The Changing Seasons

A typically eventful, unpredictable Fall migration, flavored more by its blend of ornithological happenings than by any single event

Paul A. DeBenedictis

THE FALL 1977 MIGRATION was anything but uneventful, being marked by major incursions of northern species, trans- and intercontinental movements of birds, and the discovery of several additions to the list of North American birds. Heat, cold and the distribution of water and food commonly underlie patterns of avian distribution. Thus, they are the framework upon which this summary is constructed. This frame extends back to the winter of 1977, characterized (in the unlikely event than anyone has forgotten) by drought in the West and cold and snow in the East. Although summer brought an end to the cold, the severe western drought continued. The Fall began with the main upper atmospheric airflows running from northern Alaska through west-central Canada to New England. Canada and the northern United States experienced cooler-than-average temperatures, while the southern United States was somewhat warmer than average. Rainfall was largely confined to the eastern half of the continent until the first major Pacific storm hit the Northwest on August 25, a month early, marking the beginning of the end of the western drought. Almost simultaneously the main upper atmospheric airflow shifted southward to parallel the U.S.-Canadian border. Temperatures tended to be subnormal in the western half of the continent and above normal in the eastern half following this shift. Late August and early September marked the Atlantic hurricane season. A storm track from the Gulf of Mexico to the mid-Atlantic region brought several storms with heavy rains from the Southeast to New England, particularly in the last half of September. A mid-September Pacific storm brough snow to the northern Rockies. October opened with much of the continent experiencing subnormal temperatures, but by month's end and until almost the last week of November most of the continent basked in above-normal temperatures. Repeated Pacific storms began soaking the Northwest following the last week of October. Simultaneously a major, moisture-laden Gulf low moved to the mid-Atlantic, to be followed the next week by a second system that brought much precipitation to New England. The first persistent snow cover blanketed the northern part of the continent following November 9, and the last week of November saw arctic air masses bring near freezing temperatures to the Gulf coast.

It is now clear that local weather is a proximate determinant of the volume of bird migration at any particular locality on a given date. Conditions conducive to migration are tail winds unaccompanied by severe weather. Particularly favorable conditions should exist when such airflows extend from surface to upper atmospheric levels. By comparing maps of surface with the 500-millibar-level airflows, one would expect that September 21-23 and October 2-4 would have been particularly favorable periods for migration in the Northwest; that September 9, 14-15, 24-26, October 1-3, 8, 11-17, and November 9-13 would have been particularly favorable periods for migration in the mid-continent; and that September 20-21, 26-28, October 4-6, 9, 12-19, and November 9-13 would have been particularly favorable in the North-

east. The Southwest rather consistently lacked any such favorable conditions, and favorable conditions extended into the Southeast only after mid-October.

ONLY THE ONTARIO, Niagara-Champlain, and Appalachian Regions provided data relevant to these predictions. The reader will note that dates of tower kills generally coincided with these favorable dates, while dates for "grounded migrants" generally coincided with the dates for less favorable conditions. The rarity of highly favorable conditions for migration in the Northeast in the early Fall may explain partly the poor quality of migration there; migrants just trickled through daily, as is typical in the Southwest. Ten years ago I expressed great reservations as to whether reports in *American Birds* could adequately chronicle day-to-day movements of migratory birds (*AFN* 24:4-8, 1968). Continued agreement between predicted and observed dates of migratory passages will persuade me to temper such views in the future. It was difficult to find airflows that would carry eastern vagrants westward, whereas flows from west to east were rather consistently evident, particularly on dates between those listed above for southward migration. One would have expected this to be a better season for western birds east than *vice versa* if airflows are a major determinant to such wanderings. The strongly contrary flavor of the Regional Reports to me better supports Kenn Kaufmann's cogent discussion of last Fall's migration (*American Birds* 31:151-152). One last observation is ambiguous. This was a good Fall for Siberian vagrants on the Pacific coast. Airflows particularly conducive to transport such vagrants existed August 12-14, 16-20, September 9-16, 21-22, and 25-27. However most of the vagrants were detected in October and November. The unknown here is: to what extent did these late season records result from possible movements of birds into southern Alaska during the early Fall?

As last Fall, tropical storms on the Pacific were more noteworthy than those on the Atlantic, which section experienced an exceptionally calm Fall. Hurricane *Anita* developed about 120 miles south of New Orleans August 30 and moved slowly southwestward to cross the Mexican coast September 3. Hurricane *Babe* was born in the same position September 4, but turned northward to hit the Louisiana coast September 5 Her remnants traveled northeast to enter the Atlantic over Chesapeake Bay on September 10. Neither storm produced much in the way of *rarae aves*, most of which are noted in the Central Southern Regional report. No Atlantic hurricanes touched the mainland, but birds associated with the strong storms of late October and early November are detailed in the Northeastern Maritime and Hudson-Delaware Regional reports.

WEATHER SATELLITES HAVE REVEALED that the Pacific coast of Mexico is a major spawning ground for tropical storms, most of which pass northwestward out to sea, unnoticed. This Fall two of these storms moved onto the southwest mainland. Hurricane *Doreen,* still located south of Baja California, brought rain to southern California on August 15. On the morning of the 16th, *Doreen* was over the mid-Baja California peninsula, and her remnants, downgraded to a tropical storm, were off San Diego on the morning of August 17. The volume of water transported by *Doreen* was impressive; the Colorado Desert received its average total *annual* rainfall from this storm alone However, *Doreen* arrived with little bluster and only one ornithological record—three American Oystercatchers at the Salton Sea —is so unique as to be certainly storm-associated. Boobies and frigatebirds found at this time on the Salton Sea and in the lower Colorado River Valley, and a Long-tailed Jaeger inland of San Diego, were probably storm-transported. However, all but the jaeger have occurred at these sites at the same time of year in the absence of tropical storms, and the date for the jaeger coincides with early dates for other inland records. A spate of similar reports in early September is more difficult to attribute to *Doreen*. The remnants of hurricane *Heather* passed from the Gulf of California to the southern Rockies between October 6 and 8, again bringing heavy rains but neither strong wind nor *rarae aves*.

Pelagic and maritime species

GREAT INTEREST IN SEABIRDS is again evident in all coastal Regional reports. On the Pacific, observers found signs of an influx of Northern Fulmars by November. (Black-vented) Manx Shearwaters made their best showing in decades. In cooler waters Short-tailed Shearwaters and South Polar Skuas were particularly numerous, while in warmer waters Least Storm-Petrels, Red-billed Tropicbird, and Craveri's Murrelets were well represented. Perhaps surprisingly, Xantus' Murrelet was scarce, even though its breeding range overlaps that of the other warm-water species. David G. Ainley (*West. Birds* 7 33-68; 1976) has correlated reports of seabirds with oceanographic conditions; this year's reports are typical of years when warmer-than-average temperature prevailed on the Pacific Coast.

Several exceptional reports of pelagics came from California waters. A probable Short-tailed Albatross, once the commonest inshore albatross, was seen off southern California. Birders on Monterey Bay found North America's second Streaked Shearwater (see *AB* 31:1097), its second Galapagos Storm-Petrel, and a "white-vented" Manx Shearwater. The last would represent the first firm report from the northeastern Pacific if this form can be identified in the field. Either of the two Pacific forms (*newelli* from Hawaii or *auricularis* from west Mexico) or a long-range vagrant from the North Atlantic are possible, but these taxa can be distinguished from the palest Black-vented Shearwaters only by their blacker, less brownish dorsal coloration, a difference that requires side-by-side comparison.

At least reputedly, the Gulf of Mexico is an ornithological mystery. Observers from the South Texas and Florida Regions now are finding small numbers of Cory's and Greater Shearwaters to be regular there, and our ignorance leaves us uncertain as to how unusual the Harcourt's Storm-Petrel and Bridled Terns on Florida's Gulf coast were. Continued exploration of this ornithological *incognita maris* is to be applauded and encouraged.

PELAGICS WERE LESS INTENSIVELY reported from the Atlantic than in recent Falls, but impressive totals came from New England waters. Visits to the Gulf Stream continued to produce Audubon's Shearwater north to Massachusetts and Bridled Tern north to Maryland; a Black-capped Petrel was noted off Cape Hatteras for the sixth Fall in succession. Northern Fulmars, probably storm-driven, were found from New England to the Middle Atlantic Coast in late September, but not afterwards. Large skuas remained controversial in the North Atlantic. Many may not be identifiable in the field, and the confusion cannot be helped by the fact that most, perhaps all, bird books published in the Americas which illustrate the large skuas with photographs show South Polar Skuas, as is the bird illustrated in *AB* 30:936. (British) Great Skuas are illustrated in *AB* 27:8 and nothing about the bird shown in *AB* 31:1108 is inconsistent with that identification; an immature skua not identified to species (*AB* 29:748) strongly suggests Pomarine Jaeger. Of the many specimens from the northwest Atlantic, only two or three from Greenland and one from North Carolina are identified as South Polar Skuas, but a Massachusetts specimen currently attributed to the race *hamiltoni* probably will prove to be that form as well. The only relatively certain report of any other southern hemisphere form north of the equator is a Brown Skua (*lonnbergi*) specimen from the Indian Ocean, which has not been examined by an ornithologist expert in identifying large skuas. Thus, specimen evidence suggests that one should assume large skuas seen in the north Atlantic are Great Skuas until proven otherwise, but South Polar Skuas unquestionably do occur there. Much more documentation is needed. Bulk, especially of the bill and tarsi, and color of the underwing coverts appear to be the most important characteristics by which the large skuas can be distinguished.

TWO YEARS AGO inland reports of scoters seemed particularly numerous and suggested to me that they might be going from the Great Lakes to western Mexico (*AB* 30:28). This season inland scoter numbers were more typical, but to check my earlier suggestion I compiled inland reports (from the Fall Season only, 1971 to date, and from Ohio west) of Oldsquaw, scoters, jaegers and Sabine's Gull; several other maritime species

were recorded too infrequently inland to reveal any pattern. Briefly, my intuition seems to have been faulty. All of these species are most numerous on the Great Lakes and immediately south in the Middle-western Prairie Region. Oldsquaw reports are somewhat concentrated between the Great Lakes and east-central Texas, and from the Great Basin to north-central California, but occasional birds may appear almost anywhere. Surf Scoter is the most common scoter inland. Its geographic distribution differs from that of the Oldsquaw by also appearing consistently along the east flank of the Rockies and in the lower Colorado River drainage. White-winged Scoter and all three jaegers show the same pattern as does Surf Scoter, but are somewhat more frequent in the Great Basin. Black Scoter differs in being almost unreported west of the east slope of the Rockies, while Sabine's Gull seems under-reported from the Great Basin. Oldsquaw and White-winged Scoter appeared mainly from late October on, while Surf and Black Scoters arrived about ten days earlier. The jaegers and Sabine's Gull may appear any time from mid-August to late November, but are most frequent in September; Long-tailed Jaeger reports tend to be earlier and Pomarine Jaeger reports later, but there is much overlap. Most surprisingly, there is no temporal pattern to reports within any of these species. Once they may be expected, records crop up north and south, east and west nearly simultaneously. With two exceptions the relative abundance of these species inland seems to reflect their overall abundance as nesting species in North America. Oldsquaws overwinter in the thousands on the deeper Great Lakes but are relatively infrequent elsewhere inland.

Long-tailed Jaegers are strangely scarce. It will require better reporting of age classes and compilation of older specimen records to determine whether immatures regularly are being misreported as Parasitic Jaegers, or if they simply don't occur inland (see *Auk* 82 19-25; 1965, for a summary of jaegers in the Gulf of Mexico, where Long-taileds also are scarce). Observers' attention is called to comments about finding this group inland in the Southwest Regional Report.

Population trends, invasions and irruptions

THE WINTER OF 1977 hurt many species that winter in the Southeast. Notwithstanding some encouraging notes from the Nesting Season reports, observers were unanimous that Winter Wren, Carolina Wren and both kinglets remained scarce in the East. A variety of other, mostly ground-feeding species, were similarly noted in some of the reports. Many commented both upon the early departure of warblers and the generally poor quality of the late Fall warbler movements. Perhaps the scarcity of kinglets, which contribute so much to mixed species flocks at that time of year, exaggerated this, but many of the late season warblers (notably Orange-crowned, Myrtle and Palm) also overwinter in areas that were hard hit last winter, and may have been more adversely affected than reporters realize. On the plus side, Atlantic Brant populations seem not to have fared as badly as had first been thought. By now it is clear that the winter of 1978 will not have helped these species to recover, but good data as to just what, and how severely bird populations were affected will have to await comparison of the 1977-78 Christmas Bird Counts with those from the previous few winters. Further, a potentially interesting natural experiment is developing The harsh weather seems to have been selective as to which species were reduced in population size. Many species, including neotropical migrants, seemed to have been little affected. Anyone conducting long-term breeding and winter bird censuses should watch for comparative population responses over the next few years.

American Birds has successfully documented invasions and irruptions of many species. For several groups, notably waterfowl and shorebirds, observations seem so strongly dependent on local conditions that population trends are hard to discern from anything less than a regional survey The best showings of southern herons was in southern California and Arizona, where these species added variety to last summer's Roseate Spoonbill invasion. Cattle Egrets continued strong, being reported from every Region except Alaska, Northwest Canada and Québec; no new range expansion was

suggested by these reports. White Ibises drew continued attention along the Atlantic seaboard. The very wet Fall would have permitted waterfowl and shorebirds to be much dispersed this Fall, perhaps explaining their generally poor numbers in the eastern Regional Reports.

PARTICULARLY INTERESTING ACCOUNTS of diurnal raptor migration come from the Middle Pacific Coast, Mountain West, South Texas and Hudson-Delaware Regional reports. Observers were unanimous that Sharp-shinned Hawks and Merlins made good showings this fall, and Osprey and Peregrine Falcon numbers were encouragingly high in most Regions. White-tailed Kite showed continued evidence of range expansion into Oregon, the western Great Basin, and west Texas; isolated reports from Louisiana and Georgia hopefully foretell reoccupation of its former range in the Southeast. Hook-billed Kites persisted in Santa Ana National Wildlife Refuge. Red-shouldered Hawks were widely detected along the western fringe of the Great Basin and in the Colorado River Valley. While one is always hesitant to suggest an action that may require collecting of raptors, it would be valuable to determine whether these represent pioneers from the western race *elegans* or stragglers from eastern *lineatus* populations; fortunately *elegans* is so distinctive (*Auk* 80:417-446; 1963) that it probably can be identified from good photographs. Rough-legged Hawks had a major flight, reaching central California, Colorado and Minnesota in mid-August and southern California in mid-September. Both the pattern of arrival dates and the relatively smaller number on the East Coast suggested that the flight originated in western Canada.

Snowy Owls invaded the Pacific Northwest, reaching northern California by early December, but were found in low numbers elsewhere. The flight of Pygmy Owls discovered in the North and Middle Pacific Coast Regions may be a phenomenon new to the ornithological literature. Otherwise, reports of owls were mixed, but Hawk, Great Gray and Boreal Owls began to appear around the Great Lakes in late November; the extent of this flight will be revealed in this Winter's reports. A remarkable number of migrant Flammulated Owls was discovered within its western range this season.

Mexican Crows persisted in South Texas without indications of nesting. The population of Brown Jay deserves better coverage than it is getting. Blue Jays made a strong showing in the Northwest, the three reported from central California in October being the most remarkable; best numbers were in the northern Rockies. Blue-Steller's Jay hanky-panky continues in Colorado; the newly described hybrid type suggests that hybrids are fertile and have back-crossed with Steller's Jay. Boreal Chickadees remained boreal, and only a modest Black-capped Chickadee flight was reported from the Northeast. In the East Red-breasted Nuthatches had a major flight, particularly in the Mississippi River valley and the extreme Southeast, and had reached the Rio Grande Valley and south Florida by mid-October. Central Canadian populations seem the most likely source of this irruption. Varied Thrush was particularly numerous along the Pacific coast and numbers penetrated the Southwest. There also were numerous reports from southeastern Canada and the northeastern United States, and an isolated individual was found in Florida. Bohemian Waxwings similarly invaded the Northeast at the season's end, but were scarce in the northwestern parts of their winter range. Bohemian Waxwing incursions might be expected to coincide with Varied Thrush flights, since both are berry-feeding species with large breeding populations in the Northwest. The several Say's Phoebes reported from the Northeast could also have had a similar origin, but otherwise are less easy to tie to this flight. Northern Shrikes were found in above-average numbers across the continent and penetrated far southwestward; a specimen from Parker, Arizona, is among the most southerly reported from North America.

EVIDENCE THAT CARDINAL'S range continues to expand is seen in birds reported from Duluth, Minnesota, and from Wyoming. Evening Grosbeaks were not mentioned from the West (except southern California) but a strong flight from the Great Plains to the Atlantic was evident after late September. The Midwest, Great Lakes and Northeast

retained few at the season's end, when large numbers were arriving on the Gulf and Atlantic coasts. Eastern Purple Finch seemed to vanish from the northern part of its range in late Fall, but did not appear in numbers anywhere to the south. Pine Grosbeaks made a strong showing from the Great Lakes to southern New England in November. Pine Siskins had spectacular flights everywhere east of the Rockies. Many observers reported flocks of thousands. By mid-November siskins were in the Rio Grande Valley and by early December had reached south Florida. Red Crossbills were spottily distributed, numerous only at scattered locations in the western mountains and along the Atlantic seaboard. In contrast, although not especially numerous, White-winged Crossbills were widely and consistently mentioned from the northern Rockies south to the central Great Plains, the Midwest, and the Middle Atlantic Coast Region. Snow Buntings were widely reported, with many very early dates (Idaho in August!, Ontario in September), and had been found in central California, northern Mississippi, and northern Florida by early December.

The avian miscellany

AS ALWAYS RARITIES DOMINATE the Regional reports, especially from along the continental borders. Broad-billed Sandpiper, Sooty Flycatcher and Little Bunting from the Aleutians were new to the North American list, but seemed more overdue than surprising because all range far enough north and east in Siberia that occasional visits to west Alaska could be anticipated. What the intensive field work of recent years has revealed is that palearctic species whose known range is much more southerly also appear with some regularity (witness Spot-billed Duck again this Fall). Of the many palearctic vagrants so far detected in Alaska, the Chinese Egret found in 1974 is perhaps the most remarkable, since the species is both southerly and rare. What we can be sure of is that this avifauna promises many more additions to the North American list. Of perhaps greater significance this Fall was the discovery of several of these species on the arctic slope and the southern coast of Alaska, particularly given the strong but as yet not exceptional number of Siberian species in the Pacific Coast Regions. By the season's end observers had found five Emperor Geese, two Tufted Ducks, a Mongolian Plover, a Curlew Sandpiper, four Bar-tailed Godwits, 15+ Sharp-tailed Sandpipers, eight Ruffs, a Wheatear and two Red-throated Pipits; Yellow-billed Loon, King Eider and several Siberian Lesser Golden Plover (*P.d.fulva*) also could have come from Siberia. Of these species only Mongolian Plover and Wheatear have been found so infrequently as to be more comfortably called vagrants instead of rare migrants. Ancient specimen records suggest that these new reports merely reveal more clearly a long-standing pattern of bird distribution, and not a recent invasion of the New World by these palearctic species.

Palearctic species were poorly represented in the East, the Eurasian Whimbrel in Nova Scotia and White-winged Black Terns in Delaware and Georgia being the most notable

Northward autumnal wandering of (west) Mexican species brought the first Eared Trogons (Arizona) and Aztec Thrush (Chisos Mts.) north of the Mexican border. Multiple Tropical Kingbirds (one north to Vancouver Island) and Black Vulture, Yellow-green Vireo, Scarlet-headed Oriole and Varied Bunting in southern California; and a variety of species, most notably Costa's Hummingbird in Oregon and northern California, found north and west of their breeding range in the Southwest are also part of this pattern. The analogue to this movement in the East was less pronounced, but is well described in the Northeastern Maritime Regional Report More extreme were a Variegated Flycatcher in Maine, Fork-tailed Flycatchers in Ontario and New Brunswick, and a Tropical Kingbird in Florida. The first two species are southern South American migrants, evidently headed north when they should have been going south; several other species have similar migrations and may be anticipated in future years. The only Tropical Kingbird specimen from the East (where it may be overlooked among vagrant Western Kingbirds) has been referred to the Middle American race *chloronotus*, but several others, whose occurrence will require specimen confirmation, are possible.

The numbers and variety of eastern birds west now defies brief summary. Virtually every species of warbler and vireo mentioned in the two California Regional reports would have been boldfaced 20 years ago, and the 148 Palm Warblers detected this Fall is about twice the total for all reports up to 1970! Of all the species potentially present, Louisiana Waterthrush continues to be the most perplexing because it is not seen, even though it winters in northwest Mexico. The converse movement saw Swainson's Hawks widely reported in the East (they winter in south Florida); Say's Phoebe drawing much attention in New England, but elsewhere Ash-throated Flycatcher the predominant vagrant western flycatcher; yet another New England Phainopepla and Mountain Bluebird reached the Atlantic Ocean on Long Island. Otherwise, low-to-average numbers of western vagrants were reported in the East.

A parting shot

I FEAR THE CONTINUALLY increasing emphasis on rarities may be harming more than contributing to *American Birds*. Make no mistake: I enjoy seeking and seeing rarities, and reading reports of birds found by others, especially from places where I have a personal feeling for the local avifauna. At the same time, the abbreviated documentation necessitated by the format of *American Birds* engenders a certain degree of skepticism, well summarized by the Editors of the Québec Region. All of the rarities were unusual in the sense that the chance of finding the species at that locality on a given date were quite small. However, many, many of the reports, even those boldfaced, are equally unexceptional in the broader context both of records accumulated over the last ten or so years and also of those that may be anticipated over the next ten or so years. More importantly, as these relatively ephemeral events get more coverage, phenomena of longer-term significance increasingly seem to fall by the wayside.

The Southwest Regional Report nicely states the quandary that every Regional Editor faces four times a year. I think many make the wrong choice far too frequently. It was continually frustrating while preparing this summary to find the description of an obvious irruption compressed into one often cryptic sentence, only to be followed by the detailed recounting of rarities that fit into no overall pattern. As a former Regional Editor I realize that this decision is partly dictated by the tendency of many contributors to report only rarities and not to provide the more valuable data on commoner species.

Some rarities ought to be reported, because our ignorance of their potential long-term significance leaves no other alternative For example, if those Eared Trogons found Arizona sufficiently to their liking that they return next summer to nest, then this Fall's report documents the founding of that population. Only time will tell. In other cases, such as the large skuas of the north Atlantic, where reports seem to be falling into an average pattern, continued coverage, and also some analysis, is desirable. I have made much use of such reports from *American Birds* myself. However, many reports, particularly of eastern birds west and vice versa, now add little new to our understanding of avian distribution. Some more effective means of summarizing such reports must be found. Effort on the part of all contributors to *American Birds* is required. Each must decide what (potential) long-term significance a record might possess, how best to convey that information, and whether the ornithological community will benefit from the record being published. I urge every contributor to *American Birds* to turn to the Regional Reports, read them all carefully, and then write his own version of the Changing Seasons. Few experiences enlighten one more as to what data can and must appear on the pages of this journal if it is to continue to provide its unique and invaluable overview of the dynamics of the North American avifauna. Lest this parting shot seem overly negative, be assured that the lengthy summary that precedes this critique is in itself a testimonial to the present strength and potential of *American Birds* in providing this service.

— Department of Biology, Syracuse University, Syracuse, N.Y. 13210