

The Changing Seasons

Winter 1982-3, wherein the unexpected and the unexplained prove how very normal the season was

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EL NIÑO

FROM THE APPALACHIAN REGION, George Hall writes: "After a year in which there was practically no spring and very little summer, it was appropriate that there was no winter either." This description of the winter of 1982-1983 applies almost continent-wide. Precipitation initially was moderate and temperatures were well above normal, a dramatic contrast to the bleak winter of the previous year. The only exception to these generally benign and balmy conditions occurred along the Pacific Coast. Here, temperatures were mild, but precipitation was only a bit below that amount required to wash all of California off the continental shelf and into the Pacific abyss.

By late winter it was becoming clear that precipitation in 1983 was running well above normal for most of the continent. Unlikely though it may seem, our wet mild winter probably was a consequence of highly unusual events in the equatorial Pacific Ocean. Normally, a "South Equatorial Current" causes waters to move from east to west, away from the coast of South America. This movement of surface water is reinforced by the trade winds blowing in the same westerly direction. An opposing equatorial current, "El Niño," appears on occasion and moves Pacific surface waters *toward* rather than away from the Americas. Normally the trade winds minimize El Niño's effects, but this winter a reversal of high and low pressure systems caused these winds to move with rather than against El Niño. The result was accumulation of warm surface waters along the western coast of the New World. This, along with a southward location of North Pacific high pressure cells, resulted in a dramatic rise in precipitation.

El Niño had a drastic negative impact on reproduction in various Pacific seabird breeding colonies. Sooty Terns, which normally nest in the millions on Christmas Island, this year failed alto-

gether. Other species affected in various places were the Phoenix Petrel, Wedge-tailed Shearwater, Lesser Frigatebird, Brown Booby, and Masked Booby.

Productivity of microscopic marine plants (phytoplankton) provides the food base for the ecosystems upon which all pelagic seabirds ultimately depend. This production can only occur when essential nutrients trapped deep in marine sediments are brought to the ocean surface, where light penetration is sufficient to allow phytoplankton photosynthesis. This upward movement, called upwelling, normally occurs along the west coast of the Americas, since currents moving surface waters offshore create a sort of vacuum which draws cool nutrient-rich deep water upwards. That is why the eastern Pacific Ocean usually is so productive. However, with El Niño the currents are reversed and upwelling stops. Thus marine productivity crashes, and pelagic birds have little or no food.

LATE LINGERERS

DOUBTLESS RELATED to this winter's mild temperatures, many species remained north or inland of their usual winter ranges well into the season. Open water resulted in late Common Loons, Red-necked Grebes, Horned Grebes, Double-crested Cormorants, and Gannets in the Northeast. Common Loons wintered in high numbers in the Northern Rockies. Herons lingered late throughout the Northeast, the Great Lakes region, and elsewhere. Unusual sightings included a Glossy Ibis in Delaware on December 26, Green Herons on Long Island and in New Jersey through early January, and a Least Bittern through mid-December and American Bitterns through mid-January in Wisconsin. Black-crowned Night Herons stayed all winter along the Colorado Front Range.

There were many records of waterfowl and shorebirds remaining north beyond usual migration dates or in above-normal numbers. Individual reports are far too

numerous even to summarize. More than 50,000 Canada Geese wintered at Cayuga Lake near Ithaca, New York. Whistling (Tundra) Swans were reported in unusually large numbers from the Great Lakes and Great Plains to the Appalachian and Southern Atlantic Coast regions.

Raptors remained in numbers outside of normal wintering areas. Ospreys wintered from the Western Great Lakes through the Middle Pacific Coast regions. Turkey Vultures were reported from the Hudson-Delaware, Ontario, and Middlewestern Prairie regions. Cooper's, Sharp-shinned, Broad-winged, and Red-shouldered hawks were widely reported north of typical wintering habitats, or at least in unusually high numbers.

Pomarine and Parasitic jaegers were seen along both Pacific and Atlantic coasts. Interesting inland records included both species in Ontario after January 1, and in Ohio on December 11, a Long-tailed Jaeger at Richland, Washington on December 17, and Parasitic Jaegers at Longmont, Colorado on December 5-6, and in New Mexico on January 23.

Late hummingbirds included probable Ruby-throateds from Pennsylvania in December and North Carolina in January, Rufous (December), Broad-tailed (December), and Violet-crowned (January) in Arizona, and a Costa's Hummingbird from central California. Unusual late-lingering songbirds are too numerous to mention. American Robins were reported in large numbers widely across northern latitudes. There were few reports of Horned Larks, but this may have been because lack of snow cover allowed the birds to spread out more thinly than usual. Among our favorite late records were: the first record of a House Wren in Newfoundland (December 6-9), a December Palm Warbler in Quebec, a Henslow's Sparrow until January 15 in Massachusetts, Rose-breasted Grosbeaks from all over the East, a Long-billed Marsh Wren in Nebraska (January 6), Dark-

eyed Juncos and an American Robin in the Yukon, and Fox, Golden-crowned, and Tree sparrows at Fairbanks, Alaska in January.

ERUPTIVE SPECIES

Raptors — Various species of high-latitude birds of prey erupt southward when their food supplies are low. In autumn 1982, there was a strong invasion of one of these species—the Goshawk—especially into the central and eastern United States (P. Lehman, *Am. Birds* 37:151). This movement was correlated with low numbers of hare and grouse in Canada. The effects of this eruption persisted through the winter. Unusual numbers of Goshawks were reported from Delaware, Ontario, Pennsylvania, Virginia, the western Great Lakes, throughout the Midwest, Louisiana, Alabama, and south through the Great Plains as far as Big Bend National Park. Lowland western records were at Phoenix and Santa Barbara.

It was generally an unexceptional year for two other high-latitude raptors—the Snowy Owl and Northern Shrike. There was a “fair flight” of Snowy Owls through the Hudson-Delaware Region. Only from the Niagara-Champlain and Appalachian regions did we receive widespread reports of this species. Other Snowy Owl sightings were from Ontario, eastern Washington State, and the Pacific Northwest. Northern Shrikes were even less in evidence this winter. The high number reported in one area in Northwestern Canada supports the contention that perhaps these birds stayed north during this mild year.

Three-toed woodpeckers — The Black-backed Three-toed Woodpecker (*Picoides arcticus*) and its close relative the Northern Three-toed Woodpecker (*P. tridactylus*) probably are the least-known members of their family in North America (dare we include the Ivory-billed Woodpecker?). *P. tridactylus* is distributed everywhere with spruce trees, probably explaining its absence from most of the Pacific coastal mountains. It is known to undergo eruptive migrations, probably related to cyclic abundance of its main prey, the spruce budworm. The situation for *P. arcticus* is less clear. In California and the northern Rockies this species is known to concentrate in large numbers in burned forests being invaded by wood-boring beetles, wasps, and other insects. Eruptions might follow declines in these

insect populations three or more years after a fire. A most interesting report from Ontario was of an eruption of Black-backed Three-toed Woodpeckers in the absence of any movement of the Northern Three-toed Woodpecker. This observation supports the idea that these two closely related species in fact have very different ecological requirements.

Fruit-eaters — Although not normally considered an eruptive migrant, American Robins are dependent in fall and winter upon irregularly abundant fruits and berries. This winter robins occurred in unusually large numbers from Idaho and the Prairie Provinces east through the Northeastern Maritime Region. While the warm winter doubtless was involved, in Quebec the presence of large flocks of robins was tied to an exceptional crop of mountain ash berries. Similar reports came from Idaho and Montana.

The Varied Thrush is a fruit-eater confined during the nesting season to the Pacific Northwest; it normally winters mainly south along the Pacific Coast. However, it is a notorious vagrant which can appear far inland in certain years. Varied Thrushes were reported this winter from no fewer than seven inland and eastern regions—from Utah east through the Northern Great Plains to New York, Vermont, Quebec, Ontario, Virginia, New Jersey, and Massachusetts. While these sorts of sightings occur reasonably often, there was an unusually large number of such accounts this winter. Conversely, Varied Thrushes were absent from most areas in the Middle Pacific Coast Region, and scarce in the Northern Rockies. This suggests that Varied Thrushes may have opted to move east instead of south. Given Pacific states' weather conditions, we don't blame them.

Best-known as vagrants among fruit-eating species are the waxwings. However, this appears to have been an unremarkable year for these species, especially in the West. Bohemian Waxwings were scarcely reported, except from their normal winter range in the Northwest. Cedar Waxwings were seen in moderate to normal numbers widely east of the Rockies, and as more common than usual only in the Northern Rocky Mountain-Intermountain Region.

Boreal seed-eaters — The winter of 1981-82 saw large southward eruptions of six boreal species: Red-breasted Nut-

hatch, Evening Grosbeak, Pine Grosbeak, Common Redpoll, Pine Siskin, and White-winged Crossbill (P W Knapton, *Am. Birds* 36:264). Among the “big eight” eruptive boreal seed-eaters, only the Red Crossbill and Purple Finch failed to move. Since by now it seems clear that these species *tend* to erupt in synchrony, and *usually* in alternate years, we predicted that this winter (1982-1983) would be a poor one for finding these birds south of the boreal forest. Forgive our swelled heads. Of all these species, only the Purple Finch appeared in high numbers across many regions, and note that it was one which did *not* erupt last year. Purple Finches were common in the East from New England to Florida, and in the Western Great Lakes-Great Plains areas.

The cause of boreal bird eruptions is a matter of considerable debate. Bock and Lepthien (1976 *Am. Nat.* 110:559) showed with CBC data that there was a statistically significant tendency for these species to erupt southward together, usually in alternate years, all across North America. There are, of course, many exceptions. Limited data suggest that eruptions are triggered by tree seed crop failures, particularly in spruce and birch, and that the pattern may be synchronized through both the New and Old World boreal forests. However, seed crop data are scarce, particularly for North America, and final resolution of this problem awaits a definitive long-term field study. We predict that southward eruptions would be small when seed crops are large. In this regard, we are encouraged to note that Ron Weir reports heavy cone crops in Ontario this winter, while J Bernard Gollop writes that the cone crop at Churchill, Manitoba, “was better than last year.” So, while it certainly was a warm winter, it also seems to have been a year of good seed supplies. Which factor—food or weather—kept most of the boreal seed-eaters north this year? Clearly this year cannot test these alternatives, but we confess a strong prejudice to the former explanation.

EXTRALIMITALS

THE GREAT CALIFORNIA ornithologist Joseph Grinnell long ago noted that birds, as mobile flying organisms, are likely to get into the most unlikely places. In one sense, then, no discovery of any bird in any place can be truly unexpected. Nevertheless, documentation of extralimital records is important because it re-

veals much about patterns of migration, including eruptions, and about possible range changes. As always, extralimital reports are too numerous to summarize in detail. Listed below are some which stand out.

Western birds east — Eared Grebes were reported from nine eastern and central regions, from New England and the Great Lakes to Florida and coastal Texas. White Pelicans appeared at Brigantine National Wildlife Refuge, New Jersey, and elsewhere along the mid-Atlantic coast, perhaps signalling a change in the winter range of this species. Rufous Hummingbirds were seen in Virginia and Florida. A Calliope Hummingbird in Louisiana represented a state record. Western Tanagers were reported from New Jersey, Virginia, North Carolina, and Louisiana. There was a number of late-lingering Western Tanagers reported from the western United States also, suggesting that this was a very peculiar year for this species. Also noteworthy were a Say's Phoebe in Massachusetts, a Wied's Crested (Brown-crested) Flycatcher and Rock Wren in Florida, a Mountain Bluebird in Illinois, a Phainopepla in Nebraska, and House Finches at Brownsville, Texas, and Libby, Montana.

Eastern birds west — West Coast birders did their usual good job scaring up lost warblers, etc., despite the near-aquatic conditions. The Northern Pacific Coast Region reports a Black-and-white Warbler from Oregon, a Swamp Sparrow in Washington, and a Clay-colored Sparrow in British Columbia. From the Middle Pacific Coast came records of 16 Black-and-white Warblers, two Prairie Warblers, and a Prothonotary Warbler. In southern California, observers found a Thick-billed Kingbird, Chestnut-sided Warbler, Worm-eating Warbler (also reported from Arizona), Field Sparrow, and Orchard Oriole.

Miscellaneous — Two Thayer's Gulls furnished Rhode Island's first confirmed records. This unusual species also was recorded in Pennsylvania on Lake Erie and in North Dakota. A Black-throated Gray Warbler was seen on the campus of Princeton University for almost a month. Black-headed Gulls were spotted at Cape Hatteras and Carolina Beach in February, in the Middle Atlantic Coast Region. Florida reports a Black-chinned Hummingbird at Tallahassee all winter, and a La Sagra's Flycatcher on Biscayne Bay December 21-January 24. This is only

the second known North American occurrence of this West Indian *Myiarchus* flycatcher. In the West Indies, a Northern Shoveler on St. John and Ring-necked Ducks on St. Croix were records for those sites. Whimbrels, normally rare in the West Indies, were seen on St. Croix, St. Thomas, and on Barbuda. Yellow-throated Vireos were seen on the Caicos and at St. John, while the Caicos also reported a single Blue-winged Warbler on January 9. A second Blue-winged Warbler appeared December 18 at St. John.

A male Tufted Duck provided only the second such record for Ontario. No fewer than three Black-throated Sparrows appeared in the Great Lakes Region this winter, a movement which staggers the imagination. A Ross' Goose on December 8 provided a first for Alabama. Olivaceous Cormorant was added to the Nebraska state list, when a specimen was identified among a series of cormorants shot illegally in October, 1982. Hook-billed Kite, Roadside Hawk, Lesser Black-backed Gull, and Gray-crowned Yellowthroat were among the unusual sightings in South Texas.

A Common Teal appeared in December at Walla Walla, Washington. Colorado reported a Yellow-billed Loon for a third state record. A Greater Scaup at Bosque del Apache Refuge represents one of the few solid records of this species in New Mexico. Unusual Arizona records included an adult Laughing Gull at Nogales on December 10, no fewer than 11 Rufous-backed Robins from various localities, at least two Tree Sparrows from north of Prescott, and two Black Rosy Finches (no longer a species) on the south rim of the Grand Canyon.

Unusual Alaska sightings included a Black Duck at Cordova, a Smew at Kodiak, and a European Bullfinch along the Kuskokwim River. A Mountain Plover appeared on the Oregon Coast. For the second winter in a row a Smew was observed at Foster City in central California. A Steller's Eider at Crescent City Harbor in northern California is the first recorded south of Vancouver Island, British Columbia. Southern California reports a second record for the King Eider and a third California record for the Rufous-backed Robin. Hawaii recorded its first Eared Grebe.

POPULATION TRENDS

IT WAS A GOOD WINTER for Short-eared Owls along the Middle Atlantic Coast

and in the Hudson Delaware regions. However, this species was reported as scarce in Ontario, the Prairie Provinces, the Southern Great Plains, and the Middle Pacific Coast regions.

Red-headed Woodpeckers continue to be reported generally rare in the Northeast. CBC analysis (Bock and Lepthien, *Wilson Bull.* 87:355; 1975) shows that this bird reaches peak winter densities in the Midwest. This winter, Red-headed Woodpeckers were reported common only in Illinois in the Middlewestern Prairie Region, which is alarming if it represents a long-term trend.

There were few reports of Tricolored Blackbirds this winter, fueling more speculation that this bird may be in trouble. Observers are encouraged to keep a sharp eye out for this California endemic.

House Finches continue to expand from their release point in New York Numbers were up throughout New England, while a single bird appeared in Halifax, Nova Scotia. To the south, new records or greatly increased numbers were reported for various North Carolina counties. Inland, numbers were up in the Ontario, Niagara-Champlain, and Appalachian regions. House Finches are now "regular and increasing" in Michigan, while birds were reported as far away as Calgary, Alberta, Madisonville, Kentucky, and Springfield, Missouri. It seems only a matter of time until this expanding population contacts the original native western populations.

CRAZIES

FOR THE SECOND YEAR in a row, a pair of Great Horned Owls attempted to nest on the ground at Primehook National Wildlife Refuge in Delaware. The nest was abandoned in February after the female became buried in a snowdrift. In Arlington, Virginia, a Greater Yellowlegs was caught wading in water on top of a six story building. We wish it well. A Bald Eagle was seen flying off with a house cat in Oxford, Connecticut. Perhaps Old Tom finally got his for a long life spent nabbing backyard sparrows.

Finally, we request a moment of silence for the "late Gray Catbird" at Anthony, New Mexico, which succumbed to a Cooper's Hawk on January 15, thus becoming the *late*, late Gray Catbird.

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