

The Changing Seasons: Drought, Fire, Plague, and a Penguin



Droughts and fires occasion summer wandering in a great many species, as the birding annals of June—July 2002 attest. But how did this Humboldt Penguin come to be caught in fishing nets off Prince of Wales Island, Alaska on 18 July 2002? *Photograph courtesy of Guy Demmert.*

Matthew F. Sharp

VIREO, Academy of Natural Sciences
1900 Benjamin Franklin Parkway
Philadelphia, Pennsylvania 19103
(email: sharp@acnatsci.org)

Summer is supposed to represent a lull, a time when birds are at their most sedentary. With many having completed their northward “spring” migration, they raise young before moving south again in “autumn.” The scenario is, of course, misleading in the context of a great many species. The accompanying photograph of a **Humboldt Penguin** caught 18 July 2002 by fishermen near Noyes Island off of Prince of Wales Island, Alaska provides a needed reminder that completely unexpected birds turn up even during supposedly static seasons such as summer. Whether this bird wandered northward from the southern hemisphere under the influence of seawater currents, strayed from a coastal zoo, aquarium, or theme park, or escaped from a foreign fishing vessel on which it was kept as a “pet,” we’ll never know. Whatever its source, the bird turned up at a time when the extreme, even the absurd seemed to be the norm in the world of birds and birding.

Climatic Patterns

This summer season was again marked by superlative climatic conditions—chiefly extreme heat and continued drought—through much of the continent. This undoubtedly led to the displacement of many birds,

entire populations perhaps, by the drought and widespread fires in northern Mexico, the northern portion of the Baja California Peninsula, southern California, the arid Southwest, the Great Basin, and the Central Rockies. Few regional editors commented in detail on the displacement per se, but most regional reports in the vicinity of the drought and fires contain numerous early dates for migrants, records of wanderers at odd altitudes, and birds out of habitat and range.

To back up a bit to the season’s beginnings: the cold and wet conditions in late May and June in the northern Rockies and northwestern boreal forests are believed to have delayed arrival of many migrant breeding species (Dinsmore 2002) and ultimately to have led to very poor reproductive success for a wide variety of northern-nesting species. As Michael Harrison put it, Alberta experienced “all four seasons in June and July, sometimes in one day.” Snowfall in both June and July in the mountains of that province certainly must have made things difficult for montane breeding species there. In the central portion of the continent, climate was more variable, with intra-regional differences in both heat and precipitation. Torrential rains came in northeastern North Dakota and northwestern Minnesota, where flooding was a problem, while South Dakota and much of the northern Great Plains were under drought conditions, as were most of the southern Great Plains, especially Nebraska. The Great Lakes, Middlewestern Prairie, and Central Southern regions received more rain than areas to the west or east, though some areas in all three regions suffered below-normal water levels. South-central Texas experienced severe floods.

U.S. Drought Monitor July 30, 2002

Valid 8 a.m. EDT

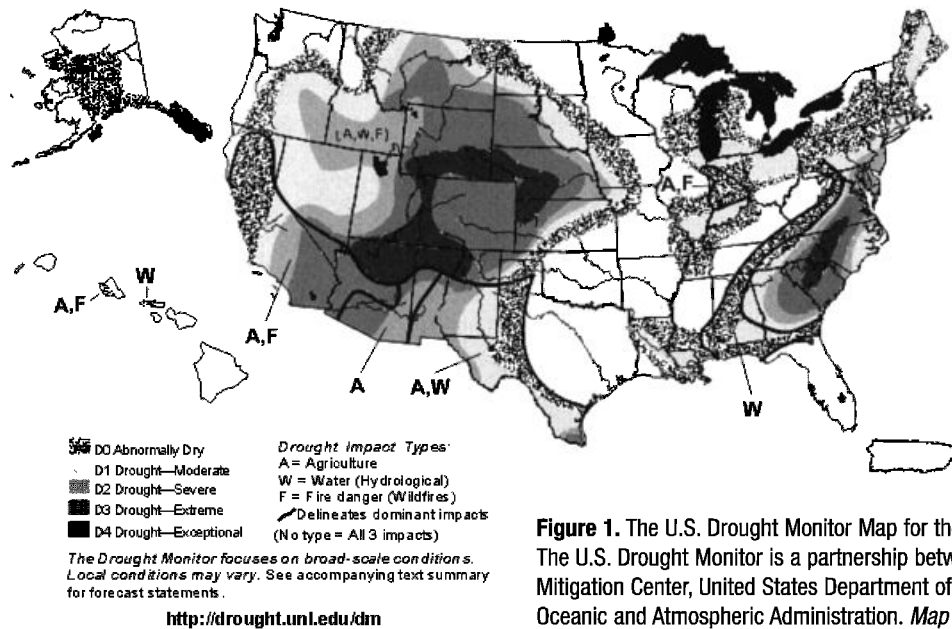


Figure 1. The U.S. Drought Monitor Map for the period ending 30 July 2002. The U.S. Drought Monitor is a partnership between the National Drought Mitigation Center, United States Department of Agriculture, and National Oceanic and Atmospheric Administration. *Map courtesy of NDMC-UNL.*

With the exception of Florida, where heavy rain brought much-needed water back to dry wetlands, the entire East Coast suffered under drought or near-drought. A cold late spring, with substantial snow as late as 18 May in New England, led to nest failure in some closely monitored early nesters such as Peregrines and Bald Eagles, as well as cavity nesters such as Eastern Bluebird in the Northeast. The wet, cool early June did help ameliorate the effects of an exceptionally hot and dry July in New England and the Hudson-Delaware region. To the south, it was hot and dry, with many areas experiencing severe drought, especially in Georgia, Virginia, Maryland, and North Carolina—the Piedmont in particular. However, unlike drought-stricken areas in the West, adverse effects on the reproductive success of breeding birds were not described here, and regional editors called the nesting season “largely successful” (Hudson-Delaware) or “relatively successful” (Southern Atlantic Coast), though these are impressions based on anecdotal evidence rather than comparisons of standardized long-term data sets. An exception was the Middle Atlantic Coast region, where weak patterns of unseasonal occurrences, as in the summer of 1999, led Iliff to speculate that failed breeding birds from the higher elevations might have been displaced eastward by dry conditions.

Birds’ variable responses to dry conditions across the continent, in a summer that was arguably the driest since the 1930s, made for interesting regional commentary and inter-regional comparisons. Whereas birds in the arid regions of the West are adapted to the extremes of those climes (including frequent fires in some areas)—and may have a greater tendency to wander when conditions prohibit successful nesting—eastern birds inhabit a comparatively more homogenous environment, one in which wandering might offer less advantage in terms of finding necessary resources. This season was distinguished by above-average numbers of high-intensity fires in the Southwest and Mountain West especially. Of course, when read closely, regional reports from almost all regions in all years include details of birds in unusual locations, at unexpected elevations, or out of season; but this summer, the Southern Pacific Coast report seemed particularly loaded, with a number of mountain- or foothill-breeding species making unusual appearances in California’s Central

Valley. It is tempting to see these unusual records as effects of drought and fires, as in past dry seasons (e. g., summer 1996).

Interestingly, the two regions reporting the most moderate weather conditions, Texas and the Pacific Northwest, also found the season to be full of exciting strays and vagrants. Mlodinow called the season “a magnificent one for birding,” and Lockwood, Shackelford, and Sekula described it as “one of the most exciting in recent years.” Totally unrelated to drought or fire, vagrant-of-the-season honors go to the **Juan Fernández Petrel** 80 km off of Brookings, Oregon 7 June (only the second report for North American waters), a well-documented male **Siberian Blue Robin** in a garden in Dawson, Yukon 9 June (first for the North American mainland), an apparent juvenile **Belcher’s Gull** at Natural Bridges State Park, Santa Cruz County, California 6 July (potentially a state and continental second), and a **White-collared Swift** at Rondeau Provincial Park, Ontario 10 June (a first for Canada). If there were a category for rarest hybrid, the award would surely go to the apparent **Sutton’s Warbler** at Sandyston, New Jersey in early June. Who says summer is boring?

Drought

The season’s dry conditions made headlines in newspapers across the nation. According to the *National Drought Monitor*, “more than one-third (about 36 percent) of the contiguous United States was in severe to extreme drought, based on the Palmer Drought Index, at the end of June 2002. This is comparable to the size and duration of the drought that peaked across the U.S. during the summer of 1988, but only the Dust Bowl of the 1930s and the Drought of the 1950s stand out as more significant [...] droughts since the beginning of the twentieth century.” Perhaps more tellingly, tree-ring data show no periods of drought more extensive or prolonged than the 1930 dust bowl period in the past 300 years (Cook et al. 1996). So the current conditions are severe even when considered from the longer perspective of three centuries. The National Drought Monitor Map (Fig. 1) shows the areas in the United States hit the hardest by the end of the reporting period. Drought conditions were also extreme in the

northern Baja California Peninsula, northern Mexico, the Bahamas, and the Canadian Prairies.

Droughts' effects on birds vary widely, but in terms of reproductive success, the effects of drought are generally negative. Well-known effects include delayed, reduced, or abandoned breeding attempts, nest failure, high rates of nestling mortality, and unusual patterns of dispersal. Teasing out broad-scale patterns of drought-induced avian dispersal from the regional reports is a tenuous task, but several widespread movements of conspicuous species do seem drought-related. The most dramatic and obvious effects of drought are on waterbirds, whose breeding biology is directly tied to bodies of standing water.

American White Pelicans are renowned wanderers, and this season they were showing up in large numbers all over the continent, possibly displaced and/or failed breeding birds from the western half of the United States and southern Canada. In Québec, White Pelicans sightings became routine, with a total of 15-17 individuals estimated, while a single bird was reported in Ontario. To the east in New Brunswick, there were seven sightings, possibly of the same bird, between 13 June and 26 July. White Pelican numbers were high in the Southeast at the end of June, with 60+ in South Carolina, and 770 counted at Lake Apoka, Florida, though these were likely both concentrations of regional residents, rather than western birds. A new breeding colony in Minnesota produced 48 birds in July, and the colony in Green Bay, Wisconsin showed continued growth. One hundred were noteworthy in Shelby, Alabama 28 June, as were 460 on Lake Tennessee on 6 July. The species was widespread in central Texas, with counts of over 100 in a few locations in July. They were noted in both Arizona and New Mexico, with a high count of 240 at Mosquero New Mexico on 16 June. The species turned up at a couple unexpected locations in Montana with 20 in Somers, Flathead County being especially unusual. Forty-six at Swan Lake in British Columbia 4 June to 12 July were thought to be drought refugees. Numbers were above average on the western side of the Cascade crest in Washington and Oregon, though not as high as last summer's.

Unrelated to the situation of White Pelicans, Brown Pelicans appeared to be on the move in many places, especially the Southwest. Beginning in the middle of June, reports began piling up in Arizona, where somewhere between 50 and 100 birds were seen over the season, some of them dead along roads south of Phoenix. These birds were almost all juveniles, which suggests that prey species may have crashed in the Gulf of California (Sea of Cortez). At Mono Lake, California, two Brown Pelicans in June provided fifth and sixth county records, and there are very few state records from east of the Sierra. Records of the species from Colorado are few, so one at Big Meadows Reservoir in Mineral County 2 July could have been related to the Arizona influx to the south. On the other hand, inland singles in southeastern Tennessee, Cedar County, Nebraska, and Benton County, Mississippi were more likely to have come from the Gulf of Mexico.

A predictable effect of drought is the negative impact on the breeding success of waterfowl. Such effects were noted in the Northern Great Plains, where production was noted as "down significantly from recent years" Conversely, in Minnesota, where rain was abundant in places, waterfowl counts for Blue-winged Teal and Mallard showed an increase over last year. Drought may have led to record numbers of "southern ducks" such as Canvasback, Redhead, and Ring-necked Ducks being seen at Churchill Manitoba in mid- to late June as well as to unseasonably large counts of Redheads in Texas (86 near New Deal on 26 July) and Oregon (41 total from several locations). The diversity and numbers of waterfowl in Arkansas (nine species), and western Tennessee (11 species) in June and July—including a remarkable count of 150 Ruddy Ducks on a minnow farm in Prairie, Arkansas 22 June—may have been indicated failed and

displaced breeders. Unseasonable waterfowl reports from Québec (including prairie-nesting species such as Redhead, Ruddy Duck, and Northern Shoveler), Virginia, California (especially Blue-winged Teal), and all through the prairie states were also attributed to drought in the usual breeding areas, but widespread reports, for instance, of Ross's Geese in the Lower 48 probably indicated injured birds, more numerous in summer now that the species has become a regular winter visitor across so much of the continent.

Wilson's Phalaropes were also apparently dispersed by drought, and this contributed to an impression of greater abundance in areas where migrants have been considered scarce over the past decade (especially in the East, where more were seen in fall 2002 migration as well). Record-high numbers at the traditional Mono Lake staging area in California were impressive to say the least: Joe Jehl estimated as many as 130,000 there on the last day of July. Wilson's Phalaropes were plentiful throughout the Midwest, and nesting was suspected in Iowa, Ohio, and in Gibson and Allen Counties in Indiana. A nest with four eggs at the Kankakee Sands wetlands, Newton, Indiana provided the first nesting record in 60 years for that state. The species also turned up in 35 counties in Minnesota, tripling the recent summer average. Finally, the species made news in New England, where two nests were found in Scarborough Marsh, Cumberland, Maine 14 June, with two juveniles subsequently seen there in July—only the third documented breeding record south of Canada in the East. Was this event, some 2000 km east of the core breeding range, attributable to the drought? In Texas, other possibly drought-displaced shorebirds were the 2 Mountain Plovers near Texline, Dallam County 13 June and one near Dalhart, Hartley County 9 June, the first summer records in Texas since 1986. In Minnesota, the state's second modern-era summer record of Long-billed Curlew was plausibly connected to drought in the Great Basin, but the species went otherwise unmentioned.

The response of passerines to drought is generally harder to gauge. Michael Patten and Doug Bolger documented the very nearly complete breeding failure of several species—Rufous-crowned Sparrow, Wrentit, and Spotted and California Towhees—in southern California, and the impact of severe drought here could not be clearer. A subtler indication of droughts' effect can be inferred from the scores of out-of-place passerines during the small window between northbound and southbound movements—though whether these wanderers failed because of drought or some other reason is essentially impossible to determine. Nonetheless, a wide variety of displaced, nonbreeding birds were noted in the Mid-Atlantic, the Southwest, the Great Plains, Montana, and the Southern Pacific Coast.

Fire

The other environmental event of the summer was drought's close relative, fire. If one listened to the popular news media, it sounded as though entire western states were ablaze. In fact, by the end of July 58,254 individual fires had consumed over 4,167,095 hectares in the United States and Canada, according to the Canadian Forest Service. The majority of fires occurred in the southwestern and western United States, in British Columbia, and in Alberta. The ecological ramifications of fire are well studied, and so it is possible to speculate about this season's fires' effects on breeding birds. Many species, of course, depend on periodic burns for the generation of appropriate habitat. Exacerbated by decades of fire suppression strategies, many of the forest fires this season were extremely hot and catastrophic, with repercussions on forest ecosystems that will last for decades. The solution for the future—contrary to the current administration's proposed policies—is certainly not to allow lumber companies' unfettered access to National Forest lands, though management in the form of selective logging is perhaps appropriate in some areas to avoid

uncontrolled fire and even to promote “healthy” burns in the future. Fire in the political arena is still a highly controversial topic.

Unfortunately, in many of the most heavily burned areas (Arizona, New Mexico, the Great Basin, Colorado, and remote parts of Québec’s boreal forests), observer coverage was minimal, and patterns of bird movement were hard to detect in the reports from those regions. Furthermore, in the absence of singed rectrices, whether individual birds were displaced by fire or drought is impossible to determine and is for most the part irrelevant in terms of overall distribution patterns. One species that made big news in all the southwestern regions was Lawrence’s Goldfinch. After a spring invasion of the species into the Middle Pacific Coast region, they were noted in many unexpected locations. A total of 12 was reported June and July in Arizona, where there was previously only one July record and no June records. A juvenile found in P.O. Canyon, New Mexico provided the first state record since February 2000. And Texas’s first summer record came in the form of an adult male at Guadalupe Mountains National Park. As Gary Rosenberg put it: “Something was definitely going on with Lawrence’s Goldfinch this summer.” Drought and fire seem the most obvious stimuli for this species’s unusual summer dispersal. It is more difficult to interpret records of multiple Common Redpolls from the coasts of southern Oregon and south Texas, or the single White-winged Crossbills in South Carolina and Nebraska in the middle of summer; but these would seem more likely to be holdovers from the previous autumn and winter flight of both species, which produced first remarkable records across the southernmost states from California to Texas to Alabama to Florida.

Birds on the move I: Expansion

Several species were notable for their continuing range expansions; most of these birds show patterns in the long-term (one to two decades) and so were probably not dispersed by drought, though in the case of waterbirds such as ibis, one guess may be as good as the next. In keeping with recent years’ records of vagrants, White-faced Ibis continued to be found at new locations in the East. In addition to the now-annual reports from Delaware and New Jersey, two in New York were great finds. North Carolina got its first well-documented record, while Minnesota reported multiples, with four continuing from the spring in Murray County. White Ibis is also a regular stray to the north of its usual range, and slightly more were reported this season than usual. Along the East Coast, this species rarely crosses the Delaware Bay, such that Delaware has more records of the species than does New Jersey. Altogether this season, seven were reported in Delaware, including a group of five at Cape Henlopen State Park. A total of five was noted in southern Appalachia, from eastern Tennessee and western North Carolina, where they found more frequently than in past years. In the Central Southern region, they were found breeding in small numbers at a few locations north of usual, and one made it as far north as Indiana, to the very productive Kankakee Sands wetlands.

Truly “Southern” waterfowl are surely showing up more frequently out of range, though the picture could be clouded by escapees from bird collections. Black-bellied Whistling-Ducks have been showing up at northern locations with increasing frequency in recent years, such that a pattern of dispersal is becoming discernable; both the expanding Texas and Florida populations could be involved here. Notable northerly reports, following this spring’s record of a single bird in Suffolk County, New York on 8 May, include a flock of 22 on a pond in McClellanville, South Carolina 5 June (state records increasing there and in Georgia); one at the Milwaukee Coast Guard Impoundment in Wisconsin (a potential state fourth), one in Delaware County, Indiana (potential state first); five in western Tennessee (and “becoming commonplace” in nearby Luling,

Louisiana); and 11 at Red Slough Wildlife Management Area, McCurtain County, Oklahoma, where the species has appeared frequently in recent years. (A flock of five on the Nansemond River, Virginia 11 August, just after the summer reporting period, would furnish that state’s fourth record.) Other water-associated birds continued to expand, even to breed, well beyond typical range. Black-necked Stilts had a successful season in the Midwest and bred successfully for the first time in Indiana; large numbers were also reported from Louisiana. In the Pacific Northwest, much news: a nest in British Columbia produced four fledglings, for the first breeding record in that province, and stilts continued their exploration of Oregon and Washington.

Doves, doves, and more doves. Eurasian Collared-Dove was mentioned from at least 25 states’s reports, with 2 in Alamo Township, Kalamazoo County providing Michigan with a first report. Northern confirmed breeding came from Northampton County, Virginia on the East Coast (first state nesting) and from Alberta and Saskatchewan in the continent’s center. Not to be forgotten, Mourning Doves continue an expansion in the Maritime Provinces: the first nesting for the French islands of St. Pierre and Miquelon was finally recorded, and two broods were documented at St. Lawrence, Newfoundland. White-winged Doves were slightly less numerous than their counterparts the collared-doves, with reports from about 19 states including Washington state; Alabama confirmed its first breeding record of the species. To the south, Belize noted expansion of the species as well.

A species that shows a pattern of summer dispersal similar to that of White-winged Dove is Scissor-tailed Flycatcher. Atlantic Canada had two reports, one from New Brunswick and the other from Nova Scotia, and two each were in Ontario (one sitting in a kingbird nest) and Québec. Other northerly birds were at Kenosha, Wisconsin and St. Adolphe, Manitoba. Pushing the limits of the breeding range, a pair raised at least three young near Monroe, North Carolina for the third consecutive year. In the Midwest east of the Mississippi River, they were noted at two locations in Illinois, and remarkably two pairs nested in western Kentucky. Down South, pairs were found nesting in Mississippi, Arkansas, and Alabama. True to form, the species was also detected to the northwest and west of typical range. To the West, two pairs nested in Prowers County, Colorado, with two others elsewhere in the state, one was at Summer Lake, New Mexico, and California had one at Año Nuevo State Reserve for two weeks in July.

Continuing the trend from past summers, Mississippi Kites were found in unprecedented numbers in Massachusetts, with an astonishing one-day total of *nine* recorded at North Truro on the first of June. The usual scattering of Mississippi Kites was reported in the Hudson-Delaware region as well, but daily counts up to 18 birds were considered quite high in southernmost Virginia, where nesting is clearly ongoing but still unconfirmed. Two were observed at Cape May, New Jersey on the intriguing date of 6 July, while to the west in Pennsylvania, presumably the same subadult was seen in Northampton and Bucks Counties through 26 June. In the Midwest and West, Mississippi Kites made it as far north as Minnesota and were reported from all six middlewestern prairie states and from Colorado. Another long-term (ca. two-decade) expansion from the South is that of Black Vulture: four were in Massachusetts; a potential first summer record came from Michigan at Manitou Is. 16 July; and nesting was confirmed for the second consecutive year in Coshocton, Ohio. It is traditional to attribute the expansion of these species to the warming of the continent (and the earth); time will tell. Meanwhile, Carolina Wren is now confirmed as a nesting species in the Atlantic Provinces region, at Grand Manan Island, New Brunswick, Orchard Oriole now breeds in Québec, Blue Grosbeaks flirt with southern Manitoba and Saskatchewan, White-eyed Vireos fledged young in Boulder, Colorado, and Summer Tanager

was confirmed nesting on Long Island, New York. Can sweet iced tea be far behind?

In contrast to the push of southern species northward, only a few species appear to be expanding from north to south, it would seem, or from the Midwest to the Northeast (the anomalous Wilson's Phalarope records notwithstanding). Merlins, which are expanding as breeders in New York and New England (with single lingerers south to Virginia in June), are one exception; Sandhill Cranes are another. Cranes made news in New England by successfully raising young for the third consecutive year in northern Kennebec County, Maine. Additional cranes were reported from New Brunswick, Newfoundland, Rhode Island, New York, Virginia, and New Hampshire: two birds at separate locations in upstate New York raised the prospect of breeding there, while one at Smith's Swoope, Augusta County, Virginia in mid-July provided an unprecedented summer record for the state. A clear sense of what's going on with cranes is very difficult to obtain, as former captives have been reintroduced willy-nilly in unusual locations (15 in eastern North Carolina in May 1999, for instance; whereabouts unknown) and have even been found breeding with feral Common Cranes in New Jersey. Moreover, the species is kept in private collections, not all of which band their birds (one bird at Joe Batts Arm, NF in July was banded, but it was not clear whether this was a wild-banded bird). Nevertheless, with breeding in the Midwest and probably southern Québec in a mode of expansion, the Maine breeding record, and probably the summering birds to the north and the south, suggest a natural reoccupation of former breeding range and prospecting in new areas, every bit as welcome as the kites' pioneering to the north. The hoped-for expansions of Western Meadowlark and Clay-colored Sparrow across the Appalachians and east of the Great Lakes have not materialized; the meadowlark is found less often well out of range, but the sparrow continues to make small inroads.

Eastern-breeding Neotropical migrant passerines can be so regular in the Far West, and so far into June, that to call them "eastern" "spring" "vagrants" becomes problematic in all respects. Rose-breasted Grosbeaks are a good case in point. They seem to have been staging something other than just "spring overshooting" the West Coast in recent years, especially in the Middle Pacific Coast region. A "mere" 25 were reported this summer from that region, with 15 farther south in California (eight from the coast and seven in the interior). Ten were in Arizona, three, plus a pair, were in New Mexico, three in Utah, ten in Oregon, three in Washington, and two were far to the north in British Columbia. The dates span the entire period in all regions. I repeat Don Roberson's question from the spring report: "Will nesting be next?" A much less pronounced pattern of extralimital movement has been evident with Yellow-throated Vireos (among several possible examples) in the West. A female Yellow-throated Vireo paired with a Plumbeous Vireo male near Fort Collins, Colorado was mind-blowing; another in early June at the mouth of the Big Sur River in Monterey County, California was in a place that has hosted several in recent years; and Montana got its first Yellow-throated Vireo, a popular long-staying bird in Columbus. A species to watch, perhaps.

Also in the West, species expanding from south of the international border, always of interest, include the continued summer presence of Short-tailed Hawks in Arizona, plus two more Texas sightings, and a nice incursion of Yellow-green Vireos into southernmost Texas. In western Texas, nesting of MacGillivray's Warbler, Greater Pewee, and Buff-breasted Flycatcher made headlines.

Birds on the move II: Declines

There are a great many species thought to be in long-term decline, particularly in eastern forests, but the regional reports tend to flag only the most precipitous or obvious declines. Cattle Egrets in the Northeast and

Middle Atlantic, for instance, seem to be declining (see the Hudson-Delaware region's S.A. for details). Is this an indication of a larger ecological effect, or part of a normal population cycle of a recently colonized species? The lack of mention of Cattle Egret in any of the southeastern reports could be taken to indicate that no significant trends have been noted, though in areas of greatest abundance, a decline would be less apparent than on the margins of range, particularly in a species that shifts colony locations frequently and that is not carefully studied over large parts of its range. In the Midwest, however, record counts in Minnesota this season suggest a population expansion to the north, while numbers from the Middlewestern Prairie region were similar to counts from the past four years. Recent counts of the species from Noxubee N.W.R. in Mississippi—26,726 in 1998, 35,545 in 2000, and 27,087 in 2001—suggest a stable population in the Central Southern region. It could well be that as farms in the Northeast revert to fields or are converted to housing developments and golf courses, the species is simply losing foraging habitat. By contrast, the continued and clear decline of Black-crowned Night-Heron in the New England and Middle Atlantic regions is worrisome but not likely to be linked to the Cattle Egret's problems. Given the different foraging behaviors of night-herons and Cattle Egret, any factor that affects both would need to be pervasive in the environment.

Two species of eastern warblers have received special monitoring attention in recent years. Golden-winged Warbler is often characterized as a species in serious decline: diminished habitat and competition and hybridization with Blue-winged Warbler are considered to be the causes. The Cornell Laboratory of Ornithology has implemented a Golden-winged Warbler Atlas Project to determine the population size and distribution of the species as well as to identify hybrid zones for management purposes. Zero Golden-winged Warblers and 5 Blue-winged x Golden-winged hybrids reported from New England lend support to the theory that the species is suffering from hybridization with Blue-winged Northern New Jersey is last stronghold of Golden-winged in that state, with only 50-60 pairs estimated to remain. Atypical songs suggest that hybridization with Blue-winged Warbler is occurring there as well. Northwestern New York is already considered a hybrid zone, and the number of hybrids reported from that area lends support to the designation. The good news comes solely from Appalachia, where surveys in West Virginia found more than twice as many Golden-winged as Blue-winged (475 vs. 185), though eight Brewster's Warblers were also found. Single singing Golden-winged Warblers in June in Wyoming and Montana were extraordinary, whatever their status.

Again under the stewardship of the Cornell University Laboratory of Ornithology, the Cerulean Warbler Atlas Project published results based on four years of field work from 1997 to 2000. This project identified several hundred important Cerulean Warbler breeding sites in all states within the species's range and estimated population sizes at those sites. Using physiographic regions defined by Partners in Flight, the core of the breeding range was found to be in the Ohio Hills, which consists of the Allegheny Mountains in West Virginia and the Allegheny Plateau in Ohio, and the Northern Cumberland Plateau, which covers the eastern third of Kentucky, southwestern West Virginia, a small area in western Virginia, and a swath across Tennessee barely extending into Alabama and Georgia. Significant populations were also found in two adjacent regions: The Allegheny Plateau of west-central Pennsylvania, the southern tier of New York to the base of the Adirondack Mountains, and a part of northeastern Ohio and the Interior Low Plateau extending from northern Alabama across central Tennessee and Kentucky into southern Illinois, Indiana, and Ohio.

The atlas also refined our understanding of Cerulean Warbler habitat

requirements. The species is known to inhabit riparian bottomland forests as well as a variety of upland forests. One feature identified as being common to these different types of habitat is an irregular canopy structure providing some sort of “internal edge” providing a view across the canopy of an individual bird’s territory. In drier sites, such as ridges, this edge is often provided by emergent oaks; in areas of mature secondary growth, emergent Tulip Poplars provide the feature; and in riparian situations, it is provided by American Plane Trees, or Sycamores (Rosenberg et al 2000) I encourage anyone interested in Cerulean Warblers to take a look at the report at <<http://www.birds.cornell.edu/cewap/>>. In addition to being a landmark for the study and conservation of Cerulean Warblers in the United States, it is a wonderful example of what can come of the collaboration between well-funded scientists and birders.

Regional editors Sekula, Shackelford, and Lockwood report a fascinating situation with another rare warbler in the United States, the Colima Warbler. In the area of Mount Livermore in the Davis Mountains Preserve, five or so singing male *Vermivora* sounded like Colima Warblers, while others appeared to sing songs intermediate between Colima and Virginia’s Warblers. This year’s birds were thought to be Colimas when studied visually and by ear in June, but when two were captured on 12 July, measurements indicated that both were Virginia’s Warblers. Could hybridization have played a role in this area, and have any true Colima Warblers been confirmed in these mountains?

Big counts and concentrated monitoring efforts

Surveys conducted by the Canadian Wildlife Service in the St. James Bay region of Québec produced some jaw-dropping results: 198 Yellow Rails, 181 Le Conte’s Sparrows, and 422 Nelson’s Sharp-tailed Sparrow make the mind reel, as does Donata Roome’s location of some 60 Swainson’s Warbler nests in southeastern Louisiana as part of her Ph.D. research (only the count of resultant mosquito bites could be more impressive). The tally of about 720 Hudsonian Godwits at Beaverhill Lake in Alberta 23-24 July led Regional editors Rudolf Koes and Peter Taylor to wonder: “Do these large numbers indicate massive nesting failure farther north, or drought-displacement from known gathering areas in central Saskatchewan?”

Several sets of numbers combined from the Hudson-Delaware and New England regions paint an encouraging picture for the recovery of endangered species. A count of 433 Bald Eagle pairs came in from Maine, New Hampshire, Massachusetts, Connecticut, New York, Pennsylvania, and New Jersey; though a cold, wet spring apparently reduced nesting success, the number of East Coast pairs increases steadily. Perhaps a symbol of this great bird’s comeback is its coaxed return to New York City: the attempt to hack four Wisconsin-origin eaglets at Inwood Park on the north end of Manhattan resulted in one young airborne by the end of July. Peregrine Falcons’ numbers were also encouraging, with a total of at least 129 nests in New England, New York, New Jersey, and Pennsylvania. Particularly encouraging were the reports of falcons returning to a historic cliff-nesting site in Massachusetts, as well as about 17 pairs on natural sites in New York; historical eyries are still uninhabited in neighboring Pennsylvania. To the west, the only known wild pair of Aplomado Falcons in the United States brought off three young by the period’s end—the first successful nesting by wild Aplomados in the country in half a century. Regional editor Sandy Williams notes that “this historic natural recolonization continue[s] to be threatened by proposed releases of hundreds of captive Aplomados of tropical lowland origin into the high desert grasslands of western Texas and southern New Mexico.” This is much food for thought.

A combined 975 pairs of Piping Plovers from Massachusetts, Long Island, New Jersey, and Delaware offers some hope, though beach-nesting

plovers (including Wilson’s) still face an uphill battle given the human pressure on barrier beaches, which is relentless and reckless in many parts of Virginia and the Southeast, where monitoring of productivity and policing of disturbances are ineffective in most places and nearly nonexistent in many others.

West Nile Virus

Alarming accounts of dead and dying raptors and owls filling wildlife rehabilitation centers in the Midwest caught the media’s attention this summer. A precise picture of the impact of West Nile Virus on the avifauna of North America is still quite difficult to countenance. The few numbers available are mainly from state and county health departments or wildlife rehabilitation centers. Neither of these sources has attempted to monitor bird mortality systematically, so the actual numbers are potentially much greater than what has been reported. Too, there are no coordinated, long-term data sets of avian mortality before the arrival of the virus, and so conclusions made in the absence of a baseline are apt to be speculative. The Center for Disease Control has identified over 100 species in North America (including non-native species) that have tested positive for the virus, but it is not clear in many cases that the actual *cause of death* was West Nile Virus. The American Bird Conservancy estimates that thousands of birds have been killed by the virus, but that figure comes from tested birds; so no one knows the real extent of the impact. It’s important to add that American Crows in test situations have shown 100% mortality rates when exposed to the virus, and the family Corvidae seems particularly susceptible to the virus. The range of species listed at <<http://www.cdc.gov/ncidod/dvbid/westnile/birdspecies.htm>> shows no taxonomic patterns. From the numbers of hawks and owls coming in to rehabilitation centers in Ohio, Illinois, Michigan, Indiana, and Nebraska, one could infer that these groups may also be especially susceptible to the virus, though an ailing Red-tailed Hawk would be much more conspicuous than would a sick Song Sparrow or Carolina Wren, for instance.

The devastating impact of mosquito-borne disease in birds is well studied in the Hawaiian Islands, so dire scenarios of population crashes in North America are not without some basis in reality. One frightening possibility would be for various migrants to carry the virus to Caribbean islands, where many endemic species are already struggling to maintain healthy populations (see the West Indies regional report). On the other hand, native birds have evolved in the presence of potentially devastating diseases, and epidemics occur somewhat routinely. This past season, an outbreak of avian cholera in the St. Lawrence estuary of Québec killed some 6000 Common Eiders, for instance. Without a robust and adaptable immune system, no bird species would be able to survive the rigors of natural selection. West Nile is closely related to the bird-borne St. Louis Encephalitis virus, so perhaps the physiological framework for immunity already exists. While there is reason for genuine concern regarding threatened and endangered taxa—a Gulf Coast Sandhill Crane (*Grus canadensis pulla*) was among the birds apparently killed by the virus—there is also reasonable hope that birds will adapt quickly to the new pathogen. At this point, the situation needs close monitoring, so that if widespread declines occur, they will be detected in time for some action to be taken. Winter crow roosts may provide a relatively easy focus for monitoring efforts.

Under the radar: skuas

This past September, a bomb was dropped on the seabirding world. Dick Newell announced on the listserv *Frontiers of Field Identification* that preliminary results of DNA analysis of samples from two skuas captured in the eastern North Atlantic—one at St. Agnes in the Isles of Scilly in October 2001, the other on Aberavon Beach in Glamorgan, South Wales in February 2002—indicated that they belonged to one of the cryptic

southern hemisphere taxa of Subantarctic Skua *Catharacta antarctica*, either *hamiltoni* or *antarctica* (some authorities, e. g., Shirihai [2002] still combine the larger *lonnbergi* with this group under the name “Brown Skua”). The measurements of the Glamorgan bird suggest “Falkland Skua,” the nominate form; no measurements were taken of the Scilly skua. No further details were announced, though a short paper has been sent to *Ibis* for consideration (see <<http://www.surfbirds.com/Features/skuare-result.html>>). (N. B.: The A. O. U. and A. B. A. now place skuas in genus *Stercorarius* with jaegers.)

DNA is often thought to be “bulletproof” when it comes to determining identification, but many important questions concerning exactly what types of tests were performed, what exactly was sequenced, and what sorts of reference materials were used for comparisons remain to be addressed. What’s more, the taxonomy and systematics of southern hemisphere skuas are very much unsettled and complicated by interbreeding between some populations. So while the English skua findings cannot be regarded as unequivocal or clear, the forthcoming paper should be eagerly anticipated by East Coast (and even West Coast) pelagic birders.

Subantarctic Skua is one of the names associated with *antarctica* and *hamiltoni*; others are Antarctic Skua and Southern Skua, whereas “Falkland Skua” is reserved for the nominate taxon and “Tristan Skua” for *hamiltoni*. One of this group might well have already occurred off the coast of New Jersey (Brady 1988), and world authorities on the group have reason to believe that other photographs taken off North Carolina (and circulated via the Internet) refer neither to Great nor to South Polar Skua but probably instead to one of these two taxa (cf. <<http://www.patterson.com/skuas/skuas.htm>>). Likewise, Brown Skua—the name almost always associated with *lonnbergi*—has probably been detected off New York (ph. *American Birds* 32: 1108) and off North Carolina several times (Brinkley 1994; see also ph. <http://www.magikcircle.com/birds/image.asp?title_id=457>), but criteria for at-sea identification of this group are uncertain, and no records committee has accepted any of these records as referring unambiguously to any taxon, though the North Carolina committee acknowledges that more than two *Catharacta* taxa have almost certainly been documented in state waters.

The appearance of confirmed Subantarctic Skuas in the North Atlantic is particularly troubling, as it potentially throws into question many reports of both young dark-morph South Polar Skuas and many Great Skuas, which show an unsettling resemblance to Subantarctic Skuas in some plumages. If states’ records committees take a conservative view of *Catharacta* identification and distribution, then it would seem a necessary measure to re-review all photographic documentation of all *Catharacta* available. Given the uncertainties surrounding identification of members of this group, many such records would then undoubtedly have to be relegated to “unidentified *Catharacta* species,” as most records prior to the late 1970s already have been, that is, before the split of South Polar Skua and the realization that the species often summers off North American shores. Nevertheless, birders on both coasts can continue to contribute to the pioneering work of figuring out the puzzle of skua identification and distribution by taking excellent field notes and by taking photographs and video of every individual possible.

On the wild side?

Ruddy Shelducks may be as conspicuous as Subantarctic Skuas are cryptic. A Ruddy Shelduck at Bombay Hook, Delaware on 8 June and a flock of seven at Cape May, New Jersey at the end of July 2002 were largely dismissed as escaped former captives. But the same was once said of Garganey, now often accepted as a legitimate vagrant from the Palearctic by states’ records committees. The vagrancy of the Ruddy Shelduck in the western Palearctic is conclusively tied to the drying of their preferred

habitat, temporary ponds and flooded fields, in core range, and their appearances in western Europe are typically in summer. Might drought as far away as southern Europe drive birds to our shores? The nicely documented record from Nunavut in summer 2001 (Allard et al. 2001) should encourage us to take a closer look.

In an essay entitled “The Implications of Vagrancy,” Keith Vinicombe and David M. Cottridge write of this shelduck in northwestern Europe “Regular northerly movements of Ruddy Shelducks can also be categorized with the foregoing [immigrations from the south], although the fact that larger movements may be triggered by desiccation makes this species at least partly irruptive. As these influxes occur principally in July and August, a time that is traditionally poor for vagrancy, many ornithologists have been [...] unwilling to accept that they actually involve wild birds, and many have been traditionally dismissed as escapes. The Ruddy Shelduck and the Rose-coloured Starling have long been stigmatized in this way” (Vinicombe and Cottridge 1997). (One could add: their colorful plumage feeds incredulity about their presence as well.) A thorough review of vagrancy patterns in the British Isles suggests strongly that second-year male Ruddy Shelducks have the greatest propensity to wander (Harrop 2002). Has anyone noticed that the Atlantic coastal appearances of this species in past decades have largely been in summer and very early autumn—and that they sometimes coincide with “flight years”? It is curious how birders, ornithologists, and the media often arbitrarily segregate the wheat (ear) from the chaff (inch): Cuban Grassquits are summarily dismissed as escapees, while Yellow-faced Grassquits are celebrated as legitimate vagrants; Eurasian Wigeon are universally accepted as wild, while White-cheeked Pintails have fallen from favor everywhere; Belcher’s Gull arrives under its own steam, but White-chinned Petrel must have been brought aboard a ship. And was the penguin more likely to hitch a ride than the skuas, in a beautiful pea-green boat?

Literature cited

- Allard, K., K. McKay, and L. McKinnonby. 2001. Ruddy Shelducks at East Bay, Southampton, Nunavut. *Birders Journal* 10: 86-89.
- Brady, A. 1988. Possible presence of an Antarctic Skua in New Jersey waters. *Cassinia* 62: 7-11.
- Brinkley, E. S. 1994. Spring migration of seabirds off North Carolina May 22, 1992, with notes on two skua (*Catharacta*) taxa. *Chat* 58: 94-101
- Confer, J. L. 1992. Golden-winged Warbler. In: *The Birds of North America*, No. 20 (A. Poole, P. Stettenheim, and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists’ Union, Washington, D. C.
- Cook, E. R., D. M. Meko, D. W. Stahle, and M. K. Cleaveland. 1996. Tree-ring reconstructions of past drought across the coterminous United States: tests of a regression method and calibration/verification results. Pages 155-169 in: J. S. Dean, D. M. Meko, and T. W. Swetnam, eds. *Tree Rings, Environment, and Humanity*. Radiocarbon, Tucson, Arizona
- Dinsmore, S. J. 2002. The Changing Seasons: Musings of a migrant birder. *North American Birds* 56: 270-276.
- Harrop, A. H. J. 2002. The Ruddy Shelduck in Britain. *British Birds* 95: 123-128.
- Rosenberg, K. V., S. E. Barker, and R. W. Rohrbaugh. 2000. *An Atlas of Cerulean Warbler Populations*. Final Report to USFWS: 1997-2000 Breeding Seasons. Cornell Laboratory of Ornithology, Ithaca, New York
- Shirihai, H. 2002. *A complete guide to Antarctic wildlife*. Alula Press, Degerby, Finland.
- Vinicombe, K., and D. M. Cottridge. 1997. *Rare birds of Britain and Ireland*. Collins, London.

