The Changing Seasons: Wheatears, flycatchers, and plovers

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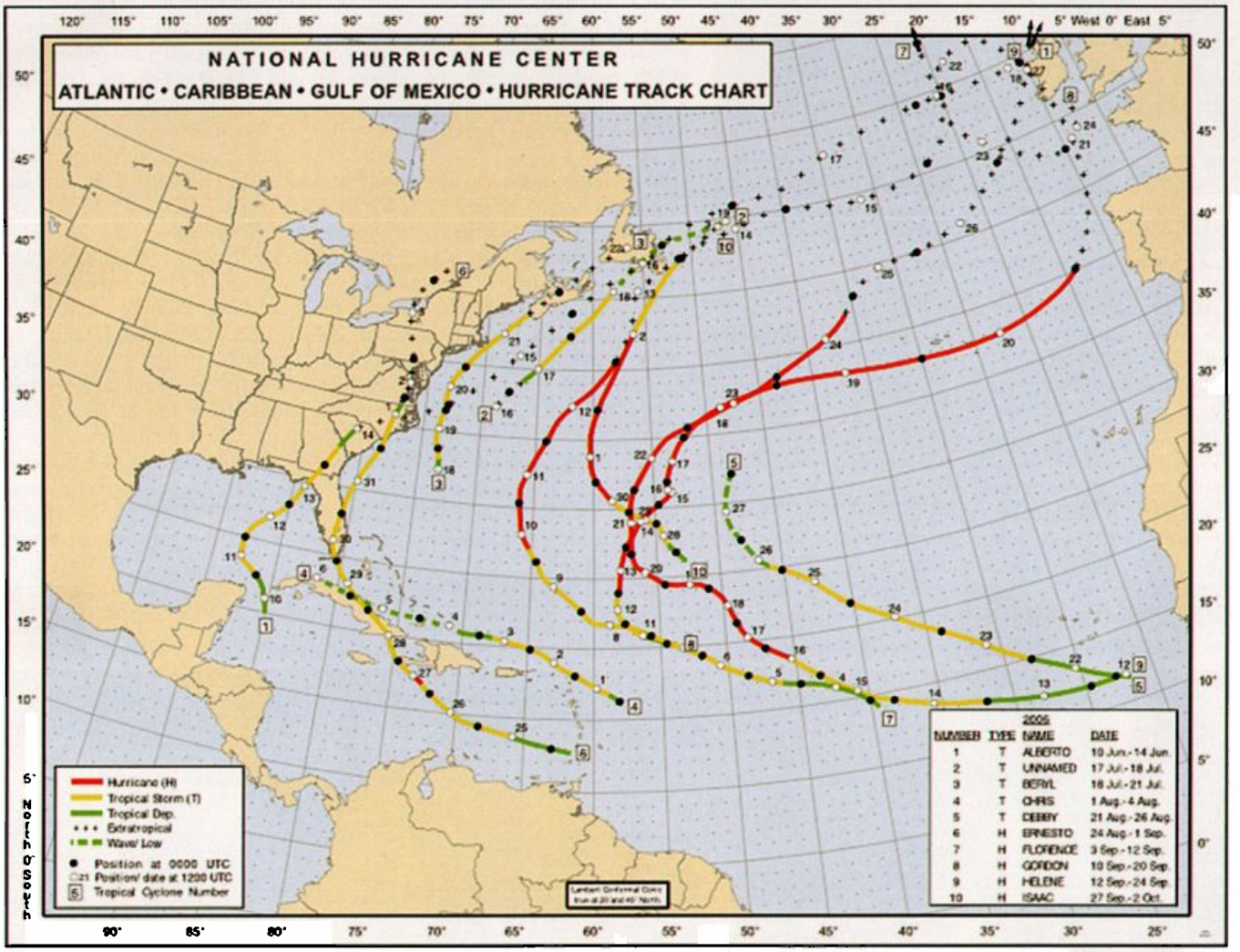


Figure 1. Summary of 2006 Atlantic tropical storms. The number and intensity of storms were both below predictions, probably owing to a late-forming El Niño that dampened conditions favorable for tropical storm formation. ***Image courtesy of the National Hurricane Center.***

Of the plethora of topics covered in autumn "Changing Seasons" columns, weather is the most frequent, and, at least since the mid-1990s, discussions of El Niño/Southern Oscillation (ENSO) and hurricane activity have dominated this essay. Perhaps the most significant climatic event of the 2006 fall season was the unexpected rapid return of El Niño in mid-September. The National Weather Service's ENSO discussion for August and early September predicted ENSO-neutral conditions to continue through the end of 2006. A supplemental discussion was issued on 13 September, however, stating that El Niño conditions were present and were likely to continue into early 2007—a prediction that held true.

The most obvious effect of the 2006 El Niño was a relatively uneventful Atlantic tropical storm season. In conjunction with National Hurricane Preparedness Week (21-27 May), NOAA had predicted a "very active" 2006 North Atlantic hurricane season, with 13 to 16 named storms expected, including as many as 10 hurricanes. Of these, four to six were predicted to attain Category 3 strength or above. ENSO-neutral conditions were expected to contribute to the active tropical storm season; instead, El Niño dampened the formation of tropical storms by creating both a sinking motion in the middle and upper atmosphere and higher wind shear in the western half of the main Atlantic hurricane-formation region. Additionally, a persistent low-pressure area across the eastern United States during the peak of the season kept most storm paths well out to sea, largely sparing Caribbean and U.S. coastlines from direct hits. The season closed with what turned out to be near-normal tropical storm activity (quiet in comparison to that of 2005), with nine named storms including five hurricanes, two

at Category 3 strength or above (Figure 1).

Nonetheless, one named tropical system overcame these barriers to reach the Caribbean and U.S. coasts this fall. *Ernesto* (24 August through 1 September) only briefly maintained hurricane strength on 27 August while still at sea south of Haïti. The storm crossed eastern Cuba at tropical storm strength on 28 August, emerging off Cuba's north-central coast the next day. It swept southern Florida as a tropical storm on 30 August before returning to sea, and then made its third and final landfall on the southeastern coast of North Carolina near Oak Island on 1 September. *Ernesto*'s tropical storm intensity was spent by the time it reached the Chesapeake Bay, but the remnants of the system swept slowly northward through Pennsylvania and New York in the following day. The Special Interregional Report in this issue covers most of the seabirds entrained by this storm, a surprising variety and number given the storm's weakness, and the regional reports also include mention of grounded shorebirds and other charadriiforms.

The Eastern Pacific's tropical weather season of 2006 was much more eventful than usual and set several records. Overall, the season had 18 named storms, 10 of which reached hurricane strength and five of which became major hurricanes. The season had record-high activity in November and had the strongest hurricane (*Sergio*) ever measured in that month. *Sergio* also set the new mark for its duration as a tropical storm in November (5.5 days). Also unprecedented were the three Eastern Pacific tropical cyclones that formed in November; the previous high mark was set by two storms that formed in November of 1966 (official records begin in 1949).

For all of the activity, though, few Eastern Pacific storms approached Mexican coastlines this season (Figures 2, 3). On 25 July, Tropical Storm *Emilia* approached the southwestern coast of Baja California Sur but never made landfall. The most significant Pacific tropical storm from a birding perspective this season was Hurricane *John* (28 August–4 September), which strengthened into a major hurricane (Category 3) on 29 August and grew to a Category 4 storm the next day. Fortunately, it was still offshore at these strengths. *John* crossed the Baja Peninsula about 74 km northeast of Cabo San Lucas early on 2 September as a Category 2 hurricane. It tracked up the peninsula, weakening into a tropical storm late on 2 September. Its intensity continued to weaken as it progressed farther north up Baja, diminishing below storm

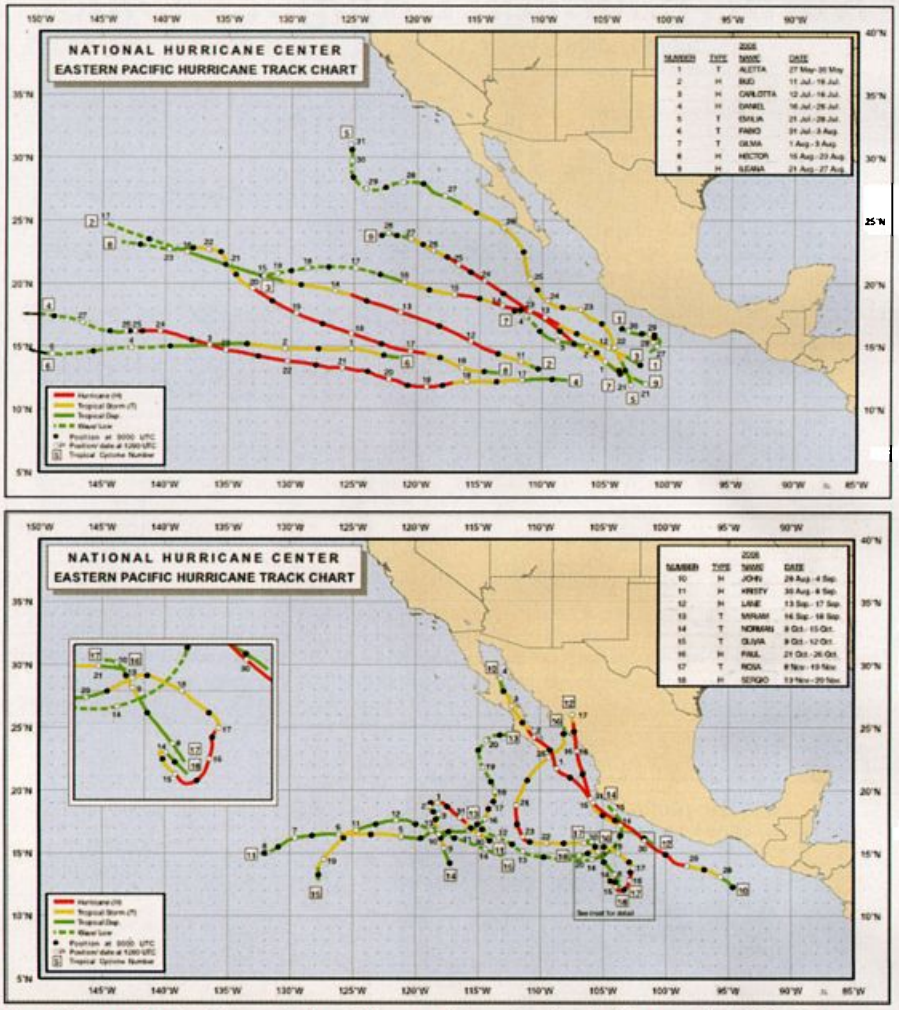


Figure 2. Summary of 2006 early eastern Pacific tropical storms, early season (top image) and late season (below). The Pacific season was unusually active, in contrast to the Atlantic season. ***Images courtesy of National Hurricane Center.***

strength on 4 September and dissipating near the east coast of the north-central peninsula later that day. For more detailed information on *John*'s impact, see the S.A. section about the storm in the Baja California Peninsula regional report. The center of Hurricane *Lane* (13-17 September) narrowly missed the Islas Marías, but the eastern eye wall hit those islands directly 16 September and struck coastal Sinaloa at the Peninsula de Guevedo, about 28 km southeast of El Dorado, later that day. *Lane* weakened to a tropical storm over the rugged terrain of western Mexico 17 September, and circulation dissipated later that day. The storm produced flooding and mudslides along the Pacific coast of Mexico, including areas well south of the landfall, such as Acapulco. Residual moisture from the storm contributed to enhanced rainfall in areas of interior northern Mexico and southern Texas. Cabo San Lucas had a brush with *Paul* (a minimal tropical storm), which passed just south of the tip of peninsula on 25 October. That storm lost energy as it crossed the Gulf of California but reached the southwestern coast of Mexico as a tropical depression 26 October, after which it quickly dissipated about 93 km northwest of Culiacán.

In what would become the warmest year on record for the United States (per NOAA), the autumn 2006 season was comparatively mild. Perhaps the most noteworthy climatological issue across North America at the onset of the 2006 fall migration season was drought: 51% of the contiguous United States was categorized as suffering moderate to extreme drought at the end of July; Mexico also had substantial areas under drought conditions, particularly in the northern states (Figure 3); and southern Canada was also ex-

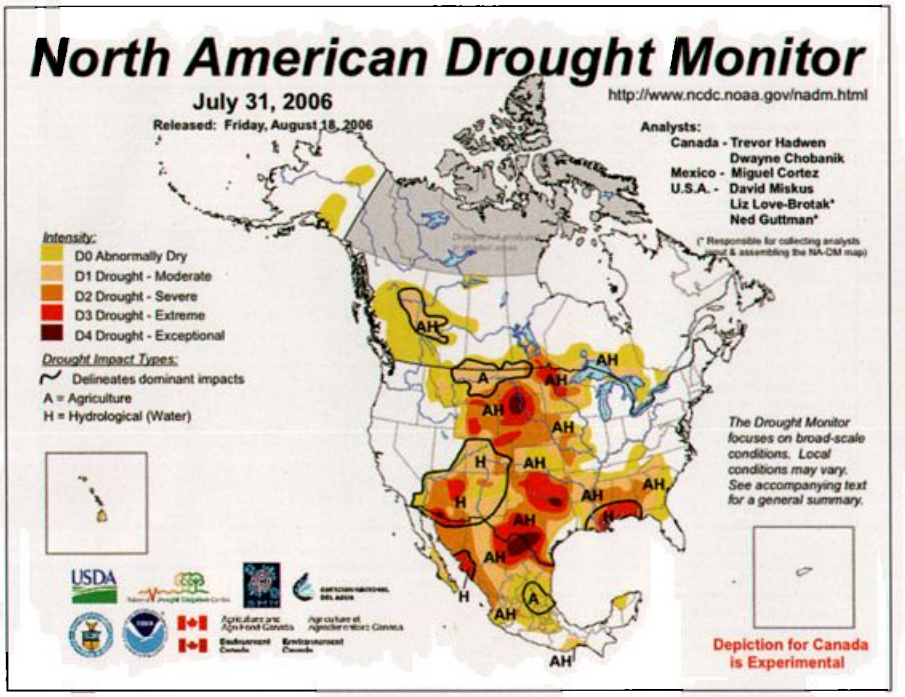


Figure 3. This map depicts North American drought conditions for 31 July 2006; on this date, about 51% of the Lower 48 states was categorized as being under moderate to extreme drought conditions. *Map courtesy of the National Oceanic and Atmospheric Association.*

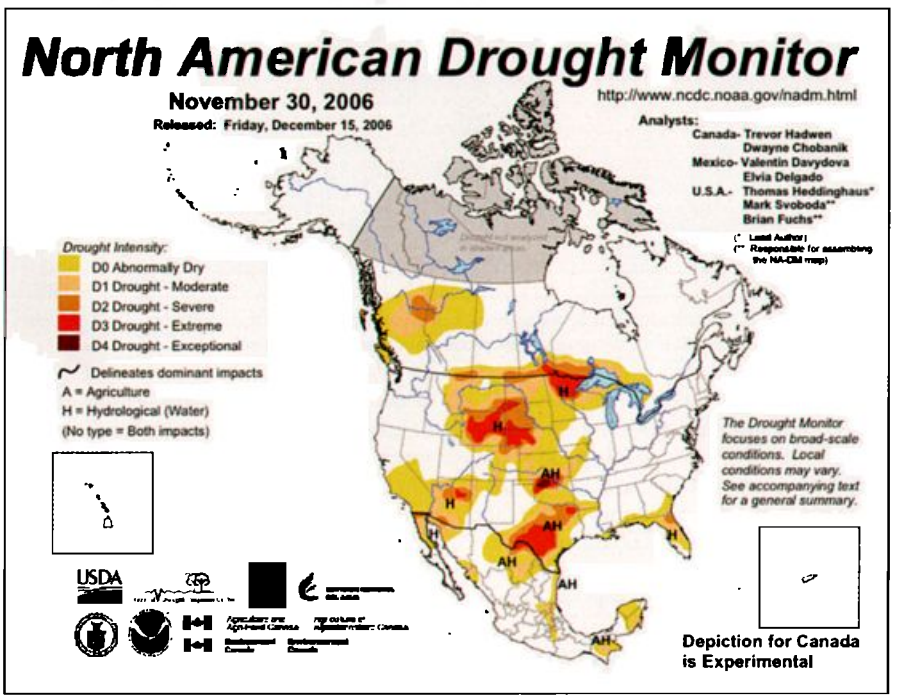


Figure 4. This map depicts North American drought conditions for 30 November 2006; with autumn rainfall, drought-stricken areas covered 40% of the Lower 48 states. *Map courtesy of the National Oceanic and Atmospheric Association.*

tremely dry at summer's end. Fortunately, by the end of the fall migration season, many of the driest areas were reduced in size and severity. However, extensive swaths of the U.S. Plains states remained under severe to extreme drought conditions (Figure 4). NOAA's *North American Drought Monitor* provides excellent analysis of significant weather patterns, and although the *Monitor* addresses mostly to the agricultural and hydrological impacts of drought, it provides a good index as well of conditions encountered by resident and migrant birds. While stochastic events such as hurricanes and nontropical low-pressure systems affect birds on relatively small spatial or temporal scales (with many notable exceptions), drought—especially extensive, severe, and persistent drought—affects far more birds in far more perdurable ways. It is likely that drought will, if the warming of the planet continues as predicted, steal the thunder from tropical cyclones—at least in this column and in bird conservation studies. Below, we consider precipitation deficits and weather systems over the four months of this season, much of this information gleaned from NOAA's *Drought Monitor*.

August

In Canada, hot and dry weather continued from the summer in many parts of the western provinces. Much of British Columbia and northwestern Ontario and parts of southern Ontario experienced severe to record-low stream-flow conditions. Hot, dry conditions also contributed to increased forest-fire activity in these areas. In contrast, eastern Canada's agricultural regions received adequate and timely precipitation. Across the United States, drought was concentrated in the Plains states from the Dakotas to Texas, and across the Southeast from Texas to Georgia; stream flow in the Southeast was particularly low. The Southwest received strong monsoon rains in August (encouraging a great wildflower show and vigorous singing by monsoon-associated breeders as Botteri's and Cassin's Sparrows), and Tropical Storm *Ernesto* contributed much-needed precipitation in the Southeast and along the Atlantic coast in early September. Much of the central part of the country continued the dry summer conditions through most of August, but cooler temperatures and beneficial rains eased drought conditions for much of the area by the end of the month: 40% of the Lower 48 states was rated at moderate to extreme drought by the end of August, a positive move from late July's 51%.

September

Much of western Canada was abnormally dry, expanding drought areas there from previous months. In particular, drought regions covered British Columbia, northwestern and southern Alberta, southern Saskatchewan, southern Manitoba, and northwestern Ontario. As a result, stream flows continued to drop significantly below normal in many regions of western Canada. Even Nova Scotia continued a two-month pattern of unusually low precipitation. In the mainland United States south of Canada, drought continued

throughout the Plains and across the Southeast, but cooler temperatures and above-normal precipitation over parts of the region eased drought severity for many states. The Pacific Northwest saw warm and dry conditions, and seasonal dryness in the Far West contributed to a busy wildfire season. In addition to *Ernesto*'s early-month moisture contributions along the East Coast, the remnants of Tropical Storm *Lane* spread moderate to heavy rains across southern and eastern Texas. Country-wide, Mexico received close to normal precipitation in September. Portions of northern Mexico experienced wet conditions, and tropical cyclones contributed still more rain to western Mexico. Hurricane *Lane* especially benefited the states of Durango and Coahuila, bringing relief to the drought conditions in those two states. September was also notable for bringing six cold frontal systems to Mexico, an unusually high number for the month. The milder weather from these systems improved drought conditions over Coahuila, Nuevo León, and northern Tamaulipas.

October

Conditions throughout eastern Canada improved, as much of that region received above-average precipitation. Particularly, Nova Scotia and much of southern Ontario returned to near normal. Drought conditions persisted throughout British Columbia, northern Alberta, and from the southern Canadian Prairies into northwestern Ontario. In a welcome break from the oft-repeated news of dry, warm conditions, much of the United States' drought-stricken areas benefited from a cooler and wetter month than average. Parts of the Atlantic Southeast remained dry, however, as did states on the West Coast. South-central Alaska saw heavy rains (7.5 to 12.5 cm) from 8 to 12 October, producing flooding, mud slides, and road damage. In Mexico, October brought wet conditions to the Baja Peninsula and to northern and central parts of the country. Much of this moisture was from four tropical systems that formed in the month, particularly *Norman* and *Paul*. Early in the month, generous rains washed the Yucatan Peninsula and Gulf Coast of Mexico. However, the paucity of Atlantic tropical storms this season resulted in unusual dryness in those areas for the remainder of the month.

November

Much of western Canada finally had some drought relief, as abundant precipitation fell throughout the region. The southern Canadian Prairies saw near-average precipitation, resulting in little change in their overall drought status. In the United States, the tiresome news of warmer-than-normal temperatures came booming back, with only one state (Florida) recording below-normal temperatures. Particularly warmer was the northeastern part of the country, with four states (New Hampshire, Rhode Island, Connecticut, and New Jersey) experiencing the dubious honor of charting their record-warmest Novembers. The Northwest quenched its dryness with flooding rains in the first week of November, including parts of northwestern Oregon and western Washington that were inundated by up to 38 cm of rainfall. Flooding also hit portions of northern Idaho and western Montana. Hawaii joined the list of flood-influenced states at the beginning of the month, with some locations on the windward sections of Kauai and Oahu reporting over 38 cm of rainfall from 31 October through 2 November. November ended with a significant winter storm moving across the central United States. Snow and ice fell from northern Texas through Oklahoma, Missouri, Illinois, Wisconsin, and Michigan. Accumulations of 18-31 cm of snow were common near the storm's center, with some areas reporting even more. Areas south and east of the storm received heavy rains. This moisture brought significant improvement to dry and drought conditions from Texas to Illinois. Still, the Great Lakes basin continued to be dry, with Lake Superior 43 cm below its long-term average level, second only to 1925. Lakes Michigan and Huron remain 48 cm below their normal levels, a pattern that began in the dry 1990s. The central Mexican states of Michoacán, Morelos, Puebla, and Zacatecas experienced above-average precipitation in November. However, no significant precipitation fell on the Baja Peninsula or in northern, northwestern, and western Mexico. Cold fronts at the end of the month eased dry conditions over Mexico's Gulf Coast states and the Yucatan Peninsula. Coastal and southern Veracruz, Yucatán, and northern Quintana Roo in particular saw drought conditions ease or abate.

Northeasterly winds: Wheatears and plovers

The story of the autumn was clearly the flight of Northern Wheatears, which spanned 6 August 2006 through 4 November (Smith 2007). At least 46 birds were located, ranging from easternmost Newfoundland through Québec, western New York, and western Ontario and south to New Jersey, Florida, and Bermuda; one Alabama outlier turned up in winter, 3-13 February 2007! The final tallies included 21 in the Atlantic Provinces (plus one at sea, 400 km northeast of St. John's, Newfoundland); seven each in New England and Québec; two each in Ontario, Florida, New York, and Bermuda; and singles in New Jersey and Alabama.

The autumn 2006 season's southernmost Northern Wheatear in North America was this individual at Everglades National Park, Florida 13-23 (here 21) September 2006. ***Photograph by Jeff Weber.***

September was the peak month for wheatears, with more than half of the birds turning up 29 August through 23 September. Such a range of arrival dates suggests that a single weather event was not responsible for the flight. But why then did four Common

Ringed Plovers make an appearance in southern Newfoundland during the same period (20 August through 17 September; see article, this issue)? The breeding range of this species in eastern Canada and Greenland overlaps to a fair extent with that of Northern Wheatear, and both winter in the Old World. Late August through September had a period of sustained, strong northeasterly winds over a large quadrant of the western North Atlantic, and these winds were almost certainly responsible for moving both wheatears and plovers westward, back toward North America, during migration. It is remarkable that the flight of the wheatears was so protracted, but it is probably the case that these birds, once displaced onto the "wrong" continent for wintering, simply moved southward in North America as they might have through Africa—analogous, perhaps, to Siberian birds that turn up in Alaska and then appear in a slightly later window along the West Coast (Sullivan 2004).

But why then were so few wheatears detected in the Southeast (two in Florida, one in Alabama; Figure 5)? Arguably, the number of birders per capita drops appreciably south of the Mason-Dixon line, and detection rates should thus also drop. And it may be that relatively few southern birders monitor birding listservs to the north, watching for irruptions or vagrants that may be heading their way. Were there dozens of wheatears migrating undetected through the Southeast? Or did the wheatears bypass this area, making a transoceanic flight toward South America (with a stopover at Bermuda for a few), much as they would, under typical circumstances, migrate to Africa (Thorup et al. 2006)? Or did they continue to orient toward Africa from the Northeast? The questions cannot be answered—but that does not make them uninteresting, and so we pursue the topic more generally in the next sections.

How many do we *miss*?

Autumn is clearly the prime season for rarities, and many of us spend goodly portions of our free time in search of such. A frequent item of discussion among birders at this time of year is the number of rarities that we birders *don't* find. Because proving presence is nearly infinitely easier than proving absence, this topic is one of those perennial favorites that—like the identification of many an odd-looking gull—has no solution, given current knowledge and abilities, whether personal or technological. In a post to the "Frontiers of Field Identification" listserv (<http://listserv.arizona.edu/cgibin/wa?A2=ind0701b&L=birdwg01&T=0&P=7915>), Peter Post summarized a paper from Great Britain (Fraser 1997) concerning the percentage of rarities present that actually gets found. He writes: "The author [Fraser] attempts to quantify the numbers of rarities being missed annually, in Britain and Ireland, using statistical analysis and a mathematical model. Among the author's conclusions: During 1988-1992, 40% of rare birds were found on weekends, far greater than it would be (approximately 28%) were daily coverage uniform. Even more rarities are first sighted on Sundays than Saturdays (21.3% of all first dates). Based on rarities found from 1990-1994, Fraser estimated that, conservatively, approximately 800 rarities in all groups are overlooked in Britain and Ireland every year. The number for rare passerines and "near-passerines" missed was estimated to be 400 per year and the number of waders 90-100 per year, virtually the same as the number found. He felt that other groups, mostly bigger birds, are probably not overlooked in such large numbers; they include about 240 to 340 herons and storks, ducks and geese, raptors, and gulls and terns" (posted 13 January 2007).

It stands to reason that large birds are less likely to be missed than are small birds, but in the absence of a data set of present-but-missed rarities, we find it hard to believe that one could begin to extrapolate such numbers at all. Certainly, one can use weekend vs. weekday effort to generate a rough percentage of rarities missed during the week due to lesser field efforts—but is it truly possible to know how many rarities were missed on Sunday? To spell it out: did the 21.3% of the week's rarities on Sunday represent half of the rarities actually present—or just 1% of the rarities present? Post's post (we couldn't resist) forced us to reconsider the question, if not to change our thinking on the matter. While the U.K. situation is quite different than that in North America—Great Britain has a smaller land area and larger numbers of birders scouring local patches that are, quite often, marginal but island-like in their own right (as example, check out Chorlton Water Park in Tom McKinney's blog: <http://skills-bills.co.uk/2006.htm>)—even in a well-birded North American place, one can imagine that birders find only a minority of the rarities actually present. One might even make the argument in North America that we birders manage to find as little as 1/100 of 1% (yes, 1 in 10,000) of the rarities (continental, regional, and local)—no matter what the definition of the term. Indeed, if we knew the actual scope of the occurrence of such "rarities" (again, no matter the definition), we would be hard pressed to continue calling many of them rarities; "very low-density transients" might be more accurate.

Now, before coastal birders ascribe our above claim to hyperbole, or to the naïveté sometimes associated with a landlocked birding location, we should point out that our time at Cape May, New Jersey and Whitefish Point, Michigan has given us the impression that a sizeable proportion of rarities present at such places probably does get detected; moreover, concentrations of many migrant species along coasts are greater than in areas away from large water bodies. However, there are vast swaths of land away from the coastlines of the continent (including the Great Lakes' coasts) that are home to few or no birders. In fact, as birders living on the Great Plains and in the Great Basin can attest (and as attested in the introductory notes to the latter region's report), these tree-poor areas offer an incredible number of migrant traps at which rarities are concentrated and relatively easily found The down side to that blessing is that there are very few of us living in these areas, so most such areas are rarely visited by birders—and, let's be honest, *most have never been visited by a birder at all.* Access to most areas is limited, by lack of roads or permission, and birding tends to occur in the most easily accessed areas.

We are of the opinion that the finding of rarities, while certainly a function of birding intensity and skill, is also a product of simple serendipity. Yes, the prepared mind of the modern birder is more likely to be able to identify rarities as such but is, perhaps, less important than being in the right place at the right time and being moderately observant. A few cases in point follow.

Example 1. As noted in the Northern California regional report this season, a Fork-tailed Flycatcher was found and photographed 28 September. Yes, California is a coastal state and one with a larger-than-average and probably more-savvy-than-average birding community, which may discover more than the average percentage of rarities actually present. However, this bird was found in a non-coastal county and found by a relatively new birder. The significance of this record, in relation to our claim, is that no one (except the finder of the bird) knew of the bird's existence until he showed a photograph to a more experienced birder. Thus, this record nearly escaped us—and it was just the second for California.

Example 2. In the Colorado & Wyoming regional report, mention is made of an adult Whooping Crane that provided only the third modern record for Colorado. The location of the sighting is well out onto the plains, very

near the Kansas border. The party that found the bird may well have been the only birders in the field within 100 km (or more in most directions), and the flock of Sandhill Cranes of which the Whooping was a part just happened to fly within easy viewing range; the bird was seen in flight only. Indeed, the state's second modern record was of a juvenile roosting with a single Sandhill Crane in a small playa near Anton (about in the middle of the state's eastern plains) on 4 November 2004. The bird was found by a hunter who recognized it for what it was and phoned an acquaintance at the Colorado Division of Wildlife—who then notified a birder friend, who got the word out. Again, there were probably no birders in the field at that time within 150 km, and as the bird was present only on the evening of the 4th and the early morning of the 5th, it seems incredibly lucky that we heard about that one: the species' migration passes to the east of Colorado; most move through this latitude quickly on both spring and fall migrations; and there are just over 200 wild birds in existence. Still, the species is highly distinctive and conspicuous, far more so than most passerines, and we can look through back issues of this journal to calculate rough detection rates of the species through the Plains each year. It would seem that the increasing population over the decades has resulted in an increase in records of migrants, though the increasing number and avidity (and the improving communication) of mid-continental birders probably also play a role.

Example 3. Again in Colorado, this fall's report of a Ruff, only the state's third, came from a lake in Lincoln County on 27 September. As in the location in Example 2, Evilsizer Lake is in the middle of nowhere and is visited by birders fewer than 10 times per year. The bird was found by a very experienced birder, one who just happened to be surveying playas for the Rocky Mountain Bird Observatory and thus had been toodling around to many such middle-of-nowhere places. Without the funding to support the project, we certainly would have missed this one, as it was not present even late that very afternoon.

Example 4. Finally, an example from the Atlantic coast. In Bruce Mactavish's words: "A nonbirder photographed an unfamiliar bird in St. John's cove on 5 August. The photographs shown to the birding community a month later revealed Newfoundland's and North America's third record of Eurasian Oystercatcher." A large, gaudy species right in the well-birded provincial capital? Were there others unseen in the many remote coves of the province?

Our experience on the eastern plains of Colorado, where numerous and widespread planted hedgerows and homestead woodlots can be incredibly effective migrant traps, suggests that only a vanishingly small percentage of rarities in this area is actually found. We would hazard that less than 1% of these sites are visited even once in any given year and, if visited at all, are visited only once or twice. Yes, as with birding everywhere else, many of us go to the same proven migrant traps again and again (e.g., Chico Basin Ranch in Colorado), ignoring smaller or unproven woodlots on our way to those legendary sites. How many Magnificent Hummingbirds and Bay-breasted Warblers (both recorded 19 May 2002 in a single woodlot at Chico Basin Ranch) have we missed by not stopping? Given the thousands of such sites just in eastern Colorado, we cannot but believe that the numbers, were we to know them, would be alarming! In coastal Louisiana, how many minor patches of vegetation go unchecked during migration in favor of larger cheniers—even though tiny patches of trees have produced major rarities in the area? On the West Coast, where county birding/listing and a large birding population means regular checks of even the smallest oases in deserts and coastal areas, they count their eastern vagrants by the dozens or even hundreds, hence the phrase "regular rarities" there. Few places in the East can claim this sort of coverage, and so even some regular migrants (e.g., *Catharus* thrushes) would seem to have rather surprisingly low rates of detection. What percentage of the population of Bicknell's Thrush, for instance, is detected on migration each fall and spring—or, for that matter, what percentage of Gray-cheeked Thrush's population is detected (acoustic monitoring aside)? Bicknell's and Gray-cheeked have populations that number in the tens of thousands and in the millions, respectively; thus it would seem, based on reports in this journal, that birders are collectively detecting fewer than one in 10,000 of these species each season. With rapidly increasing participation by birders in "eBird" (<www.ebird.org>), we have more and more refined knowledge about how many such birds are detected, where, and when: our understanding of detection rates is in its infancy, but if our data continue to be collocated and easily analyzed (see the new Google tool on eBird), we'll soon understand far more about detections than most of us have ever imagined.

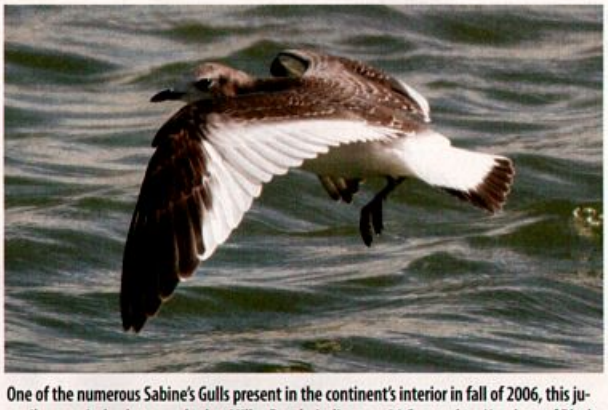
Returning winterers—potential insight into the longevity of individual birds

Speculation about detection rates and relative "rarity" in birds often entails consideration of how many individual birds are in fact responsible for individual records as maintained by bird records committees. For instance, how many Western Reef-Herons have been visiting sites in between Newfoundland and New Jersey in recent years? Birds assumed to be the same individual returning to a certain site to winter (most such birds arrive in the autumn season) or to summer (many arrive in spring) often become part of the local lore, even earning a nickname—but how many of these are in fact the same individual? And in how many instances are single individual "rarities" recorded in multiple locations (and assumed, typically, to be different birds)?

Virtually all of the data on average and extreme longevities of birds come from bird-banding studies. And banding (and other marking systems) and satellite-tracking studies have shown that many individual birds are faithful to wintering sites. However, when those individuals are rarities, particularly ones well outside of normal winter range, non-banders have an opportunity to contribute to a body of knowledge on the subject. Readers of these pages know of various individual rarities returning year after year to the same location to spend the winter: the grizzled Barrow's Goldeneye that winters at Shark River Inlet, New Jersey; the still-unidentified dark-mantled gull ("Ol' One Foot") in coastal Alabama, and various and sundry oddities in southern California, among them "Al" (the Laysan Albatross at Point Arena) and those inexplicably site-tenacious Thick-billed Kingbirds. With birds so far out of typical range, we feel relatively comfortable with our assumption that a rare bird of the one species at the same locality in consecutive years is the same individual returning to a site of successful wintering. Yes, the birds are, for the most part, not definitively individually identifiable, although "Ol' One Foot" and other injured birds could be considered so. And, yes, there are situations in which our certainty is lessened. For instance, a returning Golden-crowned Sparrow at Red Rocks Park near Denver was joined in its third winter by an immature of the same species When only one returned the following fall, local birders wondered which of the previous year's birds it was. However, in at least some cases, careful records on what appear to be the same individuals returning can provide important data on the longevity of birds. Hopefully, when countenanced in publications like this one, such information will eventually make its way into online compendia such as the *Birds of North America* (<http://bna.birds cornell.edu/BNA/>).

Table 1 lists this fall's crop of returning winterers, at least those specifically mentioned as returning individuals—with apolo-

Yellow Rails, along with many other boreal breeders, were reported with rather high frequency in autumn 2006 across much of the Lower 48 states. This Yellow Rail was found by Joe Nowak 15 August 2006 in Chicago, Illinois. It was taken to a wildlife rehabilitator and, after being declared healthy, was released shortly thereafter. There are very few August records for the Illinois & Indiana Region, and the only other Yellow Rail to arrive this early in fall was one in Indiana in 1885. Another early Yellow Rail was seen in Maryland on 22 September this season. *Photograph by Annette Prince.*



One of the numerous Sabine's Gulls present in the continent's interior in fall of 2006, this juvenile was nicely photographed at Miller Beach, Indiana on 20 September. Numbers of Black-legged Kittiwake were also noted to be unusually high on the Great Lakes and in some interior reservoirs, which suggests a productive nesting season. *Photograph by Michael Brown.*

Steller's Jays staged a remarkable invasion in southern Yukon this fall. The thin blue streaks in the crown of this bird photographed at Carcross on 25 September 2006 indicate that it came from a coastal population; the dull outer wing coverts identify it as a hatch-year bird. *Photograph by Cameron Eckert.*

Table 1. Birds returning to wintering sites in the United States and Mexico, fall 2006.

Birds returning for at least their second winter
Eurasian Wigeon at Hampton, VA (the species has been found here sporadically since 1996)
Western Grebes (2) at Tennessee National Wildlife Refuge, TN
Red-tailed Hawk (*calurus*, dark morph) at Oxbow Meadows, GA
Allen's Hummingbird in both Houston, TX and Cullman County, AL
Broad-tailed Hummingbird at Mission Viejo, CA
Vermilion Flycatcher at Eufala National Wildlife Refuge, GA
Thick-billed Kingbird at Wilmington, CA
Yellow-throated Warbler in Scott County, IA*
Yellow-throated Warbler in Miraflores, Baja California (possibly not a winterer?)
Grace's Warbler in Santa Maria, CA*
Streak-backed Oriole at Gilbert Water Park, AZ
Birds returning for their third winter
Lesser Black-backed Gull at Coulee Lakes, WA
Eastern Phoebe in El Rosario, Baja California
Black Phoebe at Broken Bow Reservoir, OK
Tropical Kingbird at Seeley, CA
Black-throated Blue Warbler in Guerrero Negro, Baja California
Audubon's Warbler in Chapel Hill, NC
Birds returning for their fourth winter
Falcated Duck in Coburg, OR
Harlan's Hawk in Kings County, CA
Rufous Hummingbird at Valrico, FL
Grace's Warbler near Ciudad Constitución, Baja California
Birds returning for at least their fifth winter
Northern Waterthrush in Santa Clara County, CA – 5 years
Thick-billed Kingbird in Yuma, AZ – 6 years
Harlan's Hawk near Humboldt Bay, CA – 8 years
Mew Gull in the Union Reservoir area, CO – 9 years (a lame individual)
Eared Grebe at Gloucester, MA – 12 years
Laysan Albatross at Point Arena Cove, CA – 14 years
* = Number of winters present inferred from regional report but was not specified.

gies for the focus on more temperate (coastal and/or southern) areas in this list and for records we may have inadvertently omitted (particularly those banded hummingbirds in the Southeast—see the winter regional reports). We found it interesting that reports from Canada, Alaska, and the higher-latitude interior regions of the Lower 48 states made no mention of returning birds.

What may have been the longest-term returner was not mentioned in this fall's Colorado & Wyoming report. A Great Black-backed Gull first found in its first plumage cycle at Pueblo Reservoir, Colorado, in spring 1993 (and accounting for the state's 6th record) may have been at this site for its 15th winter this year. However, in winter 2005-2006, there were three adult Great Black-backed Gulls at the site (two were there in winter 2006-2007, with at least one arriving in the fall of 2006), so we no longer have any certainty that any particular individual is the beloved (at least, for a gull) "Murray."

Of course, it would be easy enough to take the logic of our first section, on the number of rarities missed, and discount many of the records of returners listed in Table 1—if there are scores, even hundreds of "rarities" traversing the continent (as we may infer from recent movements of species as disparate as Slaty-backed Gull, Black-bellied Whistling-Duck, Northern Wheatear), then patches of habitat are apt to attract one or more of these "vagrants," and we birders may be naïve enough to believe that our old friends are returning to

favored sites, when in fact there have been multiple individuals involved (the Great Black-backed Gull example is germane). To infer longevity without firm evidence that the same bird is in fact returning is not strictly possible, so it may be worthwhile to mark or band birds that appear to be returners. There have been some remarkable records of long-lived banded birds in recent years, but in the case of apparent returning birds, a color band or two could help to erase doubt.

Increasing birds—or observers?

If one accepts the idea that birders are finding only a small fraction of the birds that pass through an area, then it stands to reason that increasing coverage would result in an increasing number of most bird species reported. We know that the number of birders has grown steadily since the 1970s, but it is by no means the case that reports of all species are on the increase—Evening Grosbeaks in the East have become rarities in most areas, for instance, as they were in the 1950s, just one example among many. What about birds whose numbers vary sharply from one autumn season to the next? Writers of this column have often attributed unusually high autumn counts of certain species to a productive or "successful" nesting season, and, in some cases, this can be verified by researchers on the nesting grounds (as with certain species of geese). With various pelagic species, our impressions of relative abundance from season to season, however, are probably influenced by large-scale oceanographic and meteorological factors of which we're only dimly aware (Pyle 2006). But what of those species whose breeding grounds lie mostly north of Breeding Bird Survey routes, those that nest in the northernmost prairies and marshes, the boreal/taiga belt, and the tundra and Arctic coasts? There were, for instance, remarkable increases in reports of several geese (including Greater White-fronted), American Bittern, Yellow Rail (Figure 6), all three jaegers, Black-legged Kittiwake, Sabine's Gull (Figure 7), Connecticut Warbler, Hudsonian Godwit and other species of shorebird, both kinglets, Hermit Thrush, and Rusty Blackbird.

Thankfully, we do have situations from which we can better ground-truth our understanding of the relationship between bird numbers and observer activity, at least crudely. Take the invasions of jays of fall 2006, for instance. Gray Jay, typically confined to the boreal forest, moved out of that environment and southward, particularly into southern Manitoba, northern North Dakota, and along the north shore of Lake Superior, from Ontario south to Duluth, Minnesota. Because the number of observers in such areas is probably relatively stable, if growing modestly, and because many years pass between observations of Gray Jays in these areas, it is a safe bet that these observations reflect a genuine irruption—not a suddenly more astute or numerous set of observers. The same is true of the southern Yukon's influx of Steller's Jays (Figure 8), though the network of wildlife observers in that region (and the facility of their communication, over the Internet) has grown by relative leaps and bounds of late.

Yellow Warbler is among many Neotropical migrant passerines that have in recent years exhibited "late-date creep"—that is, records of October and November individuals have become increasingly frequent and increasingly later, with some birds even detected well into December. This bird at Maumee Bay State Park, Lucas County, Ohio 26 October 2006 was one of three found in the state during the last week of the month. *Photograph by Brian Zweibel.*

Records of seasonal rarities—birds found outside their normal period of occurrence—also appear to be on the increase. We once thought of such birds as "lingering," but recent thinking has turned also to models of reverse migration, potentially also linked with weather patterns (Sullivan 2004, Sullivan and Wood 2005). Although we cannot confirm the suspicion with statistics, our reading of this journal over the years suggests that the number of belated birds in autumn seasons has increased—not evenly (some seasons have far more than others) but, overall, rather steadily. We suspect that the increases we note (e.g., Figure 9) are tied both to influxes of reverse migrants that are able to survive because of milder late-autumn weather *and* to a steady increase in birders who are aware that October and November (and even December) hold some of the best birding for vagrant species across much of the continent, and so in hunting for strays, we find an increasing number of "late" birds as well.

Can we ever turn our impressions of increase or decrease in certain species (late birds, invading birds, or migrants, whether abundant or scarce), especially over large areas, into accurate statements about trends in observed numbers of birds, much less bird populations? This column has asked the question scores of times. It has been answered only rarely: by collecting, vetting, and analyzing all data available from all observers—a task proclaimed hopeless or impossible on more than one occasion in these pages. Only in the case of eBird has the task been considered feasible and meaningful. So our hope is that, as the buy-in increases throughout North America (and in other parts of the Americas), eBirders—all of us—will be able to see trends in bird populations over the decades to come. But the refinement of our understanding will depend on our participation: the more eBirders and checklists, the more robust the data set that forms the basis of our perceptions.

Those (few?) we didn't miss: Flycatchers & other firsts

As always, fall migration brought along some lost birds for the ride, including many representing firsts for the territory, province, state, or region where they were found. Three new species, from three different points of the compass, will be added to the North American list if accepted: Barred Antshrike, Pallas's Warbler, and Song Thrush. Of course, most of the records noted below should be considered provisional until the appropriate records committee reviews the details of each. For now, though, they provide a bit of inspiration to keep looking for unexpected birds, and to give odd-looking or puzzling birds a bit of extra scrutiny and the benefit of a few notes, sketches, or frames of film (or for growing numbers of us, digital space on our memory

cards). In most cases, these records represent part of growing patterns of "vagrancy," but in some cases—for instance, the many extralimital flycatchers reported—improved observer acumen is certainly also part of the pattern, as is the redoubled effort to find vagrants in October through December.

In Newfoundland, an apparent (and calling) Western Wood-Pewee graced Cape Spear 9 October, and a Gray Flycatcher made it to Cambridge, Massachusetts 5-9 November (in company with a Least for the first two days). Another cryptic *Empidonax*, a Pacific-slope/Cordilleran Flycatcher at Manomet, Massachusetts 10 November represented a first for this heavily birded state and for the New England region. In the past, it would have been conceivable for such a bird to be identified only as "*Empidonax* sp." or as a late Yellow-bellied Flycatcher. Even in the West, migrant empids in the "Western Flycatcher" complex can often be identified only in the hand, and, even then, many birds key out within an overlap zone between Pacific-slope and Cordilleran Flycatchers. Colorado, for instance, confirmed its first Pacific-slope Flycatcher only this season (despite suspicion that the species may be an annual migrant through the state)—a bird mist-netted by the Rocky Mountain Bird Observatory that measured out well beyond the overlap zone. Likewise, in many states, notably Florida in recent years, calling "Traill's Flycatchers" have been increasingly keyed out as Alder Flycatchers. Floridians also turned up a state-first Hammond's Flycatcher (Figure 10), and New York recorded its second. Out West, California's Farallon Islands had reports of Alder and Yellow-bellied Flycatchers in September and October, respectively—both still considered real rarities there.

As usual, a few Say's Phoebes turned up east of usual range, mostly in the third week of September (New York, Vermont, and Illinois [two]) but one as early as 10 September (Wisconsin's third), and Vermilion Flycatchers made it to Georgia and Michigan. *Tyrannus* flycatchers, a staple of fall, were scattered liberally: Gray Kingbirds from North Carolina, South Carolina, Québec, and New Jersey; Scissor-tailed Flycatchers in Massachusetts, West Virginia, South Carolina, South Dakota, Michigan, Ontario, Georgia, North Carolina, and Nova Scotia; and Fork-tailed Flycatchers in Florida (20-21 November), New Hampshire (state first, 18-20 November), and even northern California (state second, 28 September). The most surprising flycatchers of the season, however, may have been: the Great Crested Flycatcher at Scarborough, Massachusetts 9-10 November, one of very few recorded this far north so late; the virtually certain Sulphur-bellied Flycatcher at Cape May, New Jersey 13 October (the first north of Florida for the East); and the apparent Southwestern Willow Flycatcher at Forman's Branch, Maryland 12 Sep, a subspecies group unrecorded in the East.

Western flycatcher species took the East by storm in autumn 2006. Representing the first record for Florida was this Hammond's Flycatcher at Fort De Soto Park 30 and (here) 31 October 2006. Another Hammond's was beautifully documented at Rye, New York 19-28 November, just the second for the Empire State and one of very few for the East. ***Photograph by Lyn S. Atherton.***

Canada as a whole recorded ten new provincial firsts. Newfoundland's first White-tailed Tropicbird and Nova Scotia's first Red-billed Tropicbirds (two) were all found as beachcast specimens. Québec picked up two new species for the province, Gray Kingbird and Song Thrush, the latter being all the more remarkable for its location, well away from the Atlantic coast. (One wonders, given the low detection rates for shy thrushes in the East: how many more Song Thrushes were missed this season?) The Yukon Territory's list grew by one, as Lesser Goldfinch was added; a White-tailed Kite was not only Saskatchewan's first but also first for the Prairie Provinces region. Saskatchewan added Curve-billed Thrasher this season, and Alberta picked up a first Yellow-throated Warbler. A Eurasian Hobby was a first for British Columbia.

The "East" (here including Bermuda and the West Indies) had at least ten potential firsts for the season, including a few mentioned above. Maine and New Hampshire shared their first Western Reef-Heron, probably the same bird that had summered near Halifax, Nova Scotia. Birders off the Maryland coast identified a possible Cape Verde Shearwater; the only currently accepted record of this species in North America is from North Carolina waters. New York birders encountered the state's first Violet-green Swallow in the company of seven Cave Swallows late in the season. Maryland's Inca Dove was not only a state first but first for any location in the East. With a handful of previous sight reports, North Carolina firmed up Bell's Vireo on its state list with a photographed bird. A Ross's Goose made its way out to Grand Bahama Island, marking the West Indies' first recorded occurrence of the species. Two Rocky Mountain birds were reported from Bermuda: MacGillivray's Warbler and Western Tanager, both anticipated there.

Away from the Atlantic, there were another ten additions from the Northern Great Plains to the Gulf Coast. West Virginia added a Black-chinned Hummingbird, as did Indiana. A duck hunter in Michigan may have puzzled over a Black-bellied Whistling-Duck that fell before his gun, proving to be the state's first; North Dakotans saw their state's first Black-bellied Whistling-Duck at Jamestown. A Broad-tailed Hummingbird may also represent a first North Dakota record. A Wisconsin birder saw what may be the state's (and North American interior's) first record of Yellow-browed Warbler; see the S.A. box in the Wisconsin report for more details of this intriguing sighting; another would turn up in winter in Baja California. Kentucky hosted a Little Stint, first not only for that state but also in the Ohio/Mississippi valleys region. Tennessee joined many nearby states in recording its first Cave Swallow, with several seen at the end of September. Louisiana had its first well-documented Iceland Gull and Mississippi its first Rock Wren.

The Intermountain West and Texas had at least five state firsts. Montanans found a Curve-billed Thrasher, while Idaho's list will grow with the addition of Orchard Oriole. Following in the footsteps of other Pacific refugees at the Great Salt Lake, a cooperative Pacific Golden-Plover provided many birders their first chance to count the species on their Utah lists. The first Black-capped Gnatcatchers in New Mexico, a pair, stayed to nest and raised three fledglings. And the already lengthy Texas state list increased by one: a night-vocalizing Barred Antshrike, never seen but heard and audio-recorded, passed muster with the state records committee.

From the Pacific coast states, eight new species were reported. Alaska added Northern Lapwing and Pallas's Warbler—on the latter, see the lead article in this issue. Oregon birders found two birds new to the state, Masked Booby and Ruby-throated Hummingbird. The Masked Booby also represents a regional first, as does Washington's first Common Ringed

Plover. Washington also enjoyed its first Smith's Longspur. California had a pair of exiting first state records: a first Ross's Gull, the southernmost ever recorded anywhere (see the Photo Salon, in this issue) and a first Taiga Flycatcher, the latter a first New World record south of Alaska. Offshore, a White-rumped Sandpiper on O'ahu Island made a first record for the Hawaiian Islands region.

Mexico's two major peninsulas swept the first state records honors this season: the Baja California Peninsula had a Chimney Swift and the Yucatan Peninsula a Spotted Rail. A Scaly-breasted Hummingbird was also a first for the Yucatan region, although it will be hard to determine if Campeche or Quintana Roo will claim it, as it was found in a disputed border area. Honduras picked up Fasciated Tiger-Heron for its list, and Nicaragua added Solitary Eagle and Yellow-headed Caracara. A Veery banded in El Salvador established the first record of that species in the country. Finally, Shiny Cowbird widened its territory into Guatemala, as three males and a female provided the country's first record of the species. Belize appears to be the next in line for the expanding range of that species.

These first records become benchmarks in the records books, but they also serve an important function: they alert the birding community, and ornithologists, to the possibility that the species is to be watched for in the area—either as a cryptic vagrant that has been theretofore overlooked (as, arguably, with Common Ringed Plover) or as a species showing signs of expansion (Shiny Cowbird), irruption (Steller's and Gray Jays), weather-related influx (Northern Wheatear), or some other movement. In so many instances, first regional records are just the tip of the iceberg, and second through tenth records follow rapidly—often because observers refine their searches based on what they read here and elsewhere about bird records. This journal's job has a paradoxical quality: by alerting more people to changing patterns of occurrence, and to the presence of subtle species such as Common Ringed Plover, we increase awareness of such birds, thereby precipitating more reports (hopefully mostly accurate, well-documented reports!) of the species. If a tree falls in a forest, but there's no one there to hear it, it surely makes a sound; but if a rarity visits a copse (or shelterbelt or chenier or oasis), but there's no one there to document it, we will never know about its visit. Whether one ponders Heisenberg's uncertainty principle, Schrödinger's cat, or just plain "observer effect" from that old *Star Trek* episode, the nefarious ways in which our ever-changing observations of birds (and communication about those observations) inflect and influence our measurements of their populations, and in turn shape our future observations, will never allow for comprehensive understanding—but we have made such great strides in our reflections on North American birds in recent decades. Anyone recall the time when rarities were treated as mere avian entertainment? We've come a long way.

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