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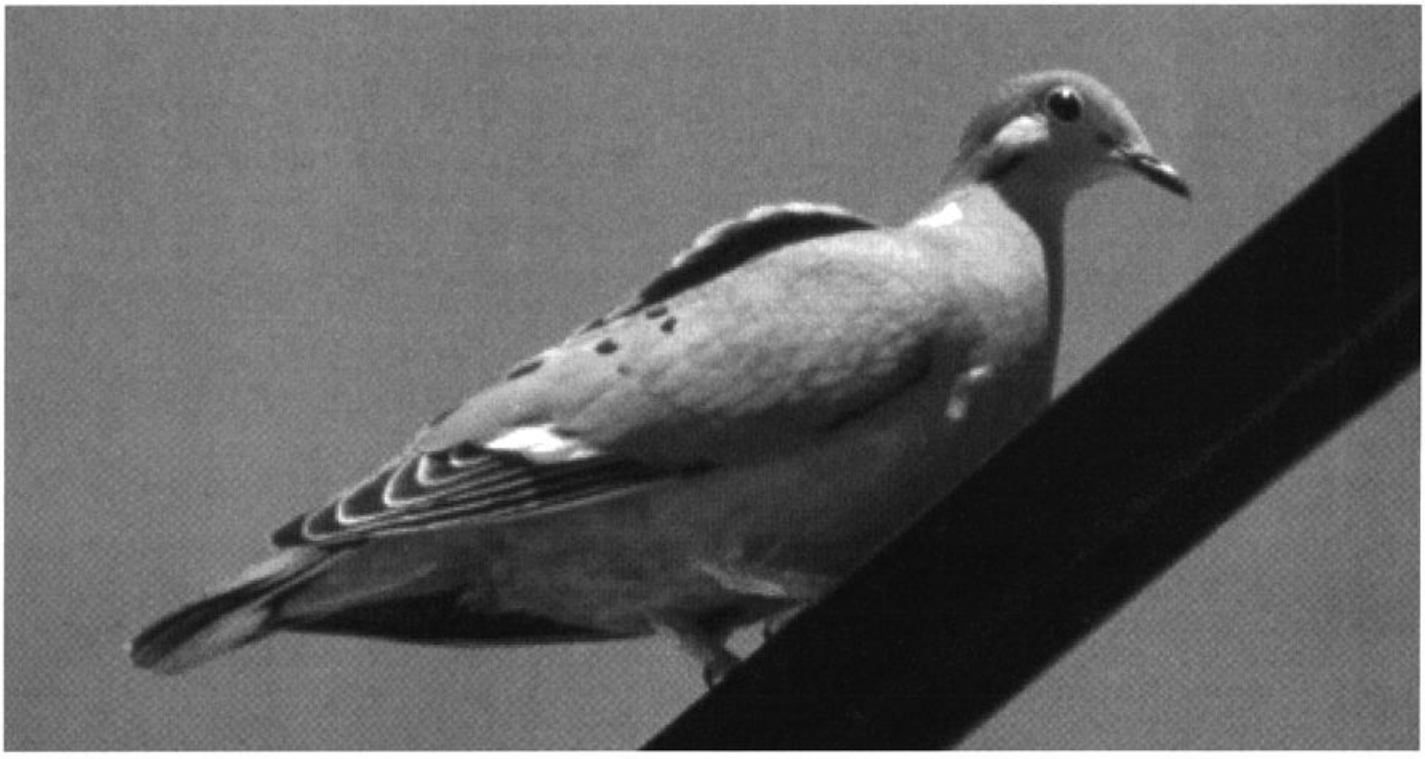
The Changing Seasons: Musings of a migrant birder



This Zenaida Dove, a genuine rarity in the United States, was photographed 5 May 2002 (present 3-6 May) at Key Largo, only the fifth verifiable Florida record. All A.B.A. Area records are from the Florida Keys. Many other Caribbean species were noted in Florida this spring, perhaps as a consequence of the strong easterly and southeasterly airflows over the peninsula. *Photograph by John Puschock.*

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Spring—a season of change that signals the arrival of breeding birds, ushers in the nesting season, and bids adieu to many wintering birds. For me, spring is a seemingly endless blur of migrants—waterfowl first, followed by gulls, raptors, shorebirds, sparrows, warblers, and, last but not least, those pesky empids. At season's end, many species are still northbound (some shorebirds, Common Nighthawks, several *Empidonax* and *Contopus* flycatchers, and a few warblers), while other species are already entering the postbreeding period (many tropical species, plus Bald Eagle, Great Horned Owl, and Horned Lark, to name a few). The day-to-day changes in species diversity, most evident between mid-April and mid-May, are cause for wonder. And what spring season would be complete without at least one Big Day—those tireless adventures that often yield more than half of a state's annual bird list in a single day, all while adding hundreds of miles to the designated vehicle (usually mine!) and skipping more than a few hours of badly needed sleep? Despite all the excitement of spring migration, I am invariably exhausted by late May and look forward to the brief rest summer offers after the frenetic spring birding pace!

In keeping with past writers of this column, this Changing Seasons article follows no specific format and simply offers my perspectives on some aspects of the 2002 spring migration. I have summarized some of the more striking regional and national patterns (both for birds and weather), highlighted many of the more notable rarities, and suggested an objective method for reviewing extreme arrival dates. My intent here is thus twofold: first, to offer a concise summary of this spring's migration, and then to take a moment to discuss a specific topic that may be of interest to other birders. Introductions aside, let's get to the good stuff the birds!

Weather

Weather patterns during the spring 2002 season reversed the general pattern seen over the past several years with its return to cooler conditions The "spring" season began with wintry conditions in early March, the coldest weather of the winter in many regions (see Brinkley 2002). The first week of March was "frigid" in the Rocky Mountains, Arctic air enveloped many parts of the Northwest, it was "colder than it had been all winter" in the western Great Lakes region, and extremely cold air dipped as far south as Texas. In the Prairie Provinces, this was labeled "the coldest spring since … the 1940s."

After this brief cold spell, the remainder of March and the month of April returned to near-normal temperatures in most reporting regions A brief period of record and near-record warmth, accompanied by strong southerly winds, occurred over the eastern two-thirds of the country and south into Mexico in mid-April and was responsible for numerous record-early arrival dates. Despite this early warming trend, unseasonably cool weather gripped much of the continent for most of May. Snow fell in late May in parts of the Northwest, northern Great Plains, and the Northeast. Migration peaks were delayed in many northern regions, and several reports noted the extremely late leaf-out (2+ weeks late in many areas). Despite these cool conditions, many migrants arrived at or near their normal arrival dates, though mass arrivals of some species in far-northern areas were delayed considerably

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In addition to the cool late spring weather, drought conditions persisted in many Regions. Drought gripped Baja and the southern Pacific Coast, much of the Desert Southwest, the Great Basin, the southern Great Plains and northern Mexico, parts of the Southeast and Northeast, and Bermuda. Spring followed on the heels of the driest winter on record for much of southern California. In other Regions, particularly the Great Plains and Southeast, severe drought conditions have now entered their third year. Spring rains, which were not substantially below normal in many Regions, simply were not sufficient to overcome the moisture deficit that accrued over the past few years. These widespread drought conditions appeared to affect the dispersal of some migrants. A common theme in the West was the concentration of migrant passerines at the few oases with permanent water, resulting in spectacular counts of many common migrants, particularly along and near the Pacific Coast.

Table 1. Reports of selected western and mid-continental species east of typical range, spring 2002.

White-faced Ibis	Maine, New Hampshire*, Virginia, Florida, Indiana (3), Illinois (2), Georgia*
Black Brant	West Virginia*
Ferruginous Hawk	Ontario, New York*
Pacific Golden-Plover	Massachusetts*
Snowy Plover	Ontario, Missouri
Band-tailed Pigeon	Québec
Vermilion Flycatcher	Ontario, Michigan, Georgia, New Jersey*
Ash-throated Flycatcher	Georgia
Cassin's Kingbird	Florida
Scissor-tailed Flycatcher	Maine
Clark's Nutcracker	Alabama*
Varied Thrush	Pennsylvania
Sage Thrasher	Ontario, Michigan
Audubon's Warbler	Nova Scotia, Ontario
Black-throated Gray Warbler	New York, Ohio, Michigan
Townsend's Warbler	New York (2)
Hermit Warbler	Ontario, Nebraska*
Western Tanager	Maine, New Hampshire, Ontario (3), Michigan (2), Illinois, Wisconsin, Minnesota (12+)
Green-tailed Towhee	Michigan, New Brunswick, North Carolina
Black-throated Sparrow	Minnesota
Lark Bunting	Virginia, Ontario
Harris's Sparrow	Massachusetts (2), Virginia
Pink-sided Junco	Québec, Arkansas
Smith's Longspur	Ontario
Chestnut-collared Longspur	Nova Scotia
Black-headed Grosbeak	Illinois, Minnesota, Manitoba, Nova Scotia
Lazuli Bunting	Minnesota (7), Manitoba, Massachusetts*
Brewer's Blackbird	Québec
Bullock's Oriole	Virginia
Scott's Oriole	Minnesota (2)
Lesser Goldfinch	Mississippi*

Asterisks indicated first documented state records; italics indicate common English names for subspecies, in this case of Brant, Yellow-rumped Warbler, and Dark-eyed Junco. All reports should be considered tentative until verified.

Similarly, many wetland birds were concentrated at the few available water areas in the West. Other parts of the continent were at near-normal precipitation levels, except for the Hawaiian Islands and Québec, where precipitation was slightly above normal.

General bird patterns, spring 2002

As with every season, there are always a few continental patterns that catch our eye, and this spring was no exception. A spring highlight for many birders is the active pursuit of warblers (and other passerines), commonly referred to as "warblering" by some of my birding friends The spring 2002 season was particularly good for observing this group, especially inland in southern central Canada, the Great Plains, in parts of the Northeast, and along the mid-Atlantic Coast. The immediate Gulf and southern Atlantic coasts generally experienced lackluster passerine fallouts, largely because a huge dome of high pressure remained entrenched just north of this area from mid-April through early May, causing persistent southerly winds over the Gulf of Mexico. Such unfavorable conditions for observing trans-Gulf migrants along Gulf shores rarely persist for so long, and the strong southerly airflow clearly contributed to one of the poorest passerine migrations there in several years It was called "one of the least fulfilling [spring migrations] in years" along the Texas Coast. Reports in the West were mixed—in most regions, the eastern warbler showing was about average, except that it was thought to be below average in southern California. Along the West Coast, the passerine migration was thought to be exceptionally good, especially for western migrants. This was probably the result of severe drought conditions that ultimately reduced vegetative cover, and therefore food supply, with the result that these migrants concentrated at the few oases with favorable conditions.

As I read through the regional reports, I was struck by the variability in passerine fallouts continentally. A perusal of the reports revealed the following fallouts: 8 April and 13 and 17 May in coastal Texas, 18 May along the Middle Atlantic Coast, 12 and 13 May at Block Island, Rhode Island, 9 May at Point Pelee, Ontario, 16 May along southern Lake Michigan, 15 and 18 May in Minnesota, 4-5 May and 22-23 May in the Prairie Provinces, 11, 17, and 21-23 May in the Northern Great Plains, and 24 May in Québec. The localized nature of passerine fallouts results from a combination of regional (passage of a cold front, etc.) and local (rainfall, fog, favorable winds, etc.) atmospheric conditions. We still struggle to understand and to predict such fallouts, but perhaps our abilities in this regard will continue to improve, as more birders become aware of the usefulness of Doppler radar for detecting bird movements

One of the more noticeable patterns this spring was the eastward displacement of many western and mid-continental migrants, particularly in May (Table 1). While there are usually a few such reports each spring, the large number of reports this spring was especially interesting. It is perhaps even more difficult to discern plausible causes for the vagrancy of such individuals displaced toward the East than it is to interpret the displacement of eastern birds to the West in spring. In the latter case, there are often large counts of eastern birds in western migrant traps (as in spring 2001), while in the East, almost invariably, *single* western birds seem to be the norm. Is there a connection to be made, for instance, between single spring vagrants such as the Vermilion Flycatcher near Cape May, New Jersey and the Lark Bunting at Chincoteague in Virginia, both found during and following strong southwesterly winds about a day apart? A connection is possible, but context for a strong connection is not obvious. If one reads Marshall Iliff's column carefully, however, one sees what some "Changing Seasons" authors have identified as a "shift" of a fair bulk of more westerly migrants toward the East. The birds involved were not boldfaced vagrants but rather species whose primary migrational pathways in spring tend to be well away from the Atlantic

Seaboard. Such surmises are always tenuous, but a mild pattern does emerge from the middle Atlantic regional reports. Many of the birds listed in Table 1, though, had little or no connection with the mid-May rarities on the coast: they were overwintering birds (Varied Thrush, Cassin's Kingbird, Ash-throated Flycatcher, a Black-throated Gray Warbler), or wintering birds newly newly discovered, or migrants returning northward from wintering areas well to the east of normal (e.g., one can imagine the Ferruginous Hawk in New York having spent the winter in Florida), or displaced by drought conditions or a failure of cone crops (the Clark's Nutcracker in Alabama comes to mind). A few reports of Baird's and Buff-breasted Sandpipers in eastern states (Georgia and Virginia) require scrutiny but if correct could strengthen the impression of a westward shift Both sandpipers are almost mythical in spring anywhere in the East.

Perhaps as a result of the strong easterly and southeasterly airflows over southern Florida this spring, that state witnessed one of its better seasons in recent memory for Caribbean strays, with reports of multiple La Sagra's Flycatchers, a Zenaida Dove, Western Spindalises, a Key West Quail-Dove, a Bananaquit, and a Yellow-faced Grassquit. Again, a mild correlation arises between sustained, prolonged wind flow and influxes of vagrant species from the direction of wind flow.

Shorebird migration occasioned little comment, except in the West (where there was a mild incursion of typically eastern species such as Hudsonian Godwit and Baird's Sandpiper), but Eurasian species were well-represented outside of Alaska, where the spring was poor for Asian birds, owing to a lack of eastwardly-moving cyclones.

In the East and even Midwest, observers enjoyed quite a range of Old World species: a Garganey was in Ohio (and another was to the west in Saskatchewan), a rather cooperative Eurasian Kestrel frequented Cape Cod, Massachusetts, there were the usual scattered reports of Curlew Sandpipers and Ruffs, 6 European Golden-Plovers made it to Newfoundland and a Common Ringed Plover and a White Wagtail were in Québec, a Little Egret once again blessed Nova Scotia, and a Common Greenshank found its way to St. Pierre et Michelon. Single Eurasian Whimbrel were found in two Atlantic provinces, in New Jersey, and at Cape Lookout, North Carolina; undoubtedly, the rise in interest in subspecies will produce more such records. Of like note, single Bar-tailed Godwits (possibly the same bird) in Connecticut and Massachusetts were identified as the race *baueri;* the majority of East Coast records are thought to involve individuals of the race *lapponica*, from western Eurasia. A Siberian Accentor in Alberta and Slaty-backed Gulls in Idaho and Manitoba took top honors in the continent's interior. Among of all these odds and ends, patterns are elusive, but one could see a moderate "Iceland Express," as Kenn Kaufman coined it, in the Eurasian Kestrel, the incredible nominate White Wagtail, and the sprinkling of Old World shorebirds (four taxa, 13 birds) in the northeastern part of the continent, but there have certainly been more compelling fallouts of this kind. As Blake Maybank points out, the northeasterly winds that apparently brought in the golden-plovers and probably some of the other species were not particularly strong or sustained. A "Siberian Express" by contrast expressed itself only weakly; the accentor had probably overwintered on the continent, and Slaty-backed Gulls, while thrilling, have reached New York alone at least four times.

Interesting loon reports continued this spring, and all four regular species were seen at a single locale in Oklahoma in early April. Pacific Loons were surprisingly well reported in May, continuing a pattern that has emerged in the last few years. A perusal of the spring reports revealed individuals in New Jersey, Maryland, Florida, Kentucky, Texas, Minnesota, Illinois, and Oklahoma. In many regions, those late loons are probably worth a second look!

The spring season is also a period of transition between winter and the nesting season, except for a few species like the Great Horned Owl, for which the terms "winter" and "nesting season" are nearly synonymous! After a strong winter flight, Snowy Owls lingered well into spring in many northern regions. White-winged Crossbills, on the heels on a major irruption that penetrated even the Deep South (including a first state record for Alabama), were still much in evidence this spring, including a few notable reports of nesting. Common Redpolls also lingered in fair numbers in the upper Midwest and the Northeast, with singletons sweating it out as far south as Florida and south Texas! Other "winter" birds were less evident: very few Northern Shrikes, only a smattering of Snow Buntings (but one as far south as Arizona!), and the continued absence of Evening Grosbeaks in many Regions. Reports far to the south in Mexico echoed the lack of wintry weather farther north and hint that many northern visitors never made it that far south this winter.

Spring "migration" of a birder: the view from the continent's center

Spring migration is an exciting season of transition, and I can think of no better place to bird during this season than in the Great Plains It has all the ingredients for birding success—high species diversity, varied habitats, and more than its share of good migrant traps. The Great Plains is also a region of mixing for eastern and western species, a place where you can, in a few short hours, see Eastern and Western Wood-Pewees, Rose-breasted and Black-headed Grosbeaks, and Baltimore and Bullock's Orioles. The Great Plains experienced a pretty typical spring season through early May 2002, when the weather pattern began to change By mid-May, persistent easterly and southeasterly winds were the norm, affording ample opportunity for many typically "eastern" passerines to make their way west. Several weak cold fronts passed through the Plains region in mid-month, and the associated weather changes were ideal for migrational fallouts. Conveniently, mid-May once again found me birding the northern Great Plains during the height of spring migration, I was, as usual, not disappointed with the results.

I arrived in Ogallala, Nebraska the evening of 14 May, where I rendezvoused with birding friend Joe Fontaine. Our plan was to spend a few days birding migrant traps in western Nebraska and eastern Wyoming before parting for our respective summer work sites. We had noted the large passerine fallouts on 13 May on the Texas coast and in the Northeast with envy and hoped we would experience the same conditions in the Great Plains. On the 15th, we birded from Keith County westward; passerines were scarce, dozens of stops at promising-looking thickets yielded few birds, and our hoped-for prospects of a big warbler day were rapidly fading. In early afternoon, we detected a good fallout of *Catharus* thrushes in the Nebraska Sandhills; our total at the end of the day included 4 Veeries, 3 Gray-cheeked Thrushes, and 147+ Swainson's Thrushes. I don't think we saw a single cluster of trees in the Sandhills that didn't have at least one *Catharus* in it; in a couple of the woodlots we checked, the trees were almost dripping with thrushes! Oddly, there were few other migrants in the Sandhills except for thrushes.

The night of 15-16 May was uneventful weather-wise, with light southeasterly winds and an intermittent light rain. A quick evening check of birding listserves in the surrounding states revealed a good warbler fallout to our east on the 15th; if only the weather and birds would cooperate for us! On the 16th, we continued westward across the Nebraska Panhandle, briefly ventured into southeastern Wyoming, and then returned to western Nebraska. We found several Tennessee Warblers in each state (a hint of what was to come) and a spectacular male Prothonotary Warbler in Nebraska, but little else. It seemed that the

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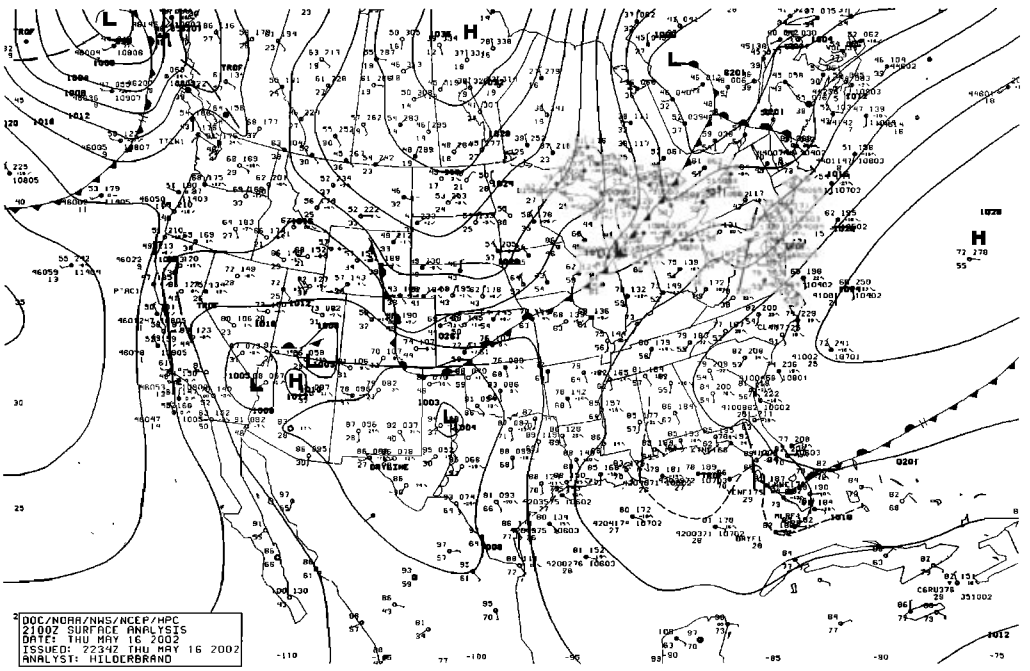


Figure 1. Weather map for 16 May at 1500MST. A cold front moves along the eastern edge of the Front Range, producing moderate east-southeasterly winds just to its east and north winds over the Great Lakes. The air behind this front was quite cold, and result in the the Western Great Lakes region was to stop migration in its tracks, especially in Minnesota and along Lake Michigan's shores. In the East, one to two days later, there was a modest fallout of waterbirds in the mid-Atlantic states (see the Middle Atlantic Coast report) and very cold temperatures at high elevations that also arrested migration of Neotropical species

favorable winds weren't so favorable after all.

Late on the 16th, a cold front was draped along the eastern edge of the Front Range with moderate east to southeast winds just to its east but strong winds from the north over the Great Lakes (Fig. 1). Overnight, the front strengthened, and by dawn the winds were north-northwesterly in southeastern Wyoming but still had a strong east-to-southeast flow less than 80 km to the east in Nebraska (Fig. 2). On the 17th, we birded our way from western Nebraska to southeastern Wyoming, retracing our way to several spots we had checked on the 16th. This was clearly *the* day for migrant passerines, and this fact was evident at our first stop of the morning. In a single thicket in a cemetery in Gering, Nebraska, we saw a singing male Worm-eating Warbler, a male Mourning Warbler, and a

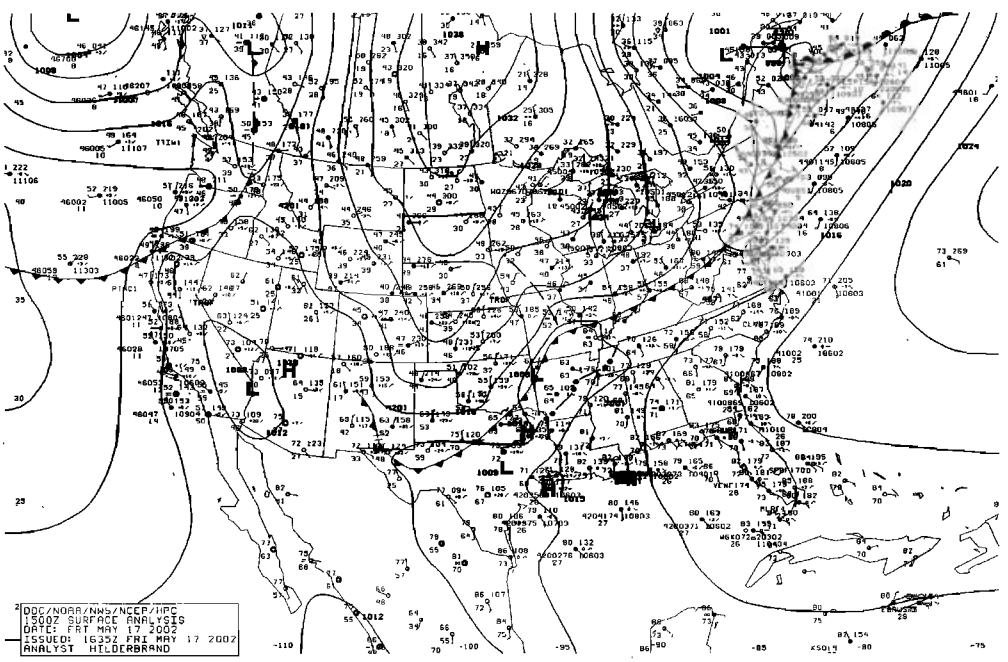
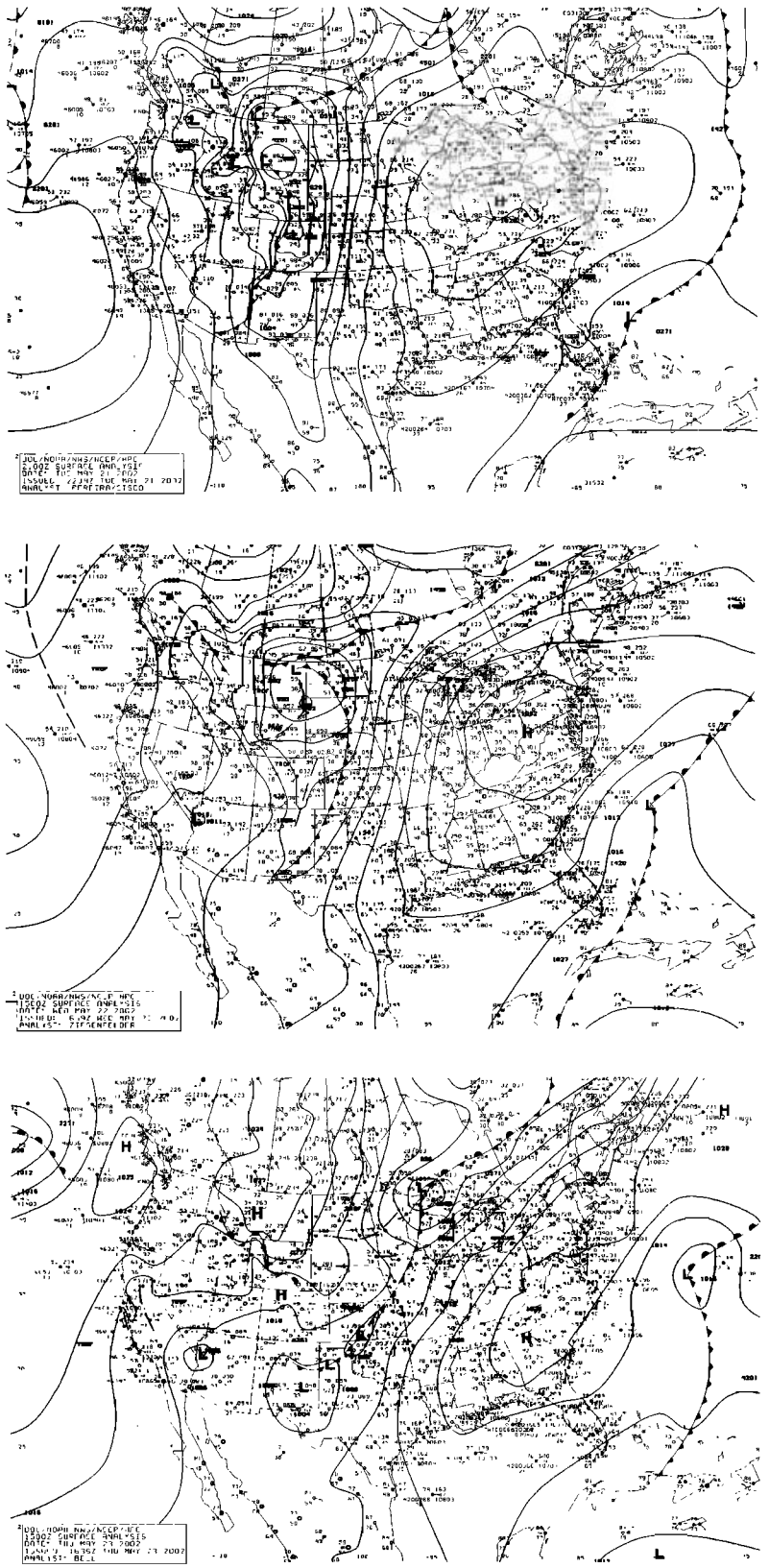


Figure 2. The same front shown on 17 May at 0900MST. Winds behind the front were northwesterly and clearly dropped migrants from Nebraska, as noted by the author, through the Northern Great Plains and the Western Great Lakes regions.

female Hooded Warbler in less than a minute! And that wasn't the last of the good news. We saw 10 Tennessee Warblers in both states, plus an eastern Nashville Warbler, a Chestnut-sided Warbler, and the continued presence of the Prothonotary Warbler found the day before. Neotropical migrants were found at almost every stop, often in good numbers, making this exactly the type of day we had hoped for. Our observations this day matched those of birders to our north: the Northern Great Plains also experienced a good fallout on the 17th, and there was also an outstanding fallout in the Western Great Lakes, which was first noted 15 May, with counts of *400-600* Tennessee Warblers around Lake Carlos and *488* Nashville Warblers around Mille Lacs Lake, both in Minnesota.

On the morning of the 18th, we birded a few locales in southeastern Wyoming before parting ways in mid-afternoon. Overnight winds had returned to an easterly flow with clearing skies, once again creating favorable conditions for migrants. At the Wyoming Hereford Ranch, a famous migrant trap outside Cheyenne, eastern warblers were again in evidence, including spectacular eyeball-to-eyeball looks at a male Connecticut Warbler. By midday, our Cheyenne area birding effort had produced a Townsend's, a Yellow Palm, 8 Tennessee, and 2 Chestnut-sided Warblers, plus a long list of the more common warblers. In a wet meadow near Hereford Ranch, a small flock of White-faced Ibis contained 2 adult Glossy Ibis, a further indication that this species is rapidly expanding in the Great Plains (see Patten and Lasley 2000). Our observations indicate that this was also a good day for migrants, although this was not specifically mentioned in any of the regional reports covering the Great Plains. Of course, there are relatively few birders in the Great Plains (compared to, say, many coastal areas), so this fallout may actually have been more widespread than was documented. Farther east, this front occasioned one of the best fallouts of the season in the Great Lakes area and along the Atlantic Coast, where shorebirds and waterbirds fell out at inland reservoirs around the District of Columbia and Maryland during heavy rains and unseasonably cold temperatures stopped most northward passerine migration. Even in these more intensely birded parts of the world, regional editors wondered about the extent of the fallout in the interior—the rain had kept many birders indoors!

In mid-afternoon on the 18th, before we parted ways, we reflected briefly on the past four days of birding. During this short period at the peak of spring migration, Joe and I tal-



Figures 3, 4,and 5. This more powerful late-May cold front, shown here on 21, 22, and 23 May (at 1500, 0900, and 0900MST, respectively), packed gale-force winds and snow squalls in Montana and elsewhere in the northern tier of the Great Plains. It was responsible for record fallouts (and probably high mortality) of warblers and other Neotropical migrant passerines from the Mountain West northward and eastward well into Québec.

lied a respectable 205 species (without even trying for a big list), including 28 species of shorebirds and 23 species of warblers. The diversity of eastern and western migrants, coupled with the varied habitats and scant human presence, made this a memorable birding trip, but it wasn't over just yet

One of the big players this spring season was a powerful storm that swept across the northern Great Plains on 21-23 May (Figs. 3-5), and which I was fortunate enough to witness in north-central Montana. Accompanied by gale force winds, snow, and rain, this storm deposited unprecedented numbers of passerines in its wake. For several days prior to 22 May, this region experienced moderate to strong easterly and southeasterly winds, broken by the passage of several weak cold fronts and intermittent light rain. Early on the 22nd, this general pattern continued, with winds increasing to more than 35 mph and then suddenly becoming northwesterly by mid-afternoon. The change in wind direction at my location in Phillips County at around 2 p.m., caused by a strong cold front, ushered in a temperature drop of nearly 30 degrees Fahrenheit in less than two hours! By 4 p.m. it was snowing lightly.

At 4 15 p.m., I noticed a warbler flying low across the prairie towards my camp. Normally such a sight would be of little interest to me, but I was not standing in typical warbler habitat. I was in the midst of the vast mixed-grass prairie region, where trees are still a rare sight and the tallest vegetation is the occasional sage bush that reaches a height of about a meter Flying into the strong winds, the bird finally made it to the shelter of my trailer—the nearest trees were miles away. The bird was an exhausted Tennessee Warbler, an uncommon spring migrant in this region, and a species I had never seen away from the Milk River corridor 80 km to the north. Within half an hour, the migrant flock seeking shelter behind my trailer had increased to 5-6 Tennessee Warblers, a Yellow-rumped Warbler, 2 Blackpoll Warblers, and an American Redstart. I now realized that something "big" was happening and quickly headed for the nearest trees several miles away. By now, the winds were gale force, it was snowing heavily, and the ground was white. The few trees at the nearest ranch were literally dripping with migrants, and they were easy to see because the trees were still devoid of leaves. I spent two hours birding this small area. In addition to large numbers of Tennessee Warblers, I found single Cape May and Black-throated Green Warblers and a Veery. Many exhausted migrants were foraging on the ground, and I won't soon forget images of Tennessee and Blackpoll Warblers, American Redstarts, and Ovenbirds walking at my feet!

The morning of 23 May dawned gray, and it was a chilling 22 degrees with a blanket of 7-12 cm of fresh snow. The winds had subsided, and I was hopeful that a few migrants had survived the night. A morning tour of several local migrant spots turned up disappointing numbers of passerines, and I suspect that many did not survive the night. In addition to hundreds of Tennessee Warblers (easily the most common passerine migrant), I found single Magnolia, Cape May, and Palm Warblers. But, as on the previous day, it was the images of "showy" Neotropical migrants against a snowy background that I remember the most: Least Flycatchers flycatching (for what, I have no idea) over snow-covered ditches, a striking male Blackpoll Warbler perched atop a snowdrift, and several brilliant male Yellow Warblers filling a snow-covered Russian Olive! These images are rarely seen by birders, and they certainly don't bode well for the birds themselves. In addition to passerines, there was a respectable shorebird movement that included 29 species in Phillips County, Montana.

This late May storm created some remarkable birding conditions in its wake There were astounding numbers of Tennessee Warblers everywhere—counts in the hundreds were common in eastern Montana, there were record numbers in western Montana (24), good numbers were deposited along the southern Front Range of the Rockies (49 in Colorado and 15 in Wyoming were excellent totals for those states), and there were widely scattered reports farther west to Idaho. Given the miserable weather conditions many of these birds encountered, I wonder how many actually survived. The storm also included a nice sprinkling of other eastern warblers, most notably above-normal numbers of several species of *Dendroica* (Cape May, Black-throated Green, Bay-breasted, and Blackpoll Warblers). Cape May Warblers seemed especially numerous: 3 in Montana and one in western South Dakota made the news Above-average numbers in the preceding one to two weeks in the southern Great Plains and Midwest are indicative of the source of some of the individuals.

So, do the observations of a lone birder such as I accurately reflect the migrational patterns seen locally and regionally by others? My springtime meanderings through the Great Plains, while hardly painting a complete picture of the migration there, do nicely illustrate some of the pivotal moments of the spring 2002 migration. Major passerine movements were detected in concert with what other birders were seeing in this same area, and significant movements of certain species (e g , Tennessee and Cape May Warblers) were also evident in my travels

Vagrants

This spring saw more than its share of eye-popping vagrants (see the regional reports for highlights), and we are continually reminded that almost all birds have wings and that a few individuals sure know how use them! A few reports merit a brief discussion here. Maryland *finally* got its long overdue first record of Eurasian Collared-Dove, causing me to ask the obvious question, "What state will be *last* to add this species?" Any bets? Reports of possible hybrid Glossy x White-faced Ibis in Oklahoma should raise a red flag for birders in the Great Plains—*Plegadis* identification just got a little tougher! And how about this trio—Gyrfalcon, Snowy Owl, and Common Redpoll—all in Texas! Although spring is not the primary nesting season for many species, there were a couple of interesting reports that bear mention here. An Elegant Tern (paired with a Sandwich Tern) nested in Florida and a Western Kingbird (paired with an Eastern Kingbird) nested in Maryland. Both reports represent first nesting records for those states, or do they? Do such mixed-species pairs truly represent definitive nesting records, or are they best considered something else? Be sure to read the summer season "Changing Seasons" for additional reports on these and other interesting nesting records

I'm a "numbers man," as the captain of the *Miss Hatteras* would say, so I pay particular attention to high counts reported in the regional reports A few this spring caught my eye – 1,250 Ruddy Turnstones in North Dakota (I have to work hard just to find a handful in states just to the south), 400 *Empidonax* in a day in Arizona in late April (talk about an identification challenge...), 2,000+ Wilson's Warblers at a site in southern California (I know they are common, but that is an awful lot to be in one place!), 7,060 Bobolinks at a single site in Florida and 6,700 at another site in Georgia, and 4,000 Baltimore Orioles (must have been a colorful sight) flying south during a reverse migration on 9 May at Point Pelee, Ontario.

Early dates

The spring 2002 season saw the continued pattern of record-early arrival dates for some long-distance migrants. As early arrival dates for some migrants slowly creep earlier and earlier, many birders (me included) are wondering if some of the more extreme dates are adequately scrutinized Global warming aside, there are limits to just how early some species can arrive in the Northern Hemisphere. Or at least we think there are—I just can't picture Yellow Warblers routinely arriving in Iowa in, for example,

late March, but maybe I'm not being as open-minded as I should be. I believe there is a widespread perception among birders that many species (and passerines in particular) will migrate north earlier in years with warm springs. Well, this notion is only partly true, and improvements in our understanding of how and why birds migrate will guide and increase our knowledge of dates of occurrence for many migrants.

Bird migration is stimulated by multiple cues, with photoperiod (day length) usually considered the primary stimulus. Arrival dates for many common migrants are surprisingly consistent across years, independent of weather (a big exception to this rule, of course, being waterfowl). A fine example is the spring 2002 passerine migration: many Regional Editors noted that while peak migration was delayed by up to two weeks, most arrival dates deviated little, if any, from normal. An exception here, of course, was the mid-April heat wave that blew a few migrants north on record-early dates, although most of these reports involved isolated individuals. Thus, the main cues that most birds use to migrate have little to do with surface weather conditions, which simply provide the means for a bird to move from point A to point B.

So, what does this have to do with an interpretation of early migration dates? In general, warm weather does not necessarily promote early migration (but *extremely* warm weather with strong and persistent southerly airflows can, as it did in April 2002). For many common birds, the wealth of *documented* arrival and departure dates (photographs, window- and tower-kills, mist-netting data, etc.) paints a very clear picture of consistency, regardless of weather. Period. The pitfall with mixing documented data (specimens, photographs, etc.) and sight records is that the overall picture of occurrence sometimes becomes muddled, and we run the risk of losing some really valuable information. Suppose, for example, that someone finds a window-killed Mourning Warbler in Iowa on 8 May. Because it is not a record-early arrival date for the state, there is a good chance the report will not be published, even though it would represent the earliest unequivocal spring report of this species in Iowa (all Iowa reports prior to 8 May are sight records). So, which arrival date(s) should we believe? Should we accept records earlier than documented reports when they are not substantiated with the same level of detail? Well, maybe.

One possible solution is to invoke a simple statistical model to describe extreme migration dates with greater clarity. This is a topic I've pondered for several years, and earlier this spring, Paul Hertzel offered a solution similar to the one I had in mind during a discussion of spring migration dates in Iowa. The inherent properties of individual birds produce a range of responses to a particular cue. The cue of interest here is "When does a bird migrate?" and it follows that individual birds will have slightly differing migrational urges. This should hardly come as a surprise. We know they differ, but what we really want to know is "How unusual is unusual?"

From statistical theory, we know that characteristics such as this are often normally distributed in a population, with a mean and standard deviation (the variability around the mean). If we knew something about the standard deviation, then we could use properties of the normal distribution to describe just how "unusual" a given arrival date is. So, how do we calculate the standard deviation? First, only well-documented sightings (preferably specimens, photographs, or multiple-observer sightings) should be used when calculating the standard deviation. This information could eventually be used to assess the probability associated with unusually early (or late) migration dates. The old adage "garbage in, garbage out" is probably appropriate here, so we shouldn't use questionable reports to calculate the mean and standard deviation.

An example might illustrate the point better. Suppose a large banding station in Nebraska operates for 10 years and records a mean arrival date for Yellow Warblers of 6 May, with a standard deviation of 3 days (all based on net captures). Assuming arrival dates for this species are normally distributed, we can conclude that ~68% of annual arrival dates will fall between 3 and 9 May (±1 standard deviation of the mean of 6 May), ~95% of annual arrival dates will fall between 30 April and 12 May (±2 standard deviations of 6 May), and 99% of annual arrival dates will fall between 27 April and 15 May (±3 standard deviations of 6 May) If a Yellow Warbler was subsequently reported on 20 April without any hard evidence, we could use this statistical application to require a higher standard for acceptance of such an unlikely arrival date. This suggestion comes with at least three important caveats: 1) the model for any given species is only as good as the data that are used to build it; 2) the mean and standard deviation can (and probably will) change through time, perhaps in response to subtle changes like global warming or simply as a result of more birders looking; and 3) this model assumes that arrival dates are normally distributed. This approach may seem a little unusual at first, but the mechanics for computing mean arrival dates and their standard deviations are relatively easy, and I believe this method offers an objective means of assessing unusually early (or late) migration dates and further suggests an appropriate, uniform, and neutral way to apply skepticism regarding temporally unusual reports. The birding and ornithological communities have typically not addressed this difficulty in consistent or systematic ways

Skepticism aside, there *were* indeed some unusually early arrivals this spring. Record-early warblers were widely reported in the East in the period 15-21 April. Many were typically early migrants such as Blue-winged, Nashville, Prothonotary, Worm-eating, Kentucky, and Hooded Warblers But other species also arrived early: Mississippi Kite on 19 April in Maryland, Ruby-throated Hummingbird on 20 April in Québec, Great Crested Flycatcher on 20 April in Iowa, Barn Swallow on 13 April in Manitoba, and Blackpoll Warbler on 19 April in Missouri. Many of these were sight records, and most, if not all, were likely correct. I wonder how many fell outside three standard deviations from the mean arrival date in their respective regions.

PARTING THOUGHTS

As I wrap up the column, I think it is important to acknowledge the dedicated work of the team of Regional Editors who summarize the voluminous reports sent to them each season. Their timely and insightful summaries make writing this column as easy as it will ever be! I'm also pleased that the number of observers' reports to editors for Mexico and Central America continues to grow, as does our understanding of the birdlife in these still under-birded regions. Keep up the good work!

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Literature cited

Brinkley, E. S. 2002. The Changing Seasons: broken records. *North American Birds* 56: 140-146.

Patten, M. A., and G. W. Lasley. 2000. Range expansion of the Glossy Ibis in North America. *North American Birds* 54: 241-247.

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