Seasonal Timing: Small, Green Flycatchers

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Among the most-used criteria brought to bear on bird identification by expert birders is likelihood. Not just likelihood as to whether one finds Species X swimming on lakes or Species Y occurring in the Northern Hemisphere, but the likelihood of occurrence of Species Z

at this place, and

ON. THIS. DATE.

In fact, a birder well-versed in temporal occurrence of bird species on a particular geographic scale – whether at a particular birding hot spot, in a county or an entire state – can often correctly identify a bird on just the briefest of glimpses, knowing that the small piece seen rules out any other candidate that is likely on that date at that place. The first time I can distinctly remember seeing this skill in action was on my first California trip, birding with Guy McCaskie at the Salton Sea in mid-April 1987. We both saw the same bird at the same time and watched it together for, oh, a second. I immediately knew this bird to be a *Myiarchus* flycatcher, while Guy immediately knew it to be an Ash-throated Flycatcher. That species is the only expected *Myiarchus* there in mid-April. Upon seeing it better, it was in fact an Ash-throated Flycatcher (my lifer).

Though many birders seem to think that migration is migration is migration, that is far from the case. Even in spring migration, a phenomenon much more compressed in time than fall migration for most bird species, different species move at different times, and the details – arrival, peak, completion – have been refined through the millennia, with most of the outliers having been culled from the breeding population. So, while individual birds do show up outside the migration seasons of the vast majority of their respective species, the percentage of individuals that do so is miniscule. The penalty for a bird that arrives too early in spring may well be dying of starvation – death of the individual. A migrant arriving too late may find all of the good territories and/or good mate choices taken – death of those genes that do not get passed on.

Non-birders with field guides and beginning birders tend to ignore much of the information in field guides, concentrating instead on the illustrations and/or photographs. They seldom really read the text and they mostly ignore the maps. All perfectly understandable, as the appearance of birds is nearly always what strikes people, getting them

interested in the first place. However, most that take up our hobby eventually learn that the text is important and the maps are critical, yet virtually every ABA-area general bird guide has lacked a certain something since the Golden Guide (Robbins et al. 1949) went out of print. (You old timers remember that one, right? I certainly do; it was my first field guide and one of, really, only two available at the time.) That lack, that missing something, is an indication of seasonal timing across the range of each migratory species. For many migrants, particularly the species that mostly or entirely depart the U.S. and Canada, the Golden Guide showed lines indicating average arrival dates of 1 April, 1 May and 1 June across the ABA area. Granted, the Golden Guide endeavored to deal only with spring migration, and on a very gross scale at that, but that was infinitely better than all other general field guides, before or since.

So, while it may be difficult to treat in a text field guide, temporal information on arrival dates and residency times is absolutely critical to in-the-field bird identification. It is the sort of information that enables an old salt afield in Colorado in early March to quickly know that the parties of small, sprightly sparrows sporting rufous in the crown are American Tree Sparrows rather than Chipping Sparrows. Or that the long- and narrow-winged buteo is a Rough-legged Hawk, not a Swainson's Hawk; that the swift is the first-of-season White-throated Swift, not a Black Swift.

What is a newer birder to do? Yes, a newer birder can gradually learn those sorts of things (just like us old-timers did), but probably only after making countless identification mistakes (just like us old-timers did) that could have been avoided if only that information were more readily available. The most recent book covering the occurrence and distribution of birds in all of Colorado is now 22 years old and out-of-print. That book, *Colorado Birds: A Reference to their Distribution and Habitat* (Andrews and Righter 1992), provided bar graphs with annual occurrence data in the state, often for specific sections of the state; if you can find a copy of it, it is still more than worth whatever purchase price is required to obtain it, if only to give you a foundation for current seasonal timing in the state. In western Colorado, we are more fortunate, as Righter et al. (2004) is still available, and the occurrence bar graphs are nearly up-to-date.

However, there is a great source of information on seasonal timing of the birds of Colorado. It is up to date (whatever date you find yourself reading this essay), is fairly robust (more so for eastern Colorado than for western Colorado) and to top it off, it's free. That source is eBird (www.ebird.org).

The Usefulness of Seasonal Timing

First, a caveat: I do not encourage identification solely on likelihood, just as I do not encourage using a single plumage character or other appearance feature as a basis of identification. However, incorporating knowledge of what is typically found when will greatly assist in elevating the percentage of correct identifications.

Second, an explanation: The graphs in the various figures referenced in this essay are all taken from eBird, and therefore represent only a small fraction of all Colorado bird data, because the program is fairly new and few of us have entered all of our old data into that repository. However, I would guess that over 25% of data generated by individuals birding in Colorado over the past five years is incorporated into eBird, thus providing a massive amount of information, and a very up-to-date look at seasonal timing for occurrence by birds in the state. The graphs are presented in weekly format, with each month divided into four weeks beginning on the 1st, 8th, 15th, and 22nd, with the last "week" varying from 7.25 to 9 days long.

Third, another explanation: A few examples of the usefulness of understanding seasonal timing that this essay presents are based on data solely from Colorado's plains. This is not intended to slight the lower elevations of the West Slope, for which seasonal timing is often similar to the eastern plains. The geography and borders of the plains counties make it easier to know that the data are from low elevation. The plains counties used in such analyses are Adams, Arapahoe, Bent, Kit Carson, Logan, Morgan, Otero, Prowers, Sedgwick, Washington, Weld and Yuma.

Fourth, a final explanation: I consider here only those species that are of regular occurrence in numbers in Colorado, thus excluding Eastern Wood-Pewee and Yellow-bellied, Acadian and Alder flycatchers. All of the excluded species have occurred in the state, but are considered review species by the Colorado Bird Records Committee, though both the pewee and Alder Flycatcher occur annually.

Small, green flycatchers — Many birders have trouble with the small flycatchers that exhibit green upperparts, whether truly green, or greenish or even just vaguely green. Perhaps fortunately, they are not a problem for Colorado birders for a large chunk of the year as there are essentially none present in the state November through March (Fig. 1, back cover).

Eastern Phoebe, Gray Flycatcher — In April, Eastern Phoebe is the only species to be expected in the first half of the month, but only in the eastern half of the state; the species is quite rare in western Colorado. The western half gets into the action when Gray Flycatch-

ers start arriving the last week of April, though a few are found a bit earlier in some years. However, Gray Flycatcher is rare at any time on the plains, so Eastern Phoebe is the default small, green flycatcher there in April. Finally, Gray Flycatcher is about at its least green appearance at this time of year, that is to say, it is not green then, but gray.

Olive-sided Flycatcher, Western Wood-Pewee — During the first week of May, both Olive-sided Flycatcher and Western Wood-Pewee are fairly rare. Beginning in the second week of the month, Western Wood-Pewee greatly outstrips Olive-sided Flycatcher in abundance. It is my personal experience that the first week of May is the only week of the year during which one has a better chance of seeing Olive-sided Flycatcher in the state than Western Wood-Pewee. In fall, note that Olive-sided Flycatchers are essentially gone after the third week of September, while Western Wood-Pewees can still be found in small numbers into October.

***Empidonax* Flycatchers, Spring** — Though somewhat subtle, the arrival and disappearance of *Empidonax* flycatchers during spring at low elevations on both sides of the state (where they do not breed or breed only sparingly – Willow and Least) provides at least some identification assistance. After the impatient Gray Flycatcher, Least and Dusky flycatchers are the next species to arrive. During the first week of May, one can be fairly certain – though not positive – that Willow, Hammond's, and Cordilleran are not present.

***Empidonax* Flycatchers, Fall** — On the front end of migration, all but Hammond's Flycatcher start showing up on the plains in July, with Least the earliest of the lot with many records in the third week. Hammond's and Dusky flycatchers are the only *Empidonax* regularly present in Colorado after the third week of September. Perhaps because these two species are the only ones that breed at high elevation in the state, they seem more adapted to cold and the possibility of snow. I certainly recall seeing, with Jason Beason, individuals of both species in Ouray in early October with a few inches of fresh snow on the ground.

Least, Dusky, and Hammond's Flycatchers — Birders find separation of Hammond's and Dusky flycatchers to be a particularly difficult task within a very difficult genus, but I've always thought that Least Flycatcher should be in that mix, as it, too, is a small species with a fairly small bill. As noted above, the spring timing of Least and Dusky are similar, and different from that of Hammond's. Hammond's Flycatcher is far from common in spring on the plains, whereas Least and Dusky are the two common *Empidonax* there at that season. Fig. 2 on the back cover of this issue provides a comparison of the fre-

quency of these three species on eBird checklists from the plains. Note that the scales on the graphs of Least and Dusky are identical (the high value being 6%), while that of Hammond's is a bit different (high value of 5%). Thus, while the maximum frequency of Least Flycatcher in spring is 5.6% (occurring on roughly one in 18 checklists) and that of Dusky Flycatcher is 2.7% (one in 37 checklists), that of Hammond's Flycatcher is 0.8% (one in 128 checklists). Essentially, Hammond's Flycatchers simply show up in montane breeding areas without drifting onto the plains. Since montane forests are still cold and relatively arthropod-free in early May, Hammond's Flycatcher is a later spring migrant, with the vast bulk of Colorado breeders not on territory until after 21 May.

In fall on the plains, the Least-Hammond's-Dusky situation is much different. The frequency of Least Flycatcher on eBird checklists in fall (1 in 26 checklists) drops relative to that of spring, while that of Dusky Flycatcher more than doubles (1 in 17 checklists) and that of Hammond's Flycatcher increases nearly five-fold (to 1 in 25 checklists)! The focus of this essay, however, is on seasonal timing, not relative abundance. Again, Hammond's is the odd man out as it arrives on the plains during fall migration the second week of August, while July sees the arrival of Least (second week) and Dusky (third week) flycatchers. This difference in initiation of fall migration is probably caused by two main factors, both of which result in delaying the fall migration of Hammond's. The first is the generally later start to the breeding season for Hammond's as compared to Least. As the elevational breeding ranges of Hammond's and Dusky flycatchers are, essentially, coincident, they probably have very similar overall breeding seasons. However, Dusky's population is probably skewed in abundance to lower elevations: it reaches highest density in the Ponderosa Pine-Gambel Oak zone, while the highest density of Hammond's is at higher elevation, probably in the Spruce-Fir zone. That would suggest that the two should initiate fall migration at similar times, but we can see in the graphs that that presumption does not hold. The reason is that Hammond's conducts its prebasic molt on the breeding grounds, after breeding, while Dusky molts on the winter grounds (Pyle 1997), enabling it to leave two to three weeks earlier than Hammond's. These different strategies mean that adult Dusky Flycatchers are quite worn and much more gray than green in fall, while fall-migrant Hammond's Flycatchers (of all ages) wear fresh, green plumage. The take-home message here is that, like nearly everything in the biological world, many, many factors interact with incredible complexity to create the patterns that we see in the timing of migration of small, green flycatchers.

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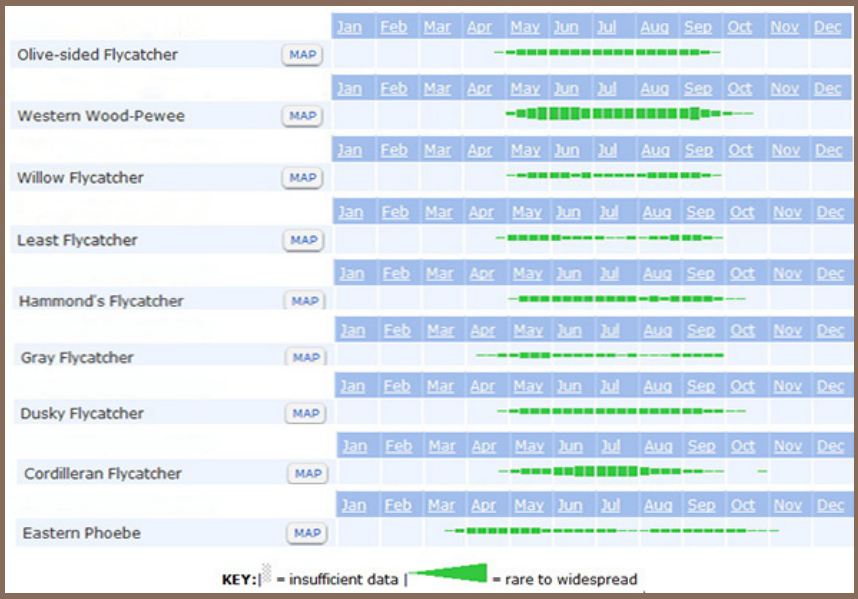

Fig. 1. Seasonal occurrence graphs of nine species of small, green flycatcher in Colorado (from data housed in eBird).

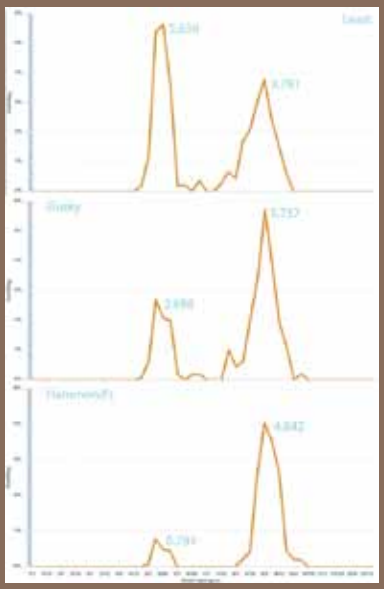

Fig. 2. Seasonal frequency graphs of Least, Hammond's and Dusky flycatchers on the Colorado plains (from data housed in eBird).