

A Look at Nature “Winged Migration”

The movie *Winged Migration* highlighted the extraordinary flights conducted by many species of birds as they travel between their summer and winter homes. The vast majority of birds that we see around Eldora in the summer made similar journeys, using their own system of navigation to fly the hundreds to thousands of miles and return to the approximate, if not the exact same, location in order to make a seasonal home and raise a family. Their exactness and simplicity of travel make the trips we humans make between two dwellings look cumbersome and inefficient.

So why do they migrate? Why make this 1,000-mile perilous journey through the air, when it might be so much easier to just stay in Central America and raise a family? A classic explanation of why birds migrate comes from *The Birders Handbook*, which says: “Seasonal migration enables birds to avoid the physiological stresses of unfavorable climates and to exploit food supplies that are available for only limited periods each year.” Makes sense: rule #1 is get the heck out of winter, as in “avoid physiological stress”. Diane and I succumbed to that after 18 winters in Eldora.

But the second part of that explanation, the food supplies available only part of the year, may be even more important and there is a related factor not explicitly stated. We don't see many living insects, especially ones that fly, in Eldora during the winter. So, if you are a bird that relies on eating mature insects, this is not a good place for you. Or, if you are a bird that likes to eat plant seeds lying on the ground, it becomes more difficult to find food under several feet of snow. But come summer the story is different. There is much more food available for more birds and bird species during the summer.

But related to this is the fact that most of our resident birds are geared towards eating the resources that come from our trees, particularly conifers like pines, firs and spruces. They can also take advantage of insect over wintering stages, when they are hidden beneath tree bark. So, nuthatches, creepers and woodpeckers can pry under that bark to find them. Or, grosbeaks, nutcrackers and crossbills can eat the seeds from the cones of trees. Many of our resident birds are omnivores; they can eat several types of food, but they also are specialized in what they eat, and most are geared towards the food resources found in conifer trees. This allows them to make it through winter, when food resources are more limited.

What this means for the migrants coming from the south is that they have less competition for food when they return. There are whole habitat types almost devoid of birds during the winter: willow shrub wetlands, aspen forests and alpine grasslands are wastelands for finding birds during the winter. But come summer, these are some of the richest avian habitats around Eldora and they are dominated by neotropical and short-distance migrants coming from the southern U.S. and Central and South America. Warblers, sparrows and flycatchers dominate the breeding birds in willow shrub wetlands. Vireos and warblers make hay in aspen groves in summer. Horned larks and pipits settle on the grasslands of the tundra. Of course, there are migrants that breed in our coniferous forests, such as ruby-crowned kinglet, yellow-rumped warbler and hermit thrush. Overall, there are well over twice as many birds around Eldora in the summer than during the winter.

The migrants have figured out that it is worth the risk of a long journey to get the advantages of avoiding winter, along with more food and less competition on their breeding grounds. If they stay in Central or South America, they have to raise their young in some of the densest bird habitats on the planet. In essence, these guys like to travel and are a little anti-social.

So how do they find their way between their two homes? This is one of the mysteries of nature. The feeling is that birds find their way using a variety of clues, including stars, sun, topographic features, and the Earth's magnetic field. And their reliance on these clues will be influenced by whether they are making a 2,000-mile journey from Central America, or a 15-mile trip from lower Boulder Canyon. The long-distance migrants often move at night. The movie *Winged Migration* followed some Canada Geese on their long sojourn. My experience with migrating geese occurred one March night while night skiing at Lake Eldora. I had stopped to take a breather, when I heard the honking of geese in the sky above. To my amazement, a flock of about 35 geese came down under the lights and then took off again on their journey.

Migrating birds are generally put into two broad categories, depending on the distance of their flight. Neotropical migrants are the long distance flyers, and come from Central and South America. Swallows, swifts, flycatchers, vireos and most warblers fall in this category. They love to eat insects. Short-distance migrants are those that winter in southern Arizona and New Mexico, and Mexico, as well as those that simply move down in elevation. Most sparrows are in this category. They love to eat the seeds of grasses and forbs, and look for places with little snow cover on the ground. Most human snowbirds also fit in this category.

The short-distance migrants that simply move down in elevation in the winter are also called vertical migrants. A lot of our robins, flickers and solitaires fall in this category. They head down into the foothills just west of Boulder during bad winters, but may be present in Eldora when the climate is mild. Dippers are an interesting case of vertical migrant. Living in and along streams, during winter they congregate at the mouth of stream canyons. Most of the dippers (water ouzel) we see during summer probably spend the winter at the mouth of Boulder Canyon. If the winter is mild, a few may be present in town, especially if there is a lot of open water on the stream. But for the most part, they hit the espresso bars in Boulder and can be seen on the Mall panhandling for grubs and other aquatic insects.

Is global warming altering the migration of birds? Probably not for most species. The increasing length of day triggers movement for most long-distance migrants, not temperature. But a few species have been moving earlier and staying later due to a longer summer period. Yellow-rumped warblers, our most common forest dwelling warbler, have recently been arriving in greater numbers in early May than they were 20 years ago, which has been documented on the Indian Peaks Bird Counts. Maybe in the long term, Eldora IS the place to be.

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