

## The Mystery of Migration: Where birds go during the winter.

Amélie Roberto-Charron (2013)

Most of the birds that we enjoy during the summer months are migratory. Migratory birds are birds that fly distances up to thousands of kilometers in order to find habitat for breeding, feeding, nesting or raising of young. When the weather becomes cold, most of our birds fly south. Most migratory birds that occur in Alberta fly south in the winter and north in the summer. Our understanding of the migratory routes that birds take is very recent. Before, it was known that some birds migrated south during the winter; many strange theories were developed to explain where the birds went in the winter.

One theory was developed as a result of the common disbelief that small birds were able to migrate. Many aboriginal groups in North America believed that small birds, such as hummingbirds, would hitch rides on larger birds, like geese, to get to southern wintering grounds. In reality, they do the journey themselves! Ruby-throated Hummingbirds fly to southern Mexico and Central America during the winter, and some birds even embark on a nonstop journey across the Gulf of Mexico, a journey that is approximately 1,000 km long! To put that journey in perspective, the length of Alberta is approximately 1,200 km, and a Ruby-throated Hummingbird is from 3.5 to 6 grams in weight. A truly remarkable journey for which it should be recognized!



Ruby-throated Hummingbird

Photo Credit: John Schneid (*Wikimedia Commons*)



Black-capped Chickadee

Photo Credit: Danielle Langlois (*Wikimedia Commons*)

Another theory was that birds would hibernate through the winter in tree cavities. This theory was believed for over 2,000 years! Aristotle created this theory, and believed that Kites, Doves, Storks, and Larks all hibernated! Some resident birds stay in Alberta all year round, but they remain active during the winter, like everyone's favorite backyard bird, the Black-capped Chickadee.

Black-capped Chickadees survive cold winter nights by using energy they stored during the day by feeding. But on especially cold nights, they have another trick up their sleeve: they can go into a temporary state called torpor. Going into torpor means they are able to

decrease their metabolic activity to conserve energy, and decrease their body temperature by up to 12 degrees!

Only one bird, the Common Poorwill, is known to go into a state of torpor for long periods of time, up to several months. Although this isn't likely true hibernation, it is similar. This can help it survive cold spells when its insect prey isn't active. The Common Poorwill can be found in southern Alberta. But it likely doesn't spend the winters here; the conditions are too extreme! It has been reported to sleep the winters away in North Dakota and in California!



Common Poorwill

Photo Credit: Brian Currie (*Utah Birds*)

Many other theories existed to explain the disappearance of birds in the winter, before migration was understood. Some other theories included the common belief that birds would shape shift into other birds and over winter as other species. Or that birds would fly to the moon during the winter. Or even that birds would burrow in the mud under lakes in the way that frogs and turtles overwinter! Thankfully through modern research that uses trackers, citizen science projects, or bird bands scientists now have a relatively good understanding of migration!



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