

# *Winter Bird Highlights*

FROM PROJECT FEEDERWATCH 2016–17

The Cornell Lab of Ornithology



# Anna's Hummingbirds moving north

BY EMMA GREIG, CORNELL LAB OF ORNITHOLOGY

**W**hen you think of hummingbirds, you probably imagine the nectar of tropical flowers being sipped by long slender bills under the warm sun. So what are Anna's Hummingbirds doing in snowy Washington, British Columbia, and even Alaska in winter? The pattern is clear not only from anecdotes of FeederWatchers, but also from FeederWatch data: during the past several decades Anna's Hummingbirds have expanded their winter range northward by more than 700 km (see figure below right). FeederWatchers have been noticing, and may be even helping, the northward expansion.

*"The Anna's Hummingbirds hang out all year round. We often see them taking a break in the trees in the rain and snow!"*

—Faye Neufeld from Duncan, British Columbia

*"I keep food warm with hand warmers taped to the feeder, or I change feeders throughout the freezing days."*

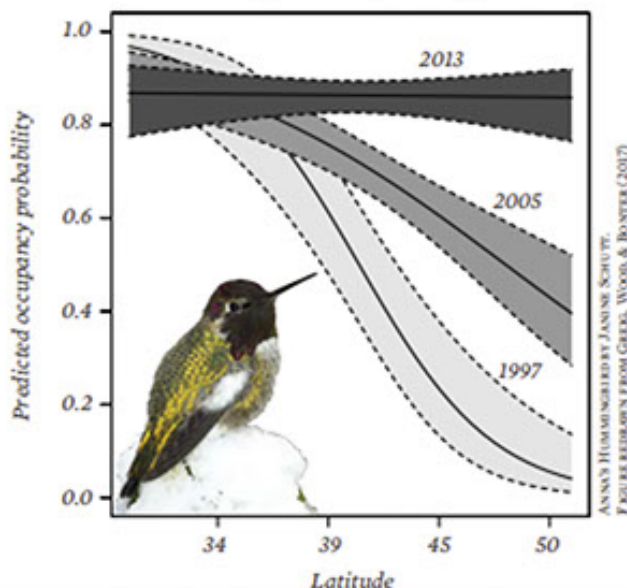
—Ann Melton from Bellingham, Washington

Are Anna's Hummingbirds able to survive farther north because winter temperatures are becoming warmer or because there are more people providing food such as nectar feeders and non-native plantings? We used Project FeederWatch data to see if Anna's Hummingbirds have moved to colder areas than previously inhabited and if this range expansion has been associated with human-modified landscapes. The answers? Yes and yes. Anna's aren't moving north solely because the climate is warming and becoming more hospitable. Instead, they now live in colder locations than they did 20 years ago, and in these colder locations they are more associated with human-modified landscapes (specifically higher housing density) than in their warm historical range.

To top it off, we found two other compelling trends. First, at sites hosting at least one Anna's Hummingbird, the farther north the site was located the more likely the participant was to observe a hummingbird on any given count day. Because a FeederWatch hummingbird sighting typically means a feeder visit, hummingbirds at colder northern latitudes probably visit feeders—and potentially rely upon feeders—more than hummingbirds in the sunny south. Second, FeederWatchers in northern locations are putting out more nectar feeders now than in the past. Which came first, the feeder or the hummingbird? We can't answer that, but we do know that there are more resources available to high latitude hummingbirds now compared to 20 years ago.

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Anna's Hummingbirds expanding north



This figure shows the probability of Anna's Hummingbirds occupying FeederWatch sites at increasing latitudes over time. At low southern latitudes (< 39°) occupancy probability was high and constant across years (more than 80% of sites had hummingbirds every year). At high northern latitudes (> 45°) the occupancy probability was low in 1997 (almost no sites had hummingbirds), intermediate in 2005, and as high as southern levels in 2013.

## Anna's Hummingbirds

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Anna's Hummingbirds seem to be thriving in colder temperatures than ever before, and it may be in part because of the supplementary food that people are providing. Do these findings mean you should not feed hummingbirds in autumn because it will prevent their migration? No. Anna's Hummingbirds are not long-distance migrants. Unlike migratory species

ANNA'S HUMMINGBIRD BY MICHELLE N. LAMBERSON



such as Ruby-throated Hummingbirds, Anna's Hummingbirds are especially inclined to stay put. Furthermore, there is a difference between helping a sedentary individual survive and preventing a

migratory individual from making the decision to leave, a decision usually triggered by changing daylight and temperatures. If anything, bird feeders probably facilitate migration by helping migrants stock up for their journey. Your nectar feeders will not stop the passage of birds that have decided to go south. What your feeders might do, however, is help more sedentary individuals survive and pass their genes on to similarly inclined offspring.

Research reported in the journal article: Greig, E.I., Wood, E.M., Bonter, D.N. 2017 Winter range expansion of a hummingbird is associated with urbanization and supplementary feeding. *Proceedings of the Royal Society B* 284:20170256.

