

Warming brings more birds north in winter

April 6 2009, By George Bryson

Long-term global warming is prompting North American birds to winter farther north -- a trend more noticeable in Alaska than anywhere else in the nation, according to a new study by the National Audubon Society.

Climate-induced changes in vegetation are also altering the summer habitat of Alaska [birds](#), and while some species may thrive amid the change, others won't, reported Matt Kirchhoff, director of bird conservation at Audubon Alaska.

One example from the study, which drew on 40 years of data from the annual Audubon Christmas Bird Count, is the American robin. It's now wintering -- on average continent-wide -- more than 200 miles farther north than it used to in the 1960s.

While some southern states, such as Texas, now have fewer robins each [winter](#), New Hampshire has five times more -- and Alaska has 37 times more, Audubon records show.

The study examined winter data on 305 bird species counted at more than 2,000 locations around the continental United States from 1966 through 2005.

During that period, the average January temperature in the lower 48 states increased about 5 degrees Fahrenheit -- and more than that in the northern latitudes, Audubon reported.

At the same time:

- More than half the bird species studied, 177, showed a significant winter habitat shift to the north, compared to 79 that shifted to the south.
- All the species combined nudged the average North American winter bird habitat north about 35 miles, but some individual species now winter hundreds of miles farther north.
- In Alaska, 19 species of winter birds -- the most of any state -- increased "significantly" in population over the 40 years studied and none decreased significantly.
- Birds that winter in Alaska that shifted their range the greatest distance north included: the marbled murrelet, 361 miles; spruce grouse, 316 miles; red-breasted nuthatch, 244 miles; varied thrush, 229 miles; red-necked duck, 219 miles, and American robin, 206 miles.

The distances listed by the study are average shifts for each species continent-wide and don't necessarily reflect their movement in Alaska. But similar examples have been observed in Southcentral Alaska, according to local volunteers who participate in the December bird count.

A case in point is the Bohemian waxwing.

During the 1960s and '70s, only a few dozen of the colorful songbirds were spotted in Anchorage at Christmas. But this past December, participants counted more than 22,000 Bohemian waxwings, more than any other bird.

Part of the increase might be explained by an Anchorage-wide effort to plant more mountain ash trees, which Bohemian waxwings particularly relish, Kirchhoff said. And other factors can attract birds in winter besides warmer weather, including urban lawns and backyard feeding.

But the only common factor that explains birds wintering farther north nationwide appears to be a warmer climate, said study co-author Greg Butcher, director of Audubon bird conservation.

"This is as close as science at this scale gets to proof," Butcher said. "It is not what each of these individual birds did. It is the wide diversity of birds that suggests it has something to do with temperature rather than ecology."

While the nationwide study didn't examine shifts in bird populations in summer months, Audubon staffers based in Anchorage have been tracking breeding-season changes in bird habitats and bird numbers throughout Alaska.

"As the climate warms, you have vegetation moving northward, and this is going to crowd out the wetlands and the tundra on the North Slope," Kirchhoff said.

Robins adapt to a changing climate just fine, he said. But other species dependent on shore ice or northern tundra -- both of which have been shrinking in Alaska in recent years -- aren't as fortunate.

"Birds that nest on the North Slope, like dunlins and buff-breasted sandpipers, have nowhere (further) north to go," Kirchhoff said. "If their nesting habitats change too much, these species will be in real trouble."

Some breeding-season birds, like the Kittlitz murrelet, are even struggling in south central Alaska, where the tidewater glaciers it depends on in Prince William Sound and the Kenai Fiords are receding, Kirchhoff said.

A 2007 report by the U.S. Fish and Wildlife Service noted that the number of Kittlitz murrelets in Prince William Sound had declined by 84

percent over 11 years and now stands at about 15,900 birds. That makes it a contender for protection under the Endangered Species Act, Kirchhoff said.

The Audubon winter bird study has yet to be fully peer-reviewed or published in a scientific journal, but will be later this year, Butcher said.

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