

# Green Scene: Birds in Peril from Global Warming

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**Although barn swallows build their nests mainly on human-built structures, they rely on a natural abundance of insects for feeding and raising their young. *Dave Schutz photo***

In September, the American Audubon Society released a disturbing report which attempted to describe how the birds of North America could be impacted by climate change over the next 65 years. Some people may already be aware that birds are facing huge challenges to find appropriate areas where they can continue to thrive despite increasing loss of habitat and pesticide use. A variety of studies indicate that global warming could result in a 2-4 degree temperature rise by the end of this century accompanied by a 0.2-0.6 metre increase in sea level from melting glaciers. The Audubon study, summarized on their website ([www.audubon.org](http://www.audubon.org)), shows the impacts of global warming on birds could be profound. Of a total of 588 bird species which spend both their winters and summers in North America, 314 are expected to lose over half of their habitat by 2080. This study excluded species which winter in Central and South America because the data available for them was insufficient for analysis.

One of the reasons why so many birds will be affected by global warming is that most species of birds have evolved to be habitat specialists. Thus, they rely on finding a certain type of habitat and food. Their needs often put them in conflict with people who have tended to cut down forests, drain wetlands and convert grasslands into agricultural fields. In addition, many birds are migratory which means they must rely on finding suitable habitat along lengthy migration corridors. Climate change is altering many of the areas upon which birds rely.

Take, for example, whooping cranes. These elegant birds were once hunted almost to the point of extinction. They were known to congregate along the Texas coast each winter but for many years the area where they nested remained a mystery. In 1937, when only 21 birds remained in the flock, the American government initiated a huge effort to protect and restore their population. The first step taken was to protect their winter habitat as the Aransas National Wildlife Refuge. When, in 1954, their summer nesting area was fortuitously discovered to be in the wetlands of Wood Buffalo National Park on the northern boundary of Alberta, the Canadian Wildlife Service also got involved.

While this flock of whooping cranes now numbers about 350, climate change is threatening their habitat. For example, recent severe droughts in Texas have reduced fresh water inflow in the Aransas Refuge which is reducing their vital winter food supply. A severe hurricane along the Gulf coast in Texas could also damage their habitat. During migration, these cranes rely on wetland habitat along their migration corridor. One important area lies along the Platte River in Nebraska where, the irrigation needs of farmers is reducing the amount of suitable river habitat for cranes. These cranes also migrate over the tar sands of Alberta which increases the risk that storms might force some birds to the ground in areas of polluted tar sand pools. While it is not known at this point if global warming could affect their wetland habitat in Wood Buffalo National Park, it is clear that climate change is already altering some of their critical habitat.

With the use of species-specific maps, the Audubon study shows how the habitat required by many relatively common species of birds could be impacted by climate change over the next few decades. In general, species such as rufous hummingbirds, red-breasted nuthatches, varied thrushes, tree swallows and hairy woodpeckers are predicted to lose much of their natural habitat, mainly within the USA, if fossil fuel emissions are not reduced. While climate change is predicted to shift most of their suitable habitat further north, it remains unclear if appropriate habitat will naturally generate in time for these birds. Since so many of these species also rely on insects for food, an even greater concern is that the insects may not be able to shift their ranges further north in synchrony with the birds.

It seems all too easy for many people to forget that climate change is happening because of us, i.e., the collective actions of seven billion people which are resulting in the release of far too many fossil fuel combustion products into the atmosphere. With the standard of living now rising in countries such as China, atmospheric carbon dioxide concentrations are expected to increase, possibly at an even accelerated rate.

To inform people about the dangers of a rapidly warming world and actions we should be taking to reduce fossil fuel emissions, the Tri-Cities LeadNow group is hosting an upcoming presentation by UBC professor Bill Rees. Rees was one of the founders of the concept of the “carbon footprint” which allows people to calculate the impact of fossil fuel emissions associated with their lifestyle and determine, in theory, how many planets it would take to allow provide everyone on earth with the same standard of living. Ben West from ForestEthics Advocacy will also take part in the event. Rees’ presentation will be on Tuesday, October 21 at the Evergreen Cultural Centre, 1205 Pinetree Way in Coquitlam. Doors open at 6:30 pm and the presentation will begin at 7 pm. Tickets (\$10) are available through <http://evergreenculturalcentre.ca/buy-tickets/>. To minimize your carbon footprint, please use public transit, cycle or carpool to attend this important event.