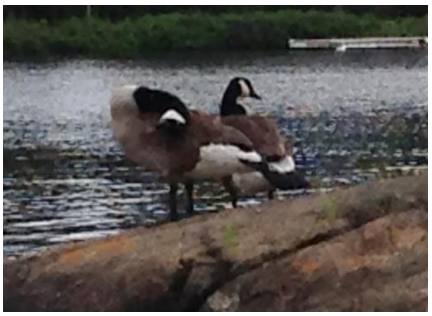
Geese, Duck and Grouse in a Changing Climate

Several geese species can be found soaring over Ontario in the spring, using northern Ontario and the Hudson Bay wetlands for staging and breeding grounds. Ducks return to the north in the spring as well. Grouse and Ptarmigan don't migrate but instead survive the cold northern winters by eating buds and some hide under the snow. These birds are important country foods for communities in the north.

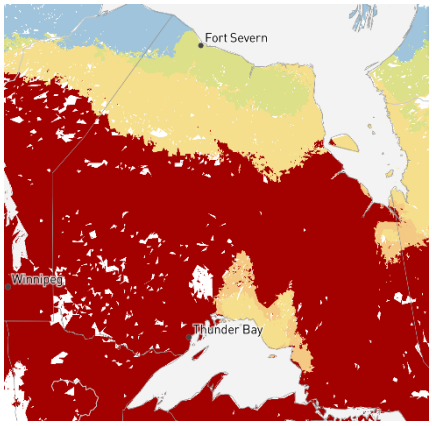


What have people noticed?

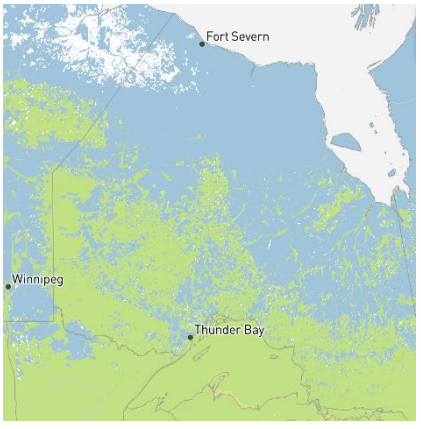
Several communities have noticed changes in vegetation in their area including a disappearance of certain grasses and increased growth of willows that may be impacting important feeding and nesting habitat for the geese. People have also noticed a change in the migration patterns of geese. Snow geese have been observed migrating south in the fall earlier than they used to, leaving around mid-August or early September, as opposed to the third week of October, while the spring migration route of Canada geese is seen as becoming more inland and less coastal. Many people report that there are fewer geese and ducks than there used to be, and some have said that duck meat doesn't taste the same as it used to. Some communities say they have found fewer grouse or partridge.

How could climate change impact these animals?

Ducks and grouse are commonly hunted. Ruffed grouse (partridge), spruce grouse, and mallard ducks are probably the most popular, but certainly not the only birds that are important to food security or have traditional value. The mallard duck and the ruffed grouse can be found across Canada and Ontario, but climate change may impact these birds differently. The ruffed grouse will likely lose some of their summer and winter range by the 2080s, but the mallard duck may actually gain some winter range by the 2080s.



Ruffed Grouse (summer)



Mallard (winter)

These maps show the predicted change of habitat range ruffed grouse in summer and mallard in winter by the year 2080 when the temperature is predicted to increase by 3°C. https://www.audubon.org/bird-guide

How can we prepare?

Adjust Harvesting Practices

Many First Nations hunters have already needed to adjust their harvest time and methods, particularly in the fall and early winter. Many community members have said they now have to travel further to hunt or gather traditional foods. This may require more costly means of transportation, such as a vehicle, ATV or snowmobile or even helicopters that some communities are now organizing for goose hunting. As some birds become less common on the land and others become more common, perhaps hunters can switch which species they hunt.

Community Initiatives

Community coolers can help lower the risk of meat spoilage by providing people with a cool place to butcher or store meat they harvest. Sharing harvested meat within a community and starting community gardens can also help increase food security for everyone.

Community garden in Fort Albany FN

Community cooler in Chapleau Cree FN. Photo by D. Souliere

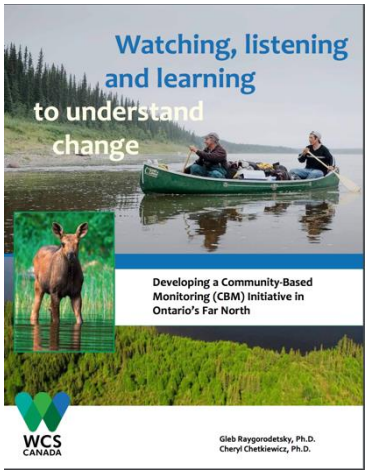
Habitat Restoration and Protected Areas

Important habitats for geese and duck are staging areas for resting during migration, nesting sites for successful production of chicks and wetlands to keep their chicks safe. Identifying these areas can allow them to be protected, restored if necessary, and monitored for change. Many communities have also noticed a decline in food sources for geese, particularly grasses declining or being outcompeted by increased woody plant growth such as willows. Restoring important grassy plants may help to re-establish goose feeding grounds.

Monitoring

Understanding what is happening with the geese, ducks, and grouse in your area can be an important step towards developing adaptation plans now and into the future.

Monitoring activities can take many forms and can be conducted by environmental stewards, researchers, and community members, alone or in partnerships. It can involve hunters, trappers, and other land users collecting observations while out on the land, or more high-tech methods like GPS tracking. Many communities have created their own monitoring programs, often called “Community-based monitoring”. These community-led programs are often driven by local information needs and guided by the values of the community.



Want to know more?

Community-based monitoring:
https://www.wcscanada.org/Portals/96/Documents/WCSCanada_CommunityBasedMonitoring_2017%20(1).pdf?ver=2018-02-21-090420-447

Range prediction maps for birds in Ontario,
https://www.audubon.org/climate/survivalbydegrees

UP NORTH ON CLIMATE
Climate Change Impact and Adaptation Study for the North of Ontario