If Climate Change is Taking Place, then the Migration Routes of the Lesser Snow Goose and the Northern Pintail is Changing

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Introduction

Our project studies how birds are affected by the climate. It shows how much the Northern Pintail Ducks and the Lesser Snow Goose are affected by the changing climate and the effects of the migration routes of the two birds. We chose those two birds because we noticed the Northern Pintail Ducks have been declining in population and have heard older generations saying that this place used to be filled with many species of birds including the Northern Pintail Ducks and the Lesser Snow Goose during their migration in the Fall. Also, the Lesser Snow Geese have vanished in the early to mid 1960’s so we decided to study them.

Materials and Methods

The materials needed for this project were: GPS, laptop computer, ARCGIS software, various USGS maps, National Weather Service (NWS) data from 1970-2007, field notebook, digital camera, and a four-wheeler to travel.

First we determined our hypothesis and the study area based on personal and local knowledge of bird migrations through the Yukon-Kuskokwim Delta Wildlife Refuge. Next, we determined where the Northern Pintail Ducks and the Lesser Snow Goose might be seen. Then, we had to go out onto the tundra and collect the data ourselves regarding the population of each of the two birds. Included in our data collected two pieces of information about the terrain including if there were any lakes, high grounds, etc. After we collected the data we downloaded the obtained data into the ARCGIS maps and Google Earth maps and continued this process for every place we went. Also, we determined which lakes had a map extension on the maps and found how much area of water has been emptied out from that lake. Finally, we compiled the information leading to our conclusions.

Results

During our three month research, we only saw one flock of Lesser Snow Geese of about 50, within our area of study. This was during their migration while they passed through. These geese suddenly vanished during the early to mid 1960’s and have only been seen by a small amount of people during their time of migration since then.

However, we consistently saw small groupings of Northern Pintail Ducks, totaling about 20 ducks per sighting. This usually took place in the northern part of the area. The Lesser Snow Geese is down 77% over the last 40 years and the Northern Pintail Ducks are third on the list of the most population declines on birds in the U.S.

Conclusion

In conclusion, the project we did shows how the extreme weather changes are affecting the two species of waterfowl during the Fall migration. It demonstrates that vegetation can change due to the extreme weather changes. These changes convert vegetation from non-salt tolerate to one of salt tolerate affecting the waterfowl.

The waterfowl depend on are very important to our community and the elders. Will the birds still be around in 20 years? We hope this will not be the effect to the community. If the birds have gone further north, we will have to move somewhere north north to be able to hunt birds! If the climate continues to change this way, things here will be a lot different for our community in the future.

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For further information

Please contact atti@uas.alaska.edu or evon@uas.alaska.edu. More information on this and related projects can be obtained at www.uas.alaska.edu/envs. PDF versions of this poster can be downloaded at www.lksd.org/kwigillingok.