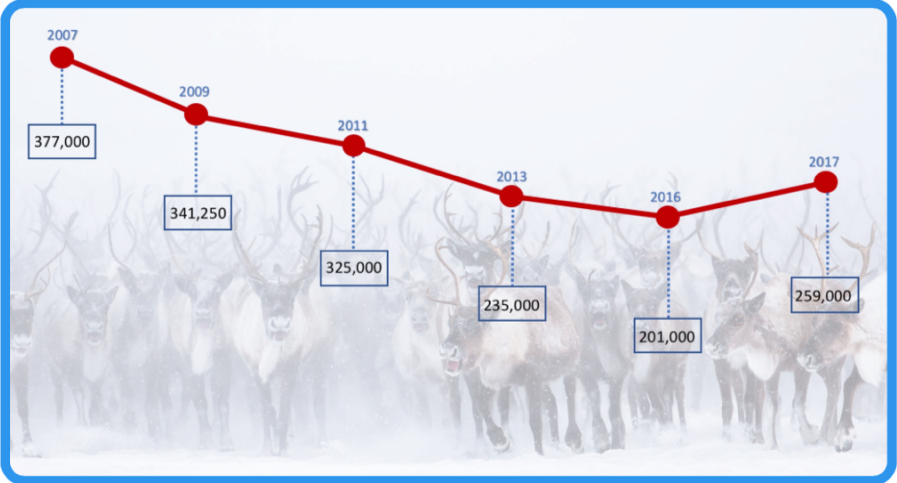


The Great Caribou Decline

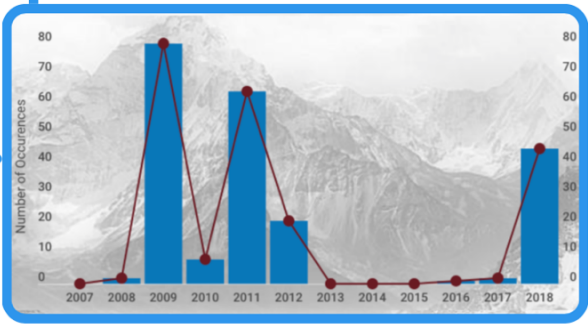
A Study of The Western Arctic Caribou Herd

by Jacob Danek, Camryn Klein, Fisher Stuk & Katie McMahon



1 Population: A census of caribou in the Alaskan Western Arctic Caribou Herd overtime. This shows a steep decline in population over the past ten years. There was a slight increase after 2016 (1).

2 Occurrence: Physical specimen data of caribou from the Western Arctic Caribou Herd. This shows a decline in specimens after 2011 and then an increase after 2017 (2).



Caribou are the only members of the deer family where both the male and female deer have horns (3).

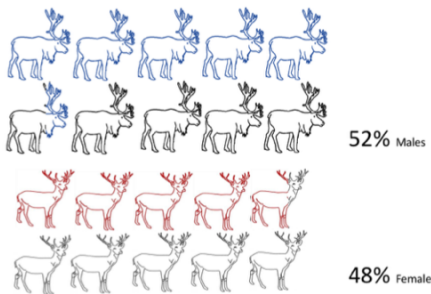
7,000-11,000
Wolves

4

Predators: Wolves, which are the main predator of caribou, are not threatened in Alaska. Their population has fluctuated slightly between 7,000 and 11,000 over the past ten years. Since the wolf population has not varied greatly, this aspect most likely is not causing the decline (1).

Caribou secrete a scent from their ankles to warn others that a predator is near (3).

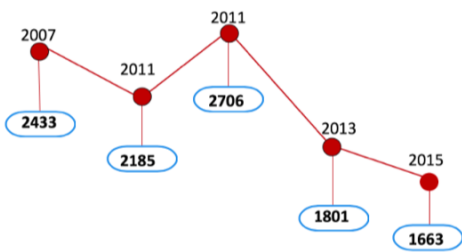
Why is the Western Arctic Caribou Herd's population declining so rapidly?



3

Male to Female Ratio: Percentage of males compared to females in the Alaskan Western Arctic Caribou Herd. Decreased females could lead to a decrease in overall population size (4).

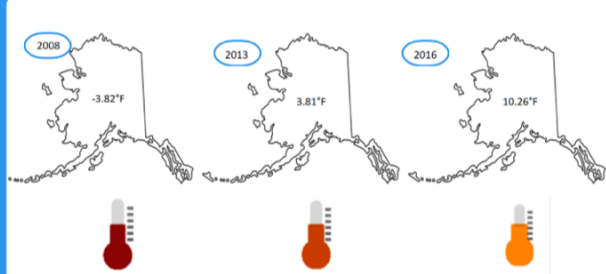
Caribou can run up to speeds of 50mph to escape predators and hunters alike (3).



5

Hunting: Number of caribou hunting licenses sold over time. This shows a steady decrease in hunting licenses after 2011. If hunting was affecting the caribou population, then we logically would see an increase in population. Since this is not the case, hunting is most likely not causing the decline (1).

Caribou eat grasses, lichens, and other small plants (3).



6

Rising Temperatures: The data shows a trend of rising annual temperatures in Alaska. The rising temperature can have an effect on the native flora and fauna. This rise in temperature seems to be a key factor in the decline of the Western Arctic Caribou herd (5).

< A Decline in Caribou could result in... >

Increased:

- Bacteria
- Moose
- Mosses
- Lichens
- Sedges



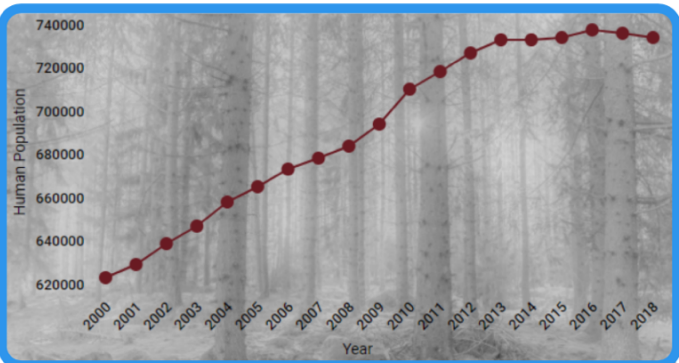
Decreased:

- Biodiversity
- Hunting
- Predators
- Indigenous people's culture and food source

Bringing it All Together

- There has been a decline in caribou population over the past decade.
- Predation and hunting do not seem to have a strong influence on the decline.
- However, rising temperatures, which could be due to an increase in human population, do seem to be playing a key role in the decline of the Western Arctic Caribou Herd.

Why does this matter?



7

Human Population: The human population of Alaska over the past few decades. During the time of the caribou decline, the human population was increasing. This alludes to how humans are playing a key role in the caribou decline. An increase in human population also equates to increased CO₂ in the atmosphere, which in turn causes a temperature increase as well (5).

Bibliography

- (1) Alaska Department of Fish & Game. 2010. NewsAugust. (n.d.). Retrieved from http://www.adfg.alaska.gov/index.cfm?adfg=wildlifeneews.view_article&articles_id=467. March 19, 2018.
- (2) Integrated Digitized Biocollections. Retrieved from <https://www.idigbio.org>.
- (3) Caribou facts. Softschools.com. Retrieved from http://www.softschools.com/facts/animals/caribou_facts/317/. March 12, 2018.
- (4) Collaborative collection management solution. Arctos. Retrieved from <https://arctosdb.org>. February 19, 2018.
- (5) Data, U. C. (n.d.). Temperature - Precipitation - Sunshine - Snowfall. Retrieved from <https://www.usclimatedata.com/climate/alaska/united-states/3171>. March 19, 2018.