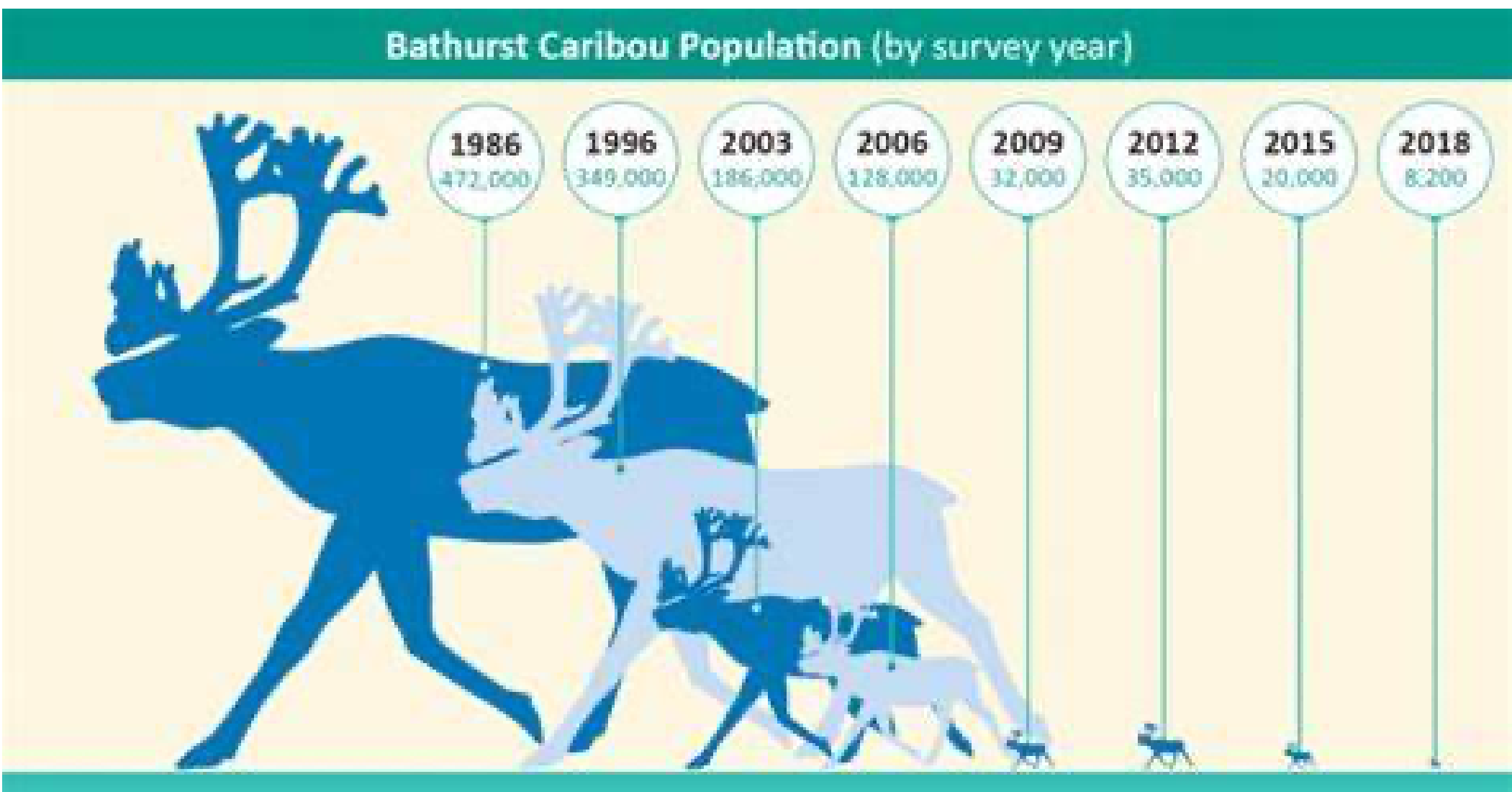


Bathurst Caribou Health Guide

Authors

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The decline of the Bathurst caribou herd from 476,000 in 1986 to 8,200 in 2018; from GNWT ENR (1).



The geographical distribution of the Bathurst caribou herd in Northwest Territories and Nunavut; from GNWT ENR (1).



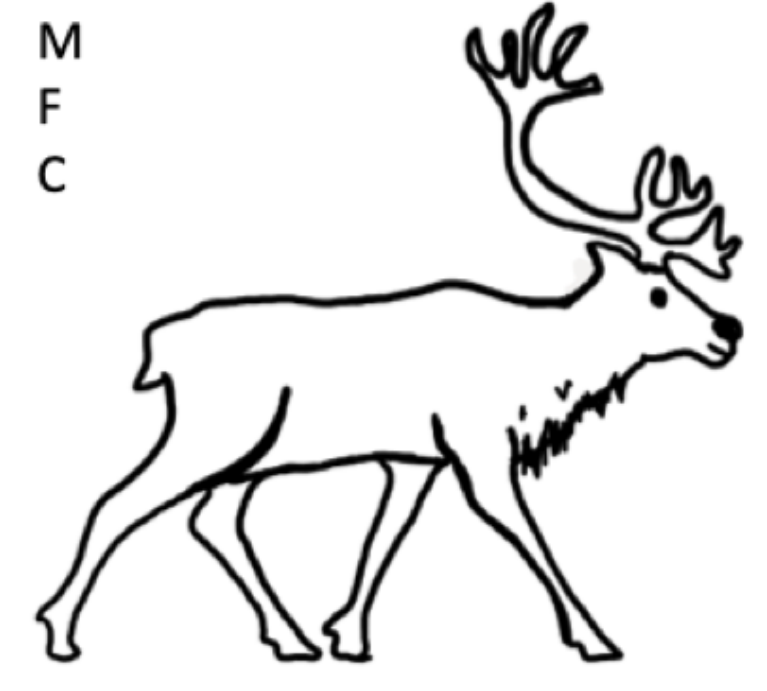
Introduction and Objective

- There are limited tools to assess the health of a declining wildlife population.
- The objective was to create a field guide that will allow for the assessment of caribou health in a non-invasive manner.
- This field guide directs observations to identify abnormalities seen in the field to improve our understanding of barren-ground caribou health.

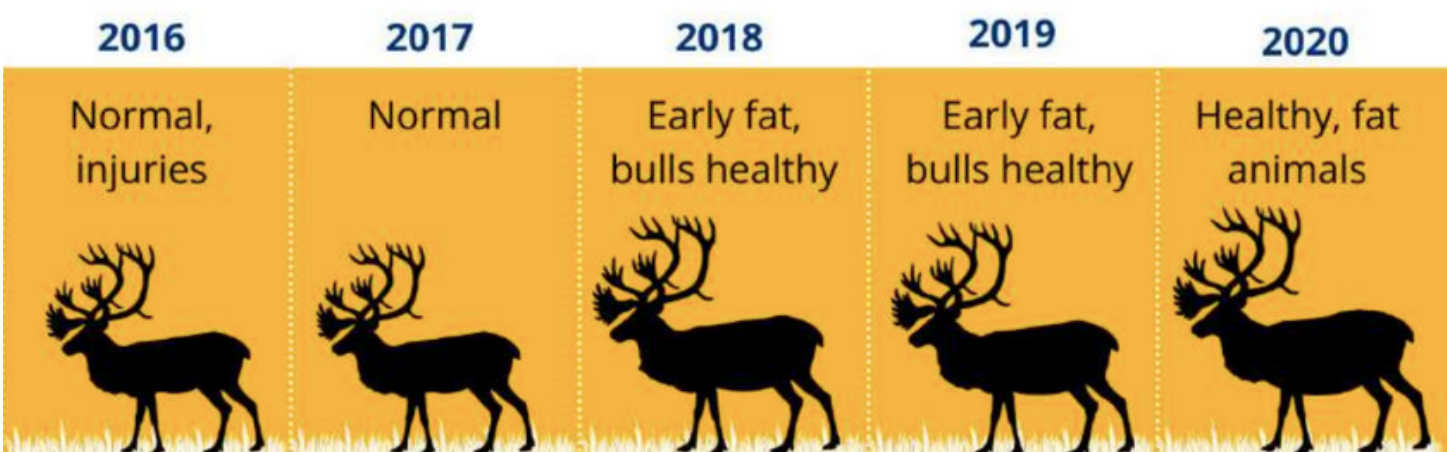
Methodology

- Bridging traditional and scientific knowledge by working with Ekwò Nàxòèdee K'è (ENK), an Indigenous-led caribou monitoring program.
- The guide is focused on four broad categories where abnormalities are commonly seen: head, hair and coat, body condition and behaviour, and the lower limbs.

Guide Implementation

Obs. #:	Date:	Time:
M F C	What parts of the animal(s) are injured or abnormal? Circle or mark diagram and Describe Abnormalities:	
		
Legs:		
Head:		
Skin/Coat:		
Overall Body Condition:		

Section of the ENK field book to record observations of health.



Previous measurements of caribou health from 2016 to 2020 from ENK 2020 results (2).

Expected Results

- ENK is in the midst of the monitoring season, so results on the efficacy of the guide are not available.
- I hypothesize that the guide will result in more focused observations that will help provide a more well-rounded understanding of the barren-ground caribou health.
- Focused health observations using this guide will be incorporated into population models and health research

Conclusion

- The use of a visual field guide helps transfer scientific knowledge of wildlife health to local people to help determine the health of declining caribou populations.
- Through the inclusion of Traditional Knowledge in wildlife health research, a more holistic perspective can develop to guide recommendations to management in order to advance conservation efforts of Arctic animals.

Field Guide

Scan the QR code to see a full copy of the field guide!



Body Condition



A caribou with poor body condition (3).

How to identify

- Hip and shoulder joints
- Visible ribs

Changes in behaviour

- Trouble eating
- Separate from the herd

Where to look next

- Scan the whole animal with focus on the head, limbs, and coat

Trouble Moving



A running caribou with a swollen carpal joint (4).

How to identify

- Uneven walking
- A head bob or a hip hike

Changes in behaviour

- Separated from the herd
- Does not want to move

Where to look next

- Scan the legs with focus on the joints and hooves

Head Abnormalities



Two caribous with different antler shapes (5).

How to identify

- Examine the mouth, nose, eyes, and antlers

Changes in behaviour

- Trouble eating
- Signs for insect harassment

Where to look next

- Scan the animal to see if any similar abnormalities are elsewhere

Coat Abnormalities



A caribou with warble larva in its back (3).

How to identify

- Look for hair loss, scabs, wounds, bumps in the coat

Changes in behaviour

- Signs for insect harassment
- Licking or itching infected areas

Where to look next

- Scan the animal to see if any similar abnormalities are elsewhere

Special Thanks to the U of C PURE program and the U o f C SURE program

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4. Alaska Department of Fish and Game. Brucellosis in Alaska's species, Alaska Department of Fish and Game. [Internet]. Brucellosis in Alaska's Species, Alaska Department of Fish and Game. [cited 2022Aug22]. Available from: <https://www.adfg.alaska.gov/index.cfm?adfg=disease-general3>
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