

Porcupine Caribou Herd



SUMMARY OF INDICATORS

2022

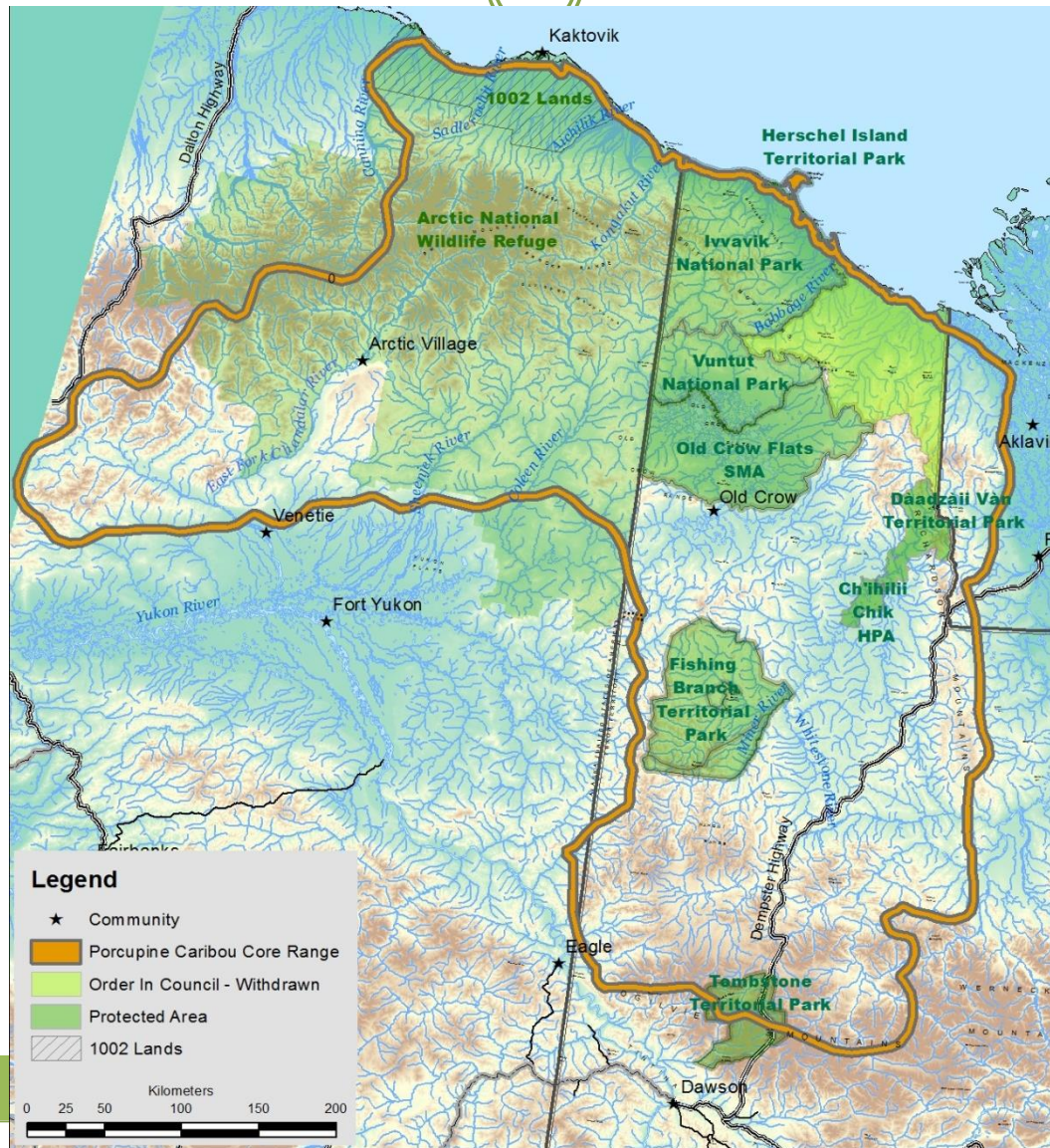
Presentation to:

Annual Harvest Meeting

February 8-9 2022

By: Porcupine Caribou Technical Committee

Range of Porcupine Caribou Herd





Population

Body
Condition

Habitat



Overview

Population Size



Methods

- Count caribou using a photocensus
- Last completed in 2017
- If conditions allow, attempting each year now until we get the next successful one

Results

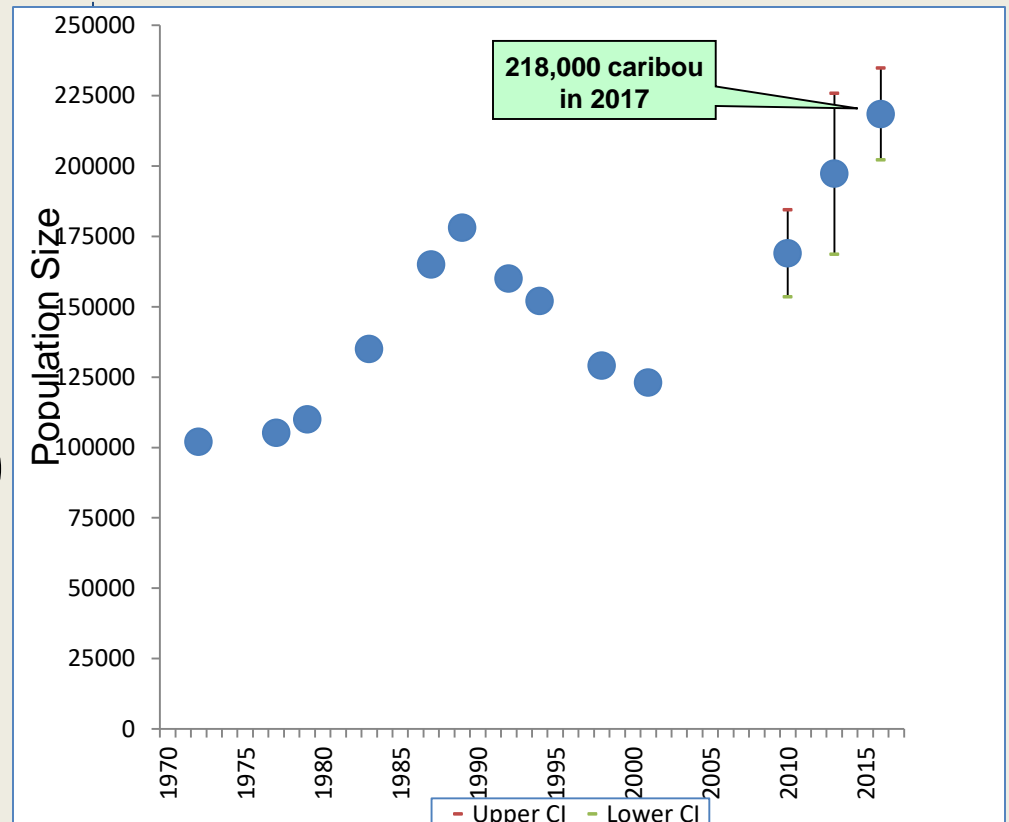


Population Size

Methods

- 218,457 caribou (202,106 - 234,808)
- Minimum count = 197,894 caribou
- Increasing (3.5%/year) similar to growth rate between 1972-1989.

Results



Calf Birth Rate and Survival

Results

- Classify pregnancy on calving grounds (2021)
 - *85% of females pregnant*
 - *Long term average of 82%*
- Check to see how many calves survive after 1 month
 - *90% of those calves survived*
 - *Long term average is 87%*
 - *After 1 month: 63 calves per 100 cows*



Female Yearling & Adult Male Survival



Methods

DRAFT

Results

- Use satellite GPS collars to estimate survival
 - Alerted when collared animals die
 - Cause of death is unknown
 - Different age/sex groups die at different rates
- Percentage of yearling females that survived in 2020-2021
 - *81% of yearling females*
- Percentage of adult males that survived in 2020-2021
 - 68% of adult males

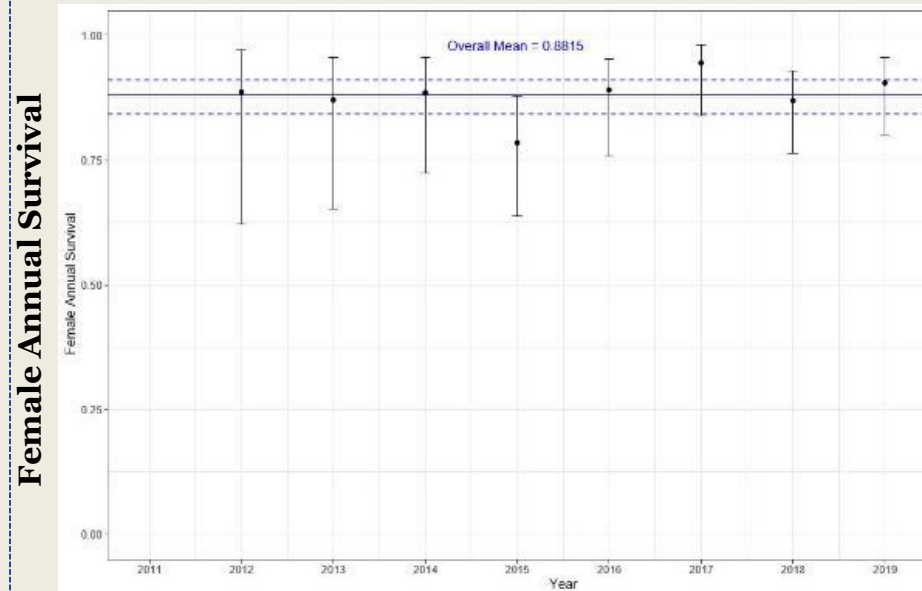
Adult Female Survival

Results

DRAFT

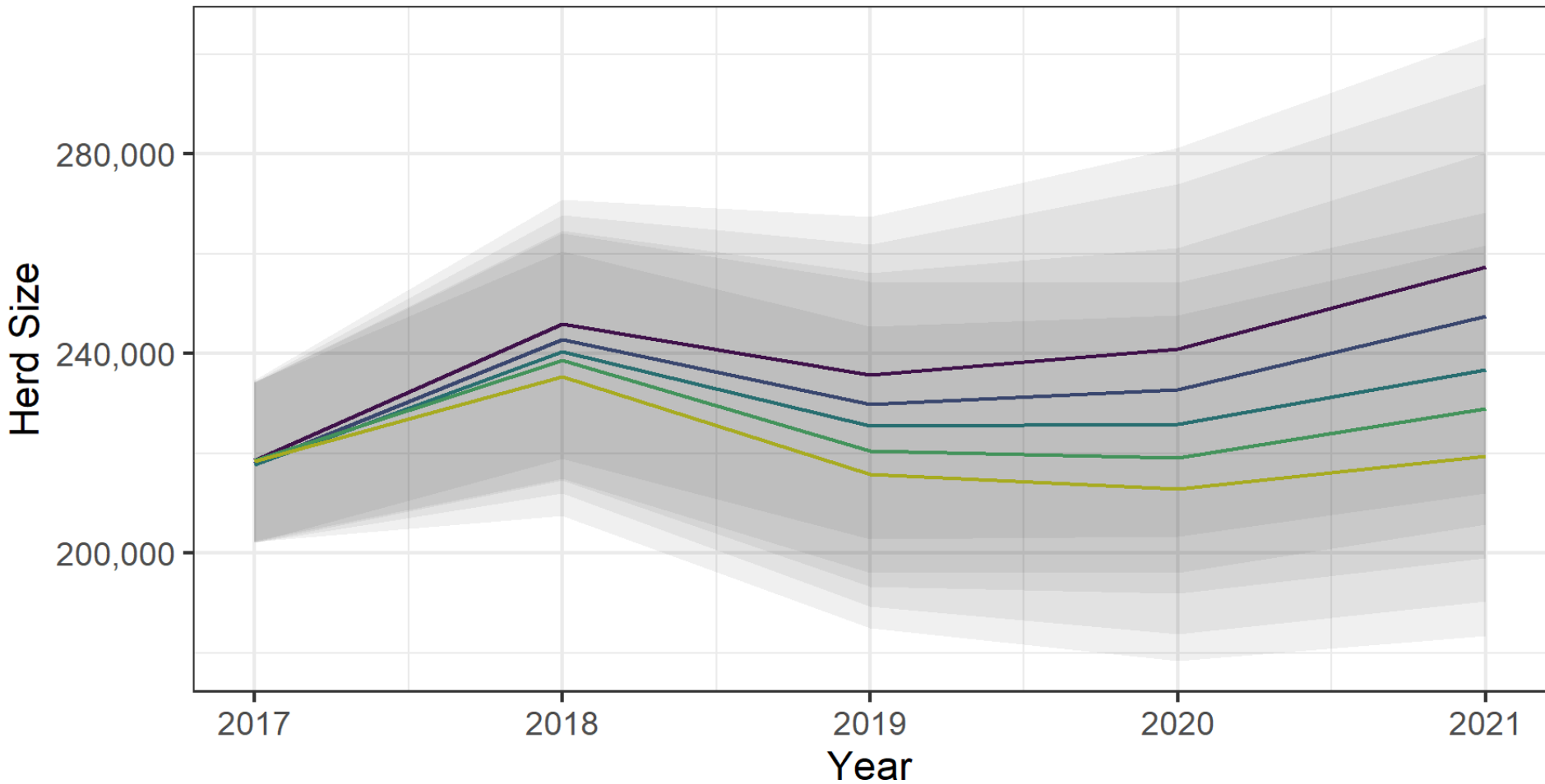
- Percentage of females (>2 years old) that survive each year
 - 95% of adult females survived (85%-98%)
 - From 2012-2021, survival ranged from 79%-95% but averaged 89%

Annual Survival of Adult Female Porcupine Caribou
(Error bars are 95% confidence limits)



Caribou Year (calving to calving period)

Population Model



Calf Mortality Rate — 0.4 — 0.44 — 0.49 — 0.54 — 0.58

Population Roll Up



- Good pregnancy
- Relatively high survival of all ages
- Likely increasing
- Highly likely were in the green zone





Population

Body
Condition

Habitat



Overview

Caribou Body Condition



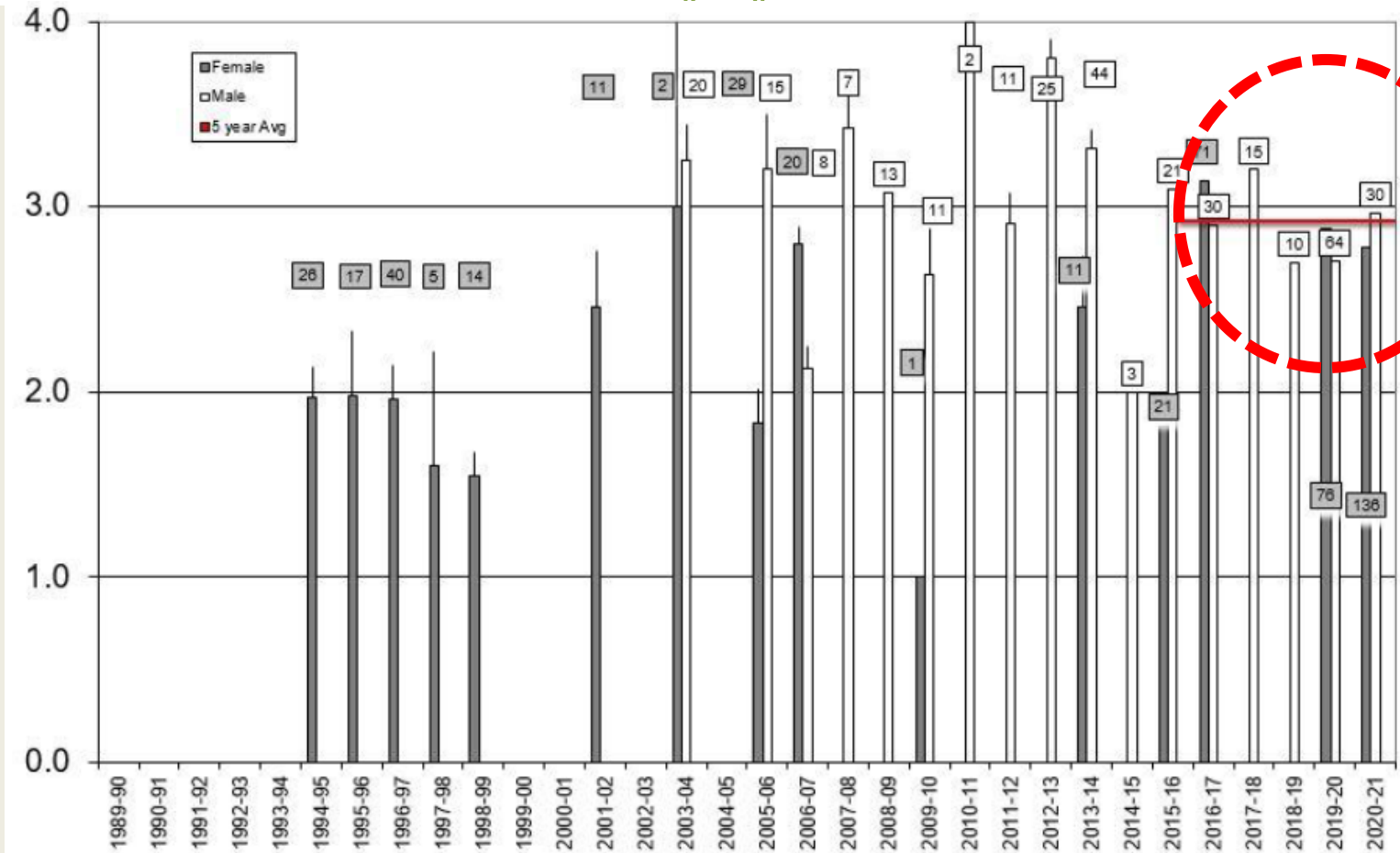
Methods

- How healthy individual caribou are by measuring back fat and rating animals
 - *Most samples from November - March*
 - *166 caribou assessed by hunters and 142 sampled for back fat depth*

Results

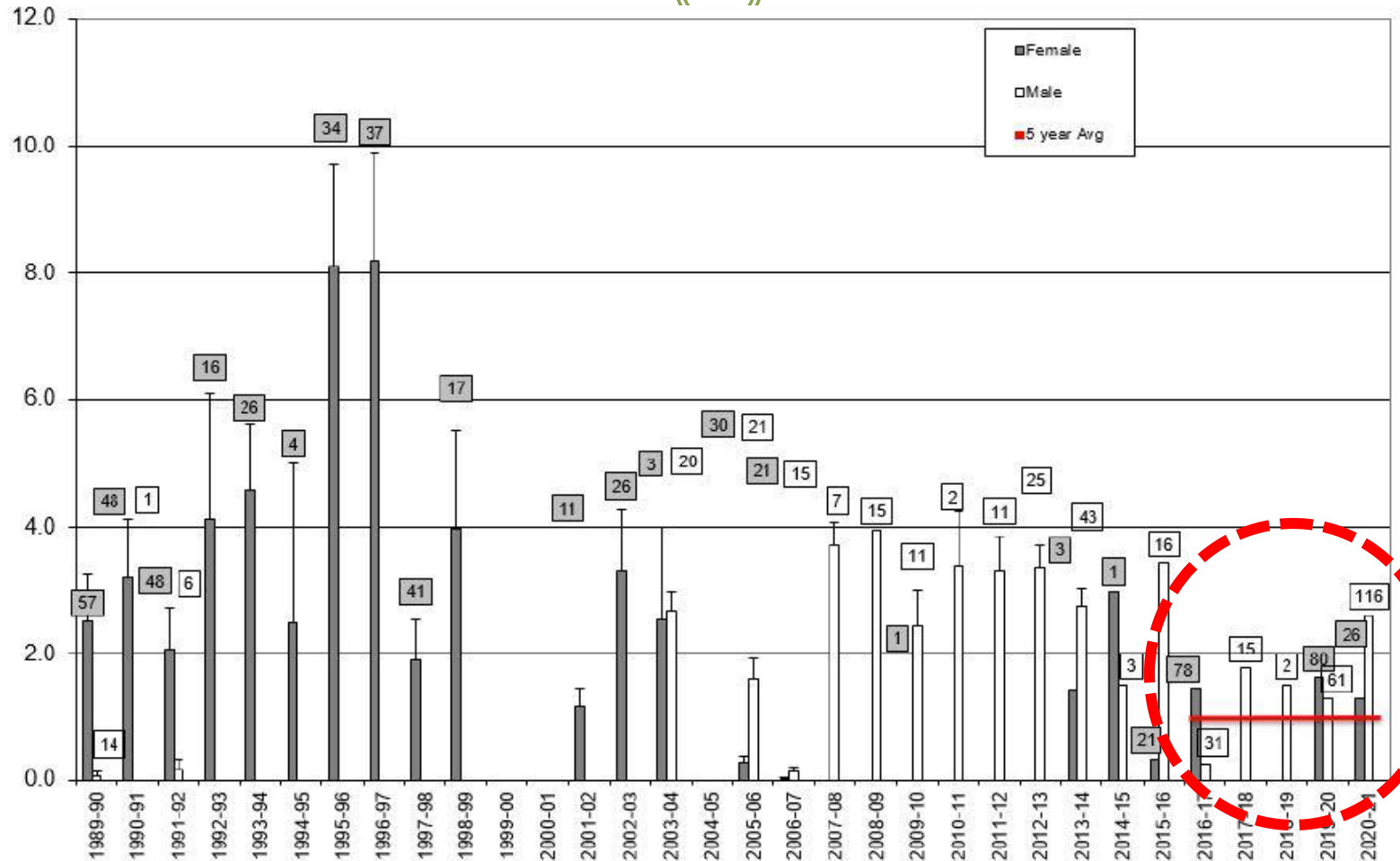
- Average for both measures - timing
- Relatively stable
- Heard from hunters condition improved as winter progressed

Caribou Body Condition



Average condition of harvested caribou
 1=poor, 2=fair, 3=good, 4=very good

Caribou Body Condition



Average Depth of Backfat (cm)



Population

Body

Condition

Habitat



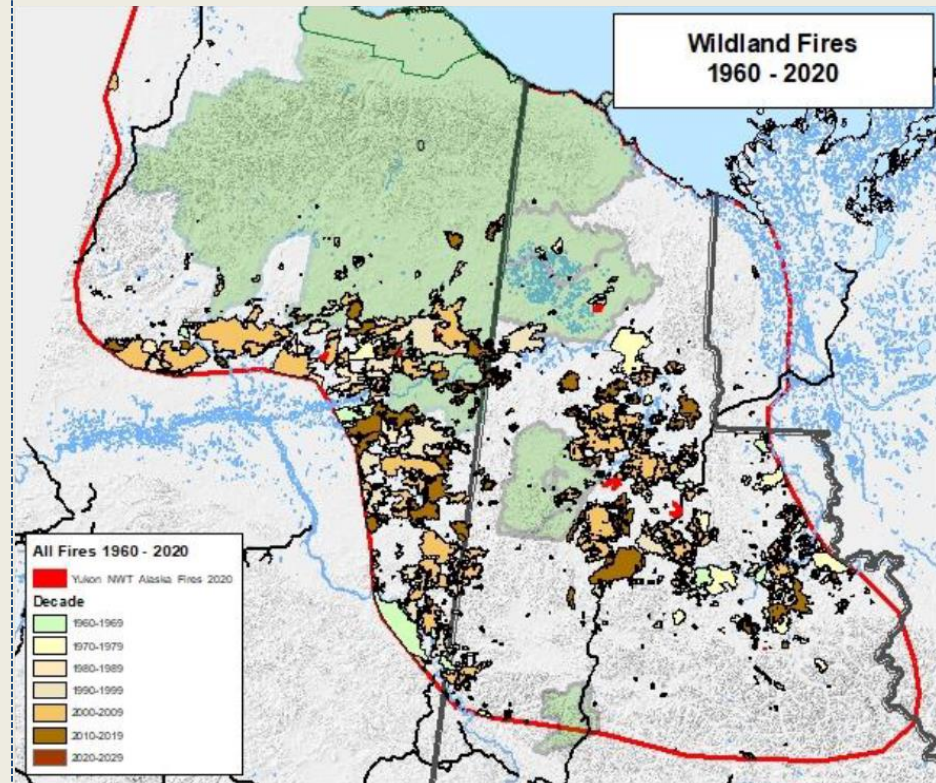
Overview

Wildland Fires

Methods

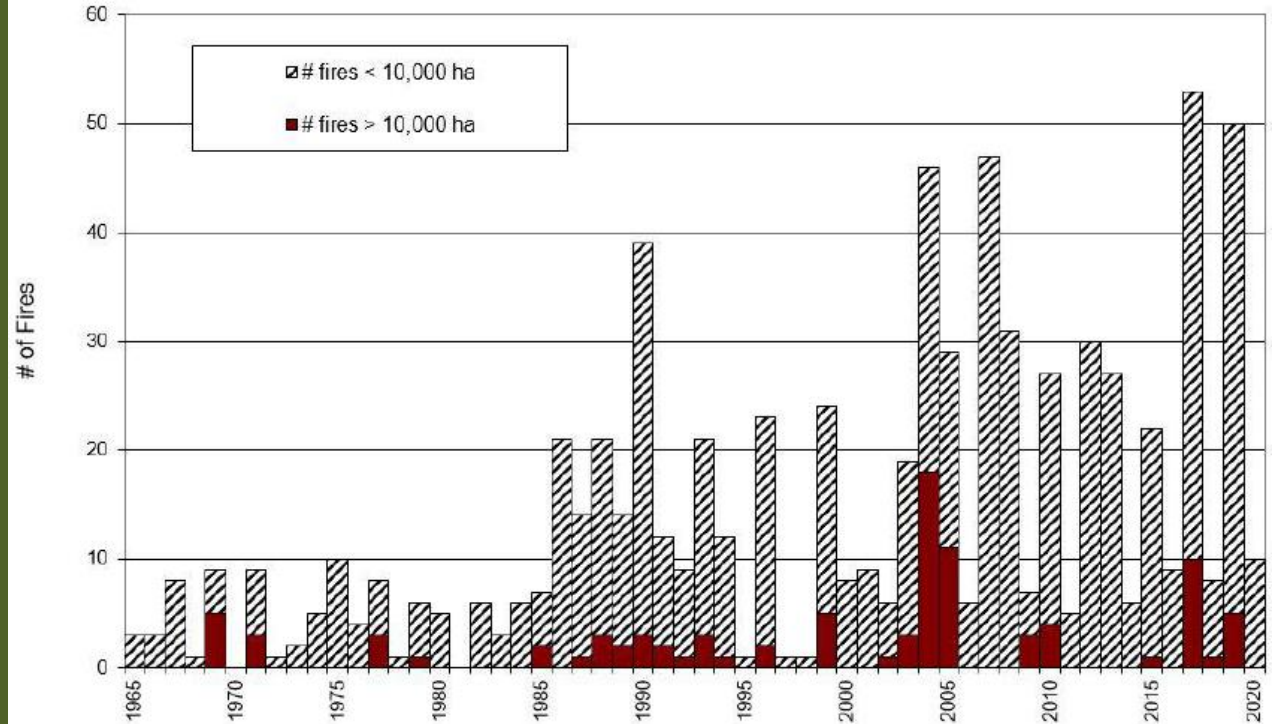
- Amount of PCH range burned as an index of range condition
- Fires in red are new as of 2020
- 2021 data not yet available – 1 fire in core winter range, several on periphery

Results



In 2020 there were 6 fires in Alaska, and 4 within the YT of the PCH range

All small fires



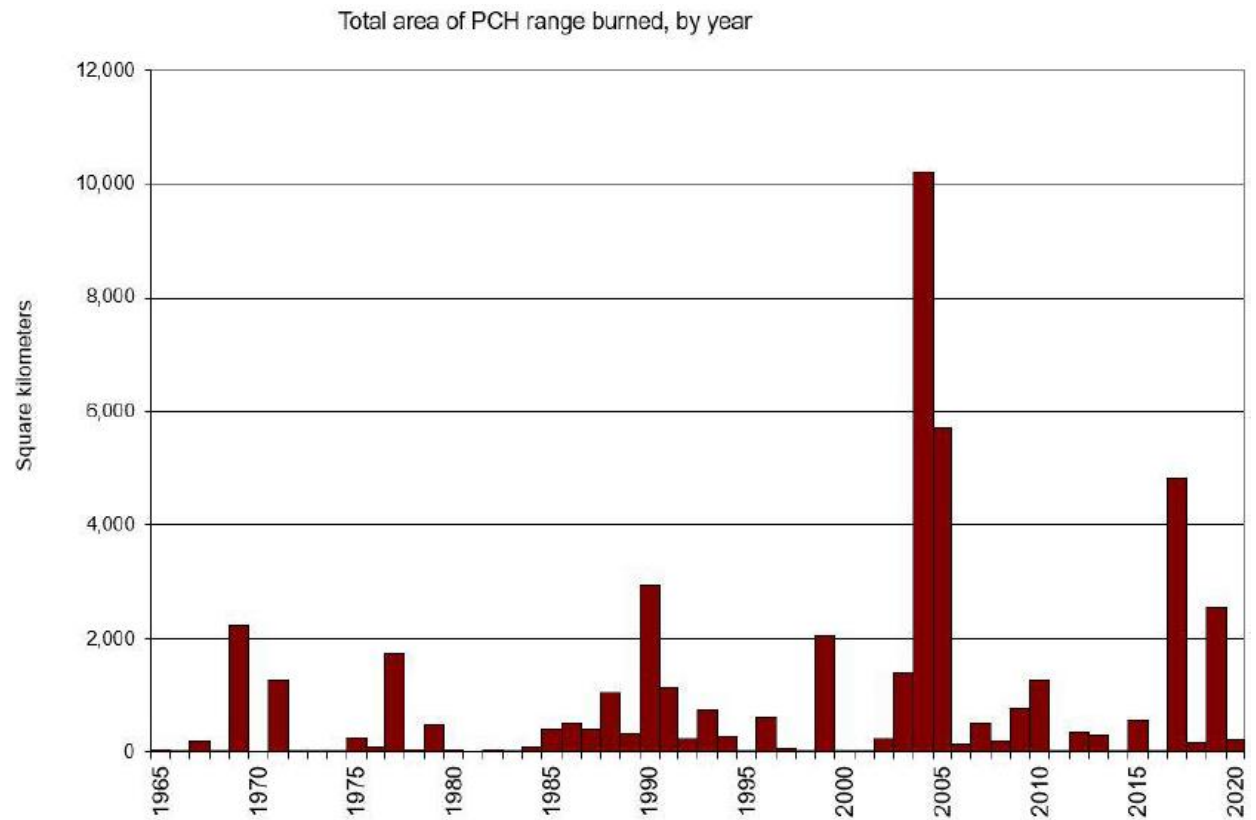
Number/size of fires in PCH Range



Using the area
burned on its own
not a great metric

Some areas reburn

New lichen maps
will show change
every 5 years in
habitat from 1985
forward – included
next season



Area burned in PCH Range

Snow Conditions

Methods

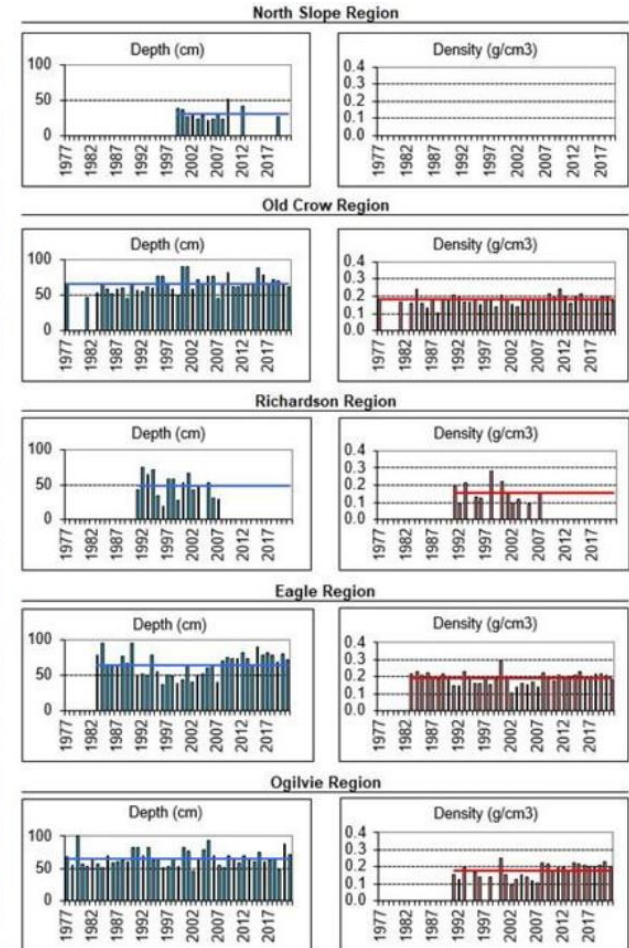
- Index of winter conditions
- Measurements of depth and snow density measured at 17 permanent locations
- 1977-2021



Eagle Plains and Ogilvie = above average snow depth

Increasing trend towards a deeper snowpack over the last decade in areas

During March 2021 observed deep snow but no ice layers



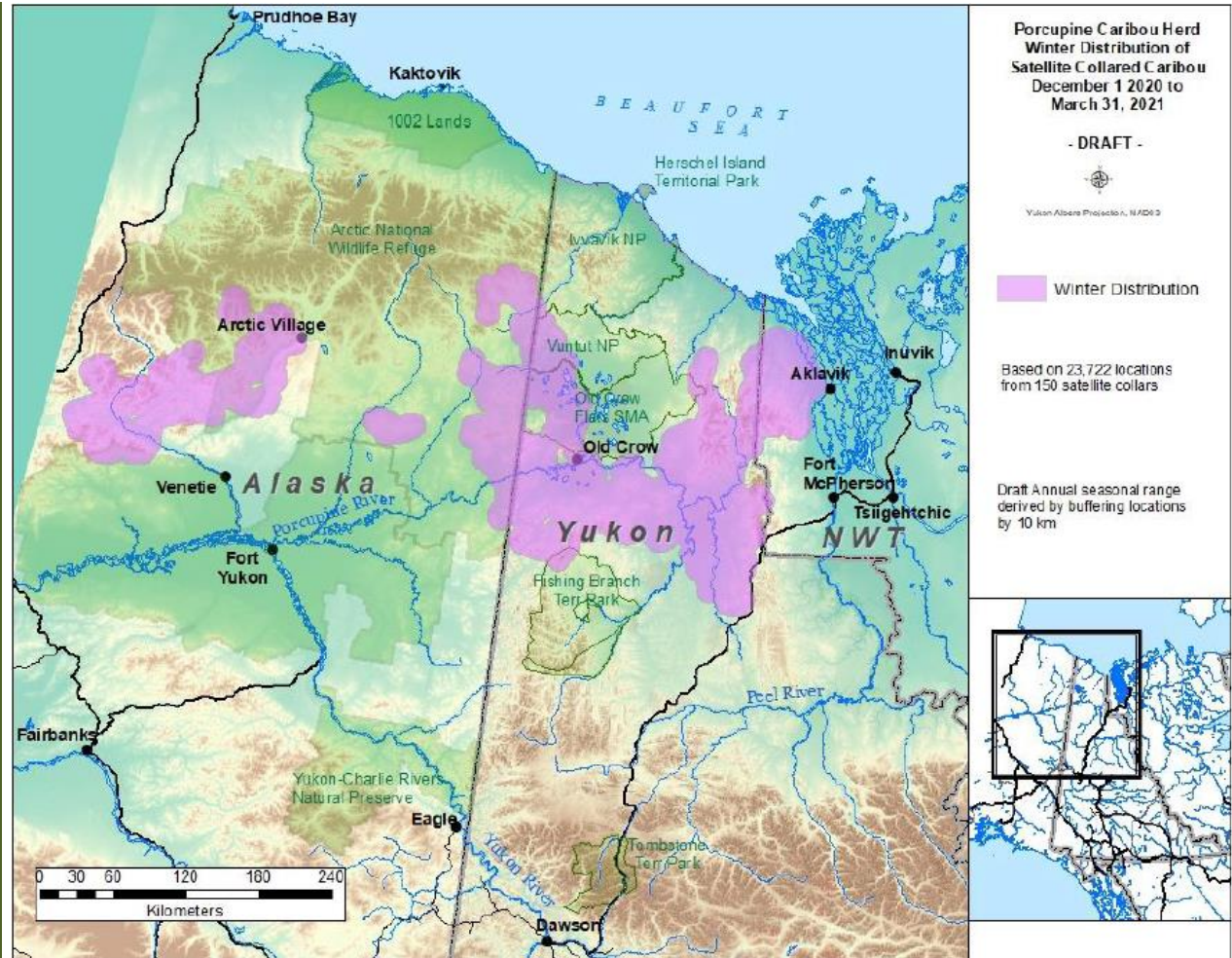
Snow Conditions



Most of the herd in Canada

Exposed to deeper snow packs in most areas they were wintering

Snow shallow until mid to late winter



Snow Conditions

Habitat Roll Up



- Few fires in summer 2020 but 1 larger fire in 2021
- Snow conditions were deeper than average
- New lichen layer will be helpful



Overall Interpretation

- Herd has likely increased
- Changing timing of movements – indications of change in herd?
- Survival generally high
- Habitat conditions haven't changed too much...



Questions?

