

Summary:
Canadian Porcupine
Caribou harvest,
2012 – 2013



PORCUPINE CARIBOU
HARVEST DATA PROGRAM

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Summary: Canadian Porcupine Caribou harvest, 2012 – 2013

File report to the PCMB by D. Cooley and M. Branigan, 6 January 2014

BACKGROUND

In the *Harvest Management Plan for the Porcupine Caribou Herd in Canada* (HMP) and the accompanying Implementation Plan (IP), all Parties committed to collecting rigorous and verifiable caribou harvest data from their respective hunters. The IP presents the variables (specific data) that are required to record when conducting harvest data collections.

Appendix 9 of the IP details the data collection method to estimate a total harvest by all users in Canada. Briefly, the program is a stratified sampling design with the 7 User Groups being separate strata. There are 3 User Groups who will estimate their harvest based on interviewing a sample of their hunters. Because of their large numbers of hunters and potentially large harvest, Inuvialuit, NWT Gwich'in and Vuntut Gwitchin will estimate their harvest. The remainder of the User Groups will submit reported harvest numbers. For those User Groups who will estimate their harvest, within each community, hunters are further stratified by their relative hunting activities; very active hunters are classified as Key. For each stratum, the average harvest per hunter who is interviewed is applied to those hunters who were not interviewed. The sum of harvest and associated variance for all strata are considered to be the total estimated harvest and variance for that User Group.

The Parties are required to submit summary data (total estimated harvest by caribou sex and variance of those estimates, or total reported by caribou sex) to the Porcupine Caribou Management Board (PCMB) for the previous season by July 15 each year. The PCMB forwards the data to the Porcupine Caribou Technical Committee (PCTC) to summarize and include in their Annual Summary Report, due to be submitted to the PCMB by November 15 each year.

Activity 1.2.1 of the Implementation Plan (page 11) lists the following topics to summarize:

- the total reported harvest, by sex, by community
- the total estimated harvest by sex, by community and variability (variance)
- the distribution of the harvest over time (season/month)
- the total number of active Porcupine Caribou harvesters by community
- the total number of Porcupine Caribou harvesters who responded by community
- the spatial distribution of the harvest
- total estimated harvest in Canada
- the reliability (variance) of the estimate
- correction factor as required

This file report to the PCMB summarizes all data submitted under the HMP.

METHODS - Data collection programs for 2012-13

INUVIALUIT

- Two interview survey waves were done in Aklavik. No data collection in Inuvik or Tuktoyaktuk yet.

NWT GWICH'IN

- Ongoing program of bi-annual, door-to-door interviews in all 4 Gwich'in communities. For most communities, active harvester lists are still being developed so these harvest estimates were stratified only by community.
- Locations were recorded using only the NWT grid system therefore Yukon kill locations are not summarized by Game Management Subzone.

VUNTUT GWITCHIN

- VGG did 2 sets of interviews this year. The first interviews were not stratified but consisted of known active PCH hunters taken from a master list. The second set of interviews used the same master list of hunters but also stratified hunters into Active, PCH, and PCH Key hunters. This enabled us to calculate a total estimated harvest by VGG citizens according to the HMP.
- For the majority of records in the dataset, month and location of harvest was not recorded.

TR'ONDĚK HWĚCH'IN

- One-on-one interviews are done with TH citizens for numerous species. We assume the reporting rate is 100%.

FIRST NATION OF NA-CHO NYÄK DUN

- No hunters report hunting for Porcupine Caribou during this period.

NWT LICENSED

- Mandatory reporting by resident hunters (currently no non-resident hunting permitted). Harvest is estimated by three mail-out reporting forms. Each mail-out is treated as a separate stratum and the total harvest is the sum of the strata.
- The mail-out for the 2012-13 season is currently underway; therefore, no estimate is yet available. For the purposes of this report, we assumed all tags were filled, which is probably an over-estimate. Currently PCH range is the only area in the NWT where residents can harvest and because NWT residents are limited to bulls only, we used the total number of tags sold as the maximum possible number of Porcupine Caribou bulls harvested by NWT resident hunters.
- Because we need to use 'maximum possible', date and location information of actual harvests is not available.

YUKON LICENSED

- All Yukon Residents and Non-Resident hunters are required by law to report their harvest. We assume the reporting rate is 100%.

RESULTS - Total estimated caribou harvest in Canada, 2012/13

It is estimated that Canadian Porcupine Caribou Users took 1,105 bull and 179 cow/unknown sex caribou between June 1, 2012 and May 31, 2013 (Table 1).

Information on the date of harvest was provided for 407 caribou. The fall continues to be the most common harvest season with 297 (73%) caribou reported as harvested in August, September and October (Figure 1).

Location information was missing for 576 caribou (Figure 2). Because the data collection programs in the NWT and Yukon used different methods to record the location of harvests; NWT programs use the smaller 10 by 10 km grid system while Yukon data is recorded by the larger Game Management Subzone. In this report, NWT grid and Yukon Game Management Subzone are overlain on the same map.

The proportion of females in the harvest is 14% of the total caribou harvested, much lower than what was believed to be prior to the HMP process (in the neighborhood of greater than 50% cows – HMP, page 24) but higher than both 2010 and 2011.

Table 1. Total estimated harvest of Porcupine Caribou by Canadian Users, June 2012 to May 2013.

| User Group | Type ^a | Active hunters ^b | Particip rate ^c | Period covered | Bulls | Cows / Unk | Total | Notes |
|--------------------------------|-------------------|-----------------------------|----------------------------|-------------------------|--------------|------------|----------------|-----------------------------------|
| Inuvialuit | E | 130 | 93% | June 2012 to May 2013 | 146 | 30 | 176 | Aklavik only |
| NWT Gwich'in | E | 271 | 44% | June 2012 to May 2013 | 522 | 94 | 615 | |
| Tr'ondëk Hwëch'in | R | 1 | 100% | | 1 | 0 | 1 | Taken during the First Hunt |
| First Nation of NaCho Nyäk Dun | R | 0 | --- | June 2012 to May 2013 | 0 | 0 | 0 | |
| Vuntut Gwitchin | E | 95 | 87% | Fall 2012 to 8 Feb 2013 | 348 | 55 | 403 | |
| YT Resident | R | 8 | 100% | June 2012 to May 2013 | 8 | 0 | 8 | |
| YT Non-resident | R | 0 | --- | June 2012 to May 2013 | 0 | 0 | 0 | No harvest reported |
| NWT Resident | M | 44 | 100% | June 2012 to May 2013 | 80 | 0 | 80 | Maximum possible |
| NWT Non-Resident | --- | --- | --- | June 2012 to May 2013 | 0 | 0 | 0 | No Non-resident hunting permitted |
| | | <u>592</u> | | | <u>1,105</u> | <u>179</u> | <u>1,283</u> | Total estimated caribou harvested |
| | | | | | | | 111 | Margin of error |
| | | | | | | | 1,153 to 1,374 | Range (90% CI) |
| | | | | | | | 14% | Cows/Unknown sex as % of total |

a. Type: E = estimated, R = reported, M = maximum possible

b. Active hunters: for estimated numbers, equals the maximum number of interviewees over all interviews. For YT licensed hunters, equals number of hunters reporting a PCH harvest. For NWT licensed hunters, equals the number of hunters who purchased a caribou tag in the Inuvik region.

c. Participation rate: for estimated numbers, equals (sum all interviews done / sum of all harvesters) for all interviews this caribou year. For YT and NWT licensed hunters, is assumed to be 100%.

Figure 1. Month of caribou harvest reported by Canadian Users, 2012 / 2013

Not including 460 caribou with no harvest month reported.

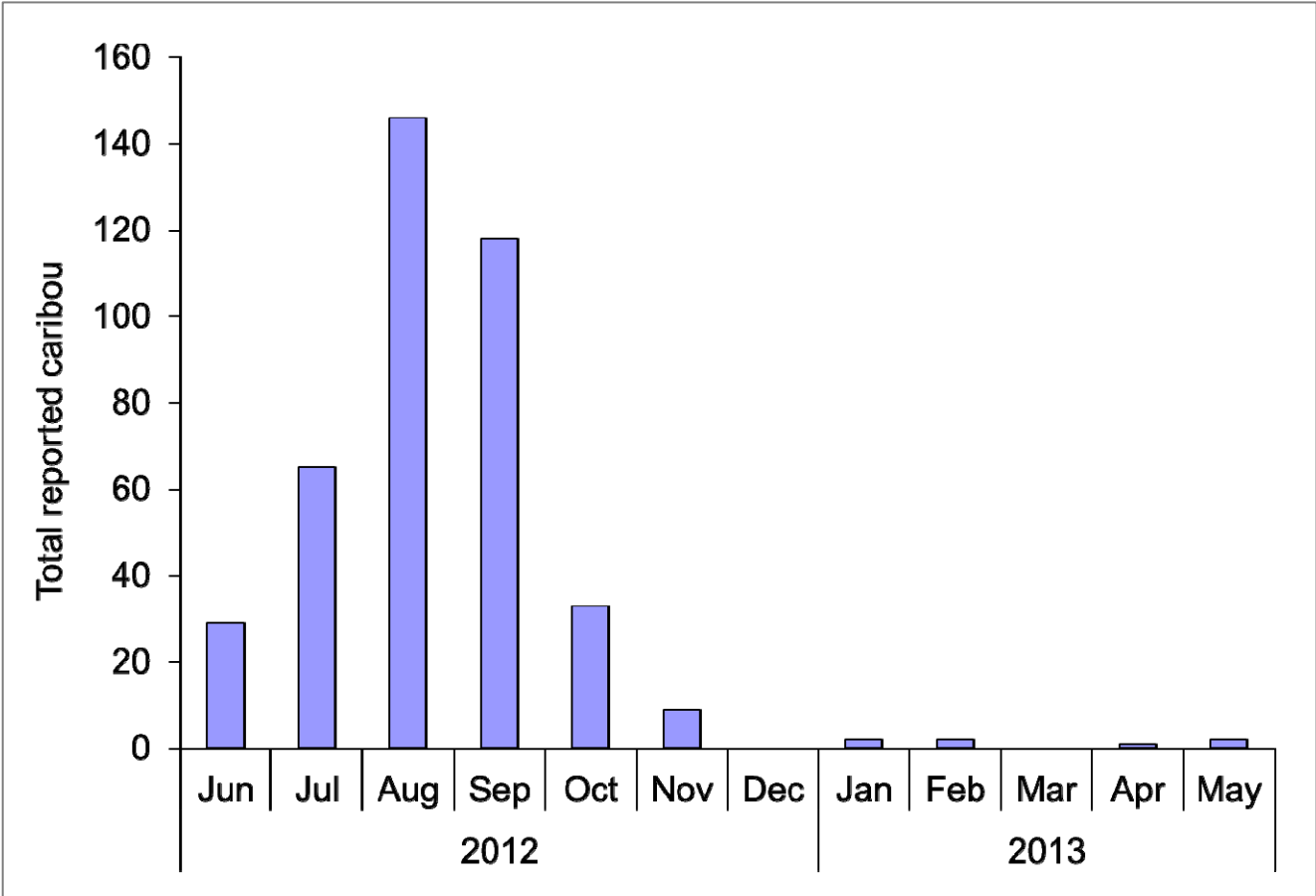


Figure 2. Density of reported caribou harvest by Canadian Users, by Game Management Subzone or Grid ID, 2012 / 2013

Not including 576 caribou with no location reported

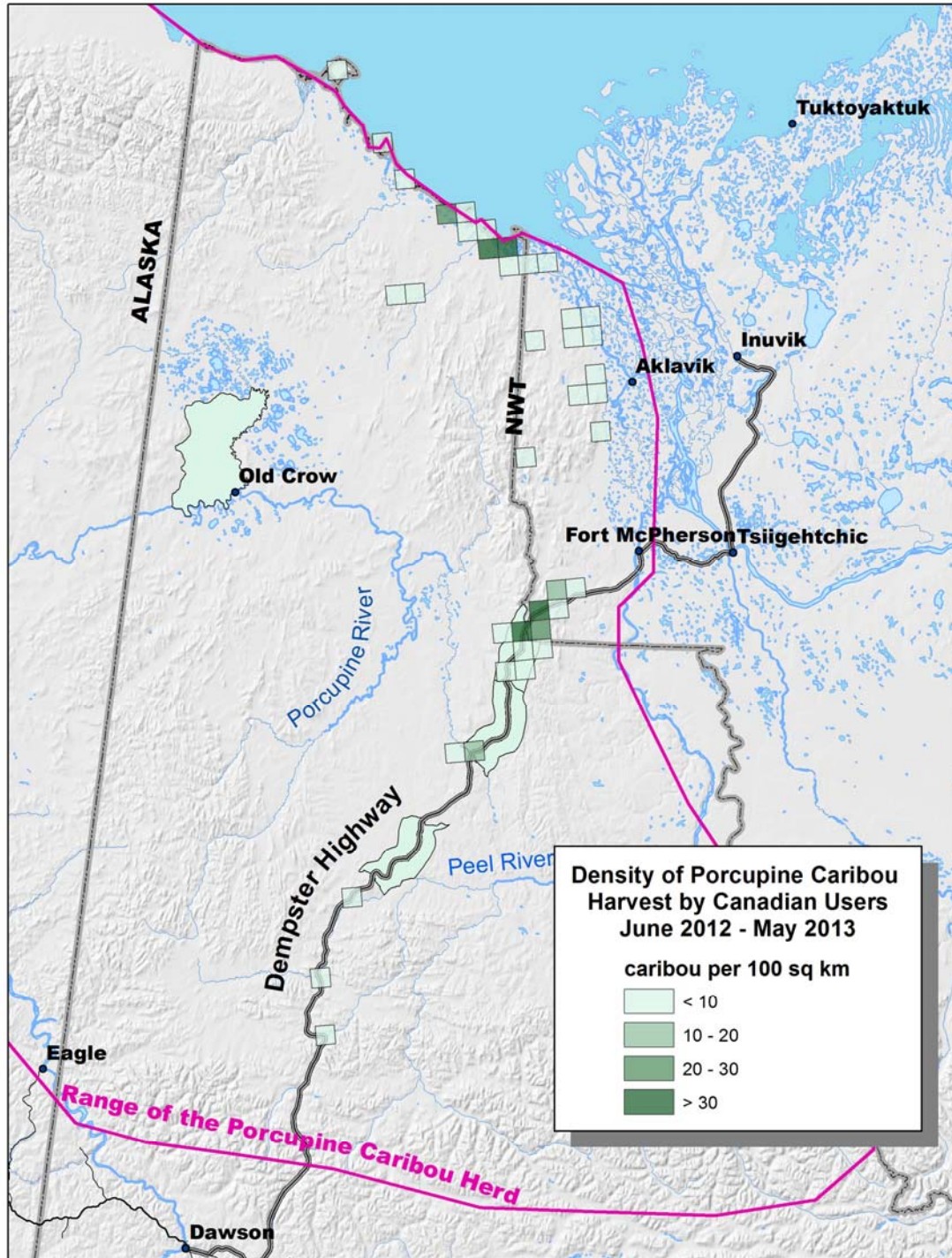
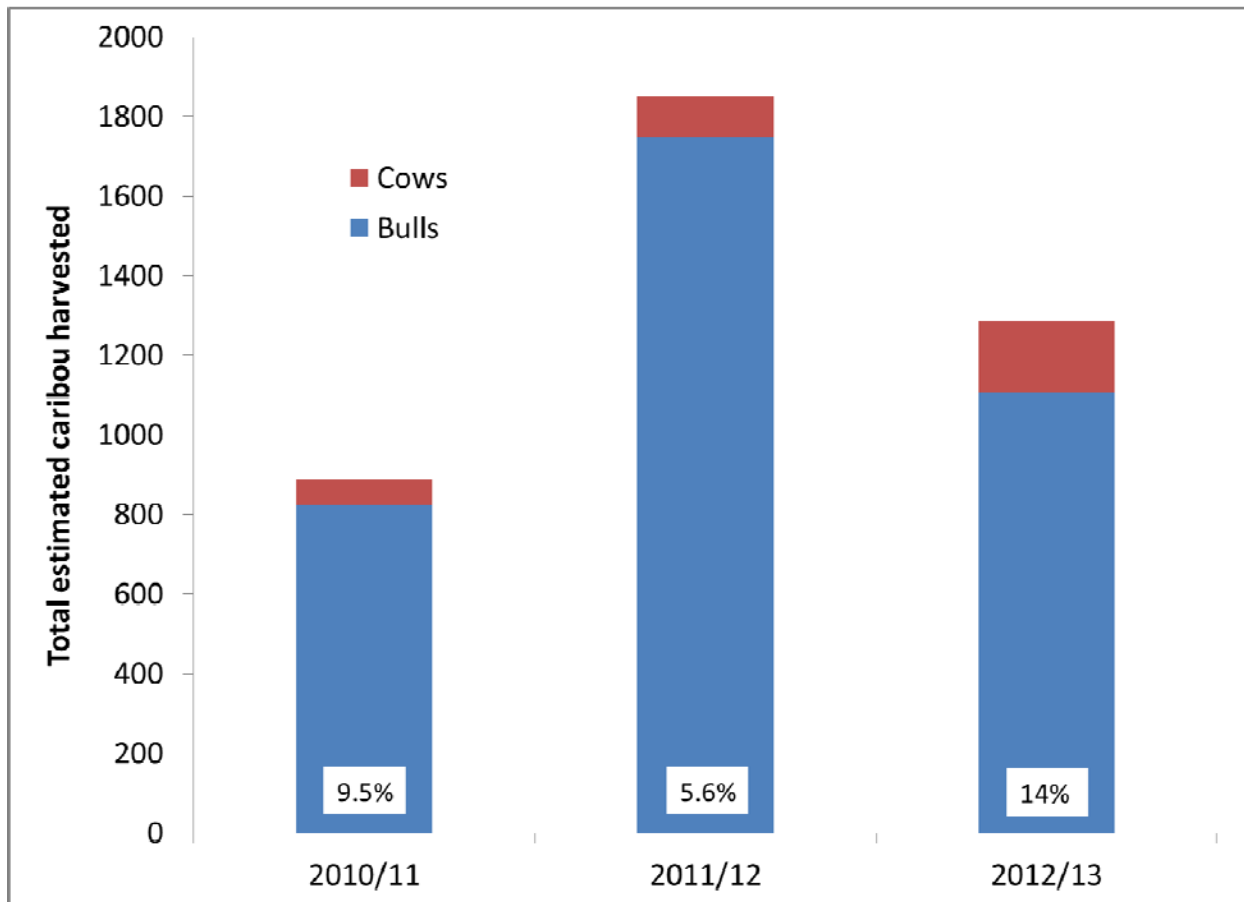


Figure 3. Total estimated Porcupine Caribou harvest by Canadian Users, 2010 to present

Columns are labeled with the proportion of females in the estimated harvest.



Important: see individual reports for all notes, caveats and limitations to the data

2010/11: Inuvialuit: Aklavik drop-in data only. VGG: Total reported. NWT licensed: updated with finalized GNWT estimates 16Sep2013.

2011/12: Inuvialuit: Aklavik interviews only. VGG: Total reported. NWT licensed: maximum possible - estimate underway.

2012/13: Inuvialuit: Aklavik interviews only. NWT licensed: maximum possible - estimate underway.