2023 - 2024 KENNEDY SIDING SUPPLEMENTAL FEEDING

BY

Doug Heard Tithonus Wildlife Research



March 2024

The number of caribou in the Kennedy Siding herd continued to increase and in 2024 there were 3 times as many as in 2014, when feeding began.

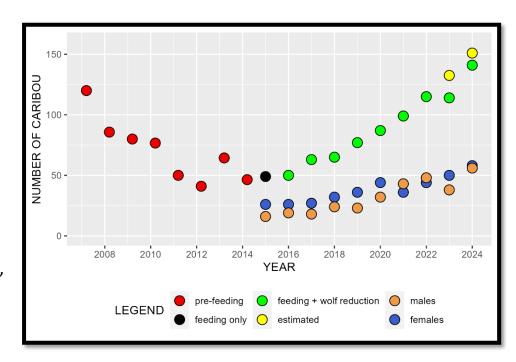


Figure 1.

FEEDING

We provided supplemental food to Kennedy Siding caribou in 2023-2024 as had been done each year since 2014 (Heard and Zimmerman 2021, Heard and Elviss 2023). We began feeding after the first caribou arrived, but only when we were present. We did not leave any food when we were not there so that no food would be available to grizzly bears. After 5 November when most grizzly bears entered hibernation, we began *ad lib* feeding until 15 January 2024. What appeared to be one individual grizzly bear, showed up on 6 evenings between 20 November and 7 December, but caribou had usually eaten all the food during the day, so the feeders were often empty and little food was available for the bear. Destiny Rae Kelto put out 460 20kg bags of food pellets (9240 kg), for a consumption rate of about 0.9 kg/c/d, a little less than in past years, which was about 1.0/kg/c/d. Most of the food put out was consumed by caribou, but some was discarded when it got wet, and some was eaten by ravens, one or more grizzly bears and on 3 nights in January, a coyote. No deer, elk, moose, or black bears ate the pellets.

FALL ARRIVAL

The first caribou in the fall arrived at Kennedy Siding on 8 September which was within the date range of first arrivals in previous years. However, it took until 3 November before half of the caribou had arrived and until 13 November before 75% were there. Both of those dates were 2-3 weeks later than in previous years. The arrival of females with functioning radio-collars showed a similar arrival pattern with half of the 11 collared cows arriving before 2 November and 73% were there by 6 November.

The relatively late arrival of caribou on their early winter range at Kennedy Siding was likely due to the unusually warm weather and late arrival of snow in the mountains. At lower elevations like Kennedy Siding the first snow came in late November, with little snow accumulation after that. On 15 January 2024, the last day of feeding, there was only a trace of snow on the ground (Figure 2). Another indication of the warm fall was the presence of at least one grizzly bear which was last seen in a trail camera picture on 7 December, about a month later than normal.

Many caribou remained at the feeders much later into the winter than normal. February 15 was the last time a caribou was present in a trail camera picture. The last radio-collared cow left 13 February.



Figure 2.

NUMBER AND COMPOSITION

We identified 143 caribou at Kennedy Siding but 2 died before the end of the count period on 15 January, bringing the final count to 141 (Figure 1). Nineteen percent were calves (n=27; 18 females and 9 males), 58 were females and 56 were males, for a sex ratio of 97 males:100 females (100*56/58).

Because 1 of the 12 females with functioning radio collars did not come to Kennedy Siding, and assuming that the collared caribou were representative of all caribou, I estimated a total population to be 154 by increasing the count by 1/12 to account for the caribou that remained on its summer range (141* 12/11). Heard and Elviss (2023) used the same reasoning in 2023 when 2 of 12 cows remained on the summer range (Figure 1).

POPULATION GROWTH

In 2024 the Kennedy Siding herd continued to grow as it had since supplemental feeding and wolf reduction began, and at the same rate as the adjacent Klinse-Za herd. As has been noted before (Serrouya et al. 2019), a combination of management treatments, wolf reduction plus feeding at Kennedy Siding and wolf reduction and a maternity penning for Klinse-Za caribou, appears to result in faster population growth than wolf reduction alone, as in the Quintette herd (Heard and Zimmerman 2021, Lamb et al. 2024; Figure 3).

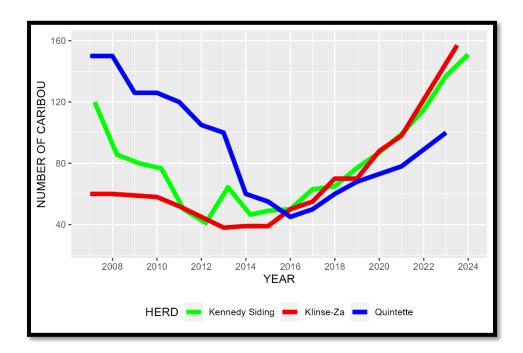


Figure 3.

HEALTH AND CONDITION

The mean body weights for calves and adults of both sexes were similar to the mean body weights from previous years (Heard and Zimmerman 2021). There were relatively few adults with visible ribs and their weights did not suggest they were in poorer body condition than other caribou (Welch two-sample t-test, females p=0.8, males p=.99).

	Mean weight (kg)	Number weighted
Calf females	73	16
Calf males	78	7
Adult females	129	50
Adult males	162	41
Adult females with visible ribs	128	6
Adult females without visible ribs	130	44
Adult males with visible ribs	161.7	9
Adult males without visible ribs	161.6	31

Two caribou were missing an eye, possibly the result of a sparing injury (Dead Eye an adult male and Fern an adult female), and 2 adult females (Pin and Opera) were badly limping on one leg. Although those conditions looked serious, Dead Eye and Pin both survived at least 2 years with those injuries, as they were first seen in 2021, then in 2022, and again this year. Pin successfully raised a calf both 2021 and 2023.

SURVIVAL

Starting in 2015, government programs reduced wolf numbers (Bridger 2019), but wolves were not eliminated from Kennedy Siding caribou range. From 2016 to 2024, we saw wolves between 1 and 7 times per year in trail camera photographs but until this year, no radio-collared Kennedy Siding cows had been killed by wolves (Heard and Elviss 2023). This year, we found 2 caribou that had been killed by wolves. On 23.12.08, wolves killed Bag Lady, a radio-collared

adult female (age estimated from incisor wear at >12 years old) and on 24.01.11, wolves killed Novel, a 2-year-old male (age estimated from molar tooth eruption and wear). Both were killed about 3 km from the feeders.

EXTENSION

I described the research going on at Kennedy Siding through numerous conversations with members of the public who came by to see the caribou, and during 6 organized field trips. Two groups came from the UNBC Student Chapter of the Wildlife Society, there were 2 Mackenzie school groups, a contingent from the Prince George Naturalists Club and a group of elders from the Lhtako First Nation bussed all the way from Quesnel.

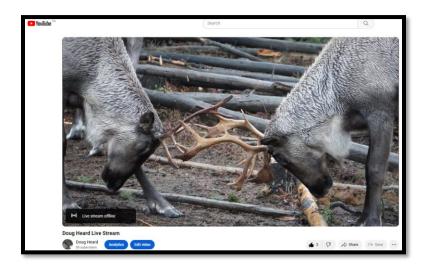


Figure 4. UNBC students attracted the attention of some caribou on their field trip.

In addition to the information I provided on-site, there was lots of new information about the feeding project on the internet.

A livestream video of caribou at the feeders became available to everyone in the world in September. It was available on YouTube directly

https://www.youtube.com/watch?v=DTrXaELu3hl&ab_channel=DougHeard or through the MLIB web site mlibwildlife.ca/live-cam/.

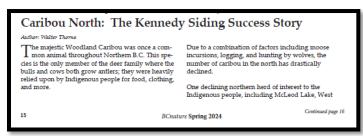


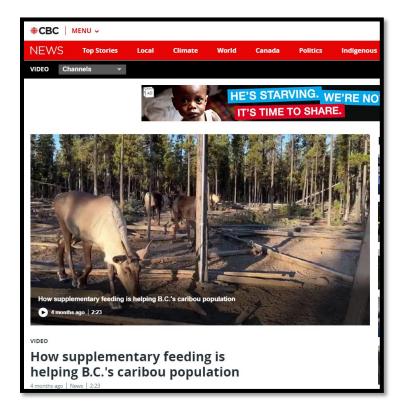
The McLeod Lake Indian Band established a web site with a description of their involvement in caribou conservation, like the Kennedy Siding feeding program [mlibwildlife.ca]. The site has inks to numerous print and video articles and to the Kennedy Siding livestream video.



The feeding project received regional coverage through an article in the Prince George Citizen newspaper, provincial coverage in BC nature Magazine and national coverage on CBC daybreak.







ACKNOWLEDGEMENTS

I thank Stephanie Rocheleau, and Destiny Rae Kelto of the McLeod Lake Indian Band for their enthusiastic support for this project. Stephanie provided great administrative support and Destiny lugged over 9000 kg of pellets, which the caribou greatly appreciated. Further thanks go to Sarah Jenkins, Mackenzie Askin and Lauren Elviss for their help interpreting photographs. Kevin Watt provided the GPS locations of radio-collared cows and Jo-Anne Allison, Brett Heard, Mike Klaczek, Scott McNay, and Line Giguere helped with the field work. This work was funded by the Province of British Columbia's Caribou Recovery Program, administered by Allen Wootton of the BC Conservation Foundation.

LITERATURE CITED

- Bridger, M. 2019. South Peace caribou recovery following five years of experimental wolf reduction. Report for the BC Ministry of Forests, Lands and Natural Resource Operations. 28pp.
- Heard, D.C. and K.L. Zimmerman. 2021. Fall supplemental feeding increases population growth rate of an endangered caribou herd. PeerJ 9:e10708

 https://doi.org/10.7717/peerj.10708
- Heard, D. and L. Elviss. 2023. Caribou research at Kennedy Siding 2022-2023. Report for the BC Conservation Foundation. 15pp.
- Lamb, C. et al. 2024. Effectiveness of population-based recovery actions for threatened southern mountain caribou. Ecological Applications.
- Serrouya, R., Dale Seip, Dave Hervieux, Bruce N. McLellan, R. Scott McNay, Robin Steenweg,
 Doug Heard, Mark Hebblewhite, Michael Gillingham, and Stan Boutin. 2019. Saving
 endangered species using adaptive management. Proceedings of the National Academy
 of Sciences of the United States of America. 116:6181-6186. Online version:
 https://doi.org/10.1073/pnas.1816923116