



Photo: © Jim Dau

Central Arctic Caribou Herd News

Alaska Department of Fish and Game, Summer 2020



The annual range of the Central Arctic Herd (CAH).



UAF/UAA research focused on the CAH

ADF&G is supportive of independent research on the Central Arctic caribou herd. Recent UAF graduate Scott Leorna completed his M.S. research into hunter perceptions of CAH hunting and management, and his study was recently published in the *Journal of Human Dimensions of Wildlife*. Find the manuscript and contact information for Scott here:

<https://humanwildliferesearch.com/scott>

Central Arctic herd hunting regulations

Participating in the Alaska Board of Game process

Hunting regulations are determined by the Alaska Board of Game based on proposals submitted by the public, local advisory committees, and/or ADF&G. Biologists at ADF&G provide analysis and recommendations to the Board for each proposal based on biological data. The next Board of Game meeting for this region is in 2023. Any member of the public may submit or comment on proposals to change regulations. ADF&G encourages hunters to participate in the process directly. Visit our website or contact the CAH area biologist for more information.

Alaska Board of Game 2020 Regulation Changes: Proposal 79

(submitted by the Fairbanks Fish and Game Advisory Committee)
The Alaska Board of Game amended and passed this proposal. In Unit 26B Remainder, the Board increased the bag limit for residents from 2 bulls to 4 bulls and changed the season for residents to open on July 1 instead of August 1, but did not add a cow registration hunt.

Resident Hunters:

Unit 26B Northwest Portion:

5 caribou per day, bulls (no closed season), cows (July 1 - May 15)

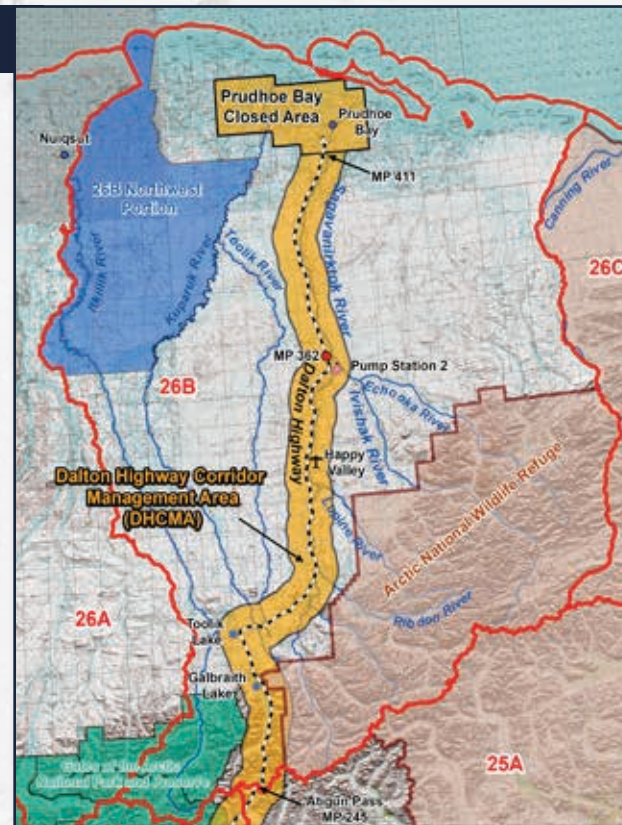
Remainder of Unit 26B: 4 bull caribou total (July 1 - April 30)

Nonresident Hunters:

All of Unit 26B: 1 bull caribou total (August 1 - September 15)

Dalton Highway Corridor Management Area (DHCMA):

See weapons restrictions on pg. 105 of 2020-2021 Hunting Regulations



Questions? Contact the CAH area biologist:

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For more information, visit:

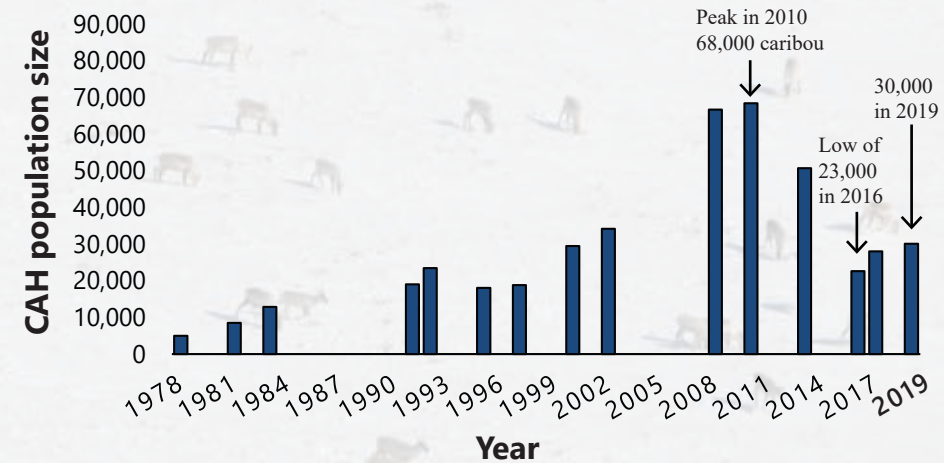
adfg.alaska.gov or hunt.alaska.gov

Central Arctic caribou herd showing positive signs

The Central Arctic caribou herd (CAH) population peaked at 68,000 caribou in 2010. From 2010 to 2016, the herd decreased in population size by more than half to approximately 23,000 caribou. In 2017, a photocensus resulted in a population estimate of 28,000, and another in 2019 resulted in an estimate of 30,000 caribou. Data collected during annual monitoring efforts indicate that the herd is stable and slightly increasing. Although the CAH has been smaller over the last several years, caribou have been accessible to hunters and the harvest has been well below the allowable harvest objective.

This newsletter has information about CAH herd dynamics, movements of caribou between North Slope herds, 2020-2021 CAH hunting regulation changes adopted at the 2020 Interior and Eastern Arctic Board of Game meeting, and other resources for hunters.

CAH Photocensus Population Estimates



A photocensus image with visible bulls, cows and calves from 2019. Digital photography was adopted for photocensus starting in 2017, which has resulted in better counting methods and estimates.

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Hunters are important founders of the modern wildlife conservation movement. They, along with trappers and sport shooters, provided funding for this publication through payment of federal taxes on firearms, ammunition, and archery equipment, and through state hunting license and tag fees.



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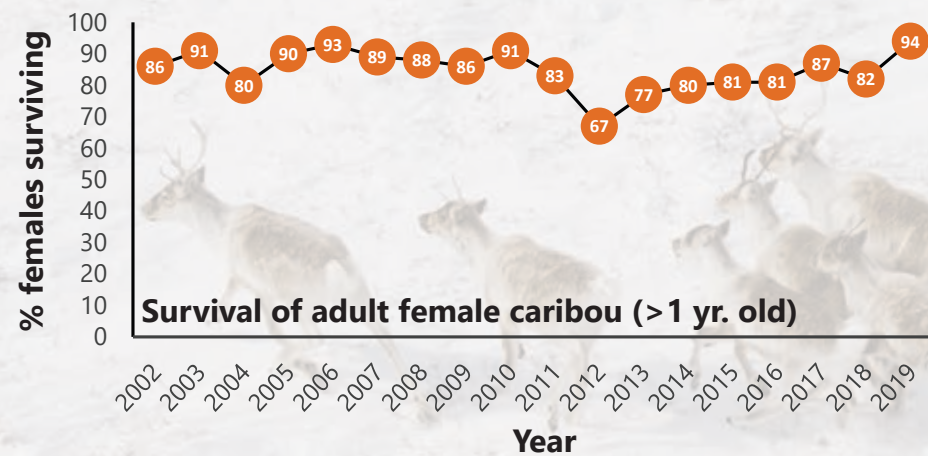
Indicators that the herd is stable

Calf production

During spring surveys in most years, 85% or more of radiocollared female caribou four years old or older are pregnant or have a calf. However, for two years during the decline, 2014 and 2015, the calf production rate was lower than 80%, which is considered moderate. During 2016–2020, it has been 87% or higher.

Female adult survival

Survival of adult female caribou (1 year old or older) improved substantially this year with 93% surviving from July 1, 2019 to June 30, 2020 (105 adult females had collars on July 1, 2019). Low survival of females was likely among the reasons for the reduction in herd size, as adult female survival ranged from 67–81% during 2012–2016, when the herd was declining. Biologists consider the herd to be stable or possibly increasing when female survival is at least 84%.



Calf:Cow ratios

Each fall helicopters are used to classify approximately 4,000 caribou as calves, cows, and small, medium, or large bulls. In fall 2019, the calf to cow ratio was 61 calves per 100 cows, which is considered very high, indicating high summer calf survival in 2019. If these calves survived through the winter, the CAH population is likely to increase.

Bull:Cow ratios

Bull to cow ratios were good at 50 bulls per 100 cows in the fall of 2019. During fieldwork, biologists noticed a healthy distribution of small, medium and large bulls. The population objective is 40 bulls per 100 cows, so the herd is exceeding objectives for bull to cow ratios — meaning there are plenty of bulls available both to cows during breeding season, and to hunters for harvest.

Disease

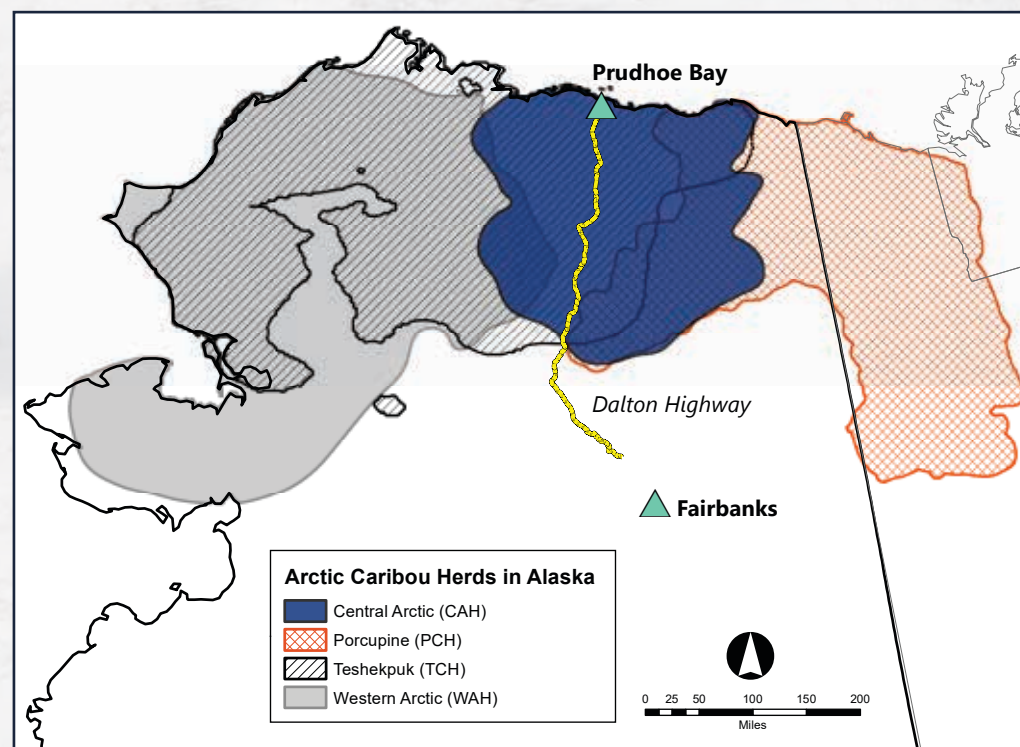
In 2017, biologists began to assess the health of the CAH and to investigate if diseases or parasites are having herd-level impacts. This study is still in progress. Part of the process is to determine what samples to collect and which tests give the most useful and cost effective information. In general, the tests considered and conducted in 2017 indicated good overall herd health and no detectable herd-level negative impacts of disease or parasites.

Samples collected in 2018 and 2019 are still undergoing analysis, and 2020 sample collection was canceled due to COVID-19. Our intent is to continue to collect samples in 2021 and 2022. This will create a baseline for future comparisons and help identify a testing strategy for future data collection.



Biologist Sara Longson collects samples from a radiocollared female caribou for health assessments and to test for diseases and parasites.

Movements of caribou between North Slope herds



The four North Slope caribou herds are: the Central Arctic (CAH), Porcupine (PCH), Teshekpuk (TCH), and Western Arctic (WAH). ADF&G participated in a study to determine what proportion of radiocollared females moved to another herd, how long they remained with another herd, and the time of year this occurred.

In general, from 2003–2015, 9% of radiocollared CAH females were found spending time with a different herd. Most went to the PCH, and usually in winter. CAH caribou changed herds at higher rates from 2011–2015 than they did from 2003–2010, probably because the CAH, TCH, and PCH were larger, expanded their ranges, and overlapped more frequently. In addition, the TCH and CAH exchanged female caribou, as their ranges also overlap.

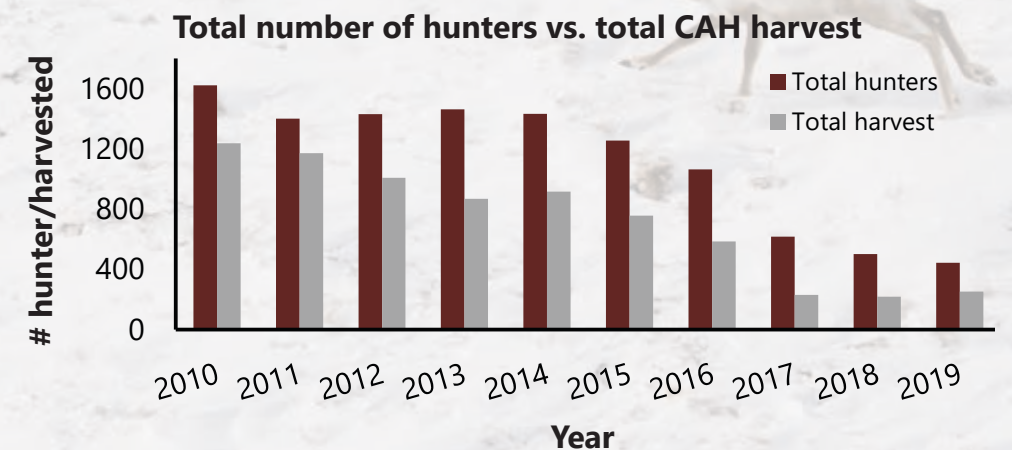
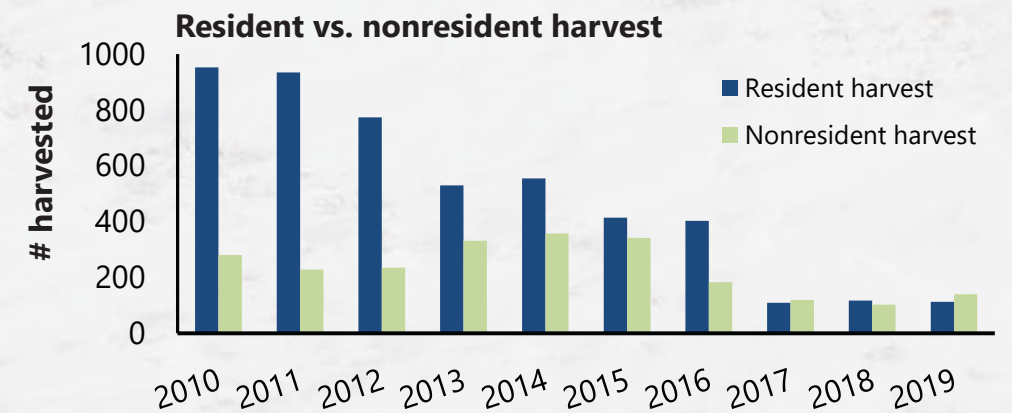
Overall, the two smaller herds (CAH and TCH) had more animals change herds than the two larger (WAH and PCH), which seldom had animals change herds. These results suggest that some CAH caribou moved to the PCH during the decline, but that movement was not the primary factor that drove the reduction in CAH herd size.

Hunting the Central Arctic herd

CAH Harvest

617 hunters in 2017 reported harvesting a total of 231 caribou, and 490 hunters reported harvesting 215 caribou in 2018. Numbers of hunters and caribou harvested have been lower since 2017 due to a combination of factors: reduction in the herd size, a reduced bag limit, and increased opportunity to hunt caribou in other herds. Resident and nonresident harvest were fairly equal in 2017, 2018, and 2019, and lower for both residents and nonresidents since 2017.

Biologists also evaluate harvest information from subsistence household surveys. Total caribou harvest from subunit 26A residents was approximately 100 caribou, and approximately 100-200 caribou in subunit 26B. Between both subunits, cow harvest was approximately 60–90 cows total. In general, reported harvest from hunters and harvest surveys combined (total harvest) has been below the harvest objective of 3% of the population, since 2017.



What to expect for the CAH in 2020 and beyond

In 2020, some fieldwork (female captures and health assessments) was canceled due to the COVID-19 pandemic; however, design of caribou monitoring is robust enough to withstand occasional disruptions from unforeseen circumstances. Calf production and early calf-survival surveys were completed this spring, and calf-survival and herd composition surveys are planned for the fall. In 2021, full data collection efforts are expected to resume, including surveys for calf production, health and disease assessments, a photocensus, calf-survival and herd composition.