

# Caribou Trails

Tuttu Tumai

Bedzeyh Tene

Tuntut Tumait



## News from the Western Arctic Caribou Herd Working Group

Summer 2024 Issue 24

**Western Arctic Caribou Herd Working Group**  
www.westernarcticcaribou.net

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### Our caribou are declining

Western Arctic Caribou Herd Working Group members once again called for significant changes to caribou harvest regulations at their December 2023 meeting. The Western Arctic Herd has declined by more than 65% since 2003. “Our caribou are declining - that should be the headline,” said Chairman Vern Cleveland, Sr. of Noorvik.

Alaska Department of Fish and Game biologist Alex Hansen presented

the latest data on the status of the herd, as well as the Working Group’s Technical Committee recommendations to the Working Group. The 2023 census counted 152,000 caribou in the Western Arctic caribou herd (WAH), some 12,000 fewer animals than the year before, continuing a two decade long downward population trend. Of particular concern was the herd’s adult cow survival rate of 69%, which is well below the long-term average of 81%.

The Technical Committee recommended keeping the herd at “preservative declining” and suggested reducing harvest, especially of cows, which are critical for herd growth. Using the Working Group’s Management Plan, a maximum total harvest of 7,296 was recommended. Hansen cautioned the herd is quickly approaching the Management Plan’s critical level because the estimated harvestable surplus, or number of WAH caribou that can be harvested, has been below the long-term average harvest for several years. In other words, the number of caribou harvested may already be exceeding the number necessary for the long-term stability of the herd.

*New bag limit of 15 caribou per hunter, per year, only one of which can be a cow.*

Before the end of its annual meeting on December 14, the Working Group passed resolutions renewing their support for the regulatory proposals they put forward last year – namely, asking the State Board of Game and Federal Subsistence Board to close caribou hunting for non-Alaska residents, and to change the resident bag limit for caribou. “Everyone needs to play a role in this herd’s recovery,” added Working Group member Tim Fullman.

In late January 2024, the Board of Game met in Kotzebue to consider proposed regulation changes for the Western Arctic and Western Region. The Working Group’s proposal to change the resident bag limit throughout most of the WAH range was carried but amended to a limit of 15 caribou per person, per regulatory year, only one of which can be a cow. The Working Group’s proposal to close caribou hunting to nonresident hunters throughout the herd’s range failed, but a drawing permit allowing up to 300 permits beginning with the 2025 regulatory year was established for nonresident hunting in Unit 23. At the Federal Subsistence Board meeting in early April, the board changed regulations for federally qualified subsistence users to 15 caribou per year, only one of which can be a cow. The Federal Subsistence Board also closed federal lands in Game Management Unit 23 to hunters who are not federally qualified subsistence users.



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### QUYANNA

The Western Arctic Caribou Herd Working Group would like to say a big QUYANNA to those who take time to fill out RC907 (Units 23 and 26A) and RC800 (Unit 22) caribou registration permits. Permit reporting provides valuable information on harvest, behavior, and caribou distribution. By providing this information you are helping biologists better understand the caribou to support hunting now and for future generations.

# Updates from the Working Group Meeting



## Message from the Chair

Last fall it rained a lot, and there is a lot of erosion on the hillside along the river. I went to Onion Portage looking for caribou. There was nothing at Onion Portage – no people, no boats. There have been so many changes in my lifetime. The marrow is not red like it used to be, but I am a patiq (bone marrow) eater, and I worry what will happen if the caribou don't come any more.

Working Group members have been working to get the message out about the low number of caribou in the Western Arctic herd, and we are seeing less waste. We have some very cautious hunters...just tulugaqs (ravens) eating guts. At our meeting in December, we voted to send proposals to the Board of Game and the Federal Subsistence Board to put limits on how many caribou can be harvested from the herd, and we asked that hunters only be allowed to take one cow because females are most important for herd numbers. These regulations are just what we've got to do to get the count back up. Caribou counts are too low, and we have to find a way to get the count back up.

State and federal bag limits changed on July first. Hunters will be able to harvest fifteen caribou a year and only one of the caribou they harvest can be a cow. These changes are going to be hard for our people, but we are trying to preserve the caribou for the future.

**Vern Cleveland**  
Noorvik Alaska

## Guest Elders - Hendy & Nellie Ballot

"I don't know where I'd be without the presence of caribou in my lifetime. It got us this far." Hendy Saanjiaq Ballot, who grew up in Selawik and later settled in Noorvik, was joined by his wife Nellie as Guest Elders at the 2023 Working Group meeting.

Mr. Ballot has been a subsistence hunter and provider all his life, in addition to serving in many leadership roles. Saanjiaq has served on the NANA Board of Directors, Northwest Arctic Borough Assembly, Inuit Circumpolar Council, and as a tribal administrator for the Noorvik Native Community.

"Caribou are a very hardy animal. I tell my family and my people that we are the people of caribou. Caribou bring to us food, clothing...if you see caribou out there, even if you can't get them, count that as a joy in your heart that they're around."

Mr. Ballot spoke about the mission of the Working Group, saying "it's very important that we continue to meet as a group, to bring Native knowledge in along with other knowledges." This mission is one that Hendy is familiar with; his brother Joseph Ballot was the original chair of the Working Group.

Looking at the Working Group members assembled around the table, he added "I'm not here to try to speak for every one of you. You're here because you're caribou people

too...I'm trying to stress to you all that our food resources are in danger! To all here today, we must work together to be prepared and be proactive."

Nellie added "our grandparents and elders passed their way of living and their knowledge to me. I'm blessed to be here as an elder. It's very important that we pass our Iñupiaq way of life on to our younger people." Nellie is the daughter of Clarence and Dorcas Jackson and of Noorvik. She and Hendy have six children and many grandchildren and great-grandchildren.



Photo courtesy of NANA.

## Caribou in your region

Each year members of the Western Arctic Caribou Herd Working Group share their observations during the "Caribou Round Table." Below is a summary of the 2023 discussion.

### North Slope

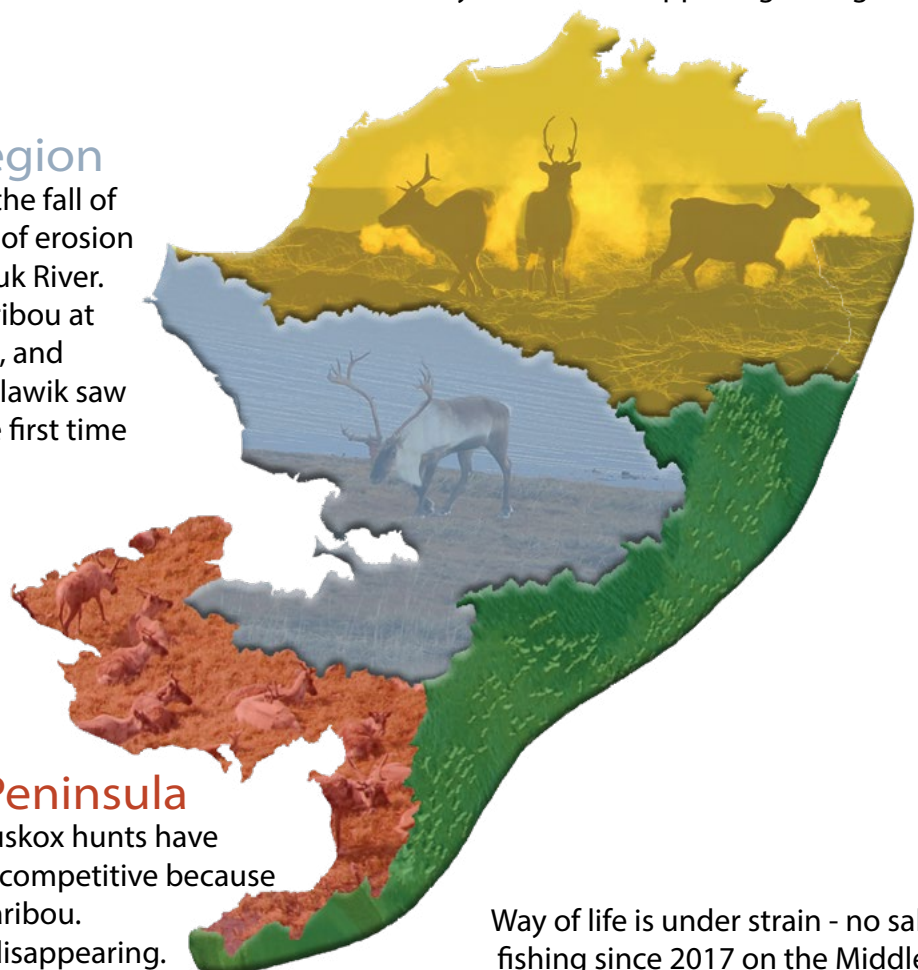
Delayed migration continues. It used to happen in June and July and is now happening in August.

### NANA Region

Lots of rain in the fall of 2023 and a lot of erosion along the Kobuk River. There were caribou at Lockhart Point, and residents of Selawik saw caribou for the first time in 3 years.

### Seward Peninsula

Moose and muskox hunts have become more competitive because there are no caribou. Permafrost is disappearing.



Way of life is under strain - no salmon fishing since 2017 on the Middle Yukon and hunters are often unsuccessful because of high water. Huslia and surrounding area are only seeing caribou in the spring.

# Western Arctic Herd Health

## Determining herd health

Although the population size of the Western Arctic Herd (WAH) receives most of the attention, it is just one of several indicators of how the population is doing. Biologists conduct a photocensus of WAH to estimate its population size and use a combination of other surveys to monitor the status of WAH throughout the year. Comparing survey results from previous years provides biologists with insight into whether the herd is likely to grow, decline, or remain stable. In addition to population size, other key indicators of WAH status are calf recruitment rate, calving rate, adult cow survival rate, bull to cow ratio, and the number of WAH caribou being harvested. The two variables most critical to herd stability and growth are adult cow survival and calf survival rates – a single 12-year-old cow and her offspring have the potential to contribute 53 additional caribou to the herd.

### Population size

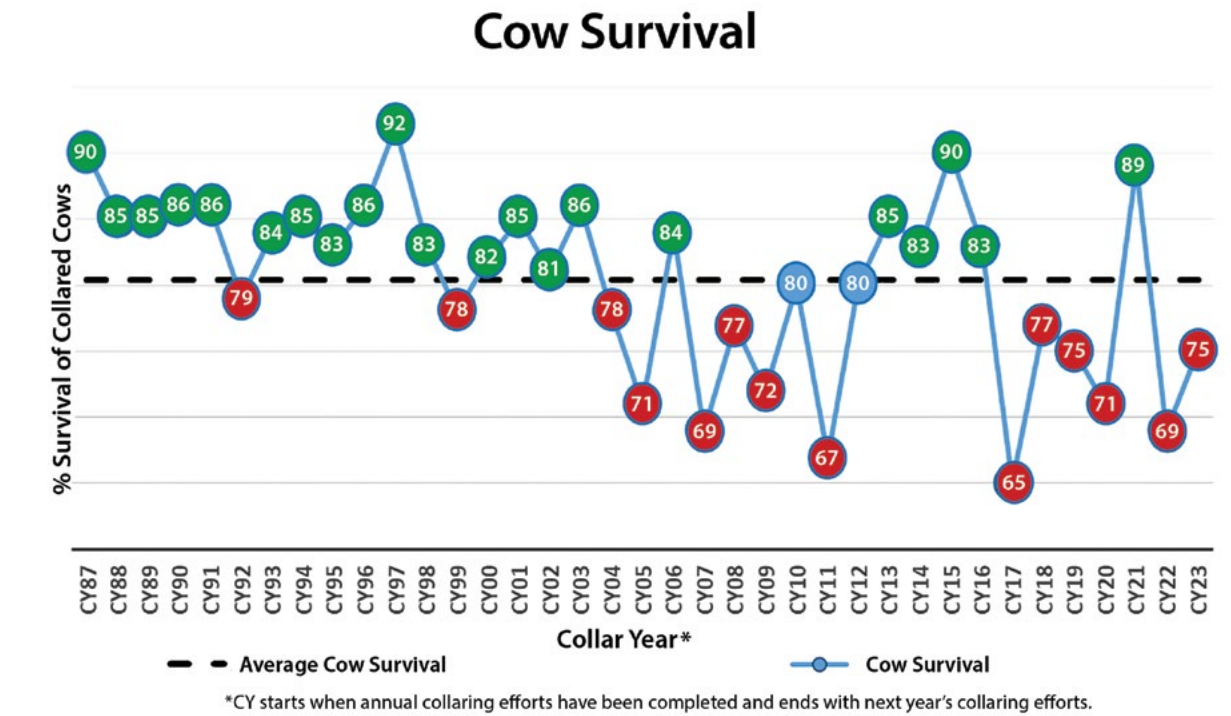
The most recent photocensus of WAH was completed on July 17, 2023. The photocensus of the herd takes place during the hottest time of the year when caribou gather in large groups to avoid insects. Biologists track caribou collars to locate groups of caribou. Once groups are located, they are photographed, and the number of caribou are counted to determine herd population size (also known as abundance). Results from the 2023 census resulted in an estimate of 152,000 caribou in the herd, which continues the two-decade long downward trend of the WAH population size. Trends in population estimates are key components of management, particularly when estimating the number of animals that can be harvested from WAH without contributing to a further decline in its population. The Board of Game established a minimum population objective of 200,000 caribou for WAH and has identified WAH as a potential candidate for intensive management if the herd remains below that number.

### Recruitment

Since 1980, spring caribou composition surveys have been conducted for WAH. This survey classifies caribou as either calves or adults but makes no attempt to distinguish the sex of the caribou included in the survey. This survey provides biologists with a way to estimate the number of calves that have made it through their first winter compared to the number of adults in the herd. Calves are the most vulnerable part of the population and calves surviving until they are about 10-months old or 'short yearlings' are considered to be recruited into the herd as 'adults' and can help the herd grow. The most recent recruitment survey of WAH took place in April 2024 with a composition estimate of 22 calves to 100 adults. This is above the long-term average of 17 calves to 100 adults and shows calves are being recruited into the population even during the herd's decline. Recruitment rate is a valuable tool used to monitor herd productivity and possible population trends.

### Calving rate

From 1992 to the present, calving surveys



have been conducted. Biologists observe radiocollared cows to determine the herd's calving rate (parturition), which is the percent of cows that had calves. This survey also helps define herd calving areas. WAH calving rate surveys in early June 2023 produced an estimated calving rate of 77%, which is above the average of 70% seen in all years since 1992. This result shows that calving rates are still good among WAH cows who make it to the calving grounds, despite the herd's decline.

### Adult cow survival rate

Adult cow survival rate (the percentage of cows that survive the year) is a critical component of a caribou herd's population size and trend. Most cows probably produce only six or seven calves during their lifetime, and many die before becoming mature enough to reproduce. The proportion of young and old individual cows in the herd can indicate whether its population is likely to increase or likely to decrease in the future. If many older cows are dying and few young cows are being added to the population, herd size will likely decrease. For all but one of the past 7 years, the survival rate for adult cows in the WAH has been lower than the longterm average rate, which is cause for concern. Adult female caribou are a major factor in herd health and growth because they produce and nurture the next generation of the herd. Herd growth is unlikely when adult cow survival rates are between 80% and 88%. When the rate dips below 80%, a decline in herd population is likely. In 2023, the adult cow survival rate of WAH was 75% of collared cows; this low rate suggests a decline since the last survey. Limiting cow harvest may help improve adult cow survival rates.

### Bull-to-cow ratios

The bull-to-cow ratio is the number of bulls in a population compared to the number of cows. The Western Arctic Caribou Herd Working Group, in consultation with state and federal managers, has suggested maintaining at least 30 bulls for every 100 cows to ensure there are an adequate number of bulls in the population to breed with available cows and to provide sufficient numbers for harvest. Since 1999, WAH has

maintained a bull-to-cow ratio above the management objective established by the Working Group. During the 2023 WAH fall composition survey, a ratio of 50 bulls to 100 cows was observed.

### Number of caribou harvested

Currently, there is not enough harvest information to provide a clear understanding of how harvest is impacting the herd. Harvest information provides how many, when, and what type of caribou are harvested each year. Hunters are required to have a registration permit and to report harvest to Fish and Game. Reporting your harvest can help biologists, managers, and the Working Group have more detailed information about factors effecting WAH. Without accurate harvest data, more conservative management with even lower bag limits may be the only option left.

### Managing WAH

A reduction in the number of caribou harvested from WAH is necessary to prevent further decline in the herd's population size. The lower than average adult cow survival rate over several years makes limiting cow harvest the highest priority. Cows produce successive generations of caribou in the herd. **Protect cows and you help protect the herd.**



# Western Arctic Herd Monitoring

## Other monitoring updates

GPS collars, which can remotely track where caribou go, were first deployed in the Western Arctic Herd (WAH) in 2009. Since then, over 1 million relocations have been recorded. A record number (56) additional GPS collars were deployed in April 2023. Data from the collars not only help biologists conduct photocensuses to estimate the size of the herd, they are also useful in recording the distribution of caribou, the timing of their migrations, when and where they calve, and caribou survival rates.

One of the most notable aspects of monitoring from August 2022 – September 2023 was the low overwinter survival rate: only 76% of the collared caribou survived from December 2022 - May 2023. This is one of the lowest overwinter survival rates reported for WAH. Caribou that overwintered south of the Brooks Range encountered deep snow and had lower survival rates. The impacts of this difficult winter lingered: just 73% of the caribou collared in the spring of 2023 survived through the end of August 2023. This was the lowest 5-month survival rate of spring-captured caribou on record and was lower than all but one previously reported 12-month survival rate. Adult cow survival has the largest impact on the population trajectory of WAH. Lower adult female survival has the potential to slow herd growth or even contribute to population declines. Measures to improve cow survival, such as reducing cow harvest, currently hold the most promise to improve the outlook for the herd.

From August 2022 to September 2023, GPS-collared cows used a smaller range compared to previous years. Very few collared animals traveled south of the Selawik River for winter, but the herd heavily used the central Brooks Range. The distribution of animals in WAH during the winter of 2022-2023 was clustered in 3 areas: the central Brooks Range, the upper Kobuk River valley, and the interior portion of the western North Slope. No collared caribou entered the Seward Peninsula from August 2022 to September

2023. This is a substantial change from seven to eight years ago, when the Seward Peninsula represented a major winter area for the herd and 75% or more of the collared caribou wintered there. The herd also did not range as far west in late summer of 2023 as it had in previous years.

Fewer WAH caribou migrating was also noted during this time. A relatively high percentage of collared caribou crossed the Kobuk River in the fall of 2021, but in the fall of 2022 only about 1/4 of the average percentage crossed. For the few caribou that did cross the Kobuk River in 2022, the first crossing on September 21 was only 3 days later than average and the earliest since 2017. 2022 also saw the 3rd lowest percentage of caribou crossing the Selawik River (14%). More surprisingly, the 27% crossing the Noatak River was, by far, a record low. For comparison, an average of 88% of the collared caribou crossed the Noatak River from 2010 to 2015. Many collared caribou stayed north of these rivers and overwintered in the central Brooks Range.

The root causes of these changing migratory and range-use patterns are unknown. Climate change is pushing snow and cold temperatures later in fall, which may contribute to the delayed migration patterns that many people have observed. Another potential factor in shorter and later migrations is the smaller size of the herd. After nearly 20 years of population decline, the herd is about a third of its peak size (490,000 individuals in 2003). Smaller populations use less space than larger ones, thus smaller populations tend to have shorter migrations than larger ones. Winter and spring seasons with deep, wet snow can be difficult for caribou, and the spring of 2023 was characterized by these conditions in the mountainous region where a majority of the herd overwintered. The poor survival rate of caribou during the winter and spring of 2022–2023 suggests these conditions impacted WAH.

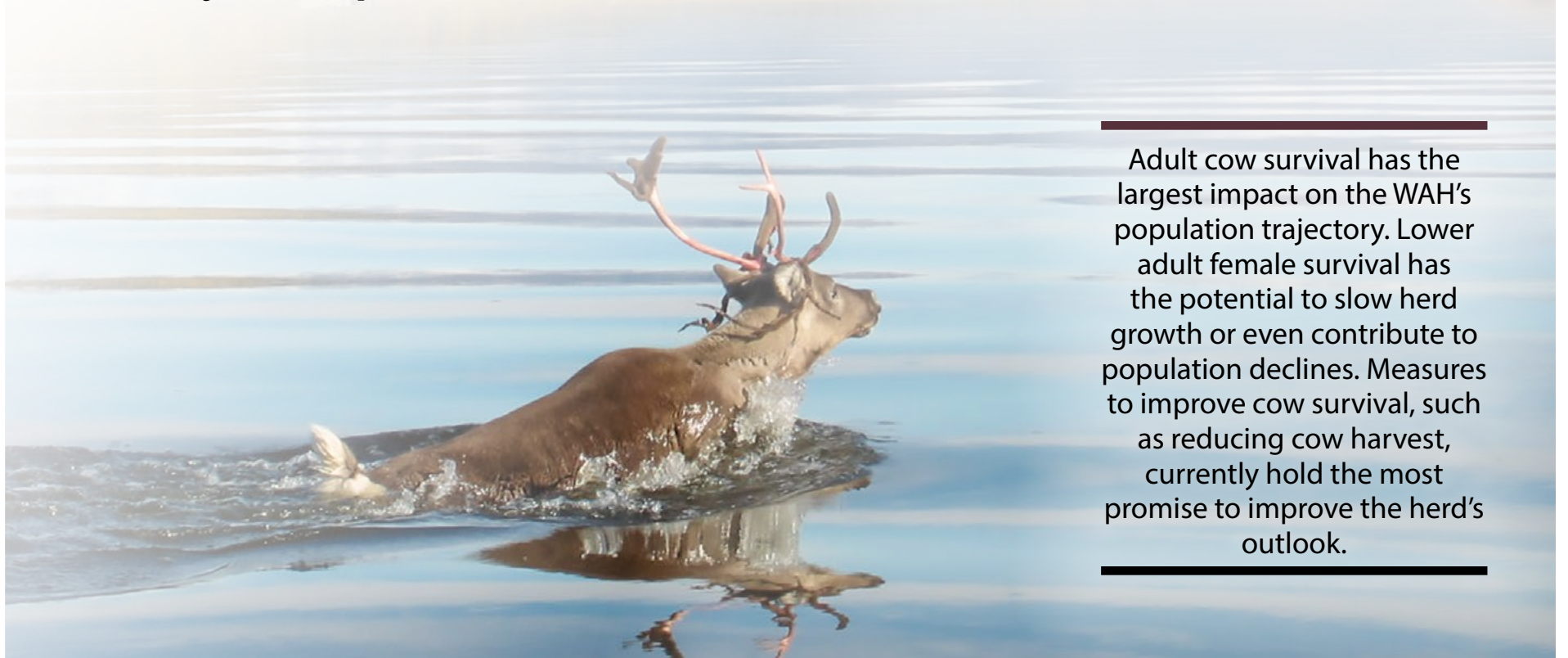
Delayed migration patterns have important implications for subsistence hunters. Later migrations can coincide with rapidly decreasing temperatures and pan ice running in the river which can make travel difficult and prevent hunting. Moreover, later arrival of caribou in fall can mean they arrive in some hunting areas during the rut, when the meat of bulls is unpalatable. This can increase harvest pressure on females and has the potential to put additional downward pressure on the herd.

Three notable scientific articles on WAH ecology were published in 2023. These research papers have important implications for better managing the herd.

In the first paper, biologists confirmed that newly collared WAH cows can be considered adequately mixed with the rest of the herd at calving to be considered representative of the herd. This means biologists can start using data from newly collared cows in their first calving season after collaring. <https://doi.org/10.1002/wsb.1398>

The second paper was an analysis of caribou calving across the North American Arctic. The study revealed caribou had their calves on about the same day of the year as other caribou across North America, but local conditions did impact timing. Specifically, deep, wet snow delayed, and in some cases prevented, caribou from reaching their calving grounds. <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.4399>

The last paper introduced new methods for detecting long-term trends in icing events within the ranges of northern caribou herds, including WAH. Being able to identify and better understand icing events is important to increase our knowledge about the effects of winter conditions on caribou survival. [tc.copernicus.org/articles/17/889/2023/](https://tc.copernicus.org/articles/17/889/2023/)



Adult cow survival has the largest impact on the WAH's population trajectory. Lower adult female survival has the potential to slow herd growth or even contribute to population declines. Measures to improve cow survival, such as reducing cow harvest, currently hold the most promise to improve the herd's outlook.

# Sharing Caribou Knowledge



The Fate of the Caribou project is a group of researchers working with Indigenous partners to investigate changes in caribou populations, based on concerns and observations from Indigenous Elders, hunters, and Knowledge Keepers. Our team includes experts on caribou population cycles, migrations, soundscapes (what caribou hear), and vegetation mapping. We use science to further the collective understanding of on-the-ground observations and to empower Indigenous self-determination, sovereignty, and stewardship. Our goal is to understand shifts in a movements, their survival, and how they use their landscapes in the context of the communities that live with caribou. Working closely with our partners, we formulate research questions, collaborate on data collection, and produce research products (for example, databases, analysis tools, outreach materials) to facilitate caribou stewardship.

Several of our initiatives are focused on survival, migration patterns, and habitat use of the Western Arctic herd. As those living in the Western Arctic herd's range know all too well, the herd's movements are extremely variable, especially in fall and winter. Some years, most of the herd crosses the Kobuk River to winter in the Seward Peninsula; more recently they have mainly wintered in the Brooks Range, and every year some animals choose to winter on the North Slope. We are asking, why? And how do those choices affect their survival? We studied survival of female caribou in the Western Arctic herd over twelve years (2009-2021) using GPS collar data from 326 individuals. Western Arctic herd caribou appear to have shifted their winter range from the lichen-rich Seward Peninsula as a response to a few winters of poor survival in the southern part of the range and deeper snow in the fall in the north, which made fall migration difficult. Animals that wintered in the Brooks Range between 2018 and 2021 had higher chances of survival than animals that continued to go south. This suggests that caribou adapt their migration patterns quickly to maximize survival in an unpredictable environment.

In addition to regular research, we are also working on projects to support Indigenous data sovereignty and knowledge sharing.

Recognizing the sheer volume of caribou knowledge shared in the Working Group and other co-management meetings, we are developing a database to store and post observations that are otherwise kept in meeting notes. The Knowledge of the Caribou database compiles observations of caribou from existing reports and documents recorded at caribou workshops and herd-specific working group meetings. These observations provide an important local record of the past and present state of the Arctic environment and caribou. The goal of this database is to alleviate repeated requests for information while compiling community-based observations of caribou ecology for posterity. We are using WACH Working Group meeting notes as the trial run as we develop the database and hope to have it fully functional in the coming year.

To learn more or get in touch, find us at [fateofthecaribou.github.io](https://fateofthecaribou.github.io), or follow us on Facebook. The Fate of the Caribou project is led by Elie Gurarie (State University of New York), Anne Gunn (CircumArctic Rangifer Monitoring and Assessment Network), Bill Fagan (University of Maryland), Mark Hebblewhite (University of Montana), Scott Goetz, and Logan Berner (Northern Arizona University). This project is funded in part by the National Science Foundation, Navigating the New Arctic, award number 2127271.

## Understanding Caribou Harvest on the North Slope

### North Slope Borough, Department of Wildlife Management

Since the 1990s, the North Slope Borough Wildlife Management Department has worked to document caribou and other subsistence harvests. Our goals are to document the harvest amounts to show what communities use to meet their nutritional needs, and also record the timing and locations of where harvests take place. This information can help our region and our partners advocate for subsistence rights and needs.

What helps our program to be successful? First, we employ local residents to conduct household interviews. Secondly, the program is managed within our region. This helps foster trust as community members recognize that sharing their harvest information can ensure their subsistence needs and patterns of harvest are documented and used to their long-term benefit. Our goal is to add to other long-term

data sets to ensure conservation of our caribou and harvest occurs at sustainable levels.

When it comes to caribou harvest, one factor we must consider is that communities on the North Slope harvest from four different caribou herds which overlap in their ranges. From west to east, these are the Western Arctic herd, Teshekpuk herd, Central Arctic herd, and the Porcupine herd.

We have been able to perform a preliminary analysis that assigns caribou harvest to specific caribou herds. This is valuable information when trying to assess why some herds may be doing better than others, such as why the Western Arctic herd is currently declining while other herds are not. In simplified terms, we combined our caribou harvest data with caribou telemetry data (collar locations from individual collared caribou) in the Western Arctic

and Teshekpuk herds. By looking at where collared caribou were located and factoring in the relative population size of the two herds, we estimated how many caribou from each herd were within a 30-mile radius of a community in a given month. This allowed an understanding of reported caribou harvests from a specific community to either the Western Arctic or Teshekpuk caribou herds.

We believe this information has been useful for addressing the conservation concerns surrounding the Western Arctic Herd and informs the Alaska Board of Game and Federal Subsistence Board when they consider new caribou regulations. These decisions help conserve the Western Arctic herd in certain areas while allowing for less restrictions for communities that harvest a moderate and sustainable level of the Western Arctic herd.



# Changes in Caribou Hunt Regulations

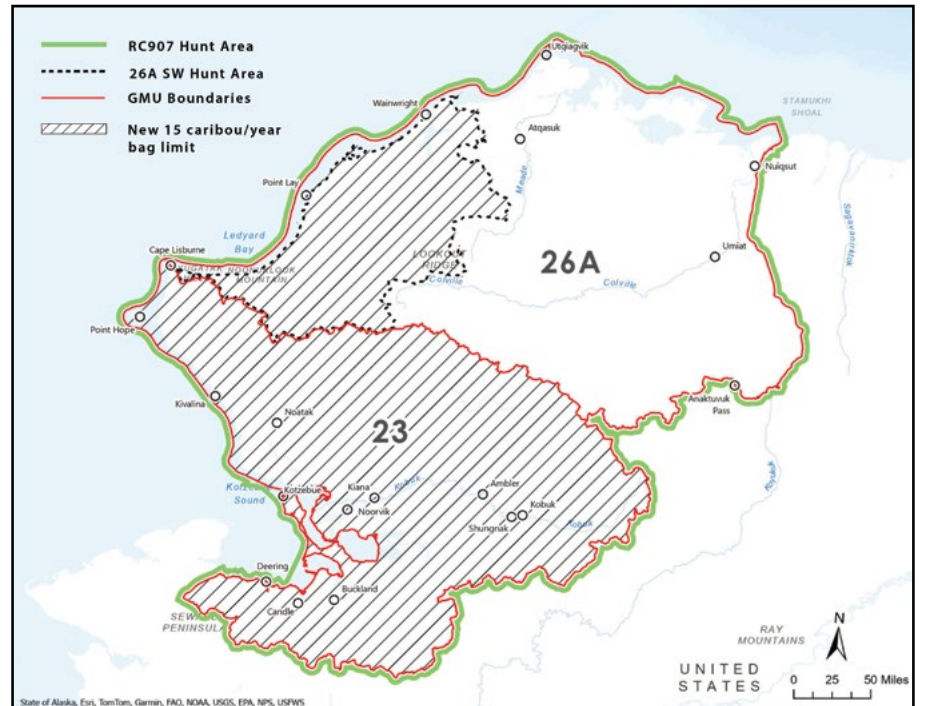
## Caribou Harvest Regulation Changes Effective July

Beginning July 1, 2024, new state and federal regulations for hunting caribou in Northwest Alaska have taken effect. The changes include a new caribou bag limit for most of the Western Arctic herd range and closure of federal lands in Unit 23 for caribou hunting by nonfederally qualified users.

Resident hunters have a new **bag limit of 15 caribou per hunter per regulatory year, only one of which can be a cow (female)**. This bag limit applies to all lands in Game Management Units (GMUs) 22, 23, and the western portion of Unit 26A. The western portion of Unit 26A is bounded by the Colville River drainage upstream from the Nuka River and drainages of the Chukchi Sea, south and west of, and including the Kuk and Kugrua river drainages. The villages of Wainwright and Point Lay both lie in this area.

The Federal Subsistence Board lands closure applies to non-federally qualified users (see definitions below) hunting on public lands within Selawik Refuge, other National Wildlife Refuges, National Park Service lands, and Bureau of Land Management (BLM) lands.

More information about state and federal regulations can be found at [hunt.alaska.gov](http://hunt.alaska.gov) and [doi.gov/subsistence](http://doi.gov/subsistence).



Contact information for representatives from relevant state and federal agencies can be found on the back page of this newsletter.

## Lands Closure for NonFederally Qualified Users in GMU 23

In GMU 23, caribou hunting is closed to non-federally qualified users on federal public lands until the Western Arctic herd population contains 200,000 or more caribou. This closure does not apply on state owned lands or on private lands (including Native Corporation lands and Native Allotments).

### Who is a “federally qualified user” for caribou in GMU 23?

A federally qualified user is a rural resident of Alaska living in a community with a traditional and customary use of caribou as determined by the Federal Subsistence Board. Your primary, permanent place of residence must be in one of the following communities or areas to be a federally-qualified user eligible to hunt caribou on federal public lands in Unit 23:

Eligible Game Management Units	Eligible Communities
Unit 21D (west of the Koyukuk and Yukon Rivers and Galena)	Galena, Kaltag, Koyukuk, and Nulato
Unit 22	Brevig Mission, Council, Elim, Gambell, Golovin, Koyuk, Little Diomede, Nome, Saint Michael, Savoonga, Shaktoolik, Shishmaref, Stebbins, Teller, Unalakleet, Wales, and White Mountain
Unit 23	Ambler, Buckland, Deering, Kiana, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Point Hope, Selawik, and Shungnak
Unit 26A	Atkasuk, Nuiqsut, Point Lay, Utqiagvik, and Wainwright

Anyone living in a Game Management Unit NOT on this list, including Anchorage, Fairbanks, Mat-Su Valley, Kenai Peninsula, Juneau, etc., is NOT eligible to hunt caribou on federal public lands in GMU 23 beginning July 1, 2024. While this closure means non-federally qualified users may not harvest caribou on federal lands in Unit 23, it does not limit a federally-qualified user’s right to share their harvest with residents of other areas, should they so choose.



Vice-Chair Cyrus Harris represented the Working Group at the January Board of Game meeting held in Kotzebue.

# Development Updates in the WAH Range

## 1. Ambler Road Project

The decision process for the Ambler Road continued. A draft supplemental Environmental Impact Statement (EIS) was released in October 2023 that describes the project and its expected impacts. If constructed, the road would cover over 200 miles across state, federal, and Native Corporation lands between the proposed Ambler Mining District and the Dalton Highway, crossing WAH migration and winter areas. In April 2024, the final supplemental EIS was published, with the Bureau of Land Management (BLM) proposing to not approve the road. This decision was finalized in a Record of Decision released in June 2024. The Working Group opposes the road out of concerns for the impacts it will have on the herd and subsistence. At the 2023 annual meeting the Working Group voted to submit comments reiterating the group's opposition to the project.

## 2. National Petroleum Reserve – Alaska Rulemaking

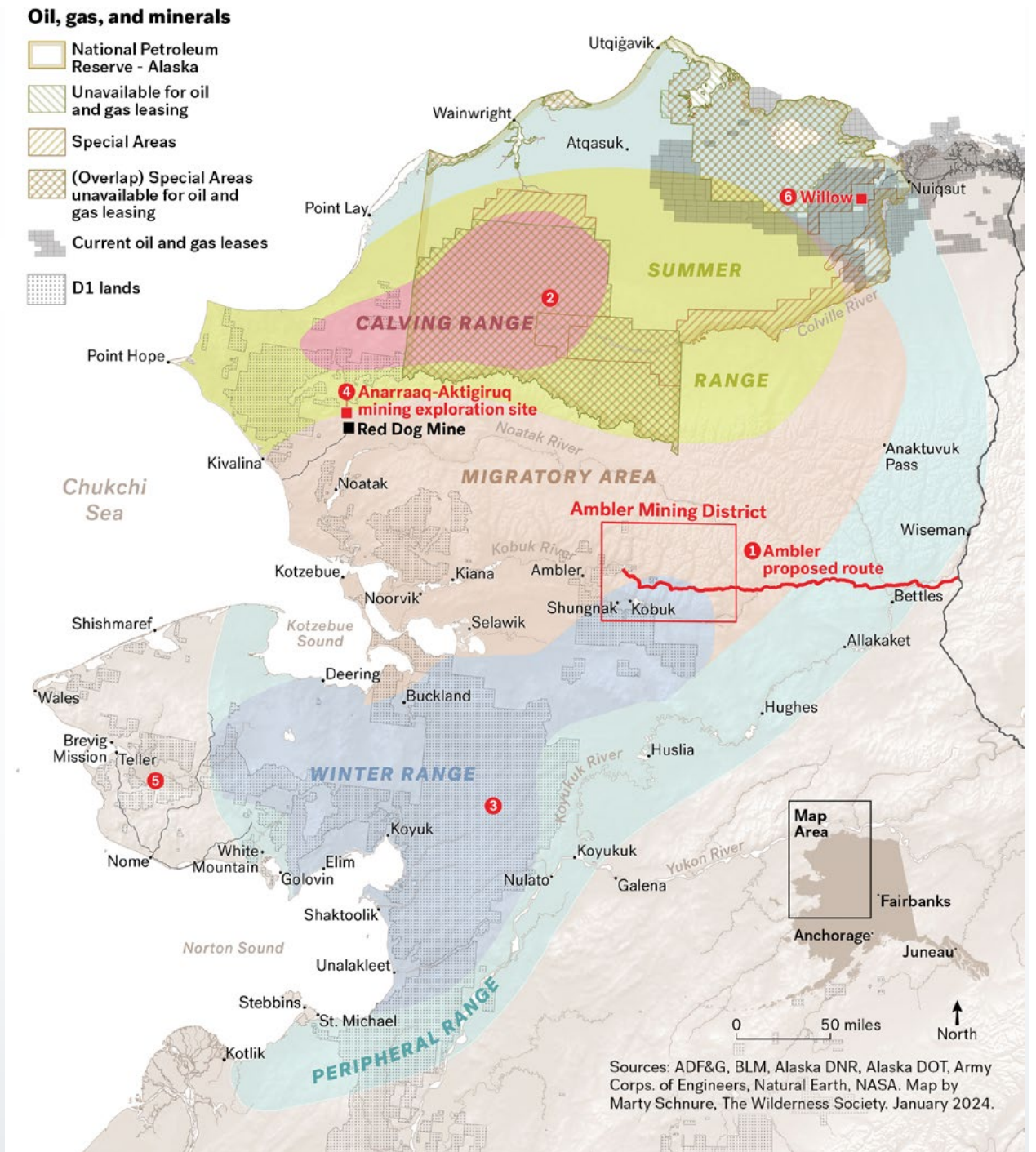
Land management in the National Petroleum Reserve – Alaska (NPR-A) follows an Integrated Activity Plan that specifies which areas are open for oil and gas development and which are set aside to protect important species, habitats, and subsistence. In September 2023, BLM proposed an updated rule to govern management of surface resources like caribou and the so-called “Special Areas” established to protect them. The Working Group requested that BLM maintain Special Area protections for caribou calving grounds and other critical habitat and expand the northern boundary of the Utukok Uplands Special Area to protect the WAH calving range more fully.

## 3. D1 Lands

D1 lands were set aside by the Alaska Native Claims Settlement Act to be unavailable for mineral and energy development and protect the public interest. In December 2023, BLM released a draft EIS considering the effects of opening up to 28 million acres of D1 lands for mining and other development. These lands overlay WAH calving, summer, migration, and winter ranges, which could lose Federal subsistence priority if D1 withdrawals are eliminated. Out of concern for this, the Working Group asked BLM to maintain their protection of D1 lands. The final EIS, released June 2024, proposed to maintain protections on all D1 lands.

## 4. Red Dog Mine Expansion

Teck America, Inc., the company that operates Red Dog Mine, is still working on plans for exploration of the Anarraaq – Aktigiruk mineral deposits about eight miles north of the current Red Dog Mine. A decision has not yet been made about whether this will proceed. The Working Group commented on earlier applications for exploration in this area, encouraging protections for caribou and subsistence but took no formal position for or against the project.



## 5. Graphite One Mine

Graphite One is a proposed graphite mine on the Seward Peninsula. The project completed a preliminary feasibility study in 2022 and received subsidy funding from the Department of Defense. Graphite One plans to continue with a full feasibility study that may lead to applications for permits and opportunities for public comments.

## 6. Willow Master Development Plan

After years of legal challenges, The Willow Project was approved in March 2023. This would expand development west in the NPR-A, closer to core Teshekpuk Herd calving areas and other critical habitat.



# Subsistence

## Subsistence harvest study concludes

This year marks the end of a multi-year collaborative effort to document harvest and uses of Western Arctic Herd caribou and other large land mammals in eight communities across the Northwest Arctic and Seward Peninsula. From 2018 to 2023, ADF&G Subsistence Staff and local research assistants conducted household surveys twice in each collaborating community. Household harvest surveys included questions about hunt participation including location, timing, and the number of male and female caribou harvested. Researchers also interviewed hunters and other knowledgeable individuals in each community to document Traditional Ecological Knowledge of caribou, caribou hunting, and the environment. Each year, Subsistence staff returned to communities to review data, share draft results, and gain feedback from tribal councils and local community members.

Over the course of the multi-year study, project participants shared a wide variety of changes and concerns regarding caribou and the environment, including the health and abundance of the herd, migratory patterns, and changes to harvest locations, timing, and effort. Key respondents were also asked to provide perspectives on the management of the herd and regulatory process. In addition to public testimony, these perspectives and preliminary results provided valuable feedback to the Board of Game (BOG) this year and will continue to provide important feedback for managers in the future.

Harvest data, local knowledge, and confidential feedback from participating households and key respondents provide important cultural perspectives about subsistence activities, help evaluate and monitor environmental impacts associated with resource development and a changing climate, and help guide sustainable wildlife management.

Though the current project is concluding, ADF&G Subsistence hopes to support outreach efforts and welcomes future opportunities for partnering in local research and harvest survey efforts. For more information, please contact Helen Cold at [helen.cold@alaska.gov](mailto:helen.cold@alaska.gov) or Marianna Mallory at [marianna.mallory@alaska.gov](mailto:marianna.mallory@alaska.gov).

*"We depend a lot on caribou. We probably eat it, I wanna say, three, four times a week. I finally got one this winter so far. But I'd like to get more. But they're harder to find. Up the coast, we're havin' to go further... Last winter I didn't even get a caribou because there was none up the coast where it was open. They were all in the west side of Ear Mountain where it's not open for hunting."*

**Shishmaref Key Respondent 2023**

## Nigipiaq from the 2012 Issue



### How to Make Akutuk (Eskimo Ice Cream) the Right Way!

by Millie Griest

1. Use dried caribou fat that is white with all the blood dried off. Set this aside.
2. Take whitefish that is caught with nets in the fall. This makes the best fish for akutuk because it is dry in the flesh. You take this fish and boil it whole or may cut it in half and boil it. Then you take all the meat off the fish and squeeze the water out. Once you have this nice dry fish meat you set it aside.
3. Mix 1/2 or 2/3 cup of berries (cranberries or blueberries) with sugar to taste. Some like it more sweet and others more tart. Crush the berries with sugar and set aside by the fish in a separate bowl.
4. Chop dried caribou fat into chunks. Run chunks through a hand cranked meat grinder. Take the ground fat and form it into four balls about the size of a softball or a bit bigger.
5. Take the balls of fat and melt them in a pan on the stove. After the fat is melted, add one cup of seal oil.
6. Now it is time to mix the fat in a big bowl. You must use your hands. You cannot use any mixing tools or it will not be right. Wait for it to cool a little bit, but it should still be a little hot to touch. Make big clockwise circles with your hand - slow and steady at the same pace for an hour. When the fat starts to turn a cream color then you add the fish a little at a time and keep stirring with your hand. Add all the fish and then when you hear the whipping sound of the bowl then you are done.
7. Add the berries and mix.
8. Form into small balls for eating. Store it in the freezer.
9. Enjoy and share with your elders.



# Our Elders Speak

## Knowledge of the migration

Anaktuvuk Pass elder Charles “Sollie” Hugo describes caribou as well-traveled with travel destinations dictated by the season. “Tuttut know when to travel and when not to travel,” he says. Caribou migrate longer distances than any other land mammal on earth and for millennia the Nunamiut traveled with them. From all those generations who have come before, knowledge of this migration has been gathered over thousands of years and transmitted to successive generations sustaining the people who ultimately settled in Anaktuvuk Pass.

The early part of Sollie’s father’s life was nomadic. When caribou were scarce, his family spent time among the Gwich’in in the area bounded by the Sheenjek River, Arctic Village and Chandalar Lake, returning to the Anaktuvuk Pass region in 1935. When he was younger, the Porcupine Herd made their way through the mountains in the spring on their way to the calving grounds, “But since the building of the Haul Road, they no longer come,” he noted.

Sollie’s earliest memory is still very vivid. He’s a little boy, probably three- or four-years old walking home from a hunting campsite during the fall migration. He says they carry this process throughout life, and there really are no words to express his people’s connection to caribou. Quantifying the Nunamiut relationship with caribou,

according to Sollie, “is like trying to define human nature. The medicine man or medicine woman does not separate the person from the land, or the body from the spirit. We learn to dance before learning how to walk. We sing songs to make the caribou arrive.”

*Quantifying the Nunamiut relationship with caribou, according to Sollie, “is like trying to define human nature. The medicine man or medicine woman does not separate the person from the land, or the body from the spirit. We learn to dance before learning how to walk. We sing songs to make the caribou arrive.”*

As a toddler, Sollie literally cut his teeth on the soft tendons from the front foreleg of caribou. At six or seven years old, he learned what skin to use for drums. At eight, he learned how to keep the pack dogs quiet when the caribou were nearby. When the first caribou arrived, often a female followed by a small group, elders taught him not to disturb the first group because they were blazing trail for the many caribou who would follow. Once caribou had been harvested, he learned what parts needed to be put away quickly, and what could wait. In the spring, a harvested caribou could be brought to the

cellars. The soft tips of antlers from caribou harvested in the spring when antlers were still soft were a delicacy to be savored. In the fall, when the weather is still warm, you had to make paniqtaq (dried meat) with the backstrap and ribs at the hunting campsite before the meat spoiled. Later in the fall, when it was cold enough, the caribou meat got placed under stones and boulders. Once the stones were set in place, water was poured over them, and once frozen, this ice encrusted cache would keep even wolverines away from the meat.

These and so many other life lessons were taken to heart as Sollie watched and learned by following his older brothers and listening to elders. “We are caribou people not just because we eat them - it’s because we have studied them for thousands of years. From studying their physiology, we learned how to tell which females were without calves. We also learned from other animals living among them, and perhaps they learned from us. An age-old question we have is did we learn how to corral caribou from wolves, or did they learn from us? Perhaps most importantly, the Nunamiut observed countless migrations. Understanding migratory patterns is critical knowledge, essential knowledge,” says Sollie, “you have to know when and from where the caribou will come”.

## Role of the bull

Darrell Vent, Sr. is from Huslia, where his Koyukon Athabascan people have a long history with caribou. Although caribou from this herd haven’t been traveling close to Huslia the past few years, hunters from the community make long trips to bring home bedzeyene (caribou) to share.

Darrell is part of the caribou clan. He remembers “when I was a kid, we used to watch the caribou. We were waiting...one of the elders was there with us. Finally, caribou come in, about maybe 10-12 of them. We’re all excited with that, to get out there and start hunting! He told us ‘Nope. Let’s not bother that pack.’ And we didn’t say anything after that. So, we let them go by. And pretty soon now, a lot of caribou started coming towards us. Lots of caribou! They were being pushed into the area. We seen the bigger bulls, kind of further back, and they were kind of herding them. Or making them migrate - moving them, you know.”

Many have observed, and Darrell agrees, that the front groups of migrating caribou are mainly females. “The lead group of females, they blaze the trail, mark the trail so that the caribou followed that scent. The females know where the good feeding grounds are.”

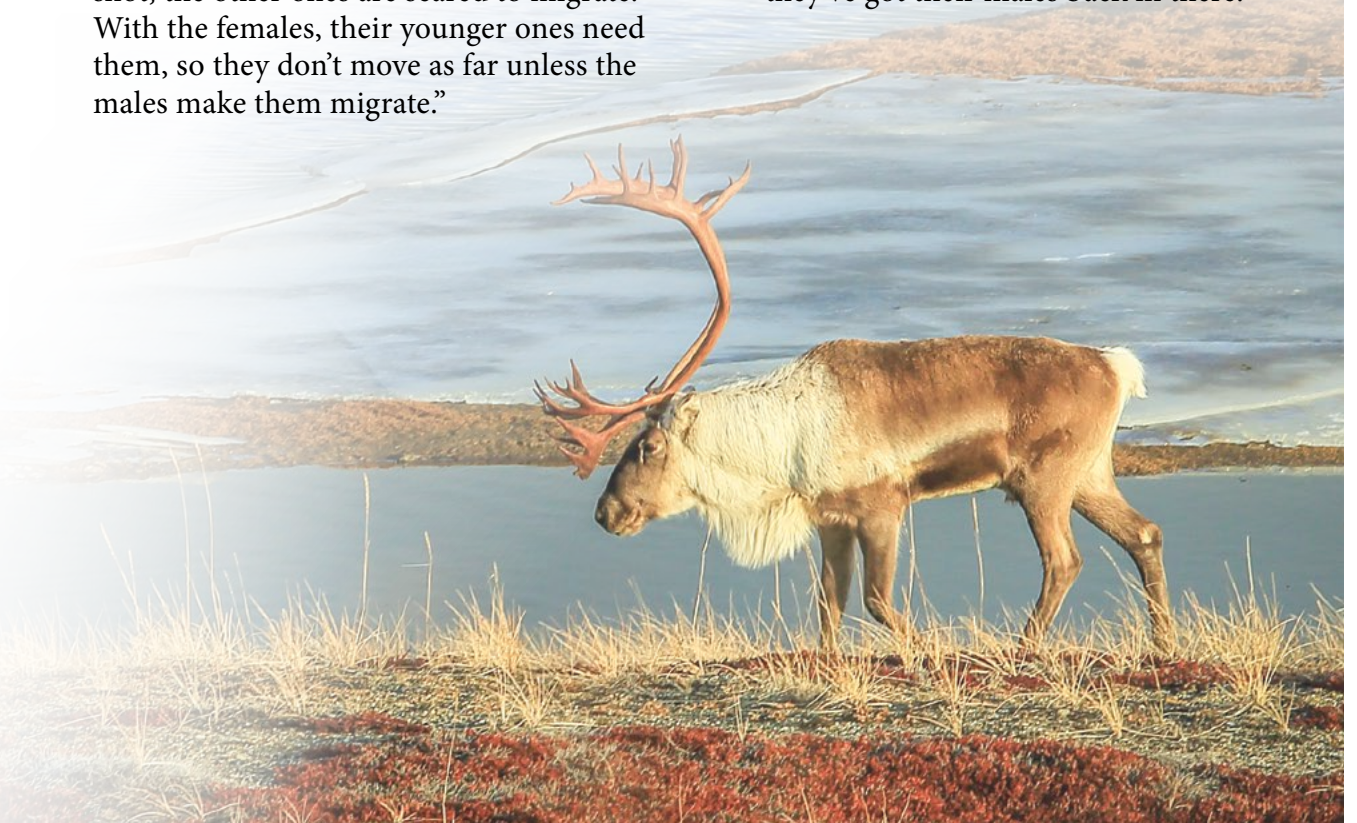
Darrell shares that, in the way his community understands caribou, the

dominant males also play an important role in the movement of caribou. Dominant males are the bulls around 6-10 years of age with the largest paddles on the front of their antlers. Behind those first females, “males will start pushing up the herd. It’s kind of like his harem, you know, he makes sure that pack goes in the right direction.”

Now caribou aren’t moving as far or coming close to Huslia. “Our people are talking and say, because the dominant males are getting shot, the other ones are scared to migrate. With the females, their younger ones need them, so they don’t move as far unless the males make them migrate.”

“We noticed that there’s not a lot of movement, and there’s a lot of predation going on. That signals to us that they’re not being led. Being pushed, but they’re not being led. And they don’t go as far as normal.”

Darrell suggests that reducing the harvest of these large, prime bulls could play a role in helping the herd recover. “And if that happens, and you start seeing the herd moving a longer ways, then you know they’ve got their males back in there.”



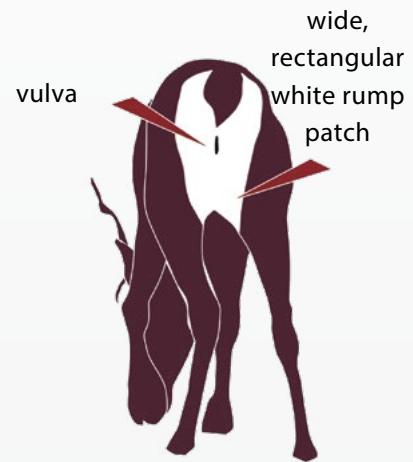
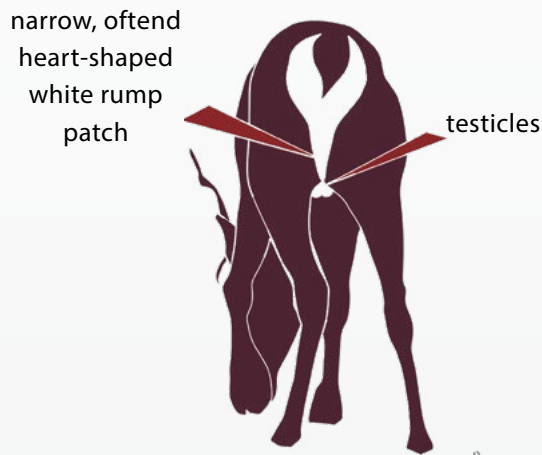
# Bull or Cow?

## Don't rely on antlers to determine the sex of a caribou!

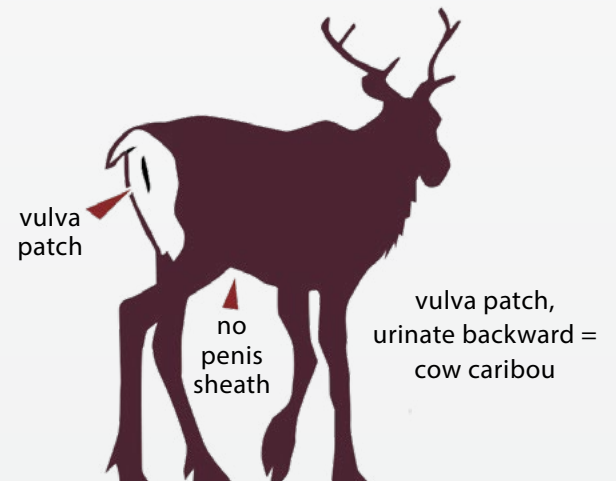
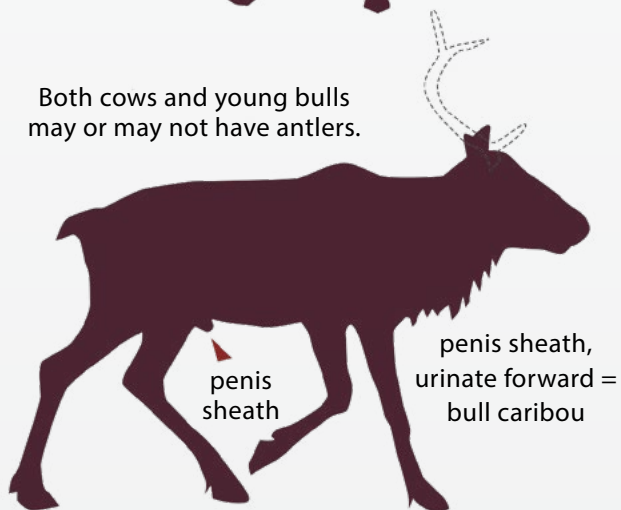
There is significant overlap in the characteristics of young bulls and cows, and it is impossible to tell with certainty young bulls from cows by looking only at their antlers! Before pulling the trigger, establish if testicles and/or a penis sheath are visible, if a vulva is visible, what shape the white rump patch is, and whether the caribou urinates forward or backward. The Western Arctic herd has no cows to spare!

bull caribou  
paŋŋiq  
bedzeyh kuh

cow caribou  
kulavak  
beggoy k'ee'aanee'

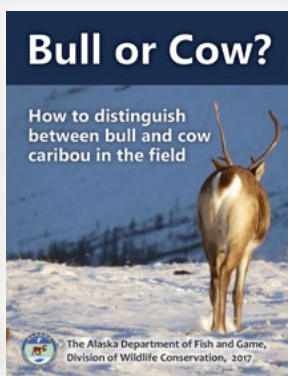


Both cows and young bulls may or may not have antlers.



## Why restrict harvest to bulls?

Not as many bulls are needed in a healthy population. When a herd is unstable or in decline, restricting harvest to bulls, or mostly bulls, allows more cows to live and produce calves. Over time this may allow the population to recover. Can you distinguish between bull and cow in the photo below?



### Bull or Cow?

This pocket guide showing how to distinguish between bull and cow caribou in the field is available. To view the guide, scan the QR code, visit [adfg.alaska.gov](http://adfg.alaska.gov), or pick up a printed guide at your local ADF&G office.



# Quyanna ~ Taikuu ~ Baasee' ~ Thank You

## Elmer Seetot, Jr.



Elmer Seetot, Jr. of Brevig Mission is stepping down from the working group after many years of involvement. Mr. Seetot is a lifelong resident of Brevig Mission, where he and his wife Johnee raised their four children and now enjoy spending time with their grandchildren. Elmer, one of the original signers of the Working Group's charter, has held the Northern Seward Peninsula chair since the group's establishment in 2000. Former working group chair Roy Ashenfelter said "it's important to remember, Elmer wasn't just representing Brevig but a cluster of villages – Wales, Shishmaref, Teller...the whole northern Seward Peninsula. All those villages agreed and supported him in filling that seat. I always appreciated that Elmer attended all the meetings and actively participated. He brought forward the village point of view on how to do things." One example was Elmer's explanation of the need to share harvests – he helped push for regulations that fit with that model. "He didn't just help the villages in his area by serving on this group," said Roy, "he helped all the villages."

## David Kilbourn



David Kilbourn, who served on this working group as a representative of Fairbanks area hunters, passed away last year in 2023. Dave was an avid outdoorsman, pilot, and father who grew up on an Idaho ranch and moved to Alaska around age 10. He graduated from Lathrop High School, went outside to college at the University of Washington, and came back to make his home in Alaska with his wife Aldean. His career was in the grocery and shipping business, but he was always passionate about hunting, fishing, and camping. Dave's connection to the Western Arctic Herd and Northwest Alaska was, in part, fostered by time spent at his family cabin on the Maniilaq River in the upper Kobuk. The Working Group thanks David and extends condolences to his family and friends.

## John Trent

John Trent, retired Alaska Department of Fish & Game (ADF&G) biologist in northern Alaska, passed away in early 2024. This Western Arctic Caribou Herd Working Group would not exist without John Trent. Former Working Group chair Roy Ashenfelter said "John put his heart and soul into understanding that there needed to be a group like this. He was the instigator in setting it all up." Roy recalled that initially it wasn't clear how the group would be structured, and what role the agencies would play. He said John was key in gaining buy-in for a working group composed of and run by the hunters and users themselves, with the agencies in a supporting role. "That structure has played out amazingly well. With the working group we all sit at the table and hear for ourselves what the concerns really are."

This fits with the recollections of Tony Gorn, Regional Supervisor for northern and western Alaska with ADF&G: "It was professionally important for John to bring people together—he believed in the importance of listening to each other and sharing ideas. His humility was a strong attribute. He would sit, legs crossed, listening very carefully to everyone in the room."

John "Jack" Nelson Trent was born in California, graduated from high school in Kodiak, and attended UAF and later the University of Wisconsin-Madison with degrees in biology and communication. He and his wife Gerda lived in Ester, Fairbanks, Utqiagvik, and Anchorage before retiring to Kenai. John's connection with the working group continued after his retirement – he attended meetings in person for many years, and as Roy Ashenfelter said, "he got to be friends with a lot of us."



# Western Arctic Caribou Herd Working Group



Front L-R: Michael Stickman, John Wisniewski, Vida Coaltrain, Joe Leavitt, Darrell Vent, Sr., Back L-R: Tom Gray, Ben Child, Tim Fullman, Jake Jacobson, Charlie Lean, Neil DeWitt, Vern Cleveland, Cyrus Harris (Johnson Eningowuk on laptop).

## About the Working Group

The Western Arctic Caribou Herd Working Group is made up of members who represent those with an interest in this herd. The members include subsistence users from communities in the range of the herd, other Alaskan hunters, guides, transporters, conservationists, and the reindeer herding industry. Management agencies participate in meetings and support the group but are not voting members.

If you have questions, comments, or concerns, or you would like to get involved, contact your local Working Group representative or one of the agencies who support the Working Group.

### WACH WG Voting Chairs

- Anchorage Fish & Game Advisory Committee
- Buckland, Deering, Selawik
- Anaktuvuk Pass & Nuiqsut
- Elim, Golovin, White Mountain
- Fairbanks Hunters
- Hunting Guides
- Kivalina & Noatak
- Kotzebue
- Koyukuk River (Huslia, Hughes, Allakaket, Bettles, Wiseman)
- Lower Kobuk River (Noorvik & Kiana)
- Middle Yukon River (Galena, Koyukuk, Nulato, Kaltag)
- Point Hope & Point Lay
- Nome
- Conservationists
- N. Seward Peninsula (Teller, Brevig, Wales, Shishmaref)
- Reindeer Herders Association
- S. Seward Peninsula (Koyuk, Shaktoolik, Unalakleet, Stebbins, St. Michael, Kotlik)
- Transporters
- Upper Kobuk River (Ambler, Shungnak, Kobuk)
- Atqasuk, Utqiagvik & Wainwright

### Representatives

- Neil DeWitt
- Vida Coaltrain
- Eli Nukapigak
- Charles Saccheus
- John Wisniewski
- Jake Jacobson
- Enoch Mitchell
- Cyrus Harris (Vice-Chair)
- Darrell Vent, Sr.
- Vern Cleveland Sr. (Chairman)
- Michael Stickman
- Steve Oomittuk
- Charlie Lean
- Tim Fullman
- vacant*
- Tom Gray
- Morris Nassuk
- Ben Child
- Bill Bernhardt
- Joseph Leavitt

### Alternates

- Matt Moore
- Raymond Lee, Jr
- Mary Hugo
- Morris Nakaruk
- John Siegfried
- John (Thor) Stacey
- Daniel Foster, Sr.
- vacant*
- vacant*
- Kirk Sampson
- Arnold Demoski
- Caroline Cannon
- Jacob Martin
- Alex Johnson
- Johnson Eningowuk
- Harry Karmun
- Leo Charles, Sr.
- vacant*
- vacant*
- vacant*

### The following agencies support the Working Group, but are not voting members:

**Alaska Department of Fish & Game, Arctic/ Western Region, Nome Regional Supervisor- Tony Gorn**  
(907) 443-8189, tony.gorn@alaska.gov

**US Bureau of Land Management, Anchorage Field Manager - Jake Vialpando**  
1-800-478-1263 or (907) 267-1246, jvialpando@blm.gov

**US National Park Service, Western Arctic National Parklands Resources Program Manager - Annie Carlson**  
(907) 442-8301, ann\_e\_carlson@nps.gov

**US Fish & Wildlife, Selawik National Wildlife Refuge, Kotzebue Refuge Manager- Wil Wiese**  
1-800-492-8848 or (907) 442-5065, wilhelm\_wiese@fws.gov

**To report violations call:**  
**1-800-478-3377**

### Please bring questions regarding the Working Group to:

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(907) 636-2261, vern\_cleveland75@hotmail.com

**Vice-Chair, Cyrus Harris**  
(907) 442-7914, charris@maniilaq.org

**Facilitator, Holly Spoth-Torres**  
(907) 223-0136, holly@huddleak.com

### Please send questions regarding Caribou Trails to:

**Alaska Department of Fish & Game**  
Deb Lawton - deb.lawton@alaska.gov

### Upcoming Meeting

Dec 11-12, 2024  
Anchorage, AK

Check the website for details:  
[www.westernarcticcaribou.net](http://www.westernarcticcaribou.net)



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