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"Put on Your Caribou Hat": Challenges to and Strategies for Successful Co-Stewardship of North American Caribou Herds

By Deana Lemke, Karen Linnell, Tina Giroux-Robillard, Jody Pellissey, Joe Tetlichi, Vern Cleveland Sr., Henry P. Huntington, Hannah Voorhees and Todd Brinkman

INTRODUCTION

AND EFFECTIVE COLLABORATIVE APPROACHES to stewardship of the environment Limprove management outcomes by diversifying the perspectives, knowledge, and data that feed into decisions, and by sharing the power and responsibility of the management process. Our profile article provides a summary of a panel discussion by Indigenous leaders on the topic of co-stewardship of caribou held at the most recent joint meeting of the North American Caribou Workshop and Arctic Ungulate Conference, which was held in Anchorage, Alaska, 8-12 May 2023. It is our hope that this summary will allow others involved in co-stewardship efforts to learn from the experiences of these panellists, and help Indigenous communities, management agencies, and researchers better understand factors that contribute to the success of co-management efforts.

The theme of the conference was Crossing Boundaries, and our panel discussion, titled Caribou Crossing: Collaborative Caribou Stewardship in a Changing Arctic, was focused on collaborative management of barren-ground caribou (Rangifer tarandus). The panel brought together leaders from Alaska and northwestern Canada who have been at the forefront of co-management organizations, including the Western Arctic Caribou Herd Working Group (WACH WG), the Porcupine Caribou Management Board (PCMB), the Beverly and Qamanirjuag Caribou Management Board (BQCMB), the Ahtna Intertribal Resource Commission (AITRC), and the Advisory Committee for Cooperation on Wildlife Management (ACCWM). Co-management organizations typically include public and Indigenous organizations, caribou harvesters, and wildlife biologists and managers working together.

The Caribou Crossing panel discussion focused on strategies that have helped co-management organizations overcome challenges to conservation, support continuation of subsistence uses, and include people who rely on barrenground caribou in management decisions, while also noting the obstacles that remain. In this article, we—the panellists, moderator, and organizers—share the outcome

of the discussion. Although the term "co-management" is widely used in formal arenas to refer to power-sharing arrangements, we also use the term "co-stewardship," which emphasizes an evolution toward emphasis on Indigenous approaches to caring for caribou, rather than "management," which focuses on human control over caribou.

SUCCESS STORIES

Panellists explained that consensus-building is a traditional form of Indigenous decision-making that has translated particularly well into the arena of co-management. In order to work together and reach consensus, everyone must be willing to "put on your caribou hat," which means putting aside differences in views on other topics and focusing on the well-being of caribou. Deana Lemke has served as the executive director of the PCMB since 2003. Speaking about the PCMB decision making process, Ms. Lemke said:

It's a board that cares about coming to consensus, and even though they represent the government and five Indigenous governments within the range of the herd on the Canadian side, when they come to the table, they put those hats aside. They put their caribou hat on. They talk about what's in the best interest of the caribou. They want them to be around forever, they are not constrained by parties' positions. They can have their direction and input. That doesn't constrain the board. The board looks at consensus. The odd time they've had to come to votes, even working through that, they do it respectfully, knowing that everyone is equal at the table.

Consensus is dependent on the development of strong relationships across boards and agencies over decades. During years in which difficult conservation decisions must be made, the consensus-building process can be extensive. Jody Pellissey, the executive director of the Wek'èezhìı Renewable Resources Board, speaking on behalf of the ACCWM, said: "Some years it is obvious what the status

should be, and sometimes it takes a long time to come to consensus. [The process] keeps everyone at the table so we can come to a decision that is acceptable to all." Ms. Pellissey continued:

Every Elder I've ever heard has said "Work together." Some days it makes perfect sense. Other times it is much more difficult. We have to get into the details, wanting to make sure that everyone's traditions continue. We need to step back and realize that despite the differences, really, at the end of the day we have the same core values.

This point was echoed by Karen Linnell, the executive director of the AITRC, who said: "We all want the same thing—healthy populations so we are not fighting over the last moose, caribou, or salmon. We have to put our egos aside to get things done."

One take-away message that Joe Tetlichi, chair of the PCMB, hoped to pass on is the importance of being proactive with developing a caribou management plan during times when the caribou population is doing well, because "if there is a peak there is a crash...once a herd declines, and people keep hunting the way they normally do, it will be harder to rebound." Like some other co-management boards, the PCMB has a set of stepped prescriptions for harvest-management measures, depending on the status of a herd. Those plans have been developed over many years, and only work if they are developed through consultation and outreach with affected communities.

The term "working together" also extends across international boundaries; where Indigenous cultures span the U.S.-Canada border, they tie together management practices on either side of the border, but such coordination depends on commitment from all governmental parties. Co-management boards form the heart of a network that facilitates a flow of information to and from communities, biologists, and decision-makers. A large part of the work of co-management leaders involves helping to build trust by facilitating outreach and communication with communities. Mr. Tetlichi described how this process works for the PCMB:

We build trust; we take time to go to the communities. ...When we go to the user communities, we take our biologists from NWT [Northwest Territories] or Yukon. This does two important things: it shows who the person is and creates a relationship. I think that really goes a long way for the communities.

Ms. Lemke described how board members play a key role in explaining decisions to all affected parties:

Whatever the board comes up with, that member is a bridge between the board and the party. They go back to the party and represent the board's perspective. They help navigate some things that are not in line with what

they would individually do. This makes it easier to understand those perspectives.

Co-management boards also work with communities to encourage them to initiate community-based conservation measures. Mr. Tetlichi described how communities' perspectives toward caribou have evolved over time from a primarily Indigenous rights-based use framework in the 1990s, to today: "Thirty years later, I have an Aboriginal right, but I also have a responsibility."

A central component of co-management is incorporating Traditional Knowledge (TK) into decision-making. Ms. Lemke described a PCMB project being conducted in collaboration with the Canadian Mountain Network that is looking at the impacts of climate change within the summer range of the Porcupine caribou herd. A key element of this project is working with seven First Nation communities and including TK.

Just as TK must be given equal weight in decision-making, so the balance of power between Indigenous board members and governmental parties must be equal. Tina Giroux-Robillard, executive director of the BQCMB, relayed how changes have been made recently so that the BQCMB is now able to engage in co-management in a government-to-government role.

Collaborations with agencies in a research setting was a recurring theme of the panel discussion. Often these arrangements were seen as foundational to co-stewardship. Mr. Tetlichi recalled that, when he was first appointed to the PCMB, "we didn't have a clear understanding of where the caribou were." Biologists recruited Indigenous hunters to fill in this gap by travelling to the migrating herds and counting caribou, creating a precedent for future collaborations.

Ms. Linnell described a more recent example pertaining to caribou habitat assessment for the Nelchina/Mentasta herd. The project is studying what the effect of vehicle traffic may be on the caribou carrying capacity of the land. "The new forms of transportation tear up the terrain and land, and this has had a great impact on carrying capacity. We want to quantify it. How can we help fill in additional information gaps?" Involvement of tribal communities in designing methodologies is key.

In closing, panellists described co-management as a process that requires hard work and dedication. It only succeeds because of the "passion of the people and the importance of the caribou to the communities." That passion requires building relationships among members of the board (or working group), and between the board and the communities and groups it serves. Having respect for one another and for each other's knowledge and perspective is central to successful relationships, but achieving it takes time and commitment. Despite the challenging work, co-management leaders remain committed in part because they are inspired by traditional values to do so. As Ms. Linnell reminded the audience: "We were taught that if we care for it, it will care for us."

CHALLENGES AND CONCERNS

Concerns and challenges related to caribou well-being and co-management fall into four major categories: (1) increasing human activity and disturbance; (2) climate change; (3) differences in values, capacity, and commitment among interest groups; and (4) a circumpolar-wide trend of declines in most caribou populations.

Ensuring that human activity and development do not cause significant negative and cumulative impacts to caribou is an ongoing challenge. Panellists explained that expanding human infrastructure (such as roads) inflates hunting pressure and disturbs caribou movements. More advanced technology and equipment can also put more pressure on caribou and their habitat. As Ms. Linnell related: "We have a lot more traffic, a lot more off-road vehicles tearing up the land...the blessing and curse of living on the highway system is accessibility." However, panellists also noted the need for economic growth to support jobs and address the high costs of living in rural areas. As Ms. Giroux-Robillard explained: "These are remote communities that need that income." The challenge of finding caribou during times of decline can increase the need for economic development. Vern Cleveland (WACH WG) explained that rural residents in the Northwest Arctic Borough (Alaska) are "tired of being broke, tired of spending money on fuel."

Climate change was considered a factor that was beyond local control. Climate-related impacts (including erosion, permafrost thaw, changing hydrology and seasonality, and habitat loss resulting from the increasing frequency and extent of wildfires) are affecting plants and animals and how people are interacting with the land. Yet panellists noted the importance of focusing on factors that can be addressed locally. As Mr. Tetlichi said: "We have no control over global warming, but we do have control over harvesting, so we focused on the harvest side."

Differences in cultures and land-management jurisdictions can create conflict. Panellists said that sometimes non-local hunters' activities and motivations (e.g., for the trophy rather than the meat) are at odds with local customs and values. The unique missions and regulations of different agencies and land jurisdictions create confusion for hunters. Those differences result in fragmented management plans and variations in the levels of commitment to conservation solutions.

Local communities have the passion and commitment to implement successful strategies, but they often lack the capacity and resources. Agencies often have funding and capacity, but may have priorities that don't align with local communities. Although different approaches to management can create conflict, the panellists also saw benefits in different perspectives. "The different perspectives help to navigate challenges and explain why we are managing the way we are," said Ms. Lemke.

Panellists expressed uncertainty as to why many barrenground caribou populations are declining, though they generally agreed that many factors are involved; climate change is a contributor, and caribou numbers decline when herds are not being properly taken care of. Some caribou populations, such as the Bathurst and George River herds, have declined by nearly 99% from documented highs. Panellists noted that declines often trigger harvest restrictions and create hardship. When people must stop harvesting caribou the way they would like to, food security issues increase, and the people are less able to pass on TK to younger generations, which threatens the future of their cultures.

The loss of opportunity to hunt caribou because of low population numbers presents a significant challenge to co-management. If their ability to harvest caribou is restricted, people are unable to hunt, and they are also less likely to engage in co-management. Ms. Pellissey explained that this can create a challenge: "The biggest limitation is to bring knowledge to the table when the communities are unable to hunt the herds. Closures are keeping communities from hunting and then they are less likely to come to the table and share their experiences." Finding ways to support caribou-dependent cultures to continue traditions and pass on knowledge related to caribou even when hunting is restricted will be key to continuing co-stewardship through hard times when herds are declining.

CONCLUSION

We hope this article directly supports co-stewardship processes that lead to respectful, salient, and sustainable decisions related to the management of species that are important to the well-being of Alaska Natives and Indigenous Peoples in Canada. Implementation of successful co-stewardship will be more likely to happen if all participants enter the process with a philosophy to "put on your caribou hat."

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New Insights into William Gibson, Thomas Armitage, and the "Peglar Papers" of the Franklin Expedition

By Glenn M. Stein

INTRODUCTION

PARTLY EXPOSED SKELETON OF A MEMBER of the Franklin Expedition, accompanied by papers Libelonging to naval petty officer Henry Peter Peglar (HMS Terror) was discovered by Leopold McClintock on the coast of King William Island in 1859. Previous researchers suggested the remains may have belonged, not to Peglar, but to his shipmate Thomas Armitage, based on the belief Armitage and Peglar served together from 1834-37. In "Scattered Memories and Frozen Bones: Revealing a Sailor of the Franklin Expedition, 1845–48," Stein (2007) weighed the evidence of the skeleton's identity between Armitage and another shipmate, William Gibson. For the first time, Armitage's full naval service is presented, which proves he served just one year with Peglar prior to the Franklin Expedition and was illiterate up until the time he went to the Arctic. In contrast, Gibson had a much longer and more recent connection with Peglar. By considering further evidence, including an unpublished letter by Gibson and some of his personal documents, plus family letters and information, I am able to shed new light on Gibson, his family, and naval service. Finally, in this essay, I embarked on a handwriting comparison of the "Peglar Papers." After separating out the like items evidently in Peglar's handwriting, a juxtaposition of Gibson's handwriting to the other handwriting within the papers found no favorable comparisons.

WILLIAM GIBSON AND FAMILY

William Gibson was born in 1822 in Middlesex (London), the first and only son of Stuart Gibson (ca. 1795–1877) and Mary Tweedie Carlyle (ca. 1796, deceased 1830–36), who were married 2 February 1818, and in 1819 lived in St. Anne, Soho, Westminster. Stuart was a tailor and had a shop close by on Regent Street, where he made riding habits (women's clothing for horseback riding) and must have had a wealthy clientele (T. Huygens, pers. comm. 2019; Huygens, n.d.). The Stuarts also had three daughters, Margaret Ann (1819–?), Charlotte Donaldson (1828–91), and Mary Ann Frances (ca. 1830–97). After

Stuart's wife passed away, he remarried on 27 March 1837 to sixteen-year-old Mary Ann Mayfield (ca. 1821–51), who family stories claim, worked as a seamstress in his shop (Huygens, n.d.). Their children were James (ca. 1836–?), Margaret Ann (1837–39), Eleanor Eliza (1841–?), Stuart Jr. (1843–?), nameless child (1845–?), and Alfred (1846–74) (Huygens, n.d.).

GIBSON AND THE WANDERER

William Gibson volunteered for the Royal Navy at Sheerness on 3 January 1840, aged 17 years and six months, where he worked being rated a captain's cook. However, within days he was re-rated a boy 1st class. His first ship was the 16-gun brig-sloop *Wanderer* (Captain Joseph Denman, November 1839—August 1841), with a crew of approximately 110 souls (*Wanderer*, C,D,O, ADM 38/9306). William did not waste any time informing his father about his new surroundings in a letter addressed to "S. Gibson / No 11 Grenvill / Street / Sumers Town / London" (Grenville Street, Somers Town) (Fig. 1a-c); it was twice postmarked, first on 27 January in Devon, and again on 29 January (K. Scott and W. Morikawa, pers. comm. 2015):

Dear father

I received you leter on Friday last and you say that you wated fore an answer I sent one on Monday but I suppose it as miscaried or else you would ave received it I find out that I canot leav my alf pay as I am only on the Books as a first Clas boy but I can leave eleven shilings and ninepence by the Captains agent N° 14 great geary street westminster the Capain as riten to im about it and you ad betar see about it as soon as you can i said in my last leter that I has got no place to hang my amock up in but I have got one now it is a very bad one thow it is is ["is" again above] fastend to the staraord compreser by the main atchway and the first night I laid theare I had ["we all had" above] to get up about one a Clock to muster as the Joly Boat was taken away by somone the two nights following we had to let go an anchor I fare very well now as I mes with the steuard I have very nigh cut down a