

CARMA Newsletter July 2011

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CARMA Session at the Arctic Ungulate Conference, August 22-26 in Yellowknife



The 2011 Arctic Ungulate Conference will be held in Yellowknife, Northwest Territories, August 22-26 2011. Here is an expanded version of the CARMA session in Yellowknife for the Arctic Ungulate Conference:

1. **Introduction to CARMA** - Origins, goals and accomplishments - Don Russell and others. In this talk we highlight the origins of CARMA, how it fits in with international fora (Arctic Council, CAFF, Circumpolar Biodiversity Monitoring Program), highlight the tools and resources produced, and introduce the synthesis efforts.
2. **CARMA, Communities and Education** - Susan Kutz and others. In this talk we highlight CARMA's role in communities, co-management boards, and education.

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We talk about the community monitoring activities, Voices, Atlas and highlight how CARMA's agenda through the seven CARMA annual gatherings have had a community focus.

3. **CARMA's Climate database: assessing habitats on a circumpolar scale** - Don Russell and others. In this talk we provide more detail on the Climate database produced by CARMA and provide a number of examples of comparative assessment of migratory tundra Rangifer habitats and some synthesis products that have emerged.
4. **CARMA's integrative modeling: the development and application of the ENERGY / PROTEIN model** - Robert White and others. The ENERGY model has a long history and the resources in CARMA have allowed us to incorporate protein dynamics. We will provide an overview of the model, some examples of how it can be used to better understand the Rangifer system and illustrate examples of how it will be used in a comparative assessment of circumpolar herds.
5. **CARMA'S decision support tools: an approach to cumulative impact assessment** - Anne Gunn and others. In this talk we introduce how CARMA has worked on developing decision support tools. We provide the example of integrating CARMA's Climate database, the ENERGY / PROTEIN model, RSF modeling and the Caribou Calculator (harvest impact assessment tool) to assess the cumulative effects of climate change, development, and harvest on cycling Rangifer herds.
6. **The challenges ahead: CARMA after IPY** - Gary Kofinas and others. In this talk we discuss where CARMA can continue to play a role in understanding, educating, supporting and facilitating discussion on the future health of Rangifer populations. To set the stage for that discussion we briefly explore the institutional stages that exist around the north and how we have collectively responded during the latest Rangifer declines. Focusing on CARMA's key strengths and weaknesses therefore, we suggest a role for CARMA in building on those opportunities and experiences to better manage herds through the next cycle.

The 2011 Arctic Ungulate Conference will be held August 22-26, 2011 in Yellowknife, Northwest Territories.

NWT Management Plan Released

The Northwest Territories government has finalized its five-year plan to monitor the territory's barren-ground caribou herds and help them grow.

The government's 2011-2015 caribou management strategy is entitled "Caribou Forever - Our Heritage, Our Responsibility"

Robert White

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Update

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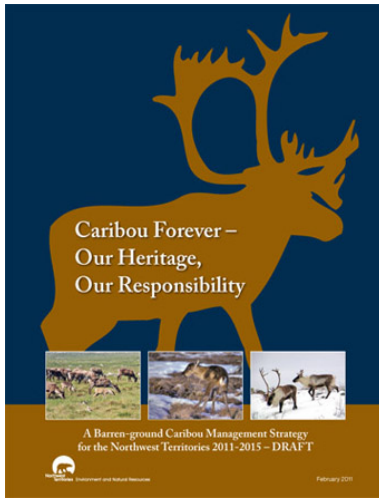
Spread the word about
CARMA and your work.
Help us increase
membership:

Forward this newsletter
to at least **TWO** people
who aren't members
of CARMA ... yet.

From the Steering
Committee -

Climate Database

As presented at the last CARMA gathering in December, CARMA has been working with a climate database to help us understand how the ranges of different herds compare and how individual herds ranges have changed in the last 30 years. The database covers the period from 1979-2010 and we will attempt to keep the database updated on an annual basis. To give CARMA members an example of one of the simple things we can do with the database here is a graph of the average monthly maximum snow depth for the 22 migratory tundra herds. This type of analysis shows us both the similarity



and builds on the government's previous five-year strategy, which focused on stabilizing declining caribou numbers.

Environment Minister Michael Miltenberger said under the draft plan, population censuses of all caribou herds will be conducted every three years. Government officials will monitor the herds and have guidelines for

what to do when a herd's population begin to decline.

"When the herd hits certain numbers, certain actions take place automatically," Miltenberger said.

"We won't have to have the kind of political situation where all of a sudden we get some numbers in and we have the big debate about what do you do about it. We have that type of situation all anticipated and planned for."

Recent population declines

Caribou herds in the N.W.T. declined by 36-91 per cent from the 1990s to the late-2000s, according to the plan.

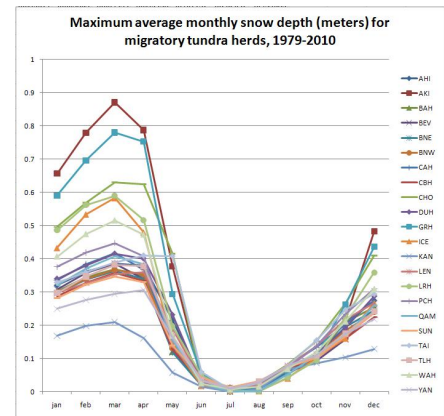
Some of those herds – the Bathurst, Bluenose West and East, Cape Bathurst and Porcupine herds – have stabilized in the past few years, thanks in part to hunting restrictions and other herd management practices.

But other herds, such as the Tuktoyaktuk Peninsula, Beverly and Ahiak and Dolphin-Union herds, continue to decline, according to the plan.

Miltenberger said a coordinated approach to caribou management will make it easier in parts of the N.W.T. where there are both settled and unsettled land claims.

As part of the five-year plan, there is strong funding support for the Arctic Ungulate Conference, coming up this August in Yellowknife (see related stories), as well as an annual contribution to CARMA.

among most of the herds and the variability this ecotype of caribou occupies. At the Arctic Ungulate conference in Yellowknife in August we will be presenting a more detailed analysis of the climate database.



COMING EVENTS

Arctic Ungulate Conference, August 22-26

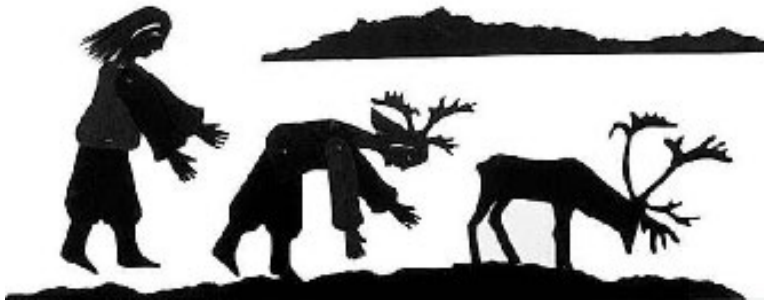


Key Dates: Yellowknife, Northwest Territories . August 22-26, 2011

Registration Fees: \$325. Students \$200.

Optional fees: Banquet tickets, \$50. Seminars, \$25 each, Field trip (August 26) \$ Variable.

The Arctic Ungulate Conference (AUC) is an



Feature Project - Voices of Caribou People

Interviewee: Gary Kofinas

The interview is impressively focused on the project, Voices of Caribou People. The only thing Gary Kofinas says about himself is that he conceptualized the project. Grad student Archana Bali is the person making it happen.



Voices of Caribou People documents the perceptions, knowledge, and cultural sense of identity in six villages across North America - villages closely tied to barrenground caribou herds. It provides a snapshot of socio-economic conditions in these six villages, during the International Polar Year, 2007-2009.



CARMA has always made an effort to involve indigenous people in their work but this project goes one step further because it doesn't filter them through modern science, said Kofinas. Each community had their own research assistant and in each community videography was done with their leaders, elders, hunters, women and youth. What makes this project different from other similar interviews and films is its scale - from Alaska to Quebec. The project doesn't focus on just one community, one herd, one management board - it focuses on these things, individually, all across North America.



Common themes emerged. Leaders and hunters tended to speak of the political challenges of maintaining the sustainability of their herds. Women often

spoke of social conditions. Elders spoke most often about changes since long ago. And youth spoke of what they see as the future.

international conference held every four years. Yellowknife is your host in August 2011.

The theme of the conference - **Challenges of Managing Northern Ungulates** - will address the difficulties of managing ungulate populations faced with the unpredictable effects of climate change and ever-increasing human presence on the land. The conference will also focus on the challenges associated with developing recovery actions for declining caribou and reindeer populations that are an integral part of Aboriginal cultures and ways of life.

This is an excellent opportunity for biologists, managers, Aboriginal groups, co-management boards, researchers, students and resource users to discuss northern ungulate research and management with their circumpolar peers. Topics and sessions under consideration:

- Status of ungulate populations across their arctic ranges
- Comparison of caribou and reindeer co-management across the circumpolar north
- Population dynamics and management
- Animal Health: disease, parasites, and contaminants
- Nutrition, physiology, and body condition
- Behaviour, genetics, and evolution
- Range and habitat ecology
- Impact of climate change



Common concerns emerged too, with regional differences. Interesting and inspiring is the relationship with the caribou that is still central, with the new

challenges of grappling with oncoming modern life, modern communication, modern conservation. Everyone was concerned about industrial development, climate change, and social issues.

Voices of Caribou People spoke to 97 people and recorded over 100 hours of video interviews.

Archana is working on logging, editing, referencing and cross-referencing the interviews, entering them into a database, and creating a website where all interviews will be available to the public to watch, searchable by subject or theme, like climate change. She also continues to work with communities to produce short films.

The six communities - Anaktuvuk Pass, Alaska (Teshekpuk and Western Arctic Herds); Old Crow, Yukon (Porcupine Caribou Herd); Wekweeti, NWT (Bathurst Herd); Lutsel K'e, NWT (Bathurst, Ahlak and Beverly Herds); Arviat, Nunavut (Qamanirjuaq Herd); and, Schefferville, Quebec (George River Herd) - were chosen because they stand out as having strong connections to caribou, they have diverse populations, and they responded to our invitation, explains Kofinas.

"We had to limit the project to six communities to be able to finish," said Kofinas. "However, there is interest from Russian communities to document Voices of Russian people."

"We hope to make the website a "living website", so people internationally can upload and share interviews."

Voices of the Caribou People is a video-based effort to document knowledge of the caribou people and bring their local voices into biological research on caribou.

Gary Kofinas is Associate Professor of Resource Policy and Management at the University of Alaska, Fairbanks. He is particularly interested in human dimensions of northern resource management including US-Canadian comparative work, sustainability of communities, community resource management systems, indigenous-agency co-management institutions, local knowledge in ecological monitoring and integrated assessment, human role in reindeer/caribou systems.

and increasing human foot print on northern ungulates

- Predator-prey relationships
- Importance of caribou and reindeer to Aboriginal peoples and the involvement of Aboriginal peoples in the management of caribou and reindeer

The Government of the Northwest Territories, the Government of Nunavut, and the Government of Yukon are co-organizing this conference.

For more information go to www.auc2011.ca.

IPY 2012 *From Knowledge to Action Conference*



In a little less than a year the International Polar Year (IPY) 2012 *From Knowledge to Action Conference* will be held in Montreal, Canada, April 22-27, 2012. The Conference includes four major program areas:

- Science Highlights (Area 1)
- Synthesis and Integration (Area 2)
- *From Knowledge to Action* (Area 3)
- Public Engagement, Education and Outreach (Area 4)

Archana Bali arrived from India in fall 2007 to study caribou at the Large Animal Research Station and in their arctic tundra habitat. Her interdisciplinary work is through the Resilience and Adaptation Program at the Institute of Arctic Biology. She is the first recipient of the George Schaller Fellowship - for international graduate students at UAF whose conservation research will contribute to the survival of wildlife and the vitality of inextricably linked human communities. Schaller is a UAF alumnus and world-renowned wildlife conservationist.

"It's all really new science and in India there wasn't a place offering coursework for inter-disciplinary students," Bali said.



"Feature Person - Robert (Bob) White

Bob White is originally from Australia. He currently lives in Anchorage, Alaska with his wife, Lura Elverson White, and devotes much of his time to CARMA projects.

He is also quite famous among his friends and peers for playing the bagpipes,

depicted here in a watercolour by his wife, Lura.

Bob grew up 400 miles west of Sydney in an agricultural area. He completed both secondary and post-secondary education in agriculture (B.Ag.Sci., Melbourne). This was followed by a Masters in Physiology (M. Rural Sci.) and a PhD in Nutritional Biochemistry at the University of New England.

"Armidale is where I met Jack Luick, a visiting Fulbright Fellow and well-known nutritional specialist from the laboratory of Max Kleiber. He'd moved to Fairbanks to work on reindeer and invited me over for a post-doc. That initial jump to the University of Alaska brought together my nutritional knowledge and Arctic ecological studies."

That was April 1970. Robert had come for a one-to-two year post-doctorate position but made Alaska his permanent home. There, his early ecological training was at the feet of ecologists including David Klein and Steve MacLean as well as with collaborators Ray Cameron and Hans Staaland. Later Robert made a number of visits to Norway to work with Eldar Gaare and others in Trondheim, Aas and Tromsø.

"For my first independent research, we took tame reindeer to the Prudhoe Bay area on the North Slope of Alaska to study grazing ecology. Reindeer were, in fact, model caribou

Key Dates:

- Call for Abstracts
June 15, 2011
- Student Travel Grants
June 30, 2011
- Early Bird Registration
Sept. 15, 2011
- Conference Dates
April 22- 27, 2012

Registration Fees:

- Early Bird Registration
(CDN \$700)
(until 28 Feb 2012)
- Students and Early Career
- Scientists (CDN \$400)
- Polar Educators (TBD)
- Late Registration
(CDN \$800)

For more information on the Conference Program, please see the *From Knowledge to Action* Conference website http://www.ipy2012montreal.ca/050_program_e.shtml

Porcupine Caribou Herd Update



Update from: Martin Kienzler

The goal this March was to recapture a number of cow caribou that had originally been collared with VHF transmitters as 9 month old calves (also called "Short-yearlings" as they are just short of being one year old). We also had 2 satellite collars that were approaching the end of their lifespan and needed to be replaced. In addition, we wanted

mimicking what caribou would do in those areas. Don Russell arrived in the summer of 1973 to do some work with me for several weeks. That's when he got his intro to research in Alaska, and I got my intro to Don Russell!"

In 1972 Bob took a position as Assistant Professor in the Institute of Arctic Biology (IAB) and began to teach and research his way through the ranks, eventually becoming Director of the Institute. "I held that post for five years until I retired, the first time." He was then recruited in 2008 by University of Alaska Anchorage to be Vice Provost for Research and Dean of the Graduate School. His job was to coordinate and increase research and the profile of graduate studies at the university. "I've just retired again. Now I'm devoting most of my retirement time to working on CARMA projects and to unfinished research from the University of Alaska Fairbanks."



The post-doc position itself evolved into research in the International Biological Program (IBP), and Research on Arctic Tundra Environments (RATE), which

meant five years of studying the tundra at Prudhoe Bay and south of Barrow, Alaska. Later Bob put together a team at IAB to start muskox research and to establish the Large Animal Research Station (LARS). "Starting in 1979 we captured muskox from Nunivak Island, bottle-raising groups to create tame animals which were the basis for research for the next 20 years."

After the muskox project, Bob and his team established a tame caribou herd at LARS, based on calves captured from the calving grounds of the Porcupine and Delta caribou herds, both in Alaska.

"I continued research on those caribou and muskox with several students, working at both LARS and in the field, particularly with the Porcupine Caribou Herd. In many instances we worked with Don Russell and the Alaska/Canadian group of researchers doing research on that herd. Others involved when we studied the 'Sustainability of Arctic Communities' were Jack Kruse, Gary Kofinas, Brad Griffith and researchers from the Institute of Social and Economic Research (ISER).

"Our research was orchestrated so that we could use results to do computer simulation modeling on the caribou base and the villages subsisting on them. I provided the relationships that go into the caribou modeling, largely derived from our nutritional work. Don worked with Canadian modelers at UBC, then with

to capture a number of current year short-yearling cows to increase our sample of known aged collared caribou. Radio collars were provided by the Yukon Government and the Government of the Northwest Territories. Satellite collars were provided by the U.S. Fish and Wildlife Service. Telemetry to relocate caribou for recaptures was conducted by USF&WS staff and Papa Zulu Aviation from Tok, Alaska. Captures were conducted by Alaska Department of Fish and Game Biologist Jason Caikoski using an R-44 helicopter (Chena River Aviation, piloted by Troy Cambier). All captures were conducted in Alaska. Weather was clear, sunny, and relatively calm with temperatures ranging from -25 F to 15 F depending on time of day and geographic location. A total of 17 caribou were net gunned for recollaring or deploying new collars. This included 9 adult female recaptures, and 8 new random female short-yearlings. Of the 9 recaptures 2 were to replace satellite collars. The other 7 caribou had initially been collared with radio transmitters. 1 of these was recollared with a new satellite transmitter while the others were refitted with new radios. All short-yearlings received radio transmitters. Following the capture events in March, we now have a total of 14 satellite and 102 VHF radio transmitters on Porcupine Caribou. All satellite transmitters are on cow caribou. Of the VHF transmitters 87 are on cows and 15 on bulls.

**From the Mind of
- Doug Urquhart**

Colin Daniel to produce the model of caribou that we've used for 20-25 years. The model enables us to understand what happens when caribou don't get enough to eat, don't get the right things to eat, are heavily harassed by insects, or are poisoned by industrial toxicants. Basically, the model is used to measure and assess environmental effects and the cumulative impacts of industrial activity on caribou."

When speaking of his work and what has been most satisfying about it, Bob communicates a deep respect for collaboration and for the people with whom he's worked: researchers, students, managers and subsistence users of caribou.



"The initiation and development of CARMA has been the means to integrate and utilize our northern resources and it has also allowed me to expand collaborations with Anne Gunn and Christine Cuyler."

During his career he has supervised or jointly supervised 13 PhD and 5 Masters students ... "which in itself has been extremely rewarding. I've not worked alone; I tend to work with others as a team, and that too is satisfying."

"What I care about is to understand why things happen. I try to visually understand mechanisms. Documenting what is happening is very, very important; then we try to work out why does it happen."

"I feel strongly that Northern areas of North America, Russia, and Scandinavia are some of the most unique ecosystems that need more special attention because they are so vulnerable to climate changes. We need to anticipate these effects by understanding ecological systems. It is exciting that many colleagues are working in this same area."

Although he has such passion for his work and the people he has worked with, Bob White is, of course, so much more.

"I learned to play the bagpipes at the age of 15 when I heard them in a little country town in Australia. I've been playing since and it's a wonderful way to meet people. I have a small Scottish background that I value."

"I married while in grad school and have two sons who are also now married. Their mum died 16 years ago. I have 4 grandchildren. I am married now to a lovely lady who is a watercolourist. We've had a series of dogs over the years but now live in a condo in Anchorage, travel a lot and it's easier not

SAY SOMETHING DIRTY INTO HIS RADIOCOLLAR



Contact Us

Do you want to be a:

- Feature Person
- Feature Project
- Feature Herd, or
- From the mind of - ?

Do you have news or events CARMA members should know about? Do you have feedback to make this newsletter better?

Well for goodness' sake contact us at askcarma@gmail.com.

Next CARMA meeting:

CARMA 8 -
November 29 to
December 1,
2011

having dogs, but we miss them.”

Bob is an avid cross-country skier, his other hobby besides bagpipes. In the summer he rides bicycles so he doesn't get too fat. He loves a dry martini, a move away from his old fave, Glenlivet.

Bob is honored to be a Fellow of the American Association for the Advancement of Science (AAAS), a Fellow of the Arctic Institute of North America (AINA), as well as a life member of the Comparative Nutrition Society (CNS). He is Professor Emeritus of Zoophysiology and Nutrition and Emeritus Director, Institute of Arctic Biology, at the University of Alaska Fairbanks and a member of the Steering Committee of CARMA.

The paintings of Bob playing the bagpipes, and the young muskox are by Bob's wife Lura Elverson White.

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