

## **Arctic Caribou Contaminant Monitoring Program**

### Plain Language Summary, April 2015

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This project studies contaminants in caribou in the Canadian Arctic. We want to know if the caribou are healthy and whether they are healthy for people eat. We also want to know if the amounts of contaminants in caribou are going up or down. In 2014/15 we were only able to collect samples from two Porcupine caribou since the migration of the herd changed and the main part of the herd did not pass through Old Crow. We collected 21 samples from the Qamanirjuaq herd with the help of the Arviat Hunters and Trappers Association and local hunters. For all the caribou we collected kidney, liver, muscle and teeth as usual, but this year we also collected bone marrow and brain from the Qamanirjuaq caribou to test them for contaminants. These samples are now being tested.

We have received the results from last year's collection and found the following:

- Levels of most elements measured in caribou are not of concern. Mercury and cadmium in kidneys could cause some concern for human health depending on how many kidneys are eaten. Yukon Health recommends eating no more than 32 Porcupine caribou kidneys each year.
- Caribou meat (muscle) does not accumulate high levels of contaminants and is a healthy food choice.
- It looks like lead levels in Porcupine caribou kidneys is going down, likely due to less lead in the environment.

#### *Capacity Building*

In October, 2014, we participated in a wildlife contaminants workshop given to the students of the Environmental Technology Program of Arctic College in Iqaluit. The workshop gave general contaminant information, and specific information on contaminants in caribou. The students learned how to take contaminant samples from caribou and how to age caribou using their teeth. This workshop will be offered again in October, 2015.

#### *Communications*

In the fall of 2014, community meetings and/or meetings with local HTOs were held in NT (Fort MacPherson, Tsiigehtchic and Inuvik) and NU (Whale Cove, Chesterfield Inlet, Baker Lake). Public lectures, school talks and interviews with CBC were given in Inuvik and Iqaluit. Information from this project was given to ITK (Inuit Tapiriit Kanatmi) and SAON (Sustaining Arctic Observing Networks Canada) to include on their websites. Presentations were also given to the Beverly Qamanirjuaq Caribou Management Board and at the North American Caribou Conference.

#### *Upcoming work*

In the coming year (2015/16) we will continue to sample and monitor the Porcupine and Qamanirjuaq caribou for contaminants. In addition, we will sample the Dolphin & Union and Ahiak caribou in cooperation with government biologists and hunters in NU and NT. As a result of conversations with Inuit elders, we have learned that caribou eat seaweed, which can contain mercury. In order to explore this further, we will develop a study to collect seaweed as well as lichen, and measure the mercury in these caribou foods.

#### **Acknowledgements**

Many thanks to Yukon Environment staff, Mary Vanderkop and Meghan Larivee for laboratory support. I would also like to acknowledge the efforts of all hunters who have submitted samples to this program over the years – without them, this work would not be possible. Thanks also to the Arviat HTA who assisted with organizing collections this year. This project was funded by the Northern Contaminants Program, Aboriginal Affairs and Northern Development and administered by the Yukon Conservation Society.