

Summary of Capture and Collaring of Tuktoyaktuk Peninsula, Cape Bathurst, and Bluenose-West Barren-Ground Caribou, March 2015

Environment and Natural Resources (ENR)

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In March of 2015 ENR deployed collars on the Tuktoyaktuk Peninsula, Cape Bathurst and Bluenose-West Barren-Ground caribou herds required to support the Post-Calving Population survey in July 2015.

Fixed-wing flights were conducted to determine the distribution of caribou (Fig. 1). Observations from these flights and reports from wildlife officers were used to find caribou and plan the deployment of GPS collars. Two fixed wing aircrafts were used; a Cessna 206 that flew out of Inuvik and Rendezvous Lake and a Cessna 206 that flew out of Norman Wells and covered the Sahtu. The fixed-wing flights were conducted between the 9th and 15th of March.

Between March 6th and 23th, a total of 107 collars (92 Argos Telonics and 15 Iridium Telonics) were deployed on adult caribou in the Tuktoyaktuk Peninsula (TP), Cape Bathurst (CB) and Bluenose-West (BW) barren-ground caribou herds (Fig. 2). Collars were deployed in the known winter ranges of the herds, with 60 collars (43 cows, 17 bulls) deployed on TP and CB animals, and 47 collars (34 cows, 13 bulls) deployed on BW animals. The number of collared caribou in each herd may change depending on where the animals go during the calving/post calving period. The target number of deployments (60) was not met for the BW due to net gunning equipment issues. However, with the number of collars remaining from the 2012 deployment (20) and assuming normal mortality rates between now and July, there should be sufficient collar numbers for the post-calving ground survey.

The capture crew consisted of 3 people: the pilot, a net gunner, and a biologist. Kevin Allen (ENR, Inuvik) and Martin Kienzler (YG, Dawson City) provided net-gunning services. Net-gun captures were conducted using an Astar helicopter with a sliding door on the same side as the pilot. A total of 70 hrs were flown. Capture locations are shown in figure 2 and 3.

The caribou were captured with a net and immobilized with leg hobbles. Eye covers were used to help calm the animals. Each animal was initially examined to assess its condition and to check for any capture-related injuries. Samples collected from each animal included approximately 15 mL of blood (from the femoral vein in the foreleg), approximately 50 g of feces (either from the ground after defecation, or the rectum), and a sample of hair (with roots). Both eyes were checked for Besnoitia, and body measurements were taken (total body length, chest circumference, and neck circumference). The age class of each animal was also recorded based on tooth wear.

The collars were equipped with automatic releases. The Telonics International releases are programmed to go off August 1st, 2018 for the GPS collars. Release dates are set based on the expected battery life of the collar.

All cow caribou were fitted with collars in a similar fashion, with the collar being snug around the neck, but allowing for an open-palmed hand to be moved freely between the neck and the collar material. As the necks of bull caribou expand during the rut, collars were affixed even more loosely on bulls; more space than a clenched fist was available between the neck and the collar material. ENR will monitor collars and attempt to locate them if they become stationary.

Average chase time was less than 1 minute. Average handling time, from when the animal was in the net to release, was 11 minutes. No immobilization drugs were used during the capture program.

There were no mortalities this year; collared animals will continue to be monitored.

Blood collected will be analyzed for genetic microsatellites and serum will be used to determine pregnancy, look at stress and health assessment. Fecal matter will be analyzed for parasites. Approximately 23% of collared caribou had besnoitia, a parasite, present in one or both eyes.

Acknowledgments:

The capture crew appreciated the safe piloting of the aircraft by Kevin Mitchener and Pat Fonseca (Canadian Helicopters). Travis Wright and Dieter Hofgartner (North-Wright Airways) safely piloted the fixed-wing aircrafts. Kristen Callaghan (GRRB) assisted in handling during capture.

Stephanie Behrens (ENR, Sahtu), Lee Ruben (Paulatuk HTC), Tony Stefure (Inuvik HTC), Richard Gruben (ENR, Tuktoyaktuk), Bernard Blancho (Colville Lake RRC), Hycinthe Kochon (Colville Lake RRC), Tyrell Kochon (Colville Lake RRC) and Kyle Tutcho (Colville Lake RRC) assisted with reconnaissance flights. Marsha Branigan (ENR, Inuvik) and Judy Williams (ENR, Yellowknife) assisted with the logistics and purchasing of collars.

Eileen and Barry Jacobson hosted the crews at Rendezvous Lake.

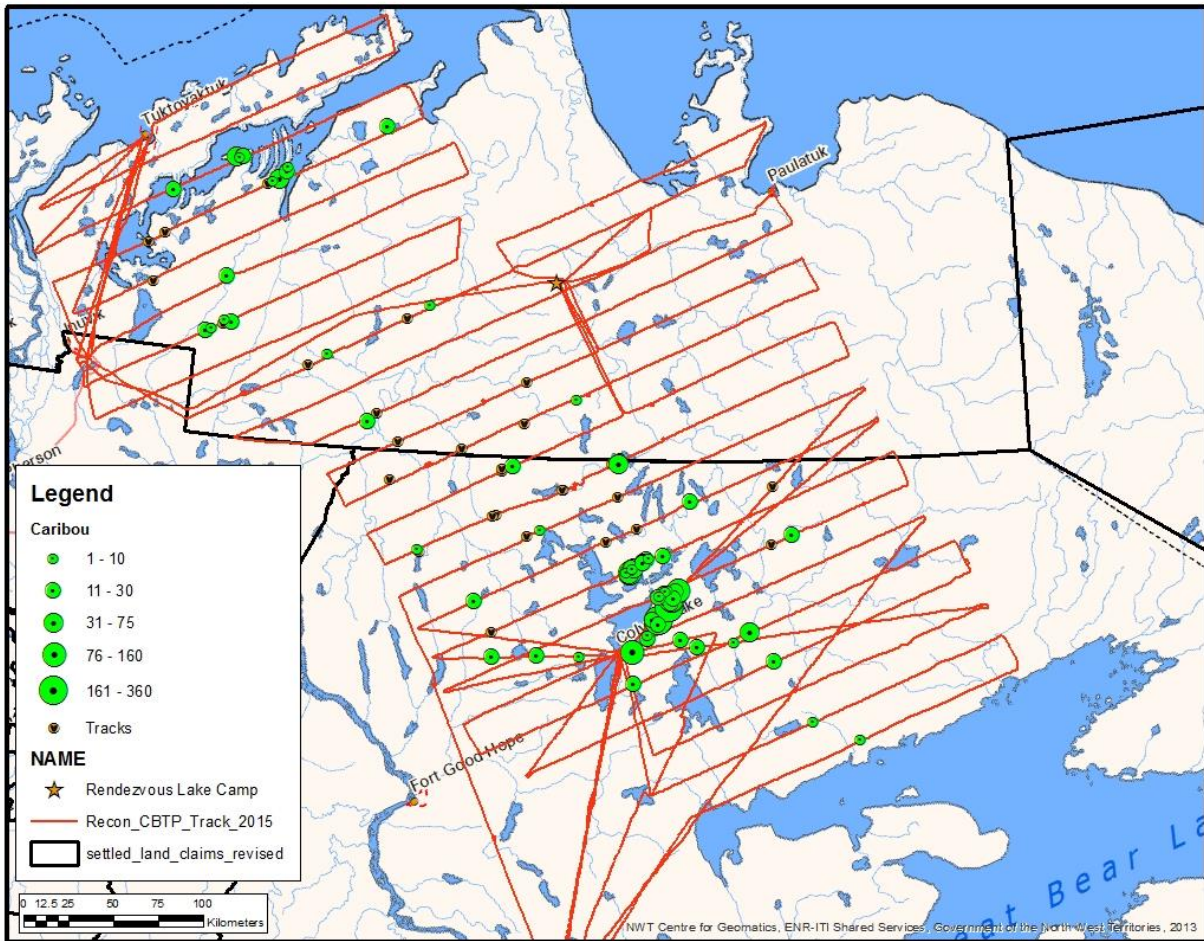


Figure 1. Flight lines of reconnaissance flown during March 2015 and locations where caribou were seen.

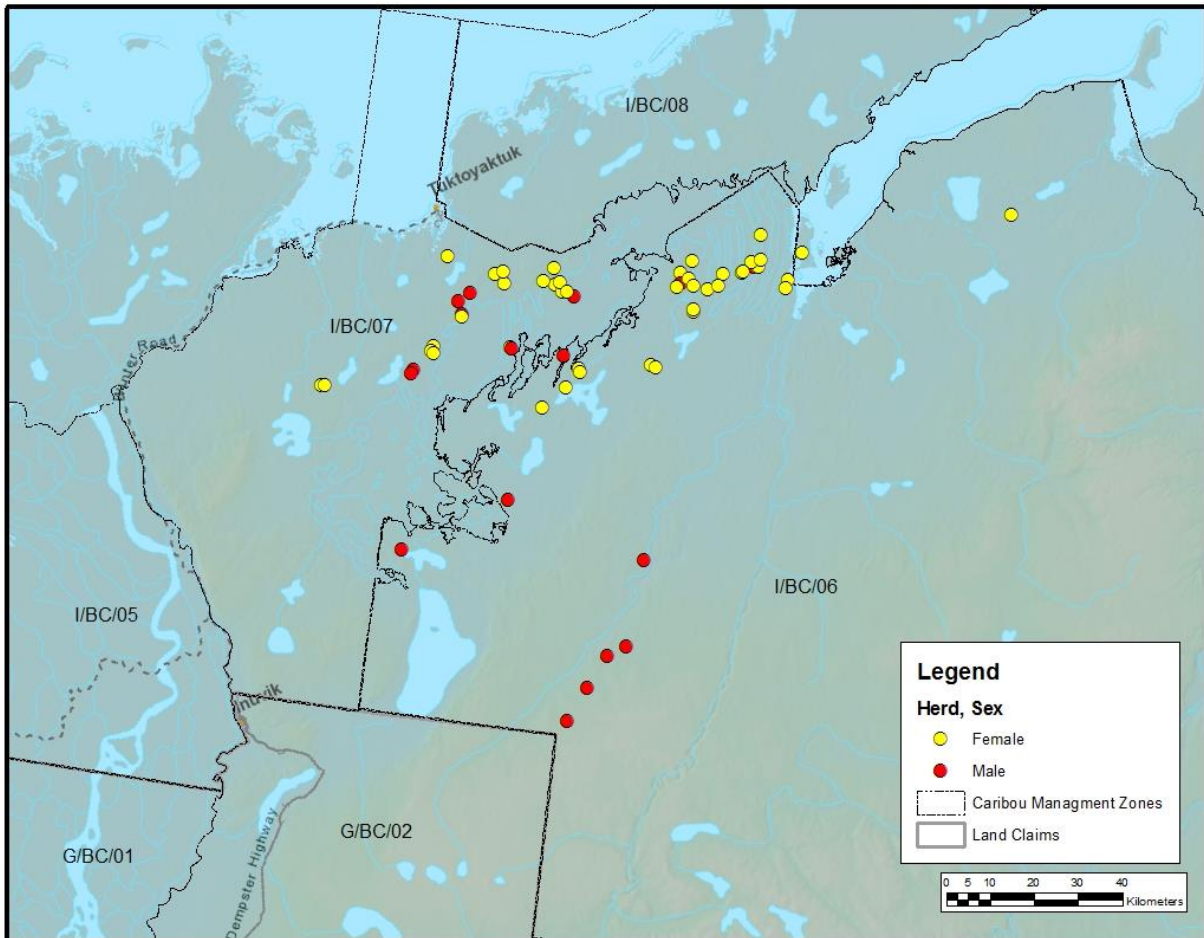


Figure 2. Locations where caribou were collared over the winter range of the Tuktoyaktuk Peninsula and Cape Bathurst caribou herds during 2015 capture efforts.

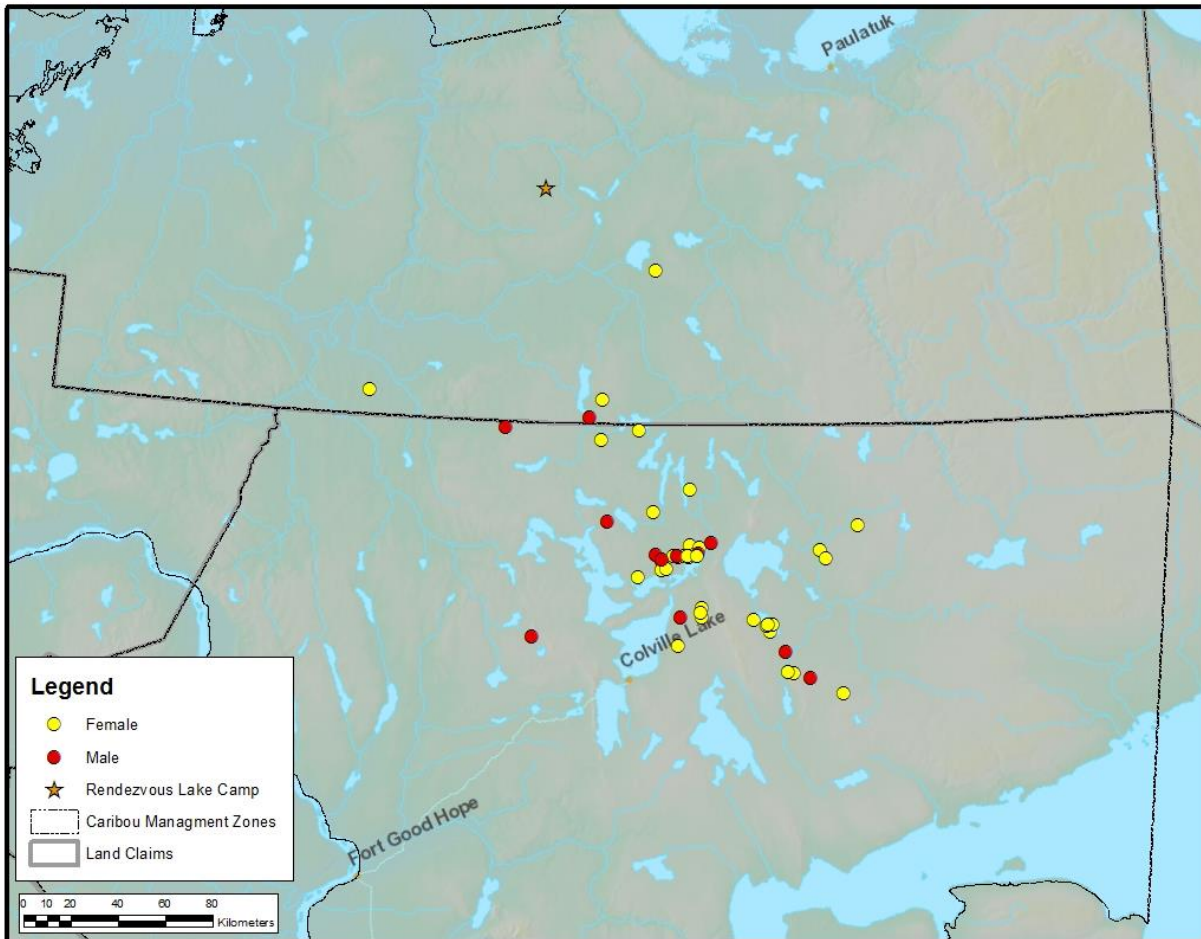


Figure 3. Locations where caribou were collared over the winter range of the Bluenose-West caribou herd during 2015 capture efforts.