

Predation of a Barren-ground Caribou, *Rangifer tarandus groenlandicus*, by a Single Gray Wolf, *Canis lupus*, in Northern Manitoba, Canada

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A single Gray Wolf (*Canis lupus*) was observed successfully trapping and predating a Barren-ground Caribou (*Rangifer tarandus groenlandicus*) in a small section of open water.

Key Words: Gray Wolf, *Canis lupus*, Barren-ground Caribou, *Rangifer tarandus groenlandicus*, predation, Manitoba.

Thousands of animals from the Qamanirjuaq Barren-ground Caribou (*Rangifer tarandus groenlandicus*) herd migrate annually from the arctic tundra of Nunavut and northern Manitoba, Canada south into the subarctic taiga of Manitoba where they spend a large portion of the winter months (Parker 1973; BQCMB 1999). Barren-ground Caribou in central Canada that migrate south of the tree line are preyed upon by both resident Gray Wolf (*Canis lupus griseoalbus*) populations and Barren-ground Gray Wolves (*Canis lupus hudsonicus*) that follow the caribou migration (Kelsall 1968; Miller 1975; Walton et al. 2001).

The following is a description of a wolf – caribou interaction observed along a section of open water at Innes-Taylor Rapids on the Little Churchill River in northern Manitoba (56°56'N, 95°41'W). The interaction was observed opportunistically from a Bell 206 JetRanger helicopter during a Moose (*Alces alces*) aerial survey training flight. Although other observations of caribou killed by a single wolf have been previously documented (e.g., Murie 1944, Burkholder 1959; Dauphine 1969; Smith 1980), it is to our knowledge that observational notes of a caribou trapped and predated by a single wolf in a small body of open water are previously unpublished.

On 28 February 2009, an adult female Barren-ground Caribou was observed standing in a small section of open water near the flow edge on the Little Churchill River. The area of open water was oriented in a northwest to southeast direction, measuring approximately 20 m in width by 100 m in length. Upon first observation, the caribou appeared motionless and cov-

ered with icicles. A Gray Wolf was then observed running towards the caribou, advancing from the nearest treed shoreline. The caribou reacted to the wolf by swimming across the river to the opposite side of the ice bank. The wolf responded to the caribou's movements by travelling along the ice edge to the area where the caribou was now attempting to climb ashore. As the wolf approached, the caribou retreated back into the open water. Numerous wolf tracks following the flow edge and a considerable amount of ice attached to the caribou's pelage suggested that the chase had been taking place for a considerable length of time. At this point, we believe the helicopter, located approximately 350 m away, disturbed the wolf. It retreated into a nearby stand of trees and was undetectable from our vantage point. The caribou was then able to climb ashore and stood motionless along the flow edge, until we departed the site for approximately one hour.

Upon returning to the site we observed that the caribou had returned to the water and the wolf was once again standing along the flow edge. Blood stains in the snow where the caribou had stood before our departure, and an open wound visible on the right hindquarter of the caribou, indicated that a struggle had occurred prior to our return. We then witnessed the weakened caribou, likely suffering from exhaustion and hypothermia, attempt to exit the water only meters from where the wolf was standing. The wolf took hold of the caribou, biting it on the front left portion of the shoulder near the neck. A short struggle ensued thereafter, ending in the death of the caribou.

The current of the flowing river began forcing the dead caribou under the ice. In order to prevent the caribou from being swept under the ice by the flowing water, the wolf fully submersed its own head into the water, and clinched onto the sinking caribou. The wolf then proceeded to partially drag the caribou up onto the ice. Within moments of stabilizing the caribou, the wolf began consuming the caribou's left front quarter and the neck area. At this point, our helicopter departed the site for the day.

On 3 March 2009, the site was revisited with a fixed-wing aircraft. Based on a limited number of new tracks and from the presence of only a single wolf bed alongside the kill, it appears that only one wolf utilized the kill. The carcass was being scavenged by Common Ravens (*Corvus corax*) at the time and appeared to be approximately 75% consumed. This rate of consumption by a single wolf is supported by Smith's (1980) observation of nearly 100% utilization of a caribou by a single wolf and a few avian scavengers in a 46 hour period.

Track evidence suggested that initially, three caribou fled into the open water after being chased by a pack of wolves. Two caribou appear to have successfully crossed the rapids, exited the water, and were chased by all but one of the wolves across the ice west of the rapids. This left one caribou in the water, and one wolf waiting ashore.

The disturbance by the helicopter during our observations may have caused the wolf to leave the scene, which allowed the caribou to exit the water, and stand ashore where it was attacked and injured upon the wolf's return. Had we not disrupted the hunt, it is possible that continued pursuit by the wolf would have prevented an uninjured caribou from attempting to exit the water, causing it to become severely hypothermic and die by this or drowning. If the caribou had died away from the wolf's grasp, it is possible that the current of the water would have made the carcass inaccessible, negating the success of this chase.

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