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2016 Moose Survey – North Slave Region

November-December 2016

Environment and Natural Resources staff along with community observers from the Yellowknife Dene First Nation, Tli Cho communities, North Slave Metis Alliance, Lutsel K'e Dene First Nation, and Yellowknife, completed an aerial survey in late Fall 2016 to estimate the number of moose in the North Slave Region (Figure 1). The population estimate for the entire survey area was 2,864 moose, ranging from 2,054 to 3,992 moose.

The survey occurred from 16 November to 09 December 2016 and involved two aircraft (a Cessna 185 and a Bush Hawk). We flew 65 lines, each separated by 8 km, and totaled 5,894 km, which took 97.7 hours to fly. The surveyed area included a 49,150 km² area north of Great Slave Lake and a 9,124 km² area east of Lutsel K'e, totaling 58,274 km². This was a significantly larger area than what was surveyed in 2012 (17,585 km² for the Taiga Shield study area) and previous years. Weather was a significant factor in the 2016 survey which added to the survey time and prevented a 10,920 km² area from being flown (Figure 1).

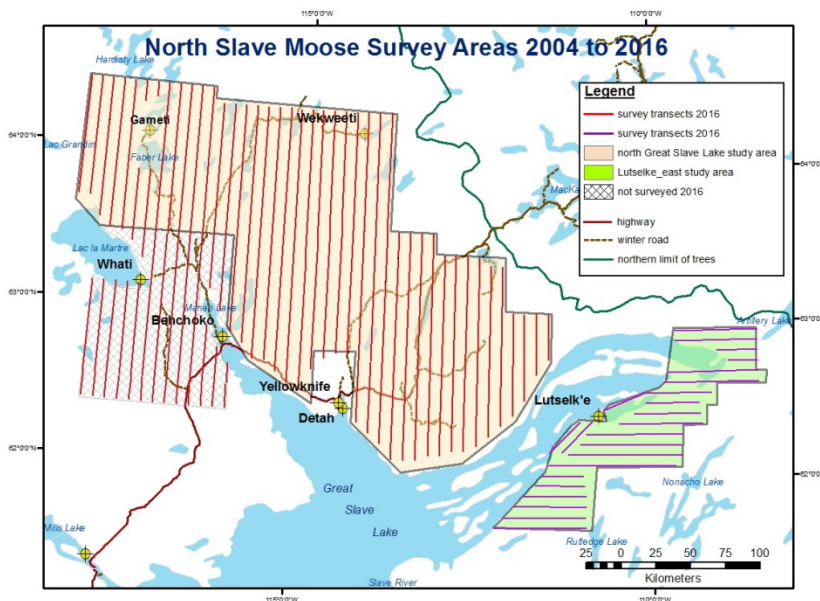


Figure 1. Map of the 2016 moose survey area in the North Slave Region showing transects flown and those not flown because of weather (hatched area). Two distinct survey areas were considered, the area north of Great Slave Lake (peach color) and Lutsel K'e East (light green).



In total, we saw 305 moose at 163 sites, averaging 1.9 moose per observation (range: 1 to 5 moose). The median group size was 2. The calf to cow ratio was 41%, ranging from 31 to 53%. The bull to cow ratio was 58%, ranging from 41 to 79%.

Comparison with Previous Surveys

The last moose survey in 2012 was much smaller in size and was based on a grid cell design, not on line transects. However, both designs estimate density of moose so results can be compared among years. The density of moose in the 2016 survey area was 4.9 moose/100 km² (range 3.5 to 6.9 moose/100 km²). The density of moose in the Taiga Shield area of the 2012 survey was 5.8 moose/100 km² (1,030 moose in the 17,585 survey area). The 2007 Taiga Shield density estimate was 4.1 moose/100 km² in the same survey area as 2012 (Figure 2).

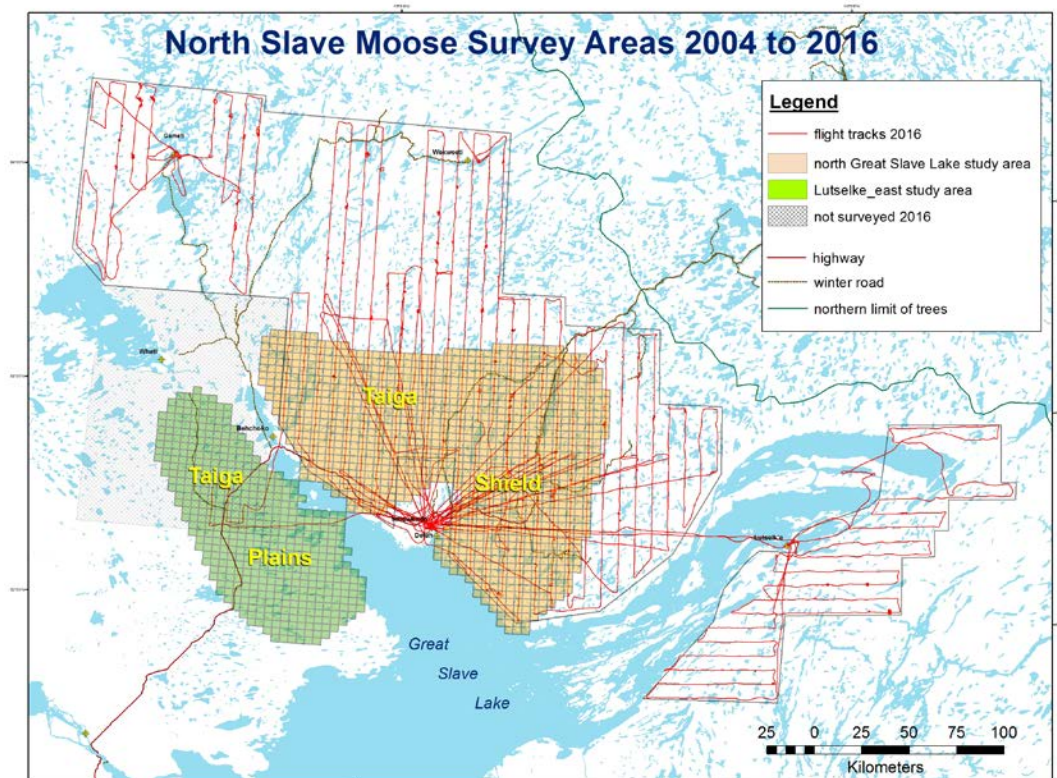


Figure 2. Moose surveys area in the North Slave Region since 2004, showing flight lines.

The moose density appears lower in 2016 than in 2012 (Figure 3) likely because the 2016 survey covers a much larger area than previous surveys and would therefore include more lower quality moose habitat rather than a decrease in moose numbers. However, the 2016 density estimate should be more representative of current moose abundance throughout much of the North Slave Region.

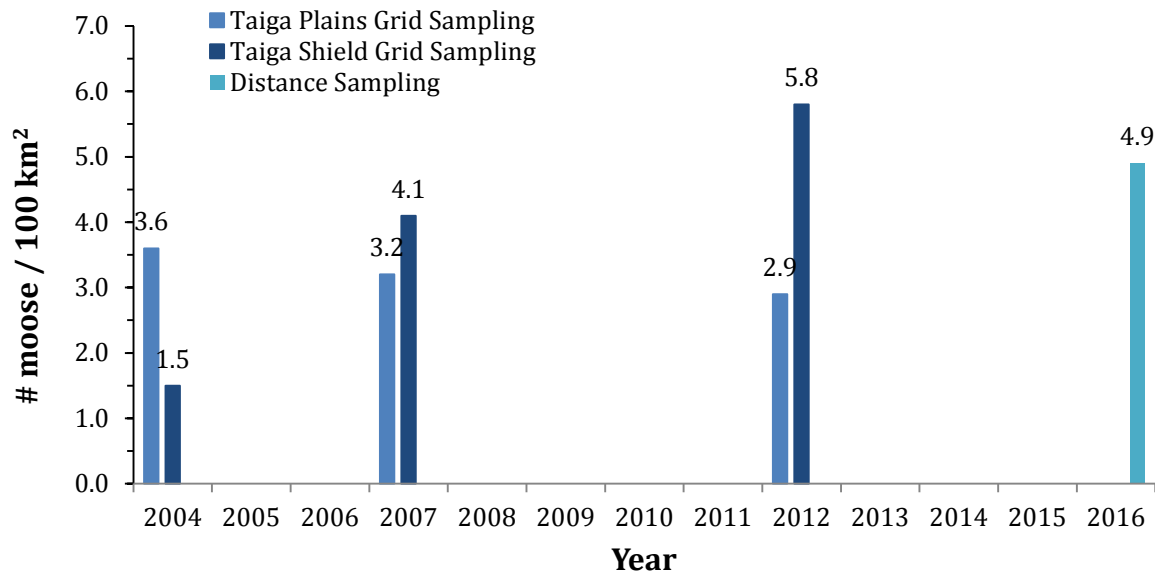


Figure 3. Moose density estimates from surveys in the North Slave Region since 2004.

Acknowledgements

I thank Judy Williams and Chris Tourangeau who expertly navigated the second aircraft. Dave Olesen and Peter Palme piloted their aircraft safely and effectively, often in challenging weather conditions. I appreciate the keen eyes of our observers, Henry Ben Mantla, Lawrence Mantla, Morris Martin, Hardi Mantla, Richard Weyallon, Charlie Wetrade, Alfred Arrowmaker, Wayne Langenham, Clay Langenham, Tom Lockhart, Herman Catholique, and Brad Anstey. Bruno Croft was instrumental in supporting the survey from inception to completion. The survey was funded by Environment and Natural Resources.

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27 August 2018