

MSc Defence: Nicholas Paroshy, May 22, 1:00 pm, BS CW-313 and ZOOM

1 message

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Thu, May 15, 2025 at 8:55 AM

MSc Defence - Nicholas Paroshy**Date:** Thursday, May 22**Time:** 1:00 pm**Supervisor:** Dr. Andrew Derocher**Location:** BS CW-313and **ZOOM****If you are interested in viewing this seminar please contact**derocher@ualberta.ca

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**"Subpopulation delineation of Canadian polar bears
(Ursus maritimus) in the eastern Beaufort Sea"**

Abstract: Wildlife management often delineates a species into units to improve species monitoring, population estimation, and status assessment. Polar bears (*Ursus maritimus*) are delineated in 20 subpopulations based on an IUCN definition, suggesting that subpopulations should be geographically distinct groups of individuals with low demography or genetic exchange. I examined whether two currently defined subpopulations within the Beaufort Sea, the Southern Beaufort Sea and Northern Beaufort Sea, were spatially separated using polar bear telemetry data. I grouped 78 adult and sub-adult bears into spatial groups using three classification methods: observed space-use, a capture location classification, and an agglomerative hierarchical clustering. I then estimated the overlap between spatial groups during the harvest (February – June) and non-harvest (July – January) periods for each classification method. My results found that polar bears within the Beaufort Sea are not geographically separated based on any of the classification methods. This assessment suggests that the Beaufort Sea region represents one subpopulation. Any boundary in the Beaufort Sea that separates polar bears into groups would not delineate subpopulations. At best, it could be used to delineate wildlife management units.

