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From: Eric Bongelli <esbongel@lakeheadu.ca>
Sent: Tuesday, October 6, 2020 7:00 PM
To: info@wrrb.ca
Subject: Diga Joint Management Proposal Comments

To the Attention of :

Wek'èezhìı Renewable Resources Board
102A, 4504-49th Ave
Yellowknife, NT
X1A 1A7

Good afternoon,

This correspondence is in response to your September 4th notice that "*Anyone interested in providing comment on the dìga joint management proposal may do so in writing through email or fax by October 23, 2020. Those interested in participating in the proceeding are asked to notify the WRRB in writing via email (info@wrrb.ca) by September 11, 2020. Documents posted to the Public Registry for the 2020 Wolf Management Proceeding can be viewed at: https://www.wrrb.ca/publicinformation/public-registry.*"

My colleagues and I recently published a paper titled: "Do North American Migratory Barren-Ground Caribou Subpopulations Cycle?" (https://doi.org/10.14430/arctic71029) in the journal Arctic. We believe that this article is relevant to the proposed reduction of wolves in the Bathurst caribou range to stimulate the recovery of Bathurst caribou from current low numbers.

Stated briefly, we found that most of the variability in 9 of the 11 barren-ground caribou subpopulations that had enough population estimates to be analyzed could be explained based on range size and range productivity. We found that most barren-ground subpopulations were sine-cyclic and that those that were not appeared to be different due to migration between adjacent herds during the low point of the cycle. The Bathurst subpopulation was one of those best classified as sine cyclic.

Of the many threats to caribou that have been identified, we found no discernible effect on the sine cycle from climate, harvest practices, development, insects, forest fires, disease, or wolf predation. The sine cycle is a physical cycle, not a biological cycle; and is symmetrical through time. It is an open question whether the sine cycle will repeat from the present into the future, but we documented that barren-ground caribou subpopulations from Labrador to Alaska appeared to have retained sine cycle symmetry up to 2015 (most recent estimates considered). This result suggests that wolf control is unnecessary for the Bathurst sine cycle to persist. The cycle appears to be generated based on the relationship of barren-ground caribou to their habitat, suggesting that wolf control alone would not be effective at restoring numbers. The sine cycle fit for the Bathurst subpopulation predicts numbers in the Bathurst subpopulation should be increasing at the present time. We also note apparent recent movements between the Bathurst subpopulation and adjacent subpopulations that may obscure Bathurst subpopulation dynamics until that subpopulation has increased substantially.

Our work does not comment on whether wolf control would shorten the recovery time for the Bathurst or for any subpopulation of barren-ground caribou. Our work does suggest that wolf control is unnecessary for barren-ground caribou subpopulation recovery to occur.
I would be pleased to answer any questions and/or participate in discussions of this work if that would be useful to your deliberations. My contact information is:

Eric Bongelli
esbongel@lakeheadu.ca

Best regards,

Eric