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UNIVERSITY OF CALGARY



OUTBREAK OF PARASITIC WORMS IN BLUENOSE-EAST CARIBOU LATE SUMMER 2023



COMMUNITY-BASED MUSKOX AND CARIBOU HEALTH MONITORING

ACTIVITY UPDATE – JULY 2024

PARTNERS



Kugluktuk Angoniatit Association



Olokhaktomiut Hunters and Trappers Committee



Ekaluktutiak Hunters and Trappers Organization



WHAT IS THE ISSUE?

In late summer 2023, several sick Bluenose-east caribou were reported by harvesters in Kugluktuk. They described two types of lesions:

- 1) Liquid in the chest and belly cavities and yellow-white material sticking to the lung, ribcage, and diaphragm (the membrane separating the chest from the belly).
- 2) Bruising and strange coloration of the muscles on the legs and the back of the caribou.

WHAT ARE WE FINDING?

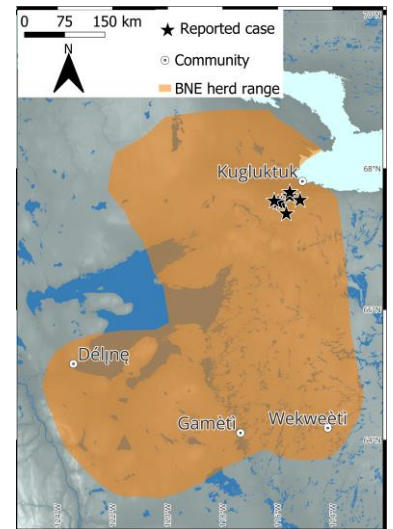
Thanks to samples collected by conservation officers and harvesters we could examine the abnormal tissues and run lab analyses. We found two types of parasitic worms *Onchocerca cervipedis* (usually infects the muscle) and *Setaria yehi* (usually found in body cavities).

WHY DOES THIS MATTER?

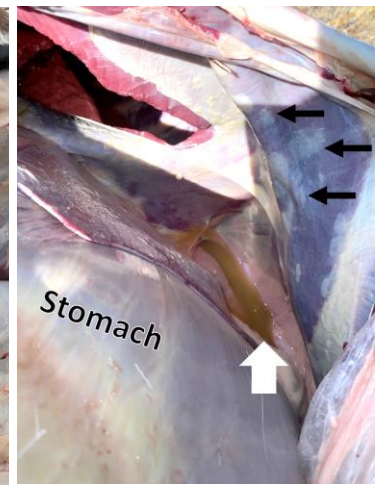
These worms are transmitted by biting flies and mosquitoes. We believe that the worms are moving north in the Arctic as climate changes.

Consecutive summers with high insect activity can make the conditions favorable for outbreaks of disease.

Although the parasites make the meat look bad, they are not dangerous to people. Outbreaks of disease occur often in reindeer in Finland. Research there shows that the meat is safe to eat. It is still recommended to discard parts that look abnormal, the rest of the animal is safe to eat. If in doubt, cooking well will make the meat safe.



Location of reported cases of sick Bluenose-east caribou in summer 2023 (black stars). The orange zone shows the range of the herd (source: government of the Northwest Territories).



Left: Bruising on the skin and muscle of the shoulder (white arrows) caused by *Onchocerca cervipedis*. Picture: K. Ongahak

Right: Accumulation of liquid (white arrow) in the belly cavity and yellow-white sticky material on the diaphragm (black arrows) caused by *Setaria yehi*. Picture: K. Ongahak

