

Winter 2024 Cape Breton Moose Survey

May 2024

Summary

An aerial moose population survey was undertaken from February 26 to March 5, 2024. This survey was a cooperative operation led by the Nova Scotia Department of Natural Resources and Renewables, and included Parks Canada, the Kwilmu'kw Maw-Klusuaqn, Unama'ki Institute of Natural Resources and the Confederacy of Mainland Mi'kmaq. The study area covered all five of Nova Scotia's Moose Management Zones and Cape Breton Highlands National Park.

Distance sampling was the survey method used to estimate the moose population. This method involves flying transect lines across an area and recording the number of animals observed and their locations. The distance sampling method corrects for the fact that the percentage of animals detected decreases the farther the animals are away from the helicopter. Biologists from other jurisdictions prefer this survey method because it calculates moose density estimates, calf/cow ratios, and adult sex ratios of the moose population within each region surveyed.

Moose, an animal native to Cape Breton, were extirpated from the island prior to the 1940s. In the late 1940s, 18 moose were released to Cape Breton Highlands National Park. Over time, moose numbers increased, and animals spread across most of western Cape Breton. The spruce budworm outbreak in the 1970s led to over-browsing and likely contributed to the abnormal forest succession that occurred in the central highlands, replacing softwood forests with grassland "moose savannah".

Survey results over the last 9 years show that the moose population has declined significantly from highs observed in the early 2000s (~5000 - 8000 animals). The Greater Highlands Ecosystem is made up of the Cape Breton Highlands National Park, as well as Moose Management Zones 1, 2, 5, and most of 3 (<https://novascotia.ca/natr/draws/moosedraw/mmzones.asp>). The moose population estimates from 2015 to 2024 in the Greater Highlands Ecosystem are in the below table:

Survey Year	Population estimates
2015	4777 (+/- 939)
2019	1298 (+/- 385)
2020	2158 (+/- 617)

2023	1552 (+/-667)
2024	835 (+/- 679)

The population declined between 2015 and 2019 and has remained low in the three subsequent surveys, despite conservation measures including a bull-only hunt in 2023 and the closure of the bear season during the moose season starting in 2020. Moose are not equally distributed across the landscape. In 2024, moose densities were 0.10 moose/km² in Moose Management Zone 1 and 5, 0.09 moose/km² in Moose Management Zone 2, 0.0 moose/km² in Moose Management Zone 3, 0.01 moose/km² in Moose Management Zone 4 and 0.58 moose/km² in Cape Breton Highlands National Park.

Information obtained from aerial surveys, biological samples, and reported harvest data from licensed harvesters along with traditional knowledge provided by Mi'kmaw harvesters all contribute important information to inform management decisions. Recommendations on moose management are made jointly by representatives of the Province and the Assembly of Nova Scotia Mi'kmaw Chiefs.

Based on survey results which show the moose population in Cape Breton has been low since 2019, and the further substantial population decline in 2024, the province will not be holding a draw for moose licences in 2024. The province is committed to working with partners to understand the cause of the decline, to continue on-going population monitoring, and to identifying conservation measures that will support the recovery of the population, such that a harvest can be reinstated in the near future.