

2020-2024

Barren-ground Caribou Harvest and Monitoring Summary Report

Abstract

This report summarizes caribou harvest and monitoring activities for the Bathurst, Bluenose-East, and Beverly herds between July 1, 2020 and June 30, 2024. Harvest levels remained strictly regulated in response to conservation needs: the Bathurst herd continued under a Total Allowable Harvest (TAH) of zero in the Northwest Territories (NWT), while Nunavut maintained a reduced allocation of 10 bulls annually. The Bluenose-East herd, after severe decline from 2010–2018, showed signs of recovery with estimates increasing from 23,200 caribou in 2021 to 39,500 in 2023. This positive trend prompted a review of harvest restrictions, with the Advisory Committee for Cooperation on Wildlife Management (ACCWM) reclassifying the herd to a “yellow” status in 2024 and the Nunavut Wildlife Management Board (NWMB) approving a TAH increase. Monitoring indicators, including calf:cow and bull:cow ratios, pregnancy rates, and Besnoitia prevalence, were updated for each herd. Results highlight modest reproductive success and calf survival for Bathurst, stronger productivity and recruitment for Bluenose-East, and stable indicators for Beverly.

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Barren-Ground Caribou

Harvest & monitoring summary reporting update for the harvest seasons July 1-June 30th, 2020-2024.

CARIBOU HARVEST

Bathurst Caribou

Since 2010, restrictions on harvesting Bathurst caribou in the Northwest Territories (NWT) have been a key management action to support herd recovery. In January 2015, the Wek'èezhì Renewable Resource Board implemented a mobile harvest management zone with a Total Allowable Harvest (TAH) of zero. This prohibition has remained in place through 2024, with the annual harvest season beginning on July 1 each year.

In late 2020, the Nunavut Wildlife Management Board (NWMB) reduced the Bathurst TAH from 30 bulls to 10. The Government of Nunavut issued these tags annually to the Kitikmeot Regional Wildlife Board, which distributed them to local Hunters and Trappers Organizations (Omingmaktok, Burnside, and Kugluktuk). These tags supported subsistence and outfitted hunts near Contwoyto Lake (Kòk'èetì) and Pellat Lake. Reported harvest is summarized in *Table 1*.

Bluenose-East Caribou

The Bluenose-East (BNE) herd, once estimated at ~120,000 animals in 2010, declined sharply to 19,300 in 2018. Survey results in 2021 suggested stabilization at 23,200, followed by a strong increase to 39,500 in 2023. Based on this trend, the Advisory Committee for Cooperation on Wildlife Management (ACCWM) assessed the herd as 'yellow' (intermediate and increasing) in 2024. Under this status, subsistence and resident harvest limits may be eased.

TAH changes reflected this recovery: in Nunavut, the NWMB set a TAH of 340 in 2016, then reduced it to 170 in 2020. In March 2024, following a proposal from the Kugluktuk Angoniatit Association, the NWMB approved an increase to 450 and removed the female harvest restriction, effective July 1, 2024. In the NWT, the Wek'èezhì Renewable Resource Board (WRRB) had reduced the TAH from 750 to 193 bulls in 2019. This limit remained through 2023-24, only to be increased to a TAH of 395 bull caribou for the 2024-2025 season. The allocation for Tlicho citizens increased from 76 to 243 bull tags. Reported harvest is summarized in *Table 2*.

Beverly Caribou

The Government of Nunavut, Department of Environment recently surveyed the Beverly caribou herd in 2023. The recent population estimate for the Beverly caribou herd is approximately 152,000 animals. This is up from an estimated 103,400 animals in 2018. There are no harvest restrictions on the Beverly caribou herd and limited harvest

monitoring information has been collected. Thanks to the Tlicho Government for documenting their community harvests of Beverly caribou for 2023-24 (1,395 caribou, TG).

Table 1 Bathurst Caribou Herd – Reported Harvest 2017–2024

Harvest Season	Management Area	# Bulls	# Cows	# Unknown	Total
2017-2018	NWT			35*	35*
	Nunavut	30			30
	TOTAL				65**
2018-2019	NWT			49*	49*
	Nunavut	30			30
	TOTAL				79**
2019-2020	NWT			39*	39*
	Nunavut	30			30
	TOTAL				69**
2020-2021	NWT			132*	132*
	Nunavut	10			10
	TOTAL				142**
2021-2022	NWT			62*	62*
	Nunavut	0			10
	TOTAL				72**
2022-2023	NWT			19*	19*
	Nunavut	0			0
	TOTAL				19**
2023-2024	NWT			0	0
	Nunavut	6			6
	TOTAL				6

*These were illegally harvested in the Mobile Core Bathurst Caribou Management Zone but not necessarily Bathurst

** not necessarily all Bathurst

Table 2: Bluenose-East Caribou Herd – Reported Harvest 2017-2024

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
North Slave Region	10	74	76	76	63	0	0
Sahtú Region		25		90			
Other*							
Nunavut (Kugluktuk)	174	93	197	170	169	170	170
TOTAL	184	192	273	336	232	170	170

*NSMA, NWTMN, Inuvialuit, Dehcho, Akaitcho

MONITORING ACTIVITIES

Bathurst Caribou

Fall Composition Surveys

Composition surveys classify caribou by sex and age to track herd productivity. Mid to late October, barren-ground caribou aggregate during the rut (breeding season). Post-rut aggregations of mixed caribou groups can be surveyed into the first week of November. The most recent surveys show calf:cow ratios around 37 calves per 100 cows in 2023, consistent with previous years but still below levels expected for strong growth. Bull:cow ratios were highly variable, with 2023 results showing over 100 bulls per 100 cows, though confidence intervals were wide. These results suggest calf survival remains modest to low but bull numbers have improved compared to earlier years. Detailed results are shown in *Table 3, Figure 1 and Figure 2.*

Table 3: Summary table of the fall (October/November) composition survey results for the Bathurst caribou herd.

Year	Total caribou sampled	Calf:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)	Bulls:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)
2006	5,616	0.402	0.024	0.360	0.451	0.362	0.021	0.323	0.404
2007	7,334	0.552	0.013	0.526	0.577	0.305	0.016	0.275	0.337
2008	3,645	0.319	0.018	0.288	0.356	0.379	0.024	0.331	0.427
2009	no survey	--	--	--	--	--	--	--	--
2010	no survey	--	--	--	--	--	--	--	--
2011	4,965	0.331	0.016	0.298	0.359	0.580	0.034	0.524	0.653
2012	4,400	0.228	0.019	0.195	0.266	0.554	0.029	0.498	0.613
2013	no survey	--	--	--	--	--	--	--	--
2014	2,927	0.253	0.019	0.213	0.287	0.490	0.025	0.444	0.540
2015	no survey	--	--	--	--	--	--	--	--
2016	no survey	--	--	--	--	--	--	--	--
2017	3,267	0.428	0.018	0.397	0.467	0.589	0.045	0.502	0.679
2018	1,697	0.214	0.028	0.176	0.274	0.461	0.134	0.431	0.590
2019	2,009	0.320	0.015	0.289	0.349	0.347	0.043	0.265	0.432
2020	1,843	0.391	0.015	0.362	0.419	0.641	0.076	0.499	0.796
2021	no survey	--	--	--	--	--	--	--	--
2022	1520	0.384	0.041	0.313	0.469	1.056	0.076	0.924	1.220
2023	2373	0.368	0.021	0.327	0.406	1.101	0.099	0.917	1.296

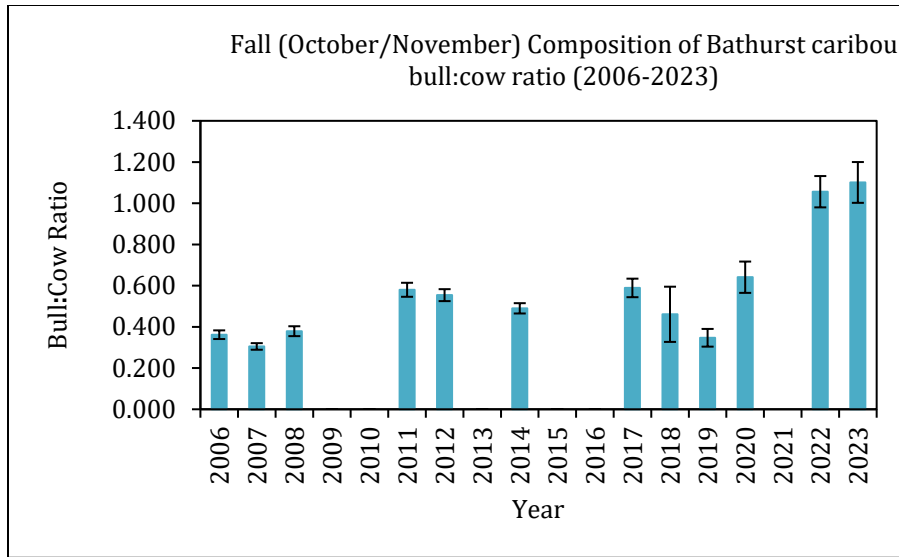


Figure 1: Fall Composition Survey of Bathurst caribou herd - bull:cow ratio. Error bars represent standard error.

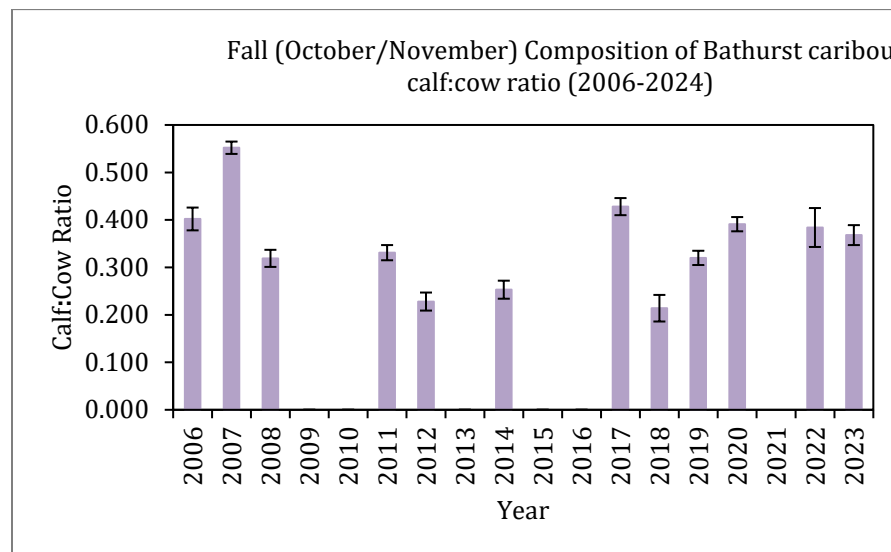


Figure 2: Fall composition survey of Bathurst caribou herd - calf:cow ratio. Error bars represent standard error.

Spring Recruitment Surveys

Spring recruitment surveys measure calf survival to late winter. The 2020 survey found 30 calves per 100 cows. No estimates were possible from 2021–2024 due to herd mixing. Recruitment below 30 calves per 100 cows indicates population decline, while values above suggest stability or growth. The last available estimate in 2020 was near this threshold (Table 4 and Figure 3)

Table 4: Summary of Bathurst caribou spring composition results with confidence limits.

Year	Total caribou sampled	Calf:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)
2006	9,913	0.086	0.007	0.072	0.102
2007	10,121	0.368	0.021	0.327	0.409
2008	4,501	0.497	0.020	0.458	0.538
2009	5,636	0.399	0.019	0.363	0.438
2010	1,819	0.489	0.021	0.449	0.532
2011	2,758	0.462	0.019	0.426	0.499
2012	4,269	0.251	0.013	0.227	0.276
2013	no survey	--	--	--	--
2014	2,323	0.326	0.015	0.298	0.355
2015	2,742	0.235	0.013	0.211	0.260
2016	2,233	0.200	0.014	0.168	0.221
2017	no survey	--	--	--	--
2018	no survey	--	--	--	--
2019	no survey	--	--	--	--
2020	1,384	0.304	0.023	0.262	0.035
2021*	Too mixed	--	--	--	--
2022*	Too mixed	--	--	--	--
2023*	Too mixed	--	--	--	--
2024*	Too mixed	--	--	--	--

*No estimate as herds too mixed

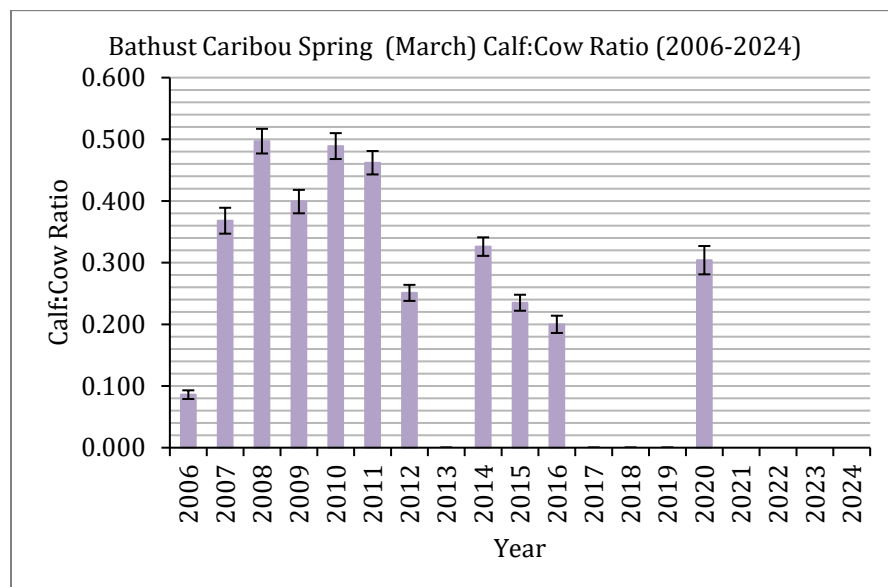


Figure 3: Spring recruitment survey for the Bathurst caribou herd – calf:cow ratio. Error bars represent standard error.

GPS/Iridium Collar Deployment Operations

The ECC barren-ground caribou collaring operation deploys satellite collars annually to the Bathurst caribou herd with a target of 70 (50 cows and 20 bulls) collars. This increased from 50 collars (30 cows, 20 bulls) in 2018-2019. During collar deployment operations biological samples, observations and measurements are taken to estimate pregnancy rates, presence of besnoitia, body condition and health.

Herd assignments for newly deployed cow collars are made after caribou migrate to their calving grounds in June (Photo 1, *Table 5*). Assignments are based on the strong fidelity cows show to their herd's calving grounds, which also avoids the period of potential herd mixing that occurs when the Bathurst, Beverly and Bluenose-East caribou overlap on their winter range. Bull collar assignments are completed in July, when there is clear separation from the other neighbouring herds (*Table 6*).

Table 5: Annual caribou cow collaring herd assignment based on calving ground location data of collars for Bathurst, Bluenose-East and Beverly cow caribou 2012-2024.

Year	Assigned Bathurst cow collar	Assigned BNE cow collars	Assigned Beverly cow collars
2012	13	39	19
2013	2	3	1
2014	13	8	23
2015	18	15	11
2016	6	13	0
2017	11	5	14
2018	11	12	10
2019	12	12	13
2020	33	20	0
2021	10	33	20
2022	17	11	9
2023	13	26	41
2024	16	18	0

Table 6: Assigned caribou bull collar herd assignment assigned based on July herd separation 2012-2024

Year	Assigned Bathurst bull collar	Assigned BNE bull collars	Assigned Beverly bull collars
2012	1	16	0
2013	0	0	0
2014	0	5	0
2015	16	17	13
2016	6	6	0
2017	10	12	15
2018	4	5	9
2019	3	5	9
2020	14	16	3
2021	5	3	18
2022	6	5	4
2023	2	10	30
2024	10	8	0



Photo 1: Collared barren-ground caribou on calving ground with calf at heel. Photo credit: Stefan Goodman ECC, GNWT

Pregnancy Rates

Pregnancy rates are assessed from blood serum (Photo 2) collected from cows during collaring efforts. In 2024, 100% of sampled Bathurst cows were pregnant, an improvement from 65% in 2022. In 2021 the pregnancy rate was 90%, where 9 out of 10 cow caribou were pregnant. See *Table 7* for annual results.



Photo 2: Blood serum collected during caribou collaring captures are used to test for pregnancy rates. Photo credit: Stefan Goodman ECC, GNWT

*Table 7: Bathurst caribou herd - Pregnancy rates from collared caribou cows (2012-2024).**

Year	Number of Cows Blood Tested	Number of Cows Pregnant	Percent of Cows Pregnant (%)
2012	14	13	93%
2013	4	4	100%
2014	14	10	71%
2015	17	12	71%
2016	6	6	100%
2017	7	7	100%
2018	9	8	89%
2019	11	9	82%
2020	29	28	97%
2021	10	9	90%
2022	17	11	65%
2023	13	12	92%
2024	6	6	100%

* Blood not always collected for all cow captures. All samples taken were tested for pregnancy.

Body Condition and Health

Body condition is evaluated by handlers during caribou collaring programs undertaken annually (normally in March). The ranking system spans from 1 – 4 (1-skinny, 2-not bad, 3-fat, 4-very fat). Bathurst caribou assessed in 2021-2024 averaged moderate body condition (values of 2.8, 3.2, 2.5 and 2.8 respectively). Average body condition for Bathurst caribou is shown in Figure 4.

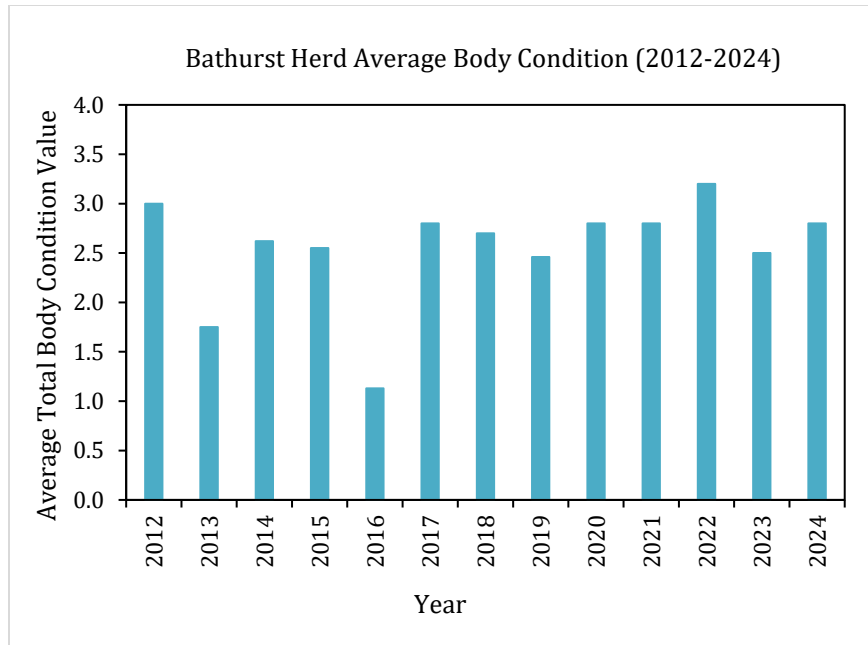


Figure 4: Bathurst collared caribou – Average body condition.

Besnoitia

Besnoitia is a cyst-forming usually non-fatal disease that can cause sickness and infertility. The presence of besnoitia in caribou is assessed by handlers during collaring operations by examining the eyes. Since 2020, besnoitia rates have been low, with only a few detections in 100 caribou sampled (Table 8).

Table 8: Presence of Besnoitia in Bathurst caribou during annual March collaring programs.

Year	Total Caribou Tested	Presence of Besnoitia in caribou	Prevalence of Besnoitia (%)
2014	13	3	23
2015	52	11	19
2016	12	3	8
2017	21	5	24
2018	13	0	0
2019	15	2	13
2020	47	3	6
2021	15	0	0
2022	23	0	0
2023	15	1	7
2024	6	1	17

Calving Ground Photo Surveys

The 2018 calving ground photo survey gave a herd estimate of 8207 +/-1079 caribou (Figure 5, ECC GNWT). The next planned survey for the Bathurst caribou herd estimate was planned for June 2020 but due to the 2020 travel restrictions put in place for the COVID-19 pandemic, the survey was cancelled.

The most recent calving ground photo surveys for the Bathurst caribou herd were conducted in June 2021 and redone in June 2022. In 2021, the survey flew both the west and east sides of Bathurst Inlet where the caribou aggregated. It was determined that the eastern side of the Inlet was Bathurst and Beverly caribou mixed along the trailing edge of the Beverly migration to their calving grounds. The estimated herd population was produced using the good data from the western aggregation of caribou in 2021. The herd-specific estimate was 6243 +/- 1370 caribou (Figure 5, ECC GNWT)

The Bathurst calving grounds photo survey was conducted again in June 2022 to try to get a valid estimate of Bathurst breeding adult females where there was sufficient separation from the other herds. The 2022 survey was successful with the herd estimate data coming from the west side of Bathurst Inlet. The herd size was estimated at 6851 +/-1787 caribou in 2022 (Figure 5, ECC GNWT). The Bathurst extrapolated herd estimates from the surveys completed in 2018, 2021 and 2022 remain low. The next survey will be completed in 2025.

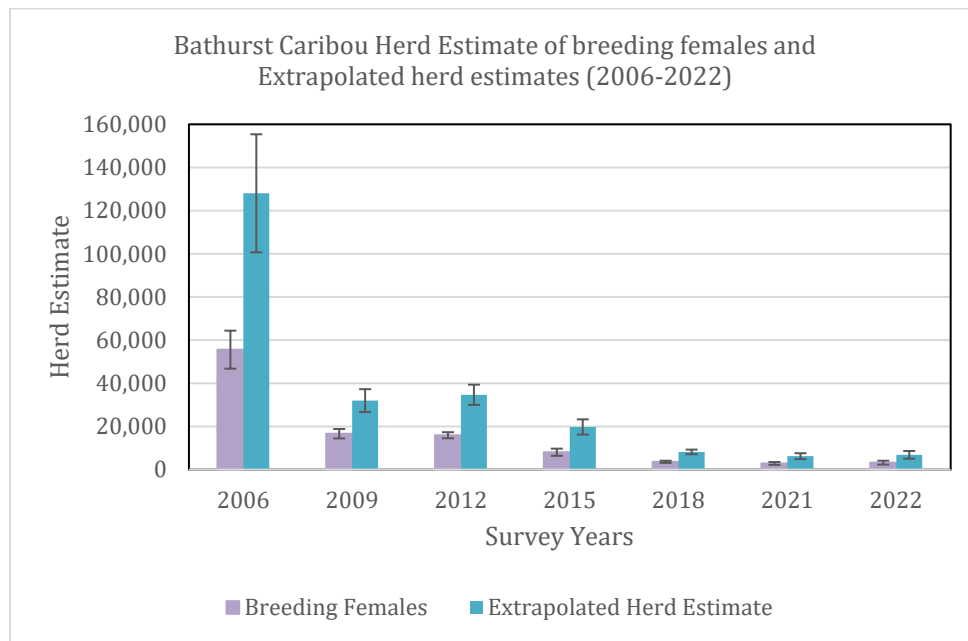


Figure 5: Bathurst caribou herd - Estimated number of breeding females and extrapolated herd size from calving ground surveys, 2006 to 2022. Error bars represent standard error.

Bluenose-East Caribou

Fall Composition Surveys

Fall composition surveys show encouraging trends for the Bluenose-East caribou herd. Calf:cow ratios rose steadily from 2019 to 2023, reaching 51 calves per 100 cows in 2023. Bull:cow ratios also increased, with nearly 58 bulls per 100 cows in 2023. These indicators suggest improved recruitment and survival for the Bluenose-East caribou herd. Full results are provided in *Table 9*, Figure 6 and Figure 7.

Table 9: Summary of Bluenose-East caribou fall (October/November) composition results with confidence limits (2009-2023).

Year	Total caribou sampled	Calf:Cow Ratio	Standard Error	Lower Confidence Limit	Upper Confidence Limit	Bull:Cow Ratio	Standard Error	Lower Confidence Limit	Upper Confidence Limit
2009	4,531	0.460	0.017	0.427	0.495	0.429	0.017	0.396	0.463
2010	no survey	--	--	--	--	--	--	--	--
2011	no survey	--	--	--	--	--	--	--	--
2012	no survey	--	--	--	--	--	--	--	--
2013	5,369	0.360	0.014	0.334	0.388	0.426	0.018	0.390	0.461
2014	no survey	--	--	--	--	--	--	--	--
2015	4,190	0.347	0.015	0.318	0.376	0.417	0.029	0.367	0.479
2016	4,019	0.434	0.024	0.389	0.481	0.372	0.022	0.328	0.413
2017	1,666	0.435	0.019	0.401	0.475	0.437	0.069	0.317	0.590
2018	2,525	0.257	0.016	0.229	0.291	0.380	0.027	0.332	0.437
2019	3,436	0.378	0.019	0.342	0.417	0.353	0.025	0.309	0.408
2020	1,010	0.517	0.022	0.471	0.557	0.633	0.074	0.500	0.790
2021	4,049	0.496	0.018	0.456	0.53	0.687	0.04	0.613	0.774
2022	2884	0.523	0.020	0.485	0.563	0.648	0.039	0.573	0.727
2023	2,144	0.514	0.015	0.488	0.544	0.582	0.03	0.531	0.646

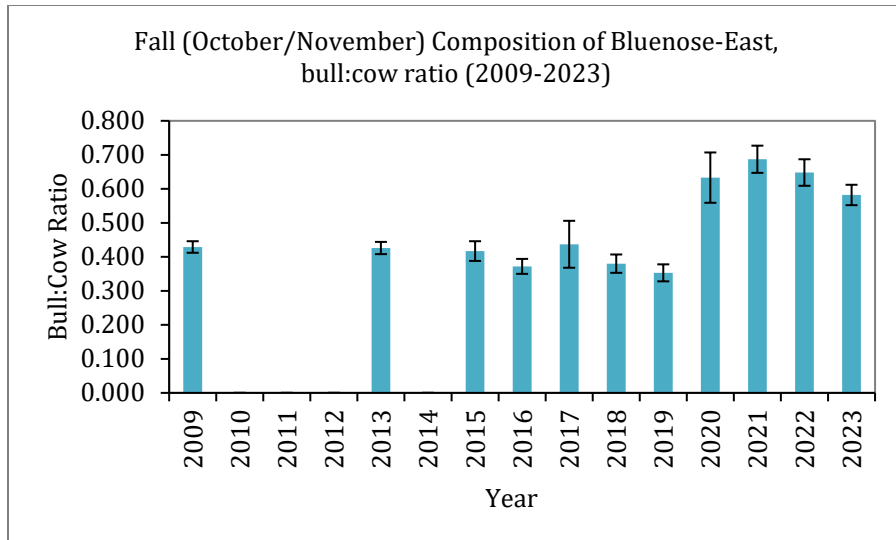


Figure 6: Fall composition of Bluenose-East caribou herd, bull:cow ratio (2009-2023)

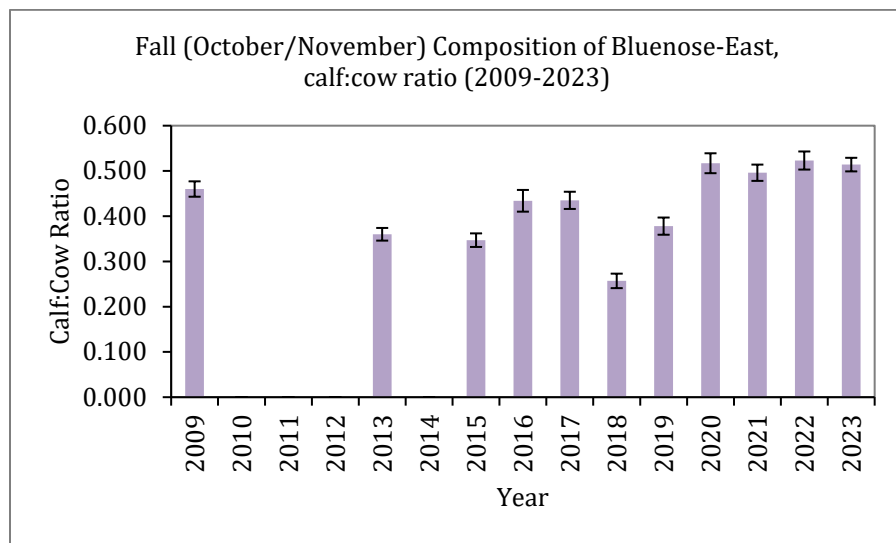


Figure 7: Fall composition of Bluenose-East caribou herd, calf:cow ratio (2009-2023)

Spring Recruitment

Spring recruitment surveys from 2020–2024 consistently showed calf:cow ratios between 41 and 48 calves per 100 cows, indicating healthy calf survival. The 2024 ratio was 48 calves per 100 cows. These results support evidence of herd growth (Table 10; Figure 8).

Table 10: Summary of Bluenose-East caribou spring (March) composition results with confidence limits (2008-2024).

Year	Total caribou classified	Calf:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)
2008	5,683	0.483	0.017	0.451	0.517
2009	6,110	0.384	0.014	0.356	0.412
2010	6,597	0.466	0.012	0.444	0.489
2011	5,846	0.415	0.016	0.385	0.449
2012	4,022	0.272	0.015	0.245	0.303
2013	no survey	--	--	--	--
2014	5,120	0.298	0.016	0.270	0.332
2015	1,133	0.212	0.023	0.168	0.258
2016	2,519	0.319	0.020	0.284	0.363
2017	no survey	--	--	--	--
2018	2,333	0.375	0.018	0.350	0.399
2019	no survey	--	--	--	--
2020	2,133	0.418	0.017	0.386	0.452
2021	863	0.467	0.028	0.417	0.527
2022	2,844	0.469	0.014	0.441	0.496
2023	1,927	0.409	0.018	0.375	0.445
2024	4,526	0.487	0.017	0.455	0.497

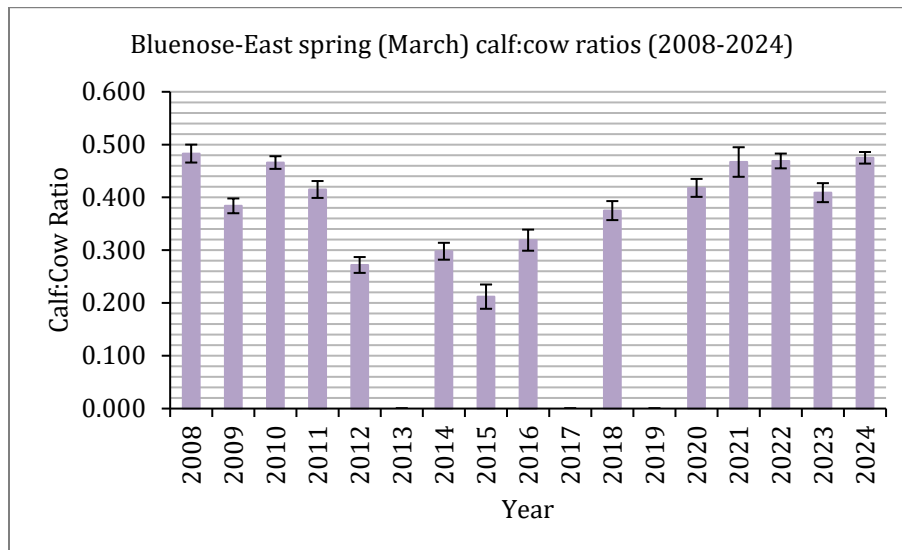


Figure 8. Spring recruitment survey for the Bluenose-East caribou herd – calf:cow ratio. Error bars represent standard error.

Pregnancy Rates

Pregnancy rates varied considerably over the past decade. In 2023 and 2024, 96-100% of sampled cows were pregnant, a strong recovery from the low of 27% in 2022. This sharp rebound suggests favourable conditions for female caribou in 2023 and 2024. See *Table 11* for details.

Table 11: Bluenose-East caribou herd: Pregnancy rates of collared caribou cows (2012-2024).*

Year	Number of Cows Tested	Number of Cows Pregnant	Percent Pregnant
2012	34	26	76%
2013	3	2	67%
2014	8	7	88%
2015	13	12	92%
2016	11	10	91%
2017	5	5	100%
2018	11	9	82%
2019	10	7	70%
2020	18	18	100%
2021	31	27	87%
2022	11	3	27%
2023	25	24	96%
2024	17	17	100%

* Blood not always collected for all cow captures. All samples taken were tested for pregnancy.

Body Condition and Health

Body condition is evaluated by handlers during caribou collaring programs undertaken annually (normally in March). The ranking system spans from 1 – 4 (1-skinny, 2-not bad, 3-fat, 4-very fat). Body condition of Bluenose-East caribou in 2021 to 2024 was generally moderate to fat (2.9, 3.35, 2.5 and 2.8), see *Figure 9*.

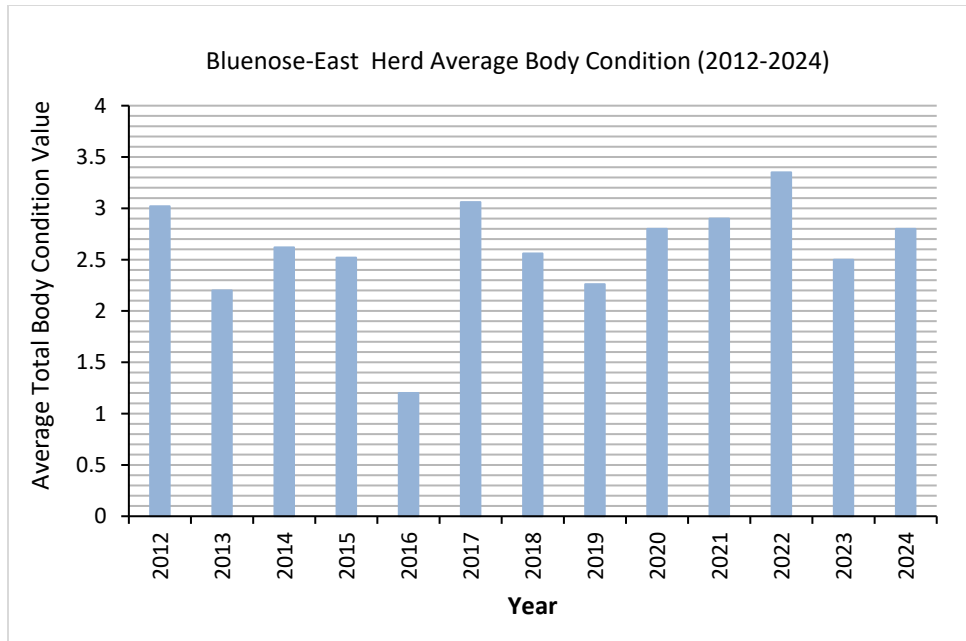


Figure 9: Bluenose-East collared caribou - Average body condition (2012-2023).

Besnoitia

Besnoitia is a cyst-forming, usually non-fatal disease that can cause sickness and infertility. Since 2020, besnoitia rates have remained below 20% of captured caribou, with 12 detections in 124 caribou sampled (*Table 12*).

Table 12: Presence of Besnoitia in Bluenose-East caribou during annual collaring programs.

Year	Total Caribou Tested	Presence of Besnoitia in caribou	Prevalence of Besnoitia (%)
2014	13	1	8
2015	31	9	29
2016	19	1	5
2017	15	4	27
2018	17	2	12
2019	17	3	18
2020	36	4	11
2021	36	0	0
2022	16	3	19
2023	36	3	14
2024	26	5	19

Calving Ground Surveys

The Bluenose-East caribou herd experienced a sustained decline between 2010 and 2018, reaching an estimated $11,675 \pm 904$ adult females and a herd estimate of $19,294 \pm 1,475$ caribou in 2018 (Figure 9, ECC GNWT). Calving ground surveys were not conducted in 2020 due to COVID-19 travel restrictions and were subsequently deferred to 2021.

Results from the 2021 calving ground survey suggested stabilization of the herd, with an estimated $12,863 \pm 1,042$ adult females and an estimated total herd size of $23,202 \pm 2,029$ caribou (Figure 9, ECC GNWT). The 2023 survey indicated a significant increase in abundance, with $18,580 \pm 1,783$ adult females, corresponding to an estimated herd size of $39,525 \pm 3,423$ caribou (Figure 9, ECC GNWT). The next calving ground survey is scheduled for 2025.

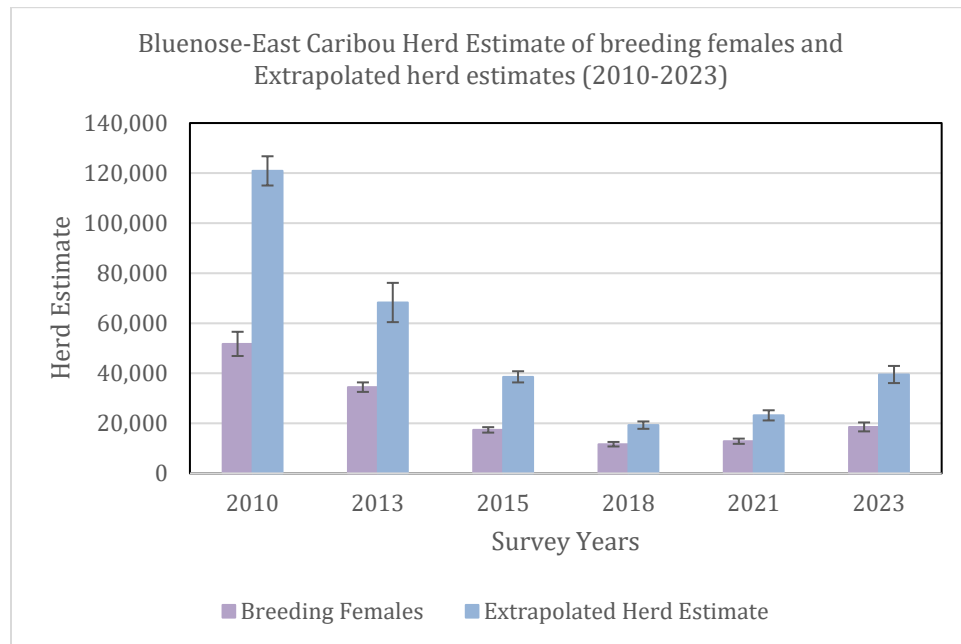


Figure 10: Bluenose-East caribou herd - Estimated number of breeding females and extrapolated herd size from calving ground surveys, 2010-2023. Error bars represent standard error.

Beverly Caribou Herd

Fall Composition Surveys

After more than a decade without surveys, a Beverly fall composition survey was completed in 2022. Results indicated a calf:cow ratio of 47 calves per 100 cows and a bull:cow ratio of 63 bulls per 100 cows. These ratios are higher than Bathurst and comparable to Bluenose-East, suggesting stronger productivity. See *Table 13*, *Figure 11* and *Figure 12*.

Table 13: Fall (October/November) composition survey of Beverly Caribou Herd

Year	Total caribou sampled	Calf:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)	Bulls:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)
2009	3,772	0.464	0.038	0.401	0.549	0.538	0.035	0.478	0.616
2010	No Survey								
2011	12,421	0.539	0.017	0.505	0.572	0.691	0.024	0.646	0.741
2012... 2021	No Survey								
2022	6,369	0.465	0.014	0.438	0.492	0.628	0.042	0.550	0.714
2023	No Survey								

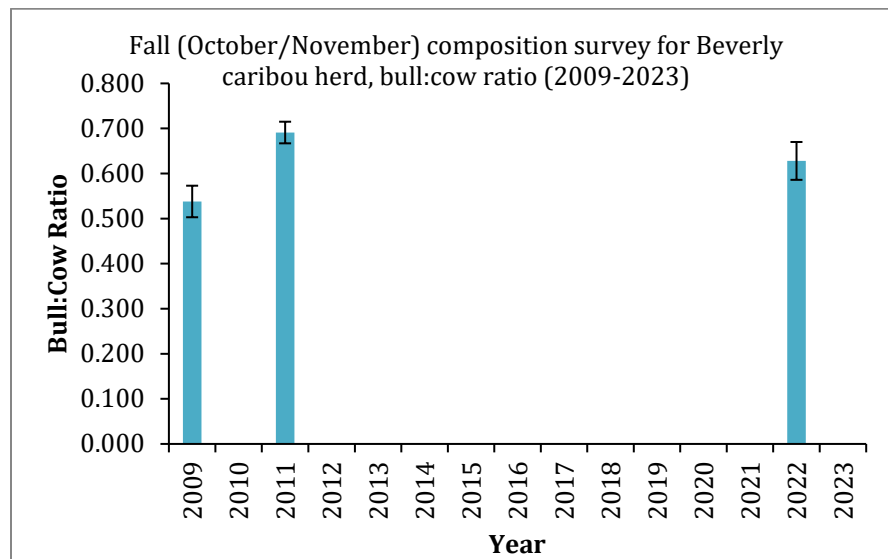


Figure 11: Fall composition survey of Beverly caribou herd, bull:cow ratios (2009-2024).

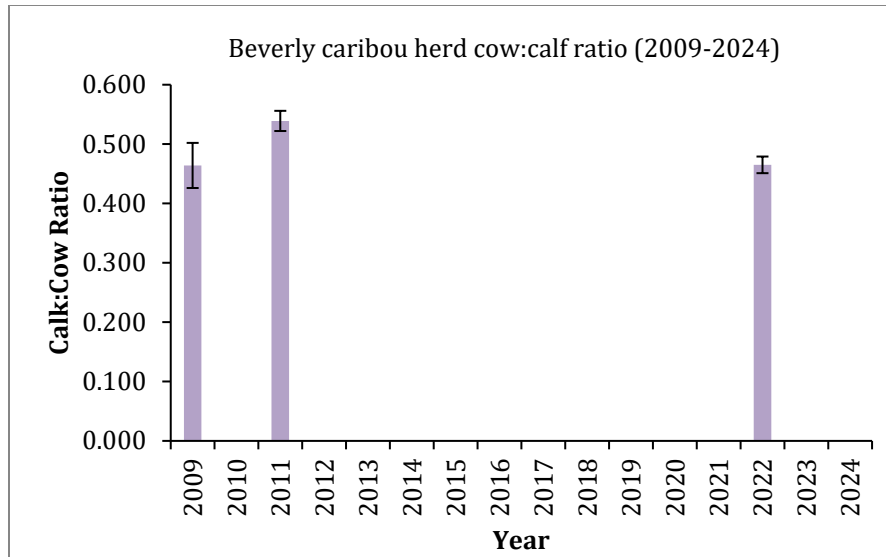


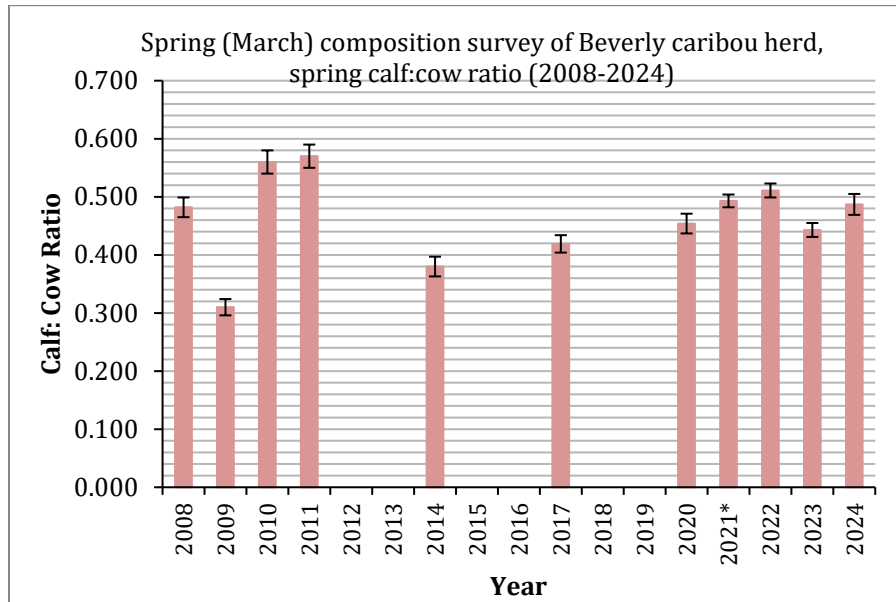
Figure 12. Fall composition survey of Beverly caribou herd, calf:cow ratios (2009-2024).

Spring Recruitment

The 2021 to 2024 Beverly spring recruitment survey found 49, 51, 44 and 48 calves per 100 cows, a healthy ratio for herd maintenance (Table 14 and Figure 13).

Table 14: Summary of Spring composition survey results of Beverly caribou herd (2008-2024).

Year	Total caribou sampled	Calf:Cow Ratio	Standard Error	Lower Confidence Limit (95%)	Upper Confidence Limit (95%)
2008	11,163	0.482	0.017	0.449	0.515
2009	6,502	0.310	0.014	0.283	0.337
2010	8,255	0.560	0.020	0.521	0.599
2011	7,304	0.570	0.020	0.531	0.609
2012	No Survey				
2013	No Survey				
2014	7,002	0.380	0.017	0.347	0.413
2015	No Survey				
2016	No Survey				
2017	4282	0.419	0.015	0.389	0.450
2018	No Survey				
2019	No Survey				
2020	3611	0.454	0.017	0.421	0.487
2021	7570	0.493	0.011	0.472	0.516
2022	3953	0.511	0.012	0.487	0.536
2023	8001	0.443	0.012	0.421	0.467
2024	3540	0.487	0.018	0.451	0.521



*calf:cow estimate is for all caribou in area (Bathurst, BNE and Beverly) but likely representative of Beverly.

Figure 13: Spring Composition of Beverly caribou herd, calf:cow ratio (2008-2024).

Pregnancy Rates

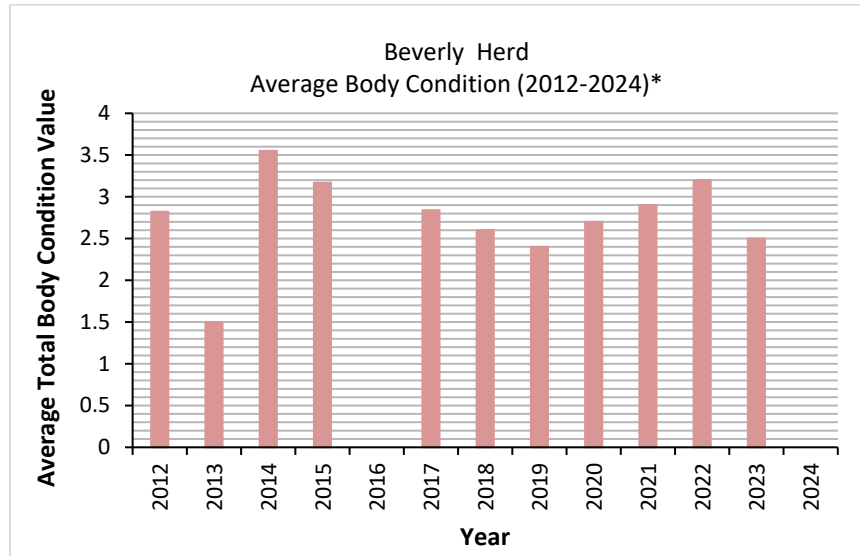
The most recent pregnancy rate data (2023) indicated 80% of sampled Beverly cows were pregnant. This level supports population stability and growth potential (Table 15).

Table 15: Beverly caribou herd: pregnancy rates for collared cows (2012-2023).

Year	Number of Cows Tested	Number of Cows Pregnant	Percent Pregnant
2012	24	15	63%
2013	1	1	100%
2014	27	24	89%
2015	8	3	38%
2016	0	0	0%
2017	11	11	100%
2018	9	7	78%
2019	12	8	67%
2020	1	1	100%
2021	19	16	84%
2022	9	5	56%
2023	40	32	80%
2024	0	0	n/a

Body Condition and Health

Body condition is evaluated by handlers during caribou collaring programs undertaken annually (normally in March). The ranking system spans from 1 – 4 (1-skinny, 2-not bad, 3-fat, 4-very fat). Few Beverly caribou were targeted for captures from 2021 to 2024, mean body condition scores were 2.9, 3.2, 2.5 and no result for 2024 because no collared caribou were assigned to the Beverly caribou herd.



*No Beverly collars assigned in 2024

Besnoitia

Besnoitia is a cyst-forming, usually non-fatal disease that can cause sickness and infertility. Since 2020, besnoitia rates have remained below 20% of captures (*Table 16*).

Table 16. Beverly caribou - Presence of Besnoitia in caribou during annual collaring programs.

Year	Total Caribou Tested	Presence of Besnoitia in caribou	Prevalence of Besnoitia (%)
2014	23	4	17
2015	24	4	13
2016	0	0	0
2017	27	1	4
2018	15	2	13
2019	21	4	19
2020	3	0	0
2021	37	2	3
2022	13	1	8
2023	70	11	16
2024*	0	0	0

Calving Ground Surveys

The 2018 survey estimated 48,977 (95% CI =44,056-54,448) breeding females and a total herd size of 103,372 (95% CI = 93,684-114,061). No Beverly calving ground surveys were conducted in 2020–2022.

The 2023 calving survey yielded a breeding female estimate of 69,900 (95% CI = 59,135-82,837; CV = 9.2%) and a total herd size of 152,131 (95% CI = 124,704-179,558) adults, representing an 8% yearly increase between 2018 and 2023.

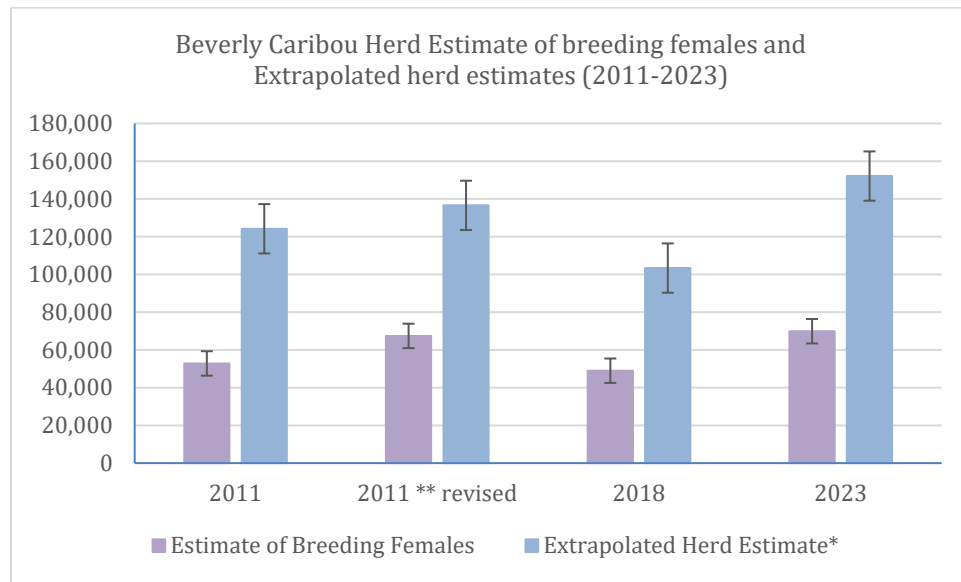


Figure 14. Beverly caribou herd - Estimated number of breeding females and extrapolated herd size from calving ground surveys, 2010-2023. Error bars represent standard error.

Wolf Monitoring and Harvesting

https://www.wrrb.ca/sites/default/files/335_manuscript%20%282024%29_0.pdf