

Theory: If Caribou are are distinct herds faithful to their calving areas, you can count the calving cows each year to estimate the herd population.

Test: Are caribou distinct herds, and are they faithful to their calving areas? Will all the cows in one herd go to the same calving area? Will each cow return to the same calving area all their lives?

If theory is correct, then herd population numbers are as reliable as the calving ground counts.

**If theory is incorrect**, then it is not possible to estimate herd size by counting cows on one calving area.

**All the calving areas need to be surveyed in order to get a count.**

Working notes:

- 1996 10 collars for "Bathurst", and 5 for Ahiak. Based on these 15 animals, calving grounds do appear distinct – Bathurst in one lump on West of Bathurst Inlet. First year of remote sensing. Ahiak in 5 lumps on the East. Each lump was an individual, lone, caribou. Bathurst collars started the year between Artillery lake and the Marion river. The Ahiak collars started south of Bathurst Inlet in line with Artillery Lake.
- 1997 7 collars for Bathurst, during June all on west side of Bathurst Inlet, same as year before. Looks like calving ground fidelity. 5 Ahiak collars, 4 in separate areas along coast, each "calving ground" a individual caribou, one stayed south. **Although generally the same Ahiak calving areas were used, the individual caribou did NOT go to the same place in consecutive years.**
- 1998 8 Bathurst collars, Some collars the same for two or three years ??????? 3 Ahiak collars, individuals again widely spread along coast, third year for all three collars.
- 1999 14 collars now, most in generally same calving area as last two years, 3 lagging on the barrenlands. Some stay in one place for two weeks, while others move around a lot more. No collar data for Ahiak.
- 2000 13 Bathurst collars, none for Ahiak. Two Bathurst cows was on WEST side of inlet.
- 2001 19 Bathurst collars, none for Ahiak. 10 in usual area, 6, Bathurst cows on west side of inlet, one of them far inland towards Baker Lake, and 5 still far south in early June. Must have been a cold spring?
- 2002 18 collars, 11 on the west, 8 on the east, 2 far inland towards Thelon.
- 2003 19 collars, 12 on west, 3 up by Great Bear Lake, 3 on east of inlet, and 1 in Thelon.
- 2004 12 collars, 6 West, 5 east, 3 Inuvik, and 1 Thelon.
- 2005 31 collars (June 1-15) , 22 West, 9 east, 3 Inuvik,
- 2006 20 "Bathurst" collars June 1-15, 14 west (Bathurst), 5 East (ahiak), 1 North (Inuvik)
- 2006 18 "Ahiak" collars June 1-15, all East, dispersed in various lumps.
- 2007 24 "Bathurst" collars June 1-15, 19 West (Bathurst), 5 West (Ahiak),
- 2007 14 "Ahiak collars June 1-15, 1 west (Bathurst area), 13 east (ahiak)
- 2008 14+3=17 "Bathurst collars, June 1-15,

time period	collar	calving areas
1996-06 01-15	80	Ahiak
1996-06 01-15	82	Ahiak
1996-06 01-15	83	Ahiak
1996-06 01-15	84	Ahiak
1996-06 01-15	85	Ahiak
1996-06 01-15	7760	Bathurst
1996-06 01-15	7762	Bathurst
1996-06 01-15	7763	Bathurst
1996-06 01-15	7764	Bathurst
1996-06 01-15	7765	Bathurst
1996-06 01-15	7766	Bathurst
1996-06 01-15	7767	Bathurst
1996-06 01-15	7768	Bathurst
1996-06 01-15	7771	Bathurst
1996-06 01-15	7772	Bathurst
1997-06 01-15	80	Ahiak
1997-06 01-15	82	Ahiak
1997-06 01-15	83	Ahiak
1997-06 01-15	84	Ahiak
1997-06 01-15	85	Ahiak
1997-06 01-15	7760	Bathurst
1997-06 01-15	7762	Bathurst
1997-06 01-15	7764	Bathurst
1997-06 01-15	7765	Bathurst
1997-06 01-15	7766	Bathurst
1997-06 01-15	7767	Bathurst
1997-06 01-15	7771	Bathurst
1998-06 01-15	82	Ahiak
1998-06 01-15	84	Ahiak
1998-06 01-15	85	Ahiak
1998-06 01-15	2557	Bathurst
1998-06 01-15	2558	Bathurst
1998-06 01-15	4401	Bathurst
1998-06 01-15	6293	Bathurst
1998-06 01-15	6294	Bathurst
1998-06 01-15	7762	Bathurst
1998-06 01-15	7766	Bathurst
1998-06 01-15	22124	Bathurst
1999-06 01-15	2450	Bathurst
1999-06 01-15	2558	Bathurst
1999-06 01-15	3820	Bathurst
1999-06 01-15	4401	Bathurst
1999-06 01-15	6293	Bathurst
1999-06 01-15	7766	Bathurst
1999-06 01-15	12090	Bathurst
1999-06 01-15	12091	Bathurst

1999-06 01-15	12092 Bathurst
1999-06 01-15	12191 Bathurst
1999-06 01-15	12213 Bathurst
1999-06 01-15	12214 Bathurst
1999-06 01-15	12217 Bathurst
1999-06 01-15	22124 Bathurst
2000-06 01-15	2450 Bathurst
2000-06 01-15	2558 Bathurst
2000-06 01-15	3820 Bathurst
2000-06 01-15	4401 Bathurst
2000-06 01-15	6293 Bathurst
2000-06 01-15	7766 Bathurst
2000-06 01-15	12090 Bathurst
2000-06 01-15	12091 Ahiak
2000-06 01-15	12092 Bathurst
2000-06 01-15	12213 Bathurst
2000-06 01-15	12214 Bathurst
2000-06 01-15	12217 Bathurst
2000-06 01-15	22124 Bathurst
2001-06 01-15	2450 Bathurst
2001-06 01-15	2558 Bathurst
2001-06 01-15	6293 Bathurst
2001-06 01-15	7766 Bathurst
2001-06 01-15	12090 Bathurst
2001-06 01-15	12091 Bathurst
2001-06 01-15	<u>12092</u> Bathurst
2001-06 01-15	12214 Bathurst
2001-06 01-15	12217 Bathurst
2001-06 01-15	16619 Ahiak
2001-06 01-15	19450 Ahiak
2001-06 01-15	19451 Bathurst
2001-06 01-15	22124 Bathurst
2001-06 01-15	23341 Ahiak
2001-06 01-15	23342 Ahiak
2001-06 01-15	30077 Ahiak
2001-06 01-15	30078 Bathurst
2001-06 01-15	30079 Bathurst
2001-06 01-15	30080 Thelon
2002-06 01-15	12090 Bathurst
2002-06 01-15	12092 Bathurst
2002-06 01-15	12214 Bathurst
2002-06 01-15	18660 Ahiak
2002-06 01-15	18661 Bathurst
2002-06 01-15	18662 Bathurst
2002-06 01-15	18663 Bathurst
2002-06 01-15	18664 Ahiak
2002-06 01-15	18665 Bathurst

2002-06 01-15	18666 Bathurst
2002-06 01-15	18667 Ahiak
2002-06 01-15	18668 Bathurst
2002-06 01-15	18669 Ahiak
2002-06 01-15	19450 Ahiak
2002-06 01-15	23342 Ahiak
2002-06 01-15	30077 Ahiak
2002-06 01-15	30078 Bathurst
2002-06 01-15	30079 Bathurst
2002-06 01-15	30080 Thelon
2003-06 01-15	12090 Bathurst
2003-06 01-15	12214 Bathurst
2003-06 01-15	18660 Ahiak
2003-06 01-15	18662 Bathurst
2003-06 01-15	18663 Bathurst
2003-06 01-15	18664 Ahiak
2003-06 01-15	23342 Ahiak
2003-06 01-15	26006 Bathurst
2003-06 01-15	26007 Inuvik
2003-06 01-15	26010 Bathurst
2003-06 01-15	26011 Bathurst
2003-06 01-15	26014 Inuvik
2003-06 01-15	26015 Bathurst
2003-06 01-15	26017 Bathurst
2003-06 01-15	26617 Bathurst
2003-06 01-15	26653 Inuvik
2003-06 01-15	30078 Bathurst
2003-06 01-15	30079 Bathurst
2003-06 01-15	30080 Thelon
2004-06 01-15	18662 Bathurst
2004-06 01-15	18664 Ahiak
2004-06 01-15	23342 Ahiak
2004-06 01-15	26006 Bathurst
2004-06 01-15	26007 Inuvik
2004-06 01-15	26011 Bathurst
2004-06 01-15	26014 Inuvik
2004-06 01-15	26015 Bathurst
2004-06 01-15	26017 Bathurst
2004-06 01-15	26653 Inuvik
2004-06 01-15	30078 Bathurst
2004-06 01-15	30080 Thelon
2005-06 01-15	23342 Ahiak
2005-06 01-15	30078 Bathurst
2005-06 01-15	30080 Bathurst
2005-06 01-15	45896 Bathurst
2005-06 01-15	45897 Bathurst
2005-06 01-15	45898 Bathurst

2005-06 01-15	45899 Bathurst
2005-06 01-15	45901 Bathurst
2005-06 01-15	45902 Bathurst
2005-06 01-15	45903 Bathurst
2005-06 01-15	45905 Bathurst
2005-06 01-15	45906 Bathurst
2005-06 01-15	55180 Ahiak
2005-06 01-15	55181 Ahiak
2005-06 01-15	55182 Ahiak
2005-06 01-15	55184 Ahiak
2005-06 01-15	55185 Ahiak
2005-06 01-15	55186 Ahiak
2005-06 01-15	55187 Ahiak
2005-06 01-15	55188 Bathurst
2005-06 01-15	55189 Ahiak
2005-06 01-15	55190 Bathurst
2005-06 01-15	55192 Bathurst
2005-06 01-15	55194 Bathurst
2005-06 01-15	55195 Bathurst
2005-06 01-15	55196 Bathurst
2005-06 01-15	55197 Bathurst
2005-06 01-15	55199 Bathurst
2005-06 01-15	55200 Bathurst
2005-06 01-15	55206 Bathurst
2005-06 01-15	55209 Bathurst
2006-06 01-15	45897 Bathurst
2006-06 01-15	45898 Bathurst
2006-06 01-15	45901 Bathurst
2006-06 01-15	45902 Inuvik
2006-06 01-15	45903 Bathurst
2006-06 01-15	45906 Bathurst
2006-06 01-15	55180 Ahiak
2006-06 01-15	55181 Ahiak
2006-06 01-15	55182 Ahiak
2006-06 01-15	55185 Ahiak
2006-06 01-15	55186 Bathurst
2006-06 01-15	55187 Ahiak
2006-06 01-15	55188 Bathurst
2006-06 01-15	55190 Bathurst
2006-06 01-15	55192 Bathurst
2006-06 01-15	55196 Bathurst
2006-06 01-15	55199 Bathurst
2006-06 01-15	55200 Bathurst
2006-06 01-15	55206 Bathurst
2006-06 01-15	55209 Bathurst
2006-06 01-15	64380 Ahiak
2006-06 01-15	64381 Ahiak

2006-06 01-15	64382	Ahiak
2006-06 01-15	64383	Ahiak
2006-06 01-15	64384	Ahiak
2006-06 01-15	64385	Ahiak
2006-06 01-15	64387	Ahiak
2006-06 01-15	64388	Ahiak
2006-06 01-15	64390	Ahiak
2006-06 01-15	64391	Ahiak
2006-06 01-15	64392	Ahiak
2006-06 01-15	64393	Ahiak
2006-06 01-15	64394	Ahiak
2006-06 01-15	64395	Ahiak
2006-06 01-15	64396	Ahiak
2006-06 01-15	64397	Ahiak
2006-06 01-15	64398	Ahiak
2006-06 01-15	64399	Ahiak
2007-06 01-15	45897	Bathurst
2007-06 01-15	45898	Bathurst
2007-06 01-15	45901	Bathurst
2007-06 01-15	45903	Bathurst
2007-06 01-15	45906	Bathurst
2007-06 01-15	55180	Ahiak
2007-06 01-15	55181	Ahiak
2007-06 01-15	55182	Ahiak
2007-06 01-15	55183	Bathurst
2007-06 01-15	55185	Ahiak
2007-06 01-15	55186	Bathurst
2007-06 01-15	55187	Ahiak
2007-06 01-15	55188	Bathurst
2007-06 01-15	55192	Bathurst
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2007-06 01-15	55209	Bathurst
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2007-06 01-15	64381	Ahiak
2007-06 01-15	64382	Ahiak
2007-06 01-15	64383	Ahiak
2007-06 01-15	64384	Ahiak
2007-06 01-15	64387	Bathurst
2007-06 01-15	64388	Ahiak
2007-06 01-15	64390	Ahiak
2007-06 01-15	64392	Ahiak
2007-06 01-15	64393	Ahiak
2007-06 01-15	64394	Ahiak
2007-06 01-15	64396	Ahiak
2007-06 01-15	64398	Ahiak

2007-06 01-15	64399 Ahiak
2007-06 01-15	73251 Bathurst
2007-06 01-15	73253 Bathurst
2007-06 01-15	73254 Bathurst
2007-06 01-15	73256 Bathurst
2007-06 01-15	73257 Bathurst
2007-06 01-15	75026 Bathurst
<b>2008-06 01-15</b>	45898 Bathurst
2008-06 01-15	45906 Bathurst
2008-06 01-15	55180 Bathurst
2008-06 01-15	55182 Bathurst
2008-06 01-15	55183 Bathurst
2008-06 01-15	55185 Bathurst
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2008-06 01-15	64399 Ahiak
2008-06 01-15	73251 Bathurst
2008-06 01-15	73253 Bathurst
2008-06 01-15	73254 Bathurst
2008-06 01-15	73256 Bathurst
2008-06 01-15	73257 Bathurst
2008-06 01-15	73373 Bathurst
2008-06 01-15	73374 Bathurst
2008-06 01-15	73375 Bathurst
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2008-06 01-15	73380 Bathurst
2008-06 01-15	73381 Bathurst
2008-06 01-15	73382 Bathurst
2008-06 01-15	73383 Bathurst
2008-06 01-15	73384 Bathurst
2008-06 01-15	73385 Bathurst
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2008-06 01-15	73440 Ahiak
2008-06 01-15	73442 Ahiak
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2009-06 01-15	73387 Bathurst
2009-06 01-15	73428 Ahiak
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2009-06 01-15	73432 Ahiak
2009-06 01-15	73433 Ahiak
2009-06 01-15	73434 Ahiak
2009-06 01-15	73435 Ahiak
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2009-06 01-15	73438 Ahiak

2009-06 01-15	73439	Ahiak
2009-06 01-15	73440	Ahiak
2009-06 01-15	73442	Ahiak
2009-06 01-15	80939	Ahiak
2009-06 01-15	80940	Ahiak
2009-06 01-15	80941	Ahiak
2009-06 01-15	80942	Ahiak
2009-06 01-15	80943	Ahiak
2009-06 01-15	80945	Ahiak
2009-06 01-15	80946	Ahiak
2009-06 01-15	80947	Ahiak
2009-06 01-15	80948	Ahiak
2009-06 01-15	80949	Ahiak
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2009-06 01-15	80957	Ahiak
2009-06 01-15	80959	Ahiak
2009-06 01-15	80962	Ahiak
2009-06 01-15	92147	Bathurst
2009-06 01-15	92152	Bathurst
2009-06 01-15	92153	Bathurst