

2011 Wildlife Management Units 438 – 446 mountain goats



Photo: Mike Ranger

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Extensive annual surveys for mountain goats have been conducted in Willmore Wilderness Park and adjacent areas since 1974. With permission from the Superintendent of Jasper National Park, the survey area was expanded (beginning in 1979) to include mountain complexes straddling the Jasper Park boundary. The objectives of annual goat surveys in WMUs 438 – 446 (Figure 1) are to collect data on population trends, distribution, and herd composition, and to monitor the status of these mountain goat herds.

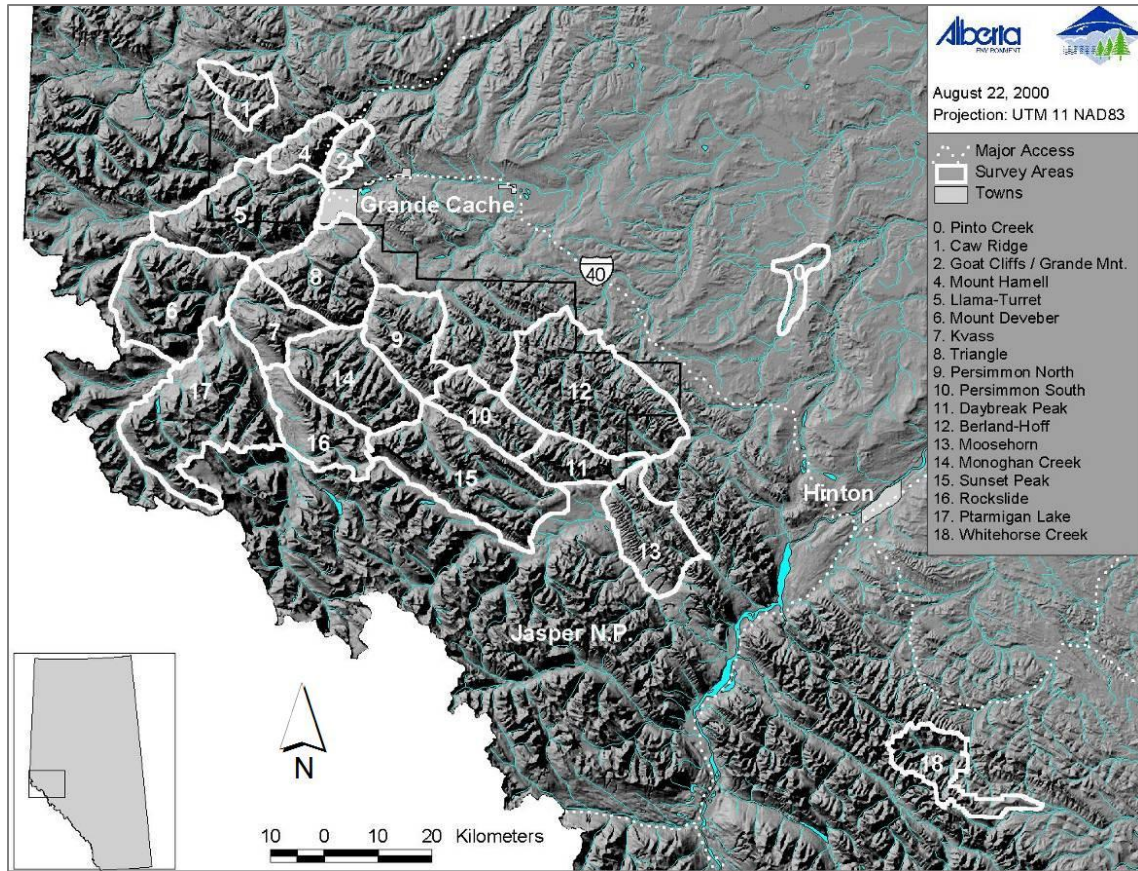


Figure 1. Location of the Wildlife Management Units 438 – 446 mountain goat survey area in Alberta.

Survey methods

The survey area is comprised of seventeen mountain complexes and one canyon complex in the forested foothills of WMUs 438 – 446 (Figure 1). We surveyed 12 complexes beginning on 28 June 2011, followed by flights on 4 – 7, 11 July 2011, using a Bell 206B helicopter flown counter-clockwise around each mountain complex between timberline and ridge top. Air speed ranged from 120 – 150 km/h. The left front passenger navigated, observed and plotted checkpoints on a 1:250,000 scale topographic map. GPS locations were recorded for each group of goats. The two rear passengers observed and recorded species classifications and counts onto field data sheets. When herd size and/or location made classification difficult for observers or dangerous for mountain goats, the helicopter landed at a distance of approximately 0.8 km and we classified goats using a 20 – 45X variable spotting scope. Flights typically occurred between 0600 – 1100 h and 1600 – 2200 h during the goats' most active periods. Exact survey flight paths vary from

year to year; thus, comparison of overall counts between years is cautioned and should only be considered as a long term trend. We did not correct for sightability; therefore, overall counts should be considered as minimum estimates. These counts do not have estimates of precision, and therefore direct comparison of survey results among years or regions is difficult.

Weather conditions in this region are variable with high winds or low cloud cover often grounding surveys for a day or more at a time. However, we were able to work within limited windows when weather conditions were considered acceptable. During the 6 survey days, average temperatures were +12 degrees Celsius, cloud cover ranged from 0 – 100%, and wind speeds varied from 0 – 40 km/h.

Results

In 2011, we observed a total of 368 goats (284 adults, 31 yearlings, 53 kids, and 0 unclassified) with ratios of 19 kids/100 adults and 11 yearlings/100 adults (Table 1). Kid to adult ratios were lower than the average and yearling to adult ratios were equal to the average, for the six mountain complexes surveyed most frequently between 1979 and 2011 (Table 2). Total counts of goats on individual complexes in 2011 were lower than the long-term averages for all 12 complexes surveyed.

In 2011, total counts were less than the 2010 survey on six complexes (Caw Ridge, Daybreak, Goat Cliffs, Llama-Turret, Monaghan and North Persimmon), and comparable on four complexes (Deveber, Moosehorn, Mt. Hamel and Rockslide). One complex (Whitehorse Creek) had comparable counts to the previous survey in 2007, and one complex (Triangle) exceeded total goats counted during the previous survey in 2008.

Table 1. Mountain goat population counts within each mountain complex of Wildlife Management Units 438 – 446 in 2011.

Complex	Adult	Yearling	Kid	Unclassified	Total
Caw Ridge	64	7	6	0	77
Daybreak	5	1	2	0	8
Deveber	39	4	11	0	54
Goat Cliffs	27	1	1	0	29
Llama-Turret	47	5	6	0	58
Monaghan	13	5	1	0	19
Moosehorn	5	1	3	0	9
Mt. Hamel	35	0	7	0	42
North Persimmon	22	3	6	0	31
Rockslide	11	3	8	0	22
Triangle	16	1	2	0	19
Whitehorse Creek	0	0	0	0	0
Total	284	31	53	0	368

Table 2. Total mountain goat population counts for six mountain complexes (Caw Ridge, Daybreak, Goat Cliffs, Llama-Turret, Moosehorn and Mt. Hamel) flown on a consistent basis in Wildlife Management Units 438 – 446 from 1979 – 2011.

Year	Number of mountain goats				Total
	Adults	Yearling	Kid	Unclassified	
Jul. 2011	183	15	25	0	223
Jul. 2010	260	18	25	0	303
Jul. 2009	192	13	36	81	322
Jul. 2008	221	11	51	0	283
Jul. 2007	236	21	40	9	306
Jul. 2005	269	31	63	5	368
Jul. 2004	299	17	63	5	384
Jul. 2002	302	15	75	9	401
Jul. 2001	223	20	70	43	356
Jul. 1999	230	27	79	34	362
Jul. 1998	245	21	79	11	375
Jul. 1997	227	14	56	8	305
Jul. 1996	260	32	75	0	367
Jul. 1995	248	26	76	0	350
Jul. 1994	205	19	76	0	300
Jul. 1993	214	11	66	10	301
Jul. 1990	194	20	67	40	321
Jul. 1989	160	31	64	0	255
Jul. 1986	219	19	45	3	286
Jul. 1984	214	25	75	0	314
Jul. 1983	245	38	80	12	375
Jul. 1980	160	28	66	0	254
Jul. 1979	219	72	91	3	385