

2009 Wildlife Management Unit 402 mountain goats



Section Authors: Mike Jokinen and Greg Hale

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Counts to estimate the trends for mountain goat populations in WMU 402 have been sporadically carried out since the late 1960s, and in some cases done in conjunction with surveys for bighorn sheep. The most recent mountain goat counts include surveys in 1994, 1997, and 2006. Many mountain complexes in WMU 402 overlap the boundary of Alberta and British Columbia, and as a result contain a trans-boundary population which is best assessed by surveying on both sides of the continental divide. Surveys encompassing an area from Tecumseh Mountain following the Divide north to Mt. O'Rourke at the headwaters of the Oldman River, including Crowsnest Mountain and the Livingstone Range (Figure 1) were surveyed in 2006 and 2009.

The 2009 survey will re-establish baseline data to monitor population trends, as well as to refine Goat Population Areas within Goat Management Area A of WMU 402. Currently there is no established Goat Hunting Area or hunting season for mountain goats in WMU 402. Our survey objectives were to obtain a minimum count of goats to determine population status and trend, classify all goats by age to assess herd structure and recruitment, and to map sightings that describe regional distribution.

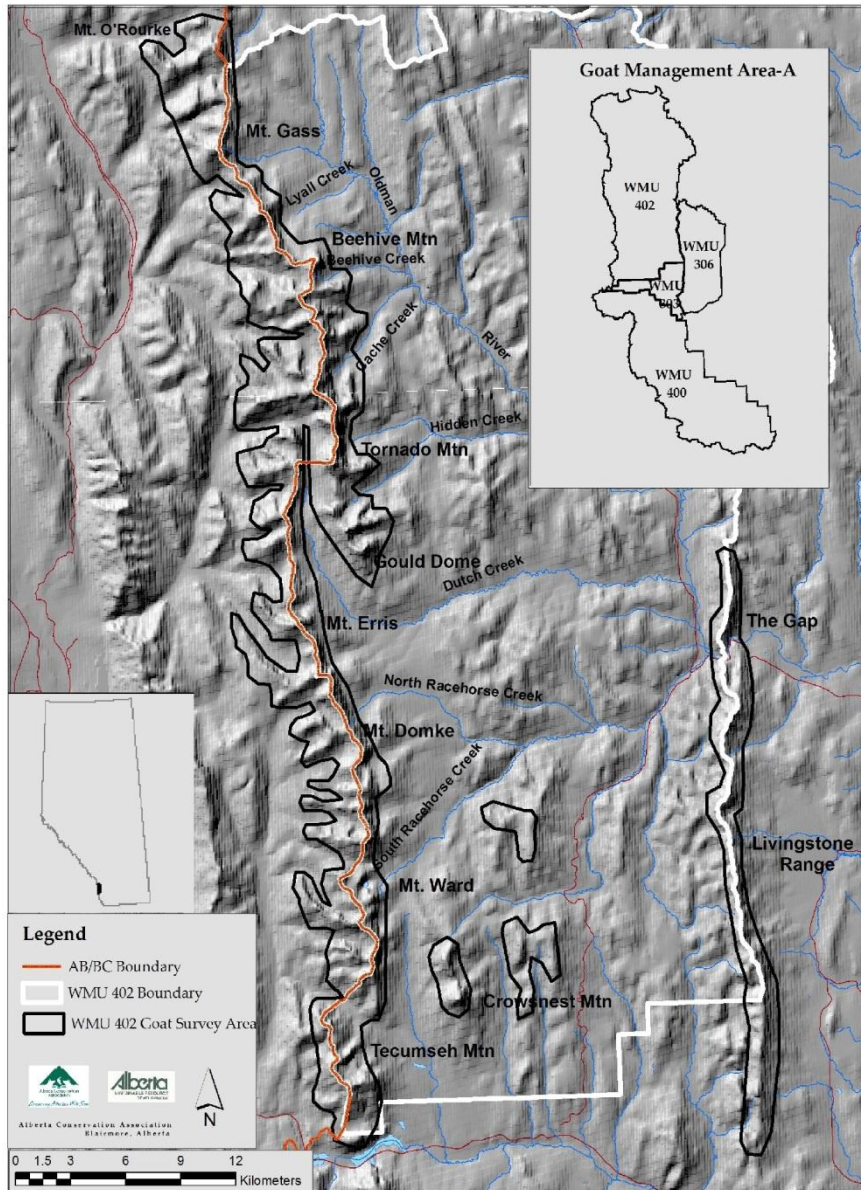


Figure 1. Location of the Wildlife Management Unit 402 mountain goat survey area in Alberta and British Columbia.

Survey methods

We searched mountain complexes in WMU 402 (Figure 1) over a 3-day period from 11 – 15 July 2009. All surveys occurred during the morning hours to take advantage of peak animal activity, using a Bell 206B helicopter flown at air speeds ranging from 80 to 100 km/h. In some instances, coverage of the goat range was accomplished by conducting a single flight above timberline, but a large portion of the survey area required a second flight at a higher elevation to provide complete coverage of extensive mountain faces, particularly in high goat density areas.

The left front passenger (navigator) maintained the proper flight course and assisted with classification of goats to age categories. Two observers occupying the rear seat provided continuous side observation, with the right passenger recording wildlife numbers and Global Positioning System (GPS) locations. We classified all goats observed into standard age categories of adult, yearling or kid. We did not correct for sightability; therefore, overall counts are minimum estimates and direct comparisons of survey results among years may be difficult. Weather conditions for the survey were good with an average temperature of 11 degrees Celsius, cloud cover ranging from 0 - 30% and wind speeds averaging 18 km/h.

Results

We observed 186 mountain goats during the survey, including 119 adults, 44 kids, 23 yearlings, and no unclassified goats (Table 1). Classification of age classes resulted in reproduction and recruitment rates of 37 kids/100 adults and 19 yearlings/100 adults.

The 2009 survey count of 186 goats was 24% greater than the survey conducted in 2006; however, some areas may have been flown in less detail due to high winds in 2006 (Table 2). The 2009 reproduction estimate of 37 kids/100 adults was almost identical to 2006, when 36 kids/100 adults were recorded. The number of yearlings per adults recorded during the 2009 survey (19 yearlings/100 adults) was much greater than in 2006 (9 yearlings/100 adults).

Table 1. Mountain goat population trend counts within each mountain complex of Wildlife Management Unit 402 in 2009.

Complex	Adult	Yearling	Kid	Total
Crowsnest	39	6	20	65
Divide- AB	43	9	17	69
Divide- BC	31	4	6	41
Livingstone	6	4	1	11
Total	119	23	44	186

Table 2. Total mountain goat population trend counts for all mountain complexes in Wildlife Management Unit 402, 2006 versus 2009.

Year	Number of Mountain Goats			
	Adults	Yearling	Kid	Total
2009	119	23	44	186
2006	98	9	35	142