



Newsletter #37

December 6, 2024

Greetings

Wind farms

A local First Nation was reviewing a proposal for a wind farm located close to mountain goat habitat. We were asked to provide information about the goat populations in the area, and about mountain goat behaviour. A quick search of scientific literature indicated that there were no publications specifically about goats and wind farms. Fortunately, a local wildlife biologist, Laurence Turney of Ardea Biological Consulting, spent years doing excellent field research in the proposal area. That data gave us the information about the herds in the proposed wind farm area. For the rest, we relied on our knowledge of mountain goat behaviour. Attached is the paper we submitted to the First Nation. This may be the first document to deal with mountain goats and wind farms.



Figure 1 This brown stripe on a kid will disappear after the first year – a possible throwback to ancestry

New video

We have added a new video to our YouTube channel at [Mountain Goats - YouTube](#) "Disappearing" is about a local mountain goat herd that came close to extirpation over a period of 12 years. The population declined from 26 to 7. The population dipped to 5 for a year but the birth of two kids and the herd is back to 7. This is a classic case of the loss of habitat. The herd was displaced from part of their summer pasture, so they now rely

on their winter home year-round. The available pasture declined from 169 hectares to 64 hectares.



Figure 2 A juvenile at night

When the herd migrated each year to the old summer pasture, the vegetation in their winter home had a chance to recover. The urine and fecal pellets from winter were able to dilute and break down. But now, foraging goes on all year and the waste continues to build up. If waste does not break down, wildlife avoids the plants near the waste. That is how it works for local marmots. The grass grows lush and tall around their burrows where the waste builds up, so the marmots must travel to find unpolluted feed.

Two hiking trails near the goats' winter home continue to disturb the herd in summer. We have seen a local helicopter buzz the herd. The herd may still disappear. The end of the video has a twist – be sure to watch.

Weather

The last two winters were very dry with less than normal snowfall. The mountain goats on McKendrick Mountain were able to go everywhere to find forage. This year is different. Today is November 30 and we have about 90 cm of snow at the 1500-meter level. That is above normal. Late each winter, the goats switch from pawing under the snow and foraging on forbs and grasses to browsing above the snow on sub alpine fir needles and arboreal lichens. This winter, we may see what happens when the switch to browsing above the snow happens early. The question will be – can the herd survive by browsing low quality needles and lichens for most of the winter?

To compound the problem, the alpine that the goats use in winter on McKendrick Mountain is small – only one kilometer long and maybe 57 hectares. And more than half of that is solid rock that supports no plant life at all. The effective habitat in winter is about 25 hectares. In summer, the herd has more forage in a meadow near the summit. They also forage in a small, forested area in summer, but there is a lack of good escape terrain in the trees, so foraging there is definitely high risk.

All the mountain goat winter homes we monitor are small - 5 to 20 hectares of good forage is typical. Most herds move to separate summer pastures in spring. The herds that are forced to stay in the same habitat year-round tend to have small populations to match their restricted habitat.

2025 Grant Program

We have two new grants in 2025 available for research concerning mountain goats. Smithers Grant A and B are in the amount of \$50,000- each. We are looking for projects that are innovative and that offer new solutions to old problems. See attached paper for details.

Realized niche

In our grant program, we will be looking for projects within our local Region 6 that extends along the BC coast to the Yukon border to the north. The reason for preferring Region 6 is that our region matches the best terrain and climate for mountain goats, the “realized niche”. Mountain goats can survive in dry, warm climates, but we have observed that they prefer cool and wet. Goats seem most content in lush green meadows close to glacial ice. Goats are not happy in drought conditions with high ambient temperatures. They easily overheat and seek cool shelter in a cave or on a snowfield. Alpine vegetation in a drought shrivels by mid-June. The same vegetation in a cool wet summer will stay green until September. We anticipate that climate change will continue to make southern habitats less suitable. So the best place to do research is where the mountain goats are best suited, their realized niche. Research in outlying regions may not accurately reflect mountain goat behaviour but instead may indicate an adaptation to climate.

Until the next time

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