



## BRITISH COLUMBIA MOUNTAIN GOAT SOCIETY

SMITHERS BC CANADA

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Newsletter #15

November 4, 2020

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Greetings to all members of the BC Mountain Goat Society. Here's the latest news:

### **A Rough Day on the Mountain**

We hiked to the backside of Hudson Bay Mountain on May 27. Across a valley we spotted a nanny with her new kid. Then we noticed that something was not right. The nanny had a large sack of skin under her belly that almost touched the ground when she walked.



She suffered a prolapse during birthing. The muscles that hold her inner organs in place failed. The organs fell out of place and distended her skin. You can see the prolapse in front of her hind leg in the photo. Her new kid is lying behind her. There is no recovery possible for the nanny. The kid will probably die along with the mother since adoption of orphan kids by a second nanny has never been observed.

That was bad enough but we hiked further and found a dead kid. The kid was stretched out on the ground. The body appeared very flat and very clean.



We believe that it was a stillbirth. The nanny cleaned her new kid and the afterbirth as normal. But the rib cage never extended to take a breath and the stomach never filled with milk – that is why the body seemed so flat. We did not see the nanny and the local ravens had not found the carcass yet so we just happened on the scene to see the kid laid out untouched. One hike and we see three dead goats – a rough day.

Birth is high risk. The three deaths we witnessed are all natural occurrences. They show a part of mountain goat life that occurs again and again out of sight but needs to be acknowledged to understand risks for a herd. We were lucky enough to record all three.

### **Blunt/Netazul Mountain Goat Project Update**

Thanks to Kara McCauly, local wildlife biologist, for her update on the Blunt/Netazul Mountain Goat Research Project. The attached PDF file is the first project report.

Update October 2020:

1. We had ten mortalities of collared goats since 2018. Three were attributed to predation (one wolverine, two wolf), three mortalities were from hunter harvest, and the cause of death is unknown from four mortalities, but assumed to be from falls or avalanches. The two mortalities from wolves occurred approximately one day apart in the same general area. These kills were likely from the same wolf pack!
2. We captured and re-deployed collars on three goats (two males, one females) in February 2020 using aerial net gunning methods. We collected genetic and health samples (tissue, blood, nasal swabs). Swabs are being tested for *M. ovi* and we are awaiting results. All goats to date have tested negative for *M. ovi*.
3. We published a paper titled "Panmictic population genetic structure of mountain goats in northern British Columbia has implications for harvest management" in Conservation Genetics, based on Jesse Wolf's MSc. thesis. Key findings from this paper note that there is little evidence for distinct population structure across three adjacent mountain complexes currently managed as separate populations. The paper is attached for your reading pleasure!
4. We collected goat fecal pellets in August 2019 and generated fecal microbiome data. We generated individual home ranges and habitat selection metrics for 24 goats, and related these metrics to fecal microbiome diversity. The results are preliminary, but suggest correlations between home range size and gut bacteria diversity.
5. We are continually monitoring the locations of the collared goats on the Blunt-Seaton, Netalzul, and Goat mountain complexes. To date, the goats have not moved off the mountain they were collared on. This suggests leaving the Population Management Unit (PMU) boundaries as is (i.e. each mountain complex is a separate PMU).
6. We had plans to present results from this project at a few conferences this year (the BC Chapter of The Wildlife Society annual meeting, the Canadian Section of The Wildlife Society annual meeting, and the Northern Wild Sheep and Goat Council symposium), but unfortunately all conferences were cancelled because of the COVID-19 pandemic. We hope to present this research when these conferences are rescheduled!

## Disappearing herds

Over and over we see the number of mountain goats on local mountains steadily decrease over the years. What is happening? Has the weather changed and affected the amount of feed? Are hikers and skiers and snowmobiles somehow driving down the numbers?

On page 69 of *Mountain Goats* by Bianchet and Cote, the authors write:  
"A reduction in available habitat could increase mortality even if the amount of food available were sufficient to support the population"

This small statement is a big idea.

The authors write about how nannies roam over a large expanse of alpine as an anti-predator strategy. Research has shown that this constant movement is not driven by a lack of feed or



nutrients. The nannies simply want to confuse predators by feeding at random over a very large area and not repeating their path across the mountain.

Let's state the problem a different way. Skiers and hikers and snowmobilers may never harass a mountain goat. But their mere presence in goat habitat causes a nanny herd to avoid that area. That reduces the available space goats need to avoid predators. As a result, predators hunt and kill more goats. Humans may cause the decrease in the population of the herd indirectly by their mere presence in mountain goat habitat even if the humans never see the goats.

Of course the human effect is driven by numbers. One or two hikers each year and there is probably no effect on the herd. 50 hikers and the effect is much more dramatic. The solution? That's another subject.



This photo shows one of the mountain goats killed by wolves in the Blunt/Netazul Project area. Photo courtesy of Kara MacAulay. The horns and the radio collar are visible.

## Best Reference

If you are curious about the science of mountain goats, there is one complete reference available – *Mountain Goats* by Marco Festa-Bianchet and Steeve Cote. This is the final report of a 16-year long study of a herd of mountain goats on Caw Ridge in Alberta. The book is available from Amazon.ca – search for mountain goats - and from the publisher, Island Press - <https://islandpress.org/books/mountain-goats>

## New Videos

We have uploaded four new videos to YouTube. One video shows mountain goats at night and includes a great view of a wolf pack. The second video shows goats sleeping on a narrow ledge. There is lots of “goat talk” and social conflict. The third video is about goats creating caves and ledges by chewing on rocks. The fourth video follows two goats as they scramble up and down steep cliffs in a display of agility.

See the Gallery page at <http://www.mtgoats.ca/gallery.asp>

Stay safe. Until next time,

Jim

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