



## BRITISH COLUMBIA MOUNTAIN GOAT SOCIETY

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Newsletter #12

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Thanks to local Fish and Wildlife Biologist Kara MacCauley for telling her story.

While hiking up into the alpine on Blunt Mountain last summer, lugging packs filled with labelled bags of fresh mountain goat pellets, we stumbled upon a unique find — something with a stench that was, surprisingly, much worse than the excrement in hand.

Skeena Region biologists are collaborating with Dr. Aaron Shafer and Jesse Wolf from Trent University on a research project using genetic data and goat movements to help inform population management for mountain goats on three mountains northeast of Smithers: Blunt Mountain, Netalzul Mountain, and Goat Mountain.

Last August, Aaron and Jesse flew from Ontario to Smithers for a week and I joined them to collect pellets from mountain goats to examine the microbial communities within their digestive systems – a topic not well understood in wild ungulates, but one that allows us to learn more about the interactions between goats and their preferred environments.

Fresh pellets are required for the microbiome analysis, and we soon learned our efforts were not best spent walking the alpine to opportunistically locate goat pellets; this led us to dried pellets from old bedding sites. Instead, we let the goats tell us where to go.



*Figure 1 Small white object*

We set up a spotting scope to scan the landscape for the nearest group of goats who had eaten recently (but not *too* recently). Once a group of goats had moved on, we would go to their bedding site and collect fresh pellets. On the last day of sampling, we stopped to eat lunch and set up the scope in the alpine on the north side of Blunt Mountain. We noticed a strange object, like a rock that was the colour, size, and shape of a goat about a kilometre from where we were standing. We kept an eye on it during our lunch break, and the object still hadn't moved. We decided to investigate further, prepared to be disappointed by a large, flat, white rock, agreed to not steal a glance with our binoculars at the unknown object until we were close enough to identify it with the naked eye.

A short walk through rolling alpine led us to a small pond. Along the shoreline we spotted what we had hoped to see all along: A small, two-year old male goat... that was dead. An initial look at the goat revealed no external injuries. No bleeding, no broken bones, and no obvious cause of death.



Figure 2 Photo courtesy of Jesse Wolf

If you spend enough time outdoors, you'll inevitably encounter dead wildlife. But, to opportunistically find a dead goat, especially where the cause of death was not immediately obvious, seems rare.

A larger objective of this mountain goat research project is to learn more about goat health and survival, focusing on goats we have captured and put GPS collars on. During these captures, we take blood samples that are analyzed for pregnancy, trace nutrients, DNA, and general indices of health. We swab the nasal cavity to test for *Mycoplasma ovipneumoniae* (*M. ovi*), a

respiratory disease that can be fatal in goats.

Good news – all of the goats we captured and tested from 2018 and 2019 have tested negative for *M. ovi*. Last, we assess body condition of goats by feeling for the spine on the goat's rump. The better we can feel the spine, the less body fat we assume the goat has, and we assign a lower body condition score. These health assessments involve capturing and releasing a live animal, so to encounter this opportunity on a goat we weren't tracking was rare.

After much discussion with my colleagues back in the Smithers office via a satellite phone with an unreliable connection, we decided to bring the goat back to the lab in Smithers to perform a necropsy to determine the cause of death. We were excited to learn more about the health of our local mountain goats and to uncover the apparent mystery of his death.

We had the fortune of being transported to and from our field sites for the day by helicopter. Stumbling upon this dead goat ended our day earlier than we planned. We called the helicopter for a pick-up and noted we may be a bit heavier packing out than we planned. Even though the goat was a young male, he was too big to fit in the storage compartment of the helicopter, so we slung him from the base of the helicopter for the 50-kilometre flight.

Back in Smithers, the goat was stored in a freezer awaiting Dr. Helen Schwantje, the Provincial Wildlife Veterinarian. A few months later, in November, Helen and I performed the necropsy, and determined the cause of death to be a fall. The goat had no broken bones, but we found clotted blood, a sign of internal bleeding.



Figure 3 Two horn wounds

Possibly the most obvious sign was a goat horn sized and shaped wound in the goat's hind leg that was made obvious after we opened him up. The goat was likely pushed by another goat. After falling, he made his way to the pond where we found him.

The goat was in excellent body condition, with lots of fat surrounding the internal organs and spine. There were no abnormalities, cysts, or parasites on his internal organs. He tested negative for *M. ovi* and did not appear to be weakened by any other disease. Helen estimated he had only been dead a few hours before we found him.

We have GPS collars on 22 goats across Blunt, Netalzul, and Goat Mountains. When a collar hasn't moved for 24 hours, we get an email notification, which usually means the goat has died.

It has been difficult to conclude cause of

death from the collared goats that die. Twice now, we have been unable to visit the mortality locations soon after the goat has died because of safety concerns with accessing sites in winter because of avalanche risk. We've had to wait until summer and, as expected, there are only a few bones left by this time, not enough "clues" to conclusively determine how the goat died.

Stumbling upon this dead goat certainly felt serendipitous and gave us a lot of information that has otherwise been difficult, if not impossible, to collect. While we did not find evidence of a "new" disease or parasite affecting our local mountain goats, confirming its absence and getting a better idea of what a "healthy" mountain goat looks like can be just as important.

We thank the B.C. Mountain Goat Society for allowing us to share our story, and for their contribution to our project. If you'd like more information about the mountain goat research project, please contact Kara at [Kara.MacAulay@gov.bc.ca](mailto:Kara.MacAulay@gov.bc.ca).

(Editors note: The only goat-to-goat violence we have observed in the summer has been a nanny defending her kid from any other goat that gets too close.)

## **Snowmobiles and Mountain Goats**

We have a local problem with snowmobiles disturbing mountain goats. Some local snowmobilers spend all winter looking for new and challenging terrain on our local mountains. A number of sledders have 30 years experience and are expert at getting to the highest peaks and ridges. In addition, snowmobile technology improves every year. Sleds are lighter, more powerful and capable of travelling further and higher into the backcountry.

Sledding is good entertainment for many locals but there is a price for all the motorized fun. Snowmobiles are reaching and displacing more mountain goats each year. The best feed for the goats are grasses and dry forbs on meadows and ridgetops – the exact place snowmobilers want to travel.

When sleds approach, the goats hide in cliffs nearby and stay there for hours or overnight. The feed available in the cliffs is scarce. It takes vital energy to climb down into the cliffs and back up when the sleds leave. The sleds are in effect reducing the winter habitat for the goat herd. Time and time again we see the number of goats in a herd decline from year to year where snowmobiles are close by.



One of our directors is a member of the local snowmobile club. He asked for support of a ban on snowmobile activity on Mt. McKendrick where snowmobiles displace a herd of goats. The club members refused to consider the request. Some club members said that they never see goats, and that concern about mountain goats is not in the club's best interest. Others argued that saving a mountain goat only benefits hunters who will shoot the goat anyway. The problem with that argument is that hunting is regulated and takes about 3% of a large herd. In contrast,

snowmobiles are unregulated and can cause the loss of an entire herd by displacement, and no one may know it ever happened.

The local snowmobile club refuses to take any responsibility for avoiding goat winter habitat. That puts the club in direct conflict with BC provincial policy that has a goal of maintaining healthy populations of goats throughout their native range.

It's also illegal in British Columbia for anyone to use a motorized vehicle to harass wildlife (Wildlife Act Section 27(3)) We are not just talking about chasing wildlife. The definition of harassment in the Act includes worry, exhaust, fatigue and annoy. So harassment may happen even when the sledder is unaware of the mountain goats nearby.

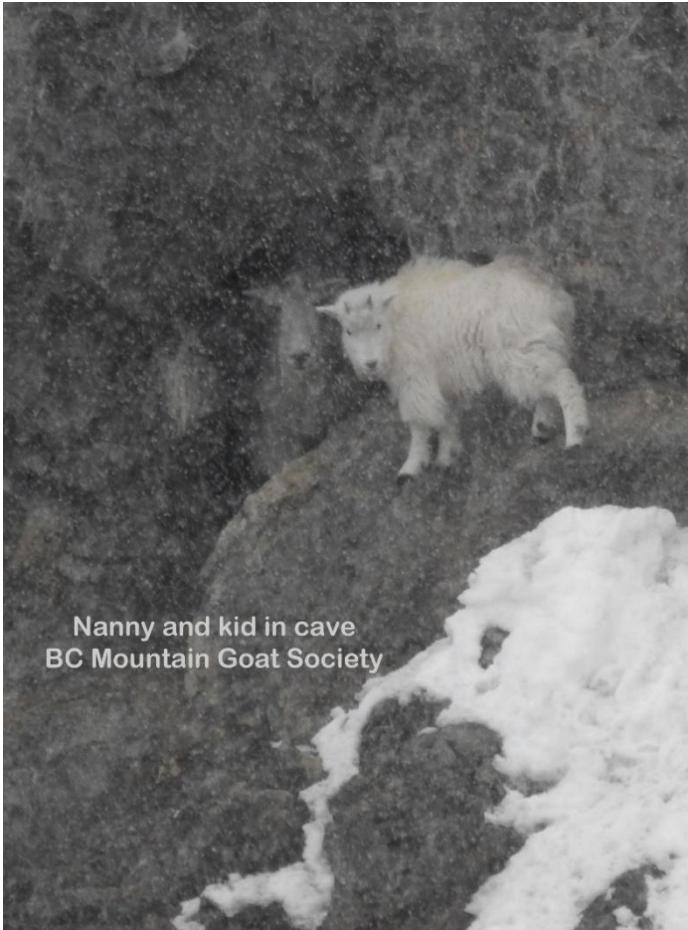


*It only took eight days of no snowmobile traffic for mountain goats to start roaming the mountain and feeding on balsam needles*

The government must choose whether to keep goat herds viable or to allow snowmobilers to travel freely without limits.

Our society created a brochure to inform local snowmobilers about mountain goats. See the attached PDF. The brochure shows that sleds and goats can co-exist by contrasting the best snowmobile terrain with the best mountain goat terrain. It also lists all local snowmobile areas and whether there are goats in winter.

We believe that the public is in favour of conserving wildlife whenever possible. That gives us confidence to propose motorized closures where sleds are obviously displacing mountain goats. It's a thankless task but government staff do not have time or money enough to keep track of all that is happening in the backcountry, so someone has to do the work. That's us.



We have submitted a proposal to close motorized travel on one mountain (Netazul Mountain, in process) and will soon propose closure on another mountain for the third time (Mount McKendrick).

### **Mountain goats in caves**

Observing mountain goats in a snow storm or a summer rain storm is always difficult. So we don't have a lot of photos of mountain goats taking shelter in bad weather. Experts have told us that goats never take shelter and always stay in the open but recently we have photographed goats retreating to caves.

It's also difficult to observe mountain goats at night but we see tracks that indicate that goats often use caves or overhangs at night. (The small dots in the photo are snowflakes)

Keep safe everyone. And stay tuned for more about mountain goats.

Jim

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