



BRITISH COLUMBIA MOUNTAIN GOAT SOCIETY

SMITHERS BC CANADA

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Newsletter #6

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Some of our society directors spend all summer hiking and observing our local mountain goats. Mountain goats never cease to surprise us.

A billy at play

We were on a two-day hike to a remote lake. We arrived at the lakeshore, set up our tent, then lay in the grass to watch a herd of nine mountain goats feeding and moving slowly across a cliff about 600 meters away. The goats were too far away to video but we had binoculars. The top half of the cliff is covered with green sedges and an easy climb for any mountain goat. The bottom half of the cliff is very steep and include sheer vertical walls where the entire face had broken off and slid to the bottom.

One goat moved away from the herd toward the steepest part of the cliff. From the goat's behaviour, we were sure this was a billy. We seldom see a nanny alone and away from the herd unless she has a kid or juvenile with her. We have never seen a nanny seek out the most difficult route but each time there was a choice of an easy traverse and a more difficult route, our goat took the challenge.

It wasn't long before we could see that this mountain goat wasn't trying to get from point A to point B, he was playing. He would walk over to a vertical slab of cliff and stand still. He looked up, down and stared ahead in an attempt to figure out how to get across. Sometimes he would leave his hind hooves on a safe ledge and walk his front hooves forward until he was stretched out as far as he could reach. Then he would either crouch down and spring forward or slowly walk his front feet back to safety, turn around and try another route.

Other times he would start across a vertical slab, then either pull himself up onto a higher ledge or jump down to a lower ledge. Each move was in slow motion to keep control and to avoid breaking the next rock ledge he depended on. Our goat succeeded about half the time. The other half, he would turn around and pick another route. Sometimes the ledge was so tight he had to back out a few steps before he could turn around.

At first we both could not help but utter suggestions under our breath. "Go up – it's an easy walk" but after 15 minutes we figured out what our billy was doing and we simply gave him scores from one to ten. He got a score of ten for a long leap to a new ledge but only a score of two for backing out. For an hour we watched our billy go from one impossible traverse to another. He did not cover more than 200 meters in that hour and he never rested. There was always an easy route available but he always chose the more difficult. At the end of the hour he turned up the cliff,

picked an easy route and walked over the top. He had an hour of fun but we felt exhausted just watching him.



Panic photos

On December 5, 2018, we noticed a set of three photos on the website for the Habitat Conservation Fund in Victoria BC. The photos were taken from a helicopter surveying mountain goat populations in northeastern BC. The survey project is funded in part by the Habitat Conservation Fund. The problem was that all three photos showed mountain goats in panic mode trying to get away from the helicopter. It's obvious that the helicopter was too close to the goats. In 2010, the BC Mountain Goat Management Plan established that helicopters should maintain a minimum vertical separation from mountain goat habitat of 400 meters and 2000 meters horizontal.

We emailed the executive director of the Habitat Conservation Fund to explain that the survey project crew they funded was flying too close to the goats they were sent out to count. We received a phone call the next morning. The executive director thanked our society for pointing out the indiscretions of the survey crew. He pulled all the photos off the HCF website and promised to contact the leader of the survey crew to let him know that flying too close is not part of the project.

This is a good example of how our society can defend mountain goats from unnecessary harm. Photos of harassment on a public website give the wrong impression. Others may think that it is OK to fly close to mountain goats to get the perfect photo. It's also our job to educate people about the fact that mountain goats are very sensitive to low-flying aircraft. Below is one of the photos. You can see that almost all the goats are on the move. Four goats are scrambling straight up a vertical pitch, all signs of panic.

The BC Mountain Goat Management Plan, 2010 is available free online at http://www.env.gov.bc.ca/wld/documents/recovery/management_plans/MtGoat_MP_Final_28May2010.pdf This is an excellent document and very readable.



Canyon Goats

Mountain goats don't only live in open alpine. Locally we have many goats that reside permanently in low elevation creek canyons. While alpine goats may reside at 5000 feet (1524m) elevation, canyon goats may only be at 3000 feet (914m) elevation. The advantage of living low? Canyon goats have more browse available, less severe winter weather and tree cover to block the wind. The disadvantages are that canyon goats cannot travel to high alpine to get away from insects and heat. The canyons are often small, less than 10 km long and located far from the closest mountain. So canyon goats are very restricted in movement and they cannot see other goat herds on neighbouring canyons or mountains to know what direction to disperse. The goats depend on a series of sheer cliff faces for safety from predators but those cliffs are separated by low angle treed slopes where predators can set up an ambush.

This summer we spent many days observing one herd of canyon goats. The canyon is eight kilometers long with the highest cliff about 400 feet (121m) high. We kept hidden in the trees on the south rim of the canyon and photographed the goats on the north side. We soon figured out that our canyon goats don't stay together as a herd as they would in the alpine. Instead the nannies stay in pairs and are constantly on the move along old trails that connect one safe cliff to the next. We assume that the small group size and the constant travel is to avoid ambush from predators. We observed coyote tracks on top of goat tracks. Other predators in the area include wolf, black bear and grizzly. Life for canyon goats looks very high risk with the dense tree cover, restricted movement and predators. We also plan on visiting the site later this winter and again next summer. Below is a photo of the steepest cliffs in the canyon. See our latest Youtube video on canyon goats at <https://www.youtube.com/watch?v=-pr8x2SyJ0s>



Location names

You will notice that when we talk about mountain goat habitat we don't always disclose information about the exact location. The decision to name a location depends on whether making that location public may endanger the goats. In most cases, we will not mention the exact location so you can feel free to circulate our newsletters without worrying about whether you are giving away a "secret" spot. We want to avoid turning mountain goat locations into tourist destinations. We have found that mountain goats will tolerate a few visitors once in a while but if the goats see a lot of visitors, the goats will move out.

A new mountain goat study

One of our new members, Dr. Katarzyna Nowak, has given permission to publicize her latest project report – *Molt Phenology in the Mountain Goat* - a study of the relationship between mountain goat molt and climate change. This report fills in a lot of the basic details about mountain goat molt that have been missing in the scientific literature. It will serve as a baseline study for future decades. Molt takes on a new importance due to climate warming. If summer temperatures keep increasing, a winter coat that is slow to shed may cause heat stress and lasting damage. Can mountain goats adapt quick enough to climate warming? Dr. Nowak's report uses unique data sources and analysis techniques to answer that question. The report is too large to attach to this newsletter so we will let you know when it is posted to the web site.

The authority

Talking about research, if you have a question about mountain goats, the best long-term study of mountain goats to date is the Caw Ridge project that took place in Alberta from 1988 to 2006. The authors of the final report are Marco Festa-Bianchet and Steeve D. Cote and the book is available directly from the publisher at <https://islandpress.org/books/mountain-goats>

Your concerns and relevant global research

In the BCMGS newsletters, we will fix on our local issues since that is what we know. But if you have a local issue in your area concerning mountain goats, we would be delighted to share your information and concerns with all the members. Give us a call at 250-847-4802 or email at mtgoats@bcnorth.ca

Advocating for wildlife such as mountain goats has to be tied to global trends such as the disappearance of wilderness. *Protect the Wild* is a new study published on *Nature*. Oscar Venter from our nearby University of Northern British Columbia is one of the co-authors. Russia and Canada are the two countries with the largest wilderness areas in the world. That makes our Canadian wilderness even more important.

<https://www.nature.com/articles/d41586-018-07183-6>

What is the total biomass on earth? What proportion of that biomass is human?, wildlife? You may be surprised by the results of a study published on the National Academy of Sciences of the USA website. Even more surprising is the loss of wildlife in the last 50,000 years to human activities.

<https://www.pnas.org/content/115/25/6506>



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