An ongoing assessment of Mountain Goat – Heliskiing interactions in Northwest British Columbia

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Abstract: Studying the effects of helicopter activity on mountain goat behaviour and habitat-use patterns is a high priority for research in BC due to expanding backcountry recreation. Previous research has identified short-term responses of mountain goats to helicopters; however, whether these short-term responses result in longer-term responses, such as habitat selection or range-use changes, is unknown. We are examining these medium-term responses by simultaneously monitoring movements of 21 female mountain goats equipped with GPS collars and helicopter activity (tracked by100-m GPS data) within a heliskiing tenure (and nearby control area) in northwest BC. Comparing helicopter activity to animal location data, we are examining whether individual animal's seasonal movement rates, range-size and resource selection patterns are related to measures of heliskiing activity (i.e., helicopter overflights and landings, skiing) that they are exposed to. Specific anomalous movements of animals (longer than average movements or movements that extend outside established winter range) are also being analysed to determine if they are associated with specific heliskiing events. By utilizing GPS collar technology, this project will allow us to quantify changes in behaviour at a scale not limited to the perceptual range of the observer. As such, this project is providing information integral in determining a more realistic disturbance space, and thus, more relevant operating guidelines.

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