

Together for Wildlife

Together for Wildlife HCTF Conservation Fellowship Recipient 2023



Westin Creyke

Westin Creyke is an MSc student at the University of Northern British Columbia studying under the supervision of Dr. Heather Bryan. His research uses a mixed methods approach to assess the influence of anthropogenic disturbance on Stone's Sheep health and population dynamics.

Thinhorn sheep are sensitive to disturbances such as aerial traffic. Little is known, however, about the effects of roads and road traffic on thinhorn sheep. Roads can influence wildlife in many ways, including by altering their movements, behaviour, and physiology. Stone's sheep have a restricted range, and some populations are migratory, which could make them particularly susceptible to disturbances due to road activity.

Westin's study focuses on a migratory population of Stone's sheep that moves from their winter range to their summer range in the spring and back in autumn. The migration route of the population spans two mountain ranges and is intersected by an active resource road. Previous work has shown that the study population has elevated levels of physiological stress during migration. This project aims to quantify the spatial and temporal extent of the effects of vehicle traffic on physiological stress in Stone's sheep. To achieve this goal, Westin is collecting feces and vegetation samples from sheep at different times of the year. Their sampling sessions correspond with five seasonal life history periods for the sheep, including the time when they are on their winter range, northerly migration route, summer range, southerly migration route, and breeding grounds. Once collected, Westin will analyze fecal samples for bioindicators of physiological stress (cortisol), nutrition (fecal N, metals), and metabolism (triiodothyronine). In addition, he will analyze the quality of forage samples at each time period. Westin anticipates that this research will contribute to better understanding the effects of roads on thinhorn physiology and may influence land-use planning and vehicle traffic regulations.

This project is being carried out in the Wildlife Health and Ecology Lab at the University of Northern British Columbia (UNBC) in partnership with the Tahltan Central Government (TCG) and the Wild Sheep Society of BC (WSSBC). We have also partnered with school district 87 (SD87) to provide local high school students with experience in field work in ecological research.



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