

# Together for Wildlife

## Together for Wildlife HCTF Conservation Fellowship Recipient 2024



### Tristen Brush

Tristen is a Master's student at the University of British Columbia. His research builds upon previous work done on elk (eyich) and seeks to expand the use of camera trap distance sampling (CTDS) for estimating the populations of other culturally significant species, including Columbian black-tailed deer (hupit) and black bears (schetxwen). These species are not only vital to the ecological balance but hold deep cultural importance within the swiya (territory) of the shíshálh First Nation.

Camera traps, or Motion-sensing wildlife cameras, have revolutionized wildlife monitoring worldwide by offering a noninvasive and cost-effective method of observing elusive species. Since their increase in popularity, they have enabled researchers to gather vital data on animals that are otherwise difficult to monitor. In 2017, Howe et al. pioneered camera trap distance sampling (CTDS), by integrating the benefits of camera trapping into distance sampling, a long-established population estimation method. While researchers have successfully applied CTDS in Africa and Europe, it has yet to be employed in North America.

Tristen's work aims to change that by introducing CTDS into the landscapes of coastal British Columbia, building on previous research on elk (eyich). Tristen will be applying CTDS to culturally important species such as Columbian black-tailed deer (hupit) and black bears (schetxwen) within the territory (swiya) of the shíshálh First Nation. Initial findings from the BC Ministry of Water, Land and Resource Stewardship's 'Improving Accuracy of Roosevelt Elk Inventory via Modelling of Sightability' project (2021-2023) suggest that CTDS can provide reliable estimates of wildlife population size in coastal BC. These estimates can be even more precise than those produced by more costly methods like aerial surveys and capture-recapture models.

One of Tristen's primary goals is to support the conservation and management efforts of the shíshálh First Nation by providing crucial insight on applying CTDS in the field. This includes developing a user-friendly manual to empower wildlife stewards, especially those with limited resources, to adopt CTDS as a valuable tool in conservation efforts.

By bridging scientific innovation with practical applications, Tristen's research seeks to not only advance our understanding of wildlife populations but also contribute to the sustainable management of culturally important wildlife populations for the wellbeing of First Nations, BC residents, and beyond.



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