



Al Martin HCTF Conservation Fellowships Recipient 2023



Oliver Holt

Oliver is pursuing a lifelong dream of achieving a Master's of Science from the University of Northern British Columbia. He holds a Bachelor of Science in Forestry from the University of British Columbia and has worked extensively in the forestry industry. He developed his graduate research from the ground up, including building partnerships with Indigenous and non-Indigenous governments, co-developing the research questions based on community needs, and designing a methodology that mobilizes community science. An aspect of his research Oliver is most proud of are the beautiful relationships he has forged along the way with project partners. Oliver's research is focused on bringing to light the uncertain future of northern mountain caribou.

Oliver's family roots are intertwined with the cedars of the Incomappleux Valley and the coastal Douglas fir of Crescent Beach. From a young age, he was enamored by the salmon-bear-rainforest relationship. He would study a VHS recording of a Discovery channel feature on Kermode bears his mom recorded for him in 1997. That fascination attracted him to study forest ecology at UBC where the teachings of Dr. Suzanne Simard further inspired his intrigue in ecology. This led to his immersive exploration of coastal, Kootenay, and northern ecosystems both at work, and during his free time.

Oliver has worked across most facets of land relationship planning. His free time after graduating from UBC's Faculty of Forestry was spent immersed in forest stewardship. From layout to logging, to leading the development of innovative silviculture practices with the provincial government, he has enjoyed developing his craft of forest stewardship. Oliver first started to develop his skills in species at risk recovery during a co-management role with the District of Haida Gwaii and the Council of the Haida Nation. Oliver worked with the Haida Nation to introduce novel procedures to help support the Haida Nation's initiative to develop a made on Haida Gwaii, by the Haida, Stads K'un (Haida Gwaii goshawk) recovery plan. Oliver took that experience to the BC Caribou Recovery Program, where he contributed to the development of collaborative herd plans aimed to recover southern mountain caribou. These experiences have shaped Oliver's interest in working with communities to nurture a positive relationship among humans, non-humans, and place.

Indigenous leaders have been raising community voices that northern mountain caribou are enduring change in the form of home range contraction. Oliver has designed his research to model changes in caribou distribution that are mediated by landscape scale habitat disturbances and subsequent altered predator-prey dynamics. He is doing this by quantifying the home range of thirteen caribou herds that exist across a gradient in landscape disturbance. Moreover, he is working with hunters, trappers, and biologists to collect wildlife hair samples to run stable isotope analyses to estimate the diet of wolves and grizzly bears. These predator diet estimates will be used as a measure of altered predator-prey

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dynamics. He will then model which factors (i.e., road and cut block density, wildfire, and altered predator-prey dynamics), or combination of factors, mediate caribou distribution. He hypothesizes that caribou that inhabit fragmented/heavily disturbed landscapes will have diminished home ranges isolated high in the mountains. This sedentary occupation of mountain complexes will be contrasted with assumed large home ranges of caribou that exist at the undisturbed spectrum of his gradient.

By testing these relationships across a gradient in habitat disturbance, his research will illuminate predictable changes to caribou distribution in accordance with landscape conditions. Oliver's research will support land relationship planning projects in northwestern BC and southern Yukon that will safeguard a future for northern mountain caribou.



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