

Your Name: Lindsay Whitehead

Tentative title of your thesis: Effects of Wildfire on Western Rattlesnake Population and Movement patterns

Supervisor's name or names if co-supervised: Dr. Karl Larsen

Committee member's names: Dr. Jill Harvey and Dr. Rob Higgins

Abstract of your research:

As climate change drives trends towards warmer and drier climates in western Canada, wildfire is increasingly prominent. Western Rattlesnakes (*Crotalus oreganus*) may be particularly vulnerable to these changes, given their habitat at the northern limit of their range (British Columbia) is relatively scarce while also corresponding to dry, fire-prone ecosystems. In July 2021, the Nk'Mip Creek wildfire consumed nearly 200 km², including a large swath of known rattlesnake habitat on Osoyoos Indian Band reserve. This site has supported a long-running rattlesnake research project, with over 20 years of mark-recapture and 10 years of radio-telemetry data, providing historic data on locations traditionally used by the snakes for foraging, mating, shedding, reproduction (rookeries), and denning (hibernacula). Current survey efforts target collection of demographic data (mark-recapture) and movement data (radio-telemetry) of both males and gravid females to determine how population composition and movement patterns have been effected by the wildfire and consequential habitat stressors. Finally, we are continuing to monitor the prey base, enabling us to understand how rapid changes induced by wildfire have impacted prey distribution across different habitat types. All told, this work will provide valuable data on how wildfire impacts these and other snake species at these northern latitudes.

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