

Your Name: Veronica McKelvey

Tentative title of your thesis: The chamber of secrets: uncovering the natural and not so natural overwintering behaviour of snakes

Supervisor's name or names if co-supervised: Dr. Karl Larsen and Dr. Leigh Anne Isaac

Committee member's names: Dr. Darryl Carlyle-Moses

Abstract of your research - a brief overview of what your thesis research is or will be.

Suggested length - **150 - 250 words, single-spaced.**

Snakes within northern ranges rely on hibernacula to overwinter. Due to a perceived scarcity of these features, the loss of hibernacula implies a tremendous impact on snake populations; however, one management strategy to compensate for this loss is the construction of artificial dens. Although an increasingly common conservation practice, little research has been done to understand the dynamics of artificial dens and how they compare to their natural counterparts. The recent construction of an artificial den to replace lost habitat of the threatened Great Basin Gophersnake (*Pituophis catenifer deserticola*), Western Yellow-bellied Racer (*Coluber constrictor Mormon*), and Western Rattlesnake (*Crotalus oreganus*) within south-central BC provides a unique opportunity for this research. To avoid this habitat loss in the future, we use this community of sympatric snake species to explore how these species vary in their use and selection of hibernacula while determining if there is an association between habitat features of hibernacula and the number of snakes using them. Overall, this research provides valuable information on the success of artificial dens as a conservation strategy and the resilience of these species in the face of disturbance. This research will also characterize the intra- and interspecific variation in hibernacula selection to aid in developing conservation plans for northern snakes.



