

## Speaking Up for Species

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*Distinguished by their diversity, SARAHS projects explore questions on many scales—from the molecular to the landscape—engaging researchers to collaborate in tackling multiple aspects of a problem.*

The Centre for Species at Risk and Habitat Studies (SARAHS) has brought together multi-disciplinary researchers to develop a better understanding of species at risk of extinction. SARAHS researchers seek to inform and guide regional, national, and international management strategies for species at risk and their environments.

Research collaborations address the dynamics of habitats and species across time and space, with projects ranging from field studies on particular species of concern, to applying mathematical modelling to patterns of spatial distribution.

The research centre's state-of-the-art laboratory and analytical facilities serve a variety of researchers, often contributing to valuable collaborations. Weekly discussion groups further strengthen the SARAHS research environment.

The unique geographic region of the Okanagan is a valuable resource for SARAHS. One of Canada's four most endangered regions, the South Okanagan has 3% of British Columbia's land area, yet more than a quarter of B.C.'s at risk species. Many species here occur nowhere else in Canada. The Okanagan's distinct biodiversity is threatened by extensive human-mediated landscape change, so the region offers many opportunities for local research with national and international implications.

Among the many collaborative partnerships is that of Michael Russello and Karen Hodges. Russello uses genetic and genomic approaches to investigate the

historical consequences and contemporary responses of wildlife species to human alteration of the environment. Research results are used to develop protective measures and conservation management strategies.

Russello's research is well-matched by that of colleague Karen Hodges, Canada Research Chair in Conservation Biology. Hodges' research is primarily concerned with improved management of human activities to protect species from extinction—work largely driven by the fact that the world is in the sixth major extinction event in the history of life on the planet—and it's a human-caused extinction event.

These researchers collaborate on studies of amphibian and reptile species at risk, combining Hodges' spatial ecology focus with Russello's population genetic and phylogeographic expertise. Both see the SARAHS centre as poised to become a centre of excellence in species at risk, particularly given the very nature of the centre itself.

"Conservation and species at risk are major topics on the world's political and social consciousness," says Hodges. Russello is quick to agree that the research underway is of incredible benefit to society at large.

"Research for knowledge is a critical component to the evolution of societies and our understanding of the natural world," he says. "Putting such knowledge into practice will constitute important challenges in the coming decades."

