

Yukon Biodiversity Forum 2024

Friday March 1, 7pm – Yukon Beringia Interpretive Centre

Saturday March 2, 9am - Mt McIntyre Recreation Centre

Free! Register at eventbrite.ca



Friday March 1 – Yukon Beringia Interpretive Centre

6:30pm	Doors open and light dessert available
7:00pm	<p>Keynote Presentation: Chrystal Mantyka-Pringle¹ and Elizabeth MacDonald²</p> <p>The Global Freshwater Biodiversity Crises: Insights from a two-eyed perspective to achieve novel approaches for freshwater conservation in the Yukon.</p> <p>¹Wildlife Conservation Society Canada & University of Saskatchewan ²Yukon First Nation Salmon Stewardship Alliance/Council of Yukon First Nations</p>
8:15pm	Break
8:30-9pm	Trivia hosted by Yukon Wildlife Viewing

Saturday March 2 – Mt McIntyre Recreation Centre

9am	Welcome
9:15am	<p>Don Reid*, Frank Doyle, and Robert Stitt [10 min]</p> <p><i>Spatial scale of stand-replacing forest disturbance influences the amplitude of snowshoe hare population fluctuations in boreal forests of northwest Canada.</i></p> <p>Wildlife Conservation Society Canada, Wildlife Dynamics Inc</p>
9:35am	<p>Misha Donohoe [10 min]</p> <p><i>Yukon Willows - Botanical illustration Project Update</i></p> <p>Royal Botanic Garden Edinburgh</p>
9:55am	<p>Shyloh Van Delft*, Thomas Jung [10 min]</p> <p><i>A road map to becoming a bat-friendly community?</i></p> <p>Government of Yukon</p>
10:15am	<p>Anna Smith *, Piia Kukka, Heather Milligan, Hannah Miller, Thomas Jung [10 min]</p> <p><i>Why should we monitor muskrats?</i></p> <p>Government of Yukon</p>
10:30am	Coffee & Tea
11:00am	<p>Hannah Miller [10 min]</p> <p><i>Do movements of hares rise and fall with their cyclic populations?</i></p> <p>Government of Yukon</p>
11:20am	<p>Charles Krebs, Alice Kenney, Rudy Boonstra, Elizabeth Hofer, Thomas Jung*, and Mark O'Donoghue [10 min]</p>

	<i>Where have all the berries gone?</i> University of British Columbia, University of Toronto, Government of Yukon
11:40am	Jill Johnstone* , Dorothy Cooley [10 min] <i>Developing alternative uses of fuel breaks to create win-win opportunities for northern communities.</i> Yukon University and Teslin Tlingit Council
12:00pm	Maud Henaff [5 min] <i>The first observation of the louse <i>Tricholipeurus lipeuroides</i> infesting mule deer in the Yukon, northern Canada.</i> Department of Environment, Animal Health, Government of Yukon
12:15pm	Lunch and Poster Session
1:15pm	Syd Cannings [5 min] <i>Spring Stoneflies: We're not waiting for the snow to melt!</i> Canadian Wildlife Service
1:30pm	Clara Reid* , Morgan Brown, and Chrystal Mantyka-Pringle [10min] <i>Impacts of placer mine revegetation on songbird communities in central Yukon</i> Wildlife Conservation Society Canada, University of Alberta, University of Saskatchewan
1:50pm	Rasheeda Slater [10min] <i>A study of the cumulative effects of mining and climate change on suspended sediment flux in tributaries to Mayo Lake, Yukon</i> Water and Ice Research Laboratory, Carleton University
2:10pm	Kim Lisgo* , Pierre Vernier, Mélina Houle, and Fiona Schmiegelow [10min] <i>Shiny Apps to support custom human footprint maps, mapping of upstream/downstream areas, conservation area design, and land planning.</i> BEACONS Project - University of Alberta and Yukon University
2:30	Thomas Jung* , Dennis Murray, Piia Kukka, Stan Boutin, Alice Kenney, and Charles Krebs [10 min] <i>Loss of ground squirrels from Kluane's boreal forest and why it matters.</i> Government of Yukon, Trent University, University of Alberta, UBC
2:45 – 3:45pm	Coffee & Tea - Poster Session cont'd

* Presenter

Posters:

- **Sonny Parker***, Carmen Wong, and Jonathan Cromwell. *Shifts in Birth Dates and Lambing Period in Dall's Sheep: Interannual Variation or Response to Climate Change?* Kluane National Park and Reserve, Parks Canada
- Sarah Chisholm, **Jonathan Cromwell***, Catriona Dempsey, Sonny Parker, Sean Pociuk, and Carmen Wong. *Pass the Salt: Can Sheep be Lured from Highways? Do Diversionary Salt Licks near Thechàl Dhâl' work?* Kluane National Park and Reserve, Parks Canada, Yukon
- **Lauren Wonfor**. *Yukon Youth Conservation Corps (y2c2)*. Department of Environment, Government of Yukon
- **Piia Kukka***, Hannah Miller, Julie Thomas, Fiona Schmiegelow and Thomas Jung. *The best watering hole in town: urban bats guide to dining out in Whitehorse*. Government of Yukon
- **Alexandra Heathcote***, Piia Kukka, Shannon Stotyn, Carrie McClelland, Caitlin Willier, Kai Breithaupt, Alice McCulley, Lolita Hughes, Paul Boyce, and Thomas Jung. *Monitoring an alpine mammal at risk due to climate change: the collared pika*. Government of Yukon.
- **Hugues Bernasconi***, Fiona Schmiegelow, Norma Kassi, Karlie Knight, and Alice McCulley. *Non-invasive monitoring methodologies for culturally significant species in the context of Tr'ondëk Hwëch'in's land guardians program: working with government and community*. University of Alberta and Northern Systems Conservation Co-Lab, Yukon University.
- **Maegan Elliot*** and Fiona Schmiegelow. *Assessing disturbance and climate related changes within two caribou herd ranges in central Yukon*. University of Alberta and Northern Systems Conservation Co-Lab, Yukon University.
- **Kim Lisgo***, Pierre Vernier, Mélina Houle, and Fiona Schmiegelow. *Demo - Shiny Apps to support custom human footprint maps, mapping of downstream disturbances, conservation area design, and land planning*. BEACONS Project, University of Alberta and Northern Systems Conservation Co-Lab, Yukon University.

Keynote Presentation

Title: The Global Freshwater Biodiversity Crises: Insights from a two-eyed perspective to achieve novel approaches for freshwater conservation in the Yukon

Co-Presenters:

Chrystal Mantyka-Pringle Wildlife Conservation Society Canada & University of Saskatchewan

Elizabeth MacDonald Yukon First Nation Salmon Stewardship Alliance/Council of Yukon First Nations

Abstract: The world's biodiversity is declining rapidly, with freshwater species impacted disproportionately in comparison to terrestrial and marine ecosystems. In the Yukon, we too are faced with population declines, particularly in chinook and chum salmon runs, and with significant changes in water patterns and melting glaciers that affect freshwater fish and their habitats. The global freshwater crisis is almost entirely caused by human activities, primarily those driving habitat loss and degradation, water extraction, flow regulation, climate change, and their interactions. These combined stressors or "cumulative effects" are a wicked challenge because having multiple different stressors makes it more challenging to focus on interventions as their impacts on biodiversity vary depending on the specific mixture of threats and other ecological factors. With these exacerbating impacts, we can learn from and work with Yukon First Nations who have been stewarding the land and water over a millennium. In this presentation, we draw on examples from both Indigenous and western science systems of knowledge to consider new and meaningful strategies to achieve freshwater conservation in the Yukon. This keynote will also present a mix of approaches and projects to gain insights into the interacting effects on freshwater biodiversity and how to translate research into meaningful conservation action and forward-thinking solutions in partnerships with First Nations. Together, the speakers will highlight the importance of bringing together multiple knowledge systems to inform and develop adaptive management solutions for the resilience and sustainability of freshwater ecosystems in Northern Canada.

Presentation Abstracts

Spatial scale of stand-replacing forest disturbance influences the amplitude of snowshoe hare population fluctuations in boreal forests of northwest Canada.

Donald G. Reid Wildlife Conservation Society Canada, Whitehorse, YT

Frank I. Doyle Wildlife Dynamics Inc, Terrace, BC

Robert Stitt Independent biologist, Carcross, YT

The natural disturbance model promotes emulation of natural disturbance regimes in patterns of tree harvesting. Wildfires in many boreal forests remove the canopy from patches of 500-10,000 ha in stand-replacing events. Fire suppression, coupled with harvesting dominated by patch cuts of 10-160 ha, have strongly shifted the spatial scale of stands away from scales resulting from wildfires. In two regions (central British Columbia and southeast Yukon), we tested the hypothesis that different spatial scales of stand-replacing forest disturbance (wildfire and timber harvesting) result in different amplitudes of change in abundance of snowshoe hare, a keystone boreal mammal for which mid-seral stands provide optimal habitat. Landscapes with extensive (>2,000 ha) mid-seral stands following stand-replacing disturbance supported significantly more hares, with wider amplitude in cyclic fluctuation, than landscapes with small patches (40-200 ha) of mid-seral habitat and than mature forest landscapes. Densities of hares high enough to support Canada lynx reproduction only occurred in landscapes disturbed at the scale of a moderate to large-sized wildfire. Extensive mid-seral patches (>1,000 ha) of

regenerating forest supported significantly more hares than the smaller mid-seral patches (40-200 ha). Landscapes unaffected by stand replacing disturbance for at least 80 years supported very few hares and without cyclic fluctuations. We recommend that patterns of cutting dominated by small patches (20-200 ha) be shifted to include many larger patches (2,000-5,000 ha). Silviculture should create and sustain a mix of conifer and deciduous regeneration in the mid-seral stands. Emulating spatial patterns of stand-replacing natural disturbance appears necessary to sustain snowshoe hare cycles when most fires are suppressed in intensively managed western Canadian boreal forests.

Yukon Willows - Botanical illustration Project Update

Misha Donohoe Royal Botanic Garden Edinburgh

I will be completing a three-year diploma in botanical illustration with the Royal Botanic Gardens Edinburgh later in March. The major work for this diploma is a series of five portraits of Yukon willows (*Salix alaxensis*, *S. bebbiana*, *S. glauca*, *S. pseudomonticola*, and *S. scouleriana*) with the dioecious flowers painted at a magnification of 25x. This project has been 2.5 years in development during which time, I documented the phenology of all five species and consulted with botanists in Yukon, Edinburgh and Alaska to ensure that the diagnostic features are rendered accurately. As far as I am aware, it is the first time that species of Yukon willows have been documented in full-colour, large-format botanical plant portraits. YukonU have also been instrumental to this research by allowing me to use their Zeiss dissecting scope for the duration of the project. During this talk, I would present my research (including microscopy work), and images of my paintings, along with a description of botanical illustration and its potential use for public engagement. (I am also the national coordinator for Botanical Art Worldwide; a global exhibition that will launch on May 18, 2025.)

A road map to becoming a bat-friendly community.

Shyloh Van Delft*, and Thomas Jung

Government of Yukon

Little brown bats (*Myotis lucifugus*) are an endangered species in Canada that face a variety of anthropogenic threats, with the primary one being the emerging disease white-nose syndrome. These long-lived bats commonly live commensally with people, which often results in human-bat co-existence issues. Recently, bat-friendly community initiatives have arisen as a means of increasing appreciation, reducing conflicts with humans, and securing key habitats, for synurbic populations of bats. We outline guiding tenets of becoming a bat-friendly community.

What is going on with muskrats?

Anna Smith*, Piia Kukka, Heather Milligan, Caitlin Willier, Hannah Miller, and Thomas Jung

Government of Yukon

Muskrats (*Ondatra zibethicus*) are a bioculturally important species to several Yukon First Nations, who harvest them in the late-winter and spring for food and fur. Once a common species across much of North America, muskrat abundance has apparently declined at a continental scale. Reasons for the decline are not well known but may relate to reductions in wetland habitat, changes in water levels, extreme water fluctuations, and disease. We review the evidence for decline in muskrat populations and discuss possible goals and means to monitor them in the Yukon.

Do movements of snowshoe hares rise and fall with their cyclic populations?

Hannah A. Miller^{a,b}, Jenilee Gobin^a, Melanie R. Boudreau^c, Liam Horne^d, Lee E. Scholl^a, Jacob L. Seguin^e, Samuel Sonnega^a, Charles Krebs^f, Rudy Boonstra^g, Alice J. Kenney^h, Thomas Jung^{b,i}, Stan Boutin^d, and Dennis L. Murray^a

^a Department of Biology, Trent University, Peterborough, Ontario, Canada

^b Department of Environment, Government of Yukon, Whitehorse, Yukon, Canada

^c Department of Wildlife, Aquaculture, and Fisheries, Mississippi State University, Mississippi State, USA

^d Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada

^e Department of Natural Resource Sciences, McGill University, Montreal, Quebec, Canada

^f Department of Zoology, University of British Columbia, Vancouver, British Columbia, Canada

^g Department of Physical and Environmental Sciences, University of Toronto, Toronto, Ontario, Canada

^h Outpost Field Station, 211 Old Highway Road, Kluane Lake, Yukon, Canada

ⁱ Department of Renewable Resources, University of Alberta, Edmonton, Alberta, Canada

We tracked summer movements and activity of snowshoe hares (*Lepus americanus*) in southwestern Yukon, Canada, during their population cycle (2015–2022) to assess the primary drivers of movement. Hares exhibited variable movement and activity during the cycle, exhibiting increased home range size and higher daily displacement during low population densities. Males exhibited more dramatic increases in their home ranges (>3-fold), and had greater and more variable movement rates and time spent travelling than females. The ratio of predators to hares was highest at low hare densities when hares were moving most, and seasonal activity of hares seemed unrelated to that of predators. Differences between sexes imply that reproductive activities likely were the main driver of hare movement variation rather than food availability. These findings reinforce that, even in highly variable environments, potential rewards associated with successful mate search and reproduction may outweigh the risks associated with reproductive behaviour.

Where have all the berries gone?

Charles Krebs, Rudy Boonstra, Alice Kenney, Elizabeth Hofer, **Thomas Jung***, and Mark O'Donoghue
University of British Columbia, University of Toronto, Government of Yukon

Groundberries are a primary constituent in boreal food webs and key to many consumers, including humans and non-humans alike. Yet, systematic scientific monitoring of groundberries is rare. We monitored five berry species at Kluane and Mayo for 23 and 19 years, respectively. Results were mixed depending on the species; however, we report an overall decline in groundberries. We outline our results and point to the need to better understand the mechanisms driving the decline in groundberries, as well as the concomitant impact on the people and wildlife that rely on them.

First observation of the louse, *Tricholipeurus lipeuroides*, infesting mule deer in the Yukon

Maud Henaff¹, Terry Galloway², Emily Chenery³, Jane Harms¹

¹Department of Environment, Government of Yukon

²Department of Entomology, University of Manitoba

³Department of Physical and Environmental Sciences, University of Toronto Scarborough

Mule deer have dispersed into the Yukon relatively recently, within the last hundred years or so; however, ectoparasites of deer in the Yukon have not been well documented. Hides from salvaged and

harvested mule deer were examined as part of a survey for the presence of the winter tick. During routine examination of a hide from a mule deer buck in 2020, two females of the biting louse, *Tricholipeurus lipeuroides*, were detected. The buck had been harvested approximately 25 km north of Whitehorse. These specimens represent the first record of this species infesting mule deer in the Yukon.

Spring stoneflies: we're not waiting for the snow to melt!

Syd Cannings, Canadian Wildlife Service

Stoneflies are aquatic insects whose larvae live in cool, well-oxygenated streams. There are 81 species known from the Yukon; 17 of these can be called “spring stoneflies” that emerge as adults from streams in the early spring and crawl out onto snow shelves to find a mate. The adults can easily be identified to species with the help of a dissecting microscope; some of the common species are featured in this presentation. We are still just beginning to learn about their distribution in the Yukon—naturalists are encouraged to collect specimens into ethanol vials (provided by the speaker!).

Impacts of placer mine revegetation on songbird communities in central Yukon

Clara Reid 1 , Morgan Brown 1,2 and Chrystal Mantyka-Pringle 1,3

1 Wildlife Conservation Society Canada, Whitehorse, YT, Canada

2 Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada

3 School of Environment and Sustainability, University of Saskatchewan, Saskatoon, SK, Canada

In central Yukon, placer gold mining is a major industrial disturbance to riparian habitats. Mining activities fragment and clear coniferous forests and vegetated wetlands, leaving behind open-water wetlands and bare ground which revegetates primarily with shrubs and deciduous trees. Understanding the impact these disturbances have on wildlife and ecological integrity is necessary to make responsible land use decisions. We addressed this through studying songbirds, which are relatively easy to detect and a good indicator of ecological health. Our objective was to determine how songbird community composition changes across stages of revegetation, and compare this to riparian habitats representing a pre-mined state. During the 2023 breeding bird season, we surveyed birds using autonomous recording units and in-person point counts at 26 mined sites varying in age since mining, and 15 unmined riparian sites. We quantified disturbance and habitat types within 300 metres of survey stations using satellite imagery analyses and wetland inventories. In total, 68 bird species were detected, including five species at risk. Species richness was higher at mined sites (mean = 28, 95% CI = 25-30) than at unmined riparian sites (mean = 18, 95% CI = 14-21). We will share ongoing data analyses and plans for further fieldwork. We will also discuss this study's implications for cumulative effects management in the Dawson and Northern Tutchone regional land use plans.

Shiny Apps to support custom human footprint maps, mapping of upstream/downstream areas, conservation area design, and land planning.

Kim Lisgo*, Pierre Vernier, Mélina Houle, and Fiona Schmiegelow

BEACONS Project, University of Alberta and Yukon University

We have developed a suite of user-friendly Shiny App tools to support conservation and land planning. With **Disturbance Explorer**, users explore variable buffer widths on linear and areal human disturbances to produce custom intactness and human footprint maps including statistics such as total length of

linear disturbances and area disturbed that can be compared against thresholds, for example. The tool also reports the area burned and total area disturbed by wildfire and humans. The maps are used in subsequent Shiny Apps. **Hydrology Explorer** identifies areas upstream and downstream of areas of interest (e.g., mines, wetlands, conservation areas, etc) and reports on size and area intact.

Conservation Area Explorer supports the design of conservation areas (CAs). To define the CA, users can upload a polygon or select catchments. For the CA, the tool reports intactness, hydrologic connectivity, size relative to wildfire, and representation, and identifies areas upstream and downstream of the CA. All tools produce spatial layers that can be imported into GIS software.

Loss of ground squirrels from Kluane's boreal forest and why it matters.

Thomas Jung*, Dennis Murray, Piia Kukka, Stan Boutin, Alice Kenney, and Charles Krebs

Government of Yukon, Trent University, University of Alberta, University of British Columbia

Arctic ground squirrels (*Urocitellus parryii*) are likely both an ecological and cultural keystone species in the socioecological system of the boreal forest in southwestern Yukon. Their abundance rose and fell cyclically and in concert with snowshoe hare (*Lepus americanus*) and their predators until the late 1990s when their population crashed and did not rebound. We discuss our monitoring efforts and results, as well as possible reasons for the decline. We point to potential next steps to better understand plausible consequences of this unprecedented decline.

Poster Abstracts

Shifts in Birth Dates and Lambing Period in Dall's Sheep: Interannual Variation or Response to Climate Change?

Sonny Parker, Carmen Wong, and Jonathan Cromwell

Kluane National Park and Reserve, Parks Canada, Haines Junction, Yukon, Canada

Concern about low annual lamb recruitment since 2019 at Thechàl Dhâl' (Sheep Mountain) in Kluane National Park and Reserve in southwest Yukon, Canada, caused us to examine the temporal dynamics of lambing since the early 1970s. Survival of Dall's sheep (*Ovis dalli*) lambs depends on ewes giving birth when environmental conditions are optimal for spring plant emergence, ease of movement, and thermoregulation. Research suggests ewes may have some control over timing of parturition in response to weather conditions leading up to lambing, but less is known on the potential long-term shifts in Dall's sheep reproductive phenology because of climate change. In spring 2023 we surveyed lambing events systematically at Thechàl Dhâl'. We compared birth dates and lambing period duration with historic estimates from 1971 and 1972 by using binomial generalized linear models. We found the peak birth date was earlier by 4-5 days and the window of bulk lambing was narrower in 2023. This was indicated by significantly different regression slopes and narrower interquartile ranges (5.6 days versus 7.7 and 9.9) for 2023 data versus that in 1971 and 1972. It is not clear whether the differences we saw in 2023 truly reflect an earlier shift in reproductive phenology due to climate change or natural interannual variation. We consider our results preliminary and plan to continue more lamb surveys at Thechàl Dhâl'. If lambing is indeed occurring earlier and over shorter periods due to phenological shifts, lambs could be more vulnerable to variable spring conditions or predation.

Pass the Salt: Can Sheep be Lured from Highways? Do Diversionary Salt Licks near Thechàl Dhâl' work?

Sarah Chisholm, Jonathan Cromwell, Catriona Dempsey, Sonny Parker, Sean Pociuk, and Carmen Wong
Kluane National Park and Reserve, Parks Canada, Yukon

Dall's sheep (*Ovis dalli*) are known to frequent a short stretch of the Alaska highway corridor at the base of Thechàl Dhâl' (Sheep Mountain) near Kluane Lake. Sheep descend to the highway to lick salt from the roadbed, putting themselves and motorists at risk for vehicle-wildlife collisions. The purpose of this study is to assess the efficacy of diversionary salt licks adjacent to the highway corridor as a means to lure sheep away from the roadway. Our data comes from a network of camera traps deployed around the highway corridor to monitor sheep attendance on the highway, at diversionary licks, at control sites and at a natural mineral lick. Our results thus far are inconclusive but have highlighted seasonal and annual patterns of usage at both the salt licks and on the highway that warrant continued investigation.

Yukon Youth Conservation Corps (y2c2)

Lauren Wonfor, Department of Environment, Government of Yukon

The Yukon youth conservation corps (y2c2) is a 32-year-old program run by the Department of Environment. The program hired 16 Yukon students each summer to work on a variety of projects around the territory that are conservation focused. In 3 different crews, the students travel to many communities assisting projects and lending people power to Environmental initiatives. This poster highlights the projects that have happened in the past couple of years where students assisted researchers in scientific endeavors. We hope this showcase is an opportunity for the community to celebrate the work being done, inspire new partnerships and help in spreading the word about this excellent program.

Assessing disturbance and climate related changes within two caribou herd ranges in central Yukon

Maegan Elliott and Fiona Schmiegelow

University of Alberta and Northern Systems Conservation Co-Lab, Yukon University.

The Northern Tutchone region in central Yukon, Canada, faces pressure from human disturbance, primarily associated with quartz and placer mining and exploration. As the Northern Tutchone region awaits regional land planning it experiences an uncoordinated approach to development without complete human disturbance or cumulative effects baseline information, which may influence disturbance sensitive species such as caribou. This ongoing Master's research project centers on two caribou herds within the Northern Tutchone region and tracks how human disturbances have changed their ranges over time. The project involves creating a time series of disturbance maps of the ranges of the Clear Creek and Klaza caribou herds within the Northern Tutchone region. Local knowledge interviews and previously collected traditional knowledge provide further context regarding changes on the landscape and within the caribou herds over time. Caribou collar data from the Yukon government will be used to evaluate how the caribou have responded to changes on the landscape from human disturbance, wildfire, and vegetation shifts. This research will inform and support regional land use planning and monitoring programs, and the caribou-disturbance analysis will inform caribou conservation more broadly.

The best watering hole in town: urban bats guide to dining out in Whitehorse.

Piia Kukka*, Hannah Miller, Julie Thomas, Fiona Schmiegelow and Thomas Jung

Government of Yukon and University of Alberta.

In the boreal forest of northwestern Canada, aquatic habitats are important drinking and feeding habitat for the endangered little brown bat (*Myotis lucifugus*). We evaluated pond use by little brown bats along an urban-rural gradient in the city of Whitehorse, Yukon. We found that ponds are important habitat for bats, as 98% of the ponds we sampled had some bat activity. There was less bat activity at ponds surrounded by additional open aquatic habitat, and we suggest that they may be too exposed for bats at high latitudes where nights are short and not completely dark. Isolated ponds that are darker, such as those surrounded by forest, may be particularly valuable for bats in high latitudes that exhibit risk-sensitive foraging.

Monitoring an alpine mammal at risk due to climate change: the collared pika

Alexandra Heathcote*, Piia Kukka, Shannon Stotyn, Carrie McClelland, Caitlin Willier, Kai Breithaupt, Alice McCulley, Lolita Hughes, Paul Boyce, and Thomas Jung

Government of Yukon

Collared pika (*Ocotohna collaris*) occur largely in Yukon and Alaska, making the Yukon a global steward for the species. They are a cold-adapted species that evolved in the unglaciated regions of Beringia. Climate change is a threat to the species and, accordingly, they are listed as Special Concern in the federal Species at Risk Act. Some of the postulated mechanisms by which climate is affecting collared pikas include increased summer temperatures, persistent spring snow fall, shrubification, and rain on snow events. We outline a monitoring protocol underway that covers latitudinal and altitudinal gradients of collared pika in the Yukon.