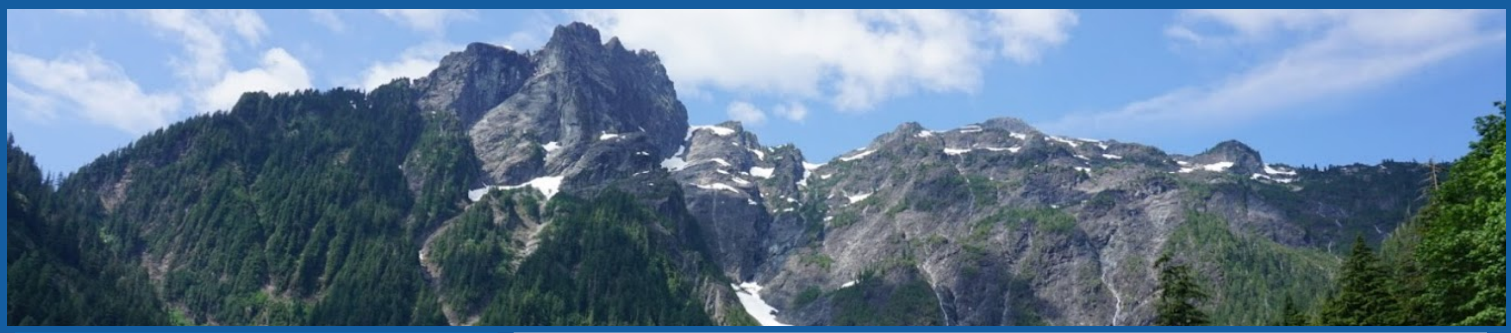
VOLUME 4 ISSUE 3 FALL 2021

THE WILDLIFE SOCIETY

Leaders in Wildlife Science, Management and Conservation

British Columbia Chapter



IN THIS ISSUE

President's Message

Hello BCTWS Members!

At this point it goes without saying that the past two years have been challenging for everyone. We continue to struggle in our battle with COVID, First Nations have shed more light on the devastating impacts of residential schools on their communities and families, and climate change has put significant stress on our ecosystems in the form of record heat waves. However, I've seen tremendous leadership by wildlife professionals in addressing these challenges.

Our members are actively involved in research using the COVID closures as an opportunity to show how human activity influences wildlife species. We are actively engaged in mitigating the impacts of climate change on ecosystems. We are leading the way in working with First Nations on finding ways to braid First Nations' management and knowledge with western management and knowledge. I believe now is an exciting and rewarding time to be a wildlife professional, and that society will be looking to us for leadership in addressing increasingly complex management challenges.

With BCTWS, we have an exciting fall ahead of us with three online webinar sessions. We will be having two "wildlife career" sessions on October 4th and 12th. The first session will provide our members the opportunity to hear from and ask questions of early career biologists in academia, government, and the private sector. The second session will focus on strategies and tactics to help you with applying for jobs with the government of British Columbia. We are also planning a session on "Indigenizing Wildlife Management" that will feature some excellent speakers with exciting and novel ideas on how to improve upon the "North American model" of wildlife management. Stay tuned for more details! *(continued on page 2)*

(President's message continued) All of this and we are actively planning an annual conference for spring 2022. However, we need your feedback on whether an in-person meeting is something you'd like to participate in, so we sent out a survey on Sept. 19th to help us gather your opinions. We realize there remains a lot of uncertainty around COVID, but conference planning is a significant amount of effort, and we want to gauge your willingness to participate before we invest significant energy into it. Your feedback is very much appreciated.

Speaking of surveys, we'd like to thank all of you that responded to our members' survey. We received 38 responses, however, it's not too late to provide your input, as we've extended the response period to Sept. 30th.

I'd like to close by thanking the current BCTWS Executive for their hard work and positive and engaging attitude over the past year. It has been a true pleasure to work with them; they've made my job incredibly easy. Please give them a shout out next time you see or talk to them!

As always, don't hesitate to send us an email (tws.bc.chapter@gmail.com) with any questions, concerns, and ideas, or to find out more about how to get involved with BCTWS.

Thank you and take care!

Tyler Muhly
President, BC Chapter of the Wildlife Society

Together For Wildlife

It has now been just over a year since the Ministry of Forests, Lands, Natural Resource Operations and Rural Development released the Together for Wildlife strategy, which sets us on a path to improve wildlife and habitat stewardship in BC. This strategy was the culmination of over 2 years of engagement with Indigenous peoples, provincial government staff and more than 60 stakeholder groups to understand what is important to British Columbians and specify actions to address priorities for wildlife and habitat stewardship. Following the fall 2020 election, the current government reinforced their commitment to implementing Together for Wildlife.

Together for Wildlife is centered around a vision that wildlife and their habitats thrive, are resilient, and support and enrich the lives of all British Columbians. The strategy lays out five goals and 24 actions to achieve this vision. Although focused on terrestrial, not “at risk” wildlife (i.e., keeping common species common), this strategy will be aligned with stewardship of aquatic species and species at risk, to embrace our principle that all living things are connected and integrally dependent on each other.

In order to be successful, Together for Wildlife must be delivered in true partnership with Indigenous governments. Although this is the focus of Goal 5 (collaborative wildlife stewardship advances reconciliation with Indigenous governments), opportunities for collaboration span all components of the strategy. The First Nation – BC Wildlife and Habitat Conservation Forum was established in December 2018 to work with the Province on drafting the strategy and proposing *Wildlife Act* amendments. The Forum, which is comprised of participants from more than 40 BC First Nations, is now supporting implementation of many aspects of the strategy.

During the first year of implementation, stewardship projects were successfully delivered across all regions of the Province to make a real difference for wildlife as well as support local economies. This was all despite significant challenges presented by the COVID-19 pandemic. Projects ranged from wildlife inventory for evidence-based decisions, to on-the-ground habitat restoration. Many of these projects were delivered in partnership with Indigenous Nations and stakeholders and we will continue to build and strengthen these partnerships in future years.

Additional highlights from our first year include the establishment of a Minister’s Wildlife Advisory Council to advise the Minister and oversee Together for Wildlife implementation; revamping data systems to better collect and share wildlife and habitat information; completing a comprehensive review of the effectiveness of land designations that contribute to conservation under various statutes; and improving management of Conservation Lands through additional resources for management planning, policy development, and on-the-ground enhancement.

We would like to express our gratitude for the commitment of so many British Columbians to wildlife and habitat stewardship in our Province.

To learn more, please visit www.gov.bc.ca/togetherforwildlife.

Tara Szkorupa, Wildlife and Habitat Branch

Ministry of Forests, Lands, Natural Resource Operations & Rural Development

Cougars & Wildfire

How cougars and field technicians respond to BC's southern interior wildfires

By Shannon Werden, Cougar Technician & Siobhan Darlington, PhD student UBC Okanagan

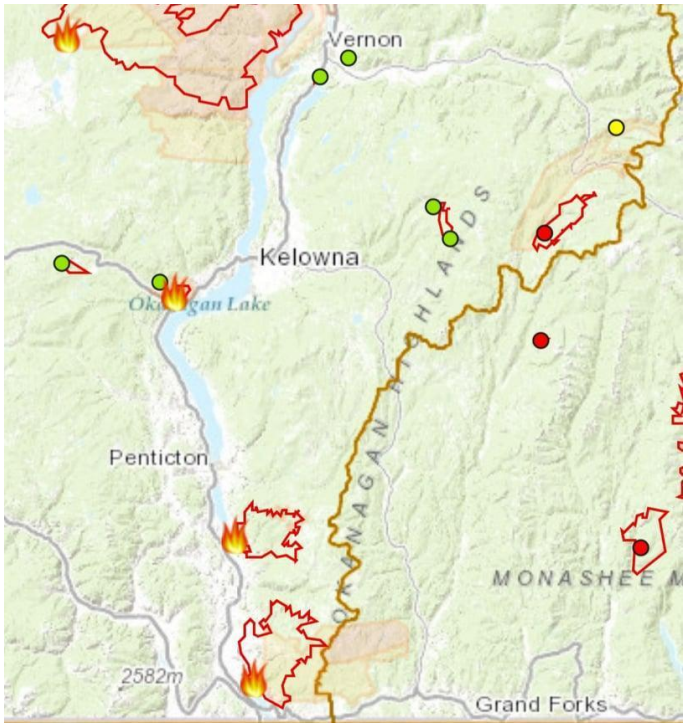
Field technician Shannon Werden hiking up to investigate a cougar kill in the central Okanagan.

The Southern BC Cougar Project team began their second summer field season in May 2021 collecting valuable data on cougar diet and habitat use across the southern interior. The project is lead by PhD student Siobhan Darlington, Dr. Adam Ford, and Dr. Karen Hodges at the University of British Columbia Okanagan (UBCO) in collaboration with the Ministry of Forests Natural Resource Operations and Rural Development (FLNRORD) in Penticton and Cranbrook. The study builds on the findings of the Southern Interior Mule Deer Project (SIMDeer) to examine the role of cougar predation of declining mule deer and the underlying role of habitat characteristics such as roads, cutblocks, and burns that may facilitate cougar predation of deer.

This summer, field technician Shannon Werden experienced first-hand some of the challenges of studying a wide-ranging species during wildfire season. Shannon is a graduate of Selkirk College and current B.Sc. student at the University of Northern British Columbia.

In the third week of June, temperatures hit record highs across the interior – causing an unprecedented heat wave and setting the stage for a fiery field season. Before setting out at 5:30 am for a day of hiking and investigating cougar kill sites, Shannon would fill her water bottle with Gatorade tablets, ice cubes, lather on the sunscreen and sport a wide-brimmed hat to stay cool. At the peak of the heatwave, field days were gladly traded for office days in airconditioned spaces. In the spring and summer many cougar kills occur near or within open cutblocks, offering little solace from the heat. Cougars increase their kill rates compared to winter because the meat spoils faster and the scent attracts scavengers. Shannon recalled discovering the remains of a cougar-killed adult mule deer in the middle

of a cutblock. “[It] was covered in thousands of maggots, with flies and mosquitoes buzzing all around. That kill was definitely the ripest of the summer, and combined with the 40°C + heat, the smells, and the thousands of insects, it made for a noteworthy day!”. As the summer progressed, temperatures above 30 degrees C remained as smoke rolled in and the team continually checked the BC Wildfire Dashboard for new fires in the study area.



This season over 1,500 forest fires spread across British Columbia burning over half a million hectares. In comparison, 637 fires burned 15,000 hectares in BC in the 2020 fire season. The Brenda Creek, Mt Law, Thomas Creek, Nk’Mip and Winnifred Creek fires all overlapped GPS-collared cougar territories. Cougar territories range from 150 to 700 km^2 in males and from 31 to 300 km^2 in females. One cougar in particular, 3-year-old female “C7”, observed 30% of her territory consumed by fire this summer. C7 continued to make kills near fire boundaries, however due to area restrictions in place and safety concerns the team was unable to investigate. Continued monitoring will allow us to evaluate how C7 responds to such drastic habitat alteration from fire, and whether her diet and predation patterns will change post-fire. A study in California by Jennings et al. (2016) found that 24% of cougar kills occurred in burns 0-6 years old while 70% occurred in unburned areas. Jennings surmised that increases in wildfire frequency and severity in California will negatively impact cougar populations over time. Whether this is the case for cougars in British Columbia is not yet known, however our research will contribute valuable data to understanding the dynamics between cougars, mule deer, and wildfire for the first time in British Columbia.

For more information on the Southern BC Cougar project visit our website www.bccougarproject.weebly.com or contact Siobhan Darlington at s.darlington@ubc.ca

C7 at a kill site in the spring of 2020 prior to wildfires occurring in her territory.

Coexistence & Camera Traps

Interactions between wildlife and anthropogenic pressures using camera traps

Large bodied terrestrial mammals may sometimes segregate from anthropogenic activity, such as recreation or forest harvest. However, these trends vary widely in space and time, and by region and species. Additionally, methods of investigating these phenomena are similarly varied, but the immense utility of camera traps has recently been highlighted given COVID-19 lockdowns prevented many wildlife researchers from continuing their work. By collecting long-term continuous data on both wildlife and human activities, camera traps offer a promising method of exploring how wildlife are impacted by anthropogenic pressures, especially throughout periods where public access is restricted.

In the summer of 2019, I began deploying an array of 58 camera traps throughout the adjacent landscapes of Golden Ears Provincial Park and Malcolm Knapp Research Forest in southwestern BC (~40km east of Vancouver). Given Golden Ears is one of the most heavily recreated parks in BC, and Malcolm Knapp hosts a variety of forest harvest activities, my goal was to investigate how large-bodied terrestrial mammals respond to human activity in these spaces. My monitoring period ran until September 2020, meaning most cameras were deployed for approximately 10 months before COVID-19 lockdowns took place in early spring of 2020. During this time, substantial decreases in recreational activity were observed as a result of the COVID-19 lockdown. However, forest harvest activity in Malcolm Knapp continued, offering an interesting “control” on recreation throughout the study area. Additionally, the cameras detected roughly 20 different mammalian species, including the possibly threatened, but critically understudied western spotted skunk.

My analyses of the camera trap data have focused on identifying anthropogenic factors that influence wildlife spatiotemporal distributions at the weekly scale, while controlling for environmental variation. Studying six focal species (cougars, black bears, black-tailed deer, snowshoe hares, coyotes, and bobcats), I am exploring how the probability of detecting these species at each camera location in a given week changes with fluctuating levels of weekly anthropogenic activity (e.g. recreationists, harvest vehicles). I am also investigating whether the detection

rates of these species changed during the closure period. I've found that bobcats may be negatively impacted by large quantities of hikers, while black bears may be negatively impacted by vehicles. Likewise, detection rates of cougars appeared higher during the closure in Golden Ears. However, no other relationships have emerged between these species and anthropogenic activity, or the closure period. In the coming months, I will be exploring how these species might be instead segregating from anthropogenic disturbance at finer temporal scales (i.e. altering diel activity patterns), therefore facilitating a mode of coexistence between wildlife and anthropogenic pressures.

Overall, I am hopeful that this research will prove helpful in guiding park management, while offering anecdotal accounts of how some species might be able to coexist with human activity by using spaces or times where humans are not present. Such research is pressing given the rapid expansion of human activity into wildlife habitats, especially with respect to recent increases in recreational activity. It's my hope that this work can help mitigate human impacts on the natural world as much as possible to help park managers meet the dual-mandate of both conserving wildlife and promoting recreational opportunities.

Funding for this project was provided by the University of British Columbia Faculty of Forestry, BC Parks, and the BC Parks Foundation. Tremendous support in fieldwork and data management has been provided by many members of my lab, as well as several volunteers.

Micheal Procko
M.Sc Forestry Student | Wildlife Coexistence Lab
Department of Forest Resources Management
University of British Columbia

For more information follow the above QR code!

Goat & Sheep App

B.C. Mountain Goat and Wild Sheep Natal App

This effort started in support of using Citizen Science to fill current knowledge gaps related to the Province's historic wildlife information, particularly where it related to regionalized understandings of parturition timing and natal ranges. With the support of the Rocky Mountain Goat Alliance and the Wild Sheep Society of BC, the Province's smartphone app and web form has helped us harness some of the collective wealth of observations that wildlife conservation stakeholders, the public and hunter-conservationists make every day. As wildlife professionals, members of the BC Chapter of TWS can offer significant benefit to building this dataset with unique and reliable data points. Participation will be the key to success in getting new/current natal location and timing information, that we hope to use to calibrate our longer-standing wild sheep and mountain goat parturition and natal range data. The dataset has the potential to immediately help regional biologists conserve critical habitats and monitor the timing of lambing/kidding in a world with rapidly changing climate and environmental conditions.

We are now, 1 year into our Mountain Goat and Wild Sheep Natal app roll-out, and there have been several unforeseen benefits to our regional understandings of mountain goat and wild sheep habitat use and distributions. With this submission to the BCTWS, I wanted to offer you all an update about the purpose of the app, and to also introduce it to those of you who may not have heard about it yet. You can access this link to the active the ministry webpage: https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/wildlife/wildlife-health/wildlife-health-matters/wild-sheep-health/bc-goat-sheep-natal-app.

Bill Jex, Wildlife and Habitat Branch
Ministry of Forests, Lands, Natural Resource Operations & Rural Development

Spring Conference

It's not too late! Have your voice heard

The BCTWS is in the process of planning the 2022 Conference. Our first ever conference was held in Kelowna, BC and was a resounding success. With pandemic restrictions easing and vaccination rates rising we are eager to bring folks together for a second in person conference/meeting. The 2020 conference was planned for Prince George, BC and was cancelled due to the pandemic restrictions. Our intent is to host the next in-person conference in Prince George, spring 2022.

There are still unknowns about what the pandemic situation might look like in 2022 and what the general comfort level is with regards to in-person meetings. As a result we want to hear from BCTWS members and other wildlife professionals, students, and folks on what you want to see in a conference at this time. Please complete this short survey to help direct the 2022 Conference planning efforts. We encourage you to share this widely with your network of other wildlife professionals that may consider attending the BCTWS conference. This survey consists of only 5 questions, so should take only a few minutes. Please complete by Sept 30th to have your voice heard!

Click here: https://forms.gle/guAfDuNE1edJFEeE9

Literature & Wild News

The BC SPCA applauds the province's decision to temporarily ban rodenticides

https://spca.bc.ca/news/bc-spca-province-temporary-ban-rodenticides/

Meet the 'park warriors' whose mission is to call out wildlife feeding in Vancouver

https://www.cbc.ca/news/canada/british-columbia/meet-the-park-warriors-whose-mission-is-to-call-out-wildlife-feeding-in-vancouver-1.6189949

Hey!

Do you have a story you'd like to share with members of BCTWS? In each issue we like to share research, news, or personal experiences with wildlife or as a wildlife professional.

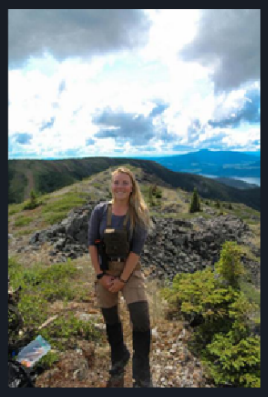
Email Tws.bc.chapter@gmail.com with the subject "Newsletter Submission" to share a complete article or if you have an idea that you would like someone to write. Please include as much information as possible for the latter.

Thank you and we look forward to all the great stories to come in the following issues!

Jobs & Opportunities

Dr. Everett Hanna, Erin Baerwald, Cayden Olstad, Mark Wong, Tiffani Harrison, Connor Fraleigh

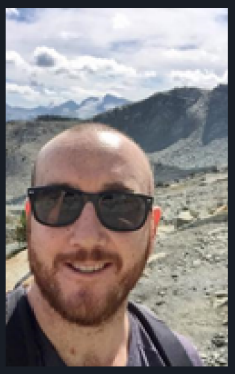
Oct 4| 11:30 - 1pm PDT
Zoom| Free admission



WILDLIFE CAREERS

LANDING YOUR DREAM JOB

Email tws.bc.chapter@gmail.com with Subject "Register for Oct. 4th Session" For details and to reserve your spot



THE WILDLIFE SOCIETY
British Columbia Chapter

A PANEL DISCUSSION BY EARLY CAREER PROFESSIONALS

Oraganized by the BC Chapter of The Wildlife Society

THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Forestry

WildCo

Two postdoc positions in Quantitative Wildlife Ecology

Wildlife Coexistence Lab, University of British Columbia

The Wildlife Coexistence Lab (WildCo) at the University of British Columbia seeks 2 postdoctoral researchers in quantitative wildlife ecology to work as part of a Canada Research Chair program in Terrestrial Mammal Conservation, under the guidance of Principal Investigator Dr. Cole Burton, with opportunities for strong collaboration with researchers and practitioners in government agencies and non-government organizations.

The research will focus primarily on developing, testing, and applying methods for the analysis of camera trap data to inform management of terrestrial mammal habitats and human-wildlife interactions. Specific research directions will be developed with the PI and project partners and may include:

- Developing and applying multiscale, spatial-temporal models of multispecies responses to habitat disturbances, human activities, and management interventions.
- Investigating thresholds in wildlife responses to anthropogenic stressors.
- Estimating the impacts of industrial land uses (e.g. forestry, oil and gas, mining) and/or outdoor recreation (e.g. hiking, mountain biking, off-road vehicles) on mammal community structure and species interactions.
- Combining and/or comparing inferences from camera trap data with those from other forms of knowledge (e.g. aerial surveys, harvest records, citizen science observations, Indigenous knowledge, expert opinion).
- Integrating wildlife monitoring into a framework for management decisions (e.g. structured decision making).

The research will capitalize on existing camera trap datasets in western Canada (Alberta and British Columbia), spanning multiple landscapes and years of sampling. An overarching objective will be to inform management decision-making on two pressing challenges: a) woodland caribou recovery, including management of habitat and predator-prey interactions, and b) increasing outdoor recreation in and around protected areas.

Desired qualifications include:

- Ph.D. in animal ecology or related field.
- Strong writing skills and evidence of research productivity, including lead author of recent peer-reviewed publications.
- Advanced skills in quantitative analysis, including methods such as Bayesian hierarchical models, generalized linear or additive mixed models, occupancy modelling, time-series analysis, simulation, structural equation modelling, decision analysis.
    - Proficiency using R statistical software is required.

- Advanced skills in GIS, landscape analysis, and data management for open science.
- Experience conducting research on terrestrial mammals, including familiarity with field data collection.
- Strong communication skills and desire to contribute to a stimulating lab environment, including mentorship of graduate and undergraduate students and liaison with non-academic partners.
- Passion for translating science into conservation action.

The position will start as soon as possible and be based in the Faculty of Forestry at UBC's Vancouver campus (start date negotiable and remote working options may be considered if eligible to work in Canada). Salary level anticipated at $55,000 CAD + benefits (to be confirmed; information on benefits available at www.postdocs.ubc.ca). Funding is available for 1 year, with potential for multi-year renewal.

The successful applicants will join a vibrant lab group and have the opportunity to mentor graduate and undergraduate students, and contribute to other WildCo projects and the emerging WildCAM network (wildcams.ca). They will also be part of the UBC's Biodiversity Research Centre and have opportunity to be involved in other exciting initiatives, including the new Interdisciplinary Biodiversity Solutions cluster (IBioS).

Applications should be submitted as a single pdf attachment by email to wildlife.ubc@gmail.com, with the subject "WildCo postdoc 2021" and file name "LastName.FirstName.WildCo2021.pdf", and should include: 1) 1-page cover letter stating your interest and key qualifications, 2) CV including contact information for 3 references, and 3) 1-3 example publications.

Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as an Indigenous person.

Applications will be reviewed as they are received and will continue until suitable candidates are identified. We regret that we will not be able to personally respond to all applications.

Thank You BCTWS Supporters

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