



Southern BC Cougar Project

BY THE NUMBERS:

- 50 cougars collared
- 12 adult mortalities
- 23 litters documented
- 30 kittens tagged
- 1,350 clusters investigated
- 16 prey species identified



The oldest animal currently monitored on the project is C39 (above and right).

This female was collared in April 2022 in the West Okanagan and is now approximately 10 years old based on its teeth wear and gum recession.

Adult monitoring

To date we have fit GPS collars on 50 cougars (34F, 16M). We have collared 21 cougars in the West Okanagan (15F, 6M), 14 in the Boundary (9F, 5M), and 15 in the Kootenays (10F, 5M). We have also completed 20 collar replacements for a total of 70 captures.

We have documented 12 mortalities to date (6F, 6M). Human-caused mortalities include 4 hunter harvests, 2 rodenticide

poisonings, 1 incidental snaring, and 2 killed due to human conflict. Natural-caused mortalities include 2 cougars that were killed by other cougars, and 1 cougar that was killed by an elk.

There are currently 25 cougars that are alive with working collars. We are currently monitoring 8 adults in the West Okanagan (7F, 1M), 9 in the Boundary (7F, 2M), and 6 in the Kootenays (5F, 1M). There are also 2

adults (1F, 1M) that are currently residing in Washington and Idaho.

Capture efforts are now focused on maintaining at least 7 collared individuals in each study area mostly through collar replacements but also by collaring new individuals.

Survival and reproduction rates of these collared animals will be used along with local density estimates to monitor population size and trend.



Kitten monitoring

To date we have monitored 53 offspring from 28 litters of GPS-collared females. This total includes kittens and subadults that were with the female at the time it was collared plus kittens that were born during the time the female was collared. We have monitored 26 offspring in the West Okanagan, 11 in the Boundary, and 16 in the Kootenays.

Of those 53 offspring, 22 are confirmed or

suspected to have died before they reached dispersal age of 1-2 years. Known mortality causes include wildfire, predation by black bears, infanticide by other cougars, abandonment by the female, becoming orphaned due to the female being killed, and being killed due to human conflict.

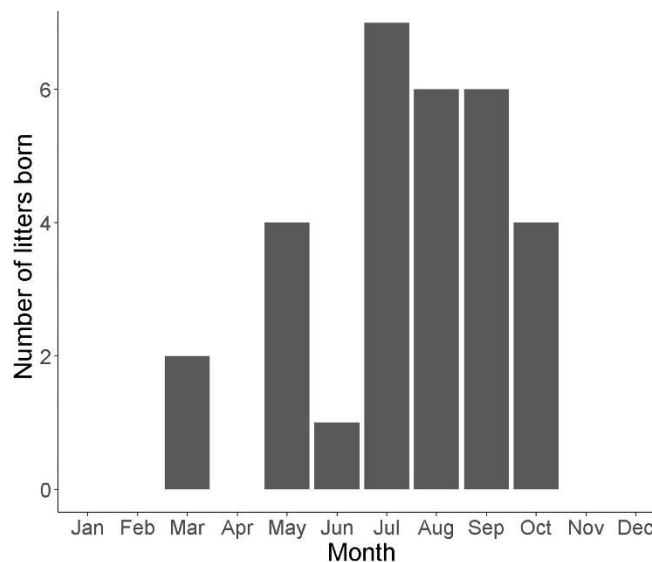
We have documented 23 newborn litters to date (10 in the West Okanagan, 6 in the

Boundary, and 7 in the Kootenays). Of the 34 females collared, 12 have had a single litter, 4 have had 2 litters, and 1 has had 3 litters during the time they have been monitored.

We have documented litters being born from March to October with a birthing pulse between July and September (see graph below).

We tagged 14 of those litters when the kittens were 1-month-old, but the other 9 litters died prior to that age. We have tagged 15 kittens in the West Okanagan (7F, 8M), 5 in the Boundary (5M), and 10 in the Kootenays (6F, 4M).

We will continue to monitor reproductive rates and kitten survival by installing remote cameras at the females' kills. We will also deploy GPS collars on tagged kittens just prior to them dispersing so that we can monitor them into adulthood.



Results from the 2021/22 West Okanagan inventory will be available soon. We are excited to announce that we will be inventorying the Boundary study area in winter 2023/24. More information to come in the fall update.

Visit our website to read previous project updates, blog posts, news articles, listen to interviews, and watch webinars:

bccougarproject.weebly.com



Have a question or cougar sighting for the project team? Contact us at: bccougarproject@gmail.com



Looking to volunteer, request a guest presentation, or learn more about related research projects? Contact Lab Manager Chloe Howarth at: chloe.howarth@ubc.ca

Cluster investigations

To date we have investigated 1,350 clusters of cougar GPS locations (702 in the West Okanagan, 234 in the Boundary, and 414 in the Kootenays) and have found cougar kills at 888 of those clusters.

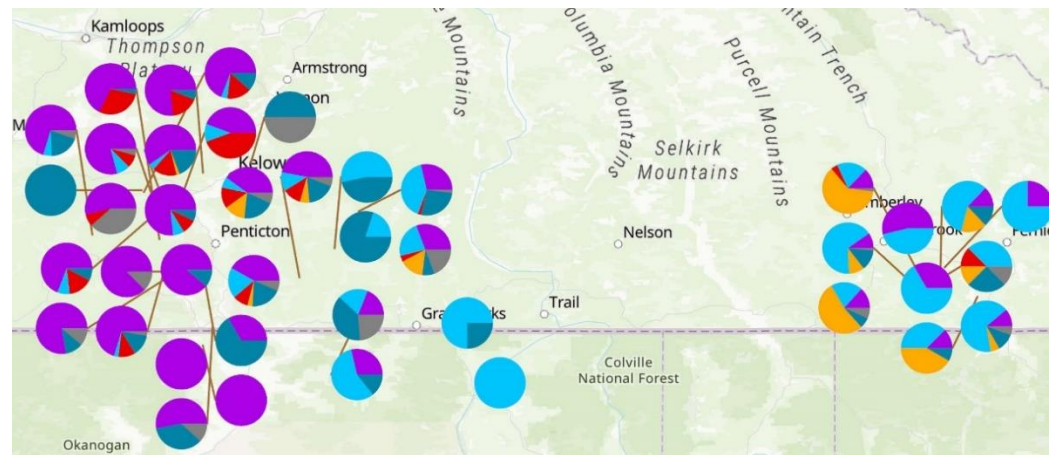
The most common prey species are mule deer and moose in the Okanagan, white-tailed deer and mule deer in the Boundary, and white-tailed deer and elk in the Kootenays (see map below).

Other prey species documented include coyotes, beavers, racoons, porcupines, snowshoe hares, grouse, magpies, livestock, and other cougars.

We would like to give a shout out to Ashley Giovannini (advised by Dr. Karen Hodges at UBCO) and Shannon Werden (advised by Heather Bryan at UNBC) for completing honours theses using data collected at cougar

clusters. Ashley examined the arrival times and interactions between scavenging birds at cougar-killed carcasses while Shannon examined small prey in cougar diet identified from scat samples using DNA metabarcoding. Results from these projects will be available soon.

Cluster site investigations continue opportunistically with the help of volunteers and students.



Proportion of cougar diet > 8 kg

- Mule deer
- White-tailed deer
- Moose
- Elk
- Deer sp.
- Other



On the map above, each pie chart represents the diet of an individual cougar placed in the center of its home range.



Forest Enhancement Society of British Columbia



BRITISH COLUMBIA CONSERVATION FOUNDATION



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Emily Matthew

Reese Embree



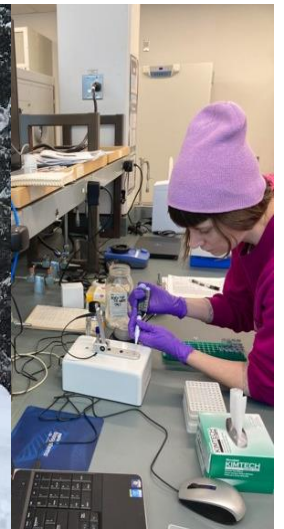
Cynthia Kiepinski



Thomas Koehle



Kieran Braid



Shannon Werden