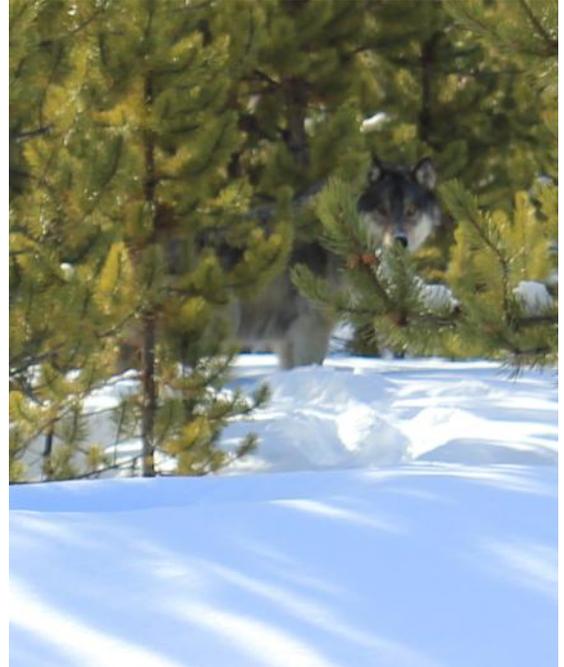




Unraveling Secrets ... Wolves and Wild Horses

Volume 2, Winter-14/15

The ultimate goal of this research and outreach project is to better understand wolf feeding ecology as a means to foster coexistence and preservation of wolves in BC's Brittany Triangle and Nemaiah Valley of the Chilcotin region. The Brittany is extremely unique in that it is home to wild horses, as well as other large ungulates such as moose and deer. The area also hosts multitudes of Sockeye and Chinook salmon that migrate through rivers and tributaries during their annual run, often referred to as "super salmon" for the epic journey these fish make inland. While winter is not the expected season for salmon to be on a wolf menu, there are documented cases elsewhere in North America of wolves digging up frozen fish carcasses where an earlier spawn has left an abundance of protein.



A wild wolf of BC's Chilcotin peers from behind greenery. Image courtesy of M.J. Baptiste.

Field Notes

Winter IS the best season to find tracks, which ultimately helps lead researchers to locate more scat and hair to be used for sampling. Backtracking can also lead to an old kill-site, which is a very valuable observation when trying to learn what wolves are eating. Backtracking is done to avoid pushing the wolves forward and/or causing them to change their behaviour in reaction to the researcher. Depending on the age of a carcass when it is found by a researcher, it may not be possible to learn whether the prey animal was killed by wolves or scavenged upon. Sawing through the femur bone of a carcass also helps researchers to understand more about the nutritional health of an animal before it died. Bone marrow from a malnourished animal is noticeably different from that of a well-fed healthy animal.



A PERSONAL GLIMPSE...researchers' notebook

I am back in the Brittany Triangle for my 2nd winter, this time the only human for as far as I can see, hear, smell or yell. The Wilderness has my full attention and the wolves keep showing me new things.

The snow is keeping me strong. It is past my knees in some sections and soft. The wolves use the tracks of the moose and wild horses. I am sure they would use my tracks too, but instead I am using theirs! I am able to observe various gait patterns they have left. I imagine the mood and speed at which these wolves have travelled; walk, run, rest, bound, play!

In the meadows not far from the second research station I located a well-used wolf path where there had been a variety of menu items sampled: i) muskrat (the wolves had attempted to dig up a very large musk-rat push-up but were unsuccessful), ii) old eggs that had been laid in the long grass during warmer months and abandoned (likely goose eggs), and iii) a wild horse.

I am backtracking a family of seven wolves. In my time here so far I have come across 2 wolf kills. The first was a deer, likely consumed the night before I found it. There had been howls at dusk. The second was a wild horse. I love knowing that the wolves are full and satiated, but I also feel for the individuals that have fallen as prey... what was their story?

It troubles me at first to think this way. But the longer I contemplate, the more comfort I find in knowing that many more ungulates would suffer a slow death of starvation or disease if wolves were not keeping the landscape in balance.



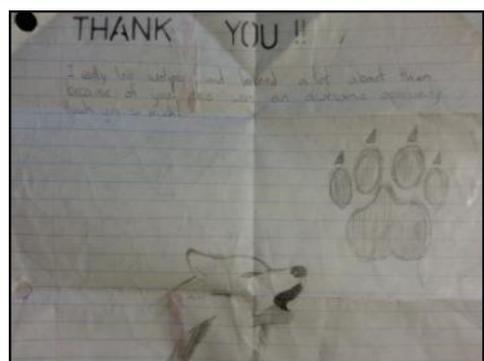
A Nemiah Valley wolf is picked up on a remote camera. This wolf is one of three that travels through a property where horses are boarded.

In the words of Aldo Leopold :

"I have lived to see state after state extirpate its wolves... In the end the starved bones of the hoped-for deer herd, dead of its own too-much, bleach with the bones of the dead sage, or molder under the high-lined junipers. I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer."

WAI Research Wish List

- Gas Cards for travel to research & outreach
- Food Cards to help with groceries while in "The Field" or on "The Road"
- Reliable 4 wheel drive vehicle



Note from student saying "THANK YOU!! I really love wolves and learned a lot about them because of you. It was an awesome opportunity, thank you so much!"





Full moon winter camp-out in the Brittany Triangle.

Field Updates

Our focus for this project is on learning as well as educating about large carnivores, and working with other groups and affected local people to promote coexistence among humans, livestock, wolves, grizzly bears, wild horses, and ultimately biodiversity.

SUMMARY OF FINDINGS WINTER 2014/15

SAMPLE COLLECTION

Total **Hair** samples collected during field reconnaissance = 25

Moose = 6

Wolf = 10

Horse = 2

Beaver = 2

Rabbit = 1

Deer = 5

Total **wolf scat** samples collected = 22

DIRECT OBSERVATIONS of Kill/Scavenge sites in Brittany: 2 deer, 1 wild horse

REMOTE CAMERAS SET UP = 5

CHANGES: Last fall WAI learned that due to the Supreme Court Land and Title decision, the Xenigwet'in had resumed all rights to the ownership and use of two trap-lines on their land. At the time of this field update, one of the trap-lines that was being used last year to trap wolves has not been in use this winter season. There is not a large amount of trapping that occurs within the research area, however, it is permitted in some areas and does happen.

NEXT STEPS...

- Autoclave and analyse all scat samples (Fall 2014 & Winter 2014/15)
- Prepare next written report based on data analysis, including updated maps
- Start preparing interview questions
- Prepare all hair samples for isotope analysis at the University of Saskatchewan, Department of Soil Sciences. Distinguish "prey isotope signatures" if possible and compare with wolf hair samples.



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DEFINITION CORNER

Isotope : When two atoms of the same chemical element contain a different numbers of neutrons in their nuclei, they are called **isotopes**.

The feature that characterizes a chemical element, which defines its chemical nature and makes, e.g., carbon behave differently from sulfur is the number of protons in its nucleus which is matched by the number of electrons surrounding the nucleus. However, since the additional neutron in the nucleus of an isotope has increased its atomic weight by 1 from 12 to 13 amu, it is called *carbon-13* (^{13}C). So, in summary, isotopes of a given element contain the same number of protons (and electrons) and hence share the same chemical characteristics but they contain different numbers of neutrons and are therefore of different atomic mass.

Isotope analysis is a research method that determines the identification of an **isotopic signature(s)**, which is the ratio and distribution of certain stable isotopes and chemical elements within a tissue sample or other chemical compound. This unique signature can be applied to a food web to make it possible to draw direct inferences regarding diet, trophic level, and energy flow. Variations in isotope ratios from **isotopic fractionation** are measured using **mass spectrometry**, which separates the different isotopes of an element on the basis of their **mass-to-charge ratio**.

References: [Stable Isotope Analysis General Principles and Limitations](#)—Academia.edu and Wikipedia

Outreach along the way

On top of the field work WAI engaged in this winter, researcher and educator Sadie Parr also provided a great deal of educational outreach along the way. Outreach included [school programs](#), [a public presentation about WAI's research project](#) (well-attended by the local Williams Lake ranching community), and a presentation to the Tsilhqot'in Land Stewardship Council. Along the way, people of all ages are learning more about wolves, their critical role in nature, and the challenges they face in Canada.

At right: Wolf Awareness supporter Racquel Alexander knows how important wolves are and how sensitive they are too. Racquel made this poster at home to show the world how she feels about wolves. Thank you for using your voice Racquel!



Thanks for choosing to

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Together we CAN make a difference!

Web: www.WolfAwarenessInc.org

Facebook: facebook.com/groups/wolfawareness/

Email: WolfAwareness@gmail.com

Twitter: [@wolfawareness](https://twitter.com/wolfawareness)

