

Wolf recovery in Washington



Samuel K Wasser, Director
Jennifer White, PhD






- Wolf pack territories
- WA wolf recovery regions
- National parks and recreation areas
- Tribal lands

N

 0 10 20 40
 Miles



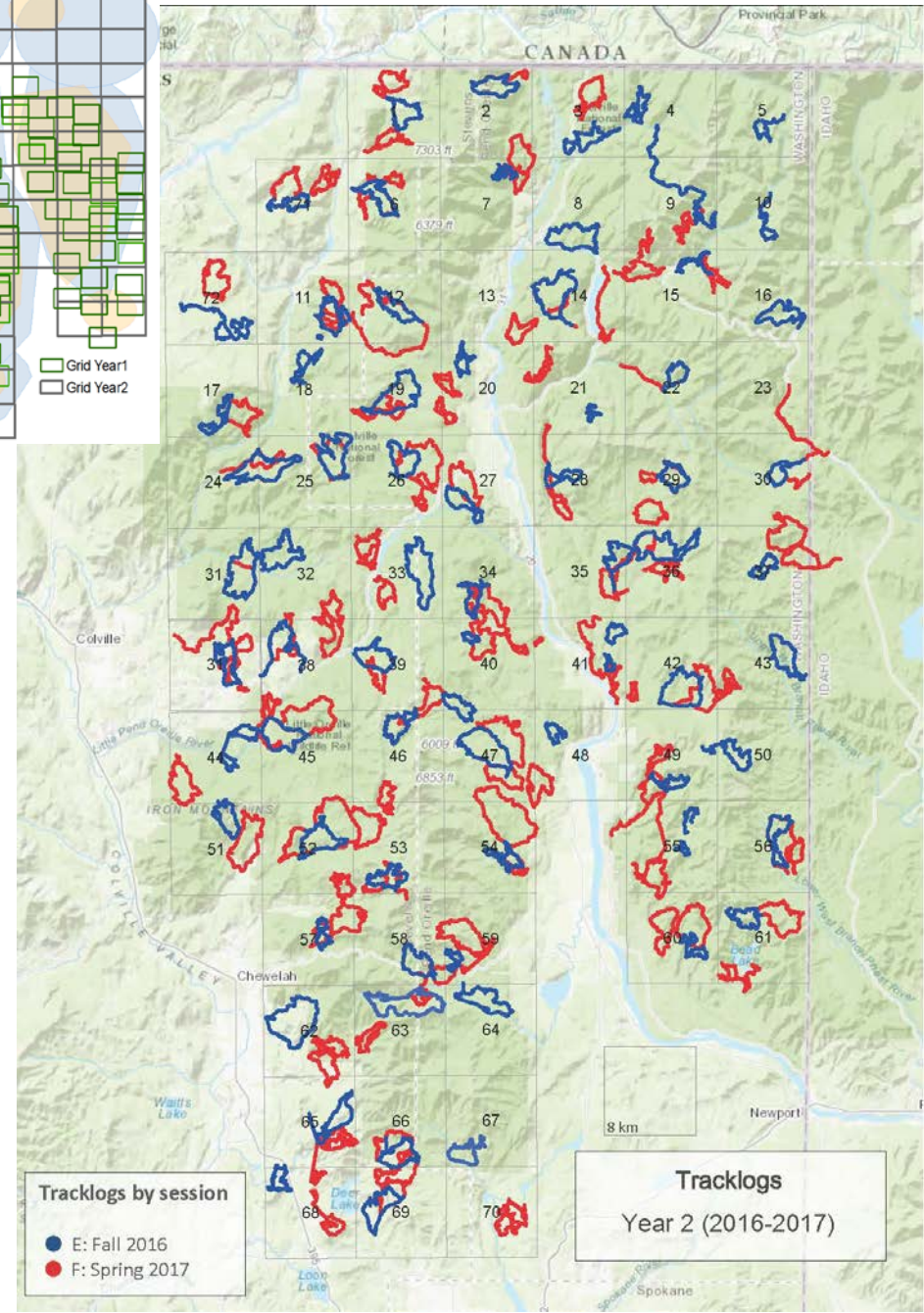
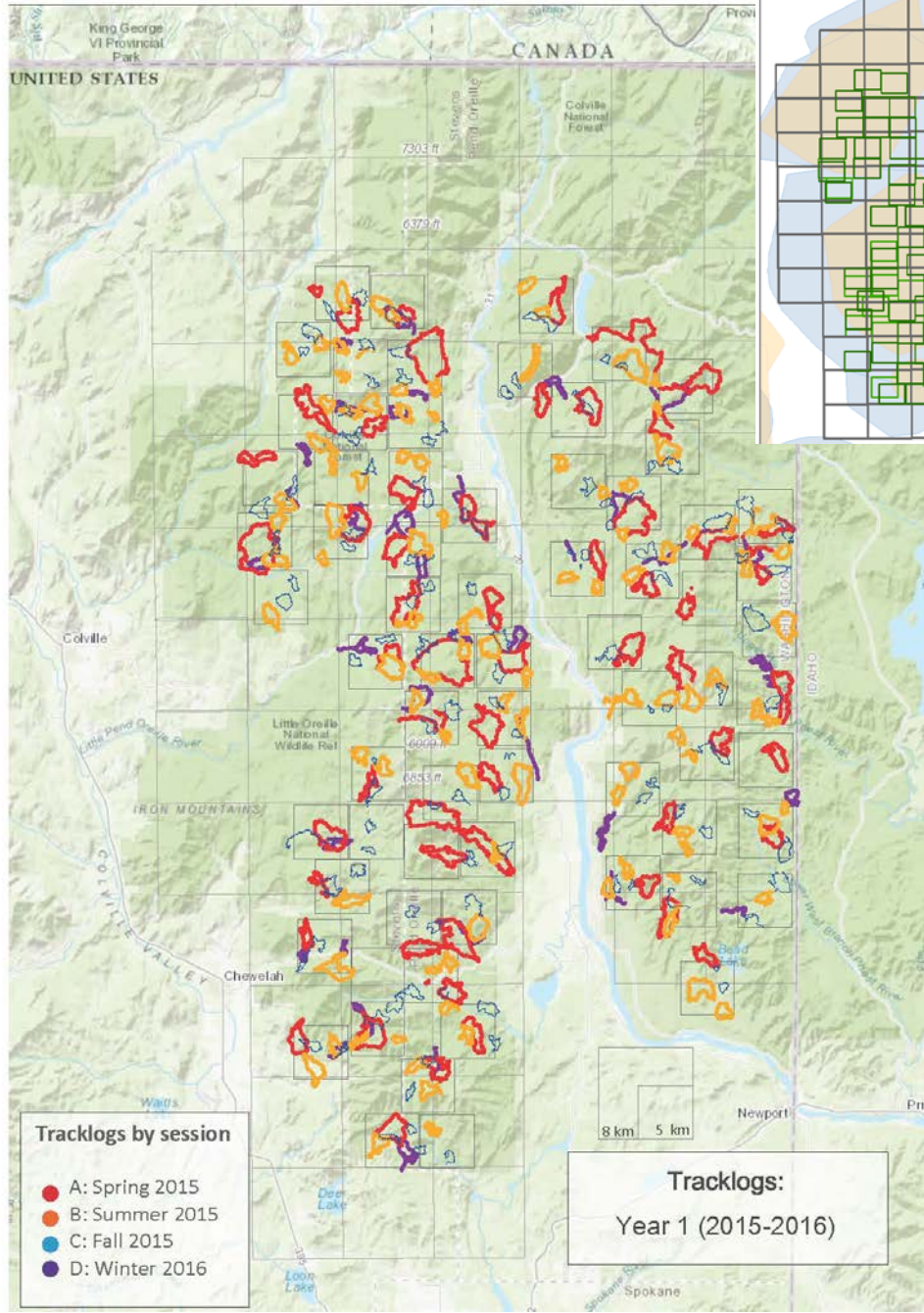
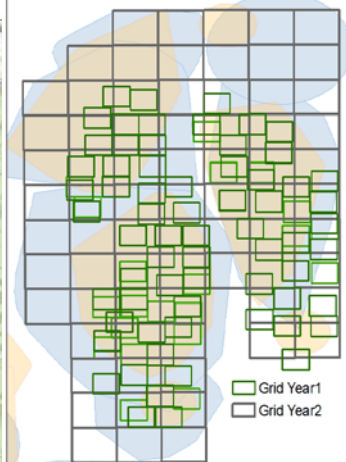
High sample detection rates

Why Dogs?





CCB CK9 Survey April 2015 - June 2017
(6 Survey Sessions)



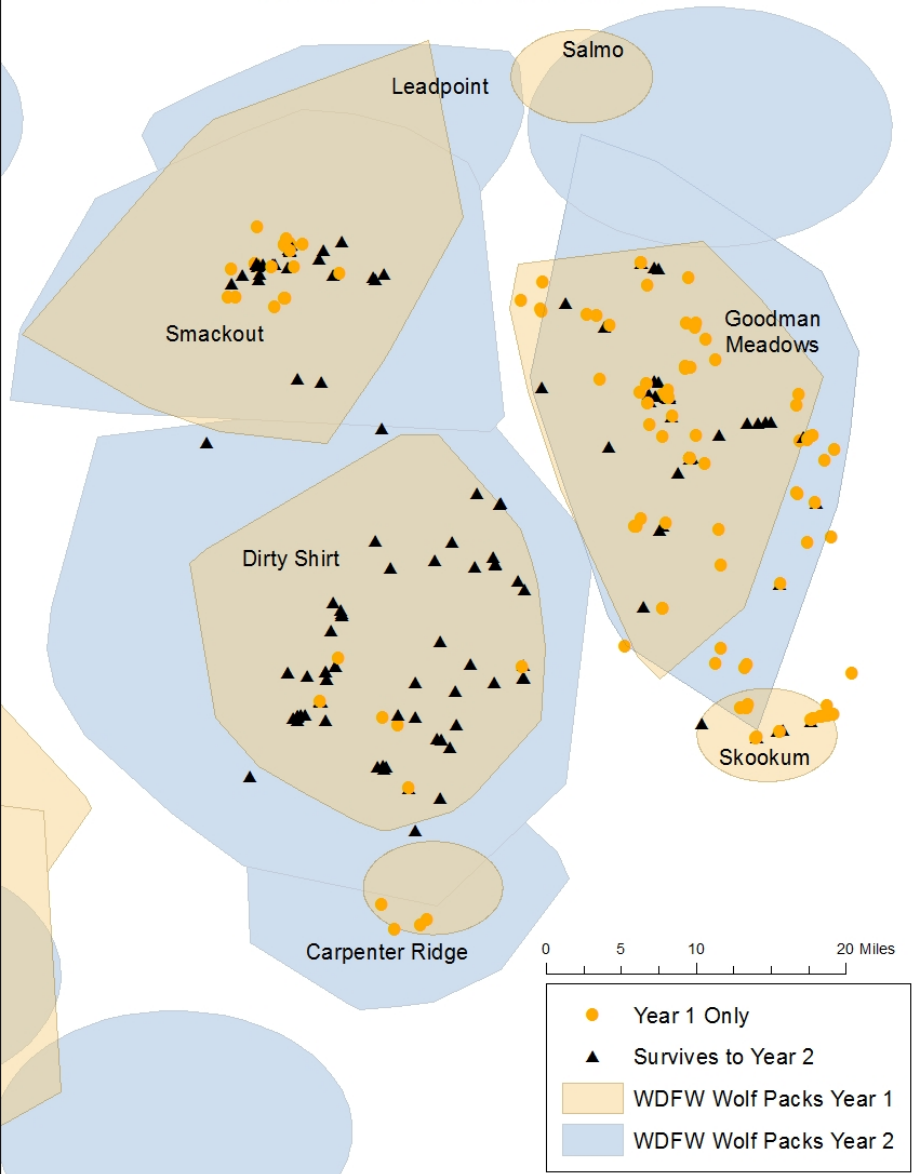
Samples per Species by Year

Collection Period	No. Scat Samples Analyzed/Collected	Carnivore Scats Identified to Species				
		Wolf	Cougar	Black Bear	Coyote	Bobcat
April 2015-Feb 2016	3917/4685	541	212	323	1878	714
Oct 2016-June 2017	2178/3771	285	205	28	848	453

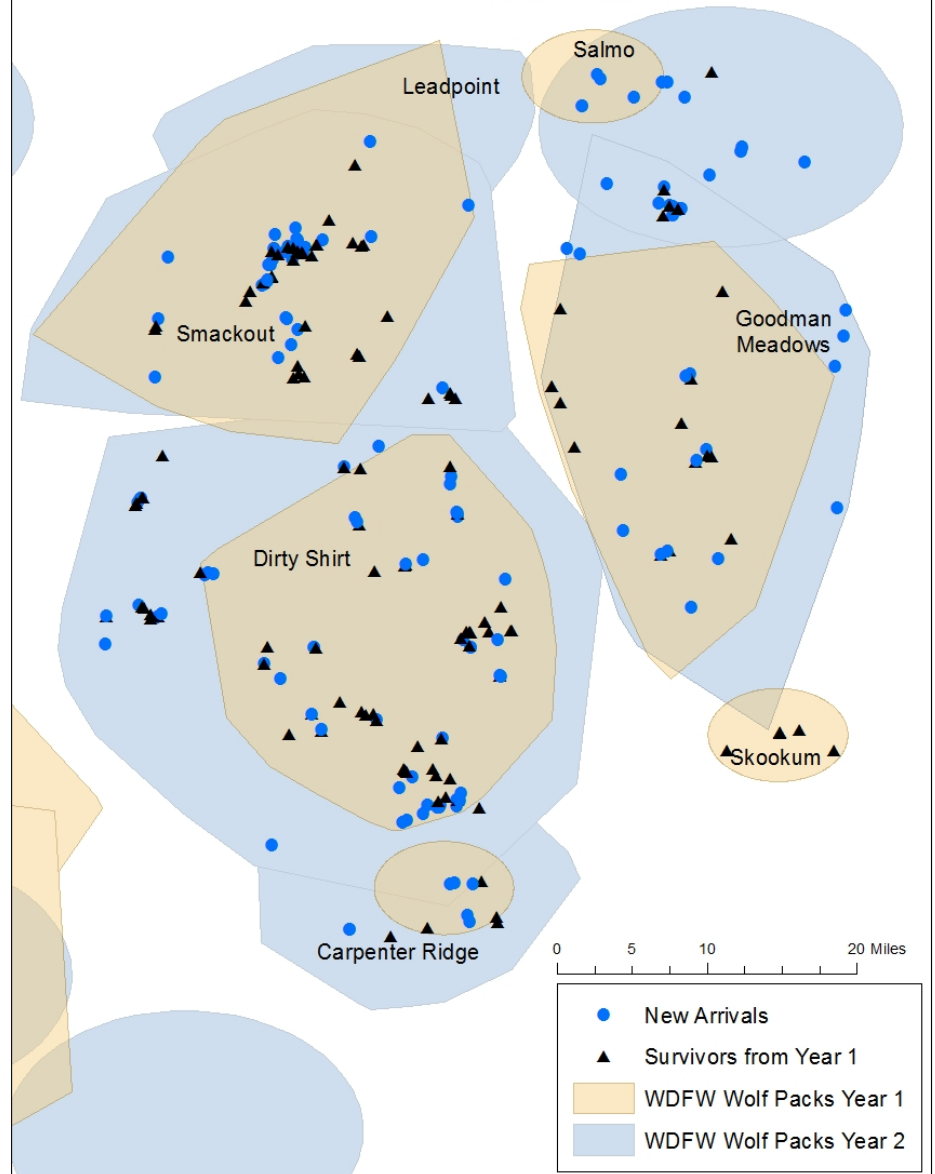
Wolf Population Estimate

Sampling Period	Sessions	No. Wolf Scats	Unique Individ's Sampled	Unique Individ's Year 1&2	Abundance Estimate
April 2015-Feb 2016	A-D	541	60	114	68 (3.1)
Oct 2016-June 2017	E-F	285	92		95 (9.0)

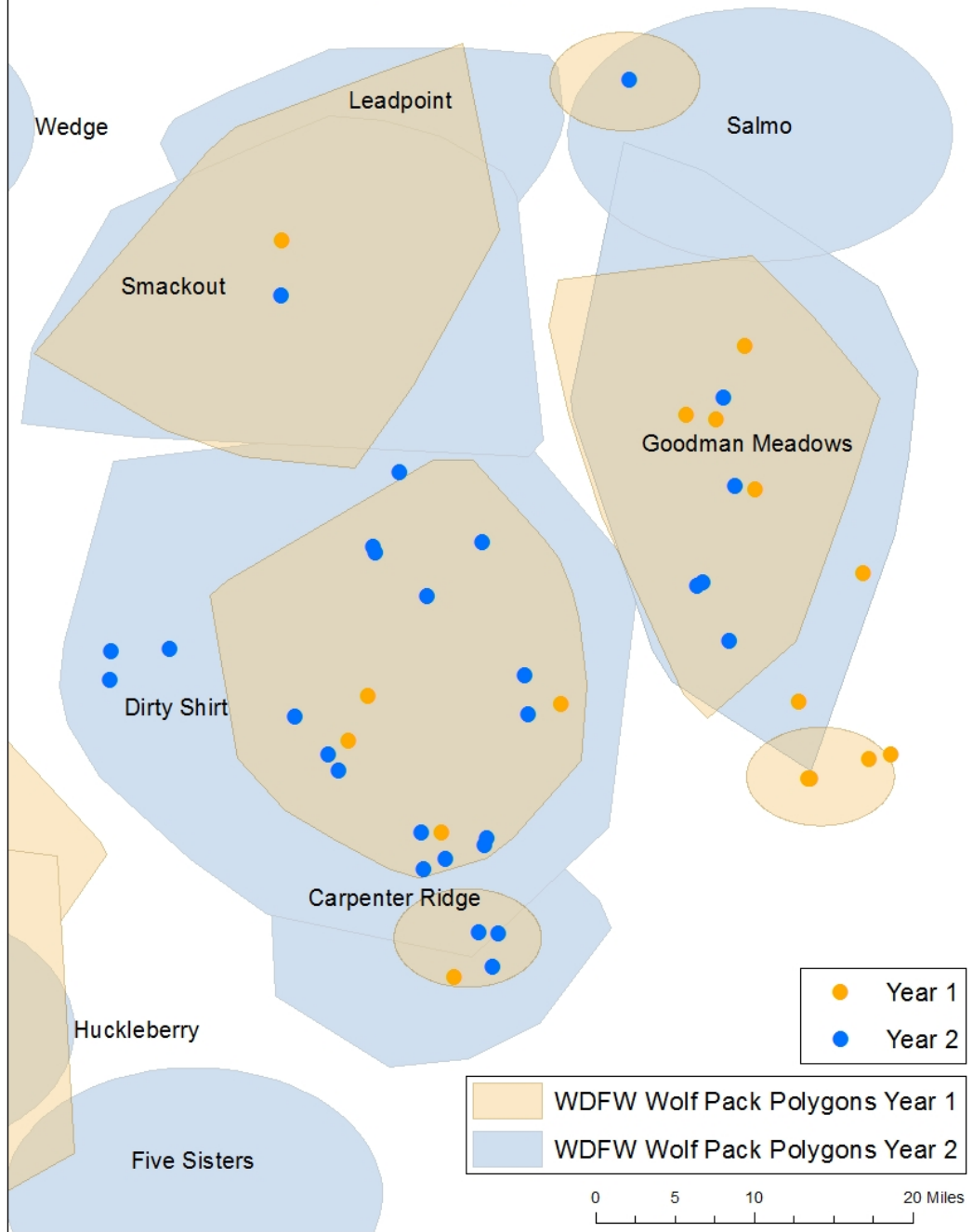
Wolf Scat Collected Year 1



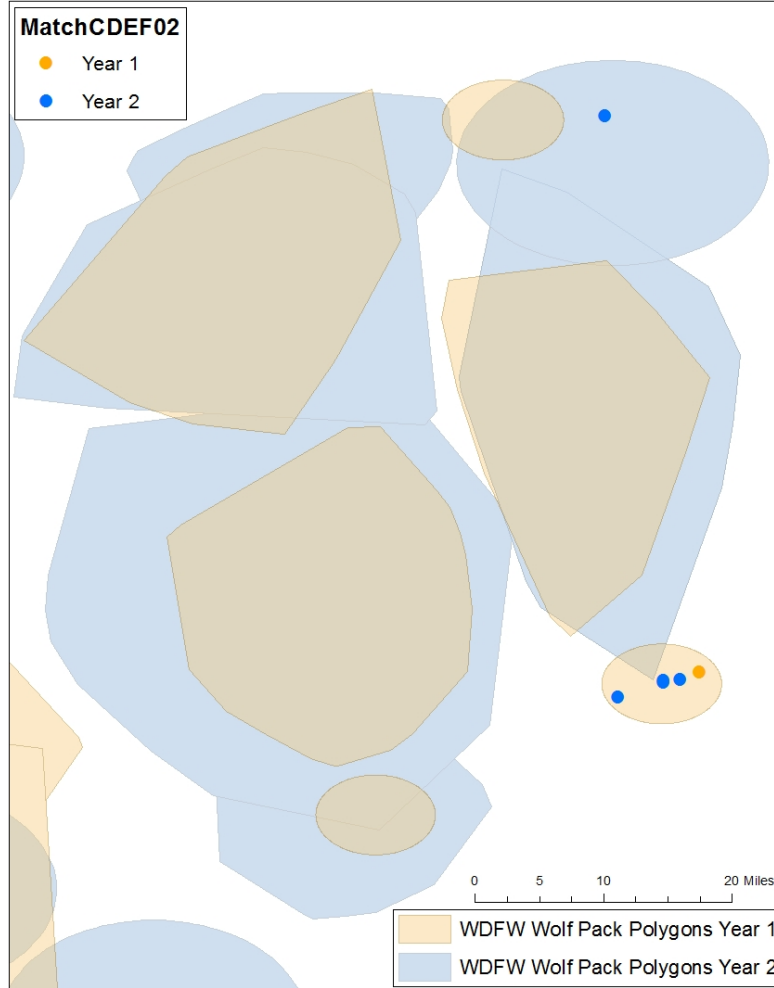
Wolf Scat Collected Year 2



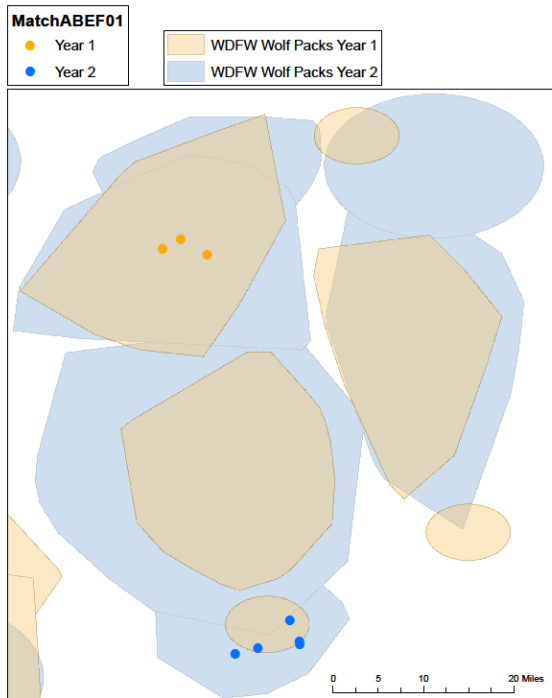
Individuals Sampled Only Once Over Two Years



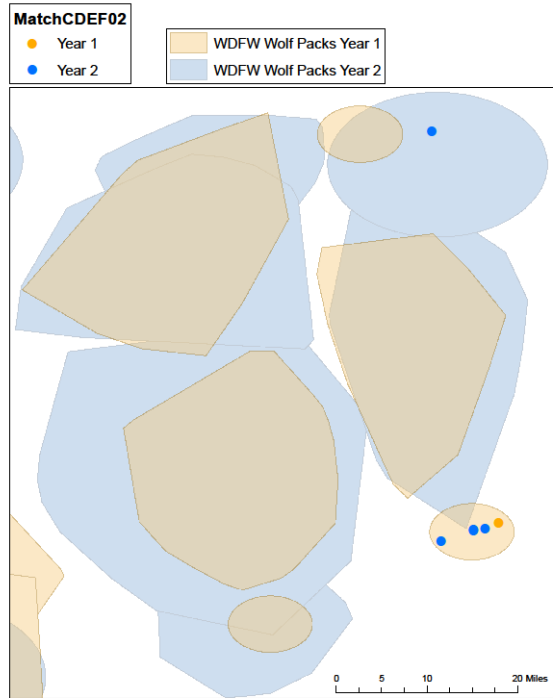
Individual Wolf Scat Samples Over Two Years



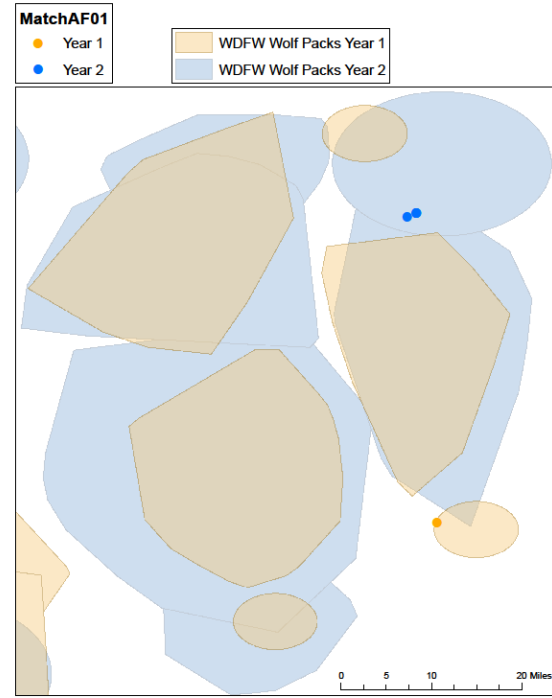
Individual Wolf Scat Samples Over Two Years



Individual Wolf Scat Samples Over Two Years



Individual Wolf Scat Samples Over Two Years



PREGNANCIES

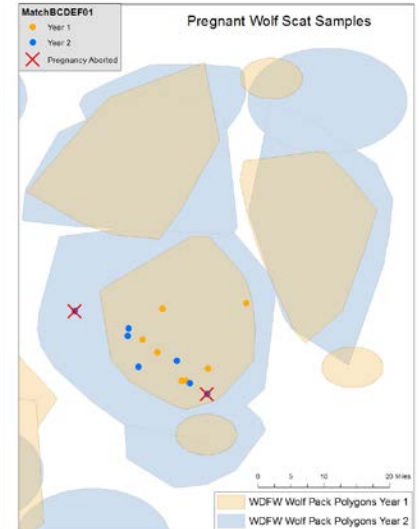
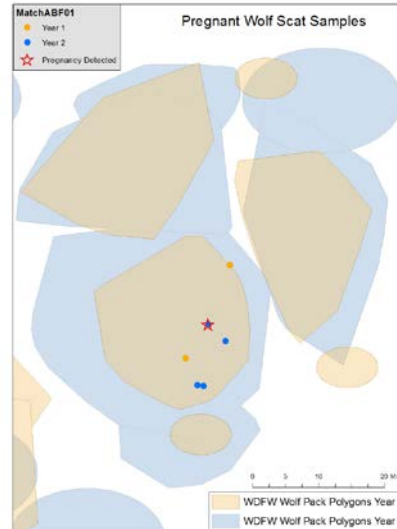
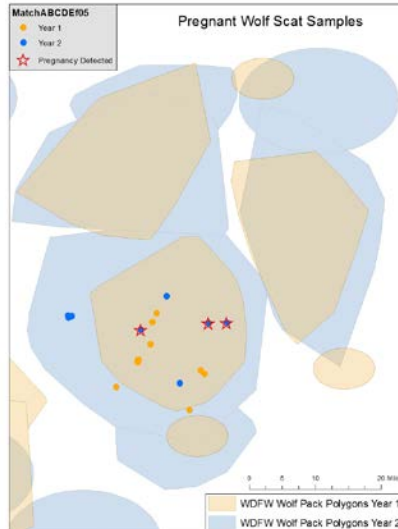
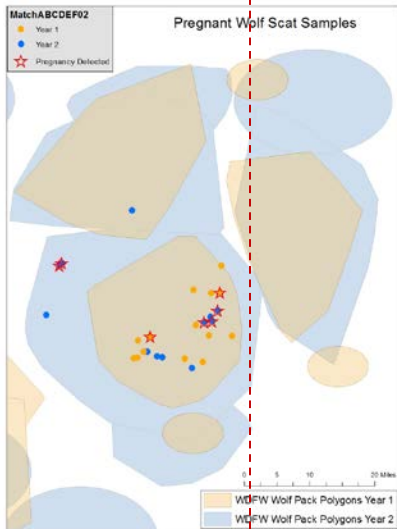
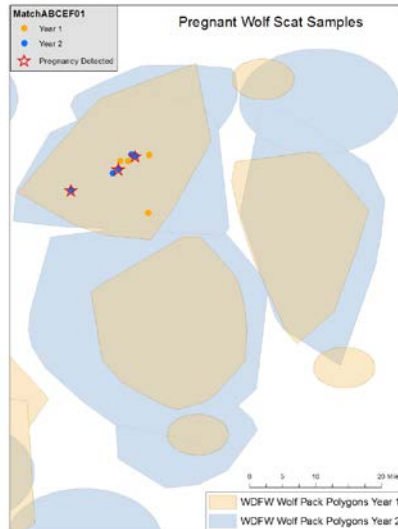
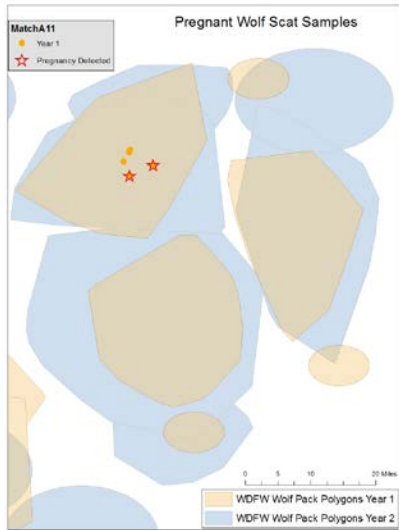
Smackout

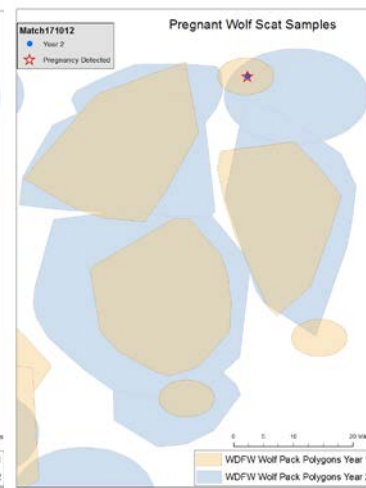
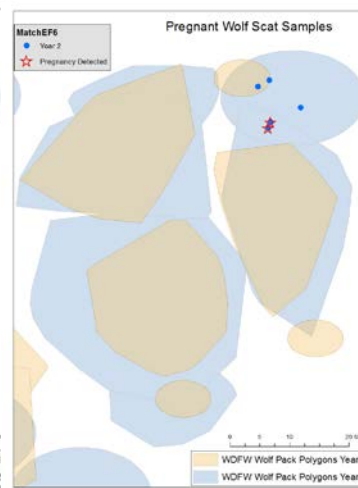
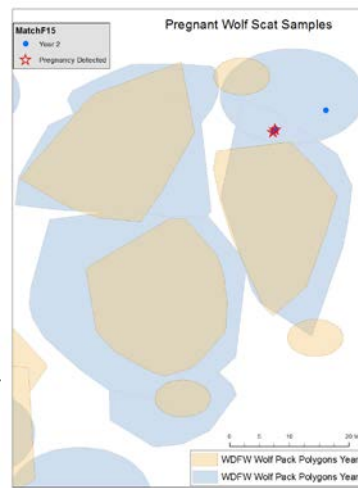
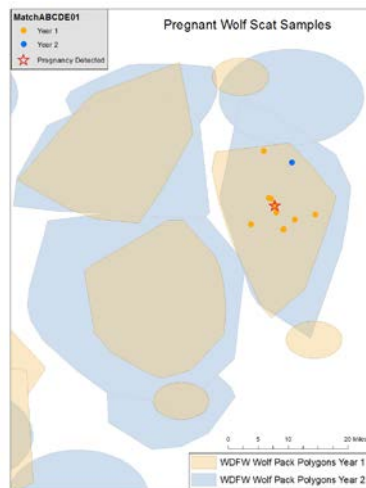
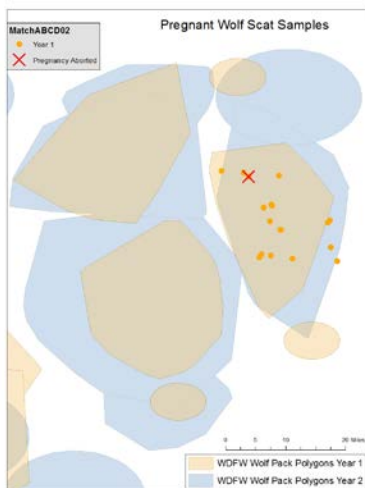
Dirty Shirt

Carpenter Ridge

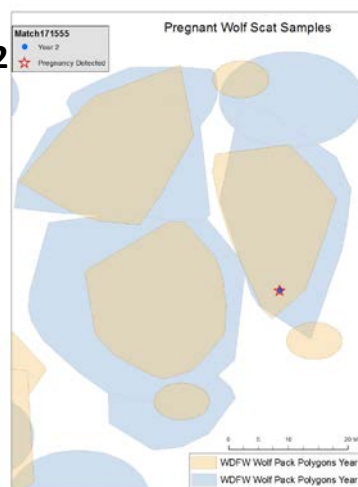
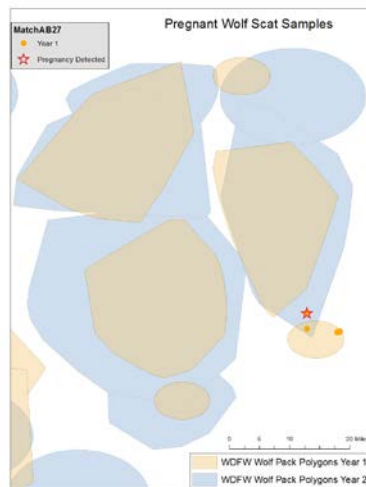
Y
e
a
r

1
2





Y
e
a
r

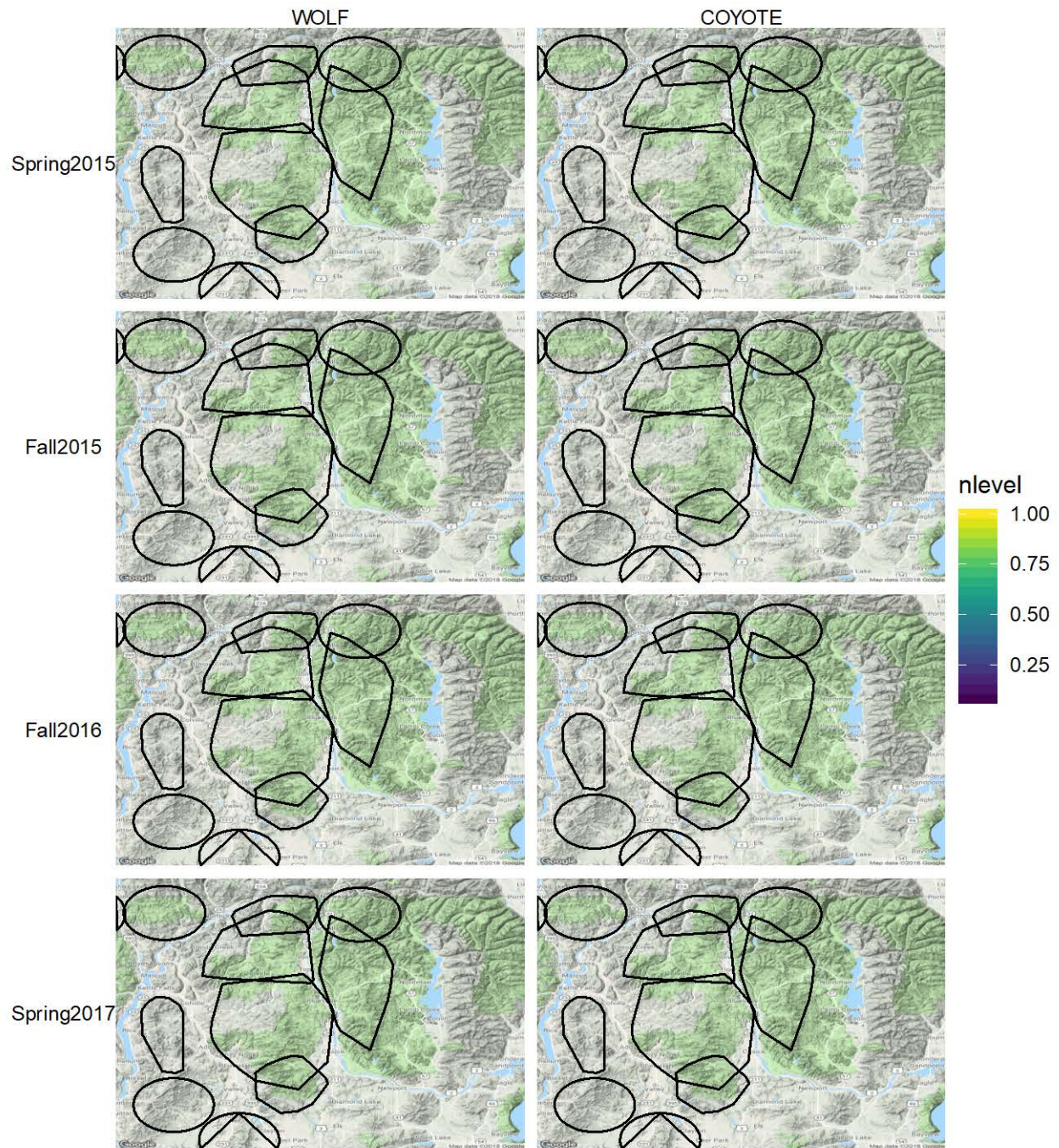


1 2

PREGNANCIES

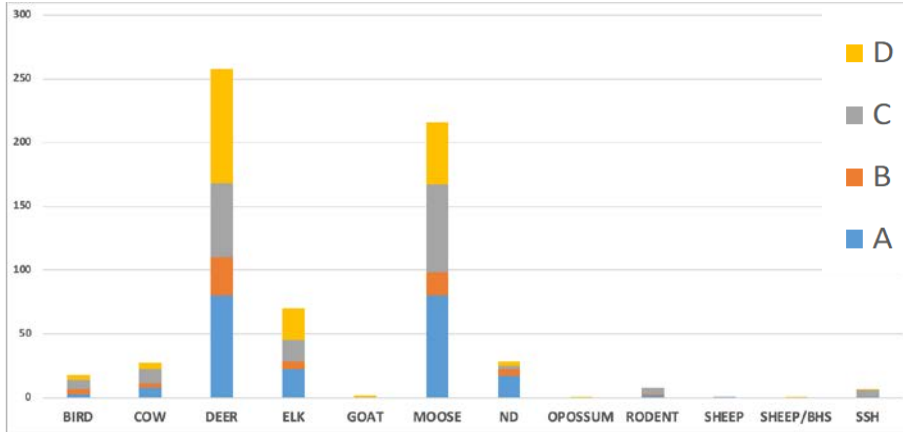
Salmo
 Goodman Meadows
 Skookum?

Densities

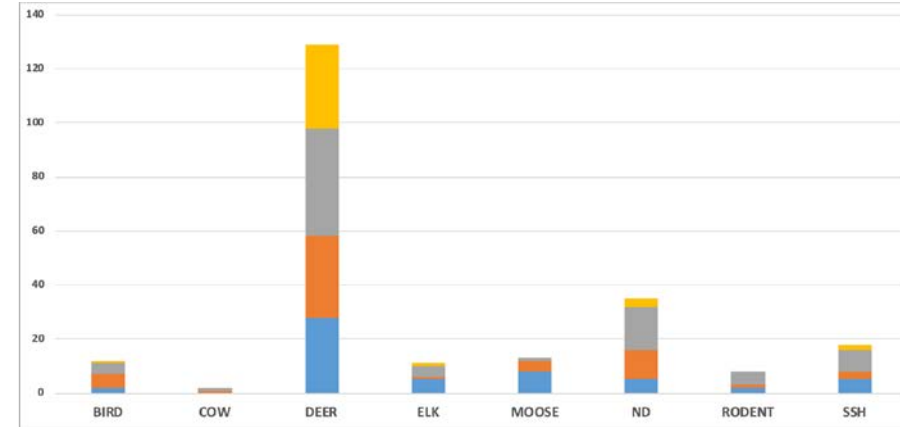


Prey Identified in Carnivore Scats 2015-2016

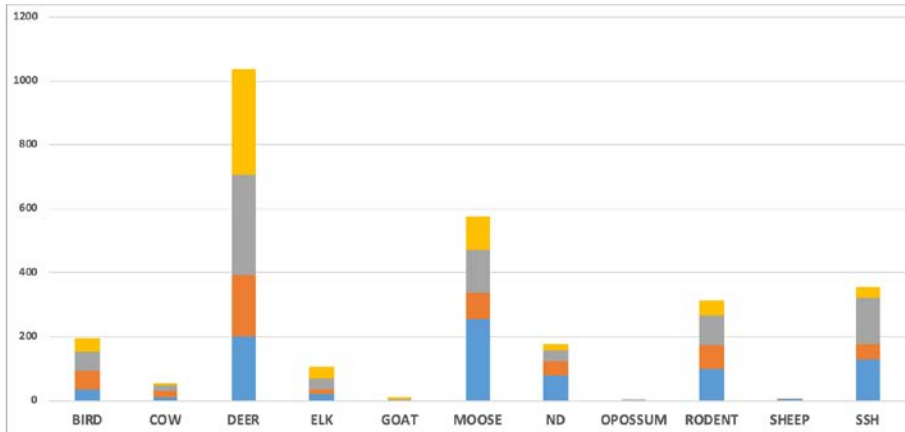
Wolf



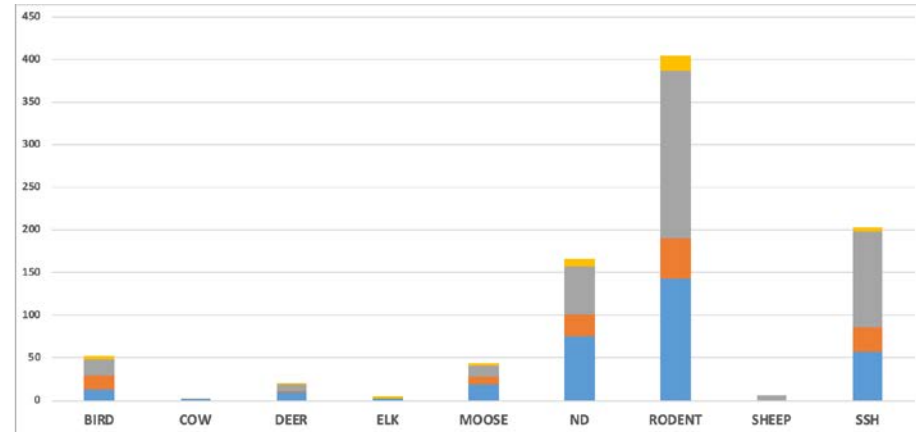
Cougar



Coyote

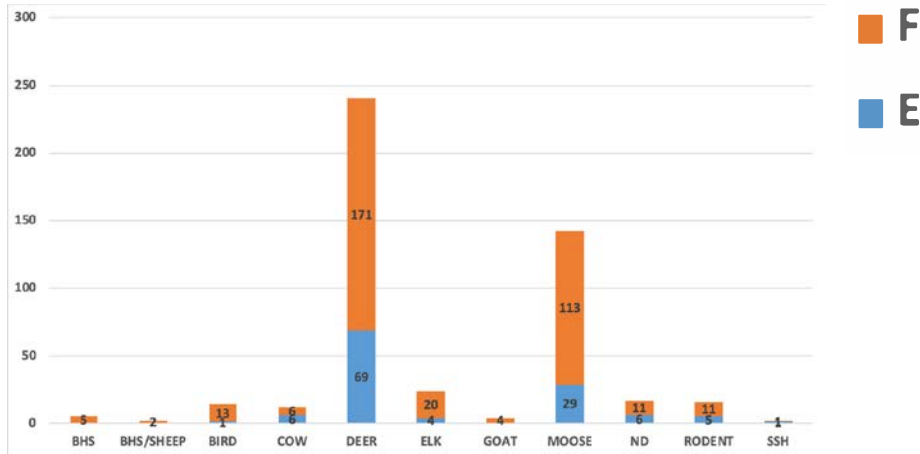


Bobcat

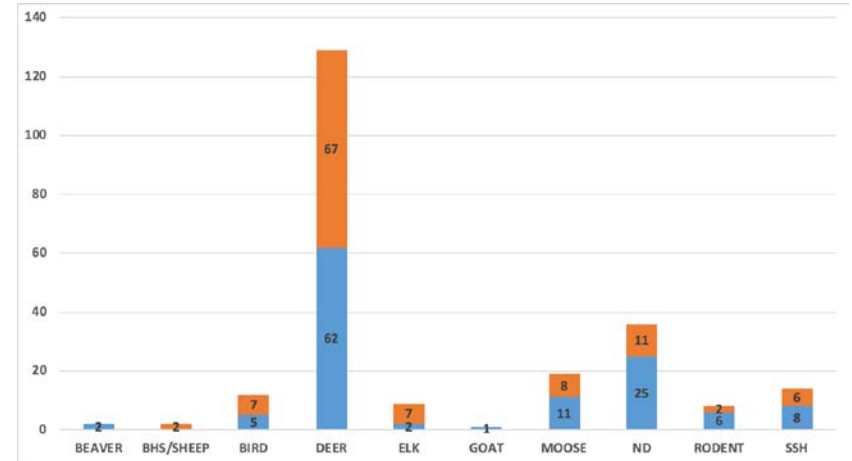


Prey Identified in Carnivore Scats 2016-2017

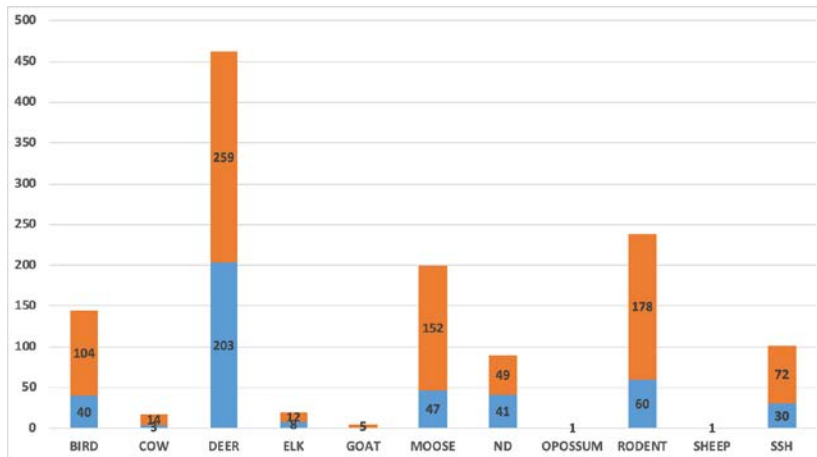
Wolf



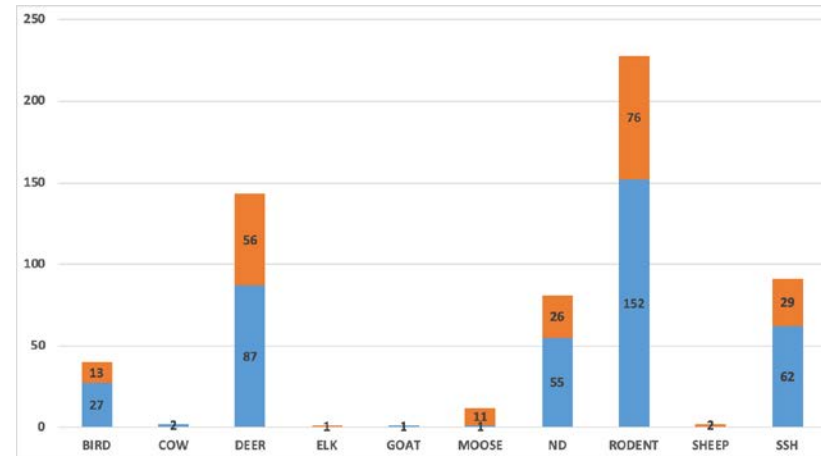
Cougar



Coyote

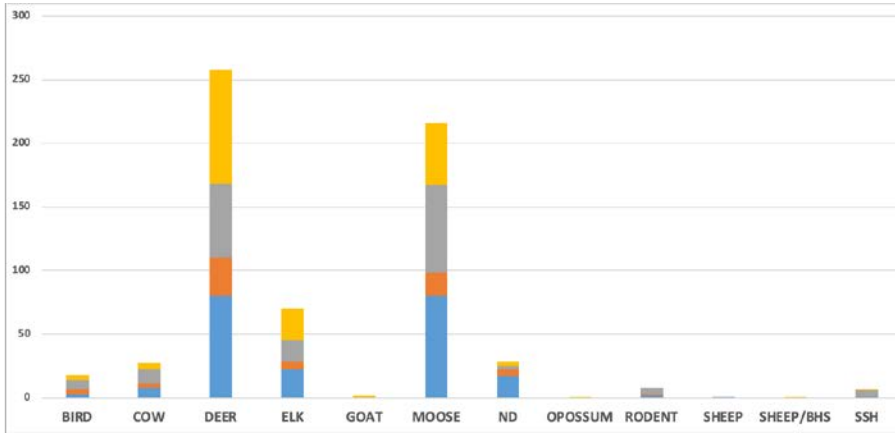


Bobcat

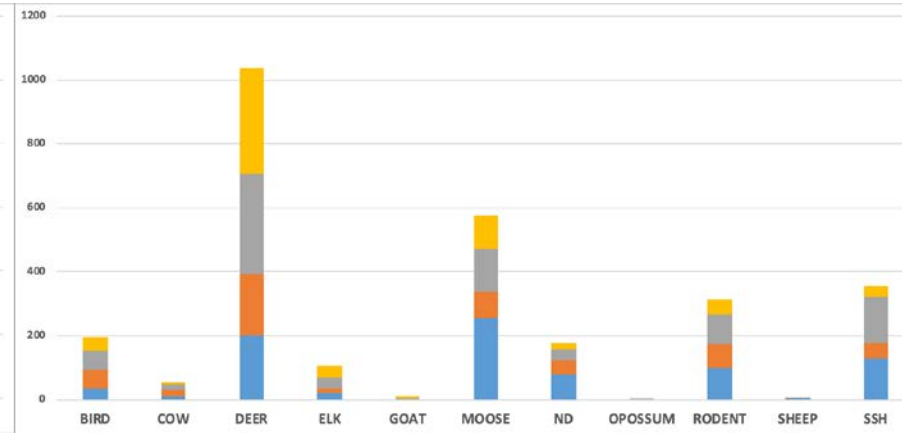


Prey Identified in Carnivore Scats 2015-2017

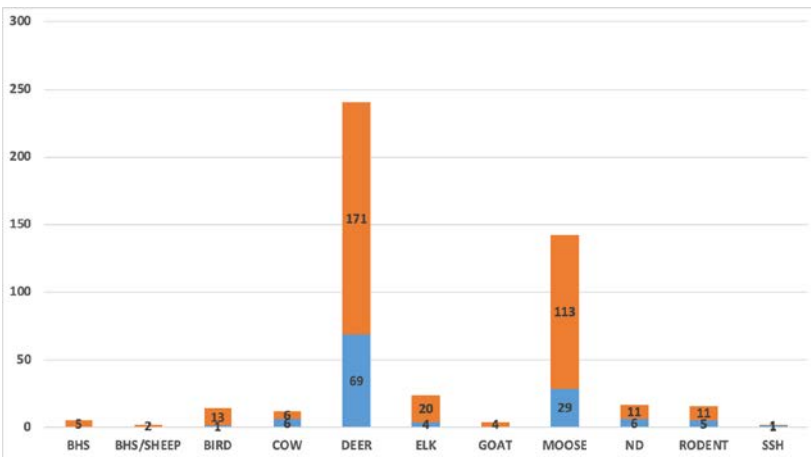
Wolf 2015-2016



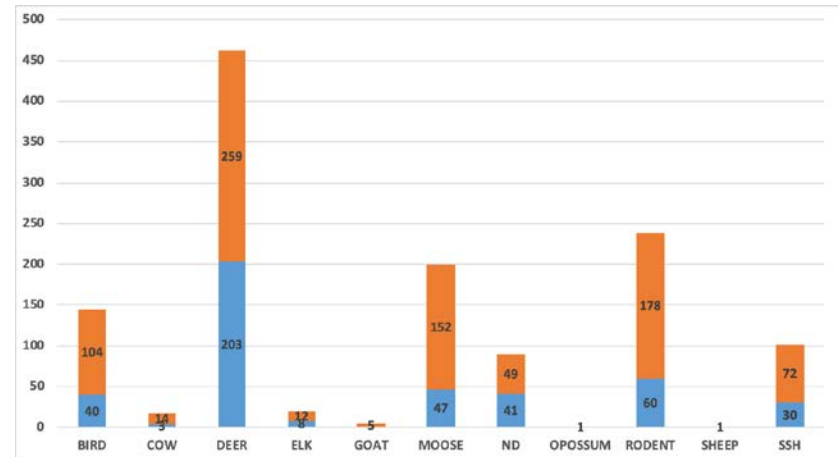
Coyote 2015-2016



Wolf 2016-2017



Coyote 2016-2017



Morisita's Dietary Niche Overlap (Yr 1 only)

	COYOTE	COUGAR	BOBCAT
WOLF	0.787	0.722	0.128
COYOTE		0.518	0.499
COUGAR			0.218

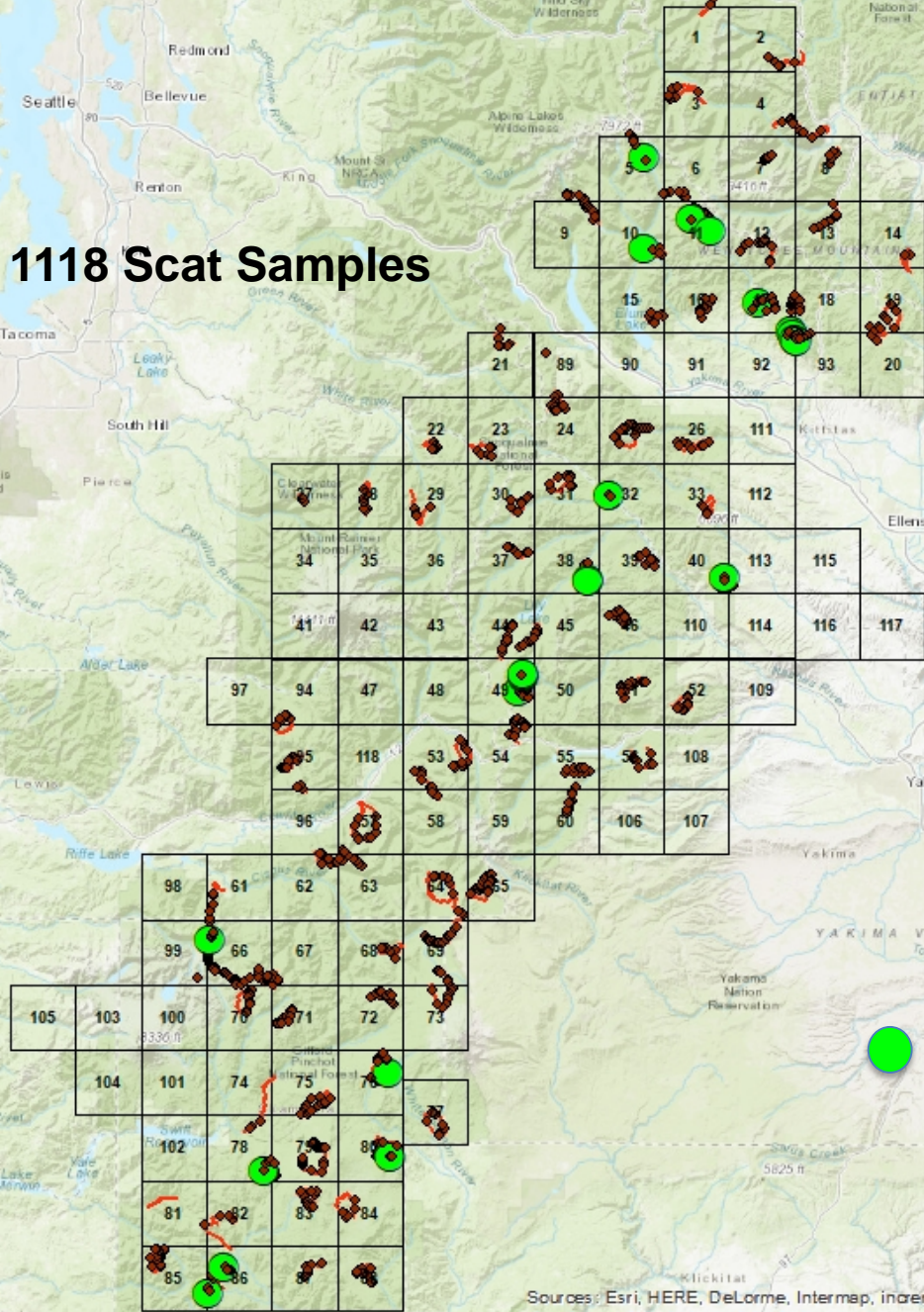



- Wolf pack territories
- WA wolf recovery regions
- National parks and recreation areas
- Tribal lands

N
↑

0 10 20 40
Miles

Collected 1118 Scat Samples



 = Potential wolf

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

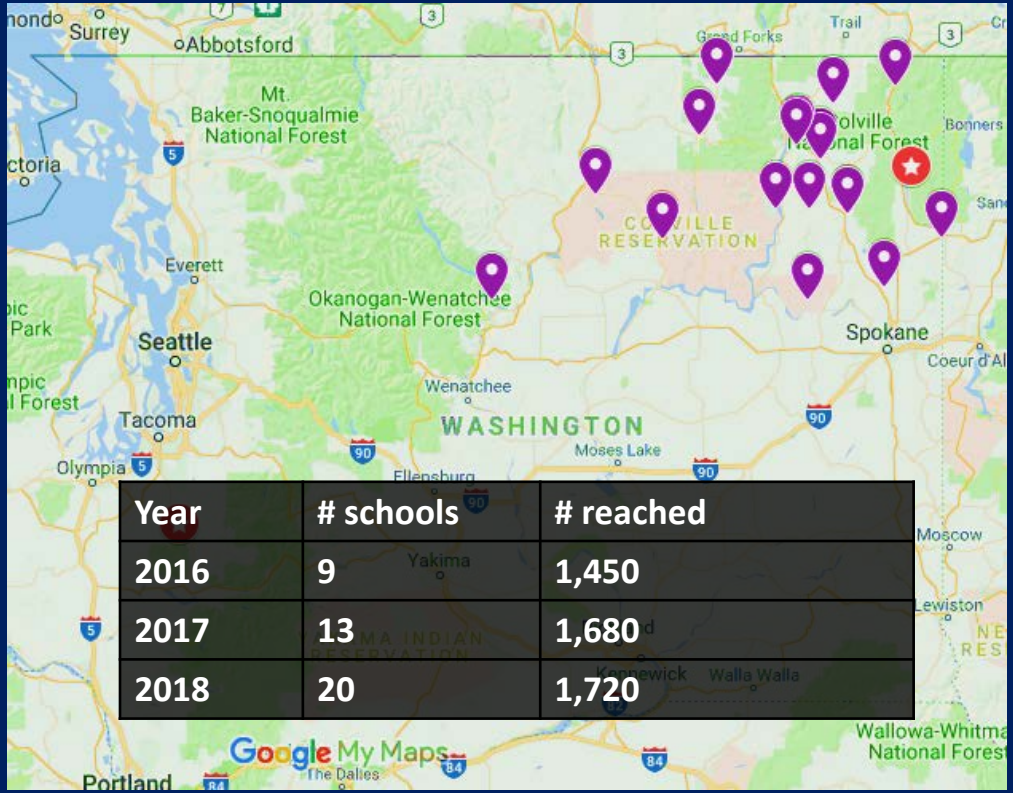
OUTREACH EDUCATION

CCB collaborated with US Forest Service in Colville to bring our research teams to rural schools throughout Pend Oreille Counties.

Our researchers introduce the dogs and the science being conducted in their local forests.

Throughout the last 3 years, our outreach program has steadily expanded our reach to include new schools.



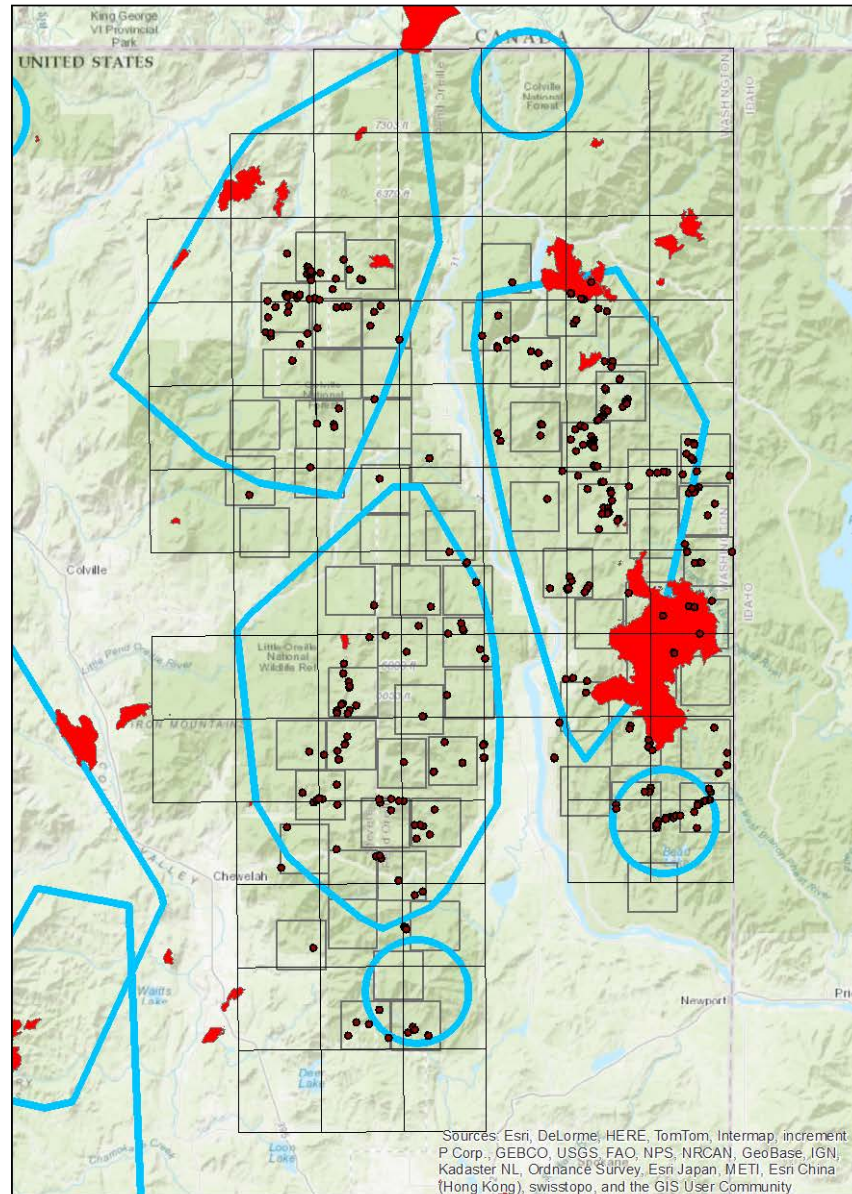




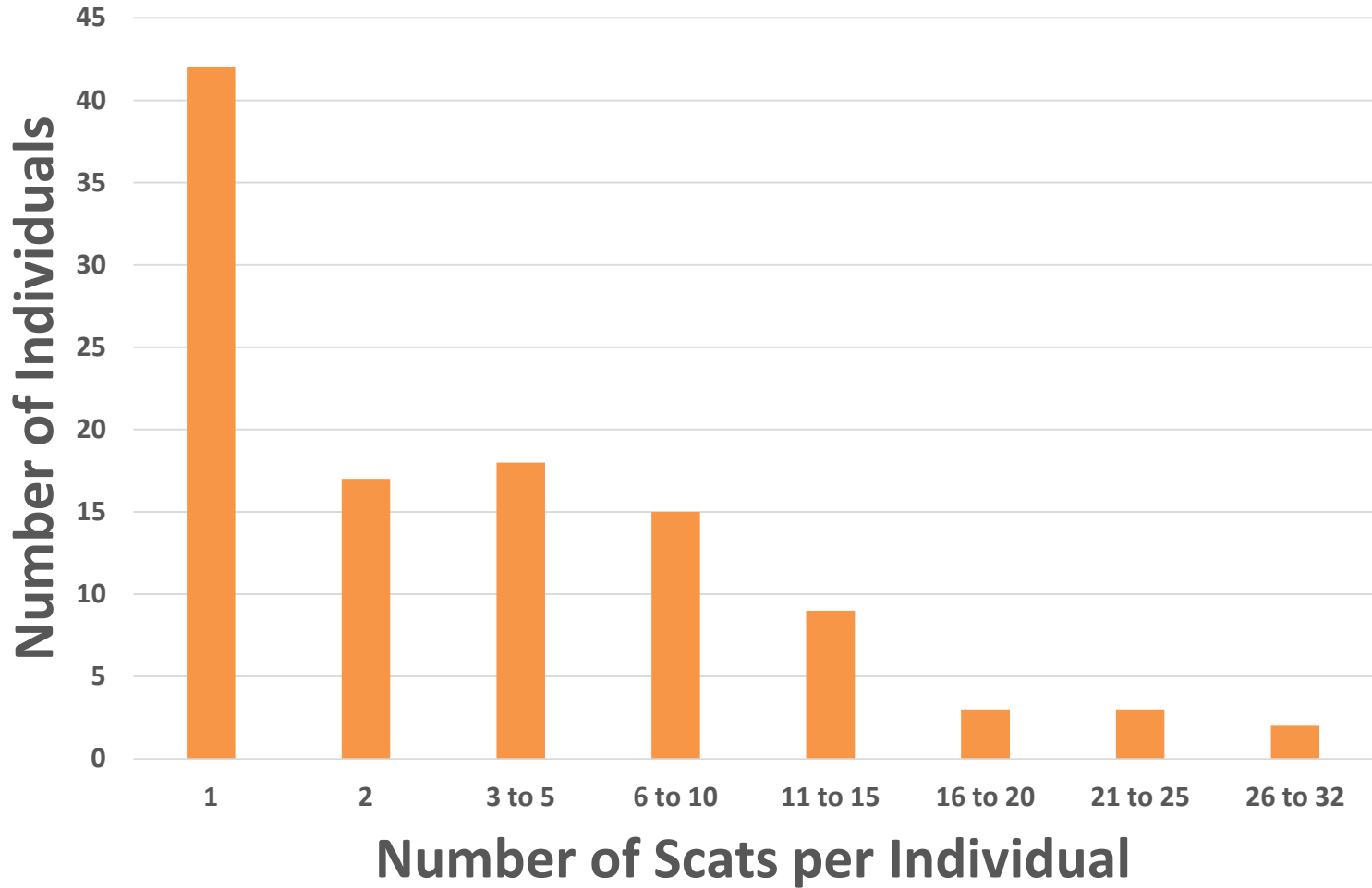
Acknowledgements

- Washington State Legislature
- Washington Department of Fish & Wildlife
- Paul & Yaffe Maritz
- Johnson Foundation
- Dawkins Charitable Trust
- Paula Swedeen, Conservation NW
- Julianne Ubigau
- Maggie Mackinlay
- Heath Smith
- Jennifer Hartman
- Misa Winter
- Rebecca Booth
- Tara Wilson
- Yves Hoareau
- Ellie Reeves
- Chad Klumb
- Conservation Canines

Kniskiu Complex forest fire in August/September of 2015



Sampling Frequency per Individual



Number of Unique Individuals by Year

