Senate Agriculture, Water, Natural Resources & Parks Committee
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The Washington Predator-Prey Project: An Update

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For Today

1. Background and genesis of the project

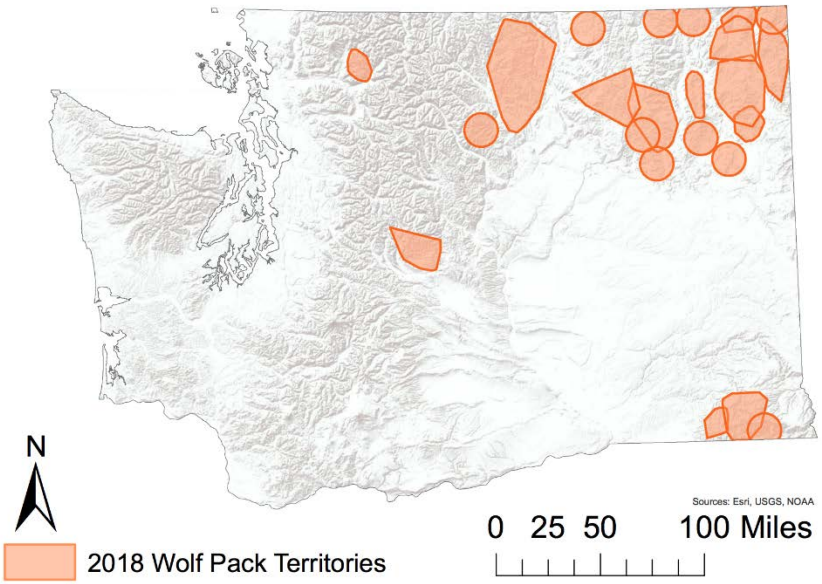
2. Project scope and components
   - active collaboration between UW and WDFW

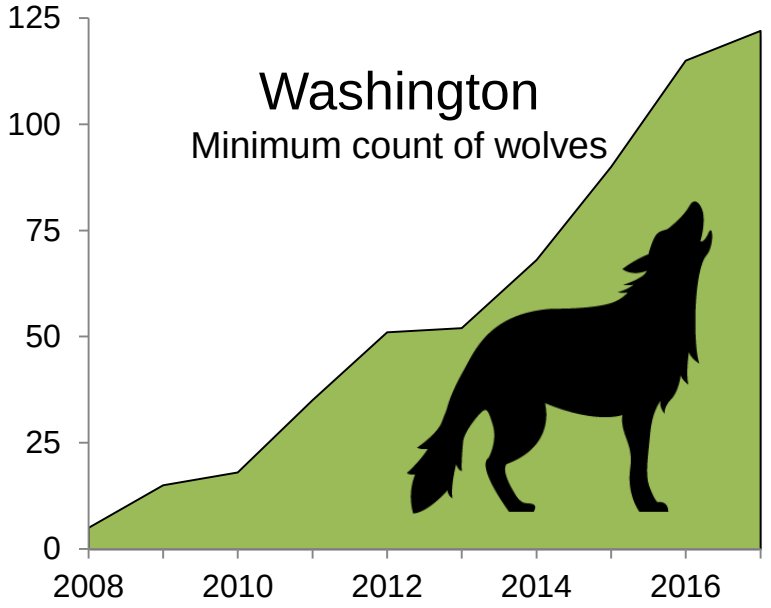
3. Progress report
   - work is ongoing; update will focus on field accomplishments rather than results

4. Answer questions

Wolves in North America

1800s – 1930s → 1995 (Yellowstone and the Rocky Mountains)





Wolves in Washington

Collared wolf in the Loup Loup pack, WA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Washington Predator-Prey Project 2017-2022

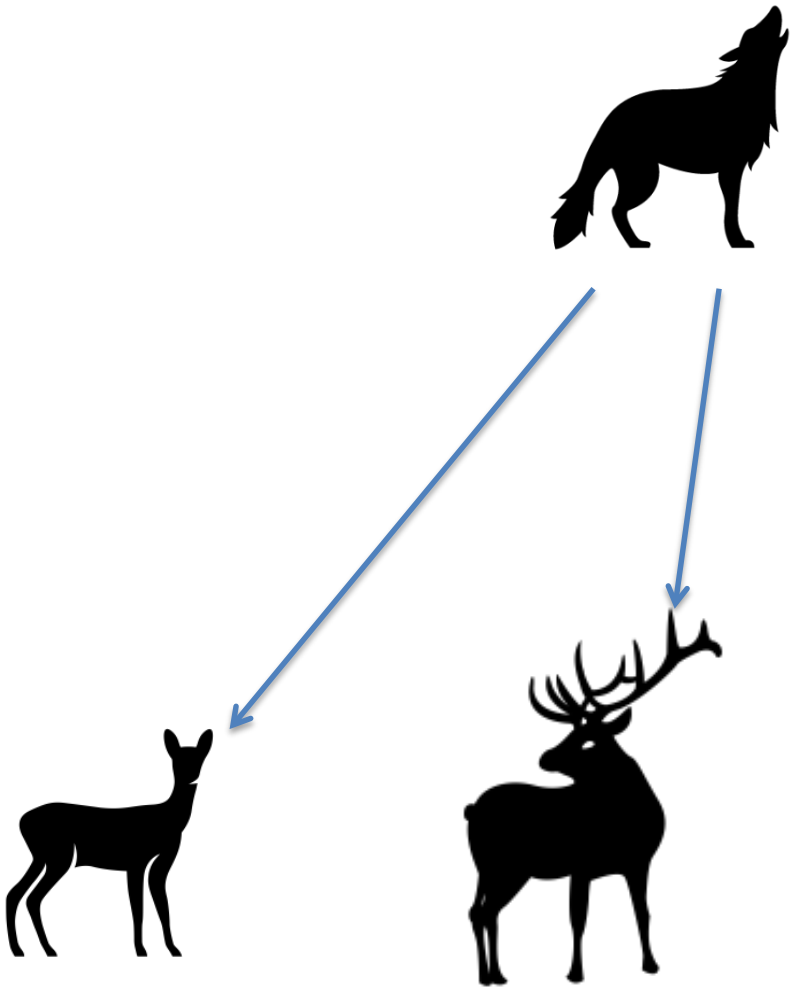
Big Question:

How are recolonizing wolves impacting other species in Washington?

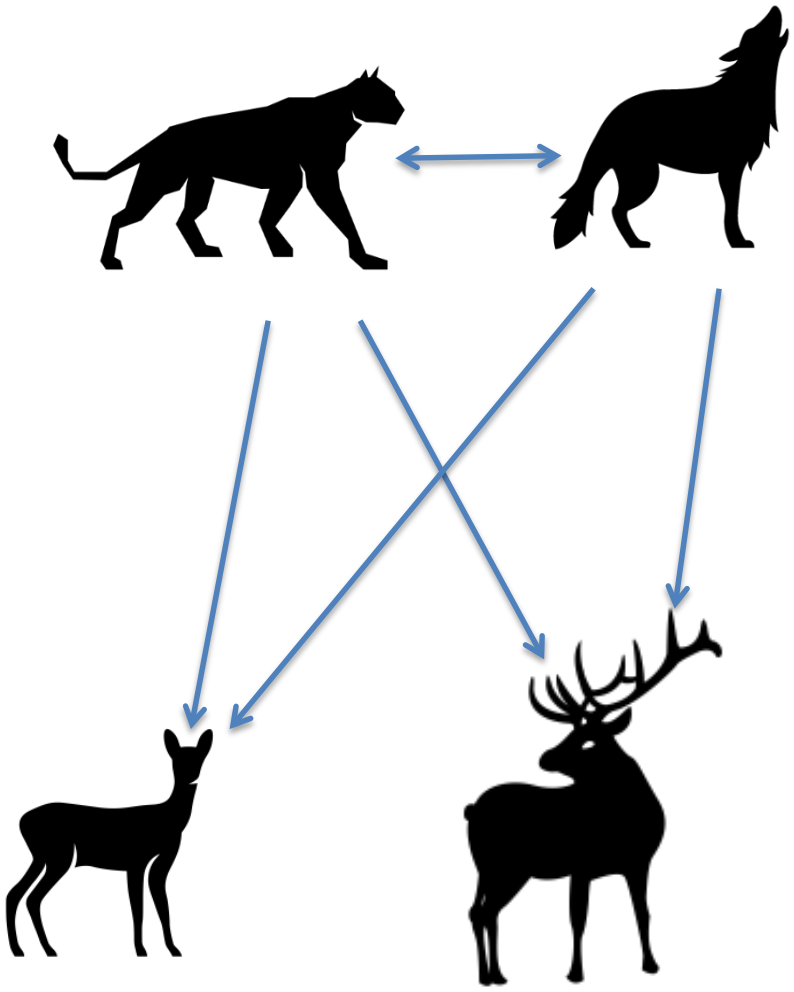




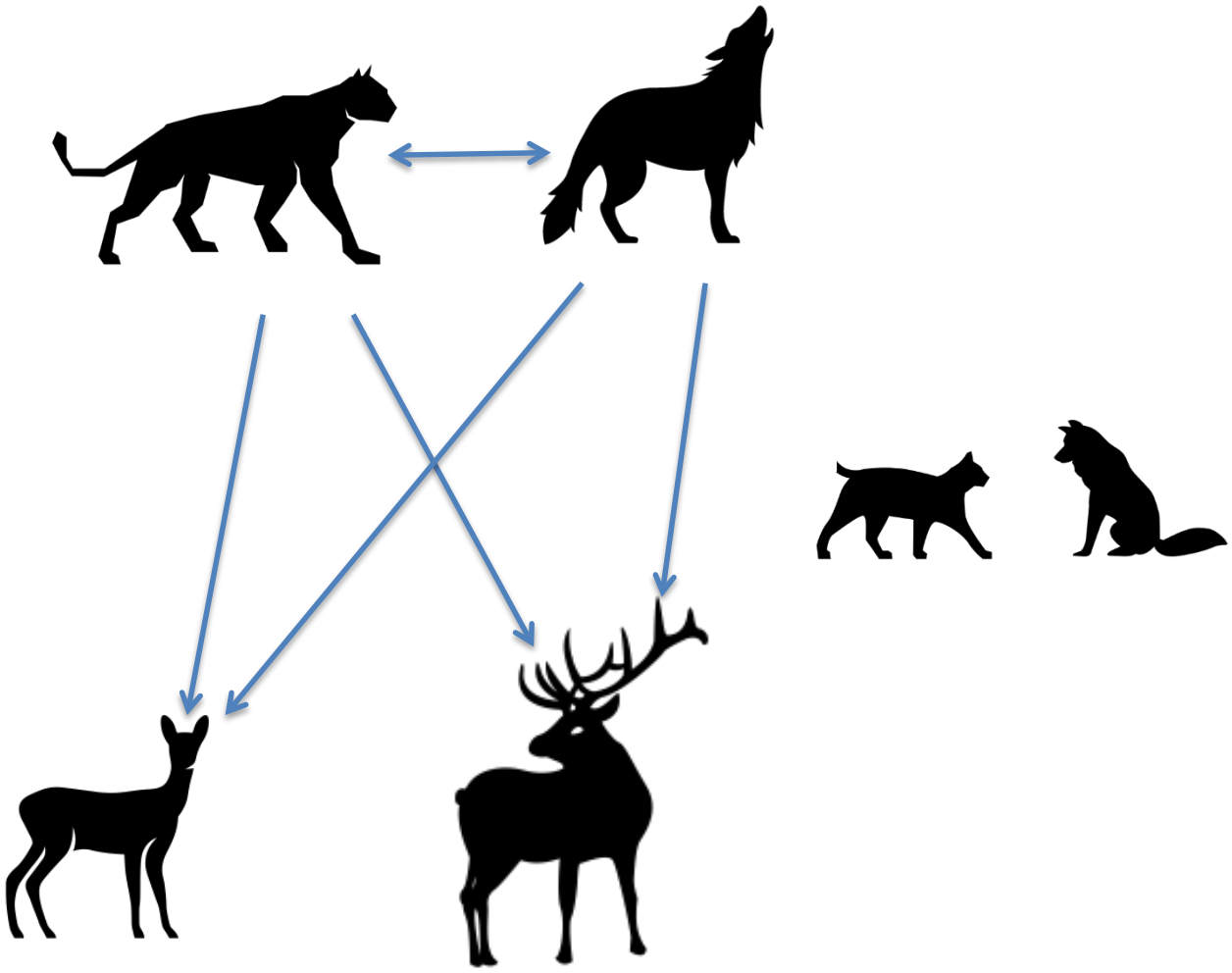
Predator-Prey Relationships



Predator-Prey Relationships



Predator-Prey Relationships



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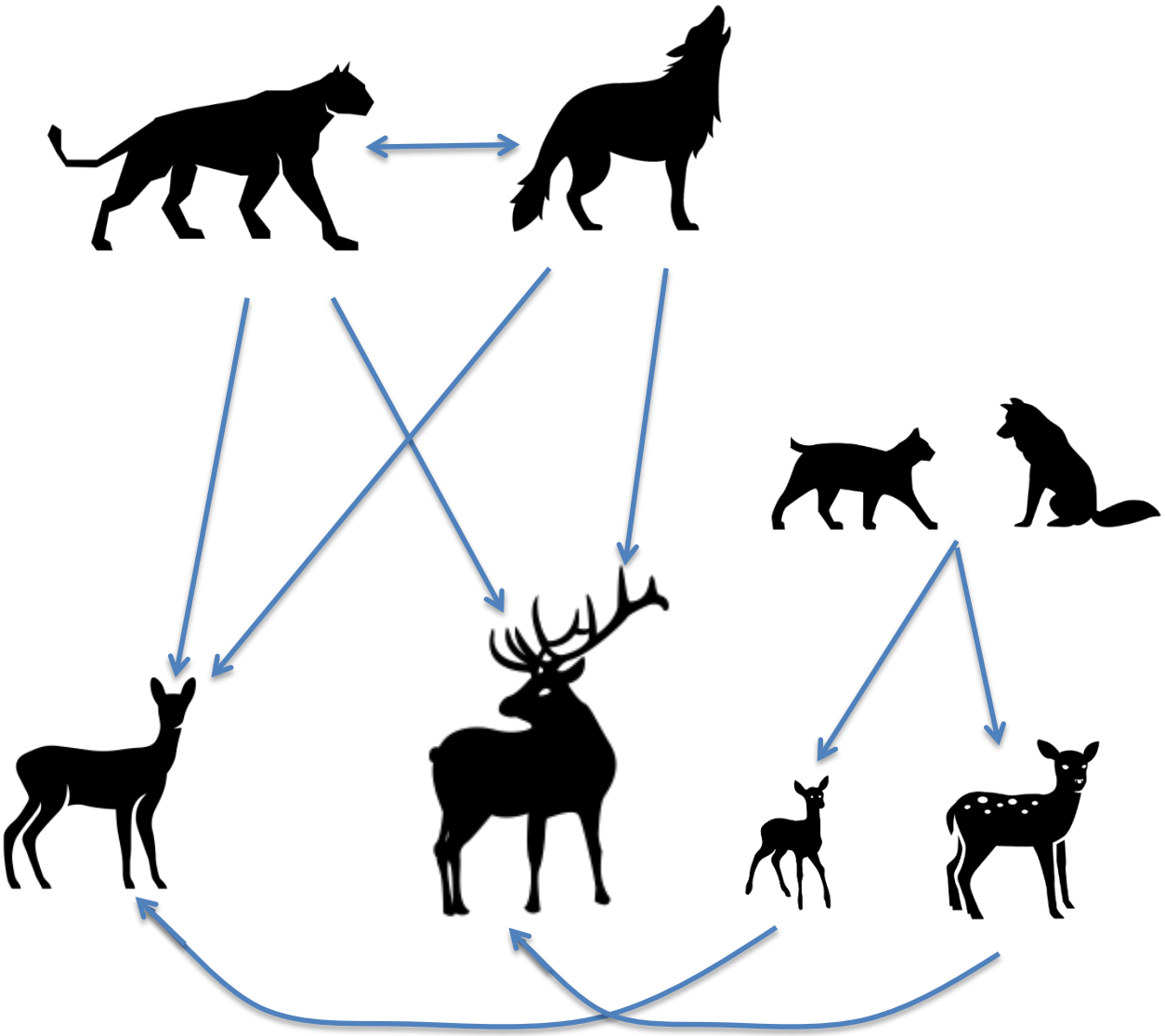
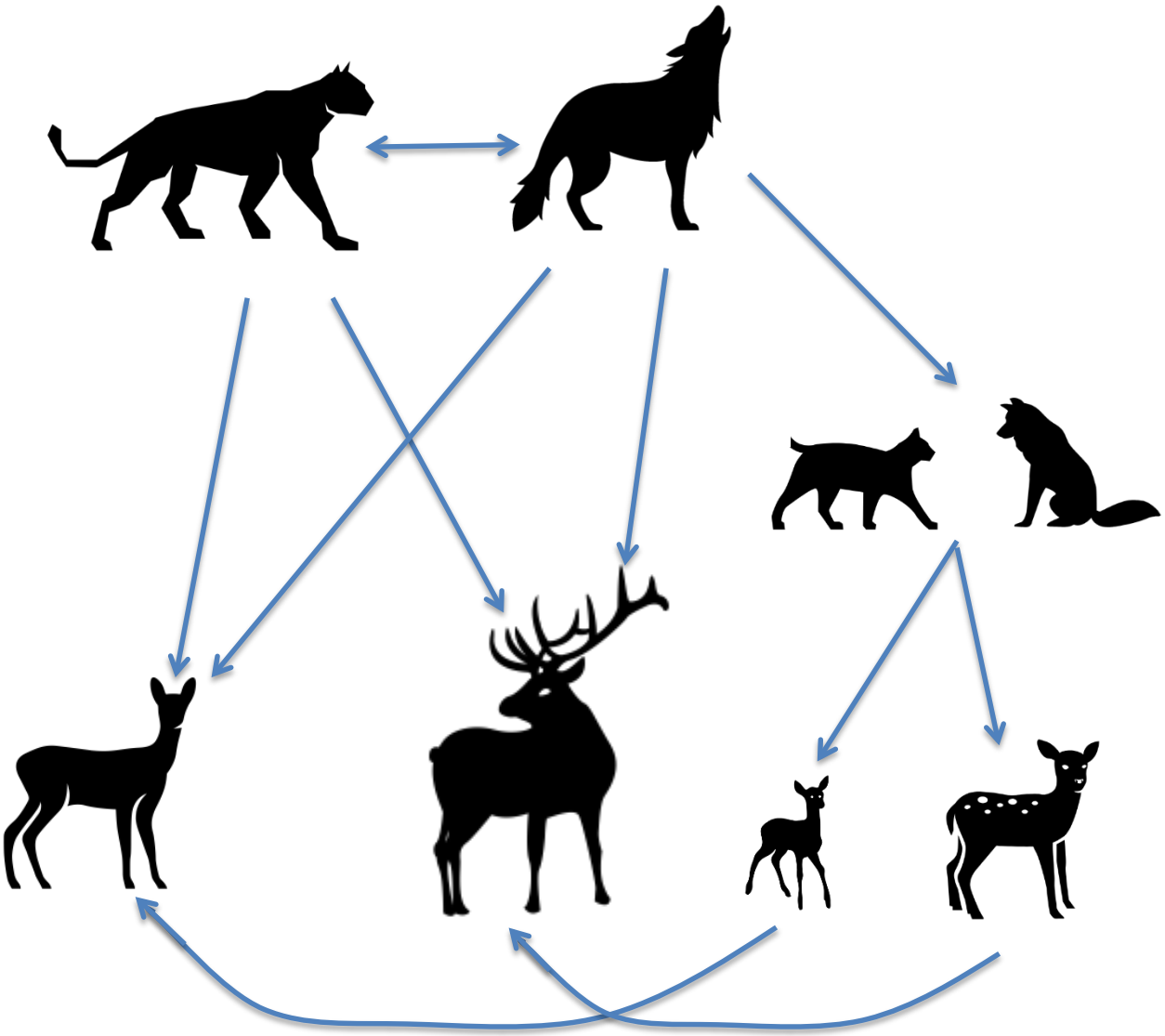


Predator-Prey Relationships



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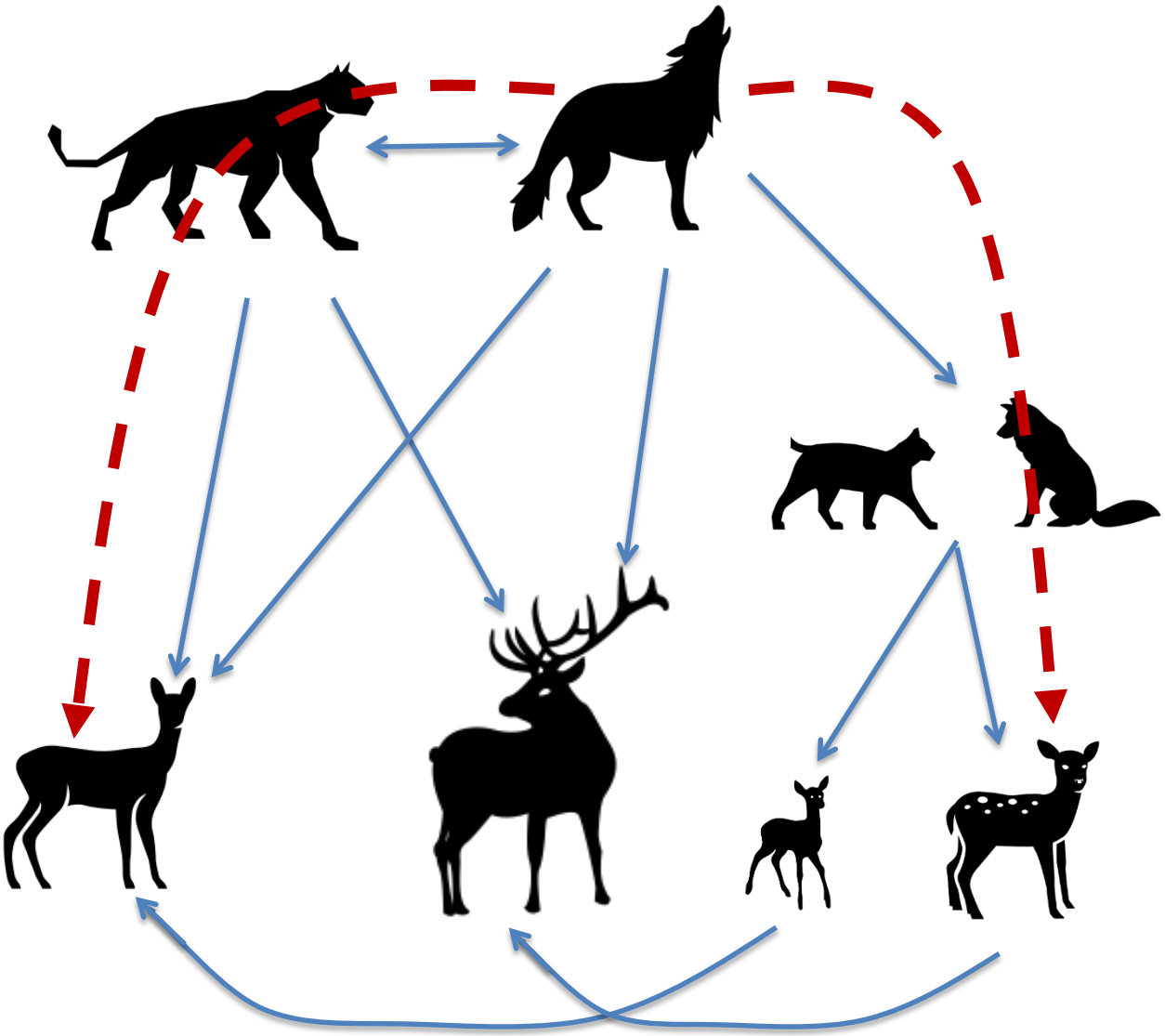
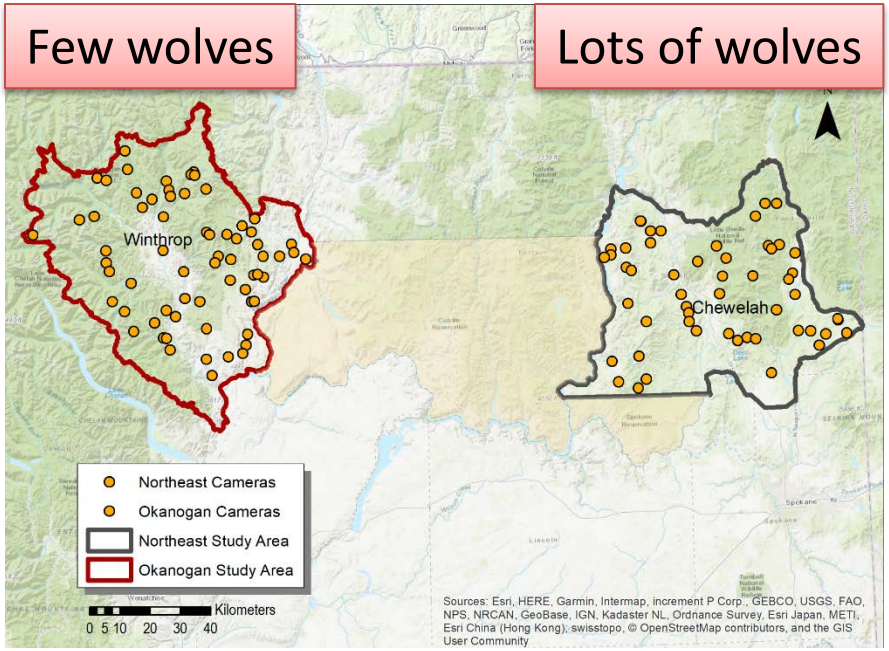


(1) Camera Trapping Study



Sarah Bassing

- *How does the presence of wolves affect activity of other species?*
- Prof. Beth Gardner and her PhD student Sarah Bassing are investigating

Beth Gardner

(2) Wolf-Cougar Interactions

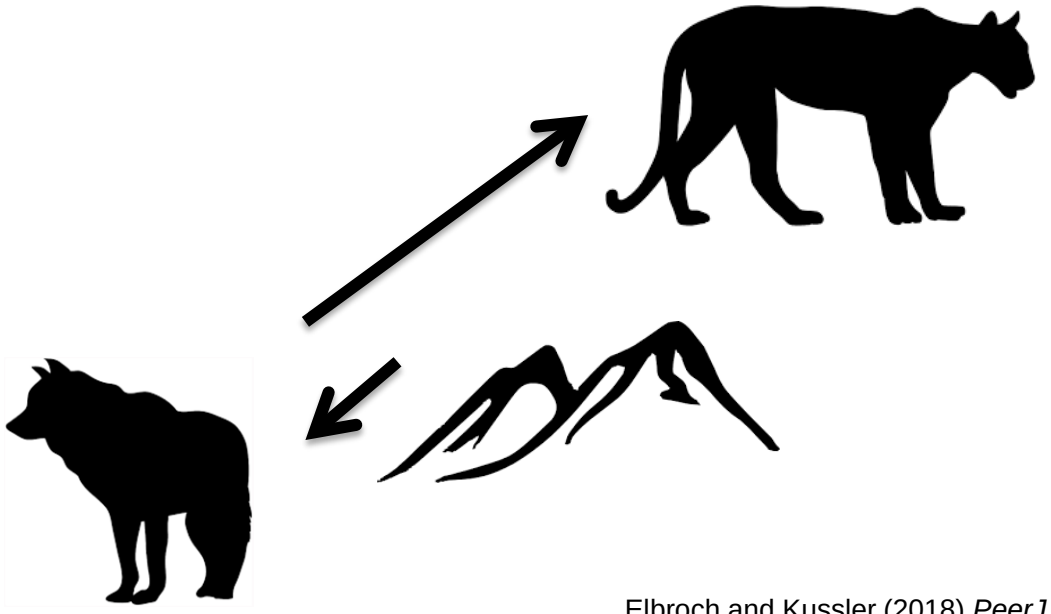
Lauren Satterfield

- Cougars are abundant throughout Washington
- *How will wolves affect their movements and behavior?*
- PhD student Lauren Satterfield and Dr. Brian Kertson (WDFW) are investigating

Brian Kertson

(2) Wolf-Cougar Interactions

- **Question:** As the subordinate predator, how do cougars respond to wolves?
  - spatial partitioning (e.g., cougars shifts upslope)
  - higher feeding rate (because cougars may leave kills early to avoid wolves, or have them usurped)
  - different prey?

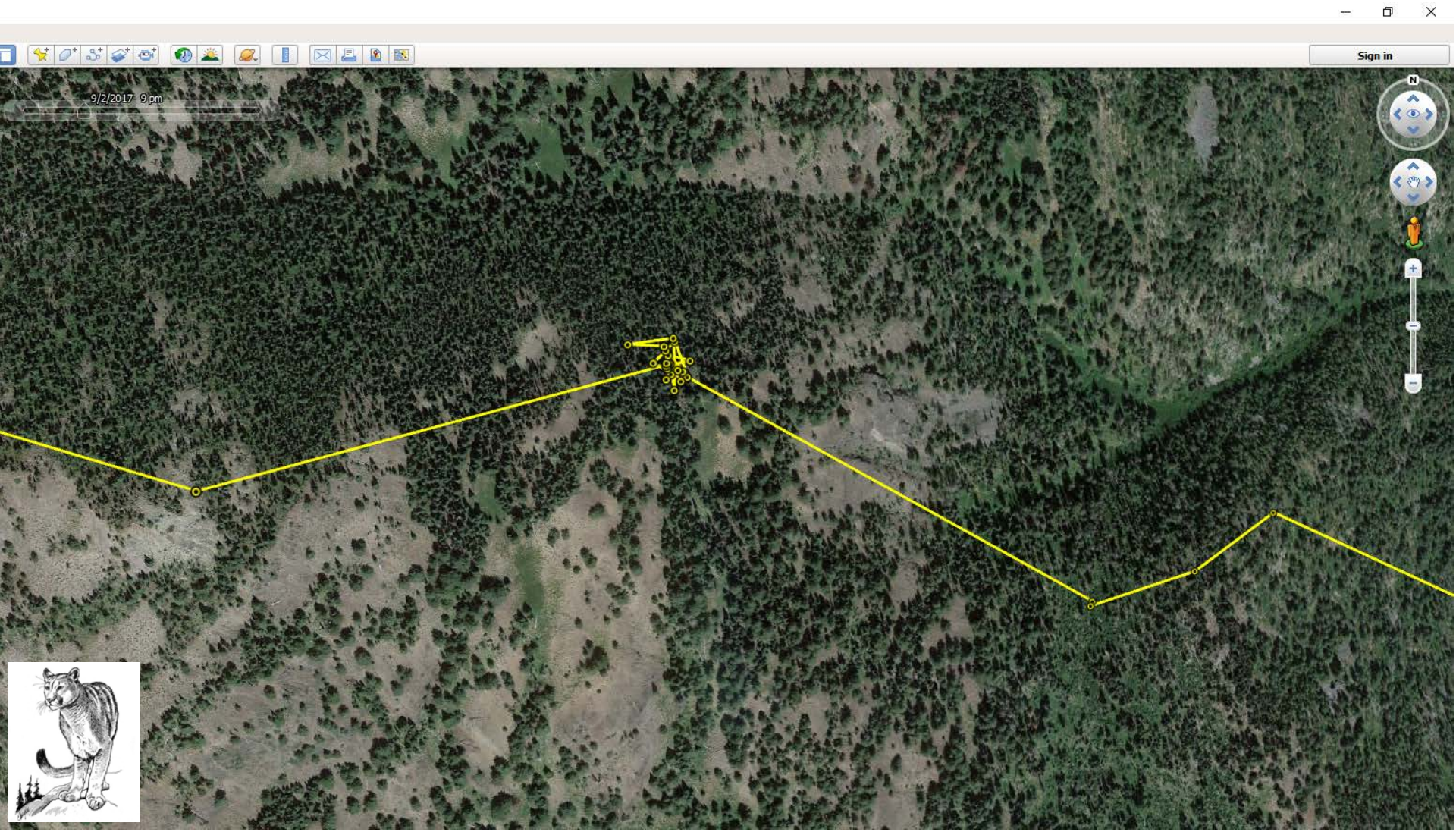


Elbroch and Kussler (2018) *PeerJ*

Methods

Cougar captures and collaring

Methods



Cluster investigations

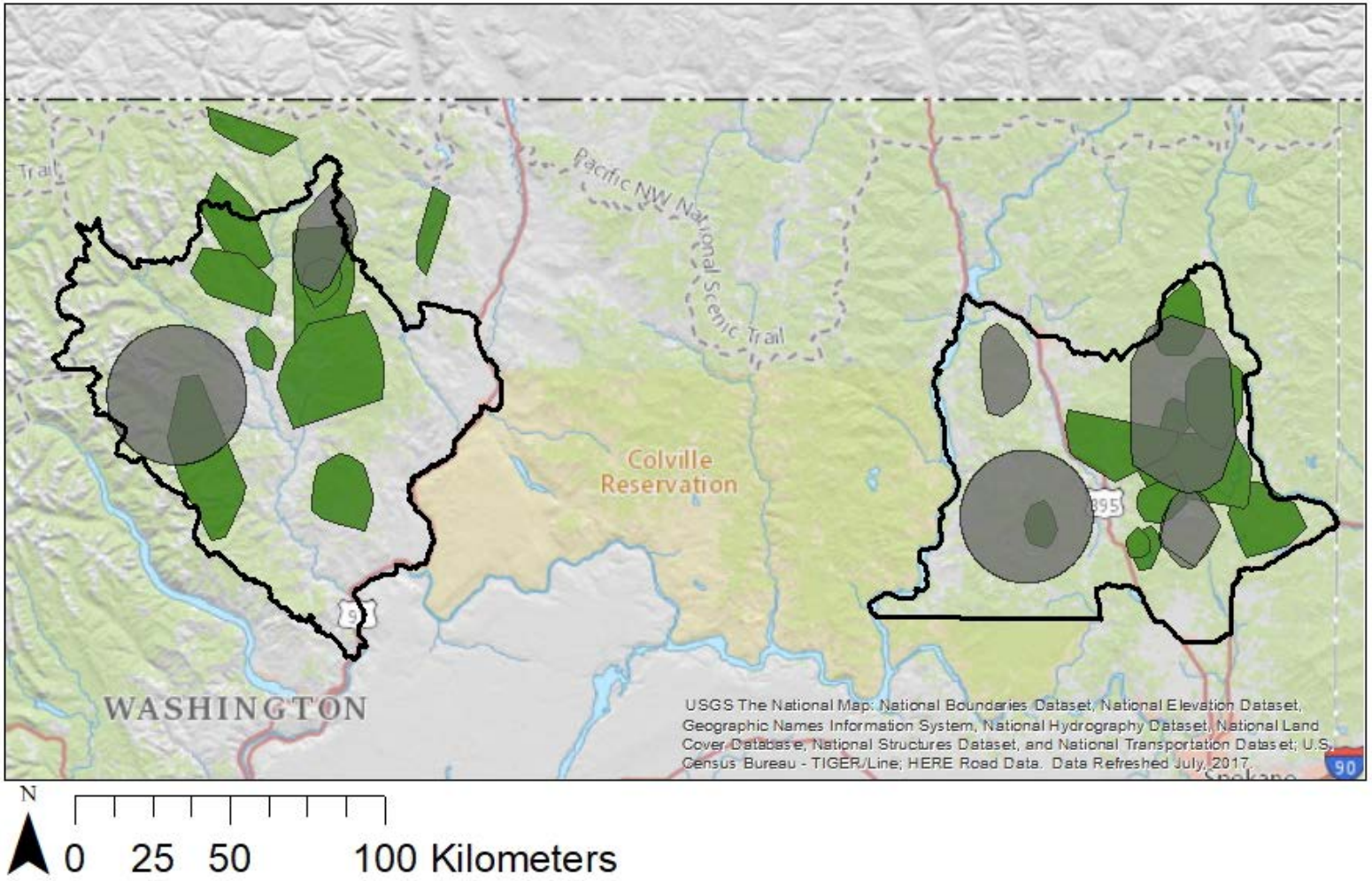
Methods

Kill (predation) sites

Collaring Progress

16 cougars, 2 wolves

17 cougars, 7 wolves



Kill Site Investigations

n = 339

n = 66

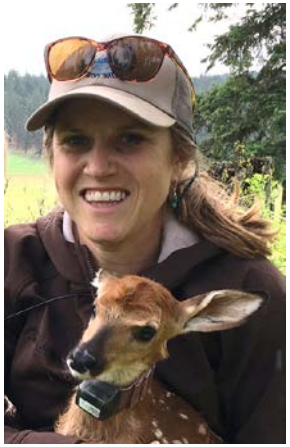
(3) Wolf-Ungulate Interactions

White-tailed deer

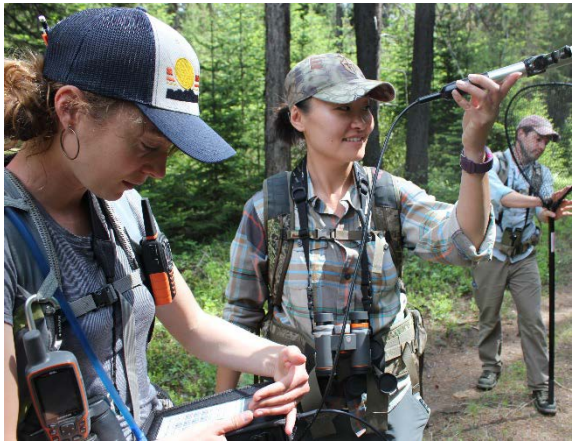
Mule deer

Elk

- Wolves rely on deer and elk
- *Will wolf predation reduce their populations?*
- PhD student Taylor Ganz and Dr. Melia DeVivo (WDFW)



Taylor Ganz



Melia DeVivo

Questions

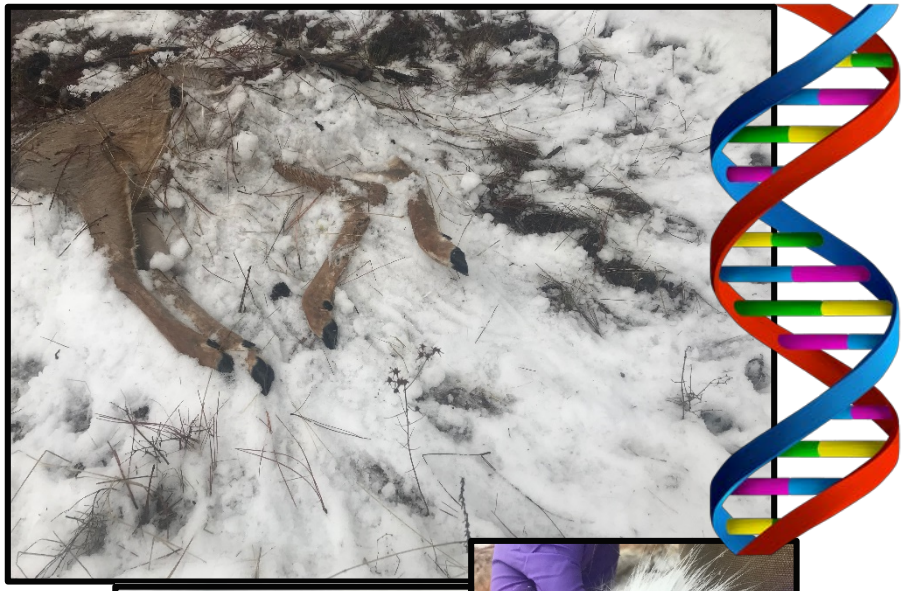
1. Do rates of adult, juvenile, and neonatal mortality differ between wolf occupied and unoccupied areas?

2. Do causes of adult, juvenile, and neonatal mortality differ between wolf occupied and unoccupied areas?

3. Do patterns differ between the ungulate species?

The big picture: Do the population growth rates of mule deer, white-tailed deer, and elk change in response to wolves?

Methods: Mortality Investigations

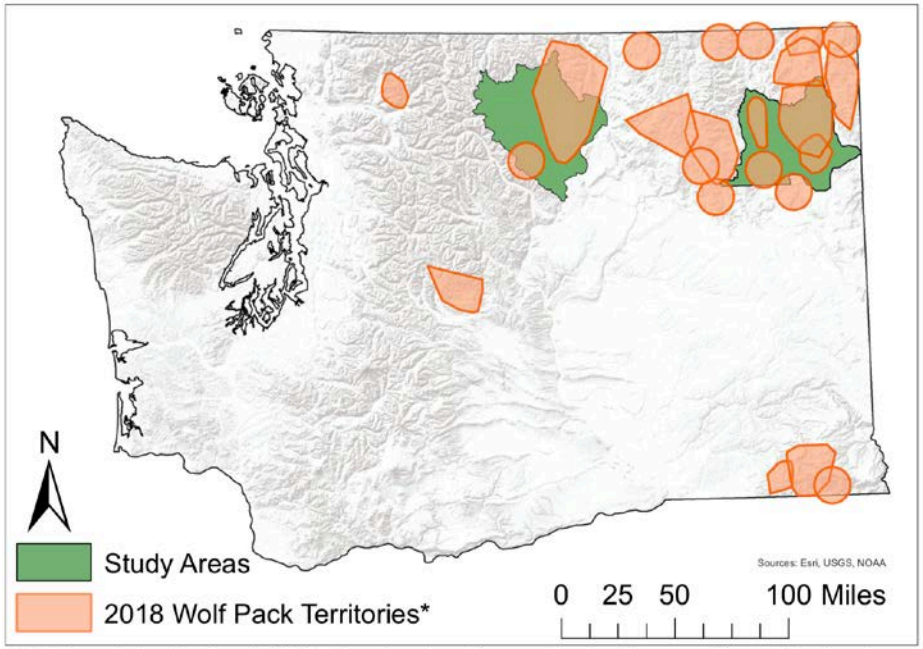


Wildlife Whodunnit: Forensic Analysis

Kelly Williams, Genetics lab manager

90% success identifying predators from swabbing saliva on carcasses (*n* = 20)

Progress



* Wolf pack territories deliniated using locations collected from radio-marked wolves. Known wolf packs without radio-collars are indicated using circles

Collars Deployed

- 100 adult female mule deer
- 50 adult female elk
  - 16 elk calves
- 37 adult female white-tailed deer
  - 52 white-tail fawns

Continued capture efforts underway

(4) Wolf-Mesopredator Interactions

Coyote

Bobcat

- Mesopredator – a middle-ranked predator
- *Will wolves reduce their populations?*
- Prof. Prugh is investigating


Questions?
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