Wolf recovery in Washington

Samuel K Wasser, Director
Jennifer White, PhD
Training Detector Dogs

1. Find the dog
2. Test for "ball-drive"
3. Associate scent with reward
4. Search the wilderness

High sample detection rates
Why Dogs?
## Samples per Species by Year

<table>
<thead>
<tr>
<th>Collection Period</th>
<th>No. Scat Samples Analyzed/Collected</th>
<th>Wolf</th>
<th>Cougar</th>
<th>Black Bear</th>
<th>Coyote</th>
<th>Bobcat</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2015-Feb 2016</td>
<td><strong>3917/4685</strong></td>
<td>541</td>
<td>212</td>
<td>323</td>
<td>1878</td>
<td>714</td>
</tr>
<tr>
<td>Oct 2016-June 2017</td>
<td><strong>2178/3771</strong></td>
<td>285</td>
<td>205</td>
<td>28</td>
<td>848</td>
<td>453</td>
</tr>
</tbody>
</table>
## Wolf Population Estimate

<table>
<thead>
<tr>
<th>Sampling Period</th>
<th>Sessions</th>
<th>No. Wolf Scats</th>
<th>Unique Indiv’s Sampled</th>
<th>Unique Indiv’s Year 1&amp;2</th>
<th>Abundance Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2015-Feb 2016</td>
<td>A-D</td>
<td>541</td>
<td>60</td>
<td></td>
<td>68 (3.1)</td>
</tr>
<tr>
<td>Oct 2016-June 2017</td>
<td>E-F</td>
<td>285</td>
<td>92</td>
<td>114</td>
<td>95 (9.0)</td>
</tr>
</tbody>
</table>
PREGNANCIES

Smackout
Dirty Shirt
Carpenter Ridge
PREGNANCIES

Salmo
Goodman Meadows
Skookum?
Densities

Spring 2015

Fall 2015

Fall 2016

Spring 2017
Prey Identified in Carnivore Scats 2015-2016
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)

<table>
<thead>
<tr>
<th></th>
<th>COYOTE</th>
<th>COUGAR</th>
<th>BOBCAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOLF</td>
<td>0.787</td>
<td>0.722</td>
<td>0.128</td>
</tr>
<tr>
<td>COYOTE</td>
<td>0.518</td>
<td>0.499</td>
<td></td>
</tr>
<tr>
<td>COUGAR</td>
<td></td>
<td>0.218</td>
<td></td>
</tr>
</tbody>
</table>
Collected 1118 Scat Samples

= Potential wolf
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.
<table>
<thead>
<tr>
<th>Year</th>
<th># schools</th>
<th># reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>9</td>
<td>1,450</td>
</tr>
<tr>
<td>2017</td>
<td>13</td>
<td>1,680</td>
</tr>
<tr>
<td>2018</td>
<td>20</td>
<td>1,720</td>
</tr>
</tbody>
</table>
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
Sampling Frequency per Individual

Number of Scats per Individual

Number of Individuals

- 1
- 2
- 3 to 5
- 6 to 10
- 11 to 15
- 16 to 20
- 21 to 25
- 26 to 32
Number of Unique Individuals by Year

Number of Unique Individuals

Pack

Individual Wolves (Identified by Genotype)
- Observed Both Years
- Only Observed Year 1
- New Genotype in Year 2

Smackout, DirtyShirt, Carpenter, Salmo, GoodmanMdws, Skookum