

Selkirk/Cabinet-Yaak IGBC Subcommittee

November 8, 2018, Libby, MT Meeting Notes

Subcommittee Members present: Rodney Smoldon (CNF), Craig Walker (for Chip Corsi, IDFG), Pat Seymour (for Eric Besaw, IDL), Rob Brassfield & Felipe Cano (for Jeanne Higgins, IPNF), Megan Wright (for Ray Entz, Kalispel Tribe), Rhonda Vogl (for Gary Aitken, Jr., KTOI), Kirsten Kaiser (KNF), Kim Annis (MFWP), Neil Anderson (MFWP), Ben Conard (USFWS), Christy Johnson Hughes (USFWS), Gregg Kurz (USFWS, on phone), Wayne Kasworm (USFWS), Steve Pozzanghera (WDFW).

Guest Presenter: Dr. Michael Proctor (BC)

Wayne Kasworm: 2018 Research / Monitoring Update

Research Captures

- Selkirks – Recaptured 2 adult males (# 1002 and #4327) in West Branch LeClerc Creek.
- Cabinet-Yaak – Recaptured 1 adult male (# 722) in Hellroaring Creek.

Monitoring of Radio-collared Bears

Radio-collared bears are the basis for determining population trend.

Selkirk Mountains

- 8 bears monitored (4 females and 4 males).
- Male bear (#4327) crossed Pend Oreille River and spent a week on west side of river. He crossed back to the east side of the river between the town of Lone and Box Canyon Dam.
- Male bear (#1002) tracked in the recovery zone and points south, mostly in WA.
- 2-year old male captured near Rathdrum, ID relocated to the Cabinet Mountains, but has recently been located north of Bonner's Ferry on the periphery of the Selkirks.
- Another 2-year old male originally captured in the Selkirks moved 125 miles through the Cabinet-Yaak and recently dropped its collar in the Fisher River.

Cabinet-Yaak

- 11 bears monitored (2 discussed in the previous section)
- 1 subadult male captured near McGregor Lake in early May and released Big Creek on west side of Koozanusa Reservoir
- 1 adult male recaptured in the Yaak
- 4 female bears in the Yaak River area; 2 of which each had 2 cubs of the year.
- 2 subadult males; 1 in the Yaak and 1 in the Cabinets
- 1 male augmentation bear (see the following)

Cabinet Mountains Augmentations

- Since 1990, 20 bears were added to the ecosystem (13 females and 7 males).
5 bears left the target area, one returned
6 bears are known dead
2 bears are known to have reproduced
- On July 21, 2018, a 2-year old male augmentation bear was released in the West Cabinets. This bear moved southwest, crossed the Clark Fork River and remained south of the river until September 3, when

an ID resident reported the bear at a black bear bait site (which utilized human foods). Bear was captured and relocated to Bull River, MT. However, it returned to the same area south of the Clark Fork. Most recently it has been SW of Heron, MT, but there have been few reports of the animal.

Human-caused Mortalities

- Selkirk Mountains – no known human-caused mortalities in 2018, so far (bears have not yet denned).
- Cabinet-Yaak – 1 female, 1 male mortality attributed to human-causes, 1 unknown cause in 2018.
- **Baiting** - Argument for baiting is hunters can better distinguish between species over bait. However, grizzlies have been attracted to human foods at bait sites and killed because of this practice. We work hard to minimize human food attractants in the recovery zones, but these attractants remain a legal hunting technique in some areas.
 - ID allows the use of bait for hunting black bears only. Baiting for bears is prohibited in the SCY Recovery Zones, but is allowed outside the recovery zones to the south.
 - WA, BC prohibit baiting for bears, but allow the use of bait for hunting ungulates.
 - MT prohibits the use of bait for all species.

Cabinet-Yaak and Selkirk Recovery Targets

Population of 90 - 100 bears judged by:

- number of females with cubs (running 6 year average)
- distribution of females with cubs (number of BMUs occupied over 6 years)
- known human-caused mortality NTE 4% of calculated population (from females with cubs last 3 years)
- female mortality NTE 30% of total mortality
- linked populations

Where are we now?

Selkirk Mountains (2013 - 2018)

- females with cubs average 3.5 / year (goal is 6.0)
- 7 of 10 BMUs occupied (goal is 7 of 10)
- 2.4% mortality (goal is < 4%)
- female mortality = 44% (goal < 30%)
- gene flow between Selkirks, Cabinet-Yaak, and South Purcells appears to be improving, but this could be an artifact of an increased survey effort since 2006
- annual growth rate = 1.8% (will be updated by spring)

Cabinet-Yaak (2013 -2018)

- females with cubs average 3.0 / year (goal is 6.0)
- 11 of 22 BMUs occupied (goal is 18 of 22)
- 2.3% mortality (goal is < 4%)
- female mortality = 14% (goal is < 30%)
- gene flow between Cabinet-Yaak, Selkirks, and South Purcells appears to be improving, but this could be an artifact of an increased survey effort since 2006
- annual growth rate = 2.1%

New Projects: Genetics

- hair samples from captures, rub trees, and corrals with cameras
- we get species, sex, individual genotype, and parentage
- Wayne proposes to evaluate changes in genetic diversity over time. Document gene flow and effective linkage in support of eventual delisting for both Selkirks and Cabinet-Yaak.
- Wayne uses a lab in BC for DNA analysis of hair samples.

Genetic Analysis (heterozygosity)

- NCDE (2004) $H_e = 0.67$
- YE (2007) $H_e = 0.57$
- Cabinets (2005) $H_e = 0.62$
- Yaak (2005) $H_e = 0.63$
- Selkirk (2005) $H_e = 0.54$ (2017) $H_e = 0.57$
13 of 15 loci tested show an increase in H_e , 13 of 15 loci had new alleles
Low diversity but that's maybe OK for this population.

New Projects: Huckleberry Contribution to Grizzly Bear Diets

- Use isotope analysis of hair, tissue, blood samples to determine diet fractions of meat, vegetation, fish.
- Develop a method to determine fraction of berries in diet from isotope analysis
- Preliminary results suggest berries are about 20% of annual calories consumed.
- Huckleberries contain 10-20% sugar which is converted readily to fat.
- Female bears require at least 20% fat level at denning to produce cubs.
- Companion study to BC effort by Michael Proctor
- Utilize a University of Montana grad student (Alex Welander) for most analysis.
- Identify US sampling sites based on July – September telemetry.
- Field effort begun in 2018: Visit sites heavily used by bears and characterize sites during August.
- Utilize US data layers to develop a predictive model if possible.
- Provide history of productive berry sites (fire, timber harvest, etc.) to inform management.

Dr. Michael Proctor: 2018 DNA Survey in South Selkirks, BC

Bear Connectivity / Coexistence with Humans

- Corridor movement potential mapped
- Direct purchase or conservation easements - 37 properties totaling 21,000 hectares (50,600 acres)
- Partners: TNC Canada, TNC US, Y2Y, Vital Ground, Nature Trust of BC, Forest Legacy (US)
- 5-7 female bears now using the Creston Valley linkage area
- Electric fencing program (Creston Valley / Nelson area) – 50% cost-share program
Conservation Officer Service and WildSafe BC taking the program province-wide
- Creston Valley Bear Fair – bear safety and bear spray training, bear coexistence I&E
- Grizzly bear non-lethal management 2004 – 2017: 74% success rate
Conservation Officer Service taking the program province-wide

Human-caused Mortality in the Selkirks

- Mortalities were rising prior to 2006, dropping since

- In contrast, mortalities continue to rise in South Rockies population, where there is no enhanced management

Population Linkage / Expansion

- Evidence of inter-population mixing between Selkirks and Purcells, from genetic samples taken pre-2006 compared to post-2006
- Increase in inter-population movements based on telemetry
- Evidence of genetic-based pedigrees and family units – 4 recent family groups between populations
- Genetic variability increased: pre-2006 $H_e = 0.54$; post-2006 $H_e = 0.57$
- No bears in Creston Valley linkage area in 2004, 5-7 females in 2017

2018 DNA Survey

Goal: assess the effectiveness of 20 years of recovery efforts

- Highly necessary part of the process
- A lot of money invested in recovery
- In Canada, recovery metrics designed to be measured from a DNA survey

Goal: assess conservation status using the following recovery metrics

- Abundance and density
- Distribution
- Distribution of reproductive females
- Sustainable mortality rate
- Genetics and demographic (females) connectivity

Preliminary design

- 160 hair snag corrals - 5km x 5km grid cells (4,000 square km)
- 4 collection sessions, 2 week intervals
- Scent lure – aged bison blood
- Year 1 – prep, Year 2 - field survey, Year 3 - lab work and analysis

US Participation in DNA Survey?

- More robust sample size if US side of the ecosystem is included.
- 7km x 7km cell size would be cheaper to implement, somewhat more expensive metrics analysis.
- Wayne Kasworm estimates a minimum \$300 - 400K needed to implement.
- Funding would need to be in place by January, 2020.
- Working group meeting called in March to discuss funding options.

Kim Annis: 2018 Cabinet-Yaak Bear Management / Monitoring

Human-Bear Conflicts

- Very low for both species
- Excellent low elevation berry crops but huckleberries were spotty.
- No conflicts between bears and mushroom pickers (recent wildfire scars) in the CYE
- 4 people had negative encounters with grizzly bears:
 - 1 person injured – Amber Kornak (FWS employee) believes bear spray saved her life

- 3 individuals bluff charged, none carrying bear spray.

Collared Bear Monitoring

- Augmentation bear (#927) spent several months in a populated area around Heron and Clark Fork, MT Kim spoke with several residents - no sightings or conflicts. Geofence proving valuable.
- Sub-adult male collared in Selkirks in 2017 (#1006) moved 125 miles through the Cabinet-Yaak and recently dropped its collar in the Fisher River.
- “McGregor” bear captured at McGregor Lake, relocated to Big Creek in Yaak. Seen multiple times in his 3 weeks of travel. Mortality is under investigation.
- Bear #722 re-collared in 2018 by USFWS for research. Arrived in the Libby area a day before start of general rifle season. Photographed on several trail cameras. Apparently keying in on big game gut piles. This bear took a deer hanging up in someone’s carport.

Securing Human Food Sources

- Lots of bear-resistant garbage containers on loan, almost out of stock again
- Lots of electric fences loaned, several permanent fences built, assisting Kootenai Tribe and ID Fish and Game with materials and a build in Bonner’s Ferry, ID

Dump Sites in Lincoln County, MT

- Most dump sites in the county fenced.
- West Kootenai planned for completion, Fortine in planning process
- McGinnis Meadows / Happys Inn and Rexford are all that remain. These sites lie outside the recovery zone.

Brian Johnson: 2018 Bear Management / I&E

Human-Bear Conflicts

- Multiple grizzly bear depredation issues involving 3 different bears in the Bonner’s Ferry, Athol, and Clark Fork areas.

Securing Human Food Sources

- Assisted the Forest Service with enforcing their food storage orders throughout the recovery zones.
- Brian received a (\$25K?) grant for bear-resistant trash cans.

I&E

- Project continues to give dozens of bear I&E presentations to schools, hunter education classes and civic groups stressing bear ID, natural history, and conflict avoidance strategies.
- Partnered with the Forest Service and Idaho Conservation League to conduct 3 bear workshops reaching about 130 people.
- Conducted extensive field patrols during the black bear season stressing proper bear ID.
- Secured a \$3,000 grant from IGBC to purchase several dozen “This is Grizzly Bear Country” signs which were shared with partners throughout the ecosystem. Dozens of new signs posted and many aging ones replaced.

Kim Annis and Felipe Cano: I&E Subcommittee Update

- I&E grant applications are due Friday, November 16.

- I&E group is updating its 5-year plan and goals. Kim will present that plan to Executive Committee at the winter meeting. I&E subcommittee is already on target to complete goals in the existing plan.
- Kim will work with SCY I&E group to update the 2012 I&E comprehensive strategy this winter. Kim will present at 2019 spring meeting.

Project Proposals

The SCY I&E group proposed the following projects to the main SCY Subcommittee to prioritize for funding.

- **Project 1:** Branding that is consistent with a logo with text through entire ecosystem (e.g. grizzly paw print or silhouette).
Decision: 2nd Priority for 2019. Combine with Project 6. Appeared that the consensus was to use the IGBC logo. Where / how to implement will need to be fleshed out so there is consistency across jurisdictions.
- **Project 2:** Updated brochures that would be used in the SCY that would be similar to other successful ecosystem's effort.
Decision: 1st Priority for 2019 as decided by the SCY Subcommittee. Get rid of outdated brochures.
- **Project 3:** Public announcements – Public information for use on social or electronic media that would be consistent with all partners in the SCY area.
Decision: Not at this time
- **Project 4:** An effort to establish more bear poles with QR patch links to the respective agency's bear recovery information (the why we have these poles up).
Decision: Lower priority. Areas without cell phone service will not be able to participate.
- **Project 5:** Bear education ambassador / summertime ranger for the SCY area.
Decision: Lower priority. A lot of this work is already being accomplished with force account / grant funding.
- **Project 6:** The addition of QR patch on posters and at campground signs.
Decision: 2nd Priority for 2019. Combine with Project 1. Recreation folks will need to be included in implementation discussions. Areas without cell phone service will not be able to participate.

Next Scheduled Meetings

March Working Group Meeting: discuss funding for 5x5 km. hair snag corrals in US Selkirk Mountains.

Next Subcommittee Meeting: May 9, Spokane (Location TBD) @ 0900

Bin Item: This winter or next spring, convene a standing technical team / biological committee consisting of agency biologists to begin discussions around linkage areas and other issues.