2014 Autumn Cabinet-Yaak and Selkirk Mountains Grizzly Bear Ecosystems Update

Wayne Kasworm, Justin Teisberg, Thomas Radandt, and Alex Welander. US Fish and Wildlife Service, 385 Fish Hatchery Road, Libby, MT 59923 (406) 293-4161 ext 205 wayne\_kasworm@fws.gov

#### Reports:

http://www.fws.gov/mountain-prairie/species/mammals/grizzly/cabinetarchive.html

# Augmentation

We released two sibling females in the Cabinet Mountains on June 19 west of Spar Lake. The bears were 2-year-olds weighing 95 and 110 pounds and had no history of human conflicts. The bears were captured by Montana Fish, Wildlife, and Parks personnel in the North Fork of the Flathead River approximately 25 miles north of Columbia Falls. While we expected both bears to remain together for a while, the pair separated with one bear moving to the main Cabinet Mountains in the wilderness and the other moving south into Ross Creek. Both individuals denned in mid-November.

We monitored two other augmentation bears for much of 2014. One is a 4-year-old male released in 2012. He spent most of the summer and fall in the main Cabinet Mountains between East Fork of the Bull River to the south and Camp Creek to the North. His radio collar detached in early October and was retrieved. The other bear was a 4-year-old male released in 2013. He spent most of his time in the West Cabinet Mountains and his collar was retrieved in upper Lightning Creek in early September after the collar spacer rotted away.

Seventeen bears have been added to the Cabinet Mountains population since 1990 (13 females and 4 males) through the augmentation effort. Three female bears and one male have left the target area and 4 bears are known to be dead. Captures, mortality, and genetically analyzed hair snags have identified 35 individual grizzly bears during 1997–2012 in the Cabinet Mountains. Twenty of these bears are offspring or fathers of offspring produced by the 1993 augmentation bear 286 (died in 2009). Ten were augmentation bears released in the Cabinet Mountains other than bear 286. The remaining five include a family group of unknown ancestry in which the mother was killed leaving 3 orphaned yearlings. One of the yearlings is known to be dead. The last bear was a male captured after a livestock conflict. In total, nine of the 35 are known to be dead.

The small number of captures and hair snags of native bears in the Cabinet Mountains since the beginning of the augmentation program in 1990 suggests that the population was much smaller than the original estimate of 15 bears. The information also suggests that the Cabinet Mountains grizzly population would probably have disappeared without augmentation. The population estimate from the USGS effort in 2012 is 22–24 bears in the Cabinet Mountains with another 22–24 bears in the Yaak River.

#### Captures

We trap bears every year to maintain a radio collared sample. This sample is the basis for population trend monitoring and also provides cause of mortality. Trapping is typically conducted from May through August or September.

Seven bears were captured in the Cabinet-Yaak (1 in the Cabinet Mountains and 6 in the Yaak area). The bear from the Cabinet Mountains was an adult female accompanied by 3 yearlings or two-year-olds. She was captured in Libby Creek during mid-June. Her young were not captured, but instead detected with trail cameras at the capture site. Two subadult male grizzly bears were captured in Idaho near the Montana-BC border during late June. Three adult males and a yearling female were captured in Hellroaring Creek during late August and

September. The yearling was accompanied by her mother and a sibling who were not captured, but identified by a trail camera at the capture site.

Nine grizzly bears were captured in the Selkirk Mountains. One capture occurred in the US and 8 captures occurred in British Columbia, Canada (BC). An adult male grizzly bear was captured near Hughes Meadows during late June in the US. The US trap team operated between May and August. An adult female, 3 adult males and 4 subadult males were captured in the Selkirk Mountains in BC. BC trapping occurred during May and June and was located near and east of highway 6 between Nelson and Salmo.

# Monitoring

We monitored thirty grizzly bears for portions of 2014 with 13 in the Cabinet-Yaak and 17 in the Selkirk Mountains. An adult female, two subadult males, and two subadult females were monitored in the Cabinet Mountains. Two adult females, three adult males, two subadult males and one subadult female were monitored in the Yaak. Selkirk Mountains grizzly bear monitoring in the US portion had three adult females, one adult male, and 3 subadult females. In the BC portion there were three adult females, three adult males, and four subadult males.

# Hair Snagging and DNA Analysis

Laboratory DNA analysis from 2013 is not complete. During 2014 we made substantial effort to collect hair in both the Cabinet-Yaak and Selkirk Mountains through placement of hair snag corrals with cameras and collections at rub trees. Forty-two corrals and 16 cameras sites were operated in the Selkirk Mountains. Twelve corrals and two camera sites yielded pictures of grizzly bears. Seven rubs were established for collections. Five or six family groups were identified from all sources of information including radio-collared bears.

In the Cabinet-Yaak, we operated forty corrals with cameras. This effort yielded pictures of grizzly bears at 5 sites. In combination with all other sources of information, we identified five family groups in the Cabinet-Yaak. A subset of the rub trees established by the USGS effort in 2012 was visited again in 2014. We attempted to collect hair on a monthly basis from May through September. We collected 1,889 hair samples at 582 of the USGS sites. We are examining these hairs to eliminate obvious black hairs before sending the remaining samples to the lab for analysis

#### **Known Mortality**

There was one known mortality of an adult male grizzly bear in the Cabinet-Yaak recovery area. The bear was killed by a hunter in self-defense along the Little Thompson River on 26 October 2014. The bear was originally captured in British Columbia as a part of a research project in 2007. It was captured again southeast of Eureka in a management capture in the spring of 2014. Lower mortality rates of female bears in the last several years have resulted in a long term stable population trend. We will recalculate trend numbers based on 2014 data this winter and expect to document an increasing trend estimate based on this low female mortality.

There was one known mortality of a subadult female in the Selkirk Mountains recovery area. The bear was found shot in British Columbia on the north side of Boundary Creek. The bear was radio-collared and the incident is under investigation by British Columbia conservation officers.

### **Berry Production Measurements**

Berry production measurements during 2014 indicated an exceptional crop. Production during 2014 was the highest recorded in the last 25 years.



Augmentation grizzly bears released in the Cabinet Mountains 19 June 2014.



Adult female grizzly bear with young captured 21 June 2014 in the Cabinet Mountains.



Adult male grizzly bear being fitted for radio collar by Alex Welander on 21 June 2014 in the Selkirk Mountains.



Grizzly bear and rub tree in the Yaak River 2014.