



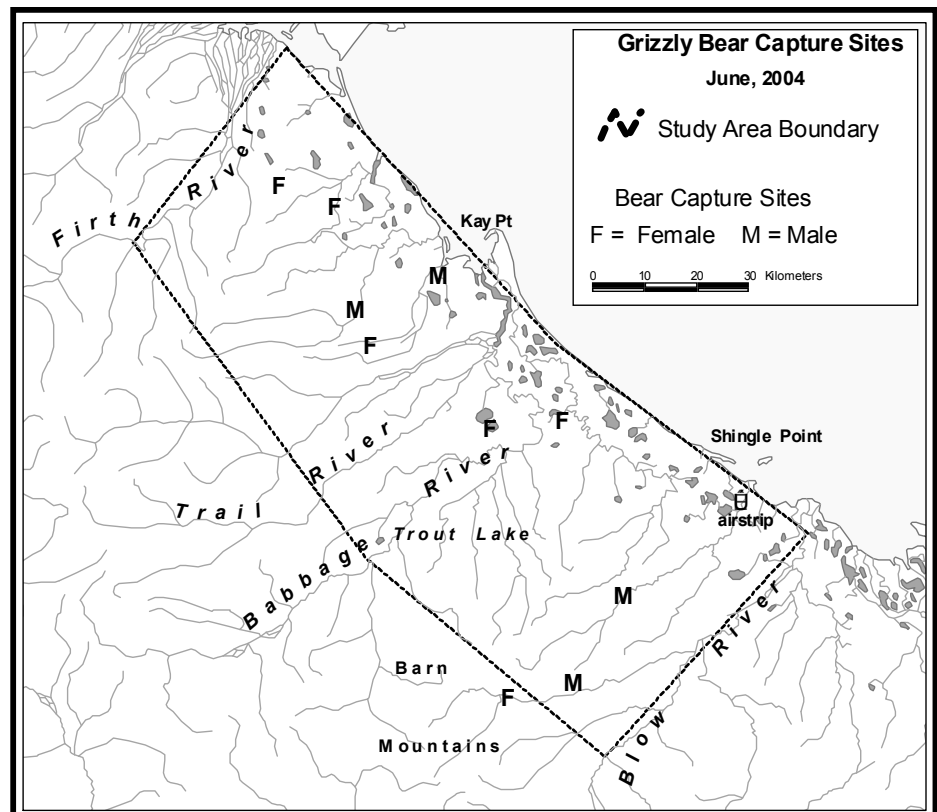
Activities in Summer 2004

In May 2004, the Yukon Government Department of Environment, in partnership with Parks Canada (Western Arctic Field Unit) and the Aklavik Hunters and Trappers Committee, began a six-year grizzly bear research project on the Yukon North Slope. The focus of the project is on grizzly bears between the Firth and the Blow Rivers.

The research project is designed to find out about grizzly bear population size, birth rate, death rate, where bears can be found at different times of the year, and how much they move around. It will also include a review of harvest activity. It is important for wildlife managers to have all this information when they are determining the conservation requirements of this population and in reviewing harvest quotas.

As part of the project, radio collars will be used to follow bear movement and to find out what habitat the bears are using at different times of year. This part of the

project is designed to determine how changes in habitat can influence population size and movements. Biologists must capture the bears in order to fit them with a radio collar. Capturing the bears also gives the research team a chance to get other important biological information such as the age, weight and physical condition of all the bears they handle.



Field Work Activities

In early June, Yukon Government biologists, Ramona Maraj and Al Baer, captured ten bears in different parts of the study area - 6 females and 4 males. (See map). Herschel Island Territorial Park Ranger Lee John Meeyok was able to assist with two of the captures. Kluane National Park Warden Kevin McLaughlin assisted with the capture of six others. Using a helicopter based at Herschel Island, the research team flew approximately 2290 km of straight line distance in the study area searching for bears. A total of 16 bears were seen in 7 days of flying. A number of these bears were in mating pairs. No family groups were observed. Most bears were seen on the coastal plain. It's possible that females with cubs were staying up in the mountains where they are more protected.

The bears were darted from the helicopter with a tranquilizing drug called Telazol. It usually took from 5 to 15 minutes until the bear would stop moving and lie down on the tundra. Biologist then approached cautiously, making sure the bear was fully asleep before beginning their work. Great care was taken to ensure the bear was safe and comfortable at all times. All captured bears were blindfolded for their protection. Temperature, breathing and heart rate were continually monitored to be sure the bear was okay while under the influence of the drug.

Biologists took several different measurements and samples from each bear. Bears were weighed using a sling hung from the helicopter. Body fat was measured by sending a very mild electric current through the bear. A number of other body measurements were taken including length, girth and head size. Blood and hair samples were collected. Age was estimated by looking at tooth wear. A tooth was also pulled as a way to determine the exact age later in the laboratory. All captured bears were tattooed for identification. As much work as possible had to be completed in an hour before the bear started to show signs of waking up.



The collars put on the bears this summer all contain GPS units which record the bears' locations every 4 hours. The information is stored in the collar and can only be retrieved by flying over the bear or by recovering the collar itself. The collars send off radio signals so that the bears can be located during overflights which are done when it is time to get the information stored in the GPS units. The collars are specially designed to fall off after a number of years in case it is not possible to remove them at the end of the study.

Results of the Field Work

The research team was able to get a lot of important information about the bears they captured. The following table summarizes some of the measurements and observations.

Bear ID	Sex	Weight (lbs)	Estimated age	Straight line length (inches)	Chest girth (inches)	Head length (inches)	Shoulder height (inches)	Body condition
YT 001	F	262	7 to 10	63	36	12	33	Fair to good
YT 002	F	184	12 to 16	63	37	13	30	Poor
YT 003	M	316	6 to 8	68	43	14	35	Fair to good
YT 004	M	186	5 to 6	63	34	13	31	Poor
YT 005	M	508	mid-age	69	52	13	unknown	Good to excellent
YT 006	F	194	5 to 7	59	36	12	28	Fair
YT 007	F	148	9 to 11	56	37	12	31	Poor
YT 008	M	404	14 to 16	73	51	14	unknown	Good to excellent
YT 009	F	176	14 to 16	58	37	12	33	Poor
YT 0010	F	216	8 to 9	51	38	12	32	Fair

One bear was producing milk although she didn't have a cub with her. The biologists think that her cub had recently died. Only one of the bears was found to have a small parasite.

Weight and size information is used to understand growth rates. It is also used to understand the health and condition of each bear and of the population as a whole. All of the information collected can be used to compare Yukon North Slope bears with other populations of bears.

Next steps

Biologists will do tracking flights in the fall to locate the bears and retrieve the information that was recorded by the collars over the summer. This data will be analyzed over the winter to start to put together a picture of annual home ranges. It will be interesting to see how far and how fast each bear has moved since collared. Laboratory work will include determining ages from the teeth that were pulled. Blood samples will also be analyzed.

The first steps will be taken over the winter to compile local knowledge about the bears. Preparations will also get underway over the winter for next summer's field work.

Body Condition of Bears

Biologists rate body fat condition according to the following scale:

Poor – Hip bones, shoulder blades, backbone and ribs can easily be felt. The bear appears to be a skeleton with skin stretched over it and generally looks unhealthy.

Fair – Hip bones, shoulder blades, backbone and ribs can be felt but were not prominent. The bear appears thin but not unhealthy.

Good – Hip bones, shoulder blades, backbone, and ribs were difficult to feel. The bear appears healthy but not extremely fat.

Excellent – No bones could be felt. The bear appears extremely fat and healthy.

For more information contact

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Also see - www.taiga.net/wmac/grizzlyresearch/index.html