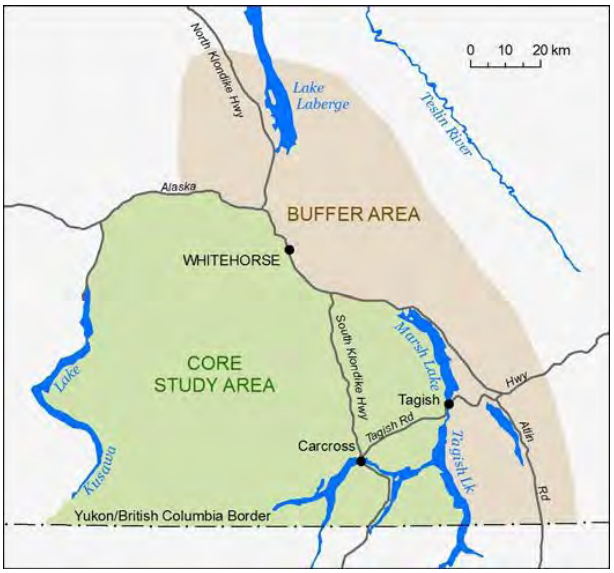
Yukon Southern Lakes Region Grizzly Bear Study Update -- April 2013

Environment Yukon, in collaboration with local First Nations, has been working on a grizzly bear population study in the Southern Lakes region. The study involves many activities, including capturing and collaring bears, using hair snagging stations to gather DNA, looking for den sites and collecting bear scat. The study, which began in 2009, covers important grizzly bear ranges between Tagish Lake and Kusawa Lake, from the Alaska Highway south to the British Columbia border.

Why is a population study needed?

This research provides information about not just the numbers of grizzly bears, but also nutritional status, habitat use, the ages of bears, ranges, and cub survival rates. Environment Yukon needs this information in order to sustainably manage this population. Current estimates of grizzly bear numbers and density are based on local knowledge, outfitter experience, harvest history and expert opinion.



What has happened so far?

1. Bears have been collared - As of April 2013

Environment Yukon has collared a total of 28 bears. All collared bears in the study area are monitored for their survival and survival of their cubs. The number of bears collared at one time is always changing because collared bears are shot illegally or in defense of life and property, die of natural causes, lose their collars and sometimes are relocated out of the study area due to human-wildlife conflict.

Last year (2012), wildlife managers collared four new bears and re-collared two other bears in the study area. By denning time there were 10 bears (six males and four females) with collars on. Wildlife managers retrieved five collars from previous study bears. It is important to retrieve all dropped collars as they store information about the bear's movements. Last year, one study bear was shot illegally, one was suspected of being shot, and two others were relocated out of the study area.

When bears are tranquilized to be collared, wildlife managers collect blood, hair and other samples. Blood samples provide information on health and are used for DNA analysis. Hair samples provide information on diet and on the amount of stress a bear may be under as a result of things like poor nutrition or living in areas with too much human activity. A vestigial premolar tooth is removed to determine the bear's age. A fat sample (biopsy) and claw shaving provide information on diet. All bears are tattooed on the inside of the lip for later identification. On recommendation from Kwanlin Dün First Nation Elders, wildlife managers offer tobacco to thank all the captured bears for their contribution to helping understand this population.

All of this information allows wildlife managers to determine if and how the population is changing. Tracking bears also provides information on bear movements and habitat use. Understanding how the bears are using different habitats at different times of the year is important when making decisions about land development.

2. Den sites have been identified - In the 2010 and 2011 seasons, 21 grizzly bear den sites were located. Wildlife managers are assessing den habitat availability throughout the Southern Lakes region and how human activity affects den use. Bears often return to the same den sites each year. Sites that experience too much human disturbance and activity are not suitable places to den. Because denning is such a critical part of their annual activities, disturbance to denning habitat and den sites can lead to drastic population declines.

3. DNA has been gathered - Wildlife managers use special 'traps' to collect hair samples from bears. The bears come to investigate the trap and leave hair behind for wildlife managers to retrieve. DNA analysis of the hair helps identify the number of individual bears in the area, which provides information about the density of bears in the region. In 2012, Environment Yukon ran a DNA-based mark-recapture grid. A total of 170 hair-snagging stations were set up in the study area. Each station was accessed five times – a set up session, mark session and three recapture sessions. Members of Carcross-Tagish First Nations participated in this fieldwork. A total of 2,085 hair samples were gathered (not all were grizzly bear). All the samples were submitted to the lab for analysis.

What happens next?

This summer (2013), wildlife managers will use both aerial and ground-based techniques to capture and collar bears. The more bears that can be monitored as part of the population study, the more wildlife managers will be able to learn about the population over the life of the project. Wildlife managers are also conducting a second year of DNA gathering using the hair snagging stations.

There will be a local and traditional knowledge component to this study. Discussion is underway with First Nations to figure out the best way to do this. Community involvement is an important part of grizzly bear management in Yukon. Local people can provide valuable information about the number of bears, where they can be found at different times of the year and how much they move around.

How can the public help with this study?

If you see a collared bear or a den, please report it to Environment Yukon at (867) 667-5652 or toll free: 1-800-661-0408 or email carnivore@gov.yk.ca.

As part of the study, we invite the public to collect bear scats. Scats provide valuable information about what the bears are eating in different areas. If you find a scat, please collect as much of it as possible and take it to any First Nation office in the Southern Lakes area or to the Environment Yukon office at 10 Burns Road, Whitehorse. Collection kits are also available at these offices.

For more information, check out www.env.gov.yk.ca/bears or contact Environment Yukon at (867) 667-5652 or toll-free at 1-800- 661-0408 or email carnivore@gov.yk.ca.

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