



A grizzly bear grazes on the outskirts of the Banff townsite in 2018. RMO FILE PHOTO

Grizzly bears, wolverines need room to roam

CATHY ELLIS

BANFF – Grizzly bears are typically shying away from busy and developed areas of Banff National Park in favour of spending time in quieter, more remote areas of the backcountry.

Preliminary research from tracking 22 GPS-collared grizzly bears and scouring through thousands of remote camera images shows the overall grizzly bear population appears to be stable, but grizzly bear density declined in areas near paved roads while increasing in the backcountry from 2012-21.

Jesse Whittington, a wildlife ecologist with Banff National Park, said grizzly bears seem to be avoiding areas near paved roads, which are surrogate for areas of high human use and activity, towns, trails, and vehicles.

However, he said this applies to female bears with cubs to a much lesser extent.

"The number of females with cubs-of-the-year increased over the 10 years, whereas the overall population of grizzly bears was stable, but what was interesting was it was not equal everywhere," he said during a recent presentation to Bow Valley Naturalists on wildlife trends.

"They essentially avoided areas near paved roads compared to backcountry areas ... we found the

strength of that effect increased over time, so in 2021 there was even a stronger avoidance of those areas near paved roads."

Overall, there are about 250 remote cameras throughout Banff, Yoho and Kootenay national parks, picking up about 1,000 grizzly bear detections every year.

In addition, data was used from GPS collars on grizzly bears for the multi-year Parks Canada/Canadian Pacific Railway study to look at grizzly bear mortality on the train tracks that wrapped up in 2016.

There are an estimated 65 bears in Banff National Park, with only a handful of female bears with cubs of the year.

In Yoho National Park, there are an estimated 11-15 grizzly bears, and in Kootenay National Park an estimated nine to 16 grizzlies; however, many of these bears do not spend their entire lives within the parks.

"More interesting to me than how many bears there are is what are the grizzly bear trends," said Whittington, noting the movements of bear 122, known as The Boss, are huge, although much smaller for female bear No. 72, who spends much of her life in Lake Louise.

"The good news to me is the population is gener-

ally stable, but it's kind of interesting to see what the population is doing in different areas of the park."

Whittington said there is some uncertainty around why females grizzlies with cubs-of-the-year didn't avoid paved roads as much, but noted that females with cubs want to keep their cubs safe from large male grizzlies.

"Many male grizzly bears will try and kill the young-of-the-year to induce breeding in the female, so what these females do is they hang out in places where they're unlikely to encounter males," he said.

"That's areas of poor habitat quality, some of them come near towns, high human-use areas to avoid those big males, but how that affects their long-term survival is hard to say."

The preliminary research, which is currently under peer review before publication, also indicates grizzly bear density was higher in national parks compared to provincial lands.

Whittington said hotspots for grizzly bears were similar to what was found during the 2005 Eastern Slopes Grizzly Bear Project, which looked in-depth at the biology, ecology and management of grizzlies in and around Banff National Parks and Kananaskis Country.

WILDLIFE

CONTINUED ON A7



Two wolverines sit on a log in the rain.

PARIS CANADA PHOTO

WILDLIFE CONTINUED FROM A6

"It's still the case – the Panther Valley, the Spray Valley, the Pipestone, Siffleur and Clearwater areas are hotspots," he said.

Whittington said those areas provide quality habitat for grizzly bears but there are also other factors at play.

"Good habitat, yeah, but we have some seasonal and permanent nighttime closures and all those things are going to help provide bears with safe, secure habitat," he said.

Habitat fragmentation and loss caused by increasing human use and population is one of the biggest threats to grizzly bears.

So too is accidental human-caused mortality along the roads and railway line, which could explain the decline in density near paved roads over the past 10 years.

But another reason, Whittington said, could be low recruitment of this grizzly bear population, with the age of first reproduction ranging from five to eight years of age and a female only producing cubs every three to five years from there.

"Maybe there's more female cubs-of-the-year, but maybe they're not surviving," said Whittington.

"Grizzly bears in the Eastern Slopes of the Rockies have some of the slowest reproductive rates in North America."

Colleen Campbell, a member of the board of directors for Bow Valley Naturalists who did fieldwork for the Eastern Slopes Grizzly Bear Project,

said Whittington's presentation reinforced some of what was learned during that earlier study.

"Female bears gravitate to habitat where they might be less likely to run into males and that means sometimes accommodating to human use," she said.

"We know grizzly bears on the ski hills, most of them are females with cubs," she said, noting she also saw this trend in her bear research along the Bow Valley Parkway.

Campbell said males have bigger home ranges and will wander further away from human-use areas.

"We keep making it harder for bears, we keep making it so that they have to keep moving away because there's more and more people on the trails and more and more people pressing on their habitat," she said.

There are an estimated 65 grizzly bears in Banff National Park, though many of these bears do not spend their entire lives within the park. Grizzly bears are a threatened species in Alberta.

WOLVERINES

Parks Canada, working with other researchers and scientists, has also been keeping a close eye on wolverines over the past decade.

A combination of remote camera images and DNA collected from wolverine hair shows a 39 per cent decline in wolverine density from 2011-20

across a 15,000-square-kilometre area that included Banff, Yoho and Kootenay national parks.

Whittington said wolverines were more common in Jasper National Park, but there were smaller, more isolated populations heading south towards Waterton Lakes National Park.

"We found that population declined by 39 per cent over 10 years in the study area, which we were surprised by," he said.

"We were expecting Banff, Kootenay, and Yoho to be a strong source population."

Based on the research, there were an estimated 13 female and 17 male wolverines throughout the 15,000-square-kilometre study area.

In 2023, wolverines were listed as threatened just south of the border in the United States.

"As soon as you get below 100 animals, you need higher percentage of survival and recruitment rates in order to persist," said Whittington.

"When you have little populations, just a roll of the dice and you're much more susceptible to extirpation."

Whittington said wolverine density within protected areas was three times higher than outside the parks, but still declined from 2.6 wolverines per 1,000 square km in 2011 to between 3.6 wolverines per 1,000 square km in 2020.

"We had a decline, which is quite concerning," he said.

"But with wolverine density three times higher in the parks than outside,

that really highlights the importance of protected areas for wolverine and other carnivores."

Many factors are attributed to the decline, including habitat loss, climate change, and loss of connectivity.

Trapping was a major player in the death of wolverines, with at least 34 killed near the parks until the B.C. government put a stop to the harvest in the Kootenay-Boundary Region in 2020.

Whittington said there are, however, signs that wolverines may be stabilizing in Banff.

"We've recently added the next few years of camera data and it looks like the population may have stabilized over the last couple of years," he said.

Parks Canada's monitoring is an early warning indicator of any concerns.

"If there's something happening that we want to know then we can apply more research and effort," said Whittington.

Whittington said the results of the wolverine and grizzly bear research were both surprising. He said updating the multi-species action plans are in the works, which will come up with recommendations on how to potentially improve refuges for wildlife.

"Where we have important wildlife habitat and where have high levels of human use and recreation, how can we blend the two and do we need to do anything to prove things for wildlife," he said.