

BEAR RESEARCH

Hunting may help bear population

Study shows adult males kill fewer cubs when regulated hunt is on

BOB WEBBER *The Canadian Press*

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Regulated bear hunting may improve a newborn cub's chances of survival, suggests new research from the University of Alberta. The finding contradicts theories that hunting creates higher rates of ursine infanticide as adult male bears, chased from their regular range, kill cubs they have not sired.

The research, being reviewed for publication by the bear biology journal *Ursus*, found that cubs had a 25-per-cent better chance of survival in an Alberta area where black bear hunting is allowed than in a neighbouring region where it is forbidden.

"We compared a hunted population and an unhunted population," said Sophie Czetwertynski, a PhD candidate at the University of Alberta. "In the hunted population, we had much higher cub survival and higher productivity of females."

Some biologists argue that hunting forces adult male bears to move from their accustomed ranges. That disrupts the social structure and brings males into contact with females they wouldn't normally meet.

The theory is that if the female has cubs, the new male will kill them and breed with her himself — what biologists call sexually selected infanticide. As well, rampaging males cause sows to drift toward poorer habitat to avoid them, leaving herself and her cubs with fewer resources.

The conclusion is that hunting hits bears with a triple whammy: the shot bears, the cubs they kill before being shot and the poorer reproductive success of the females who try to dodge them. But Czetwertynski's study suggests it isn't so.

She monitored 290 bears over four years in the Cold Lake Weapons Testing Range on the Alberta-Saskatchewan boundary, which does not allow hunting, and the adjacent area around Conklin, which does.

She found 83 per cent of cubs survived in the hunted area while the comparable figure in the non-hunted area was 66 per cent. As well, females in the hunted area began reproducing earlier.

"It doesn't mean we can prove that (infanticide) is not occurring, but it does seem that it just doesn't have that strong an effect."

Czetwertynski said the two study areas have the same quality of habitat and about the same volume of industrial activity.

She suggests the Cold Lake bears do more poorly because their population density is almost too much for the land to support.

"The effect of (density) seems to overpower the effect of (infanticide)."



The issue of bear hunting in Alberta has been controversial for years. The province recently implemented a three year ban on the spring grizzly hunt after a survey suggested the number of the bears was considerably lower than previously thought.

Czetwertynski doesn't oppose hunting. In fact, her research was partly funded by the Alberta Professional Outfitters Society. She has also worked as a bear hunting guide in Quebec, although she has also worked for groups such as Defenders of Wildlife.

But she says management decisions regarding bears should be guided by science, not by political concerns.

"We really want to know what the effects are. But if the hunt is going to be stopped, we want it stopped on ecological perspectives.

Biologist Sophie Czetwertynski holds two bear cubs. Czetwertynski's study, conducted in two regions of northern Alberta, suggests bear cubs may stand a better chance of surviving in areas that allow bear hunting.