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Bear hunt skews gender ratio

Selective hunting of male polar bears could push Canadian bear populations over the edge.

With global temperatures rising and sea ice shrinking, [polar bears](#) are already in deep trouble. Now a new [study](#), published on November 21 in *Proceedings of the Royal Society B*, adds yet another item to the bears' list of woes—hunting. The current practice of selectively hunting male bears could soon leave females without mates. A skewed sex ratio could cause mating success rates to plunge suddenly, with unknown impacts on bear populations, the study finds.



"Sex-selective harvest has been going on for quite a while in Canadian polar bears," says lead author [Péter Molnár](#), a graduate student at the University of Alberta (Canada). Current policies require that at least two-thirds of hunted polar bears be males. Given that each male mates with many females, the assumption has been that "there will always be enough males to fertilize all the females," says Molnár.

But this long-standing hunting practice has already led to a decline in the male bear population in Canada. "And we started worrying that we may eventually run out of males and the females will have a hard time finding a partner," says Molnár. So the team decided to find out what will happen if the number of male bears keeps decreasing.

By using data on sex ratio, population density, and the dynamics of male-female pairing (observed during the mating season) in a bear population in Lancaster Sound, the team predicts that beyond a certain threshold sex ratio, the rates of fertilization (or successful mating) will plunge. That tipping point varies

among populations and depends on the density of the population in question.

Although the study did not evaluate the current harvesting strategy itself, the results suggest that some precautions are necessary, says Molnár. If hunting practices reduce the number of males even further, "then we are running into trouble," he adds. Molnar is currently investigating how the effects of hunting interact with those of climate change to affect the fates of these iconic animals. —[RHITU CHATTERJEE](#)

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