

Climate change has silver lining for grizzlies

October 28 2013

Global warming and forest disturbances may have a silver lining for threatened species of grizzly bears in Alberta, Canada.

In a 10-year study that monitored 112 bears in Alberta's Rocky Mountain region, University of Alberta biologist Scott Nielsen and his colleagues found that warmer temperatures and easier access to food associated with forest disturbances helped the grizzlies to build more body fat, known to increase the chances of successful reproduction for mothers.

The resulting 'silver spoon effect' shows that bears born into these favourable conditions have a head-start in life, said Nielsen, an assistant professor in the U of A Department of Renewable Resources.

"Understanding variations in body size helps us understand what limits grizzly populations," Nielsen said. "We get clues about the environments that most suit grizzlies by examining basic health measures such as body size. A simple rule is, the fatter the bear, the better. Certain environments promote fatter bears.

The findings, published in *BMC Ecology*, may help influence forest harvest designs to enhance habitat for the Alberta grizzly, which is classed by the Alberta government as a threatened species. Currently there are only about 750 of the bears in the province, half of them adults.

In years when warmer temperatures and less late winter snow brought on

earlier spring conditions, the [body size](#) of bears as adults was larger. Smaller bears were found in colder and less productive environments or years that were abnormally cool.

"We hypothesize that warmer temperatures in this ecosystem, especially during late winter and spring, may not be such a bad thing for grizzlies," Nielsen said, noting that historically the range for the bears once extended as far south as Mexico and persists today even in the deserts of Mongolia. "That suggests the species won't likely be limited by rising temperatures which would lengthen the growing season and the time needed to fatten prior to hibernation."

As well, bears that used disturbed forest habitats containing a wide variety of stand ages were healthier, Nielsen said.

"The diversity of stand ages in the landscape has a positive influence on body condition because [bears](#) are better able to access a wide range of food sources."

Provided by University of Alberta

Citation: Climate change has silver lining for grizzlies (2013, October 28) retrieved 5 April 2024 from <https://phys.org/news/2013-10-climate-silver-lining-grizzlies.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
