

Seasonal trail restrictions to reduce grizzly bear-human conflict in Banff, Yoho and Kootenay National Parks

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Background

During a two-decade period (1985-2005) in Banff (BNP) and Yoho National Parks (YNP) of Canada, numerous serious grizzly bear-human conflict encounters occurred on popular backcountry trails in four specific areas (Lake Minnewanka / Aylmer Pass, Moraine Lake, Lake O'Hara / McArthur Valley, Bryant Creek / Allenby Pass). These incidents included eight contact encounters (bear attacks) that resulted in grievous injuries to park visitors. Six of them involved female grizzly bears with cubs during the hyperphagic (berry) feeding season. Initial reactive management responses to these incidents resulted in lengthy area closures that legally precluded all visitor access to popular trail systems.



Figure 1. Grizzly bears on popular national park hiking trails

Management Objectives

Visitors and park managers alike sought alternatives to trail closures that would:

- Allow for continued visitor access and improve the overall visitor experience
- Reduce serious human-bear conflicts
- Minimize disturbances to grizzly bears, particularly females with offspring

Management Methods

Park managers trialed a variety of seasonal trail restrictions over 18 years (1994-2011) in four different areas in BNP and YNP. The main visitor activity in these areas is hiking, with the higher-speed activity of mountain biking contributing several conflicts in two of the areas. Annual fixed restriction dates and specific seasonal trail restrictions have varied depending on the area, but have included the following suite of management actions:



Hikers must travel in tight groups of 4 or more



Hiking groups must carry bear spray



Cycling (mountain biking) is not permitted



Dogs are not permitted



Backcountry campgrounds in some of the restricted areas are closed

Widespread public outreach and education, paired with extensive visitor informational signage was instrumental for achieving visitor compliance and subsequent conflict reduction.



Figure 2. Example trail signage within restricted area

Effectiveness Monitoring

To assess management effectiveness, we evaluated bear sightings and incidents and monitored visitor compliance (directly and via remote technology) for pre and post seasonal trail restriction periods. Following implementation of seasonal trail restrictions, non-conflict grizzly bear sightings increased, aggressive conflict incidents declined, total visitor disturbance events declined, and contact encounters were eliminated. Monitoring indicated broad visitor acceptance of the seasonal trail restrictions, with higher rates of compliance during legally enforced trials versus periods where only voluntary restrictions were recommended.

After public consultation and review, these management trials have been adjusted to longer-term seasonal trail restrictions and adaptive management lessons are being applied to other bear-human conflict areas within Canada's Mountain National Parks, such as the Kindersley-Sinclair Trail within Kootenay National Park.