

Cabinet-Yaak and Selkirk Mountains Human-Caused Grizzly Bear Mortality Summary

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Introduction

The Cabinet-Yaak and Selkirk subcommittee of the Interagency Grizzly Bear Committee requested this grizzly bear human-caused mortality summary. The subcommittee suggested looking at mortality from 2000 to present to examine trends or changes in mortality patterns and what managers could do to reduce unnecessary human caused mortality.

Methods

Known and probable human-caused grizzly bear mortality records for grizzly bears in the Cabinet-Yaak were summarized for the period of 2000-2018. Known mortality included a carcass or parts, and probable mortality included bears with cut-off radio collars (where only the collar was found and not a carcass) or cubs of the year of an adult female that was killed. Cause of mortality was summarized where known. Bears identified as “human-caused but under investigation” had either cut-off radio collars or a carcass with a bullet wound, but the specific reason for mortality was unknown.

Results

Cabinet-Yaak Human-Caused Mortality

Cabinet-Yaak known and probable human-caused mortality averaged 1.7 bears per year, and 0.8 females per year, from 2000-2018 (Figure 1). Total mortality was unchanged from 2000-09 to 2010-18, with 16 mortalities in each period. Female mortality declined from 12 individuals in the first half of the period to three individuals in the second half.

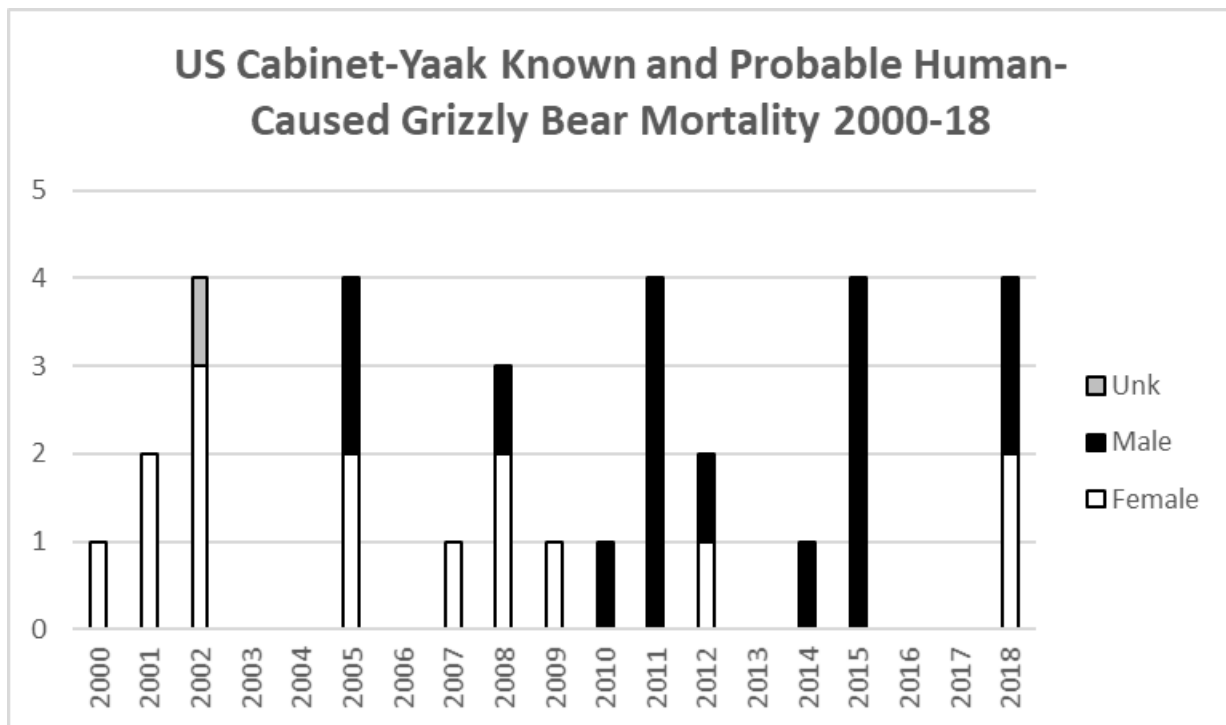


Figure 1. Cabinet-Yaak known and probable human-caused grizzly bear mortality from 2000-2018.

Selkirk Mountains Human-Caused Mortality

The international border bisects the Selkirk Mountains grizzly bear recovery area, and because of different laws and regulations governing management in the respective jurisdictions, the analysis will consider both entities (US and Canada) separately.

Selkirk Mountains known and probable human-caused mortality in British Columbia (BC) averaged 1.5 bears per year, and 0.7 females per year, from 2000-2018 (Figure 2 and 3). Total mortality in BC showed a slight decline from 2000-09 to 2010-18, with 16 and 13 mortalities in each period, respectively. Female mortality was similar from 8 individuals in the first half of the period to 6 individuals in the second half.

Selkirk Mountains known and probable human-caused mortality in the US averaged 0.5 bears per year, and 0.1 females per year, from 2000-2018 (Figure 2 and 3). Total mortality in the US declined from 2000-09 to 2010-18 with 6 and 3 mortalities in each period, respectively. Female mortality showed similar decline from 2 individuals in the first half of the period to 0 individuals in the second half.

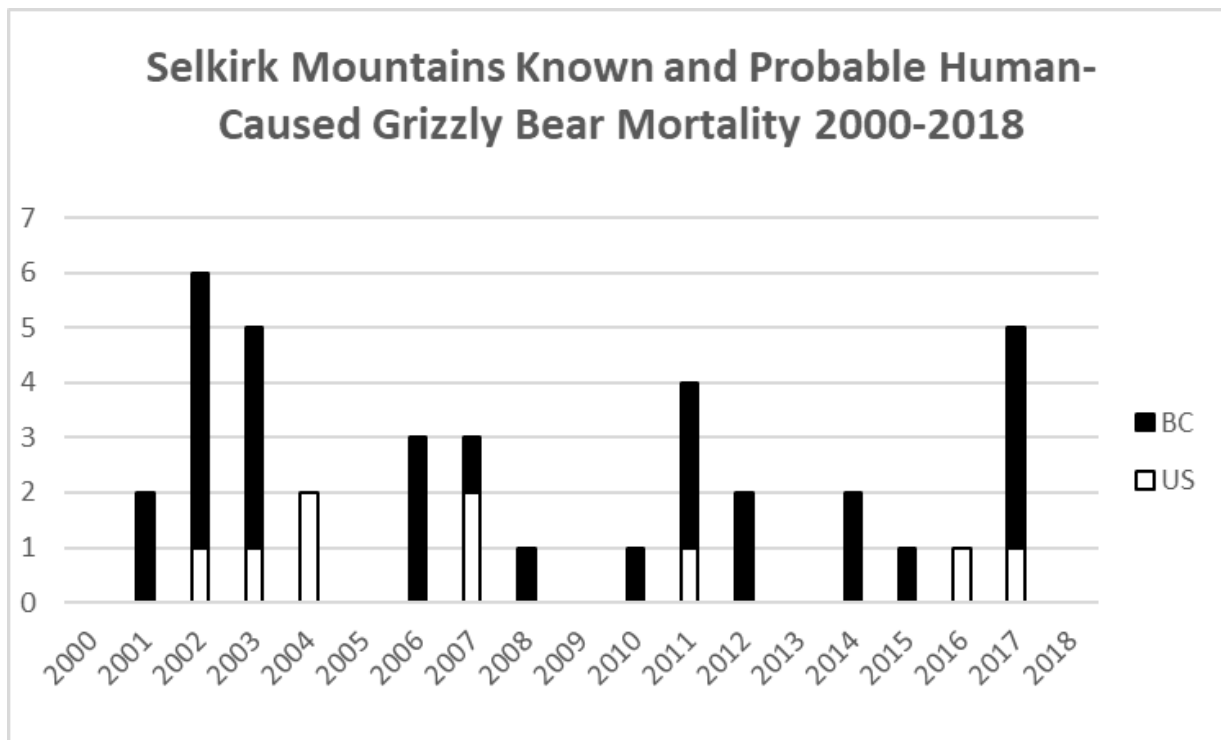


Figure 2. Selkirk Mountains known and probable human-caused grizzly bear mortality by jurisdiction, 2000-2018.

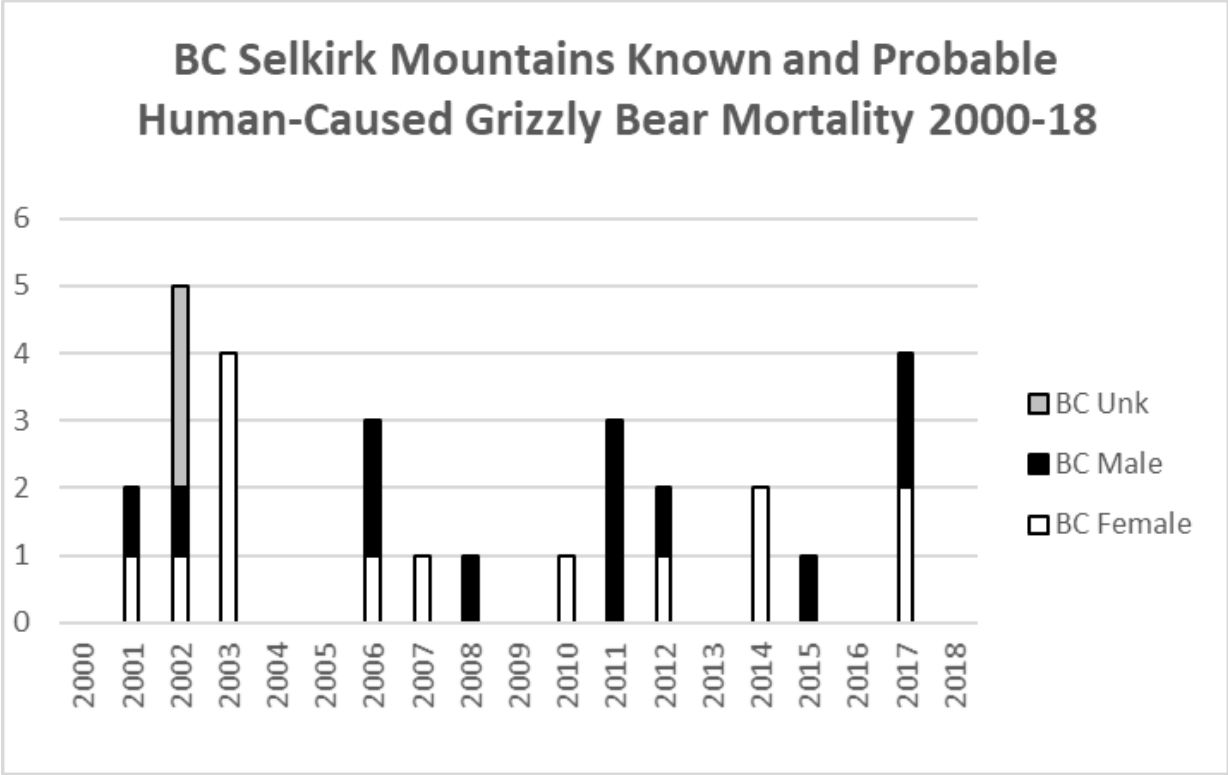


Figure 3. British Columbia Selkirk Mountains known and probable human-caused grizzly bear mortality by sex, 2000-2018.

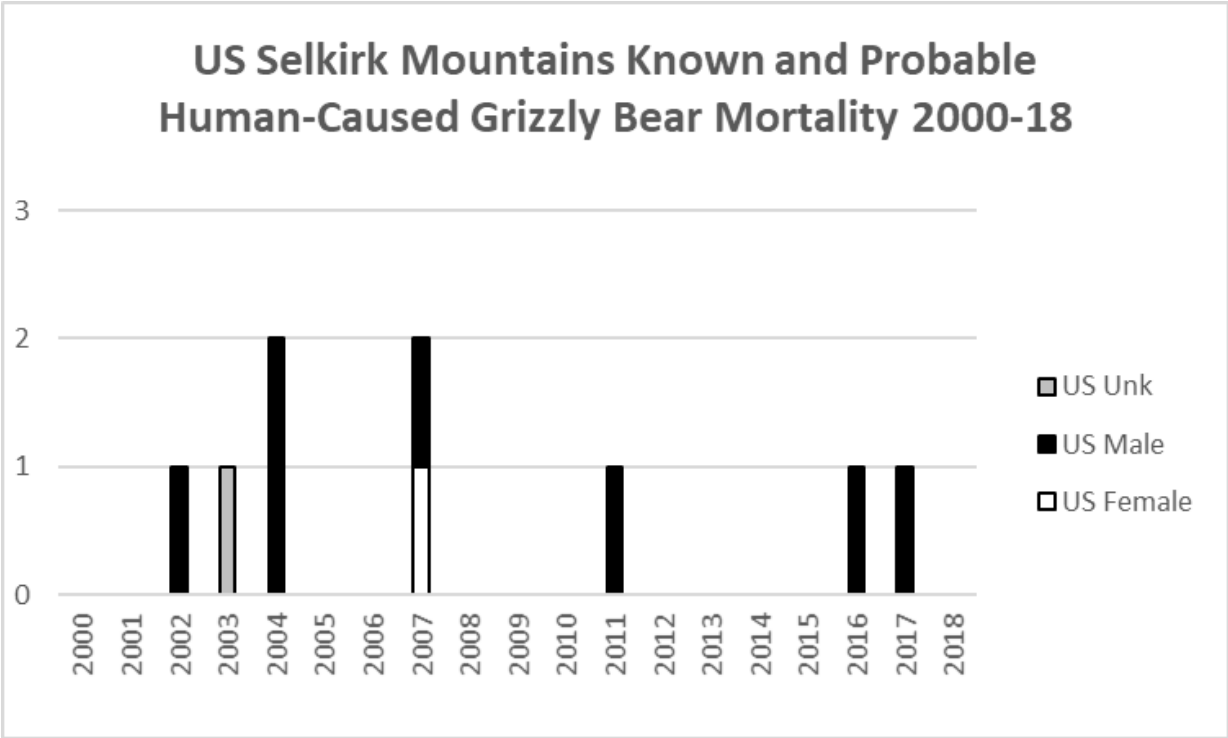


Figure 4. United States Selkirk Mountains known and probable human-caused grizzly bear mortality by sex, 2000-2018.

Cabinet-Yaak and Selkirk Mountains Human-Caused Mortality Classified by Cause

Known and probable human-caused mortality was classified into seven categories from three jurisdictions (Figure 5). Mistaken identity, defense of life, poaching/malicious, and train/auto collisions were the largest causes of mortality in descending order for the Cabinet-Yaak. Mortalities listed as under investigation involved a dead bear with a bullet wound or a cut-off radio collar. The actual source of these mortalities may have been one of the previously listed causes. In the US Selkirk Mountains, mistaken identity, defense of life, defense of property, and train/auto collisions were the largest source of mortality in descending order. Under investigation was also a significant mortality source. In the BC Selkirk Mountains, management removal, defense of property, train/auto collision, defense of life, and mistaken identity were the causes of mortality in descending order. Under investigation made less contribution to mortality in BC than in other jurisdictions.

Given the size of the under investigation category it may be useful to examine more factors associated with this source in the US. Defense of property, management removals, and train/auto collisions can probably be eliminated as potential causes. Probable causes for the under investigation include defense of life, mistaken identity, or poaching/malicious. Of the 18 under investigation instances in the US, 16 occurred during the spring or fall black bear hunting season, and 13 of 18 were within 250 m of an open road. Defense of life occurring within 250m of an open road is possible, but may be less likely, leaving mistaken identity or poaching / malicious as the suspected cause for many of these under investigation mortalities.

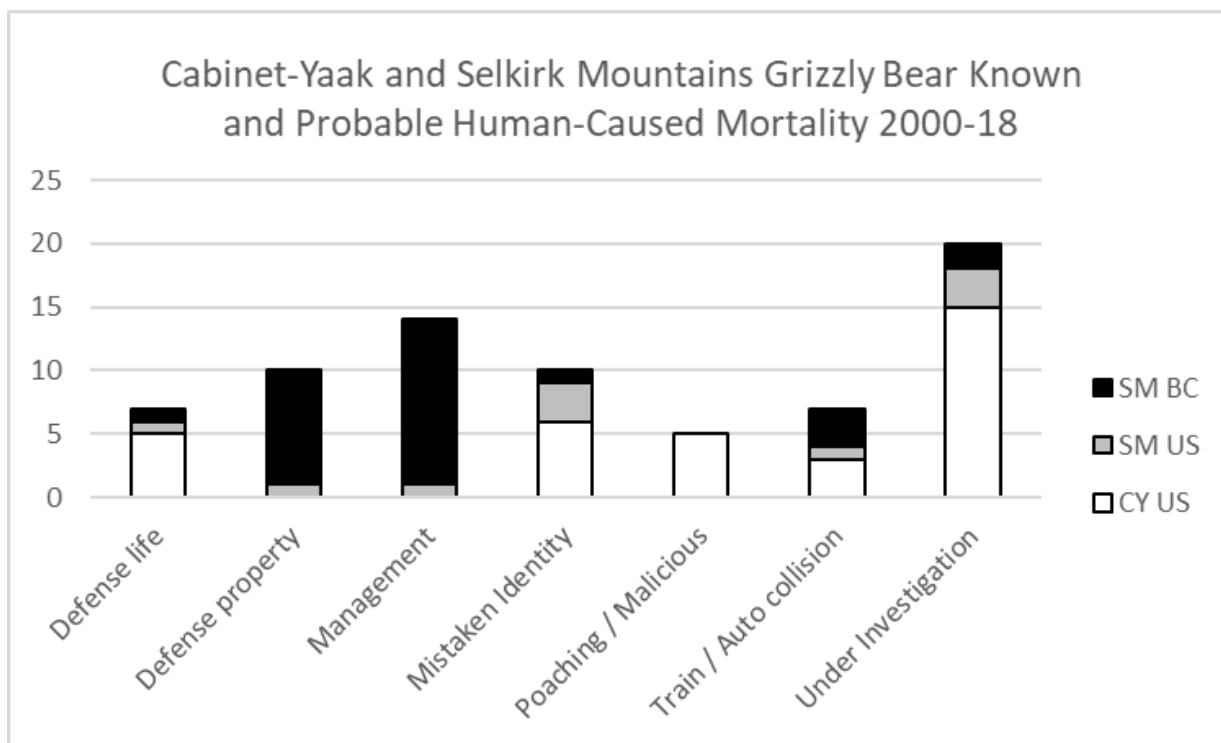


Figure 5. Cabinet-Yaak and Selkirk Mountains known and probable human-caused grizzly bear mortality classified by cause.

Strategies to Reduce Human-Caused Mortality

Numerous programs have been implemented to reduce human-caused mortality such as promotion and training in the use of bear spray, electric fencing seminars and cost share, bear resistant garbage can loaners and cost share, and other educational programs to make bear attractants unavailable to bears. Many of these programs have been implemented by the agency bear conflict specialists and NGOs, such as Defenders of Wildlife, Idaho Conservation League, Vital Ground, and Yellowstone to Yukon in the US. Expansion of these programs has been occurring in BC, particularly around the Kootenay Valley near Creston, BC and are expected to reduce mortality due to defense of life, management removals, or property defense. Support and funding of personnel doing this work is important to maintain these programs where they currently occur, and to create/increase the support and funding for personnel where these programs do not yet occur. Human population increase and turnover necessitates a long-term commitment to funding these positions. Mistaken identity and poaching/malicious kills may be reduced by increased education and law enforcement. Montana and Washington have mandatory bear identification training for black bear hunters, but this is only required once in a lifetime. Idaho does not have a mandatory program. Training more often than once in a lifetime would seem a productive investment to reduce mistaken identity kills. Poaching or malicious kills might be reduced through increased enforcement as a deterrent to this crime, but approaches that are more effective need to be investigated to address the motivation for such activity. Train or highway kills may be a product of attractants along these routes, such as ungulate carcasses or spilled agricultural products. Other kills may be related to dispersing individuals or seasonal movements that cause bears to cross these routes and be more susceptible to accidental collisions. Removal of attractants and development of highway crossing structures with fencing may reduce this source of mortality.