

From: [Guinotte, John](#)
To: [Betty Grizzle](#)
Subject: canada trapping data
Date: Tuesday, August 1, 2017 1:18:41 PM
Attachments: [Overutilization Section for John G JMG.docx](#)
[trapping_data_canada.jpg](#)

Hi Betty,

Here is some text on canada trapping. Let me know if you want more. I also attached a map. I can edit both if needed, just let me know. I included Shevenell's email re the Alberta wolverine data so you have more of the detail.

Best, John

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Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Unlike populations in Eurasia, wolverines rarely prey on livestock in North America (citing Landa *et al.* 1997) and therefore they are not directly targeted for predator control (COSEWIC 2014, p. 41). However, predator control programs targeting wolves, including poison and incidental trapping, can result in incidental losses of wolverines (COSEWIC 2014, p. 41). Within the State of Idaho, as of 2016, the number incidentally trapped wolverines reported by the U.S. Department of Agriculture Wildlife Services (Wildlife Services) totaled [update with final numbers]. This agency has also temporarily stopped (as of April 2017) using cyanide predator control devices in the State of Idaho (Moeller 2017).

Trapping of wolverines is currently closed in the contiguous United States. In Alaska, for the 2015–2016 reporting period, wolverine harvest for the State, based on furbearer sealing records, was 527 (Parr 2016, p. 42). This level of harvest has been fairly stable since 2010, as shown in table below:

Table 5. Number of wolverines harvested in Alaska, as reported from regulatory year sealing records, 2010–2015. Adapted from Parr 2016, p.42; Table 10.

Region	2010	2011	2012	2013	2014	2015
I	25	20	25	31	14	15
II	25	29	50	31	16	37
III	233	235	261	358	268	214
IV	180	160	170	158	99	150
V	140	110	135	133	109	111
Total	603	554	641	711	506	527

In Canada, wolverines are harvested in the northern and western territories—Manitoba, Saskatchewan, Alberta, British Columbia, Yukon, Northwest Territories, and Nunavut (COSEWIC 2014, p. 43). Non-aboriginal harvest of wolverines has not permitted since 2001–2002 in Québec, Labrador, or Ontario, though incidental harvest has been reported in Ontario. The management of wolverine harvest incorporates spatial and temporal elements such as season length, quotas, limited entry, and trapline management by trappers (Slough *et al.* 1987). Wolverine harvest levels in Canada are monitored using mandatory pelt sealing, annual harvest reporting, or through monitoring of fur exports (COSEWIC 2014, p. 43). In some northern communities, wolverine pelts are used locally and harvests are monitored through carcass collection programs (COSEWIC 2014, p. 43).

We evaluated trapping of wolverines in British Columbia and Alberta regions of Canada in an effort to document potential impacts to dispersing wolverines along the U.S.–Canada border. Summary and maps from BC and Alberta from John (see also email messages) The population of wolverines in the province of British Columbia is estimated to be 2700-4760 and 1500-2000 animals in the province of Alberta (COSEWIC 2014, p. ?). Nine years (2007-2015) of trapping harvest data for southern BC wildlife management units was obtained from the BC Ministry of Environment, Ecosystems Branch, for analysis along the U.S.-Canada border. Twenty seven years

(1989-2015) of trapping harvest data was obtained for Alberta in addition to locations of wolverines from a run pole study (2012-2015). ((Shevenell Webb, pers comm, and Webb et al (2016)).

These data were imported into GIS and results indicated the total number of wolverines trapped in BC wildlife management units within 110km of the U.S border (years 2007-2015) was 77 animals (average of 8.5 wolverines per year). The total number of wolverines harvested by trappers and identified from run pole studies in Alberta within 110km of the U.S was 14 animals (average of 0.5 wolverines per year).

Hi John,

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Sorry for the delay. We were supposed to get all of our DNA results back a few weeks ago, but instead of waiting further, I wanted to send you what we have for wolverine locations. I have attached 2 spreadsheets. The wolverine harvest spreadsheet includes all wolverines that were harvested by trappers from 1989-2012 (note that 2012 was an incomplete year because not all registrations had been received at the time of data entry). Trappers are required to bring in their wolverine pelts to be tagged and registered at Fish and Wildlife Offices. The date is when the animal was harvested, sex, and lat/longs are the center point of their trapline (we don't have exact locations). This is the most credible source of harvest because they are brought into Fish and Wildlife and why we used Fur Registration data in Fig 1 in our Snow paper.

The second spreadsheet was created from multiple sources. It includes all the females and lactating females we identified from our run pole study seen in Fig 1 of our Snow paper (2012-2015). It also includes new data not in Fig 1. Sex was determined from DNA test of trapper harvested tissue samples (2012-2015), so each sample is a unique wolverine. Locations from tissue samples are center lat/longs of trapline. We also have been radio collaring wolverines in the Birch Mountains area the last 2 winters and I have included the females we identified there. Note that some individuals have been identified at multiple sites. The capture locations for radio-collared animals in this spreadsheet are exact.

What sort of analysis are you working on with these data? Let me know if you need further clarification.

best, Shevenell

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