Alberta Conservation Association
2017/18 Project Summary Report

Project Name: Working with Trappers to Monitor Furbearer Population Trends

Wildlife Program Manager: Doug Manzer

Project Lead: Robert Anderson

Primary ACA staff on project: Robert Anderson, Velma Hudson, Mike Jokinen, Garret McKen, Doug Manzer, Andy Murphy, Margaret Neufeld, Mike Ranger, Corey Rasmussen, Amanda Rezansoff, Scott Seward, Mike Verhage, and Ken Wright.

We also greatly appreciate the work of Shevenell Webb, who put in a lot of effort to make this project a success.

Partnerships

Alberta Environment and Parks
Alberta Trappers' Association

Key Findings

- We analyzed 50 logbooks received over three winters from 36 trappers comprising 42 registered traplines in the Boreal Forest (50 percent), Foothills (36 percent), and Rocky Mountains (14 percent).
- Marten were the most commonly trapped species (reported by 82 percent of trappers), followed by weasel (70 percent), coyote (62 percent), lynx (58 percent), and red squirrel (58 percent). Less than half of the responses reported catching beaver (46 percent), fisher (44 percent), wolf (34 percent), red fox (26 percent), muskrat (28 percent), and mink (16 percent).
- Overall, trappers provided positive feedback on the logbook concept, but expressed interest to simplify them and pursue a digital logbook option.
- We decided that the 2017/18 logbooks should focus on marten and that species-specific trapping effort should be included.
- Trapper participation increased significantly for the 2017/18 season, with over 100 logbooks anticipated.

Introduction

For five years, we partnered with the Alberta Trappers' Association (ATA) to identify where wolverines occurred in the province and major factors associated with their distribution. We continue to work closely with ATA to study monitoring techniques for furbearers. In 2014, ATA developed a detailed logbook for volunteer trappers to complete in order to track trapping activities and species caught. A sample of these logbooks were completed over three trapping seasons. Both ATA and Alberta Environment and Parks (AEP) have asked ACA to assist in the

evaluation of this pilot information and to provide additional recommendations for developing a system by which trappers can provide relevant furbearer population information in an efficient manner.

Methods

ATA developed the initial logbook (each approximately 50 pages) for volunteers who trapped on registered fur management areas (i.e., registered traplines) to complete. In the logbook, trappers were instructed to record hours of trapping activities (e.g., scouting, setting/checking traps, handling fur, etc.) and number of each species caught monthly. Trappers were provided written information and illustrations on how to age animals and were required to estimate age class (Juvenile or Adult) and gender for harvested animals. In addition, trappers were able to record years of trapping experience, make general comments (e.g., weather, disease, industrial development, etc.), and provide feedback. ATA submitted all logbook responses received over three winters (2014/15–2016/17) to ACA to analyse the data and provide recommendations for improvement.

Results

We received 50 logbooks from 36 trappers comprising 42 registered traplines in the Boreal Forest (50 percent), Foothills (36 percent), and Rocky Mountains (14 percent) (Figure 1). Trappers had an average of 15 years of experience on the registered trapline they submitted a response for. All but two responses indicated that they already had their own method of recording trapping activities and approximately half indicated that the ATA logbook had more information than their existing logbook. Most trappers (79 percent) indicated that they would replace their existing logbook with the more thorough ATA logbook. Half of the responses indicated that they thought the logbook would improve their trapping activities within the season (38 percent said maybe). More than half (59 percent) of the trappers were in favour of filling out an electronic version of the logbook online and/or using a mobile app.

For trapping activities, roughly half of all time spent was on setting or checking traps (46 percent), followed by prepping (16 percent), cabin maintenance (14 percent), scouting (13 percent), and handling fur (11 percent). Marten were the most commonly trapped species (reported by 82 percent of the trappers) on registered traplines, followed by weasel (70 percent), coyote (62 percent), lynx (58 percent), and red squirrel (58 percent). Less than half of the responses reported catching beaver (46 percent), fisher (44 percent), wolf (34 percent), red fox (26 percent), muskrat (28 percent), and mink (16 percent). Bobcat (eight percent) and otter (two percent) were the least common species reported. A disproportionate number of males vs. females and juveniles vs. adults were reported. Adult males were the most abundant age/sex class reported for all species. We found a weak positive association between overall trapping effort (hours spent setting/checking traps) and the number of marten, coyote, and weasel harvested. However, effort was not quantified on a species-specific basis. For example, if a trapper reported spending 100 hours setting and checking traps, we did not know how much of this was for marten, coyote, lynx, etc.

We suggested increasing the number of participants (e.g., 25-30 participants per year in each of the Mountains, Foothills, NW Boreal, and NE Boreal) to more effectively evaluate logbook data and be representative of regional trends. Through discussions with ATA and AEP, it was also decided to select marten as a focal species for the logbook, given their widespread distribution and popularity. During the 2017/18 trapping season, over 100 trappers participated in testing a revised logbook that was simpler (8 pages as opposed to 50) and captured marten-specific effort. These data will be analyzed in 2018/19, along with the results on an assessment of the accuracy of visual aging techniques (Flynn and Schumacher 2016; Figure 2).

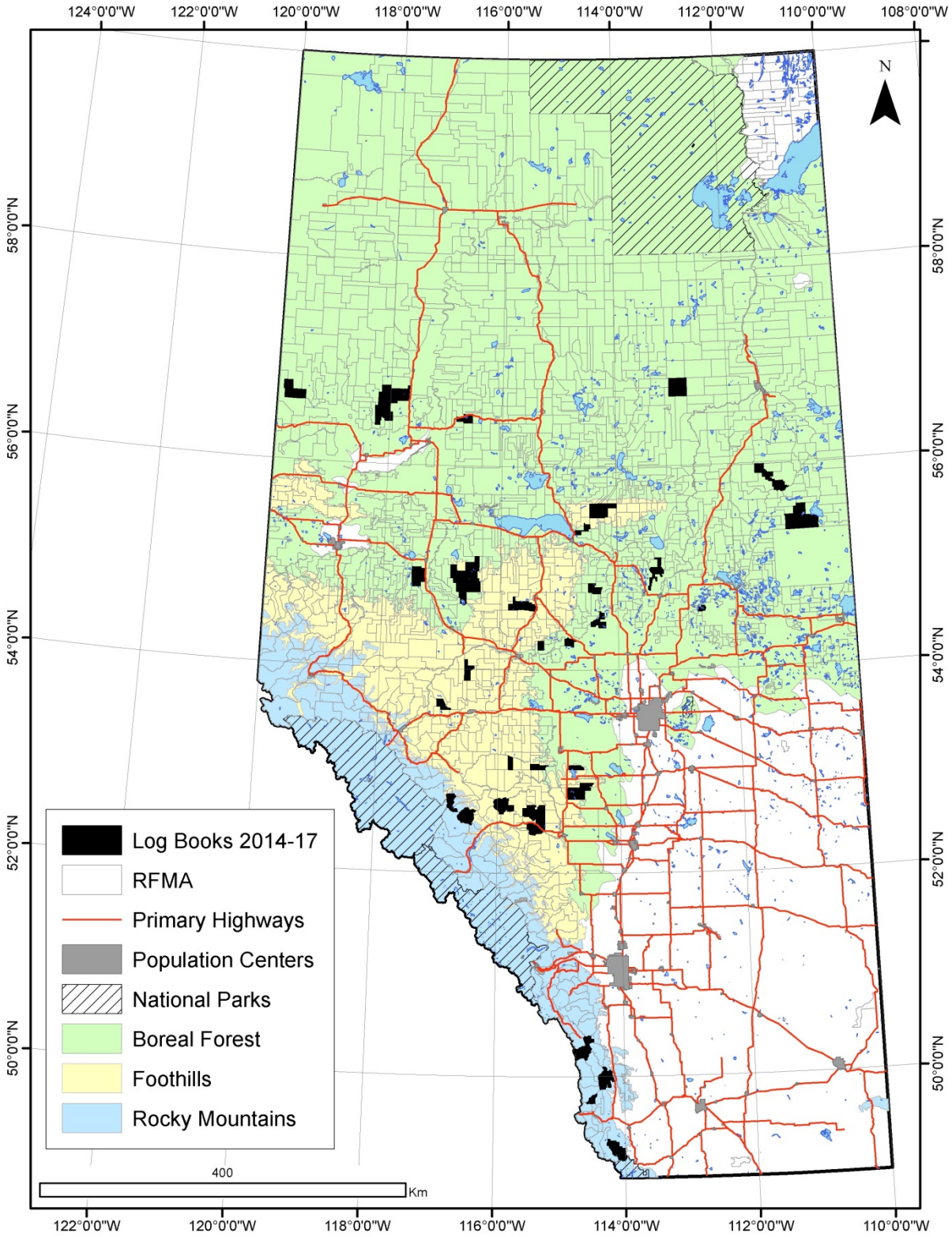

Figure 1. Alberta Trappers' Association logbook responses received from trappers for the 2014/15, 2015/16, and 2016/17 trapping seasons.

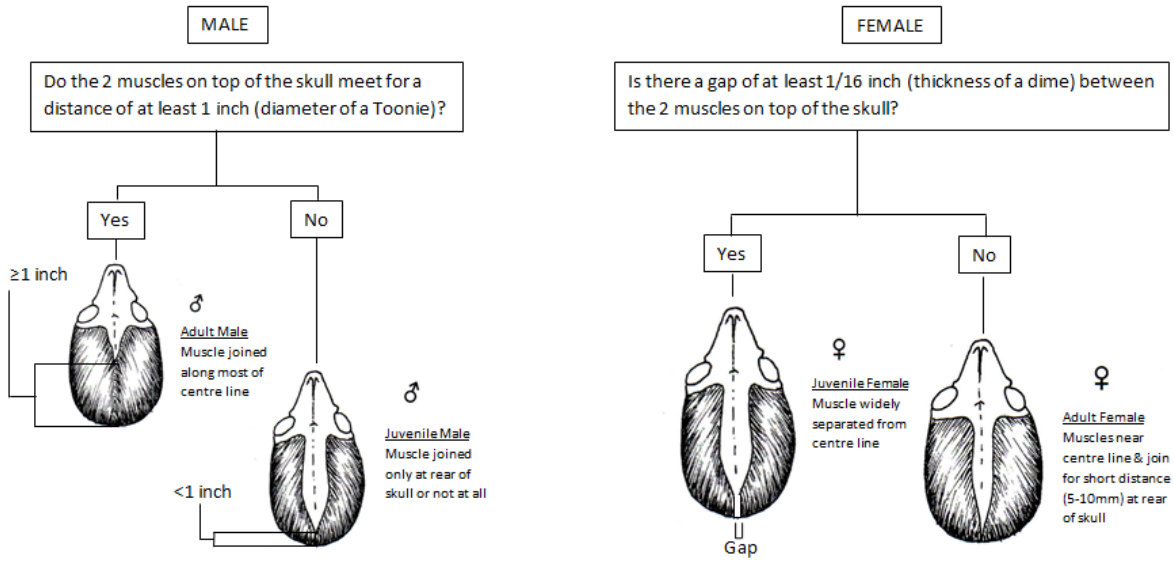

Figure 2. Researchers have developed a technique to determine gender and age class from marten skull measurements (Flynn and Schumacher 2016). We've revised the instructions for a Canadian audience and will be testing how well it works in a real-world trapping setting.

Conclusions

The initial ATA logbook pilot demonstrated that trappers are active on their registered traplines throughout the year. However, trappers did not record species-specific trapping effort and the skewed age classes reported, although not unexpected, indicated that there may be room for improvement in aging techniques. Reporting the amount of trapping effort put in for each species should result in more robust data and, combined with harvest demographics, the ability to make stronger population inferences. ACA will work closely with ATA on testing a revised logbook format and gathering better population data.

In 2018/19, we hope to explore an online data submission option and will validate age estimates (Flynn and Schumacher 2016) using tooth analysis. If the logbook works well for marten, other species or issues of interest may be added in the future.

Communications

Presentations

- A series of presentations were given to ATA members to report back on major findings from the wolverine project and to introduce them to the revised logbook format and marten age/sex trial. Locations included: Grande Prairie, Athabasca, Slave Lake, South Country Trappers (Pincher Creek), Lac la Biche, Bonnyville, Whitecourt, Edmonton, Fort McMurray/Anzac, Rocky Mountain House, Sundre, Fort Assiniboine, and Eureka local trapping meetings during fall 2017 and early 2018.

Other

- Planning meeting with ATA representatives, Sherwood Park, AB, July 2017
- Planning meeting with ATA representatives and Alberta Environment and Parks, Edmonton, AB, August 2017
- Review of logbook results and revised logbook at ATA Executive and Annual General Meetings, Westlock, AB, September 2017
- Article titled “Wolverine survey on registered traplines in Alberta 2011–2016” in *Alberta Trapper* magazine, Fall 2017

Literature Cited

Flynn, R. W. and T. V. Schumacher. 2016. Using sex and age of martens in the North Pacific Coast: using skull length and temporal muscle coalescence. Alaska Department of Fish and Game, Wildlife Research Report ADF&G/DWC/WRR-2016-5, Juneau. 20 pp.

Photos

A trapper collects a harvested wild mink from a trap. The initial logbook pilot data indicated that fewer than one in five of the participating trappers caught one of these semiaquatic mustelids. Photo: Mike Jokinen

Marten are a beautiful and much-desired furbearer in Alberta. This curious marten was captured on camera as part of an earlier project to study wolverines. Photo: Alberta Conservation Association

Marten pelts can vary widely in their colour, as Shevenell Webb demonstrates. The initial logbook pilot suggested that most trappers harvest at least some marten, so they will be the focus for the next phase of the project. Photo: Shevenell Webb

Researchers in Alaska discovered that measurements on a marten skull can tell you whether the animal was a male or female, juvenile or adult. We're going to test this method with trappers in Alberta. Photo: Shevenell Webb