

Alberta Conservation Association
2024/25 Project Summary Report

Project Name: Furbearer Trends

Wildlife Program Manager: Doug Manzer

Project Lead: Mike Jokinen

Primary ACA Staff on Project: Robert Anderson, Mike Jokinen, and Sue Peters

Partnerships

Alberta Trappers' Association

Government of Alberta

Key Findings

- Trappers have submitted a total of 1,170 logbooks from 389 Registered Fur Management Areas through the seven years of the logbook program.
- Trappers submitted 163 logbooks from the 2023/24 trapping season (up slightly from the previous year).
- On average, trappers took 118 trap nights to harvest one marten. The average catch-per-unit-effort (CPUE) was 0.88 marten per 100 trap nights (standard error = 0.06), which would be equivalent to setting approximately 17 traps for a week and catching one marten.
- Although provincial marten fur exports declined from 2018 to 2022, logbook data showed that the catch rate for a given amount of effort did not decline over that time. This suggests that fur exports may not be a proxy for populations trends and highlights the value of logbook information collected over a series of years.

Details

The Government of Alberta and the Alberta Trappers' Association asked Alberta Conservation Association to assist with the development of a logbook for trappers to record information about their activities and fur harvesting results. Since 2018, trappers from 389 Registered Fur Management Areas have voluntarily provided detailed harvest and effort information recorded in personal logbooks submitted annually. The number of annual logbook submissions has ranged between 126 and 207, with 163 logbooks submitted in 2023/24. By using a standardized logbook approach, this resource-user-derived information provides an opportunity to track furbearer population trends over time at the provincial and natural region levels.

The 2023/24 trapping season marked the seventh year of marten data collection and the fifth year for species with a harvest quota (fisher, lynx, wolverine, and otter). As well, it was the third year that wolf harvest data were incorporated into the logbooks as part of the provincial wolf management program. During the 2023/24 trapping season, marten CPUE increased to 1.18 martens per 100 trap nights from the lowest CPUE of 0.63 in 2018. The increase in CPUE for marten suggests that the decline in pelt exports between 2018 and 2022 was a result of factors beyond marten abundance. Furthermore, our 2018–2024 provincial data show that the age class (average of three juveniles harvested per one adult female) and sex ratios (average of 1.8 males harvested per one female) of marten harvest in Alberta fall within the recommended values for sustainable harvest levels.

Using marten harvest and effort data from trapper logbooks, we trialled an analytical approach—statistical population reconstruction (SPR)—that incorporated estimated survival metrics to predict marten abundance across Fur Management Zones (FMZs). Marten abundance varied yearly within each FMZ. Biologists can use SPR to understand the effect of different levels of harvest and natural survival on marten populations. We will incorporate additional years of marten harvest and effort data to improve the reliability of SPR outputs.

We hope to expand logbook program participation as the information provides valuable insight into patterns of furbearer harvest and population indices. To develop robust estimates of marten abundance among all FMZs, we predict that at least 300 logbooks are required annually.

Photos



Photo 1. Alberta Conservation Association has been working with Alberta Trappers Association to collect data on American marten (*Martes americana*) using trapper logbooks to better understand population trends in Alberta. Photo: Mike Jokinen