Examining the Effects of Hunting and Trapping on Wild Pig (*Sus scrofa*) Reproduction

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Image by Kerry Snelson

Background

- Introduced into Canada as livestock in the 1980's[1]
- Escape and release led to spread across the Canadian prairies[1]
- Wild pigs threaten the agricultural and livestock industries, the natural environment, and public health[1,2,3]
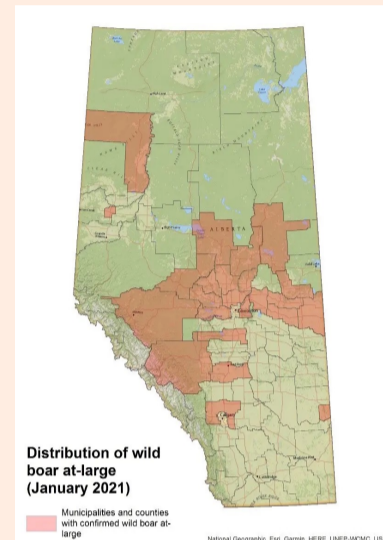

Figure 1. Distribution of wild boar at-large across the province of Alberta, 2021. Image from the Alberta Invasive Species Council.

Management

- Coordinated whole sounder trapping in Alberta[4]
- Hunting is discouraged, but remains common
  - Hunting triggers learned avoidance behaviours[5]
- Hunting may cause changes in reproduction
  - Increase in reproductive hormones[6]
  - Increase in frequency of reproduction[7]
  - Earlier first reproduction[8]
  - Increased population growth[7,8]

Figure 2. Wild pig sounder. Image from Alberta Invasive Species Council.

Objective

To document patterns in reproductive output (litter size) across three different management categories using camera trapping.

Rationale

Adequate control of the wild pigs requires a more in depth understanding of how human intervention affects the ecology and behaviour of populations.

Study Area

- Based on information by Alberta Agriculture and Alberta Pork
- Four sites chosen represent three different management categories
  1) **Trapping**
  2) **Hunting**
  3) **Non-intervention**
- Sites include broadleaf, conifer, mixed woodland, wetlands, and agricultural lands
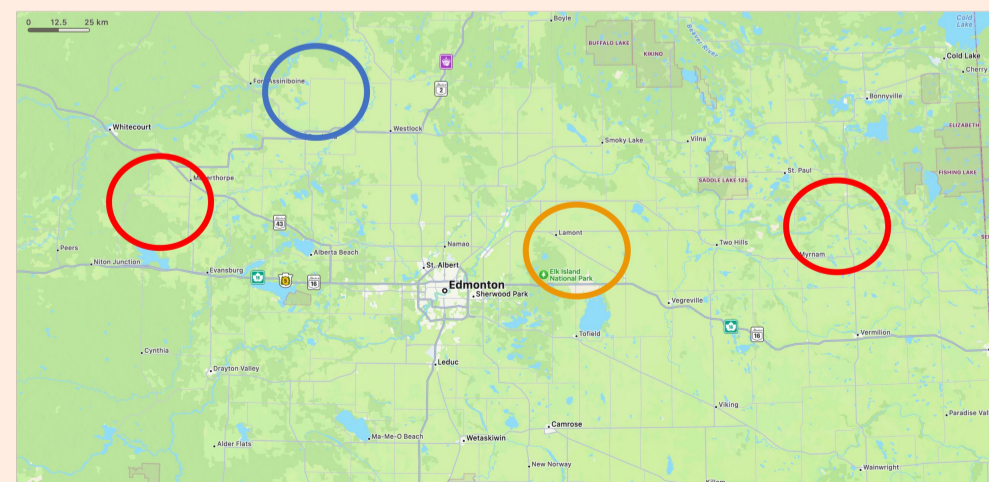

Figure 3. Map of chosen and proposed study sites for the hunting (blue), trapping (red), and non-intervention (yellow) categories.

Study Design

- 7 clusters at each site, spaced randomly >10km apart
- Each cluster composed of 2 by 3 cells (1.8km^2)
- Un-baited cameras placed in centroid of the cell
- Cameras mounted 100 cm from the ground
- Unobstructed view 3m wide by 10m long
- Images will be analyzed in WildTrax to count litter size

Figure 5. Example of a camera mounted onto a tree at Study Site B.

Acknowledgements

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