

Alberta Conservation Association
2023/24 Project Summary Report

Project Name: Forest Grouse Monitoring Initiative

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Partnerships

Alberta Trappers' Association

Government of Alberta

Key Findings

- We summarized harvest data provided voluntarily by hunters pursuing spruce grouse from 2015 to 2021; an average annual harvest of 6,127 birds was reported by an average of 2,622 hunters per year over the seven-year period. We do not know the total number of individuals who hunted spruce grouse over this period, or the total number of grouse harvested among all hunters.
- Voluntary-based harvest reports provide less information compared to mandatory reports, and these voluntary reports for game birds in Alberta lack the utility to detect meaningful trends as collected. Mandatory reporting by species would increase the utility of harvest reports for detecting trends for upland game birds.
- After discussion with the Government of Alberta staff, it was decided that our focus will shift from spruce grouse to sharp-tailed grouse and grey partridge. Those who harvest sharp-tailed grouse and partridge are likely targeting these species rather than harvesting them opportunistically. We expect that this cohort of upland game bird hunters will provide more accurate measures of effort from harvest information that we could then examine for its utility in detecting trends.

Details

There is concern that spruce grouse (*Falcapennis canadensis*, *Canachites canadensis*) numbers may be trending lower in some areas of Alberta, although the information to validate this assumption is lacking. The Government of Alberta asked Alberta Conservation Association (ACA) to develop an approach for gaining a better understanding of grouse trends over space and time. The data derived from voluntary hunter harvest reports are problematic for several reasons, especially for game birds where a specific species licence is not required in Alberta: 1) the total number of hunters pursuing spruce grouse and the total number of harvested birds within Alberta is not known; 2) it appears that at least some hunters struggle to differentiate spruce grouse from other grouse species within Alberta; and 3) it is likely that many hunters that pursue spruce grouse do so while primarily hunting other species, and therefore harvest metrics that factor in hunter effort may not be a reliable means of detecting trends.

Hunter harvest reporting systems can be extremely cost-effective tools for tracking population trends over time. Voluntary-based harvest reports provide less information compared to mandatory reports, and in the case of voluntary reports for game birds in Alberta, the reported data lacks the utility to detect meaningful trends for grouse or partridge spatially and temporally. Mandatory reporting by species would increase the utility of harvest reports for detecting trends with upland game birds. This approach would track harvest and effort more accurately and provide an early warning indicator if grouse numbers are trending dangerously low over time in a particular geographic area. Moreover, these reports would provide much greater utility if hunters identified each bird harvested to species, as well as to sex and age class (young-of-the-year vs. adult). We plan to test this concept by surveying a subset of hunters that harvest sharp-tailed grouse and grey partridge in southwest Alberta. Once we have a several years of more detailed hunter harvest information for these species, we will apply a statistical population reconstruction model (PopRecon) to estimate population trends for these upland game bird species.