Alberta Conservation Association

2020/21 Project Summary Report

Project Name: Turkey Distribution and Trends

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Partnerships

Alberta Environment and Parks
Alberta Fish and Game Association – Minister's Special Licence Program
Landholders in Southwest Alberta
Safari Club International – Northern Alberta Chapter

Key Findings

- We defined five major geographic focal areas to survey wild turkey populations in southwest Alberta.
- Within these focal areas, we contacted over 60 private landowners to gather anecdotal knowledge and approximate counts of local turkey populations.
- Preliminary data suggests that, relative to 10 years ago, local turkey numbers are down in all five geographic focal areas, with the most notable decline occurring in the Porcupine Hills.

Abstract

Wild Merriam's Turkeys (*Meleagris gallopavo*) were first introduced into Alberta in 1962, when 21 turkeys from South Dakota were translocated to the Cypress Hills in southeast Alberta. In 1972 and 1973, 12 birds from the Cypress Hills population and an additional 13 birds from Nebraska were transplanted into the Porcupine Hills. In 1988, birds from this population were

transplanted to an additional two sites in the foothills of southwest Alberta. These preliminary translocations of turkeys are what led to Alberta's current population of turkeys (Gerald, 1992). Today, wild turkey are primarily located in the southwest foothills area of Alberta.

The demand for hunting turkeys is very high, with 6,000 applicants pursuing 151 tags in 2019 (2.5% draw success), while an additional 16,000 hunters applied to boost their priority level. With 22,000 hunters seeking a turkey tag, it has become a once-in-a-lifetime opportunity for some, although many will never be drawn at the current allocation rate. Our goals for this project are to understand turkey population dynamics, develop and implement a method to monitor turkey abundance, and collect data that will assist with the allocation of tags for harvest in southwest Alberta.

In 2020, we initiated a citizen science approach to establish and maintain working relationships with landowners in the Beaver Mines, Crowsnest Pass - Livingston, Longview - Turner Valley, Porcupine Hills and Waterton regions; that is, areas that have present or potential wild Merriam's turkey populations. To date, working with private landowners has enabled ACA to identify the locations of local turkey populations and associated habitat features (e.g., roosts, feeding sites), garner local knowledge, and obtain some counts of birds. Throughout this study we hope to engage private landowners to count local turkeys on their private lands and eventually establish a population trend over time.

To further quantify sub-populations identified by landowners, we undertake some traditional survey methods to confirm local counts and gain more detailed information such as age class, male/female ratio, habitat type, location information, and regional conditions.

Introduction

In 2020, Alberta Conservation Association (ACA) gathered all historical and relevant information on the current population and distribution of Merriam's turkeys (*Meleagris gallopavo*; hereafter wild turkey) in southwest Alberta. We began this process by reviewing the draft provincial turkey management plan, compiling literature, and gathering information on the different kinds of survey types, and by establishing working relationships with local stakeholders

and experienced wild turkey biologists in other jurisdictions. We also conducted landowner meetings and trialed field survey methods to determine which was best suited for our project's goals and regional conditions. Specifically, we considered and trialed survey types that were best suited to the regional topography, climate, and geography including the ecological and administrative boundaries on the landscape.

Combined with the level of effort required to conduct traditional surveys and the cryptic nature and biological processes of these birds, we postulate that it would be challenging to achieve accurate counts by solely relying on traditional field survey methods for the purposes of attaining a reliable population index or trend over time. With this rationale, we initiated a citizen science component to establish and maintain working relationships with private landowners in the Beaver Mines, Crowsnest Pass - Livingston, Longview - Turner Valley, Porcupine Hills and Waterton regions that have present or potential wild turkey populations. To date, working with private landowners has enabled ACA to identify the locations of local turkey populations and associated habitat features (e.g., roosts, nesting and feeding sites), garner local knowledge, and obtain counts of birds. For significant populations identified by landowners, we will continue to employ some traditional survey methods to confirm population counts and gain more detailed information such as age class, male/female ratio, habitat type, location information, and regional conditions.

Methods

In 2020, we defined five major geographic focal area boundaries for the purposes of surveying wild turkeys in southwest Alberta. These survey units were created by intersecting a combination of existing administrative, geographic, and ecological boundaries, including provincial wildlife management units, provincial and national parks, the forest reserve boundary, municipal district and county boundaries, major roads, major rivers, and data from both recent and historical turkey observations. Our goal over the next five years is to establish a population trend for wild turkeys by contacting a minimum of 10 private landowners within each focal area zone per year to obtain information on turkey observations (see mock figure below illustrating the nature of expected data trends). Ideally, landowners will provide a total/maximum count of birds observed on their private lands, with counts occurring late fall and/or throughout the winter months when turkeys

are known to group up (i.e., to roost and forage) thereby increasing the likelihood of observing the majority of local population in those areas.

Communications

Ordinarily, a large part of our effort goes into communication activities; however ,this past year's activities were somewhat limited due to restrictions associated with the COVID-19 pandemic. Activities normally include presentations and tours to funding agencies and partners, and participation in several conferences and workshops; however, we did not complete any of these this year. We anticipate that we will return to these activities once it is safe to do so.

Results

In 2020, we contacted over 60 private landowners in southwest Alberta to gain knowledge and approximate counts of local turkey populations in southwest Alberta. Landowner surveys were completed over the winter months, during which we explained our project goals and gathered anecdotal information on local populations and the distribution of wild turkeys. Initiating and maintaining a positive relationship with these landowners is very important to the success of our project because many of the surveys will likely occur on private land. The benefits of recruiting landowner assistance to conduct surveys can lower costs and expand our survey range. Being accessible gives landowners a direct line of communication for any questions or concerns and creates a strong sense of involvement. We are actively contacting other stakeholders to avoid exclusion, gain more local knowledge, and potentially recruit more volunteers for later in the project. Having local fish and game members informed and involved would increase the project's exposure and garner more support.

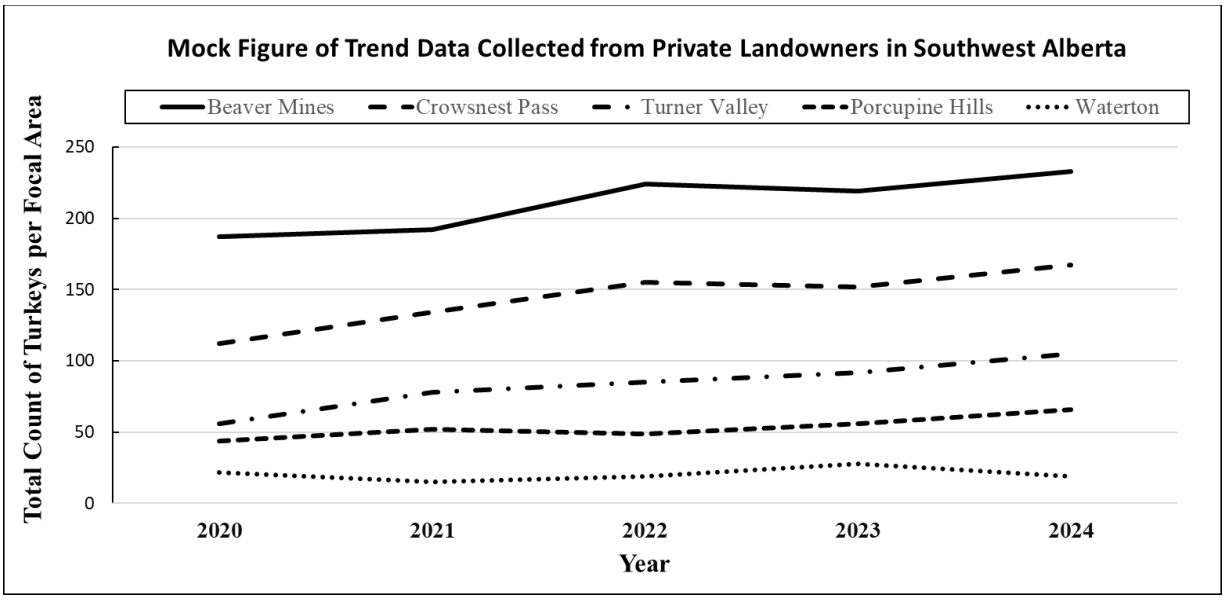

Figure 1. **Mock Figure** of Trend Data Collected from Private Landowners in Southwest Alberta.

Conclusions

Long-term relationships built on mutual respect and trust between conservation groups and landowners have allowed ACA to collaborate with producers and gather information on turkey populations in southwest Alberta in 2020. To date, we have corresponded with over 60 private landowners within five different geographic focal areas, and have gathered anecdotal information on turkey counts that we will use to develop a population trend over time. Our goal for this project is to understand population dynamics, develop and implement a method to monitor wild turkey abundance, and collect data that will assist with the allocation of tags for harvest in southwest Alberta. This initiative has led to funding partnerships (~$17,700 in 2020) and the support of Alberta Fish & Game Association – Minister's Special Licence Program and the Safari Club International – Northern Alberta Chapter. It is through these partnerships that we strive to foster mutually beneficial relationships with the ranching community through improved hunting opportunities on this land base.

Communications

- No presentations or tours were done this year due to restrictions associated with the COVID-19 pandemic.

Literature Cited

Gerald, A. W. (1992). Wild Turkeys Outside Their Historical Range. In Dickson, J.D. (Ed). *The Wild Turkey: Biology and Management.* [E-reader version] (pp.361-368).

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Photos

During the winter months, wild turkeys can often be seen at lower elevations along forest edges, foraging in agricultural areas in southwest Alberta. Photo: Mike Verhage

The tips of the rump and tail feathers on Merriam's turkeys are light brown or beige, compared to the eastern turkey that have slightly darker, chestnut-coloured tail feather tips. Photo: Mike Verhage

A bearded tom (male) struts his stuff to attract hens (females) during mating season, flaunting several physiological characteristics including the length of its beard, snood, and leg spurs. Photo: Mike Verhage