

Alberta Conservation Association (ACA)

Date: 2014-2015

Project Name: Sharp-tailed Grouse Habitat Inventory and Stewardship

Wildlife Program Manager: Doug Manzer

Project Leader: Robb Stavne

Primary ACA staff on project:

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Partnerships

- Alberta Environment and Sustainable Resource Development
- County of Grande Prairie
- Dunvegan Fish & Game Association
- Wanham Grazing Reserve

Key Findings

- Found some lek sites have shifted or been abandoned at Wanham Grazing Reserve.
- Delivered a presentation to members and the board of the Wanham Grazing Reserve.
- Spoke to the public about habitat needs and general status of sharp-tailed grouse in the Grande Prairie region at the Trumpeter Swan Festival.
- Reprinted 1,000 copies of the *Sharp-tailed Grouse through the Seasons* booklet for release to members of the public.
- Submitted a research article on the use of song meters to improve occupancy estimates of sharp-tailed grouse leks to the peer-reviewed journal *The Condor*.

Introduction

Sharp-tailed grouse populations are likely declining in areas where open grassland habitats are fragmented and converted for other uses. We work in the Peace Parkland of northwestern Alberta because of the intensive fragmentation and development that have impacted sharp-tailed grouse habitat in this area. We work with private landowners, the Dunvegan Fish & Game Association, provincial grazing reserves, Alberta Environment and Sustainable Resource Development, and the County of Grande Prairie to provide information and develop stewardship strategies at a landscape level to protect this sensitive species. Our efforts include specific surveys to gauge direct response of sharp-tailed grouse to habitat changes, as well as education and outreach activities to promote individual and community-based habitat enhancement and retention. Additionally, we are also engaging the scientific community by submitting a manuscript to a peer-reviewed journal.

Methods

Building on relationships established in prior years, we interacted with landowners, grazing reserve managers and the public in a variety of ways. We maintained direct contact with landowners in the Wembley area to discuss habitat needs and stewardship activities, and to inquire about changes in local sharp-tailed grouse numbers. Additionally, we participated in a local public festival (Trumpeter Swan Festival) to highlight the habitat needs of sharp-tailed grouse. In 2014, we partnered with the County of Grande Prairie to update and reprint 1,000 copies of the *Sharp-tailed Grouse through the Seasons* booklet for distribution to key members of the public and partner groups.

We worked with volunteers from Dunvegan Fish & Game Association to conduct a count of active leks at eight sites on the Wanham Grazing Reserve. A focus was to inventory a historical lek site located in a pasture that had recently been broken and unsuccessfully reseeded to tame forage in fall 2011. Results of this inventory, along with information on habitat needs of sharp-tailed grouse, were conveyed during a presentation at the Wanham Grazing Reserve Annual General Meeting.

Our work in past years around the Grande Prairie area has allowed us to compare occupancy rates of sharp-tailed grouse at lek sites in relation to habitat gradients. We used song meters combined with direct human observation to assess habitat features associated with lek activity. We submitted this work to the peer-reviewed journal *The Condor* for publication.

Results

Throughout the year, we interacted on several occasions with local landowners who each help support populations of sharp-tailed grouse near Wembley. Through these interactions, we continue to promote sharing of information about the status of specific populations as well as provide direction for stewardship activities. Additionally, we engaged the County of Grande Prairie in the ongoing discussion, and it has agreed to provide funds to promote educational materials and future landowner meetings. At least 20 family groups visited our poster presentation at the Trumpeter Swan Festival where we discussed stewardship opportunities and grouse habitat needs with a receptive audience. We were also informed of additional lek sites previously unknown to us, and we formed collaborative networks with other professionals at the festival.

Working with Dunvegan Fish & Game Association at the Wanham Grazing Reserve, we found that lek attendance appears to be at its lowest point since we started inventorying this area in 2008 (Figure 1). Two of the eight sites that we surveyed did not have sharp-tailed grouse activity, including the site where the pasture had been broken and reseeded in 2011 (Figure 2). Anecdotally, observers did hear lek activity in other areas of the grazing reserve, which could indicate that lek sites have shifted. We presented this information to users of the Wanham Grazing Reserve and grazing reserve board members, as well as Public Lands staff from Alberta Environment and Sustainable Resource Development.

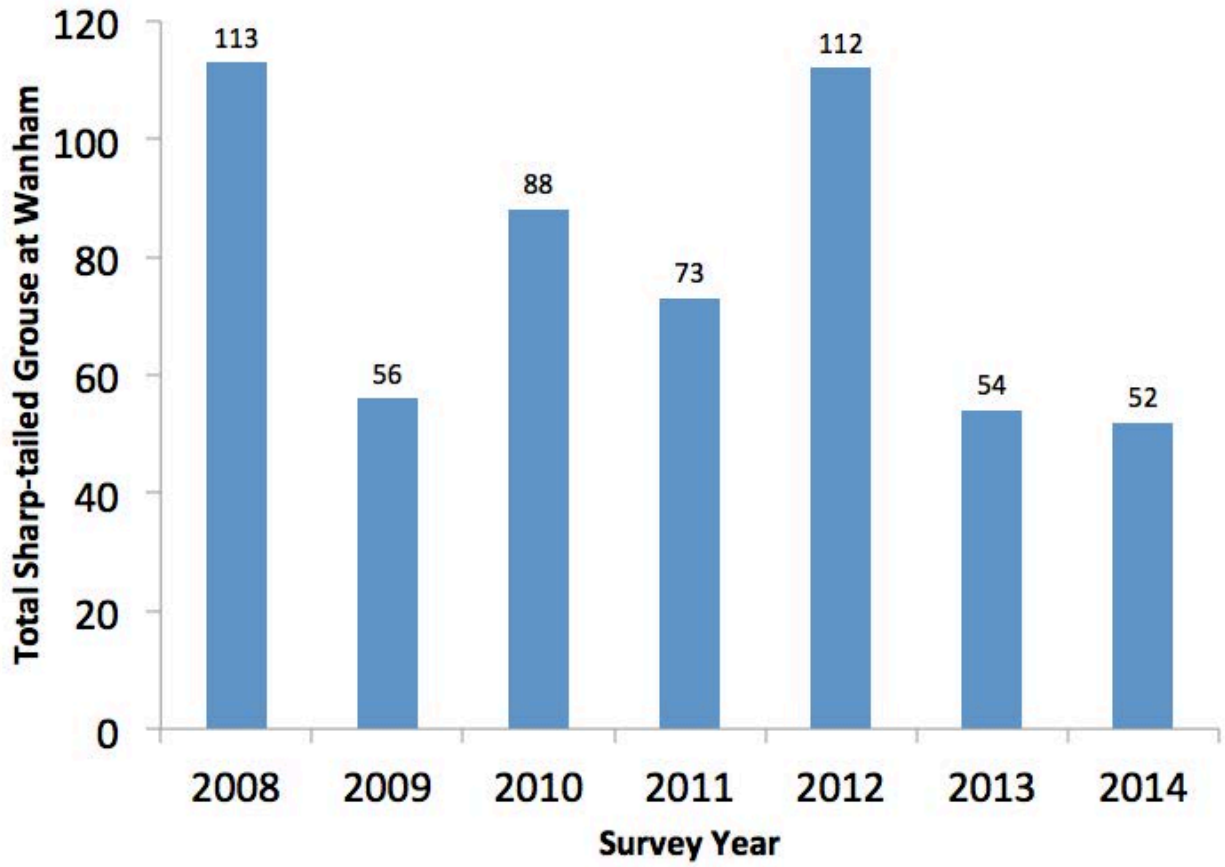


Figure 1. Total annual counts of sharp-tailed grouse observed during spring surveys at all known leks on the Wanham Grazing Reserve from 2008 to 2014. The number of known active lek sites ranged from six to eight. In 2014, two lek sites appeared to be unused, possibly owing to unconfirmed shifts to new locations.

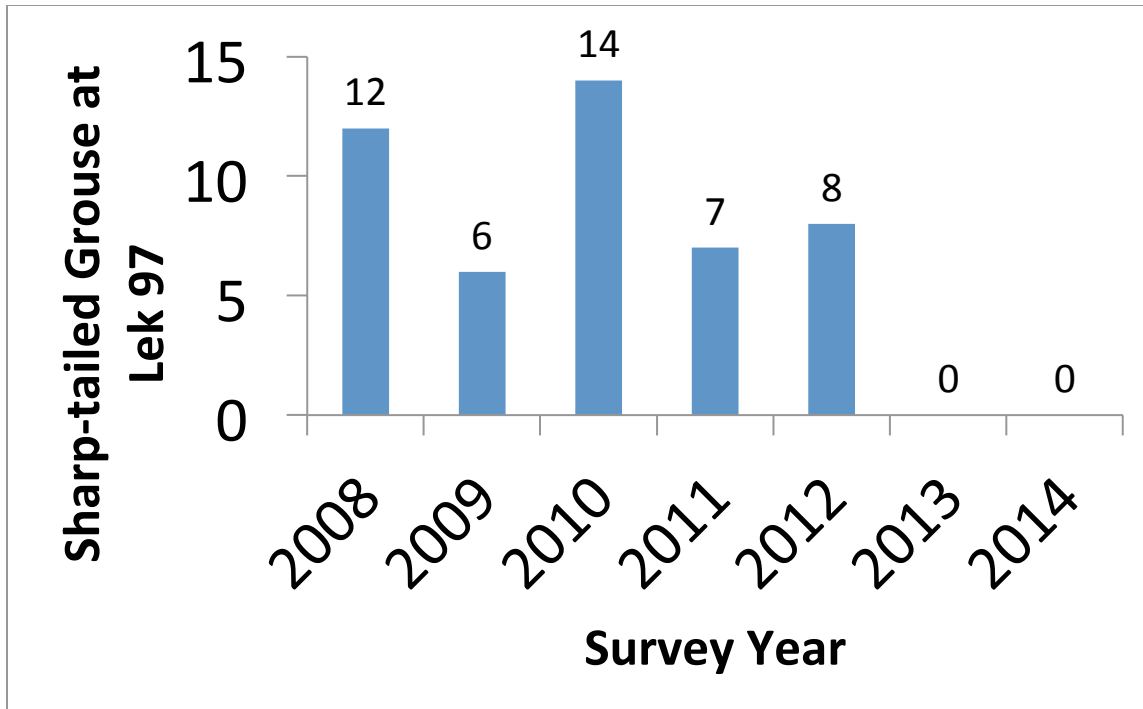


Figure 2. Total count of sharp-tailed grouse observed during spring surveys at Lek 97 in the Wanham Grazing Reserve. In 2011, grass cover was broken down in the field adjacent to the active lek site, except for a 100 m buffer surrounding the site. Although activity was reported on the site in 2012, it appears that grouse have since abandoned the site.

We submitted a manuscript entitled “Use of Song Meters to Improve Occupancy Estimates of Sharp-tailed Grouse (*Tympanauchen phasianellus caurus*) Leks in the Peace River Parkland of Northern Alberta” to the journal *The Condor* in May 2014. The manuscript is currently undergoing revisions.

Conclusions

Maintaining open dialogue with land managers, local communities and the public facilitates awareness of the habitat needs of sharp-tailed grouse. Knowledge of a variety of perspectives about living with wildlife is valuable for identifying common goals and challenges, and promotes discussion. We will continue to work towards conserving habitat on behalf of sharp-tailed grouse and other wildlife through interactions with grassroots communities and managers of larger grassland ecosystems, such as those occurring within grazing reserves. Engagement with individuals as well as groups helps promote a sense of community with nature and allows shared successes to be a unifying factor for continued engagement. Additionally, presenting material at opportunistic events, such as the Trumpeter Swan Festival, or distributing outreach materials, such as our sharp-tailed grouse booklet, allows us to capture the attention of members of the public that are wildlife friendly and can help promote education and awareness of sharp-tailed grouse concerns.

Presentations to and collaborations with grazing reserve managers and users continue to be received positively. As we continue to work with these groups, we hope to facilitate a collaborative form of adaptive management to enhance breeding habitat for sharp-tailed grouse as well as provide seasonal forage for cattle.

Communications

- Delivered presentation at Wanham Grazing Association general meeting.
- Delivered presentation to Beaverlodge Riparian Restoration Society.
- Presented poster at the Trumpeter Swan Festival, Saskatoon Island Provincial Park, Alberta.
- Submitted manuscript, “Use of Song Meters to Improve Occupancy Estimates of Sharp-tailed Grouse (*Tympanauchus phasianellus caurus*) Leks in the Peace River Parkland of Northern Alberta,” to peer-reviewed journal *The Condor* in May 2014.

Literature Cited

N/A

Photos

Alberta's Sharp-tailed Grouse



What's in a Name?

- Sharp-tailed grouse – aka: sharpies, prairie chicken, pintail grouse, partridge, fire bird
- Named for their short & pointed tail, with two central tail feathers that extend beyond the others

Spotting a Sharp-tailed Grouse

What to look for

- Found in open grasslands with patches of trees & shrubs
- Often seen high up in tree tops
- Speckled plumage of tan, brown, beige & black
- Conspicuous white underwings, rump, and abdomen in flight
- Feathers that reach all the way down to their toes

Dressed to Impress

- Both sexes sport bright yellow – orange combs over each eye
- Males have a distinct purple-coloured sac on each side of their neck, which they inflate during courtship displays while flaring their eye comb

What Is A Lek?

- Sharp-tailed grouse gather every spring at a lek site, or dancing ground to display for and court females
- Males compete for breeding opportunities through energetic displays of wing fluttering, foot stomping, spinning, and sometimes direct attack
- Lekking activity begins in the spring before snow melts, and lasts until mid-May. Mostly before dawn and for a few hours after
- Leks can be found in open grasslands, usually on a hill top where they can be easily seen and heard by females



Did you know?

- All breeding activity for a local population occurs within 1600m of the lek!
- Leks will persist for hundreds of years in the same location if left undisturbed!
- There is currently a hunting season closure for sharp-tailed grouse in agricultural areas north of highway 16!
- Chicks are flight-capable when they are 7 – 10 days old!



Small things can make a big difference

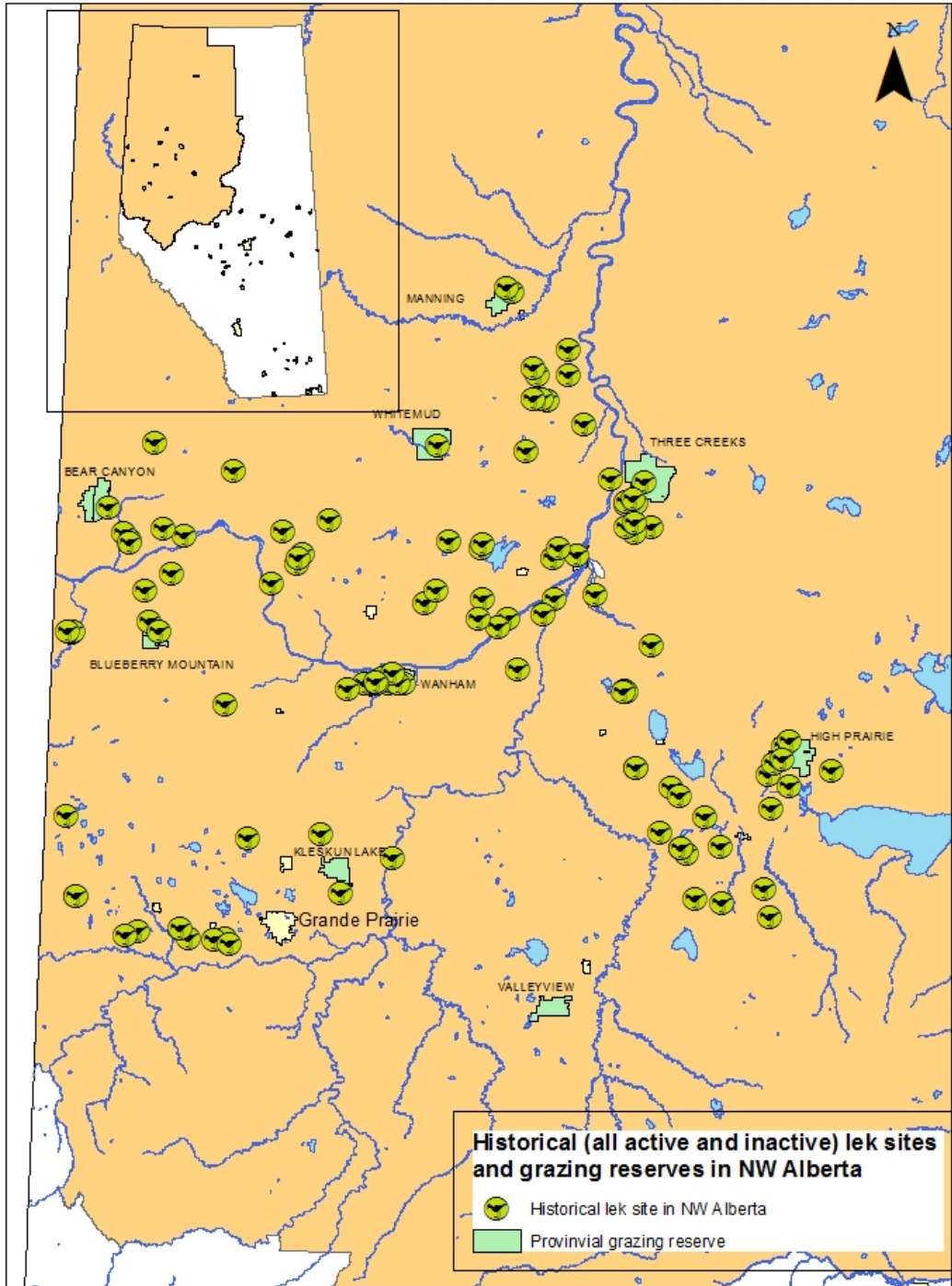
- Control cattle near riparian habitat with electric or permanent fence to keep trees & shrubs intact
- Avoid heavy grazing; keep corridor areas available for brood movement
- Leave a little for your wild neighbors; maybe it's a narrow row of unharvested grain, maybe it's the odd corner of hay not cut
- Avoid disturbing active lek sites
- Plant berry-producing shrubs to provide winter food & protection from predators
- Use markers on fence wires near lek sites to help prevent collisions
- Contact the Alberta Conservation Association for help with adopting wildlife friendly practices

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Photos: Ryan Hermanutz, Alicia Goddard
Illustration: Liz Saunders

Poster presented to members of the public at the Trumpeter Swan Festival at Saskatoon Island Provincial Park in April 2014.



Historical (all active and inactive) lek sites and grazing reserves in northwestern Alberta.