

Alberta Conservation Association 2010/11 Project Summary Report

Project Name: *Ruffed Grouse Recreational Access*

Wildlife Program Manager: Doug Manzer

Project Leader: Robb Stavne

Primary ACA staff on project:

Stephanie Brown, John Hallett, Ryan Hermanutz, Robb Stavne and Jon Van Dijk

Partnerships

- None to date

Key Findings

- Enhanced 4.7 km of trail to increase use by ruffed grouse and to encourage a more traditional and family-friendly style of upland game bird hunting at two sites north of Peace River, Alberta.
- Enhancements included clearing existing trails of large woody debris and saplings, seeding alsike clover for forage, and spreading grit to aid in digestion.
- Counted approximately 0.89 birds per linear km near enhanced trails in comparison to 0.47 birds per linear km near non-enhanced trails.

Introduction

Alberta Conservation Association (ACA) has a strong history of securing and protecting habitat to benefit both wildlife and the recreating public. Although ACA Conservation Sites in the northern regions of the province are typically managed through prescribed burns or mechanical clearings to produce habitat for big game, there is growing interest in providing recreational opportunities for alternate game.

As a small game species, ruffed grouse (*Bonasa umbellus*) are highly sought after by upland bird hunters, and offer an exceptional experience to share this pursuit with family members and a dog. In a 2007 hunter harvest survey, an estimated 8,030 hunters bagged more than 54,000 ruffed grouse in the Boreal Forest Region of Alberta (Alberta Sustainable Resource Development 2007). Energy exploration and fragmentation of the boreal forest have increased the network of roads, which are then available to hunters that explore these back roads and scan ditches for grouse. Although road-style hunting is popular, it is not necessarily the type and ethic of hunting that many others seek. In an effort to increase traditional and family-friendly upland game bird hunting opportunities, we enhanced trails and created habitat features thought to be attractive to ruffed grouse.

Methods

We selected two ACA Conservation Sites within 75 km of Peace River, Alberta with existing trails (e.g., old cut lines, etc.) and where drumming grouse were heard in the spring. The first site had 5.7 km of trails (Weberville; Figure 1), while the second site had 3.1 km of trails (East Deadwood; Figure 2). We selected sections of trail as treatments and controls at each of the two sites. We prepared treatment sections in spring by removing large woody debris (fallen or standing dead logs), and then roughly mowing them to clear small saplings and shrubs. Because it is attractive forage to grouse (Johnsgard 1983), we then seeded trails with alsike clover (*Trifolium hybridum*), and used a modified fertilizer spreader to uniformly spread (approximately 400 cm³ per linear metre) grit (natural fine screenings ≤ 12.5 mm from a local gravel pit). Trails were approximately 1.5 m wide and we deposited grit in a strip approximately 0.3 m wide along the entire length of improved trail sections.

Figure 1. Weberville Conservation Site showing enhanced (yellow lines) and non-enhanced (blue lines) trails.

Figure 2. East Deadwood Conservation Site showing enhanced (yellow lines) and non-enhanced (blue lines) trails.

We counted the number of ruffed grouse found on or near enhanced trail sections and compared this to counts near non-enhanced trails from three survey days spread over September and October. Two observers and a Labrador retriever (all had experience hunting ruffed grouse) walked slowly down trails to detect grouse. We assumed that all grouse observed from enhanced or non-enhanced trails to have used the trail from which they were found. We surveyed the Weberville site three times and the East Deadwood site two times during the hunting season before snowfall altered survey conditions. We conducted surveys along alternating segments of enhanced and non-enhanced trails during the last two hours of legal hunting time.

Results

We spent a similar amount of effort sampling ruffed grouse on enhanced (4.7 km, 6.6 h) and non-enhanced (4.3 km, 5.8 h) trails. We counted an average of 0.89 grouse per linear km near enhanced trails, compared to 0.47 grouse along non-enhanced trails (Figure 3). However, observations of grouse between surveys probably included repeated counts of the same individuals. Our ability to statistically compare treatments was limited by the availability of enhanced trails.

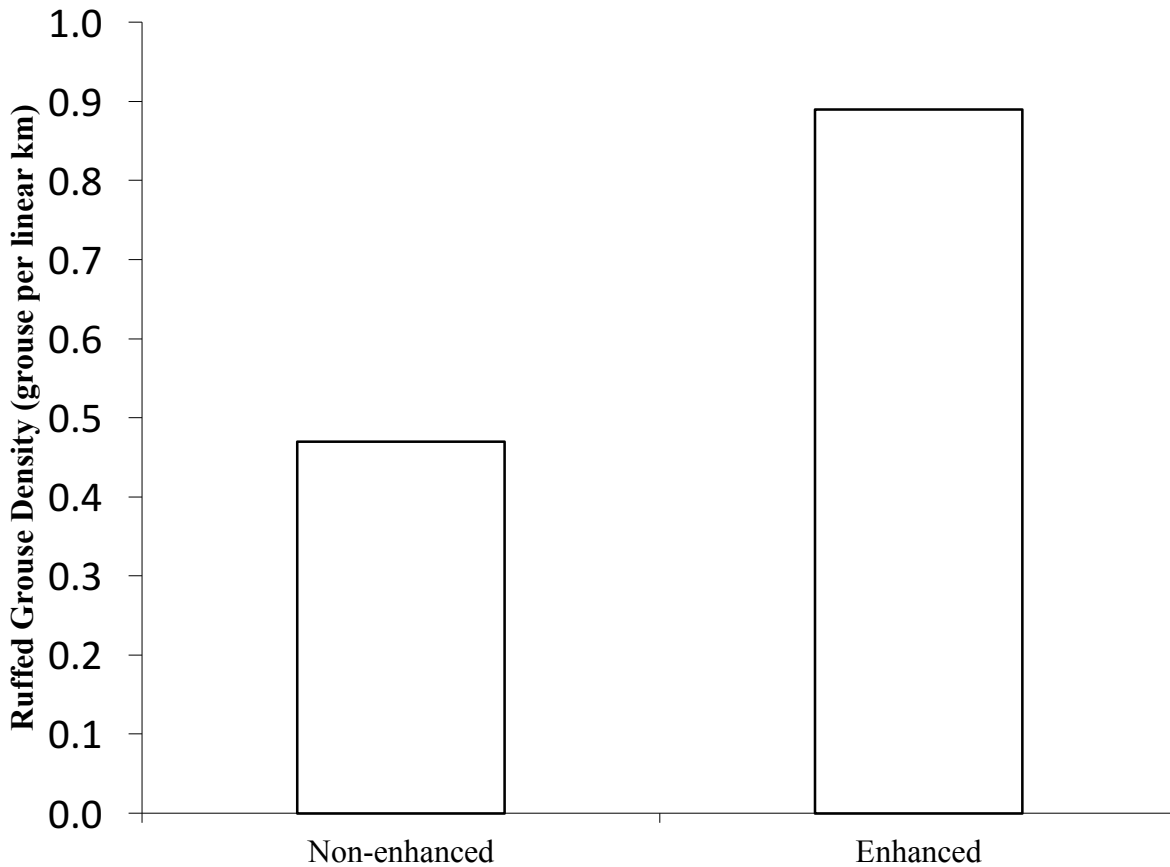


Figure 3. Mean grouse per linear kilometre of enhanced and non-enhanced trails at two sites surveyed in fall 2010.

Conclusions

Although we cannot yet statistically compare differences in observed grouse on enhanced trails relative to non-enhanced trails, the trend towards increased use of enhanced trails by ruffed grouse is encouraging. Future work to enhance trails on additional sites will create more sample units from which to draw more robust interpretation of our results.

We spent considerable effort spreading grit in a uniform manner along enhanced trails. Unfortunately, we found that much of this grit was obscured by leaf litter. Although we speculate that grouse probably found and used some of this grit for digestion, it is unknown whether or not finely dispersed grit will have utility in subsequent years. For this reason, we will consider distributing grit in either a more dense uniform dispersal along the trail, or more practically, perhaps create piles of grit at intervals along enhanced paths.

We found clover to be very affordable, easily sown, and established well. However we feel that the introduction of non-native forage to be unnecessary, given the abundance and likelihood of re-establishment of native forbs and shrubs to enhanced trails. Furthermore, we recommend

management of mature aspen forests to ensure availability of young aspen for long-term forage availability.

We enhanced 2 – 3 km of trails at each site. These enhancements, plus a similar length of non-enhanced trail (5 – 6 km total) seemed to be an appropriate length for a walking-based hunt over a two-hour period. Although longer trails might be attractive for walking hunters, we also feel that increased trail lengths might also attract ATV enthusiasts; an activity that we do not permit on these sites. Future enhancements should also plan to limit the overall length of trails to avoid similar issues.

Communications

- No communications to date, as we are continuing to monitor effects of enhancements.

Literature Cited

Alberta Sustainable Resource Development. 2007. Game bird harvest survey; ruffed grouse 2007. <http://www.mywildalberta.com/documents>

Johnsgard, P.A. 1983. The grouse of the world. University of Nebraska Press, Lincoln, USA.

An enhanced ruffed grouse trail. (Photo: Robb Stavne)

Alberta Conservation Association staff member, Ryan Hermanutz, shoveling grit into a modified seed broadcaster. (Photo: Robb Stavne)

A non-enhanced ruffed grouse trail. (Photo: Robb Stavne)

Grit spread on trail to aid grouse digestion. (Photo: Robb Stavne)