Alberta Conservation Association
2011/12 Project Summary Report

Project Name: *Habitat Legacy Partnership*

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Primary ACA staff on project:

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Partnerships

Alberta Hunter Education Instructors Association
Co-operating landowners
Municipal District of Taber
Pheasants Forever, Calgary Chapter, Chinook Chapter and Lethbridge Chapter
St. Mary River Irrigation District
University of Lethbridge

Key Findings

- Planted more than 13 km of shrubs to create winter habitat for pheasants and other wildlife.
- Installed more than 14.5 km of drip irrigation to enhance growth of shrubs planted in 2010 and 2011.
- Seeded approximately 10 acres to food plots for upland birds.
- Assisted with two Novice Pheasant Shoots where approximately 45 hunters harvested their first pheasant.
- Using points counts, recorded a total of 53 different bird species and 665 individual birds on enhancement and control sites.

Introduction

Upland game birds are highly valued for their showy colours, breeding displays and long history in the hunting tradition of Alberta. Ring-necked pheasants *(Phasianus colchicus)* require a variety of habitats that provide suitable cover for nesting, brood rearing and travel. Alberta Conservation Association (ACA) and Pheasants Forever formed a partnership to improve upland bird habitats in southern Alberta. The "Habitat Legacy Partnership" (HLP) works collaboratively with conservation groups, private landowners, irrigation districts and municipal districts by hosting landowner workshops, implementing habitat enhancements on the landscape and by monitoring the effects that habitat enhancements have on the diversity and abundance of wildlife. Although the overall goal is to create key habitat components targeted for upland birds, we anticipate that other species will benefit as well.

Methods

Engaging the public has been instrumental to raise the profile of pheasants and create habitat enhancement opportunities. We engage the public through presentations at landowner workshops, novice shoots, public speaking venues and using information booklets. To support enhancement activities on private land, we conduct site visits and use aerial photography to map the amount of nesting, brood-rearing and winter cover available on properties and their surrounding areas. On an individual basis, we prepare habitat plans and discuss potential enhancement opportunities with landowners.

We also evaluate the long-term impacts of enhancement actions to pheasants and non-target bird species. We use point counts and song meters to detect bird species in both control and enhancement sites, and look for potential influences of enhancement actions over time. Using CRICA 2000 generalized land cover classes, we categorized each site based upon habitat cover and calculated diversity indices for each site, and compared these measures between control and treatment sites. We calculated species abundance indices for each property to compare the most abundant bird species found. We also evaluated the variation in detection abilities among observers as a means to identify potential biases, and as a basis to determine if our survey methods need to be adjusted to account for asymmetrical observer bias.

Results

We planted approximately 13,000 shrubs, including many berry-bearing species, to provide a reliable food source and create winter cover for upland birds. We laid drip irrigation to supply water to approximately 14,500 shrubs planted in spring 2010 and 2011. A visual assessment in summer 2011 suggests that shrub survival was over 80% for those shrubs planted earlier in the spring, which is above our initial expectations. We also planted a 10-acre food plot for upland birds in an area where food resources were limited. We hosted two landowner advisory workshops, which were very well received; one was titled “Winter Cover for Upland Game Birds”, while the other was an informational session about raising pheasants. In partnership with Montana State biologists from Conrad, Montana, we initiated an enhancement site tour for landowners from Alberta to observe successes in Montana. In partnership with Alberta Hunter Education Instructors Association, we assisted with two novice pheasant hunts mentoring approximately 45 hunters for safe, ethical hunting practices and helped each of them harvest their first pheasant.

We recorded 53 different bird species and 665 individual birds on enhancement and control sites, with the ring-necked pheasant being one of the ten most abundant species observed (Figure 1). Species abundance and biodiversity did not differ significantly between control and enhanced sites, which was anticipated at the initial stages of our enhancement treatments. We anticipate five or more years of growth before planted shrubs will have the structure to attract songbirds or provide escape cover for pheasants.

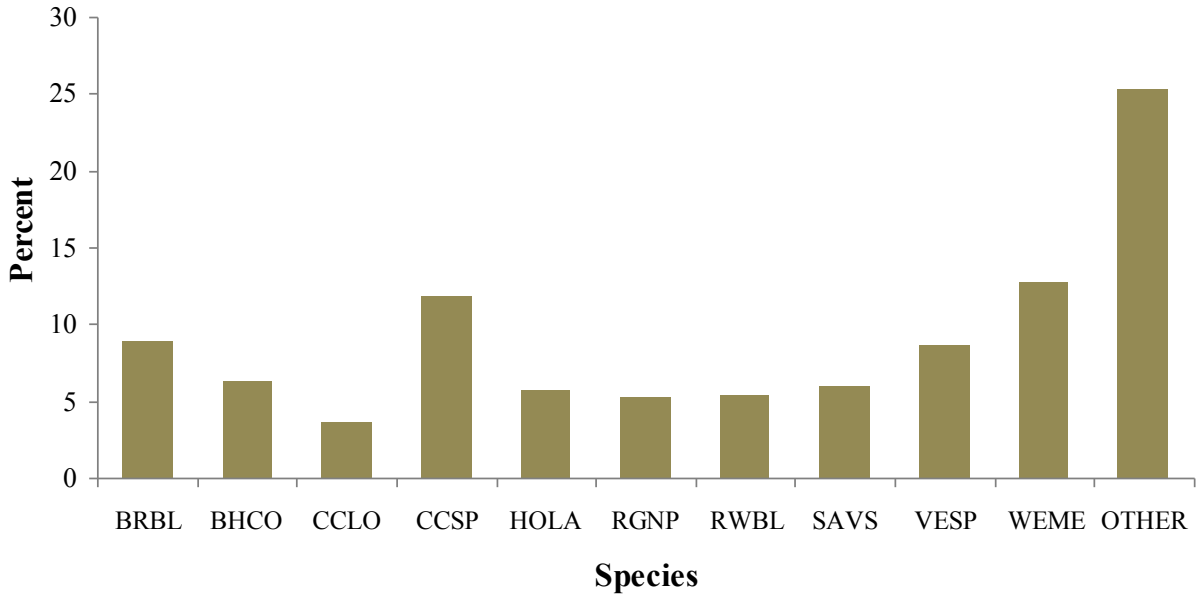

Figure 1. The ten most abundant bird species observed at the Kramer, Bullock, Tams, McVinnie and Gast properties between June 6 to July 5, 2011 (n = 665). Species abbreviations: BRBL (Brewer's blackbird), BHCO (brown-headed cowbird), CCLO (chestnut-collared longspur), CCSP (clay-coloured sparrow), HOLA (horned lark), RGNP (ring-necked pheasant), RWBL (red-winged blackbird), SAVS (savannah sparrow), VESP (vesper sparrow) and WEME (western meadowlark).

We detected a bias among individuals conducting the point counts (Figure 2), which suggests that some observers are simply better at detecting and identifying birds.

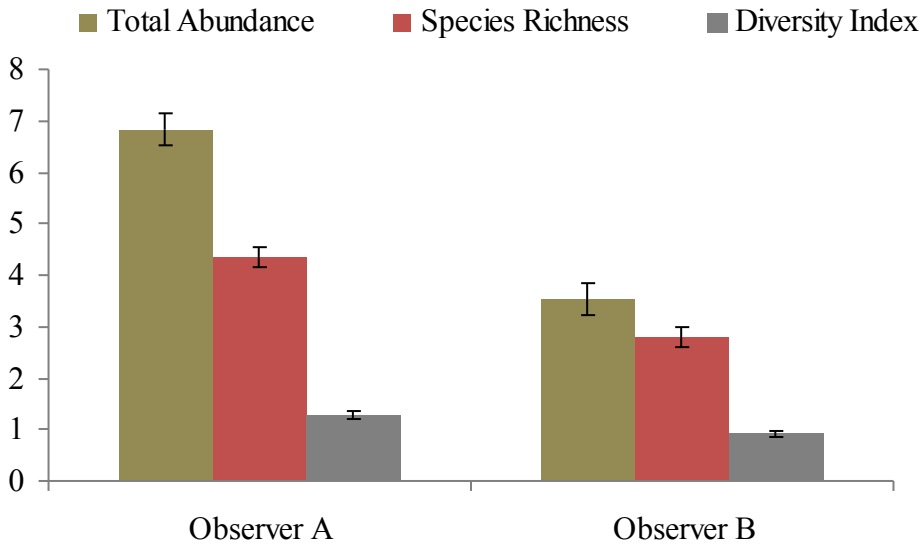

Figure 2. Difference in detection abilities between two observers during point counts (n = 43). Shown are the means for total abundance, species richness and the diversity index. Error bars denote one standard error around the mean.

Conclusions

We will continue to foster long-term partnerships and develop relationships with key members of the agricultural community, work with private landowners on property habitat plans, host landowner events, monitor the effects of habitat enhancements, and actively work with partners to support enhancement projects in southern Alberta.

Communications

- Delivered two advisory workshops for landowners that are interested in improving habitat conditions for pheasants and for raising pheasants.
- Designed signs for landowners who participate in the Habitat Legacy Partnership.
- Delivered *Through the Seasons* booklets and habitat plans with Alberta Conservation Association's logo on them to landowners.
- Assisted in novice (youth) pheasant hunts and provided presentations on upland game bird habitat needs.
- Set up a Habitat Legacy Partnership banner and Pheasant Booth at the Taber Corn Festival and Calgary Sportsman Show.
- Interviewed for the program *Let's Go Outdoors* with Michael Short about landowner involvement and submitted an article in three county newspapers highlighting the Habitat Legacy Partnership project.

Literature Cited

n/a

Photos

Ring-necked pheasants have been part of Alberta's landscape for over 100 years. (Photo: Brad Taylor)

Alberta Conservation Association staff members, Mike Uchikura and Sarah Nielson, set up a song meter and prepare to conduct point counts on a Habitat Legacy Partnership enhancement site. (Photo: Mike Verhage)

Alberta and Montana landowners on a habitat enhancement site tour near Conrad, Montana. (Photo: Mike Verhage)

Joshua Kranrod, a participant in one of the novice pheasant hunts, poses with two pheasants he harvested. (Photo: Ken Kranrod)