Alberta Conservation Association

2019/20 Project Summary Report

Project Name: Upland Gamebird Studies – Upland Gamebird Productivity Surveys

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Partnerships

Landowners
Pheasants Forever Calgary
Volunteers – Dog Handlers
Alberta Environment and Parks

Key Findings

- Our late summer surveys indicate below average production for both pheasants and grey partridge in 2019.
- We had an average of 1.21 flushes on pheasants per hour (i.e., 3.15 pheasants flushed per hour). This translates to 1.28 pheasants for each km walked over 16.5 hours of survey time.
- We had an average of 0.42 flushes on grey partridge per hour (i.e., 3.39 partridge flushed per hour). This translates to 1.38 partridge for each km walked over 16.5 hours of survey time.

- We decreased our survey effort in 2019, walking 40.6 km of habitat; that being said, we had substantially lower total counts of each species (n = 52 pheasant, n = 56 grey partridge) than years prior, since initiating these surveys in 2012.

Abstract

We worked with volunteers to conduct annual upland gamebird productivity surveys in some of southern Alberta's best habitat. We encountered a total of 52 pheasants, and 56 grey partridge within 16.5 hours of survey time covering 40.6 km. This translates to 1.28 pheasants and 1.38 partridge for each kilometre travelled. Compared to previous survey years, this indicates a well-below-average year for both pheasants and grey partridge. The information acquired from these surveys helps us understand population trends, brood success, as well as heighten the excitement for the upcoming hunting season as we release survey results on our website and various social media venues each fall.

Introduction

Since 2012, we have conducted productivity surveys in late summer to gain a measure of annual reproductive success for grey partridge and ring-necked pheasant. The information acquired from these surveys helps us understand population trends and brood success, as well as inform hunters looking for an indication of breeding success leading up to the hunting season. We release survey results on our website and other social media outlets such as Facebook each fall. We engage a group of volunteers who participate in the surveys, and interact with landowners from one year to the next helping them to better understand how habitat and weather patterns can lead to changes in bird numbers. These surveys provide a means to build interest in upland hunting as well as a platform to discuss their habitat needs.

Methods

The surveys occur in late summer and early fall to coincide with crop harvest. Once an area is harvested, it allows for higher levels of bird detection in the permanent cover that borders the

farmland. The survey sites include large coulee systems that harbour a mix of native and tame grasses, fruit-bearing shrubs, creeks, and cattail sections, often bordered by crop land. Trained bird dogs are used to search areas of prime habitat, generally coulee systems, to seek out and flush birds. Surveys occur after sunrise during the cool morning weather and typically last from two to four hours depending on conditions. Each flush location is recorded using a handheld GPS. The trained dogs are equipped with Garmin Astro 320 GPS-enabled dog collars that track the distance covered during the survey. The survey time and distance covered are recorded to calculate indices such as flushes/hour which can be easily communicated to hunters. The surveys are intended to mimic hunting scenarios, allowing the dog and handler to cover ground as they see fit, to flush the most birds possible. A variety of dogs and handlers are involved in the surveys which offers different levels of search effort and ability, giving realistic results of what hunters can expect to see in the upcoming hunting season.

Results

Our late summer upland surveys indicate well-below-average counts for ring-necked pheasant and grey partridge in 2019. The flush rate for both pheasants and partridge are the lowest that has been seen since the survey started in 2012. Overall, we flushed 52 pheasants and 56 partridge while covering 40.6 km over 16.5 hours of effort. It is notable this has also been the lowest level of effort put into the surveys since 2014 when we covered 30 km. The dogs encountered 1.2 pheasant and 0.4 partridge flushes per hour (single or covey). Averaged over the entire sample period this equates to roughly 1.6 flushes of either partridge or pheasant per hour. For each kilometre walked, surveyors flushed 1.28 pheasants and 1.38 partridge, which is the lowest on record for both species since starting these surveys in 2012 (Table 1 and Table 2).

Table 1. Total counts and encounter rates for ring-necked pheasant during late summer surveys from 2012 to 2019.

Survey results	Ring-necked pheasant							
Survey year	2012	2013	2014	2015	2016	2017	2018	2019
Distance surveyed (km)	53.6	60	30	46	47	46	67	40.6
Total count	111	215	73	155	263	163	129	52
Flushes/hour	1.37	2.59	1.96	2.44	3.32	2.23	1.54	1.21
Birds/km walked	2.07	3.58	2.43	3.37	5.60	3.54	1.93	1.28

Table 2. Total counts and encounter rates for grey partridge during the late summer surveys from 2012- 2019.

Survey results	Grey partridge							
Survey year	2012	2013	2014	2015	2016	2017	2018	2019
Distance surveyed (km)	53.6	60	30	46	47	46	67	40.6
Total count	354	420	397	292	159	214	151	56
Flushes/hour	1.37	1.59	3.53	2.15	0.83	0.96	0.82	0.42
Birds/km walked	6.6	7	13.2	6.35	3.38	4.65	2.25	1.38

Conclusions

Encounter rates and overall numbers were the lowest observed since initiating these surveys in 2012. Winter conditions in 2018 and 2019 were severe, followed by late, wet springs. As such, it's no surprise that 2019 counts were low as we suspect greater than normal winter mortality followed by lower than average recruitment, especially for grey partridge. An optimistic view acknowledges that any survival after such challenging living conditions is encouraging and demonstrates the value of high-quality habitat.

Communications

- The pheasant population survey results were published on ACA's website and communicated via social media. Results were also shared with Pheasant Forever Calgary, who further shared this information with its members via an e-newsletter and through hard copies mailed out to members.

Literature Cited

N/A

Photos

ACA staff member, Mike Uchikura, working his bird dog on a coulee slope in hopes to flush upland gamebirds. Photo: Jalen Hulit

ACA staff member, Mike Uchikura, and dog flushing a young of the year pheasant from a drainage with excellent security cover. Photo: Jalen Hulit

Cattails are essential habitat for pheasants throughout the winter as they provide great thermal cover from cold winter storms. Photo: Jalen Hulit

Hen pheasant being flushed from a chokecherry patch. Chokecherry is important habitat for upland gamebirds throughout the year; its vertical structure provides security cover and is a valuable food source. Photo: Jalen Hulit