

Alberta Conservation Association
2020/21 Project Summary Report

Project Name: Upland Gamebird Productivity Surveys

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Partnerships

Alberta Environment and Parks

Landowners

Pheasants Forever Calgary

Volunteer Survey Participants – Dog Handlers

Key Findings

- Our late summer surveys suggest we may have turned the corner from the downward trend seen from 2017 – 2019 for both pheasants and grey partridge in 2020.
- Down from the high of 2016, we had an average of 1.28 flushes per hour of pheasants (i.e., one or more birds per flush). This translates to 1.43 pheasants for each kilometre walked over the 18 hours of survey time.
- We had an average of 0.64 grey partridge flushes per hour. This translates to 2.45 partridge for each kilometre walked over the 37.6 hours of survey time.
- We increased our survey effort in 2020, by surveying 46 linear kilometre of pheasant habitat and 90.67 kilometre of grey partridge habitat. Consequently, we saw an increase in total counts of each species (n = 66 pheasant, n = 222 grey partridge) compared to our 2019 totals relative to the number of kilometres surveyed in 2019.

Abstract

Different to years prior, we reached out to the hunting dog community to ask for their assistance with conducting annual upland gamebird productivity surveys throughout Alberta. The survey information collected by these volunteers enabled us to expand the geographic areas covered as well as the overall survey effort, particularly for grey partridge. We anticipate this will provide a broader representation of the annual survey results for pheasant and grey partridge recruitment leading up to the annual hunting season. We encountered a total of 66 pheasants during 18 hours of survey time while covering 46 kilometers, and 222 grey partridge over 37.6 hours covering 90.67 kilometers. This translates to 1.43 pheasants and 2.45 partridge for each kilometer travelled. Compared to the previous eight years, these counts were again below average. However, the downward trend beginning in 2017 may have bottomed in 2019 and now turned the corner in 2020 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 the survey results on our website and various social media outlets 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 informs 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. Different to years prior, we sought the assistance of gundog owners through social media to voluntarily participate in these surveys across Alberta. We anticipated this would expand the geographic extent of the area surveyed and therefore a broader representation of gamebird abundance for the 2020 fall hunting season.

We also interact with landowners annually through this process to discuss trends and weather patterns, as well the habitat resources that are important for these ground-dwelling gamebirds. This is a two-way conversation where everyone learns something! The results from these surveys

are keenly anticipated by hunters annually and continue to build interest in upland hunting as well as providing a platform to discuss important habitat needs.

Methods

The surveys occur in late summer and early fall to coincide with post-crop harvest. Once an area is harvested, it allows for higher levels of bird detection in the permanent cover that borders the farmland. Surveyors are asked to search areas of prime habitat, generally places that they hunt, to seek out and flush birds. 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 cropland. 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. Surveys occur after sunrise during the cool morning weather and typically lasts from two to four hours depending on conditions. Surveyors are asked to record different parameters at each flush including species, sex of birds flushed, total number per flush, as well as the survey time and distance covered. This information is recorded to calculate indices such as flushes/hour and birds/km walked, which can be easily communicated to hunters.

Adding data from dog handlers across the province has expanded the area of coverage as well as the time and kilometers surveyed. 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. Since volunteers were encouraged to survey areas throughout the entire province, some surveys took place in areas with no pheasant populations. For this reason, we adjusted the time and kilometers surveyed to correlate with the surveys that took place in pheasant habitat.

Results

Our late summer upland surveys indicate below average counts for ring-necked pheasant and grey partridge in 2020. However, the flush rate for both pheasants and partridge are rebounding from the lows that we saw in 2019. Overall, we flushed 66 pheasants while covering 46 km during 18 hours of effort and 222 partridge while covering 90.67 km during 37.6 hours of effort. It is notable that our change in survey methods has increased the level of effort put into the

surveys. The dogs encountered 1.28 pheasant and 0.64 partridge flushes per hour (single or covey). Averaged over the entire sample period this equates to roughly 1.92 flushes of either partridge or pheasant per hour. For each kilometre walked, surveyors flushed 1.43 pheasants and 2.45 partridge (Table 1 and Table 2).

Table 1. Total counts and encounter rates for ring-necked pheasant during late summer surveys from 2012 to 2020.

Survey results	Ring-necked pheasant								
Survey year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Distance surveyed (km)	53.6	60	30	46	47	46	67	40.6	46
Total count	111	215	73	155	263	163	129	52	66
Flushes/hour	1.37	2.59	1.96	2.44	3.32	2.23	1.54	1.21	1.28
Birds/km walked	2.07	3.58	2.43	3.37	5.60	3.54	1.93	1.28	1.43

Table 2. Total counts and encounter rates for grey partridge during the late summer surveys from 2012- 2020.

Survey results	Grey partridge								
Survey year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Distance surveyed (km)	53.6	60	30	46	47	46	67	40.6	90.67
Total count	354	420	397	292	159	214	151	56	222
Flushes/hour	1.37	1.59	3.53	2.15	0.83	0.96	0.82	0.42	0.64
Birds/km walked	6.6	7	13.2	6.35	3.38	4.65	2.25	1.38	2.45

Conclusions

Encounter rates and overall numbers appear to have bottomed out after declining annually since the highs seen in 2016. The high counts from 2016 enabled 3.32 flushes per hour for pheasants compared to 1.21 and 1.28 in 2019 and 2020, respectively. Winter conditions have been severe over the past few years. As such, it is no surprise that 2020 counts remain near the low levels seen in 2019.

The inclusion of survey information from gundog owners across a much broader geographic area has increased survey effort, particularly for grey partridge. The data provided by volunteers has doubled the survey effort from 2019 to 2020 and represents a greater cross-section of habitat spatially as well. We hope to continue expanding the collection of survey data through volunteers annually, as well as expanding the geographic area of coverage.

Pheasants and grey partridge populations are known to be quite variable from year to year. With favourable winter conditions and good habitat management, these species can rapidly recover

from low numbers. We will continue to monitor their population numbers and gather this valuable data.

Communications

- The 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.
- Social media was used to promote the survey and to reach out to dog handlers asking for their assistance in the surveys.

Literature Cited

Not applicable

Photos



ACA staff member, Jalen Hulit, working his bird dog on a coulee slope moving towards a coulee draw with excellent security cover. Photo: Samuel Vriend



ACA staff member, Jalen Hulit, and dog flushing a covey of partridge from a pocket of choke cherry shrubs which provides excellent habitat. Photo: Samuel Vriend