2009 BOBWHITE WHISTLE COUNT

Performance Report

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Mike Hayden
Secretary

Keith Sexson
Assistant Secretary
Operations

Prepared by:
Jim Pitman
Small Game Coordinator

Joe Kramer, Director
Fisheries & Wildlife Division

Mike Mitchener, Chief
Wildlife Section

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INTRODUCTION AND METHODS

To monitor changes in northern bobwhite abundance the spring whistle count was initiated in 1998. A total of 65 established routes were surveyed annually through 2005. Prior to the 2006 survey, the distribution of routes was adjusted to provide better coverage of the entire state. This was accomplished by adding 16 new routes in areas not surveyed previously and eliminating 10 routes from areas were effort was clustered. In 2009, observers were asked to survey 71 established routes during the 1-16 June survey period, starting at sunrise (Table 1). Each route consisted of 11 stops spaced at approximately 1 mile intervals. Observers listened for 5 minutes at each stop and recorded the total number of different bobwhites heard calling. Due to poor weather or road conditions a few routes were not surveyed during the standard time period but rather one week later.

The index to bobwhite abundance was calculated as the mean number of different bobwhites heard per listening stop. A folded F-test was used to determine if the variance differed between the 2008 and 2009 indices. If unequal variance existed ($P < 0.05$) then a Satterthwaite's adjustment was used to adjust the degrees of freedom prior to conducting a two sample t-test. If variance did not differ across years then a standard two sample t-test was used to draw comparisons. Additionally, a linear regression of the historical whistle count data was used to determine if bobwhite abundance had changed significantly from 1998 to 2009. All indices and analyses were calculated for each of the 6 bobwhite survey regions (Figure 1).

RESULTS

Observers surveyed 70 of 71 Kansas bobwhite routes during 2009. The only route not surveyed was route 35 in Marshall County. The statewide index to the breeding bobwhite population increased significantly from last spring (+28.1%; Table 2). Apparent 1-year increases

were observed in every region except southcentral where numbers remained similar to last year. The only statistically significant (P<0.10) changes occurred in the northcentral (+106.2%) and southeast (+49.4%) regions. Because none of the other one-year changes were statistically significant they could simply be due to random variability associated with the sampling scheme (Table 2).

Since 1998, bobwhite abundance has declined significantly in every region except the southcentral and west regions (Table 2, Figure 2). Bobwhite populations in the southcentral and west regions have remained reasonably constant over the last decade. The statewide index has declined significantly (P < 0.05) over that time span (Table 2, Figure 3).

DISCUSSION

Prroduction was near or above average in 2008 in every region of the state except far southwest Kansas where productivity was limited by severe drought. Winter conditions were relatively mild across most parts of the state with generally very little snow fall. The one exception occurred in southcentral Kansas where an early spring storm dumped upwards of 20" of snow. Fortunately, the snow from that storm didn't remain on the ground for an extended period of time and probably had only a small effect on bobwhite survival.

It is important to understand that annual changes to the breeding population do not necessary reflect hunt quality for the upcoming season. The fall bobwhite population depends not only on the size of the spring breeding population but to a greater extent on the level of productivity. At the time of this report, bobwhite productivity for 2009 had not yet been estimated. However, vegetative conditions were good for nesting across most of the state and no major weather events have occurred. If temperatures and rainfall remain near average during the month of July it is likely that production will be very good this year resulting in much improved

hunting conditions. More accurate predictions about the upcoming hunting season will be available after the August brood count data have been collected.

Table 1. Northern bobwhite survey routes and observers in Kansas, 2009.

Route	County(s)	Observer	Route	County(s)	Observer
1	Allen	Amy Zavala	37	Meade[a]	Jon Zuercher
2	Doniphan	Randy Whiteaker	38	Miami	Andy Friesen
3	Barber	Chris Berens	39	Mitchell	Aaron Deters
4	Barton	Curran Salter (USDA)	40	Montgomery	Ed Miller
5	Bourbon	Justin Harbit	41	Morris	Brent Konen
6	Butler	Jeff Rue	42	McPherson/Marion	Brian Sorensen[a]
7	Chase	Jim Pitman	43	Morton	Kraig Schultz
8	Chautauqua	Darin Porter	44	Morton	Kraig Schultz
9	Cherokee	James Svaty	45	Nemaha	Darren Brown
10	Clark	Jon Zuercher	46	Neosho	J.R. Glenn
11	Clay	Clint Thornton	47	Osage	Don Patton
12	Cloud	Pat Riese[a]	48	Osborne	Ron Ruthstrom
13	Coffey	Bob Culbertson	49	Ottawa	Pat Riese[a]
14	Cowley	Kurt Grimm	50	Pawnee	Charlie Swank
15	Crawford	James Svaty	51	Pawnee	Randy Rodgers
16	Douglas	Brad Rueschhoff[a]	52	Phillips[a]	Marc Gray
17	Elk	Rick Tush	53	Pottawatomie	Justin Koehn
18	Ellis	Randy Rodgers	54	Pratt	Todd Gatton
19	Ellsworth	Matt Smith	55	Rawlins	Josh Williams
20	Finney/Gray	Darryl Fisher	56	Reno	Steve Adams
21	Ford	Aaron Baugh	57	Rice	Steve Adams
22	Greenwood	Rick Tush	58	Riley	Corey Alderson
23	Harvey	Charlie Cope	59	Rush	Jeremy Salter (Volunteer)
24	Hodgeman	Dan Haneke[a]	60	Russell	Matt Smith
25	Hodgeman	Aaron Baugh	61	Saline	Pat Riese[a]
26	Jefferson/Jackson	Randy Whiteaker	62	Shawnee	Brad Rueschhoff[a]
27	Jewel	Aaron Deters	63	Sheridan	Matt Bain
28	Kearny	Darryl Fisher	64	Smith	Ron Ruthstrom
29	Kingman	Troy Smith	65	Stafford	Helen Hands
30	Kiowa	Charlie Swank	66	Stanton	Kraig Schultz
31	Leavenworth	Andy Friesen	67	Sumner	Jeff Rue
32	Lincoln	Luke Kramer[a]	68	Trego	Jason Hawman (LE)
33	Linn	Karl Karrow	69	Wabaunsee	Brad Rueschhoff[a]
34	Lyon	Clint Bowman	70	Washington	Clint Thornton
35	Marshall	Keith Salamans[b]	71	Woodson	Amy Zavala
36	McPherson	Brent Theede			

[a] new observer

[b] route not surveyed in 2009

Table 2. Mean number of different bobwhites heard whistling at each stop within the 6 Kansas bobwhite management regions.

Region	n[a]	2008	2009	Apparent 1-year Change (%)	P[b]	Trend (1998-2009)
Flint Hills	10	1.56	2.25	+44.2%	0.25	Declining**
Northcentral	12	0.81	1.67	+106.2%	0.02	Declining**
Northeast	9	1.52	2.15	+41.4%	0.11	Declining*
Southcentral	12	2.98	2.79	-6.4%	0.83	Stable
Southeast	11	0.85	1.27	+49.4%	0.04	Declining**
West	17	1.39	1.80	+29.5%	0.31	Stable
Statewide	71	1.53	1.96	+28.1%	0.06	Declining**

[a] Number of routes within the region.

[b] Bobwhite abundance was considered to be significantly different than the previous year when $P < 0.10$.

* $P < 0.10$

** $P < 0.05$

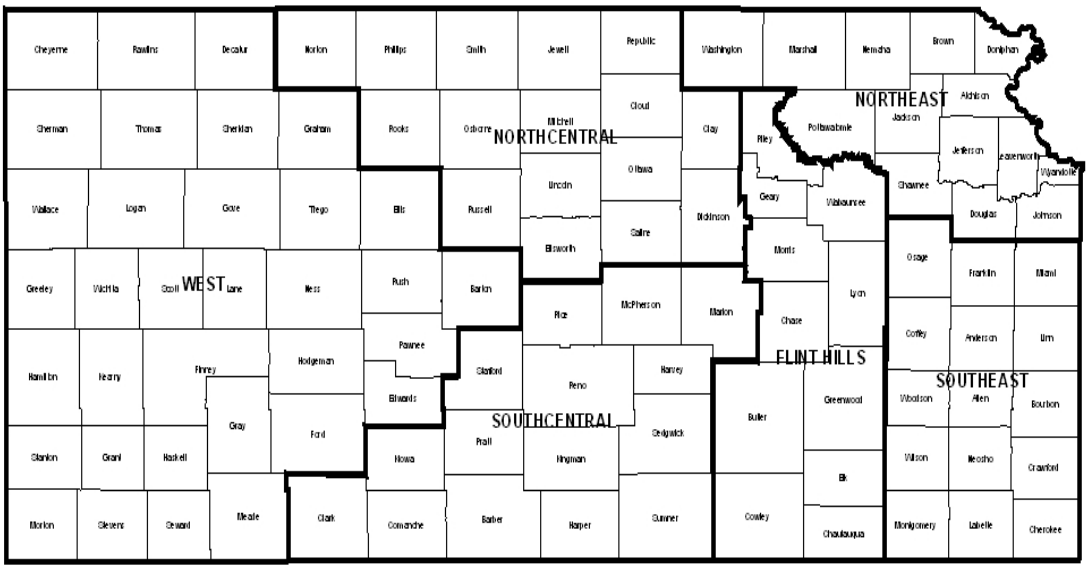

Figure 1. Northern bobwhite survey regions in Kansas.

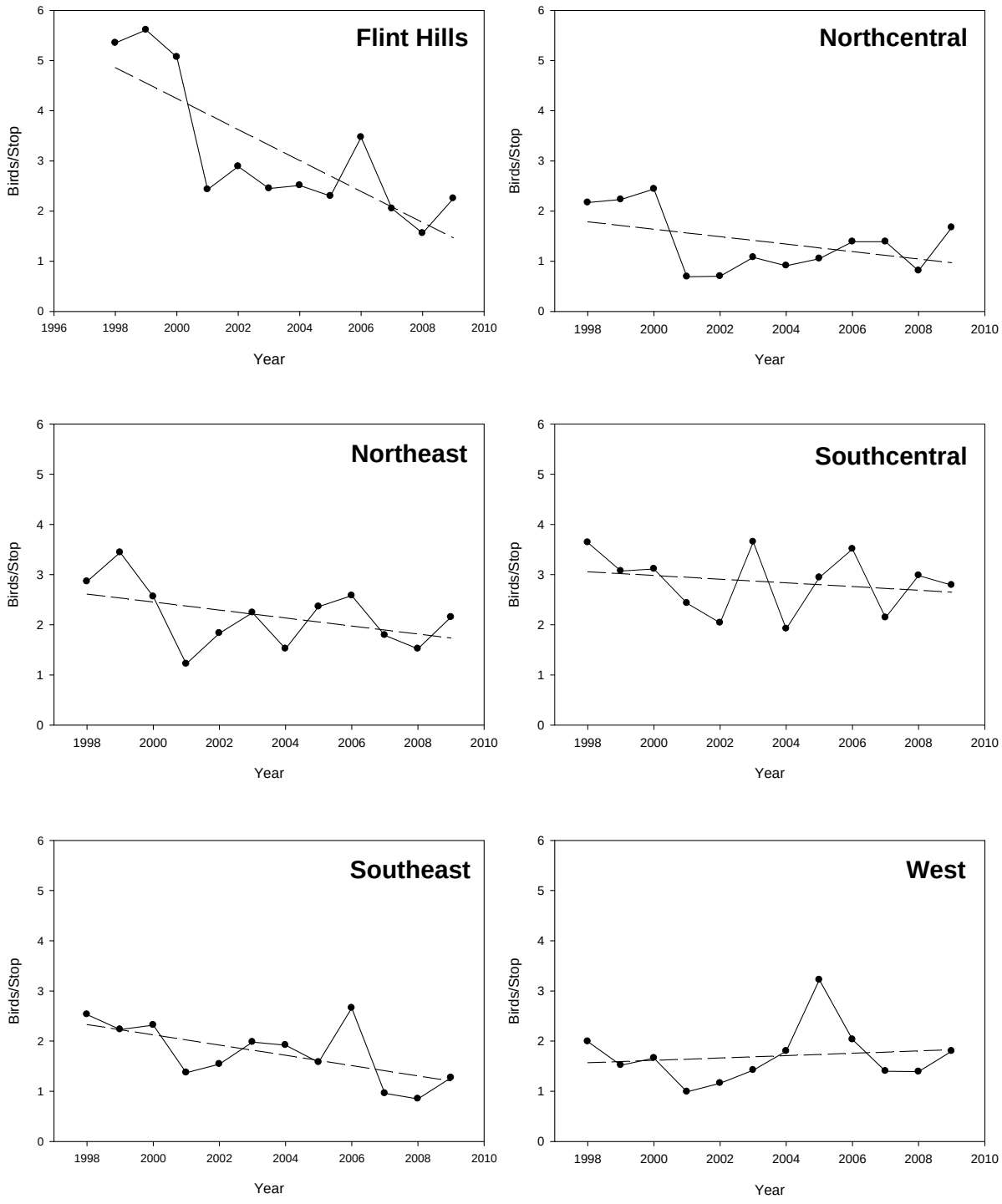

Figure 2. Mean number of northern bobwhites heard per survey stop within Kansas' 6 management regions, 1998-2009. These data can only be used to approximate long-term trends because the same set of routes was not surveyed in every year.

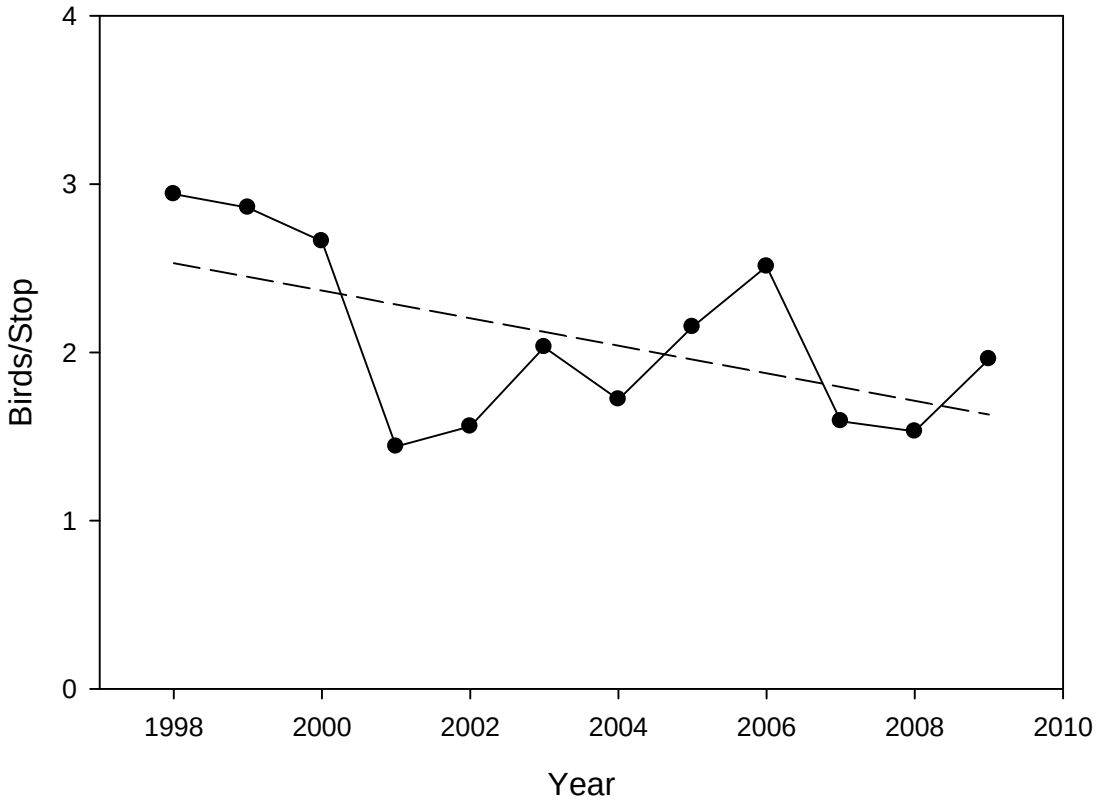

Figure 3. Mean number of northern bobwhites heard per stop calculated across all Kansas' survey routes, 1998-2009. These data can only be used to approximate long-term trends because the same set of routes was not surveyed in every year.