

Federal Aid in Wildlife Restoration Project No: W-15-R
Title of Job: 2017 April Rural Mail Carrier Survey



Dr. Jeffrey J. Lusk
 Upland Game Program Manager
 19 April 2017

The 2017 April Rural Mail Carrier Survey was conducted 3-6 April 2017. We received 445 cards by 19 April 2017, of which 424 cards contained complete information necessary for processing. The results below (Tables 1 & 2) are based on the complete cards. Rural Carriers made observations while traveling 176,863 miles on rural roads in 87 of Nebraska’s 93 counties.

Caveats. The April survey provides a snapshot of wildlife populations entering the breeding season and might not reflect conditions experienced by hunters the subsequent fall. Interpretations of percent change from previous year’s indices and longer-term means are only meaningful in relation to the indices themselves. That is, when an index value is low, insignificant changes in the index from one year to the next translates into large percent changes, but result in no observable difference in abundance within a region. For example, an increase in a species index from 0.01 to 0.02 animals observed per 100 miles is a 100% increase, but would not likely be noticeable to hunters afield. Further, survey methodology does not allow for the estimation of population size or density, but only trends in relative abundance through time. At a statewide scale, these indices are correlated with harvest and are, therefore, useful for forecasting conditions hunters might encounter in the fall, particularly when combined with results from other surveys. Upcoming surveys, including the July Rural Mail Carrier Survey will provide important information to help further refine estimates of species’ relative abundance.

Interpretations. Compared to the 2016 April Rural Mail Carrier Survey, statewide indices for pheasants, cottontails, and wild turkey were higher or comparable to the 2017 survey results, but statewide indices for bobwhites were slightly lower. In general, regional indices for pheasants, cottontails, and wild turkey were higher in 2017 compared to 2016. For bobwhites, indices were higher in the East Central and Republican regions, but lower elsewhere. For pheasants and cottontails, regional declines occurred in the Panhandle and Sandhills region. Wild turkey declined in the Sandhills region and slightly in the Southwest.

Take Home Message. Pheasant, cottontail, and wild turkey abundance was higher in 2017 compared to 2016. Bobwhite abundance was slightly lower, statewide. If spring and early summer weather is moderate, production should be good.

TABLE 1. Raw counts of pheasants, prairie grouse, wild turkey, cottontails, and jackrabbits from the 2017 April Rural Mail Carrier Survey by pheasant management region (Figure 1).

Region	Carriers	Miles	Pheasants	Grouse	Turkey	Cottontail	Jackrabbit
Central	55	22,253	152	185	1,080	134	3
Northeast	110	48,922	304	40	1,673	208	4
Panhandle	48	18,248	428	68	451	58	18
Sandhills	31	11,220	53	162	556	9	6
Southeast	124	52,521	189	21	1,341	291	1
Southwest	56	23,699	554	223	2,368	137	20
Statewide	424	176,863	1,680	699	7,469	837	52

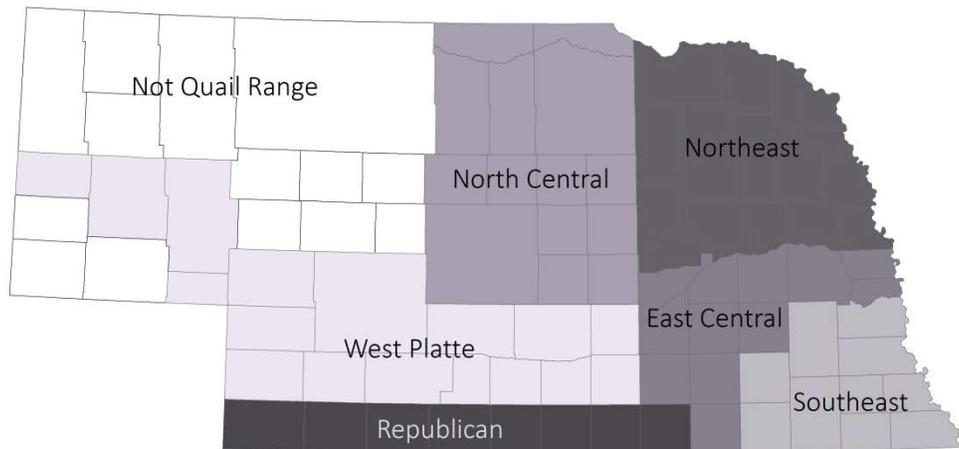
FIGURE 1. Pheasant Management Regions.



TABLE 2. Raw bobwhite counts from the 2017 April Rural Mail Carrier Survey by bobwhite management zones (Figure 2).

Zone	Carriers	Miles	Bobwhites
East Central	73	29,232	45
North Central	44	19,638	50
Northeast	98	45,610	21
Republican	31	13,947	52
Southeast	47	13,745	30
West Platte	90	19,746	16
Not Quail Range	41	34,944	6
Statewide	424	176,863	220

FIGURE 2. Bobwhite Management Zones.



Results. Statewide and regional indices for pheasants, cottontail, and wild turkey were all higher or similar in 2017 compared to April 2016, but were lower for bobwhites (Tables 3-6; Figures 3-6). In 2017, 59 of 424 cards contained no observations of any wildlife species, which is similar compared to the 56 of 426 cards that did not contain any wildlife observations in April 2016. Zero counts by species are provided in Table 7.

TABLE 3. Pheasant indices from the 2017 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Pheasants per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2016	Mean 2012-2016	Mean 2007-2016	Mean 1997-2016
Central	0.68 (0.44-0.93)	39	0	-13	-37
Northeast	0.62 (0.48-0.76)	38	16	-26	-53
Panhandle	2.35 (1.59-3.10)	-10	4	4	9
Sandhills	0.47 (0.24-0.70)	-68	-63	-72	-72
Southeast	0.36 (0.27-0.45)	6	-13	-42	-60
Southwest	2.34 (1.61-3.06)	71	14	-10	-4
Statewide	0.95 (0.80-1.10)	8	-4	-22	-33

FIGURE 3. Regional and statewide time series (1979-2017) of pheasant population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).

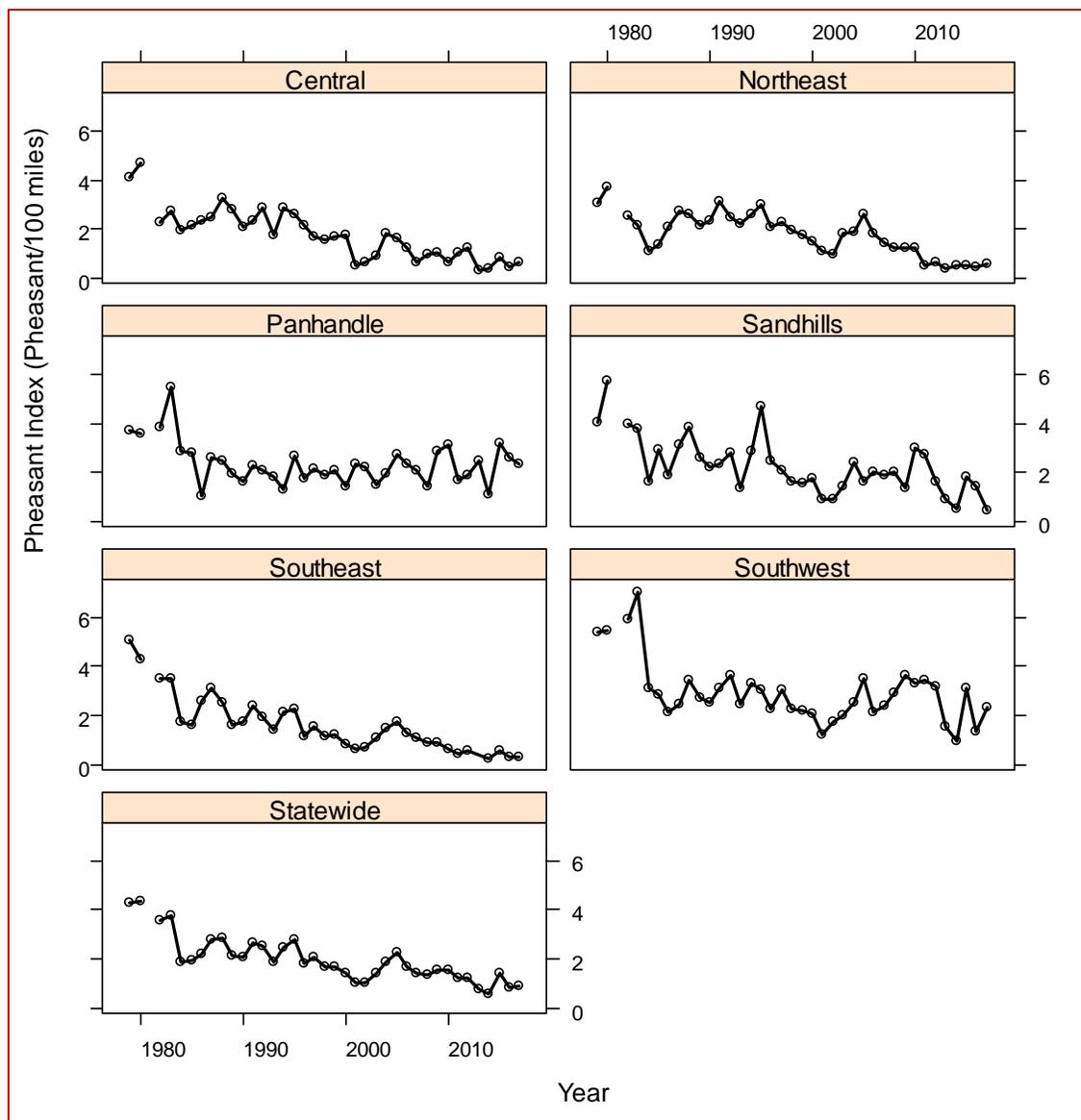


TABLE 4. Northern bobwhite indices from the 2017 April Rural Mail Carrier Survey by bobwhite management zone (Figure 2). Carrier means are weighted by miles traveled per carrier.

Zone	Mean Bobwhites per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2016	Mean 2012-2016	Mean 2007-2016	Mean 1997-2016
East Central	0.15 (0.06-0.25)	7	121	120	59
North Central	0.25 (0.03-0.48)	-57	-19	23	25
Northeast	0.05 (0.00-0.10)	-44	4	-15	-38
Republican	0.38 (0.06-0.69)	111	228	218	119
Southeast	0.15 (0.04-0.26)	-52	-26	-5	-13
West Platte	0.05 (0.00-0.09)	-17	-24	-23	-40
Not in Range	0.04 (0.00-0.09)	300	-49	-35	-10
Statewide	0.12 (0.08-0.16)	-29	9	28	4

FIGURE 4. Regional and statewide time series (1979-2017) of bobwhite population indices from the April Rural Mail Carrier Survey by bobwhite management zone (Figure 2).

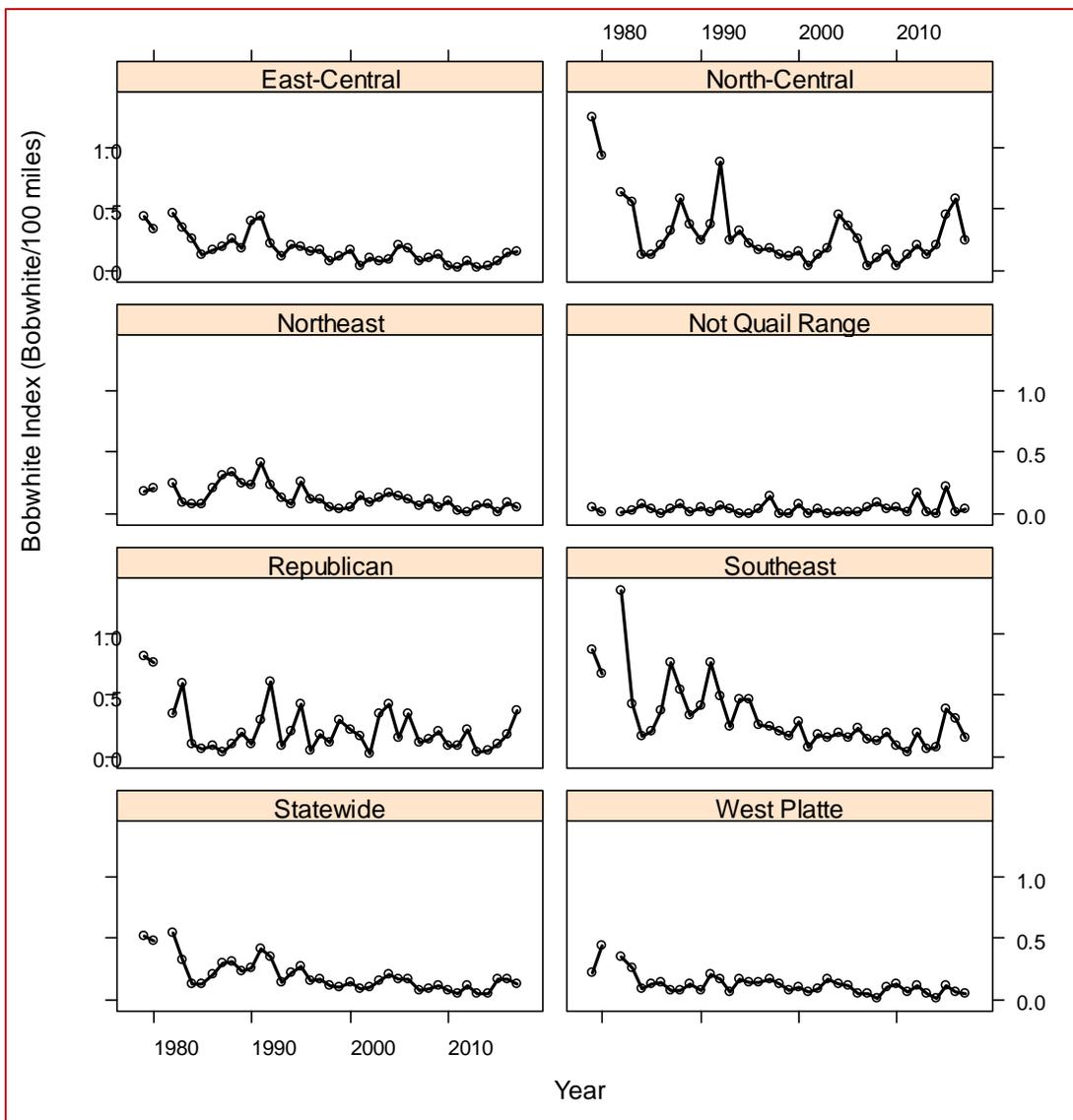


TABLE 5. Cottontail indices from the 2017 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Cottontails per 100 miles & 90% Confidence Limits	Percent Difference from:			
		Mean 2016	Mean 2012-2016	Mean 2007-2016	Mean 1997-2016
Central	0.60 (0.23-0.97)	33	23	7	-7
Northeast	0.43 (0.03-0.82)	10	-8	-28	-26
Panhandle	0.32 (0.20-0.44)	-24	-15	-14	-3
Sandhills	0.08 (0.01-0.15)	-85	-79	-76	-71
Southeast	0.55 (0.41-0.69)	34	44	17	-5
Southwest	0.58 (0.37-0.78)	21	-3	1	6
Statewide	0.58 (0.37-0.78)	7	1	-8	-13

FIGURE 5. Regional and statewide time series (1958-2017) of cottontail population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).

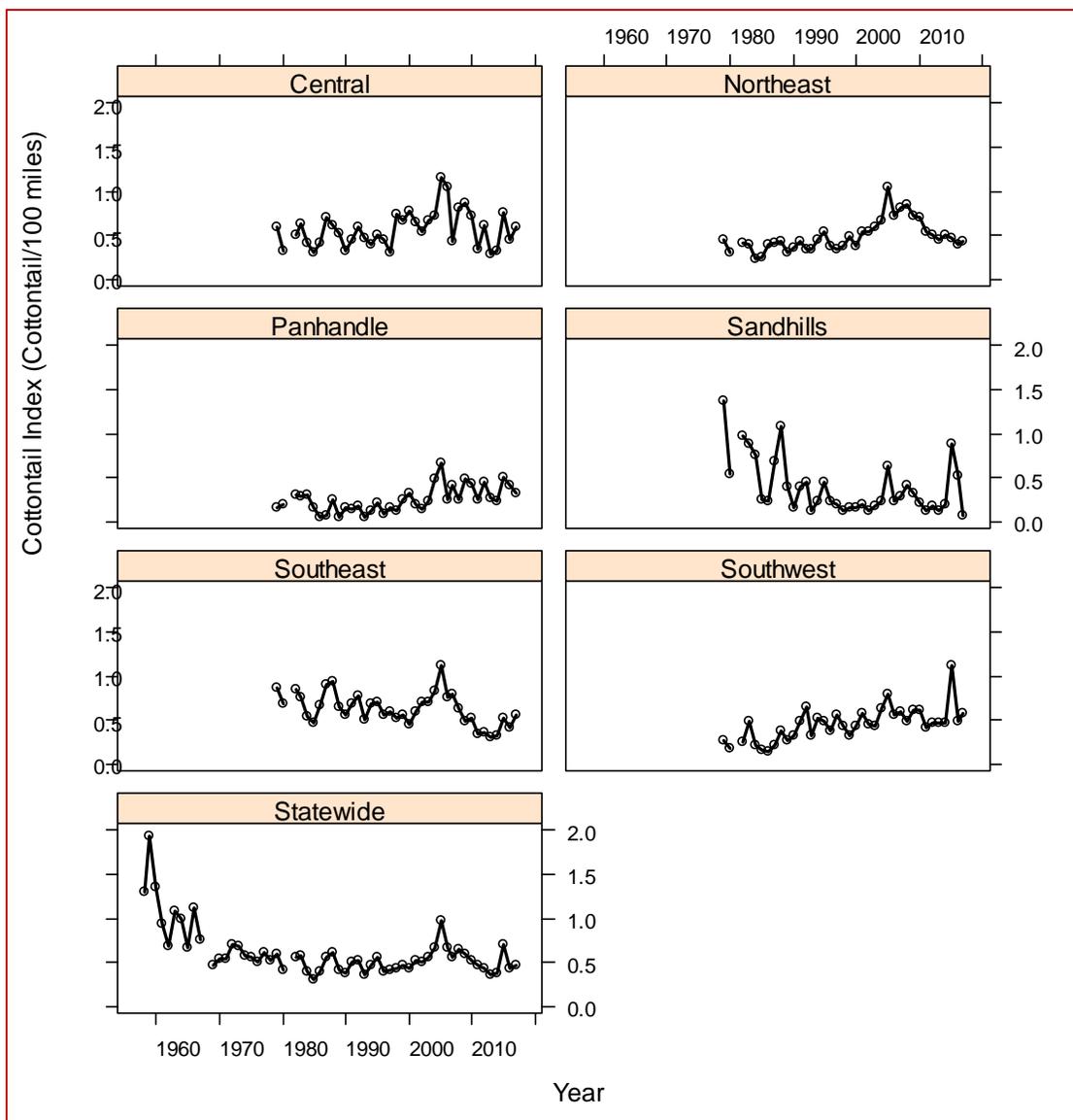


TABLE 6. Wild turkey indices from the 2017 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Wild Turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:		
		2016	Mean 2012-2016	Mean 2007-2016
Central	4.85 (3.24-6.47)	15	-34	-39
Northeast	3.42 (1.58-5.26)	19	15	16
Panhandle	2.47 (0.76-4.18)	50	50	37
Sandhills	4.96 (2.58-7.33)	-17	-43	-54
Southeast	2.55 (1.73-3.38)	55	-15	-23
Southwest	9.99 (6.18-13.8)	-8	-16	-19
Statewide	4.22 (3.40-5.04)	13	-18	-23

FIGURE 6. Regional and statewide time series (2000-2017) of wild turkey population indices from the 2017 April Rural Mail Carrier Survey by pheasant management region (Figure 1).

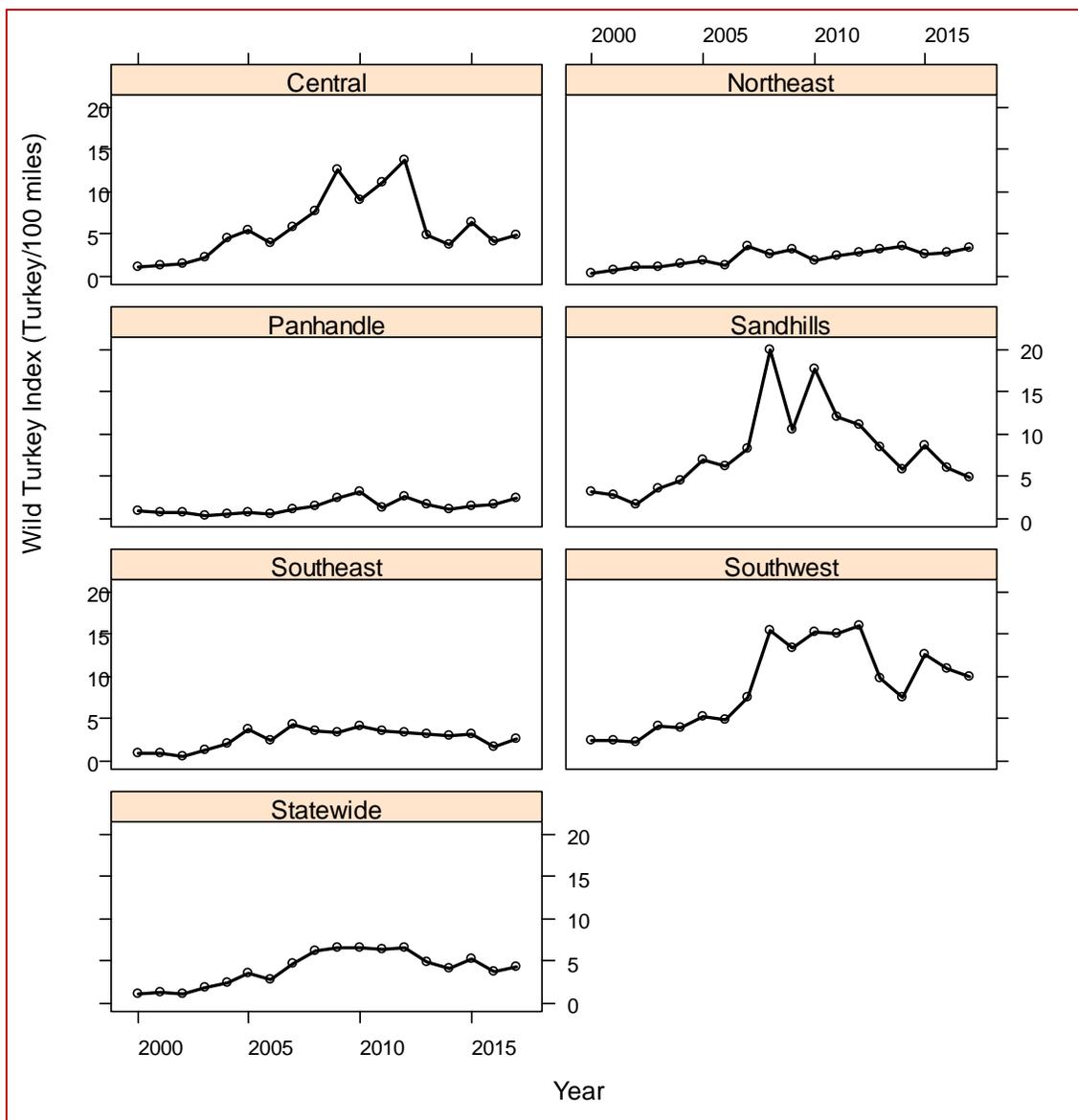


TABLE 7. Number of cards and percent of total cards ($n = 424$) that contained zero observations by species. Overall, 13.9% (cf. 13.6% in 2016, $n = 426$) of cards contained zero counts for all species (59 cards). Percentages by species from the 2016 survey are reported for comparison.

	Pheasant	Quail	Grouse	Wild Turkey	Cottontail	Jackrabbit
No of Cards	187	379	351	138	225	400
Percent (2017)	44	89	83	33	53	94
Percent (2016)	44	91	85	32	53	95