

Federal Aid in Wildlife Restoration Project No: W-15-R
Title of Job: 2018 April Rural Mail Carrier Survey



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The 2018 April Rural Mail Carrier Survey was conducted 2-5 April 2018. We received 444 cards by 29 April 2018, 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 179,503 miles on rural roads in 88 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. Generally, statewide indices were lower than in 2017 for all species except for bobwhites. Regional indices were mixed compared to 2017, but mostly down. Increases were noted for pheasants in the Sandhills, for bobwhite in the East Central and West Platte, for cottontails in the Panhandle, Sandhills, and Southwest, and wild turkeys in the Sandhills and Southwest regions. The only significant differences compared to 2017 were for quail, for which there was a significant decrease in the Northeast and a significant increase in the West Platte regions.

Take Home Message. Abundance of most species included in the survey was lower compared to 2017. However, declines were not generally significantly lower. Cold spring temperatures might have affected observations of wildlife during the survey period.

TABLE 1. Raw counts of pheasants, prairie grouse, wild turkey, cottontails, and jackrabbits from the 2018 April Rural Mail Carrier Survey by pheasant management region (Figure 1).

Region	Carriers	Miles	Pheasants	Grouse	Turkey	Cottontail	Jackrabbit
Central	64	27,503	78	119	1,157	117	6
Northeast	111	48,623	209	52	891	153	25
Panhandle	50	18,408	367	85	442	67	17
Sandhills	36	15,577	129	495	1,099	21	2
Southeast	109	46,343	141	27	955	182	0
Southwest	54	23,049	313	88	2,533	165	2
Statewide	424	179,503	1,237	866	7,077	705	52

FIGURE 1. Pheasant Management Regions.

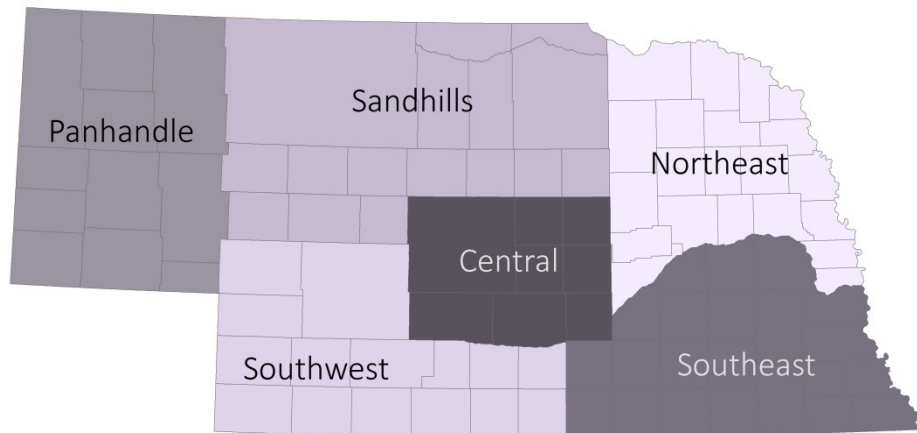
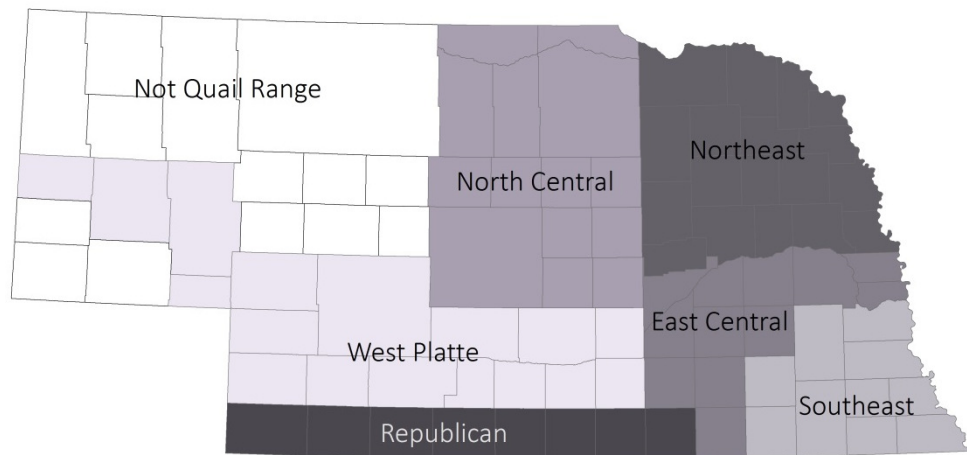


TABLE 2. Raw bobwhite counts from the 2018 April Rural Mail Carrier Survey by bobwhite management zones (Figure 2).

Zone	Carriers	Miles	Bobwhites
East Central	60	24,675	64
North Central	49	22,624	51
Northeast	101	45,952	1
Republican	28	14,775	33
Southeast	42	12,306	15
West Platte	103	17,381	99
Not Quail Range	41	41,790	0
Statewide	424	179,503	263

FIGURE 2. Bobwhite Management Zones.



Results. Statewide indices for bobwhites were higher, were down for pheasants, and Cottontails, and were similar for wild turkey compared to 2017 (Tables 3-6; Figures 3-6). Regional indices were also generally lower for these species. However, regional indices were higher for pheasants in the Sandhills region, for bobwhites in the East Central and West Platte regions, for cottontails in the Panhandle, Sandhills, and Southwest regions, and for wild turkey in the Sandhills and Southwest regions. In 2017, 83 of 424 cards contained no observations of any wildlife species, which is similar compared to the 59 of 424 cards that did not contain any wildlife observations in April 2017. Zero counts by species are provided in Table 7.

TABLE 3. Pheasant indices from the 2018 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:			
		2017	Mean 2013-2017	Mean 2008-2017	Mean 1998-2017
Central	0.28 (0.15-0.42)	-59	-50	-64	-73
Northeast	0.43 (0.31-0.55)	-31	-18	-43	-65
Panhandle	1.99 (1.13-2.86)	-15	-15	-13	-8
Sandhills	0.83 (0.54-1.11)	77	-20	-46	-47
Southeast	0.30 (0.17-0.44)	-17	-19	-44	-65
Southwest	1.36 (0.91-1.80)	-42	-28	-48	-43
Statewide	0.69 (0.56-0.82)	-27	-26	-41	-50

FIGURE 3. Regional and statewide time series (1979-2018) of pheasant population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).

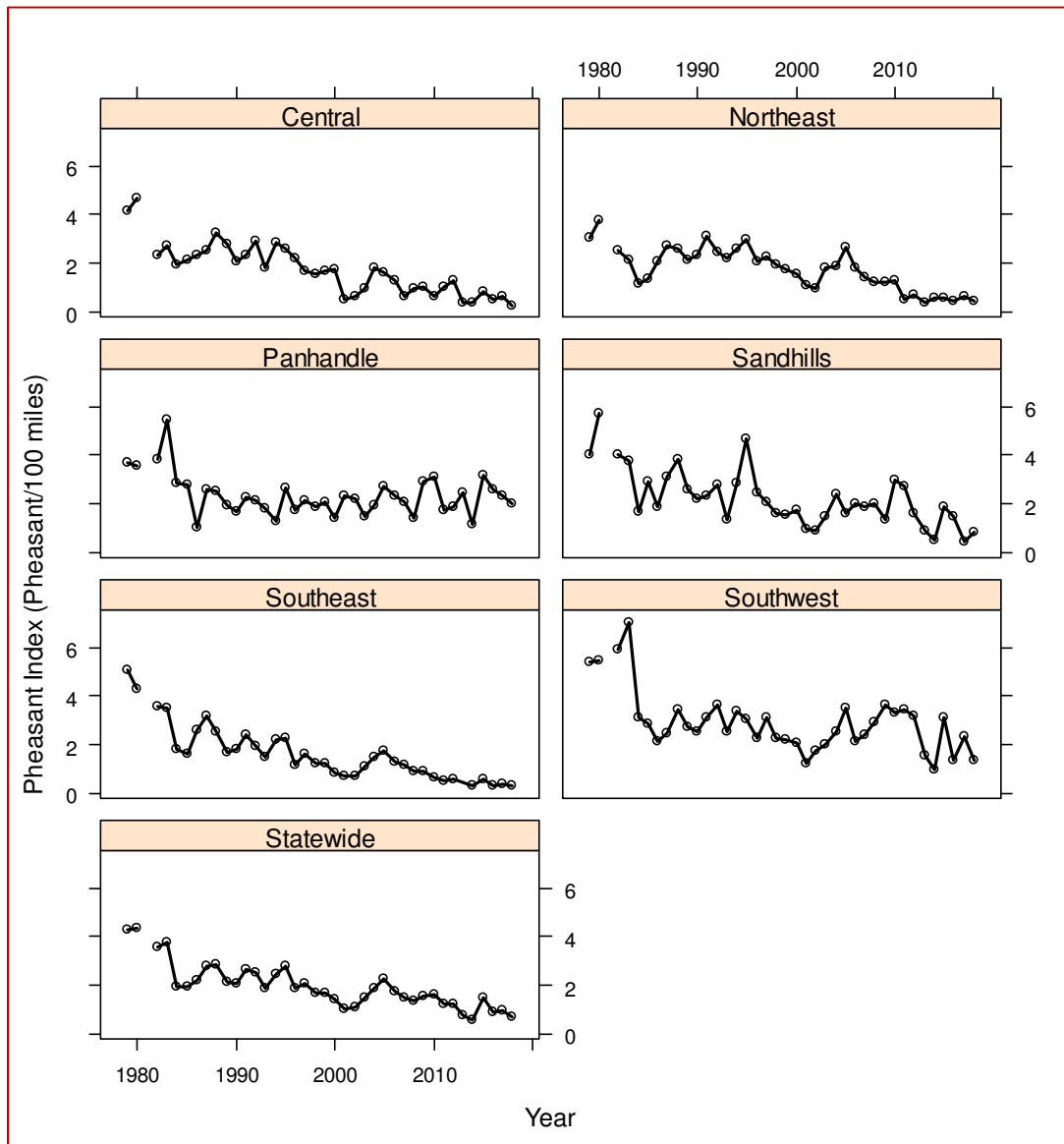


TABLE 4. Northern bobwhite indices from the 2018 April Rural Mail Carrier Survey by bobwhite management zone (Figure 2). Carrier means are weighted by miles traveled per carrier.

Zone	Mean Bobwhites per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2017	Mean 2013-2017	Mean 2008-2017	Mean 1998-2017
East Central	0.26 (0.10-0.42)	73	210	245	179
North Central	0.23 (0.00-0.48)	-8	-28	2	13
Northeast	0.00 (0.00-0.01)	-100	-100	-100	-100
Republican	0.27 (0.09-0.44)	-29	82	84	47
Southeast	0.09 (0.01-0.17)	-40	-54	-43	-46
West Platte	0.24 (0.07-0.40)	380	344	267	207
Not in Range	0.00 (0.00-0.00)	-100	-100	-100	-100
Statewide	0.15 (0.09-0.21)	25	34	53	32

FIGURE 4. Regional and statewide time series (1979-2018) of bobwhite population indices from the April Rural Mail Carrier Survey by bobwhite management zone (Figure 2).

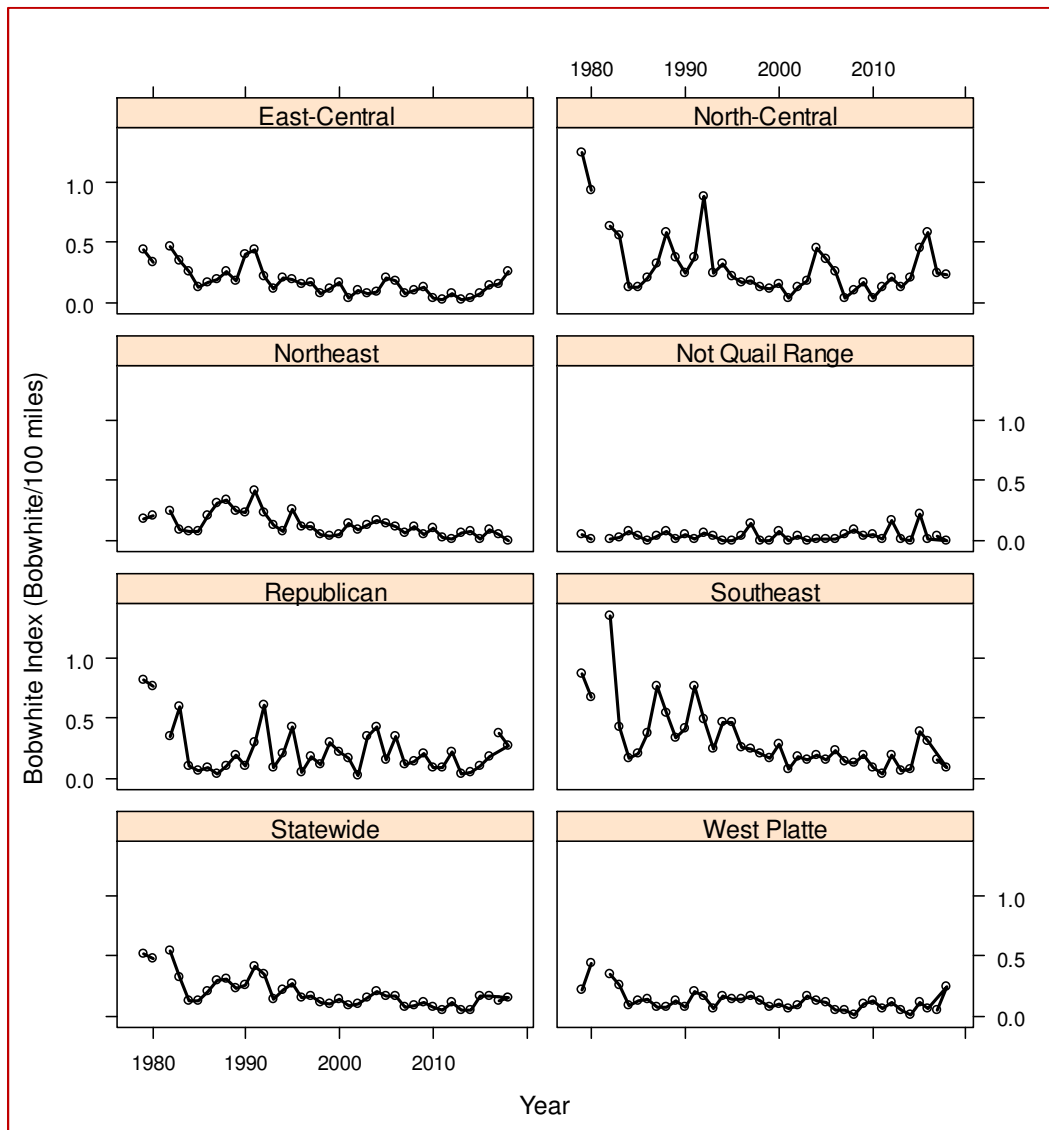


TABLE 5. Cottontail indices from the 2018 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Cottontails per 100 miles & 90% Confidence Limits	Percent Difference from:			
		Mean 2017	Mean 2013-2017	Mean 2008-2017	Mean 1998-2017
Central	0.43 (0.14-0.71)	-28	-11	-26	-35
Northeast	0.31 (0.20-0.43)	-28	-31	-44	-47
Panhandle	0.36 (0.15-0.57)	12	2	-1	7
Sandhills	0.13 (0.01-0.26)	62	-64	-58	-52
Southeast	0.39 (0.28-0.50)	-29	-7	-12	-32
Southwest	0.72 (0.43-1.00)	24	16	26	31
Statewide	0.39 (0.32-0.46)	-17	-17	-22	-28

FIGURE 5. Regional and statewide time series (1958-2018) of cottontail population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).

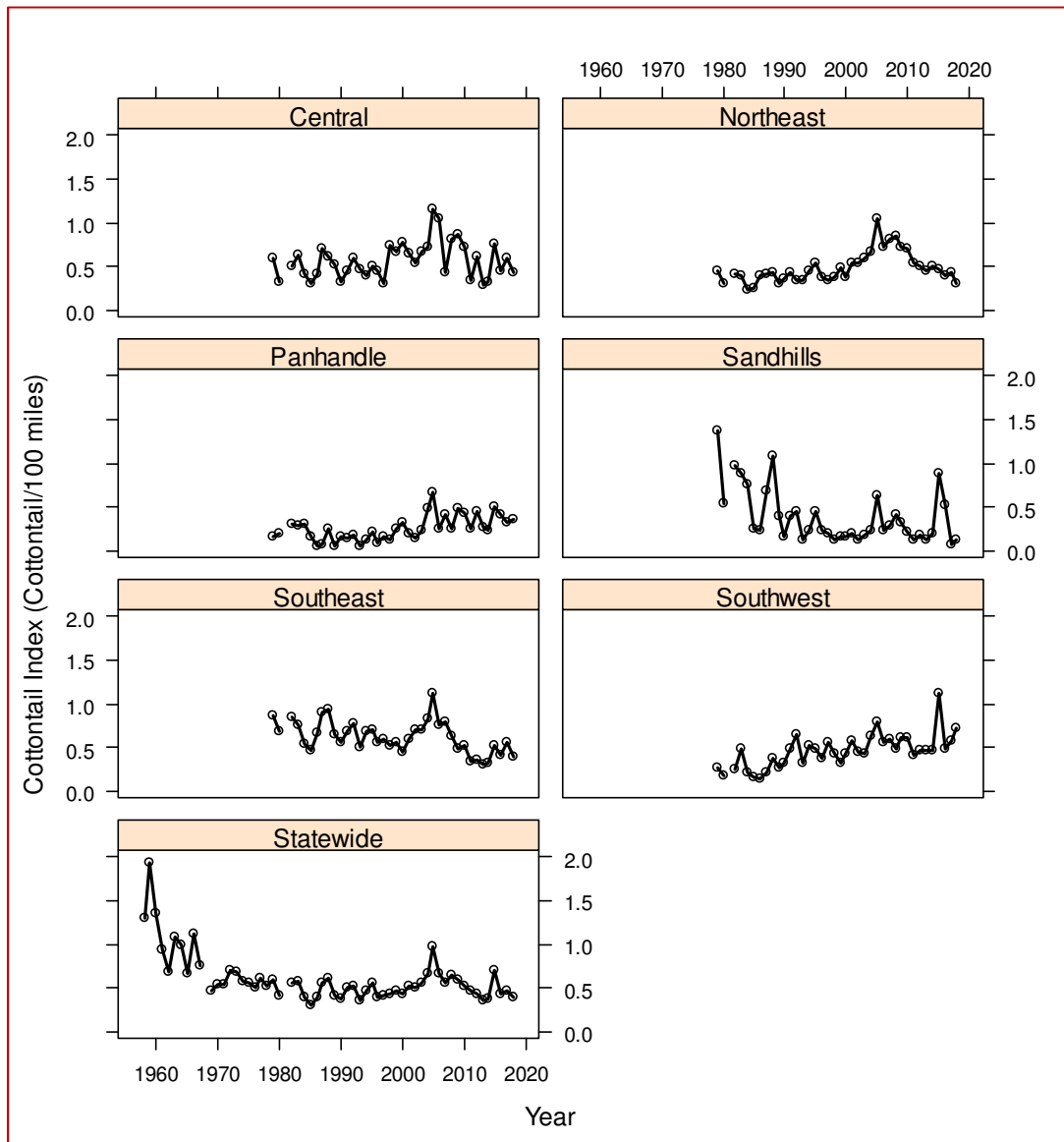


TABLE 6. Wild turkey indices from the 2018 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Wild Turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:		
		2017	Mean 2013-2017	Mean 2008-2017
Central	4.21 (2.20-6.22)	-13	-33	-46
Northeast	1.83 (1.22-2.45)	-46	-41	-37
Panhandle	2.40 (0.66-4.14)	-3	31	24
Sandhills	7.06 (3.97-10.1)	42	-6	-33
Southeast	2.06 (1.43-2.69)	-19	-27	-35
Southwest	11.0 (4.85-17.1)	10	-1	-13
Statewide	3.94 (3.00-4.88)	-7	-18	-28

FIGURE 6. Regional and statewide time series (2000-2018) of wild turkey population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).

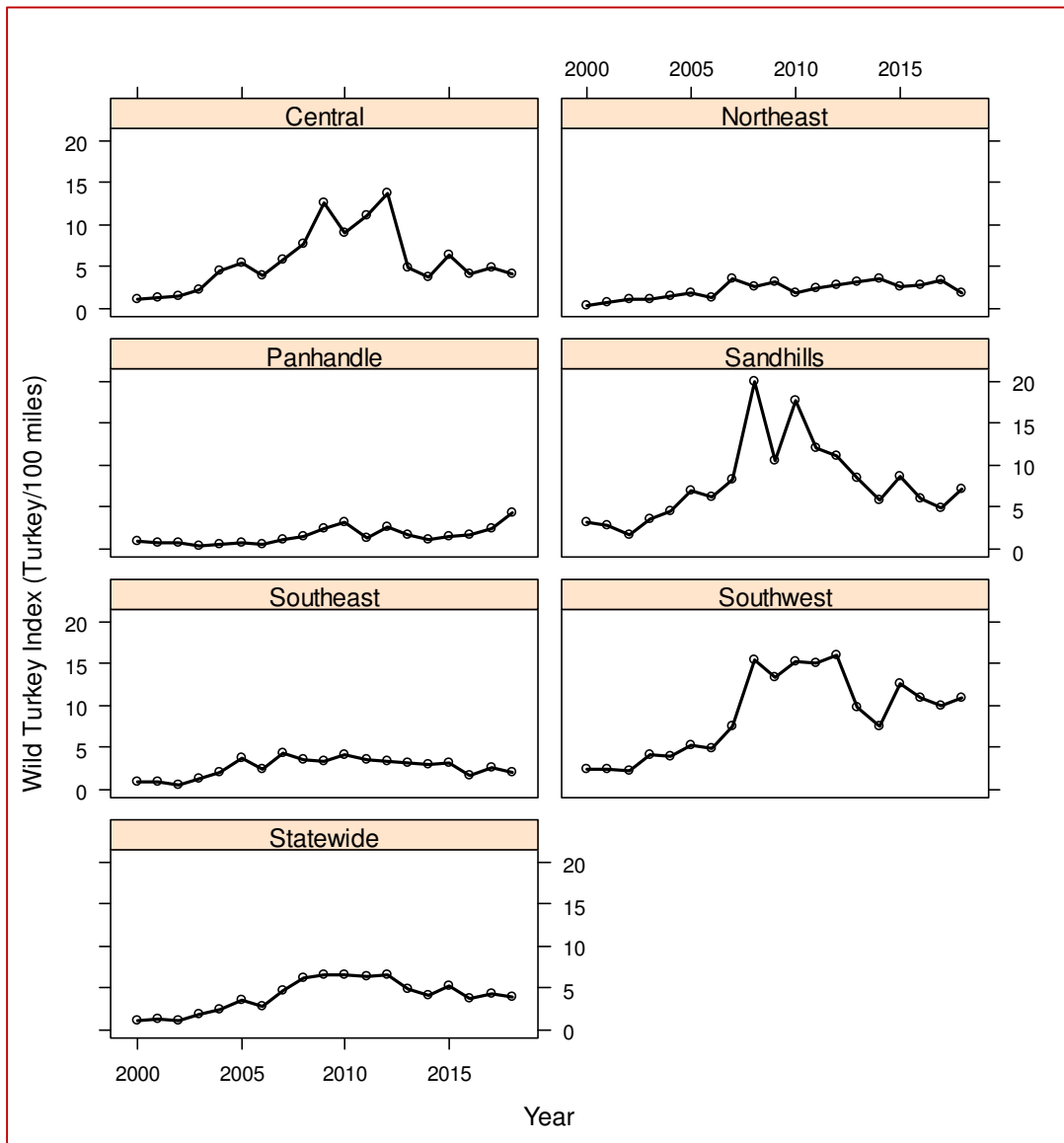


TABLE 7. Number of cards and percent of total cards ($n = 424$) that contained zero observations by species. Overall, 19.6% (cf. 13.9% in 2016, $n = 424$) of cards contained zero counts for all species (83 cards). Percentages by species from the 2017 survey are reported for comparison.

	Pheasant	Quail	Grouse	Wild Turkey	Cottontail	Jackrabbit
No of Cards	228	391	356	177	245	403
Percent (2018)	54	92	84	42	58	95
Percent (2017)	44	89	83	33	53	94