

Federal Aid in Wildlife Restoration Project №: W-15-R-79

Title of Job: 2023 April Rural Mail Carrier Survey



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The 2023 April Rural Mail Carrier Survey was conducted 3-6 April 2023. We received 368 cards by 30 April 2023, of which 343 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 147,084 miles of rural roads in 83 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 rather only for trends in relative abundance through time. At a statewide scale, these indices are correlated with harvest and are, therefore, useful for forecasting.

Interpretations. Statewide indices for all species except cottontails were similar to the 2022 survey. Regionally, indices were somewhat higher for all species compared to 2022. In the Central region, indices were higher for pheasants, cottontails, and turkey. In the Northeast and Southeast regions, indices were higher for pheasants and cottontails, but were similar to 2022 for turkey. In the Panhandle region, indices were higher for cottontails and turkey, but were similar to 2022 for pheasants. In the Sandhills region, indices were lower for pheasants and turkey, but were higher for cottontails. In the Southwest region, indices were similar to 2022 for pheasants and cottontails, and were lower for turkey. Bobwhite indices were higher in the Northeast, Southeast, and West Platte regions, but lower in the East Central, North Central, and Republican regions.

Take Home Message. The results of this survey seem to indicate that game abundance should be in a good position going into the breeding season, but much will depend on the weather conditions during the breeding season and summer. Results from summer surveys, such as the bobwhite whistle counts and July RMCS will provide some insight into how the breeding season is going.

TABLE 1. Raw counts of pheasants, prairie grouse, wild turkey, cottontails, and jackrabbits from the 2023 April Rural Mail Carrier Survey by pheasant management region (Fig. 1).

Region	Carriers	Miles	Pheasants	Grouse	Turkey	Cottontail	Jackrabbit
Central	45	19,094	81	79	806	82	4
Northeast	80	35,843	176	15	788	160	8
Panhandle	39	13,447	129	13	461	57	16
Sandhills	39	18,980	36	272	665	39	1
Southeast	98	41,741	82	23	625	154	0
Southwest	42	17,979	149	48	711	56	1
Statewide	343	147,084	653	450	4,056	548	30

FIGURE 1. Pheasant Management Regions.

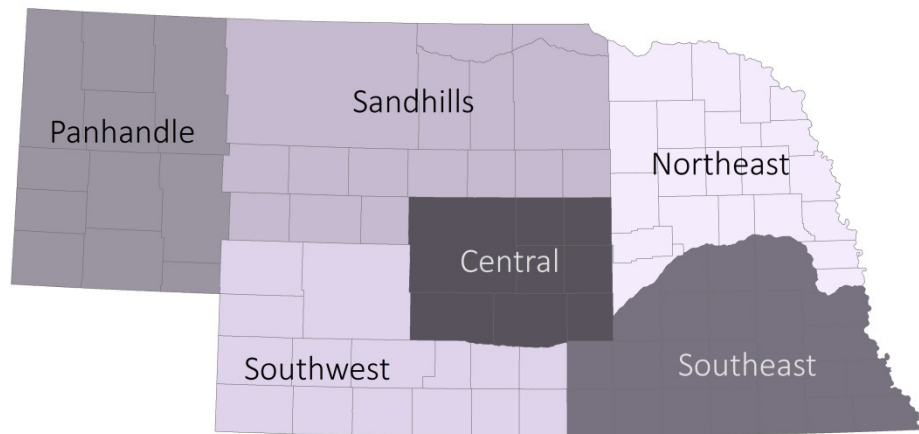
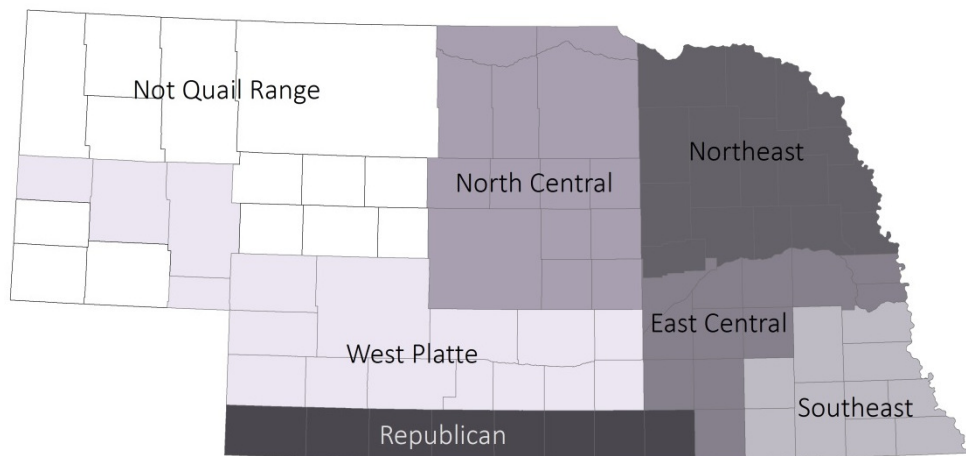


TABLE 2. Raw bobwhite counts from the 2023 April Rural Mail Carrier Survey by bobwhite management zones (Fig. 2).

Zone	Carriers	Miles	Bobwhites
East Central	53	21,574	16
North Central	49	25,405	59
Northeast	72	33,206	47
Republican	27	12,749	4
Southeast	38	16,198	6
West Platte	66	24,718	16
Not Quail Range	38	13,234	0
Statewide	305	133,850	148

FIGURE 2. Bobwhite Management Zones.



Results. Statewide indices were lower for all species (Tables 3-6, Figs. 3-6). Regional indices were generally mixed for all species compared to 2022. A total of 81 rural carrier cards were returned with no observations on them (23.6%) which is higher than in 2022. Table 7 shows how many cards contained zero observations by species.

TABLE 3. Pheasant indices from the 2023 April Rural Mail Carrier Survey by pheasant management region (Fig. 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Pheasants per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2022	Mean 2018-2022	Mean 2013-2022	Mean 2003-2022
Central	0.42 (0.13-0.72)	200	46	-1	-46
Northeast	0.49 (0.26-0.72)	40	9	1	-50
Panhandle	0.96 (0.42-1.50)	-9	-45	-53	-54
Sandhills	0.19 (0.08-0.29)	-61	-82	-82	-87
Southeast	0.20 (0.12-0.27)	67	-17	-35	-70
Southwest	0.83 (0.37-1.29)	-8	-47	-52	-64
Statewide	0.44 (0.33-0.55)	7	-37	-46	-63

FIGURE 3. Regional and statewide time series (1979–2023) of pheasant population indices from the April Rural Mail Carrier Survey by pheasant management region (Fig. 1).

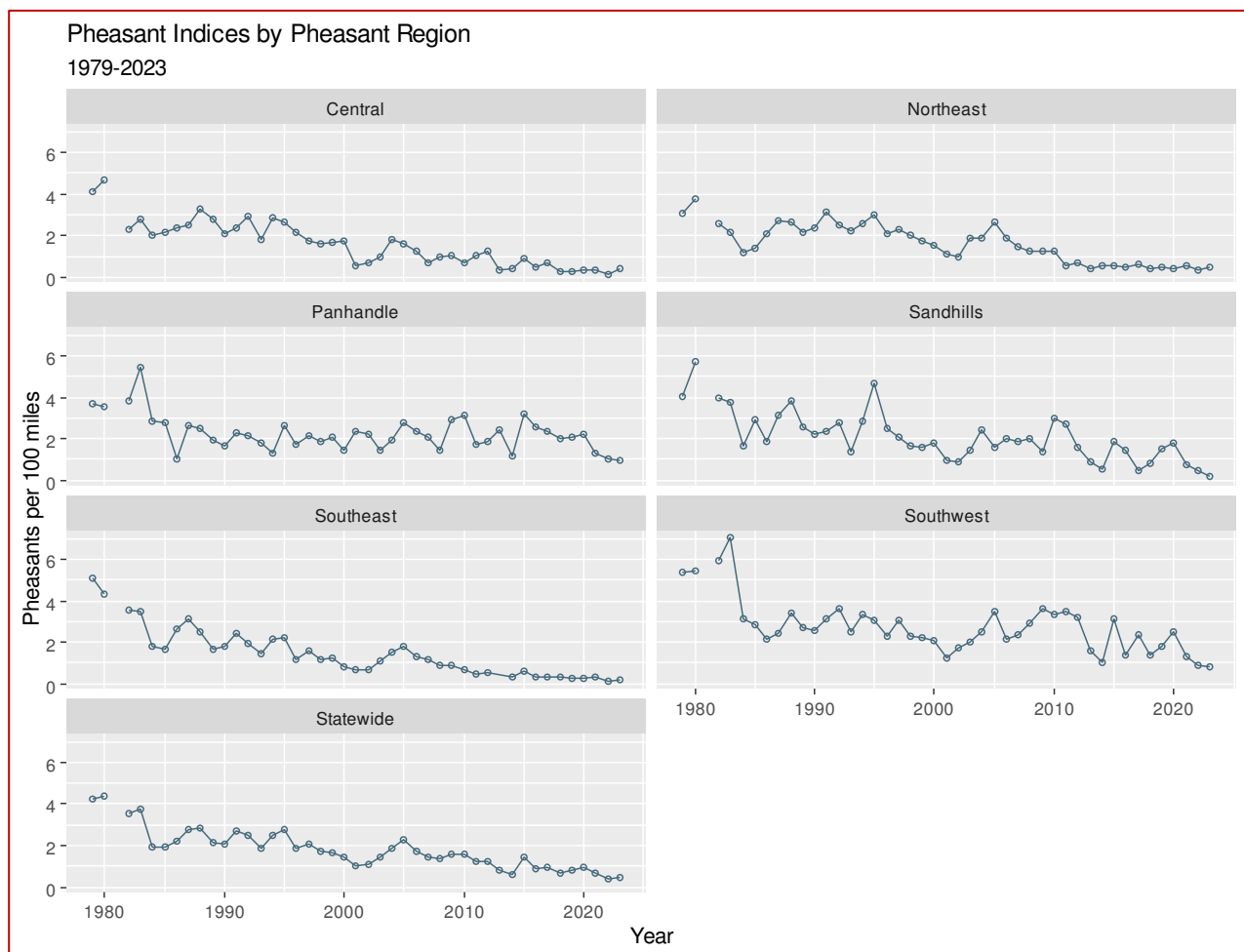


TABLE 4. Northern bobwhite indices from the 2023 April Rural Mail Carrier Survey by bobwhite management zone (Fig. 2). Carrier means are weighted by miles traveled per carrier.

Zone	Mean Bobwhites per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2022	Mean 2018-2022	Mean 2013-2022	Mean 2003-2022
East Central	0.07 (0.00-0.18)	-56	-62	-47	-38
North Central	0.23 (0.00-0.58)	-45	1	-16	-1
Northeast	0.14 (0.03-0.26)	367	400	233	114
Republican	0.03 (0.00-0.09)	-73	-86	-83	-85
Southeast	0.04 (0.01-0.07)	33	-58	-73	-73
West Platte	0.06 (0.01-0.12)	500	-19	-6	-20
Not in Range	0.00 (NA)	NA	NA	NA	NA
Statewide	0.10 (0.04-0.16)	0	-9	-10	-13

FIGURE 4. Regional and statewide time series (1979–2023) of bobwhite population indices from the April Rural Mail Carrier Survey by bobwhite management zone (Fig. 2).

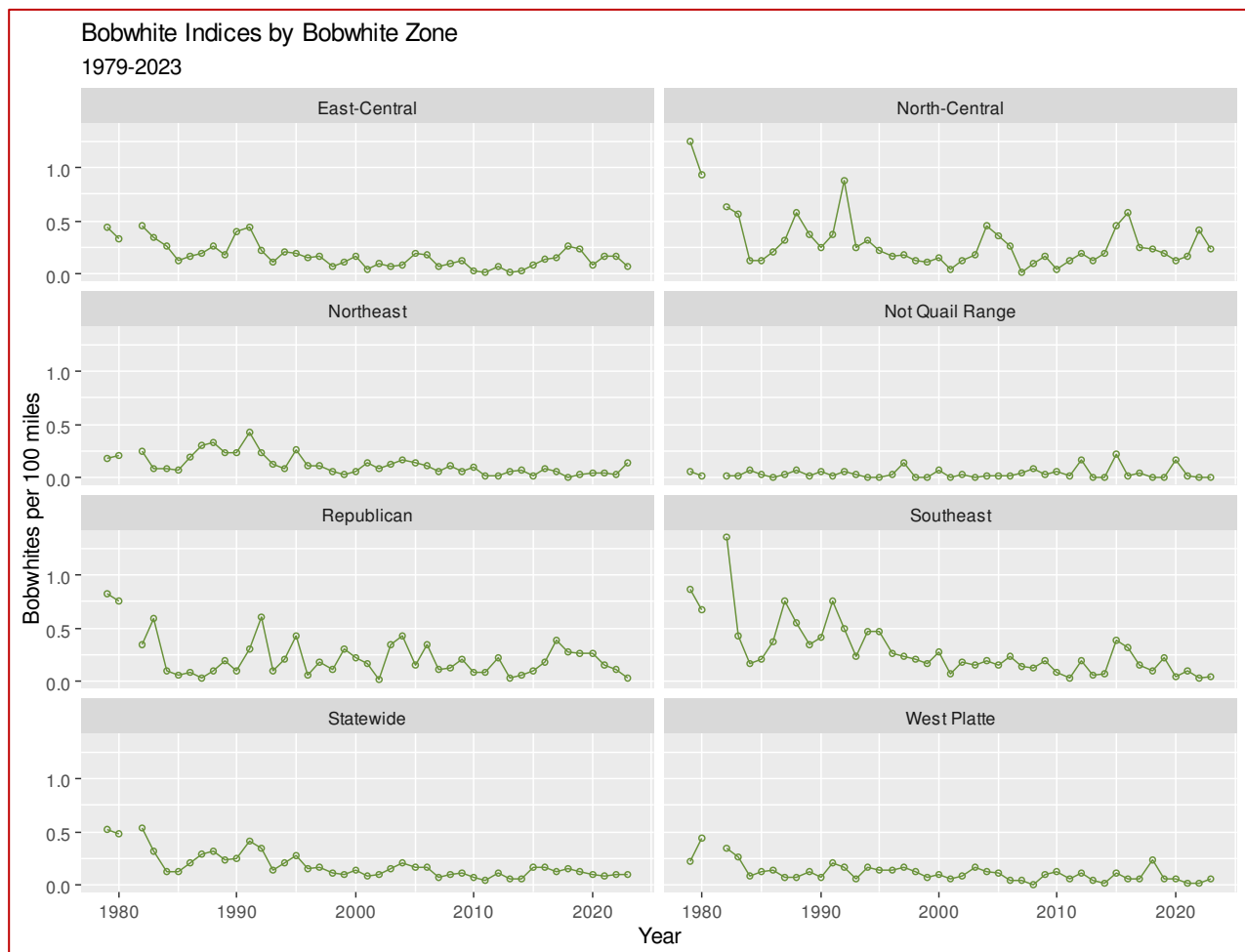


TABLE 5. Cottontail indices from the 2023 April Rural Mail Carrier Survey by pheasant management region (Fig. 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Cottontails per 100 miles & 90% Confidence Limits	Percent Difference from:			
		Mean 2022	Mean 2018-2022	Mean 2013-2022	Mean 2003-2022
Central	0.43 (0.00-1.02)	65	8	-2	-27
Northeast	0.45 (0.22-0.68)	25	30	13	-19
Panhandle	0.42 (0.23-0.62)	223	33	26	16
Sandhills	0.21 (0.00-0.41)	250	72	-13	-2
Southeast	0.37 (0.19-0.55)	6	-8	-10	-31
Southwest	0.31 (0.17-0.46)	-34	-46	-48	-47
Statewide	0.37 (0.26-0.48)	19	-2	-13	-29

FIGURE 5. Regional and statewide time series (1958–2023) of cottontail population indices from the April Rural Mail Carrier Survey by pheasant management region (Fig.1).

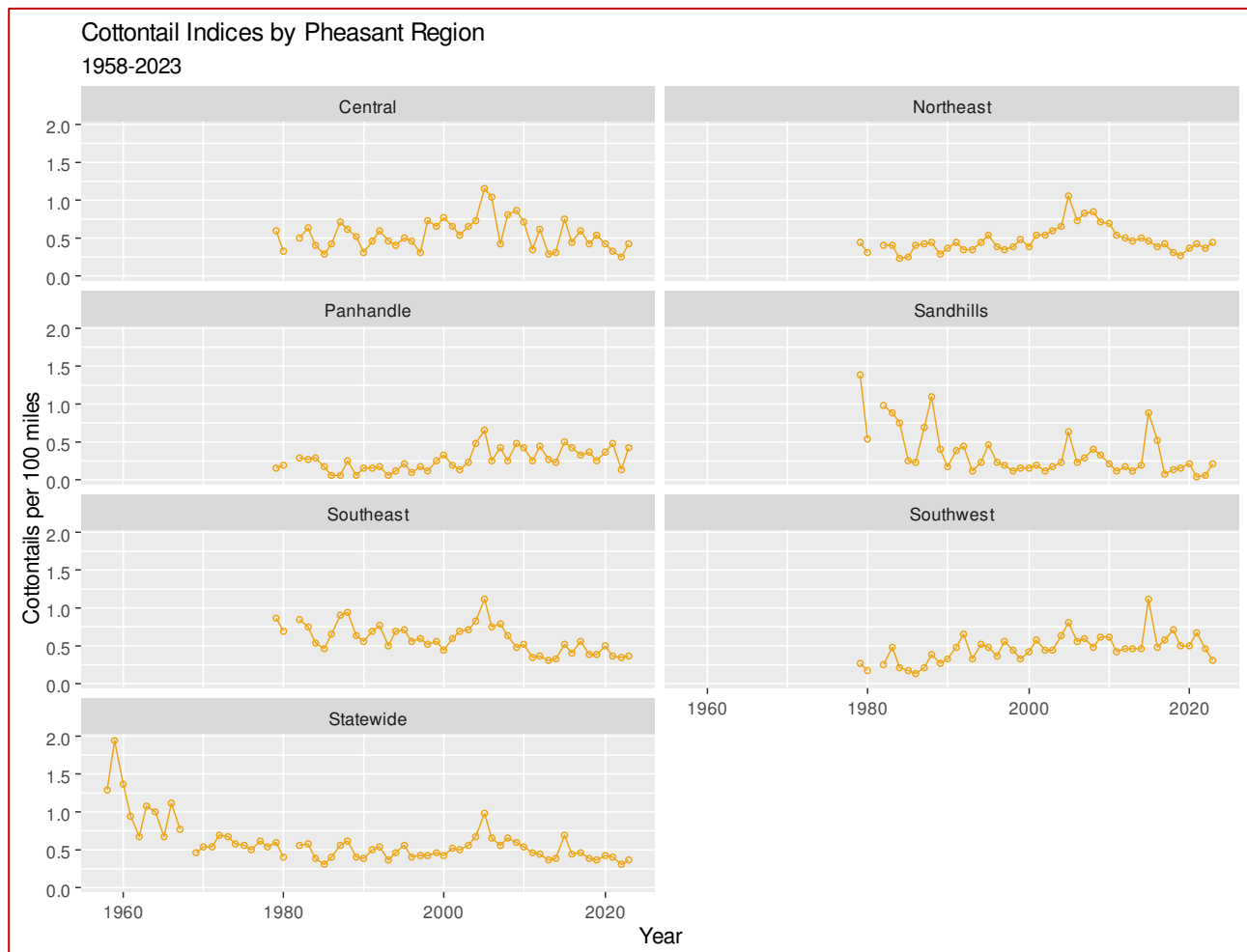


TABLE 6. Wild turkey indices from the 2023 April Rural Mail Carrier Survey by pheasant management region (Fig. 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Wild Turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2022	Mean 2018-2022	Mean 2013-2022	Mean 2003-2022
Central	4.22 (2.55-5.90)	49	9	0	-29
Northeast	2.20 (1.50-2.90)	2	-8	-18	-11
Panhandle	3.43 (1.22-5.64)	137	53	77	103
Sandhills	3.50 (1.83-5.18)	-28	-41	-46	-58
Southeast	1.50 (1.05-1.94)	-4	-33	-39	-47
Southwest	3.95 (2.51-5.39)	-33	-55	-57	-59
Statewide	2.76 (2.30-3.22)	-1	-25	-31	-37

FIGURE 6. Regional and statewide time series (2000–2023) of wild turkey population indices from the April Rural Mail Carrier Survey by pheasant management region (Fig. 1).

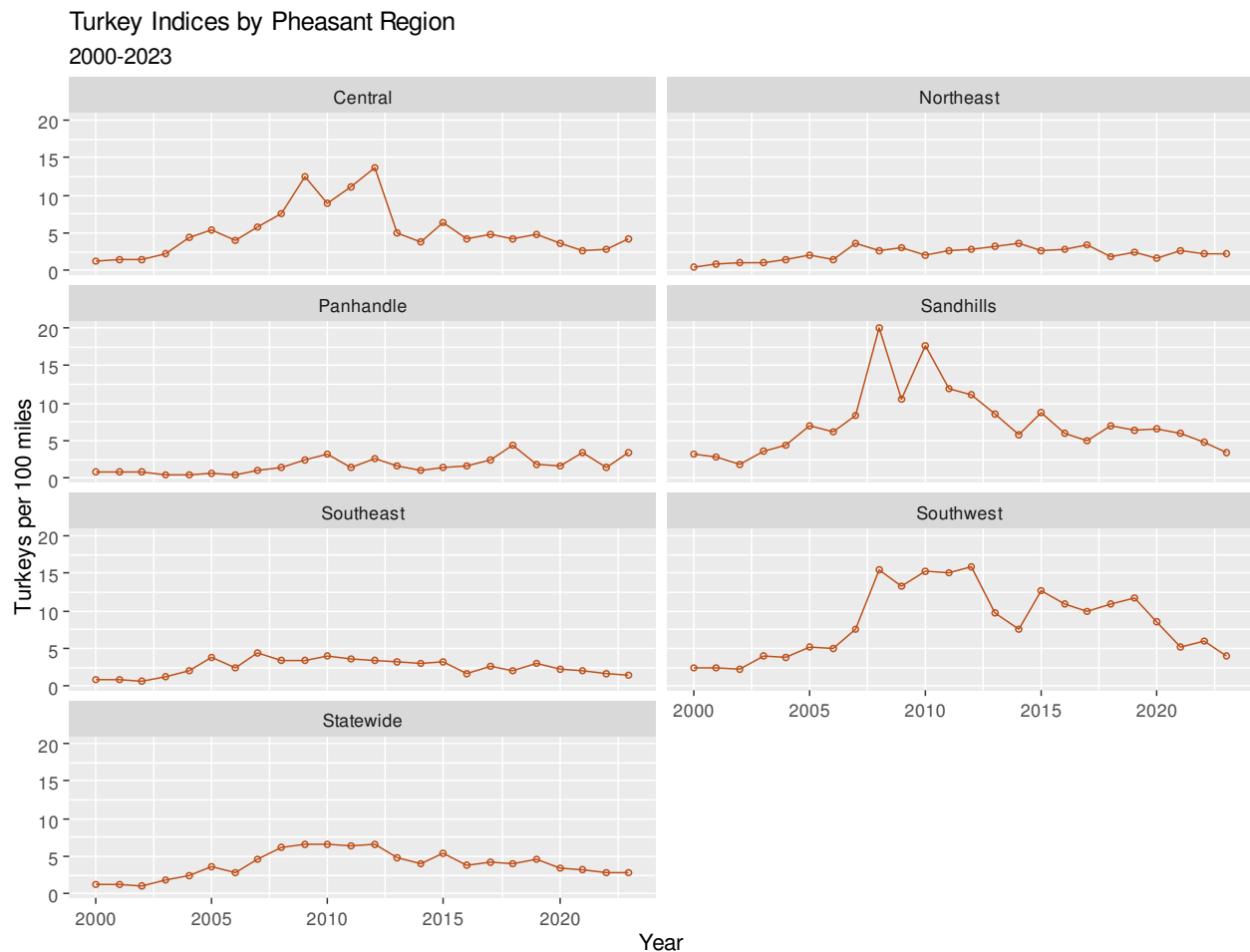


TABLE 7. Number of cards and percent of total cards ($n = 343$) that contained zero observations by species. Overall, 23.6% (cf. 23.3% in 2022, $n = 356$) of cards contained zero counts for all species (81 cards). Percentages by species from the 2022 survey are reported for comparison.

	Pheasant	Quail	Grouse	Wild Turkey	Cottontail	Jackrabbit
Nº of Cards	195	321	300	154	213	327
Percent (2023)	57	94	87	45	62	95
Percent (2022)	58	94	86	44	65	97

For further information regarding these results, please contact Bryan O'Connor at bryan.oconnor@nebraska.gov