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1956- Rural Mail Carrier Survey

Dan Heyl

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II.B

Heyl, Dan H.
1956 - Rural mail carrier survey--summer 1955.
NEBRASKA Gas Com Invest Proj 15-R Job Completion
Report No. 24-55. 8page mimeo.
February 9 1956.

Pre-hunting season population trends (quail and
grouse), page 6.

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JOB COMPLETION REPORT
INVESTIGATIONS PROJECTS

State of Nebraska

Project No. W-15-R Job No. 24 - 55

Title of Job Rural Mail Carrier Survey - Summer, 1955

- Objectives:
1. To evaluate pheasant hatching success.
 2. To obtain extensive data pertaining to pre-hunting season population trends.

Techniques Used: During the third week in August, post-card questionnaires were sent to all rural mail carriers. Each cooperating carrier was asked to report his route mileage and record the numbers of game birds he saw along his route each day for four days. Carriers were asked to report on the following species: pheasant (noting sex), quail, prairie chicken, sharp-tailed grouse, hungarian partridge and chukar partridge.

Findings: Four-day records were received from 526 carriers representing all of the 93 counties of the state, except Arthur, Blaine, Loup, and Thomas. Most observations were made during the last one and one-half weeks of August with a few taken in early September.

Pheasant Hatching Success -- The 1955 statewide reproductive success, as indicated by the number of young observed per adult hen, was shown to be below that of the three preceding years (Table I). However, the survey this year was conducted about three weeks later than usual; hence, it did not coincide with the time when the greatest number of young can be observed (about August first). This, it is believed, was at least partly responsible for the lower index. Undoubtedly, the mail carrier had greater difficulty in distinguishing the larger young from adults, especially when many young had separated from the broods. Pheasant brood observations by conservation officers, discussed in P-R job completion report 24-54 "Pheasant Brood Studies - 1955", revealed findings similar to the good reproductive success of 1954.

Table II and Figure 1 show the number of young per hen by districts. District I (Panhandle) appears to have the lowest number of young per hen and District III (Northeast) the highest. A similar contrast was noted in game technicians' brood data described in completion report No. 24-54.

Pre-hunting Season Population Trends (Pheasants) -- For the third consecutive summer, mail carriers' data indicated a lower pre-season population than the preceding year (Table 1 and Figure 2). The 1955 index suggested 13 percent fewer pheasants than in 1954, while the total drop in pheasant population since 1952 appears to have been about 63 percent. Completion reports for Job No. 21-54 (Rural Mail Carrier Survey - Spring, 1955), and Job No. 24-54 (Pheasant Brood Studies - 1955) reported a similar decrease in population.

TABLE I. RURAL MAIL CARRIER GAME SURVEYS - SUMMER 1952, 1953, 1954, 1955

	1952	1953	1954	1955
Total carriers reporting	631	647	659	526
Total miles driven	128237	133087	136472	111718
Total Pheasants	23852	14740	10626	7593
Cocks	4041	2618	1720	1460
Hens	4260	3050	2037	1740
Unclassified	1028	1064	883	978
Young	14523	8008	5986	3415
Young per adult hen	3.4	2.62	2.94	1.96
Cocks per 100 hens	95	86	85	84
Pheasants per 100 miles	18.6	11.0	7.8	6.8
Quail seen	1690	1259	1135	1155
Quail seen per 100 miles	1.3	.94	.83	1.0
Prairie chickens seen	272	299	394	394
Prairie chickens per 100 miles	.21	.22	.29	.35
Sharp-tailed grouse seen	874	380	518	488
Sharp-tailed grouse per 100 miles	.68	.28	.38	.44
Hungarian Partridges seen	68	1	2	0
Chukar Partridges seen	0	5	1	0
Deer seen	0	0	3	5

TABLE II. RURAL MAIL CARRIERS' GAME SURVEY -- SUMMER, 1955
Summary of Data By Districts

	Dist. I (Pan- handle)	Dist. II (North Central)	Dist. III (North- east)	Dist. IV (South Central)	Dist. V (South- east)	Total
Total carriers reporting	57	57	104	114	194	526
Total miles driven	13778	13399	21393	24716	38432	111718
Total pheasants	1304	916	960	2303	2110	7593
Cocks	239	208	156	387	470	1260
Hens	375	171	129	466	499	1740
Unclassified	139	195	222	299	123	978
Young	551	342	453	1151	918	3415
Young per adult hen	1.5	2.0	3.5	2.5	1.5	2.0
Cocks per 100 hens	64	122	121	83	78	84
Pheasants per 100 miles	9.5	6.8	4.5	9.3	5.5	6.8
Quail seen	0	66	285	279	525	1155
Quail per 100 miles	0	.49	1.33	1.13	1.37	1.03
Prairie chickens seen	12	364	13	4	1	394
Prairie chickens per 100 mi.	.09	2.71	.06	.02	0	.35
Sharp-tailed grouse seen	137	339	10	1	1	488
Sharp-tailed grouse per 100 mi.	.99	2.53	.05	0	0	.44
Deer seen	0	0	1	4	0	5

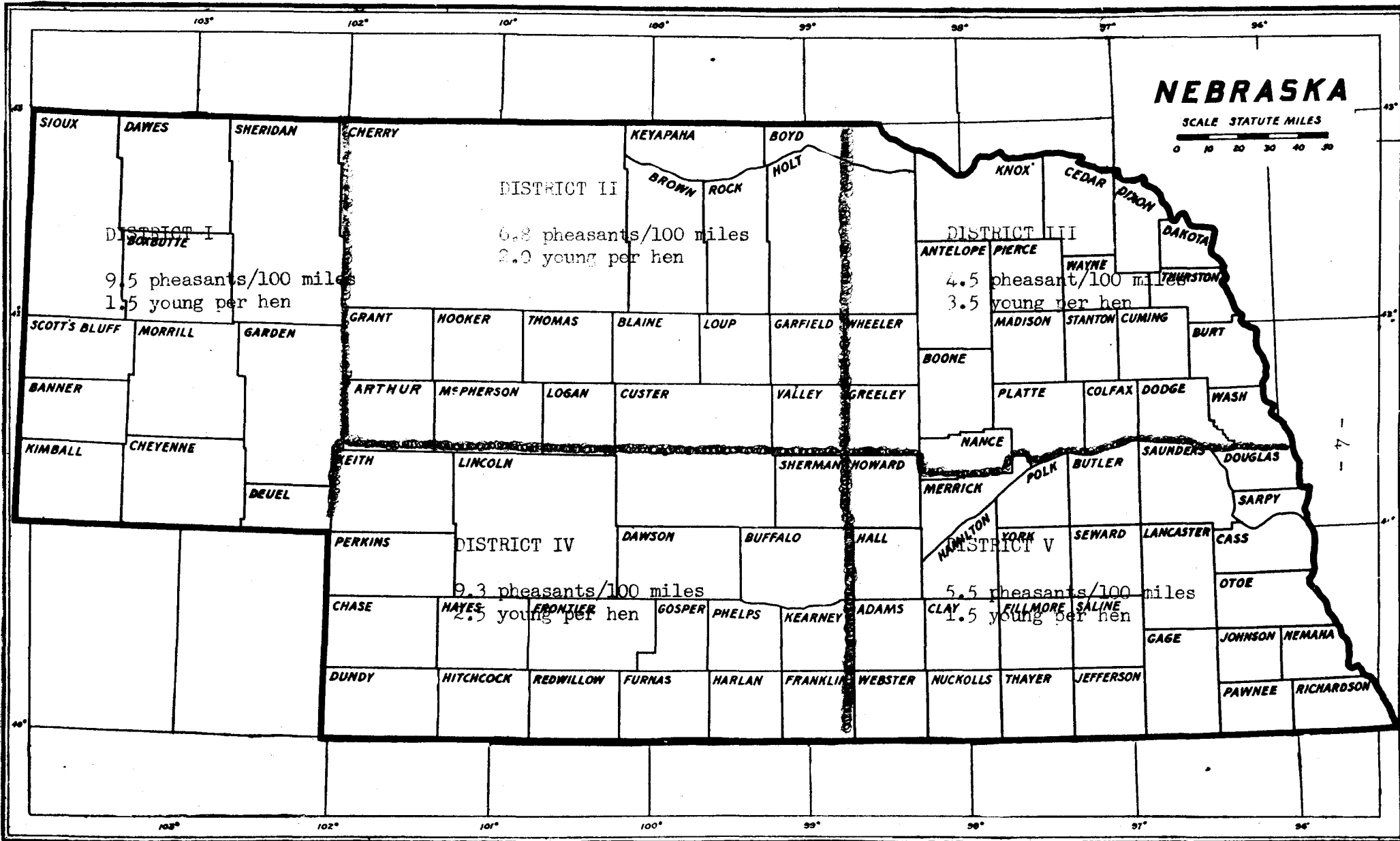


FIGURE 1. PHEASANT DENSITY DISTRIBUTION AND YOUNG PER HEN RATIO
State Average. Density Distribution - 6.8 pheasants per 100 miles
State Average. Young per Hen Ratio - 2.0 young per hen

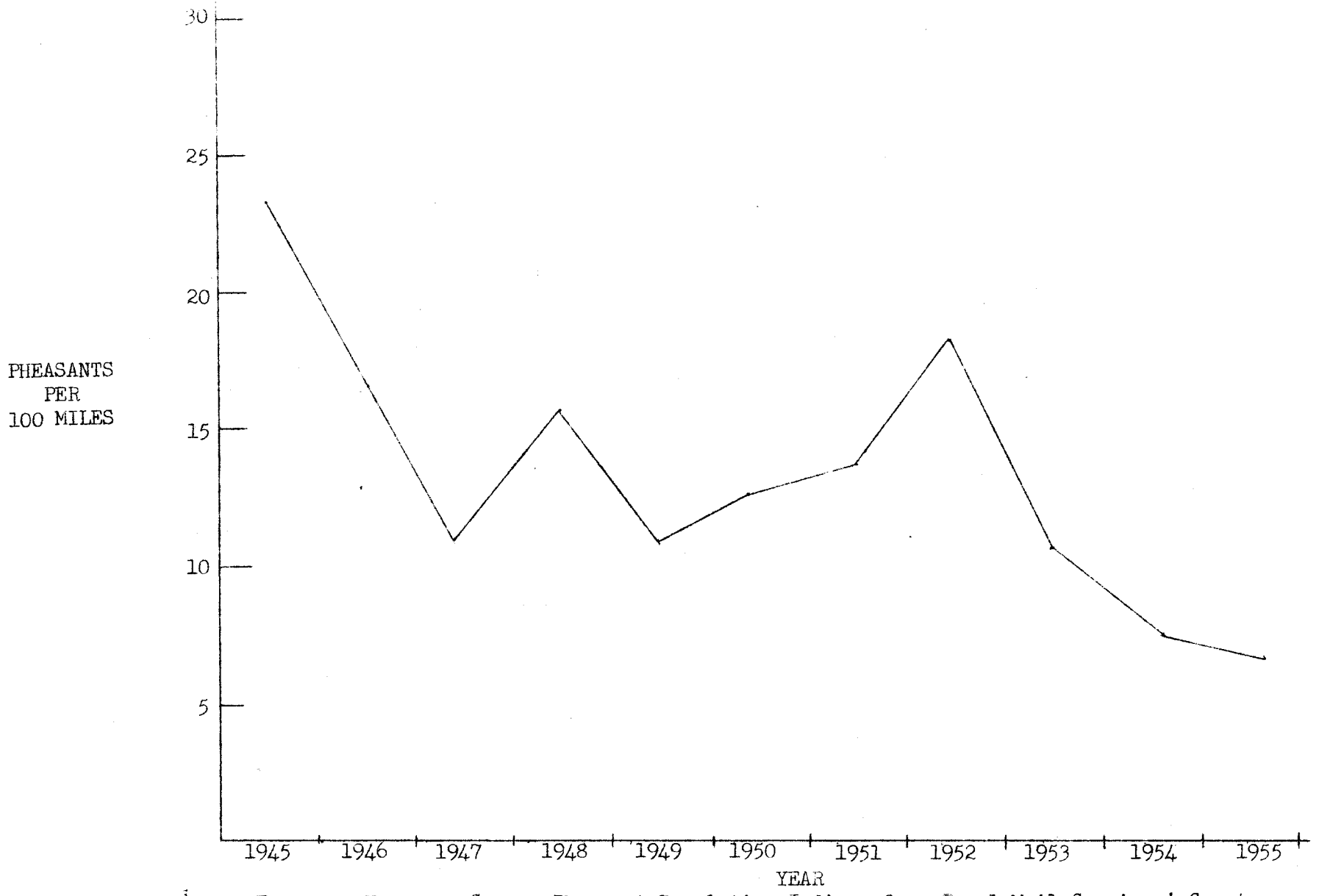


Fig. 2. Nebraska Summer Pheasant Population Indices from Rural Mail Carriers' Counts

Districts I (Panhandle) and IV (South Central) were indicated to have a higher population than the state average, while Districts II (North Central), III (Northeast), and V (Southeast) were shown to have average or lower populations (Table 2 and Figure 1).

Pre-hunting Season Population Trends (Quail and Grouse) -- Both bobwhite quail and grouse (sharp-tailed and pinnated) appeared to be in greater numbers than last summer (1954). The index of quail population showed a 20 percent gain, while the grouse population index was up 18 percent.

Recommendations: Recommend the continuance of this survey. Time of survey should be set either the first of August (for obtaining best brood data) or a few weeks preceding the hunting season (for obtaining an "up-to-the-season" population index). The latter is preferred since adequate pheasant brood data is already being obtained from the "Pheasant Brood Studies" mentioned in the text of this report, while no immediate pre-season population data is being obtained.

Summary: Five hundred and twenty-six carriers participated in the 1955 summer rural mail carrier survey. All but four of the 93 counties were represented.

Mail carriers travelled 111,718 miles and observed 7,593 pheasants.

An average of two young per hen was observed which was considerably lower than the average recorded the three preceding years. This, no doubt, was at least partly due to running the survey later than the peak period of observable young.

The average number of pheasants observed per mile (6.8) was 13 percent below the 1954 figure. The quail and grouse populations were shown to be 20 percent and 18 percent higher, respectively, than in 1954.

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District Game Manager

Approved by Phil Agee.
Project Leader

Date February 9, 1956

A P P E N D I X

Appendix Page 1

RURAL MAIL CARRIERS' GAME SURVEY - Summer 1955

Raw Data

County	No. Rep.	PHEASANTS					Prairie Sh.T.				Miles
		Cocks	Hens	Uncl.	Young	Total	Quail	Chicken	Grouse	Deer	
<u>DISTRICT I</u>											
Banner	1	2	2	0	0	4	0	0	0	0	132
Box Butte	1	13	13	0	52	78	0	0	6	0	140
Cheyenne	7	45	61	90	172	368	0	0	0	0	1880
Dawes	6	0	13	0	0	13	0	0	0	0	1332
Deuel	3	13	12	0	29	54	0	0	0	0	776
Garden	4	2	1	0	23	26	0	5	0	0	938
Kimball	4	2	0	0	7	9	0	0	0	0	1034
Morrill	6	21	15	11	3	50	0	3	0	0	1580
Scottsbluff	14	18	29	38	55	140	0	0	0	0	5267
Sheridan	9	123	229	0	210	562	0	4	131	0	2105
Sioux	2	0	0	0	0	0	0	0	0	0	574
Total	57	239	375	139	551	1304	0	12	137	0	12778
<u>DISTRICT II</u>											
Boyd	6	13	10	6	29	58	24	0	0	0	1269
Brown	4	37	29	37	67	170	0	23	48	0	911
Cherry	9	69	56	77	25	227	0	124	143	0	2692
Garfield	2	6	9	0	33	48	0	0	48	0	345
Grant	4	4	3	0	6	13	0	53	12	0	1080
Holt	11	16	16	0	71	103	19	98	14	0	2766
Hooker	1	0	0	0	0	0	0	0	7	0	240
Keya Paha	5	0	0	0	0	0	0	0	9	0	734
Logan	3	7	8	4	2	21	0	0	0	0	574
McPherson	5	1	1	2	0	4	0	0	12	0	1012
Rock	2	0	0	3	1	4	2	66	46	0	456
Valley	5	55	39	66	108	268	21	0	0	0	1320
Total	57	208	171	195	342	916	66	364	339	0	13399
<u>DISTRICT III</u>											
Antelope	5	4	0	0	15	19	5	0	0	0	1130
Boone	9	7	12	55	81	155	0	0	0	0	1956
Burt	6	2	1	8	7	18	12	0	0	0	1176
Cedar	7	3	7	1	32	43	14	0	0	0	1329
Colfax	4	10	15	27	12	64	0	2	0	0	811
Cuming	1	0	0	0	1	1	0	0	0	0	192
Dakota	4	7	5	0	7	19	13	0	0	0	726
Dixon	3	2	1	12	0	15	1	0	0	0	802
Dodge	3	0	0	0	11	11	0	0	0	0	533
Greeley	5	2	2	0	8	12	0	11	7	0	1169
Knox	15	50	34	55	98	237	231	0	3	1	2982
Madison	10	11	8	34	14	67	2	0	0	0	2172
Nance	2	0	1	0	0	1	0	0	0	0	456
Pierce	6	25	11	25	87	148	4	0	0	0	1421
Platte	4	4	2	0	4	10	0	0	0	0	768
Stanton	2	0	1	0	5	6	0	0	0	0	564
Thurston	8	4	4	1	37	46	0	0	0	0	1374
Washington	3	0	0	0	0	0	3	0	0	0	513
Wayne	6	24	25	4	34	87	0	0	0	0	1187
Wheeler	1	1	0	0	0	1	0	0	0	0	132
Total	104	156	129	222	453	960	285	13	10	1	21393

(Continued on next page)

Appendix Page 2

County	No. Rep.	PHEASANTS					Prairie Sh. T.			Deer	Miles
		Cocks	Hens	Uncl.	Young	Total	Quail	Chicken	Grouse		
DISTRICT IV											
Buffalo	13	45	47	13	92	197	23	0	0	0	2262
Chase	5	24	45	2	67	138	0	0	0	0	981
Custer	13	18	43	4	196	261	11	0	0	4	2939
Dawson	9	23	19	16	58	116	31	0	0	0	1803
Dundy	2	2	2	0	0	4	0	0	0	0	428
Franklin	11	8	18	51	17	94	52	0	0	0	2004
Frontier	9	25	20	0	53	98	23	0	0	0	1680
Furnas	4	11	6	22	51	90	40	0	0	0	872
Gosper	3	4	0	0	22	26	0	0	0	0	508
Harlan	6	15	19	14	74	122	64	0	0	0	1448
Hayes	1	0	0	0	4	4	0	0	0	0	180
Hitchcock	4	17	20	0	105	142	11	0	0	0	983
Kearney	3	0	1	0	5	6	15	0	0	0	628
Keith	6	5	13	3	31	52	0	4	1	0	1256
Lincoln	6	23	39	4	45	111	5	0	0	0	2353
Perkins	5	96	112	72	186	466	0	0	0	0	1276
Phelps	3	7	5	0	7	19	0	0	0	0	740
Red Willow	6	50	53	1	99	208	1	0	0	0	1333
Sherman	5	14	4	97	39	154	3	0	0	0	1042
Total	114	387	466	299	1151	2303	279	4	1	4	24716
DISTRICT V											
Adams	5	25	29	6	78	138	7	0	0	0	1131
Butler	9	15	19	0	49	83	0	0	0	0	1860
Cass	9	0	8	0	3	11	0	0	0	0	1393
Clay	6	79	77	0	61	217	6	0	0	0	1359
Douglas	6	12	25	0	0	37	40	0	0	0	1098
Fillmore	7	21	57	0	114	192	4	0	0	0	1450
Gage	9	7	2	12	18	39	1	0	0	0	2008
Hall	6	11	12	0	28	51	3	0	0	0	1398
Hamilton	7	5	8	1	22	36	0	0	0	0	1488
Howard	6	38	42	4	92	176	50	0	0	0	1250
Jefferson	8	5	8	0	14	27	37	1	0	0	1734
Johnson	9	0	2	0	8	10	18	0	0	0	1771
Lancaster	16	20	15	8	38	81	30	0	0	0	3058
Merrick	7	4	2	0	24	30	21	0	0	0	1526
Nemaha	3	0	0	0	0	0	6	0	0	0	488
Nuckolls	3	6	7	0	14	27	5	0	0	0	620
Otoe	13	11	13	3	30	57	62	0	0	0	2076
Pawnee	6	2	6	20	8	36	56	0	0	0	1211
Polk	5	27	29	18	2	76	47	0	0	0	1020
Richardson	4	0	1	0	0	1	11	0	0	0	643
Saline	8	25	33	13	47	118	7	0	1	0	1500
Sarpy	4	9	11	0	15	35	16	0	0	0	898
Saunders	10	6	4	4	28	42	0	0	0	0	1886
Seward	6	1	4	0	25	30	0	0	0	0	1013
Thayer	9	26	24	6	51	107	25	0	0	0	1758
Webster	8	23	22	0	9	54	69	0	0	0	1647
York	5	92	139	28	140	399	4	0	0	0	1148
Total	194	470	599	123	918	2110	525	1	1	0	38432
GRAND TOTAL											
	526	1460	1740	978	3415	7593	1155	394	488	5	111718