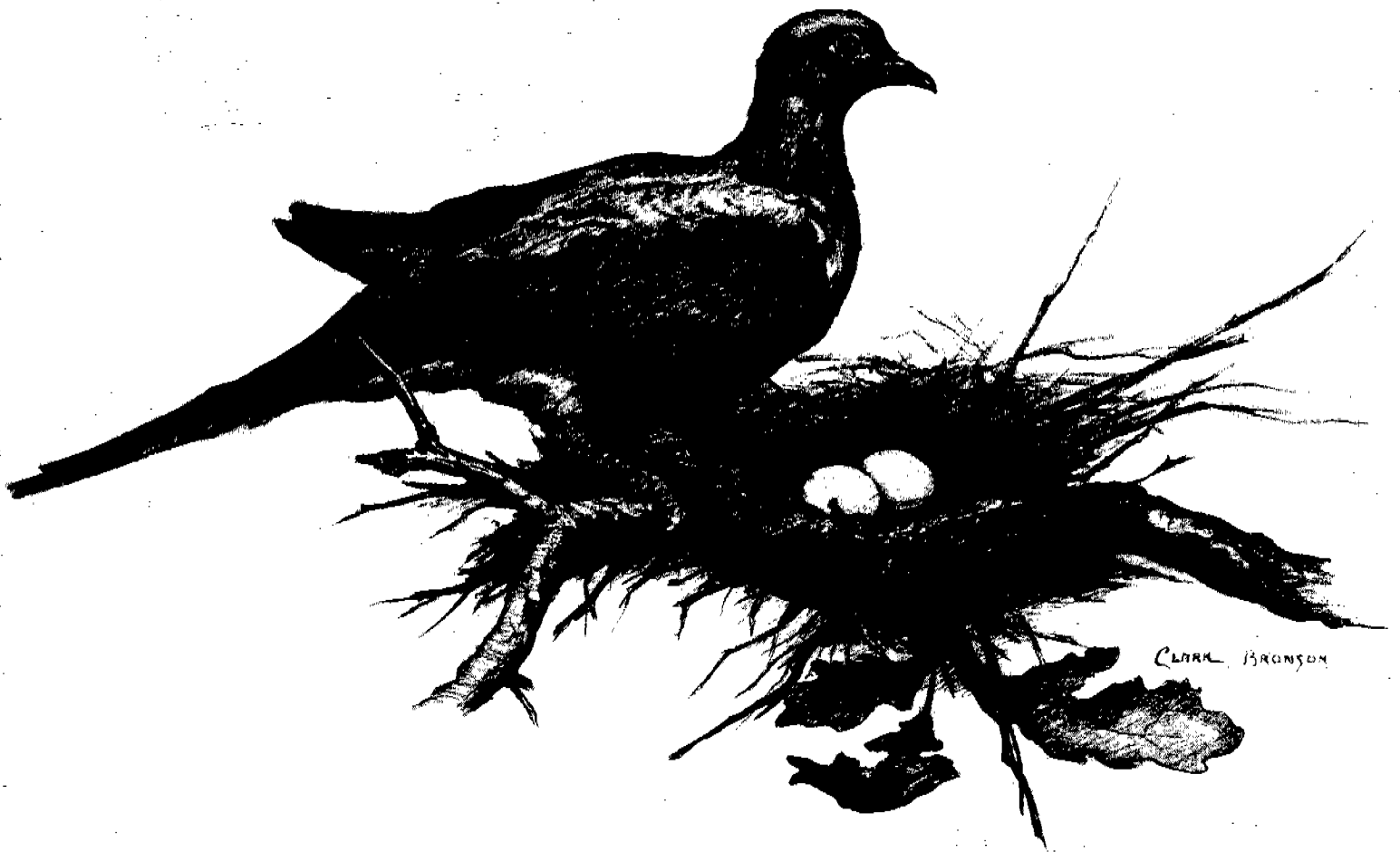


UTAH UPLAND GAME Annual Report 1972



PUBLICATION NUMBER 73-9

Federal Aid Project W-65-R-D-21

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE RESOURCES

John E. Phelps, *Director*

UTAH
UPLAND GAME
Annual Report
1972

Prepared by:
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PUBLICATION NO. 73-9
Completion Report for Federal Aid Project W-65-R-D-21

Utah State Department of Natural Resources
DIVISION OF WILDLIFE RESOURCES

John E. Phelps
Director

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JOB COMPLETION REPORT
RESEARCH PROJECT SEGMENT
(Inventory)

State of U T A H

Project No. W-65-R-D-21

Project Title: State-wide Wildlife
Management Inventory

Job No. A-4

Job Title: State-wide Upland Game
Inventory and Management

Period Covered: January 1, 1972 to June 30, 1973

Abstract: This report includes upland game inventory and harvest data relating to the 1972-73 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indexes derived by each method are included. Data obtained in 1972 are compared to 1971 and long-term averages.

Objectives: To conduct annual inventories and determine the population trend and annual harvest of upland game.

Procedures: Annual inventory procedures for ring-necked pheasants included winter sex-ratio counts and summer roadside counts. The winter sex-ratio counts were conducted from December 15, 1971, through February 10, 1972, as snow cover conditions allowed. Indexes derived include hen-cock ratios and pheasants observed per 100 hours. Annual summer roadside counts (three or more per route) were conducted from July 22 - August 3 on permanently established routes. Indexes derived include pheasants per mile, young per mile, young per hen, mean brood and percent of hens with young.

Mourning dove breeding population trend was determined via the annual call-count survey. This survey is part of a nation-wide survey administered by the Bureau of Sport Fisheries and Wildlife. Call-counts are conducted over 15 permanent, 20-mile routes. One count was made on each route between May 20-30. Doves were banded during the pre-season banding period (June 1 - August 20) primarily using mist nets at waterholes.

Random brood counts were conducted on chukar and Hungarian partridge, forest grouse (ruffed and blue), sage grouse, wild turkey and quail from July 10-August 5. Indexes derived for each species include mean brood size, young per 100 adults and birds observed per 100 hours effort.

Sage grouse strutting ground counts were conducted from March 15-May 15. Total cocks counted, average cocks per ground and percent change from 1971 for comparable grounds were determined on a county basis.

One Gambel's quail call-count route was run in Washington County in late April and early May. Long-period waterhole counts were completed in July and August.


Cottontail rabbit roadside counts were conducted over pre-established routes between July 15 and August 5. Indexes derived include rabbits per mile and young per 100 adults.

Two separate harvest questionnaires were mailed to an approximate 11 percent sample of eligible licensees. One, concerning the harvest of game birds excluding wild turkeys, was mailed in February, 1973 and the other concerning cottontails was mailed following the close of the season in March, 1973. Questions were asked concerning the number harvested and the number of days hunted in each county by species. Additional questions were asked of cottontail hunters concerning harvest by month and whether or not they hunted upland game birds in 1972. A separate questionnaire was also sent to all wild turkey permittees following the close of both the spring and fall seasons. Game bird and cottontail rabbit questionnaires were processed by the University of Utah Computer Center and turkey questionnaires by Game Management Section personnel. Total harvest, hunters and hunter-days afield were estimated using standard projection factors based on total eligible licensees and total questionnaire returns. Hunter success per day and per hunter was determined as well as the distribution of harvest and hunting pressure by county.

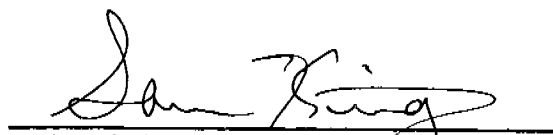
Field bag checks of upland game hunters were made at random or at checking stations during each hunting season. Indexes derived include bag per hunter (per day), bag per 100 hours, average hours per hunter-day and average hours per bird bagged.

Recommendations: This project should be continued for the purpose of evaluating trends of upland game inventory and harvest statistics in Utah.

Approved by:


Chief, Game Management

Date August 10, 1973


Federal Aid Coordinator

INTRODUCTION

The objective of Utah's upland game management program is to provide recreational hunting opportunity for sportsmen within the limits of the annual harvestable surplus for each species. It is based on the knowledge that populations of upland game experience relatively high rates of annual turnover. High reproductive rates are naturally compensated for by high death rates, whether hunting is allowed or not. Annual surveys are conducted to measure the production, trend and harvest of each upland game population hunted.

This is the second edition of this annual Upland Game Report. It is a consolidation of, and annual completion report for, information compiled during all inventory and harvest surveys conducted under Federal Aid Project, W-65-R, Job A-4. Information contained herein was compiled by conservation officers, biologists and game managers of the Division of Wildlife Resources. Harvest information previously published in the annual upland game harvest book is included.

This report serves as a handbook of inventory and harvest trend data. It is designed primarily for the use of those concerned with the management of upland game in Utah. A separate section is devoted to each form of upland game hunted in Utah. Data is presented primarily in tabular form with limited narrative comment. The first page of each section provides a brief summary of population status and trend as indicated by inventory and harvest data.

During 1972, a total of 96,047 Utah sportsmen spent 670,298 days afield in pursuit of various upland game species (Appendix, Table 2). The harvest of upland game totaled 753,341. The framework for the 1972 upland game hunting seasons is shown in Appendix, Table 3. Harvest statistics by species were as follows:



Species	Hunters Afield	Total Harvest	Hunter Days	Bag/ Hunter-day	Bag/Hunter for Season
Pheasant	84,311	240,573	327,669	0.73	2.85
Mourning dove	29,341	238,354	94,046	2.53	8.12
Chukar partridge	16,685	36,925	46,502	0.79	2.21
Sage grouse	13,040	15,983	22,232	0.72	1.23
Forest grouse	16,640	42,518	38,940	1.09	2.56
Quail	7,380	16,504	21,779	0.76	2.24
Hungarian partridge	4,754	7,335	12,135	0.60	1.54
Wild turkey					
spring	269	35	751	0.05	0.12
fall	118	12	303	0.04	0.07
Cottontail	22,835	155,102	105,941	1.46	6.79

Total hunters afield for all species of upland game birds = 90,084
Hunters afield for cottontails who did not hunt game birds = 5,963
Total upland game hunters afield = 96,047

The harvest of game birds was based on a 41.9 percent return of 15,272 questionnaires and cottontail harvest data on a 35.4 percent return of 16,051 questionnaires.

Weather conditions during 1972 were not conducive to production of most upland game. During the first quarter of the year the southern half of the State experienced the driest weather in history. The warm, dry conditions stimulated an exceptionally early spring. During March, average temperatures were the warmest in history at six weather stations, the warmest since 1910 at six additional stations and the warmest since 1934 at 29 others. This warm spell was terminated the last few days of March by a killing frost which destroyed most of the States fruit crop. Below freezing minimum temperatures continued intermittently through April and early May at many weather stations. Temperature and precipitation were near normal during June and July but a cooling trend was evident later in the year with concurrent increased precipitation. Scattered rainshowers occurred over much of the State during the first week of the mourning dove season and September was the first month of the year during which all climactic divisions recorded above normal moisture. During October, record-breaking rainfall occurred in southeastern Utah with well above normal precipitation elsewhere. Snowfall occurred in some areas of northern Utah in late October. Widespread rainfall occurred during the week preceding the opening of the pheasant season with scattered rainshowers over the State on opening day. Winter set-in relatively early and severe and continued until late spring 1973, particularly in the southern half of the State.

RING-NECKED PHEASANT

SUMMARY

Indexes derived from inventory surveys during 1972 indicated a decreased breeding population, decreased reproductive success and a net decrease in the state-wide fall population level from both 1971 and the average. The reduced population was primarily attributable to adverse spring weather. The greatest decline in pheasants per mile during the summer roadside count was evident in the Northern and Southern regions with a lesser decrease evident in the Northeastern region. The Central region population was similar to 1971 while the Southeastern region showed an increase. Harvest statistics for 1972 reflected the indicated decline in pheasant numbers. Hunter success and total harvest were both below 1971 and the long-term average. Total hunters also declined from 1971 to an average level; however, total hunting pressure in terms of hunter-days increased substantially. This increase was a result of a longer hunting season. The pheasants per hunter-day index was the lowest on record due to a combination of a reduced pheasant population, the longer season and inclement weather preceding the season and on opening day.



Winter Sex-ratio Counts

Results of this survey for the winter of 1971-72 and long-term trends are shown in Tables 1 and 2 of this section. Comparisons to the winter of 1970-71 and the average on a State-wide basis are as follows:

	<u>Winter of</u> <u>1971-72</u>	<u>Percent change from</u>	
		<u>1970-71</u>	<u>Average</u>
Total pheasants counted (roadside)	11,598	-20	-30
Hens per cock	4.9	+11	+22
Pheasants observed per 100 hours	1,555	-24	-16
Total hours effort (roadside)	746	+5	-11

The 1972 breeding population level was lower than both 1971 and the average since 1968. The indicated hen-cock ratio was slightly wider than 1971 and considerably wider than the average. This is probably a reflection of the longer hunting season and greater hunter-days afield in 1972. Assuming a pre-season ratio of 1.1 hens per cock, these data indicate that 78 percent of the 1971 fall rooster population was harvested during the hunting season.

Roadside Counts

A summary of pheasant roadside counts for 1972 is shown in Table 3. Long-term trends of pheasants per mile, young per mile, young per hen, percent of hens with young and mean brood size are found in Tables 4-8. Survey results for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total pheasants observed	4,007	-8	-4
Total miles driven	3,016	-3	+8
Pheasants per mile	1.33	-5	-12
Young per mile	0.99	-7	-15
Young per hen	3.93	-4	-9
Percent of hens with young	72	-4	-6

Extreme drought conditions early in the year coupled with a killing frost in late March and intermittently through April and early May reduced pheasant production over most of the State's pheasant range. The lower production, combined with a reduced breeding population level, resulted in a fall population level which was lower than both 1971 and the average. Reduced pheasant densities were found in the Northern, Southern and Northeastern regions. The Central region population was indicated to be similar to 1971 while the Southeastern region showed increase.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire for 1972 are shown in Table 9. Long-term trends of pheasants bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 10-12 and total State-wide harvest statistics in Table 13. Following is a comparison of 1972 harvest statistics to 1971 and the average:

	1972	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Pheasant hunters	84,311	-4	-0.3
Pheasants harvested	240,573	-7	-4
Hunter-days afield	327,669	+11	+54
Pheasants per hunter	2.85	-3	-4
Pheasants per hunter-day	0.73	-17	-39

Total hunters decreased from 1971 but was still about average; however, the total hunter-days afield was above the previous high in 1971 and substantially higher than average. This was a reflection of the increase in season length over most of the State from a maximum of 16 to 30 days. Hunter success and total harvest declined from both 1971 and the average. The hunter success per day index was the lowest on record. An undefined proportion of the decrease in this index is attributable to the lengthened season and an increase in hunter-days afield late in the season after most of the harvestable surplus had been taken. Inclement weather immediately preceding and on the opening day of the hunting season probably reduced the harvest in some areas.

Long-term trends (1948-72) of total pheasant hunters, harvest and hunter success are shown in Figure 1.

Field Bag Checks

A summary of pheasant field bag check data is shown in Table 14. The hunter success trend determined via bag check since 1966 is found in Table 15. A comparison of 1972 data on a State-wide basis to 1971 and the average follows:

	1972	<u>Percentage change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	4,445	-5	+20
Total hours hunted	16,408	+6	+27
Pheasants per hunter (complete hunts)	0.82	-22	-23
Pheasants bagged per 100 hours	16	-24	-30
Average hours per hunter-day (complete hunts)	5.0	0	+6
Hours hunted per pheasant bagged	6.1	+27	+36

This survey substantiates the reduced hunter success indicated by the harvest questionnaire. The pheasants per hunter (per day) index from this survey (0.82) was 12 percent higher than that (0.73) indicated by the harvest questionnaire. This is probably because most bag-check data are collected on the opening weekend of the season and the influence of the longer season is minimized.

The average hunter spent 5 hours per day hunting pheasants in 1972, the same as in 1971; however, more time was required to bag each bird when compared to both 1971 and the average.

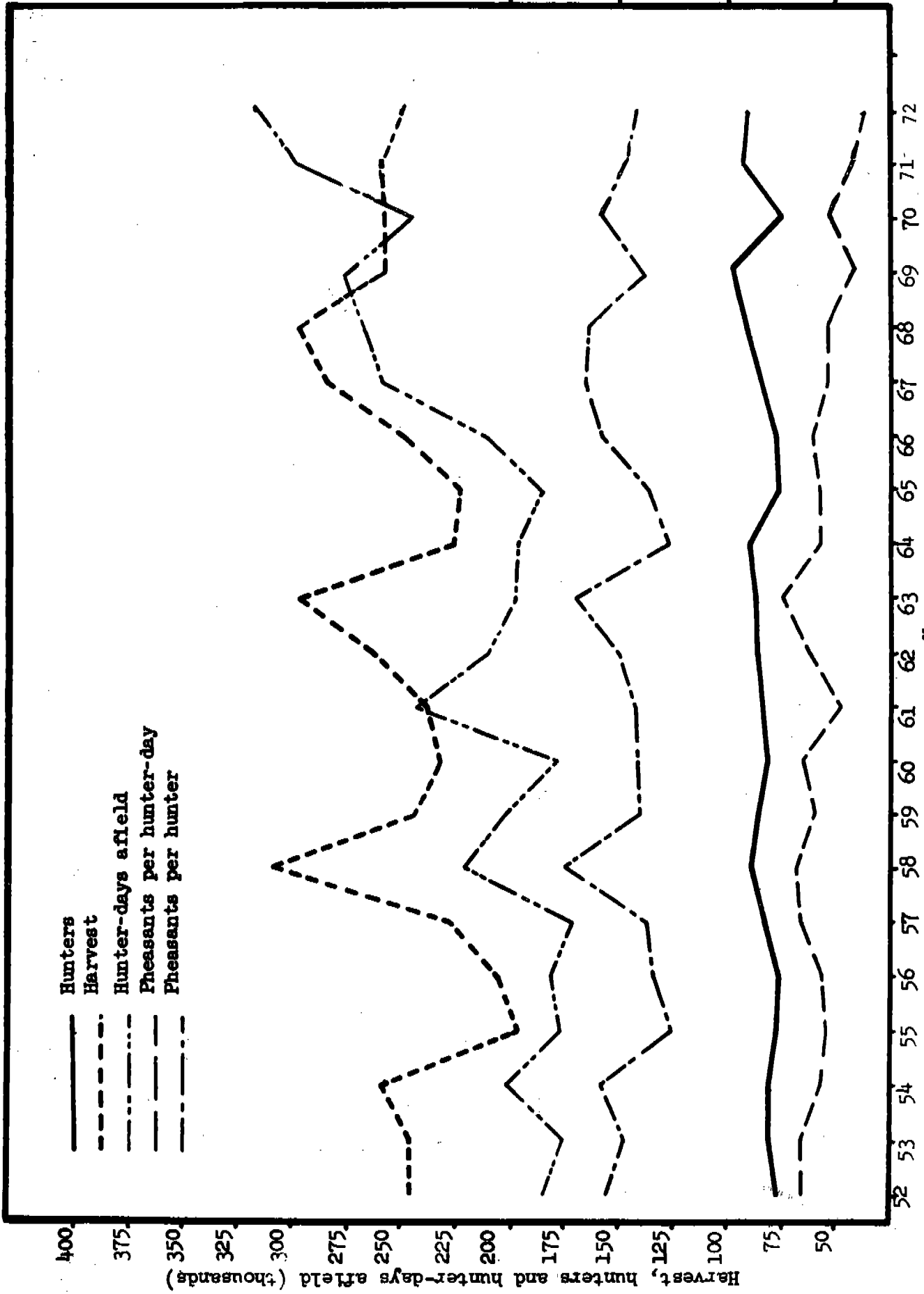


Figure 1. State-wide trend of pheasant harvest statistics.

Table 1. Summary of Pheasant Winter Sex-ratio Counts, 1971-72

Region & County	Roadside Observations				Flushing Observations				Effort Expended			Pheas.Obs./ 100 Hrs. of Road Obs.	
	Cocks		Hens		Cocks		Hens		Vehicle Miles	Hours Effort	Walk Total		
	Total	Sex-ratio	Total	Sex-ratio	Total	Sex-ratio	Total	Sex-ratio					
Northern Region													
Box Elder	162	836	998	5.16	19	--	--	--	335	30	2	32	3327
Cache	108	440	548	4.07	25	7	10	1.43	706	71	--	71	772
Davis	39	380	419	9.74	10	--	--	--	140	15.5	--	15.5	2703
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	28	243	271	8.68	12	8	157	19.6	250	13	--	13	2085
REGIONAL TOTALS	337	1899	2236	5.64	18	15	167	11.1	1431	129.5	2	131.5	1727
Central Region													
Juab	13	41	54	3.15	32	0	28	--	239	19	2	21	284
Salt Lake	309	2019	2328	6.53	15	40	123	3.08	1879	141	13	154	1651
Sanpete	293	1012	1305	3.45	29	0	0	--	632	71	6	77	1838
Tooele	244	1402	1646	5.75	17	--	--	--	868	61	0	61	2698
Utah	207	1103	1310	5.33	19	38	392	10.32	853	73.5	19	92.5	1782
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1066	5577	6643	5.23	19	78	543	6.96	4471	365.5	40	405.5	1818
Southern Region													
Beaver	13	100	113	7.69	13	1	54	54.00	153	21	9	30	538
Garfield	0	2	2	0	0	--	--	--	42	3	--	3	67
Iron	12	118	130	9.83	10	8	49	6.12	829	20.5	3.5	24	634
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	40	322	362	8.05	12	15	112	7.47	405	27	1	28	1341
Piute	16	36	52	2.25	44	2	11	5.50	53	3	1	4	1733
Sevier	106	651	757	6.14	16	--	--	--	524	43.5	0	43.5	1740
Washington	50	77	127	1.54	65	45	77	1.71	404	30.5	22	52.5	416
Wayne (Hanksville)	11	19	30	1.73	58	7	24	3.43	542	8	19	27	375
REGIONAL TOTALS	248	1325	1573	5.34	19	78	327	4.19	2952	156.5	55.5	212	1005
Northeastern Region													
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	112	193	305	1.72	58	35	52	1.49	563	36	4	40	847
Uintah	99	329	428	3.32	30	--	--	--	318	24	0	24	1783
REGIONAL TOTALS	211	522	733	2.47	40	35	52	1.49	881	60	4	64	1222
Southeastern Region													
Carbon	13	17	30	1.31	76	7	4	0.57	58	3.5	1	4.5	857
Emery	83	300	383	3.61	28	4	12	3.00	572	31	9	40	1235
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	96	317	413	3.30	30	11	16	1.45	630	34.5	10	44.5	1197
STATE TOTALS	1958	9640	11598	4.92	20	217	1105	5.09	10365	746	111.5	857.5	1555

Table 2. Trend of Pheasant Winter Sex-ratio Counts, 1968-72

Region & County	1968-69		1969-70		1970-71		1971-72	
	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.
Northern Region								
Box Elder	4.4	2612	4.8	1900	4.0	2653	5.2	3327
Cache	4.5	7685	3.2	372	3.6	1900	4.1	772
Davis	4.6	2141	7.7	1733	9.5	3890	9.7	2703
Morgan	1.3	433	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--
Summit	0.3	262	--	--	--	--	--	--
Weber	6.3	2959	6.7	1244	12.1	3140	8.7	2085
REGIONAL TOTALS	4.6	3454	5.1	1163	5.1	2651	5.6	1727
Central Region								
Juab	4.1	6017	5.1	1585	3.6	4886	3.2	284
Salt Lake	5.4	5076	6.0	2362	7.3	3155	6.5	1651
Sanpete	3.3	1001	3.1	1377	3.5	1590	3.4	1838
Tooele	6.1	8120	5.0	2311	4.9	4245	5.8	2698
Utah	5.4	2660	4.6	1567	4.6	1762	5.3	1782
Wasatch	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5.2	3339	4.7	1899	4.8	2419	5.2	1818
Southern Region								
Beaver	5.8	1225	2.3	486	8.8	612	7.7	538
Garfield	1.8	206	3.3	390	21.0	880	0	67
Iron	2.5	1150	--	--	--	--	9.8	634
Kane	--	--	--	--	--	--	--	--
Millard	4.7	587	5.4	767	3.9	1351	8.0	1341
Piute	4.0	556	3.1	650	3.7	467	2.2	1733
Sevier	5.0	3268	6.0	1527	4.6	2546	6.1	1740
Washington	4.4	415	4.0	294	4.5	592	1.5	416
Wayne	--	--	--	--	--	--	1.7	375
REGIONAL TOTALS	4.5	836	4.9	820	4.4	1430	5.3	1005
Northeastern Region								
Daggett	--	--	--	--	--	--	--	--
Duchesne	1.8	770	2.2	428	2.1	1036	1.7	847
Uintah	3.0	2834	3.0	3087	4.2	2069	3.3	1783
REGIONAL TOTALS	2.5	1492	2.7	915	3.0	1414	2.5	1222
Southeastern Region								
Carbon	3.9	817	1.3	694	2.0	924	1.3	857
Emery	3.3	3593	3.5	1623	3.5	1353	3.6	1235
Grand	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3.4	2760	3.1	1333	2.8	1150	3.3	1197
STATE TOTALS	4.4	2167	4.3	1353	4.4	2044	4.9	1555

Table 3. Pheasant Summer Inventory Summary, 1972

Region & County	No. Routes	Total Miles	Distinct Broods			Mixed Observ.		Adults w/o		Total Total Yng. Cocks	Total Total Yng. Hens	Pheas. Mile	Yng./ Mile	Mean Brood Ad.Hen w/Yng.	% Hens	
			No. Yng.	Hens	Yng.	Hens	Yng.	Hens								
Northern Region																
Box Elder	2	150	21	101	3	13	16	11	35	114	165	1.10	0.76	4.81	3.26	69
Cache	2	153	15	82	10	42	12	7	32	124	168	1.10	0.81	5.47	3.88	78
Davis	1	88	20	90	8	23	10	5	33	113	156	1.77	1.28	4.50	3.42	85
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	1	78	15	91	6	45	15	18	39	136	190	2.44	1.74	6.07	3.49	54
REGIONAL TOTALS	6	469	71	364	27	123	53	41	139	487	679	1.45	1.04	5.13	3.50	70
Central Region																
Juab	1	36	4	18	0	0	1	0	4	18	23	0.64	0.50	4.50	4.50	100
Salt Lake	2	232	30	208	10	34	7	11	51	242	300	1.29	1.04	6.93	4.74	78
Sanpete	2	184	66	403	14	83	27	8	88	486	601	3.27	2.64	6.11	5.52	91
Tooele	1	54	14	113	0	0	4	5	19	113	136	2.52	2.09	8.07	5.95	74
Utah	4	457	109	579	22	38	78	97	228	617	923	2.02	1.35	5.31	2.71	57
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	10	963	223	1321	46	155	117	121	390	1476	1983	2.06	1.53	5.92	3.78	69
Southern Region																
Beaver	1	75	6	37	1	6	5	1	8	43	56	0.75	0.57	6.17	5.38	88
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	2	150	6	34	1	25	4	6	13	59	76	0.51	0.39	5.67	4.54	54
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2	280	35	186	3	57	19	5	43	243	305	1.09	0.87	5.31	5.65	88
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	161	36	204	21	107	7	6	63	311	381	2.37	1.93	5.67	4.94	90
Washington	2	86	6	38	4	18	7	6	16	56	79	0.92	0.65	6.33	3.50	62
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	9	752	89	499	30	213	42	24	143	712	897	1.19	0.95	5.60	4.98	83
Northeastern Region																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	368	11	49	2	8	23	6	19	57	99	0.27	0.15	4.45	3.00	68
Uintah	2	167	12	69	4	23	13	3	19	92	124	0.74	0.55	5.75	4.84	84
REGIONAL TOTALS	5	535	23	118	6	31	36	9	38	149	223	0.42	0.28	5.13	3.92	76
Southeastern Region																
Carbon	2	135	2	13	0	0	4	1	3	13	20	0.15	0.10	6.50	4.33	67
Emery	2	132	25	127	0	0	9	13	38	127	174	1.32	0.96	5.08	3.34	66
Grand	1	30	5	20	0	0	2	4	9	20	31	1.03	0.67	4.00	2.22	56
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5	297	32	160	0	0	15	18	50	160	225	0.76	0.54	5.00	3.20	64
STATE TOTALS	35	3016	438	2462	109	522	263	213	760	2984	4007	1.33	0.99	5.62	3.93	72

Table 4. Trend of pheasants observed per mile during summer roadside counts, 1962-72.

Region & County	Year										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	3.06	1.29	2.00	1.56	1.85	0.91	0.82	0.68	0.57	1.75	1.10
Cache	1.90	1.15	0.71	1.62	2.30	1.50	2.20	1.46	1.90	1.98	1.10
Davis	3.12	1.06	1.26	0.70	2.12	1.39	0.83	4.04	0.70	2.75	1.77
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	0.32	--	--	--	--
Weber	2.31	2.11	2.15	1.81	2.48	1.67	2.00	3.18	0.71	1.82	2.44
Regional Totals	2.47	1.31	1.38	1.39	2.13	1.24	1.27	1.89	1.20	2.04	1.45
Central Region											
Juab	4.06	1.61	1.56	1.32	1.28	1.30	1.07	0.46	1.20	0.32	0.64
Salt Lake	2.37	1.94	1.80	1.80	1.98	1.40	3.04	2.60	0.88	1.74	1.29
Sanpete	2.47	1.60	0.88	1.63	2.03	1.00	2.61	2.33	3.34	2.22	3.27
Tooele	1.90	1.82	1.78	2.03	5.96	1.40	3.70	2.82	3.18	1.69	2.52
Utah	3.80	4.87	3.97	2.67	2.37	2.40	2.74	2.49	1.84	2.31	2.02
Wasatch	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	2.75	3.05	2.11	2.21	2.38	1.77	2.74	2.38	1.97	2.00	2.06
Southern Region											
Beaver	1.15	1.00	1.20	0.41	--	0.83	0.88	0.46	0.96	0.69	0.75
Garfield	--	0.84	0.75	1.10	0.75	0.41	0.79	1.05	0.36	0.03	--
Iron	3.38	0.88	0.19	0.43	0.86	0.69	--	0.73	0.87	0.77	0.51
Kane	--	--	--	0.75	--	--	--	--	--	--	--
Millard	1.48	2.05	1.70	1.84	1.48	1.19	1.61	1.68	1.01	1.15	1.09
Piute	--	0.16	0.31	0.89	1.02	0.39	--	0.64	0.53	0.35	--
Sevier	3.33	1.83	0.70	0.88	1.90	1.67	1.71	1.66	1.99	4.13	2.37
Washington	--	2.77	--	1.39	1.89	1.49	0.99	0.67	0.29	1.32	0.92
Wayne	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	2.60	1.61	0.86	1.11	1.54	1.08	1.37	1.12	0.92	1.48	1.19
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0.51	0.42	0.48	0.42	0.37	0.31	0.30	0.36	0.45	0.32	0.27
Uintah	0.26	2.16	1.36	3.10	1.40	0.47	1.14	1.27	0.66	0.82	0.74
Regional Totals	0.49	1.22	0.72	1.21	0.66	0.36	0.46	0.70	0.51	0.51	0.42
Southeastern Region											
Carbon	2.03	0.87	0	0	0.23	0	2.34	0.09	0.20	0.05	0.15
Emery	--	1.92	1.00	1.19	1.12	1.21	0.32	0.69	0.83	0.55	1.32
Grand	--	--	--	--	--	--	--	--	--	--	1.03
San Juan	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	2.03	1.26	0.69	0.80	0.82	0.84	0.93	0.39	0.57	0.31	0.76
STATE TOTALS	2.24	1.86	1.35	1.40	1.57	1.15	1.58	1.40	1.18	1.40	1.33

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1962-72.

Region & County	Year										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	2.44	0.93	1.55	1.18	1.34	0.71	0.51	0.40	0.35	1.32	0.76
Cache	1.63	0.88	0.59	1.25	1.94	1.25	1.84	1.05	1.39	1.62	0.81
Davis	2.17	0.86	0.97	0.53	1.59	0.95	0.65	3.11	0.54	2.25	1.28
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	0.19	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	1.91	1.61	1.50	1.52	1.55	1.33	1.60	2.35	0.58	1.35	1.74
Regional Totals	1.67	0.98	1.07	1.08	1.60	0.99	0.97	1.37	0.86	1.62	1.04
Central Region											
Juab	3.19	1.25	1.17	1.02	0.90	1.10	0.90	0.27	0.95	0.18	0.50
Salt Lake	1.93	1.27	1.30	1.26	1.44	1.00	2.14	1.91	0.61	1.31	1.04
Sanpete	2.08	1.25	0.60	1.12	1.74	0.80	2.10	1.90	2.54	1.74	2.64
Tooele	1.67	1.53	1.43	1.72	5.06	1.20	3.15	2.49	2.74	1.41	2.09
Utah	3.06	3.87	3.13	2.18	1.96	1.80	2.11	1.88	1.30	1.68	1.35
Wasatch	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	2.27	2.38	1.59	1.73	1.91	1.40	2.10	1.84	1.46	1.50	1.53
Southern Region											
Beaver	1.08	0.40	0.76	0.21	--	0.55	0.80	0.26	0.64	0.48	0.57
Garfield	--	0.57	0.47	0.86	0.57	0.30	0.63	0.74	0.19	0	--
Iron	2.75	0.67	0.09	0.33	0.65	0.48	--	0.53	0.55	0.62	0.39
Kane	--	--	--	0.00	--	--	--	--	--	--	--
Millard	1.29	1.64	1.30	1.51	1.19	0.86	1.39	1.32	0.84	0.90	0.87
Piute	--	0.13	0.24	0.68	0.81	0.28	--	0.53	0.31	0.25	--
Sevier	2.87	1.39	0.40	0.57	1.50	1.38	1.49	1.26	1.58	3.21	1.93
Washington	--	2.07	--	0.86	1.27	1.03	0.71	0.46	0.17	0.95	0.65
Wayne	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	2.13	1.21	0.61	0.85	1.19	0.81	1.15	0.85	0.69	1.14	0.95
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0.35	0.30	0.36	0.32	0.27	0.19	0.20	0.25	0.27	0.21	0.15
Uintah	0.16	1.70	0.98	2.50	1.10	0.33	0.86	0.86	0.40	0.55	0.55
Regional Totals	0.32	0.94	0.53	0.96	0.50	0.23	0.32	0.47	0.31	0.34	0.28
Southeastern Region											
Carbon	1.69	0.70	0	0	0.20	0	1.82	0.03	0.17	0.03	0.10
Emery	--	1.52	0.70	0.94	0.77	0.89	0.18	0.58	0.56	0.30	0.96
Grand	--	--	--	--	--	--	--	--	--	--	0.67
San Juan	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	1.69	1.01	0.48	0.60	0.58	0.61	0.67	0.31	0.39	0.17	0.54
STATE TOTALS	1.82	1.43	1.01	1.09	1.20	0.88	1.23	1.06	0.86	1.06	0.99

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1962-72.

Region & County	Year										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	5.26	3.49	4.86	3.38	3.15	4.02	2.07	2.00	2.19	4.02	3.26
Cache	8.54	4.30	5.91	4.20	6.59	6.29	5.65	3.38	3.65	6.64	3.88
Davis	4.55	3.33	4.50	3.86	3.71	2.75	4.82	4.00	4.00	5.45	3.42
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	1.75	--	--	--	--	--
Weber	5.52	3.33	3.17	7.38	2.23	4.47	4.74	3.70	4.22	3.40	3.49
Regional Totals	5.85	3.70	4.55	4.10	2.97	4.58	3.89	3.27	3.32	5.02	3.50
Central Region											
Juab	5.48	4.58	4.20	3.41	3.27	6.30	5.40	3.25	4.22	2.33	4.50
Salt Lake	4.95	3.33	3.48	2.86	3.36	3.40	3.02	3.63	2.96	4.08	4.74
Sanpete	7.44	4.93	3.26	3.04	7.40	5.60	4.71	5.48	4.02	4.73	5.52
Tooele	8.33	7.25	4.53	7.15	6.54	8.40	7.08	7.89	6.78	5.95	5.95
Utah	4.98	4.75	5.03	5.66	4.51	3.80	3.94	3.85	3.69	3.28	2.71
Wasatch	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	5.30	4.65	4.38	4.54	5.06	4.20	3.92	4.30	3.94	3.86	3.78
Southern Region											
Beaver	16.20	1.35	2.40	1.60	--	2.05	10.67	1.86	5.33	3.27	5.38
Garfield	--	2.87	3.60	4.10	4.80	3.83	4.00	3.50	2.00	--	--
Iron	4.73	5.48	3.80	5.30	6.40	2.93	--	3.21	2.53	4.43	4.54
Kane	--	--	--	0	--	--	--	--	--	--	--
Millard	9.07	5.14	5.20	5.00	5.70	4.91	6.10	4.58	5.89	4.62	5.65
Piute	--	3.67	3.00	3.57	4.90	2.50	--	5.33	1.75	5.00	--
Sevier	6.90	4.16	2.00	4.50	4.80	5.89	6.72	3.74	4.30	4.34	4.94
Washington	--	3.89	--	2.32	3.00	3.33	3.42	2.88	1.50	3.45	3.50
Wayne	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	6.37	4.09	3.67	4.19	4.68	3.98	5.75	3.84	3.92	4.19	4.98
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	4.36	6.00	4.60	5.60	4.70	3.21	5.92	5.00	2.51	3.50	3.00
Uintah	1.57	5.72	3.90	6.40	5.70	4.27	4.24	3.37	2.62	3.08	4.84
Regional Totals	3.62	5.77	4.20	6.00	5.20	3.60	4.93	3.77	2.56	3.23	3.92
Southeastern Region											
Carbon	5.00	6.08	0	0	8.00	0	4.52	1.40	5.00	5.00	4.33
Emery	5.68	3.76	3.53	4.30	5.30	5.17	2.46	6.78	3.55	2.25	3.34
Grand	--	--	--	--	--	--	--	--	--	--	2.22
San Juan	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	5.62	4.51	3.53	4.30	5.50	5.17	3.91	5.61	3.74	2.36	3.20
STATE TOTALS	5.35	4.31	4.22	4.62	4.40	4.20	4.25	3.94	3.68	4.09	3.93

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1963-72.

Region & County	Year										
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	
Northern Region											
Box Elder	85	90	75	86	88	57	58	59	75	69	
Cache	83	81	74	82	86	65	62	66	86	78	
Davis	62	80	65	76	62	91	56	82	87	85	
Morgan	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	38	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	91	74	100	61	100	87	80	100	77	54	
Regional Totals	82	81	75	78	86	66	66	68	82	70	
Central Region											
Juab	83	100	75	100	100	100	75	100	67	100	
Salt Lake	74	76	80	53	71	69	76	62	66	78	
Sanpete	83	81	67	100	81	97	91	78	95	91	
Tooele	100	94	100	89	100	88	100	100	84	74	
Utah	82	78	79	78	66	72	74	60	69	57	
Wasatch	--	--	--	--	--	--	--	--	--	--	
Regional Totals	82	79	79	77	71	76	79	71	74	69	
Southern Region											
Beaver	42	50	60	--	75	100	72	100	82	88	
Garfield	81	100	85	100	100	100	83	50	--	--	
Iron	80	75	90	71	76	--	75	59	62	54	
Kane	--	--	0	--	--	--	--	--	--	--	
Millard	82	79	88	96	74	100	77	94	81	88	
Plute	67	100	57	85	50	--	100	50	100	--	
Sevier	56	40	35	98	100	100	96	88	85	90	
Washington	74	--	39	65	67	92	42	67	74	62	
Wayne	--	--	--	--	--	--	--	--	--	--	
Regional Totals	--	75	73	84	78	98	79	77	80	83	
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	
Duchesne	100	92	95	95	53	92	81	44	68	68	
Uintah	92	70	100	84	91	65	59	42	55	84	
Regional Totals	88	80	98	90	67	76	65	43	60	76	
Southeastern Region											
Carbon	75	0	0	100	0	74	20	75	100	67	
Emery	72	74	55	92	86	77	94	70	42	66	
Grand	--	--	--	--	--	--	--	--	--	56	
San Juan	--	--	--	--	--	--	--	--	--	--	
Regional Totals	70	74	55	96	86	75	78	71	44	64	
STATE TOTALS	78	72	82	85	76	78	74	69	75	72	

Table 8. Trend of average brood size for pheasants, 1962-1972.

Region & County	Year										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	5.58	4.11	5.42	4.70	3.75	4.93	3.80	3.53	3.68	4.96	4.81
Cache	6.04	4.93	7.55	5.50	6.17	5.86	6.88	5.63	7.12	8.34	5.47
Davis	4.00	4.10	4.44	5.67	4.78	5.17	5.14	6.67	5.14	6.52	4.50
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	4.67	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	5.52	4.79	4.44	6.00	3.73	3.00	5.69	5.33	3.43	4.80	6.07
Regional Totals	5.31	4.56	5.49	5.29	4.54	5.13	5.25	5.56	5.28	6.33	5.13
Central Region											
Juab	5.32	5.50	4.20	4.50	3.78	6.30	5.40	4.33	4.22	7.00	4.50
Salt Lake	5.64	4.08	4.22	3.43	5.25	4.67	5.28	5.35	4.95	5.76	6.93
Sanpete	5.88	5.88	2.64	4.57	6.39	5.18	4.68	5.13	5.52	4.94	6.11
Tooele	8.33	7.25	4.81	7.15	--	8.38	8.10	7.89	6.78	6.81	8.07
Utah	5.95	5.79	6.44	6.20	5.76	5.94	5.07	5.08	5.13	5.89	5.31
Wasatch	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	5.93	5.63	5.26	5.26	5.69	5.83	5.28	5.37	5.41	5.70	5.92
Southern Region											
Beaver	6.00	3.50	3.17	2.67	--	4.75	10.67	--	--	5.75	6.17
Garfield	--	3.67	3.60	4.82	4.78	4.25	4.00	4.25	3.00	--	--
Iron	5.50	4.61	5.00	5.89	6.40	5.62	--	11.00	4.50	7.17	5.67
Kane	--	5.20	--	--	--	--	--	--	--	--	--
Millard	6.38	6.14	5.40	5.70	5.09	6.88	--	5.74	6.24	4.44	5.31
Piute	--	--	3.00	6.25	5.67	5.00	--	5.00	3.50	5.00	--
Sevier	5.95	5.84	5.00	5.48	5.88	5.35	--	4.22	5.00	5.24	5.67
Washington	--	5.06	--	5.91	4.90	5.72	4.31	8.00	--	5.25	6.33
Wayne	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	5.84	5.27	4.89	5.48	5.45	5.78	5.37	5.42	5.30	5.13	5.60
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	6.00	6.00	4.79	5.94	4.95	6.10	6.45	6.45	4.82	6.50	4.45
Uintah	2.20	6.22	5.62	6.79	6.73	4.70	6.54	6.65	6.14	6.05	5.75
Regional Totals	4.88	6.03	5.18	6.51	5.90	5.40	6.50	6.59	5.33	6.21	5.13
Southeastern Region											
Carbon	5.00	8.11	--	5.40	6.25	--	7.50	1.00	4.00	5.00	6.50
Emery	5.69	5.22	4.79	5.15	6.71	6.67	4.00	8.42	5.64	6.00	5.08
Grand	--	--	--	--	--	--	--	--	--	--	4.00
San Juan	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	5.62	5.42	4.79	5.18	6.68	6.67	6.45	7.85	5.29	5.89	5.00
STATE TOTALS	5.72	5.30	5.20	5.62	5.42	5.70	5.40	5.59	5.36	5.73	5.62

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters reporting	Days hunted	Birds bagged	Birds per hunter-day	Birds per hunter*	% of pressure	% of harvest
<u>Northern</u>							
Box Elder	628	2115	1793	0.85	3.77	14.61	16.87
Cache	439	1508	1283	0.85	3.54	10.42	12.07
Davis	400	1343	724	0.54	2.84	9.28	6.81
Morgan	18	72	39	0.54	4.07	0.50	0.37
Rich	3	8	3	0.38	0.75	0.06	0.03
Summit	1	2	2	1.00	3.57	0.01	0.02
Weber	436	1413	979	0.69	3.06	9.76	9.21
REGIONAL TOTALS	1925	6451	4823	0.75	3.20	44.64	45.39
<u>Central</u>							
Juab	91	267	139	0.52	2.57	1.84	1.31
Salt Lake	462	1225	673	0.55	2.29	8.46	6.33
Sanpete	190	571	521	0.91	4.14	3.95	4.90
Tooele	93	335	155	0.46	1.81	2.31	1.46
Utah	769	2065	1542	0.75	2.60	14.27	14.51
Wasatch	3	4	1	0.25	2.48	0.03	0.01
REGIONAL TOTALS	1608	4467	3031	0.68	2.45	30.86	28.52
<u>Southern</u>							
Beaver	26	120	84	0.70	3.85	0.83	0.79
Garfield	8	14	7	0.50	1.50	0.10	0.07
Iron	70	240	150	0.63	2.50	1.66	1.41
Kane	0	0	0	0.00	3.50	0.00	0.00
Millard	196	666	537	0.81	4.22	4.60	5.05
Piute	8	23	9	0.39	3.30	0.16	0.08
Sevier	173	535	452	0.84	2.97	3.70	4.25
Washington	51	201	99	0.49	2.28	1.39	0.93
Wayne	1	10	0	0.00	1.00	0.07	0.00
REGIONAL TOTALS	533	1809	1338	0.74	3.07	12.50	12.59
<u>Northeastern</u>							
Daggett	1	1	1	1.00	2.00	0.01	0.01
Duchesne	121	322	351	1.09	4.47	2.22	3.30
Uintah	132	510	420	0.82	3.58	3.52	3.95
REGIONAL TOTALS	254	833	772	0.93	3.89	5.76	7.27
<u>Southeastern</u>							
Carbon	79	247	112	0.45	2.56	1.71	1.05
Emery	131	417	385	0.92	5.63	2.88	3.62
Grand	7	20	4	0.20	3.62	0.14	0.04
San Juan	0	0	0	0.00	8.00	0.00	0.00
REGIONAL TOTALS	217	684	501	0.73	3.29	4.73	4.71
Unknown counties	77	215	161	0.75	1.57	1.49	1.52
Mixed Counties	3	4	0	0.00	5.00	0.03	0.00
STATE TOTALS	4617	14,473	10,626	0.73	2.85	100.00	100.00

*Based on county of residence

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1965-1972.

Region and county	1965	1966	1967	1968	1969	1970	1971	1972	
<u>Northern</u>									
Box Elder	1.61	1.72	1.52	1.46	1.10	1.25	1.18	0.85	
Cache	1.49	1.52	1.35	1.35	0.87	1.29	1.09	0.85	
Davis	0.80	0.85	0.76	0.70	0.60	0.69	0.67	0.54	
Morgan	0.80	0.42	0.50	0.86	0.25	0.95	1.02	0.54	
Rich	1.45	--	1.00	0.88	0.17	1.00	1.00	0.38	
Summit	--	1.00	0.00	0.50	0.64	0.50	0.00	1.00	
Weber	1.02	0.93	0.95	0.81	0.72	0.79	0.72	0.69	
REGIONAL TOTALS	1.28	1.29	1.20	1.12	0.82	1.02	0.92	0.75	$\bar{x}=1.03$
<u>Central</u>									
Juab	0.98	1.08	0.98	1.10	0.96	1.09	0.93	0.52	
Salt Lake	0.90	0.84	0.89	0.90	0.69	0.76	0.59	0.55	
Sanpete	1.07	1.13	1.17	1.32	1.01	1.32	1.14	0.91	
Tooele	0.86	0.58	0.85	1.05	0.80	0.95	0.69	0.46	
Utah	1.01	1.06	1.11	1.12	0.89	1.11	0.86	0.75	
Wasatch	--	0.00	0.20	1.10	0.60	0.00	0.41	0.25	
REGIONAL TOTALS	0.96	0.96	1.01	1.07	0.83	1.01	0.80	0.68	$\bar{x}=0.96$
<u>Southern</u>									
Beaver	0.56	1.33	0.72	1.22	1.14	0.91	1.00	0.70	
Garfield	0.67	1.30	0.69	0.75	1.00	1.00	0.95	0.50	
Iron	0.74	1.02	0.94	1.29	0.96	0.69	0.75	0.63	
Kane	--	--	--	--	--	--	3.00	--	
Millard	1.25	1.10	1.31	1.45	1.27	1.18	0.99	0.81	
Piute	0.47	1.33	0.91	0.59	1.22	0.79	0.93	0.39	
Sevier	1.02	1.13	1.11	1.28	1.01	1.28	1.02	0.84	
Washington	1.08	0.60	0.62	0.72	0.69	0.47	0.54	0.49	
Wayne	0.02	1.83	--	0.00	0.00	1.17	0.88	0.00	
REGIONAL TOTALS	1.02	1.07	1.07	1.24	1.07	1.04	0.90	0.74	$\bar{x}=1.02$
<u>Northeastern</u>									
Daggett	--	--	--	2.33	0.71	0.50	0.47	1.00	
Duchesne	1.54	1.64	1.12	1.00	1.18	1.22	1.19	1.09	
Uintah	1.13	1.69	1.14	1.22	1.30	1.13	1.10	0.82	
REGIONAL TOTALS	1.30	1.67	1.14	1.13	1.25	1.16	1.13	0.93	$\bar{x}=1.21$
<u>Southeastern</u>									
Carbon	1.05	1.25	0.78	0.95	0.89	0.70	0.58	0.45	
Emery	1.16	1.54	1.14	1.19	1.53	1.07	0.92	0.92	
Grand	0.33	0.83	0.50	1.30	0.71	0.50	0.75	0.20	
San Juan	2.25	--	--	--	0.08	2.00	0.75	--	
REGIONAL TOTALS	1.12	1.42	1.01	1.11	1.24	0.94	0.76	0.73	$\bar{x}=1.04$
Unknown counties	1.40	0.00	0.93	0.95	--	0.58	0.67	0.75	
Mixed counties	0.83	--	0.90	--	--	4.00	--	0.00	
STATE TOTALS	1.14	1.19	1.10	1.11	0.90	1.02	0.88	0.73	$\bar{x}=1.01$

Table 12. Distribution of pheasant hunting pressure by county hunted, 1965-1972.*

Region and county	1965	1966	1967	1968	1969	1970	1971	1972	
Northern									
Box Elder	13.47	13.13	16.15	15.52	12.31	12.23	11.47	14.61	
Cache	10.96	12.19	11.91	12.83	9.85	10.64	9.23	10.42	
Davis	8.97	9.73	8.92	11.88	11.29	10.35	8.73	9.28	
Morgan	0.19	0.23	0.22	0.22	0.53	0.37	0.31	0.50	
Rich	0.09	--	0.01	0.06	0.04	0.01	0.01	0.06	
Summit	0.02	0.02	0.08	0.03	0.10	0.02	0.01	0.01	
Weber	8.97	8.94	11.31	10.58	11.87	9.79	11.23	9.76	
REGIONAL TOTALS	42.67	44.24	48.59	51.13	45.99	43.41	40.99	44.64	X=45.21
Central									
Juab	1.36	1.65	1.05	1.11	1.55	1.54	1.42	1.84	
Salt Lake	12.60	12.26	9.93	8.76	10.26	10.27	9.64	8.46	
Sanpete	3.42	3.05	2.79	3.06	3.24	3.63	3.99	3.95	
Tooele	2.30	2.51	1.25	1.76	1.97	1.53	3.19	2.31	
Utah	17.24	17.29	10.28	13.43	14.01	14.62	15.78	14.27	
Wasatch	--	0.02	0.04	0.04	0.04	0.01	0.21	0.03	
REGIONAL TOTALS	36.92	36.78	25.35	28.16	31.07	31.60	34.23	30.86	X=31.87
Southern									
Beaver	0.75	0.54	0.63	0.76	0.64	0.55	0.66	0.83	
Garfield	0.12	0.16	0.10	0.06	0.11	0.04	0.15	0.10	
Iron	1.31	1.19	0.72	1.16	1.42	2.03	1.49	1.66	
Kane	--	--	--	--	--	0.00	0.01	--	
Millard	3.79	3.72	2.93	3.16	4.17	4.86	3.89	4.60	
Piute	0.19	0.14	0.09	0.13	0.20	0.12	0.11	0.16	
Sevier	3.47	2.72	2.79	2.62	3.90	3.40	3.74	3.70	
Washington	1.12	0.86	0.90	1.34	1.14	1.15	1.72	1.39	
Wayne	0.07	0.09	--	0.02	0.04	0.05	0.06	0.07	
REGIONAL TOTALS	10.82	9.42	8.16	9.24	11.62	12.20	11.83	12.50	X=10.72
Northeastern									
Daggett	--	--	0.01	0.02	0.05	0.07	0.11	0.01	
Duchesne	2.25	2.44	2.91	2.54	2.62	2.99	3.13	2.22	
Uintah	2.44	2.86	2.92	3.58	3.85	4.19	3.26	3.52	
REGIONAL TOTALS	4.69	5.30	5.84	6.14	6.52	7.25	6.50	5.76	X=6.00
Southeastern									
Carbon	1.69	1.61	1.32	1.34	1.85	1.61	1.98	1.71	
Emery	2.65	2.51	2.65	2.16	2.73	3.05	2.41	2.88	
Grand	0.05	0.09	0.10	0.16	0.13	0.05	0.12	0.14	
San Juan	0.05	--	--	--	0.09	0.02	0.03	--	
REGIONAL TOTALS	4.44	4.21	4.06	3.65	4.80	4.73	4.54	4.73	X=4.40
Unknown counties	0.07	0.02	2.00	1.67	--	0.78	1.92	1.49	
Mixed counties	0.40	--	6.00	--	--	0.03	--	0.03	
STATE TOTALS	100	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later is based on hunter-days rather than number of hunters reporting.

Table 13. State-wide summary of pheasant harvest statistics, 1948-1972.

Year	Total hunters	Total harvest	Hunter-days afield	Pheasants per hunter	Pheasants per hunter-day
1948	96,534	280,914	--	2.91	--
1949	88,369	263,340	189,453	2.98	1.39
1950	92,724	249,428	235,309	2.69	1.06
1951	76,576	246,575	171,233	3.22	1.44
1952	78,773	246,559	185,383	3.13	1.33
1953	82,595	245,307	176,480	2.97	1.39
1954	82,370	260,289	201,774	3.16	1.29
1955	78,793	196,195	178,359	2.49	1.10
1956	77,826	206,239	182,512	2.65	1.13
1957	83,025	228,319	170,387	2.75	1.34
1958	88,290	309,015	220,725	3.50	1.40
1959	86,268	243,276	202,730	2.82	1.21
1960	81,976	232,812	177,719	2.84	1.31
1961	83,493	238,439	243,305	2.86	0.98
1962	86,336	262,448	209,921	3.04	1.25
1963	87,647	297,873	198,582	3.40	1.50
1964	88,242	225,775	196,314	2.56	1.15
1965	77,409	211,876	186,215	2.74	1.14
1966	78,721	249,814	209,082	3.17	1.19
1967	85,664	284,000	257,033	3.32	1.10
1968	90,453	297,752	267,788	3.29	1.11
1969	90,573	250,241	277,887	2.76	0.90
1970	78,585	250,503	244,958	3.19	1.02
1971	87,878	259,189	294,618	2.95	0.88
1972	84,311	240,573	327,669	2.85	0.73
<hr/>					
TOTALS (1948-72)	2,113,431	6,276,751	5,205,436	2.97	1.21
<hr/>					
AVERAGES (1948-71)	84,547	251,507	212,077	2.97	1.19
<hr/>					

Table 14. Pheasant Field Bag Check Summary, 1972

Region and County	ALL HUNTS						COMPLETE HUNTS						
	Total		Total		Total		Total		Total		Total		
	Parties	Hunters	Hours	Birds	Birds/100 hrs.	Hunts	Complete	Hunters	Hours	Birds	Birds/100 hrs.	Hunter	
Northern													
Box Elder	99	311	1283	231	18	30	85	426	100	23	1.18		
Cache	222	673	2123	404	19	121	279	1036	194	19	0.70		
Davis	30	81	260	41	16	3	17	69	19	28	1.12		
Morgan	--	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--	--		
Weber	115	337	917	167	18	67	172	399	111	28	0.65		
REGIONAL TOTALS	466	1402	4583	843	18	221	553	1930	324	17	0.59		
Central													
Juab	--	--	--	--	--	--	--	--	--	--	--		
Salt Lake	176	378	871	114	13	38	89	209	35	17	0.39		
Sanpete	50	136	511	79	15	0	0	0	0	--	--		
Tooele	29	79	378	37	10	8	22	149	14	9	0.64		
Utah	118	348	1092	161	15	22	60	230	39	17	0.65		
Wasatch	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	373	941	2852	391	14	68	171	588	88	15	0.51		
Southern													
Beaver	51	101	240	53	22	4	7	18	6	33	0.86		
Garfield	--	--	--	--	--	--	--	--	--	--	--		
Iron	48	137	390	97	25	18	41	186	44	24	1.07		
Kane	--	--	--	--	--	--	--	--	--	--	--		
Millard	100	325	1307	180	14	10	23	985	20	20	0.87		
Piute	--	--	--	--	--	--	--	--	--	--	--		
Sevier	88	194	628	152	24	27	63	292	82	28	1.30		
Washington	12	32	73	10	14	0	0	0	0	--	--		
Wayne	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	299	789	2638	492	19	59	134	594	152	26	1.13		
Northeastern													
Daggett	--	--	--	--	--	--	--	--	--	--	--		
Duchesne	248	658	4072	627	15	171	446	3398	507	15	1.14		
Uintah	119	341	1082	178	16	42	100	515	88	17	0.88		
REGIONAL TOTALS	367	999	5154	805	16	213	546	3913	595	15	1.09		
Southeastern													
Carbon	17	52	158	4	3	2	5	15	0	0	0		
Emery	76	262	1023	156	15	11	32	133	20	15	0.62		
Grand	--	--	--	--	--	--	--	--	--	--	--		
San Juan	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	93	314	1181	160	14	13	37	148	20	14	0.54		
STATE TOTALS	1598	4445	16,408	2691	16	574	1441	7173	1179	16	0.82		

Table 15. Pheasant hunter success trend as determined by field bag check, 1967-72.

Region and County	1967		1968		1969		1970		1971		1972	
	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day	Birds/100 hr. Day
<u>Northern</u>												
Box Elder	24	1.40	22	0.89	9	0.41	24	1.00	10	0.30	18	1.18
Cache	24	1.12	21	1.11	19	0.51	35	1.10	21	0.63	19	0.70
Davis	26	0.71	24	0.97	25	0.58	27	0.98	16	--	16	1.12
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	23	1.00	40	0.89	--	--	--	--	--	--	--	--
Weber	24	1.08	23	0.62	12	0.50	10	0.52	13	0.35	18	0.65
REGIONAL TOTALS	24	1.16	22	0.94	16	0.50	24	0.99	16	0.52	18	0.59
<u>Central</u>												
Juab	44	1.67	--	--	--	--	50	--	13	2.00	--	--
Salt Lake	36	0.76	35	0.86	13	0.53	16	0.28	15	0.32	13	0.39
Sanpete	19	0.56	19	0.45	13	0.69	21	0.61	34	0.71	15	0.58
Tooele	19	0.50	15	0.50	30	1.90	20	2.18	19	0.72	10	0.64
Utah	25	1.12	27	1.13	17	1.05	26	0.77	27	1.13	15	0.65
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	26	0.80	26	0.85	16	0.98	21	0.61	22	0.77	14	0.51
<u>Southern</u>												
Beaver	40	1.59	--	--	65	2.00	19	0.67	39	1.33	22	0.86
Garfield	--	--	--	--	--	--	20	0.50	23	0.33	--	--
Iron	--	--	60	1.52	46	2.22	19	0.77	26	1.32	25	1.07
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	20	0.68	68	2.00	12	0.98	18	0.79	14	0.87
Piute	--	--	--	--	--	--	32	1.32	36	3.00	--	--
Sevier	--	--	71	1.39	38	1.11	25	1.36	26	1.10	24	1.30
Washington	11	0.30	9	0.42	46	--	7	0.43	21	0.31	14	0.31
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	18	0.56	49	1.09	52	1.61	18	1.07	22	0.89	19	1.13
<u>Northeastern</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	16	1.12	15	1.37	15	1.36	15	0.99	22	1.73	15	1.14
Uintah	36	1.23	25	1.12	21	0.93	19	1.16	24	1.36	16	0.88
REGIONAL TOTALS	21	1.16	18	1.27	17	1.24	17	1.06	23	1.56	16	1.09
<u>Southeastern</u>												
Carbon	12	1.10	12	0.86	15	3.00	5	0.10	15	1.00	3	0.08
Emery	24	1.00	22	0.76	16	1.02	24	0.96	13	0.53	15	0.62
Grand	--	--	--	--	--	--	--	--	9	0.33	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	21	1.03	16	0.82	16	1.04	23	0.90	13	0.51	14	0.54
STATE TOTALS	23	1.04	25	1.00	21	1.00	20	0.97	21	1.05	16	0.82

MOURNING DOVE

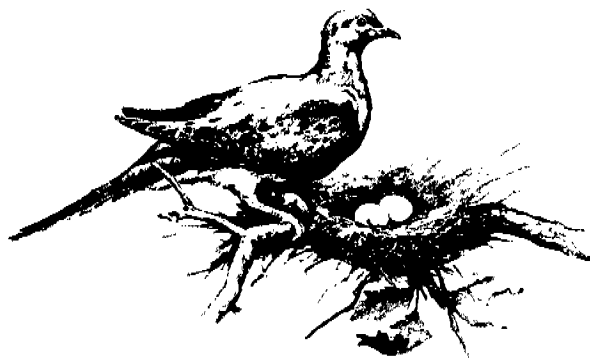
SUMMARY

The Breeding Density Index (BDI) derived from the annual call-count survey indicated a decline in the 1972 dove breeding population. The decline was sharply accentuated by an unusually high index in 1971. The breeding population level for 1972 was slightly lower than the average since 1964.

Hunting pressure, both hunters and hunter-days, increased over 1971 and resulted in an increased total harvest. Hunter success declined from 1971 and the average. Reduced success may have been due to decreased production, migration or both.

A total 1,413 doves were banded in 1972. Age composition was 36.9 percent immatures, 62.6 percent adults and 0.6 percent unknown age.

Band recovery information since 1964 indicates that a maximum of from five to ten percent of Utah banded doves have been harvested by sportsmen.



Call-Count Survey

Results of the 1972 call-count survey are found in Table 1 of this section. The long-term trend of the State's Breeding Density Index (average doves heard per route) is shown in Table 2. Indexes shown in each of these tables are unweighted and consequently differ somewhat from those published in the annual Mourning Dove Status Report compiled by the Bureau of Sport Fisheries and Wildlife. Indicated trends are similar. Following is a comparison of the results of the 1972 survey to 1971 and the average for the period 1964-71:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total doves heard per route	14.3	-37	- 8
Total calls heard per route	55.7	-33	-22
Total doves seen per route	8.6	-69	-54

The breeding density index was well below the unusually high index for 1971 but only slightly below average.

Although production data are not available for mourning doves the weather conditions which decimated production of most other upland game birds probably had a detrimental influence upon mourning dove reproductive success.

The long-term trend of Utah's dove population as shown in the Mourning Dove Status Report for 1972 is downward but not to a degree that is statistically significant. The trend since 1964 as shown in Table 2 is relatively stable. It is probable that habitat deterioration over the past several years has had a detrimental influence upon the State's dove population.

Harvest

Hunter Questionnaire

Information obtained from the hunter questionnaire for 1972 is summarized in Table 3. Long-term trends of mourning doves bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 4-6 and total State-wide harvest statistics in Table 7. Harvest statistics for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Mourning dove hunters	29,341	+13	+84
Mourning dove harvest	238,354	+ 5	+67
Hunter-days afield	94,046	+16	+133
Mourning doves per hunter	8.12	- 7	- 7
Mourning doves per hunter-day	2.53	- 9	-35

Weather conditions preceding the opening of the mourning dove season consisted of below normal temperatures and near normal precipitation. Scattered rainshowers occurred throughout the State during the first week of the season. These conditions did not appear excessively detrimental to dove hunting, particularly on the opening weekend.

Results of the harvest questionnaire indicated an increase in hunting pressure, both from the standpoint of total hunters and hunter-days. Because of the increased pressure, total harvest increased. Hunter success per day and for the season both decreased from 1971 and the average. The reduced hunter success probably indicated a reduced population level at the time the hunting season opened. Whether this was due to poorer reproduction, migration or both is uncertain.

Long-term harvest trends are depicted in Figure 1.

Field Bag Checks

A summary of field-bag-check data for 1972 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1972 survey compare to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	1,275	-5	- 8
Total hours hunted	3,359	+6	-13
Doves per hunter (complete hunts)	3.03	-1	-15
Doves bagged per 100 hours	86	+5	-10
Average hours per hunter-day (complete hunts)	3.2	-14	-11
Hours hunted per dove bagged	1.2	0	+ 9

Hunter success determined by field bag check for 1972 was similar to 1971. Most complete hunt data collected came from the Northern Region and consequently is not comparable to data collected State-wide via questionnaire.

Dove hunters in 1972 spent slightly less time afield per day in comparison to 1971 and the average. An average of 1.2 hours was required for each dove bagged; the same effort required in 1971 but higher than average.

Banding

Results of the annual preseason mourning dove banding program for 1972 are shown in Table 10. The trend of doves banded since 1961 is shown in Table 11. Band recovery rates and distribution of recoveries by State and country for Utah banded doves are shown in Tables 12 and 13 respectively. Table 14 is a summary of the number of doves banded in other states that have been recovered in Utah.

During 1972, 1,251 doves were banded by Division personnel. An additional 162 were banded by Game Management Agents of the U. S. Bureau of Sport Fisheries and Wildlife. Banding was distributed among 11 counties.

Age composition of doves banded was 36.9 percent immatures, 62.6 percent adults and 0.6 percent unknown age. This suggests reduced reproductive success in 1972 as compared to 1971 when 40.2 percent of the doves banded were immatures.

The direct recovery rate or the percentage of doves killed during the first hunting season following banding for immatures and adults combined from 1949-62 was 1.1 percent. From 1964-71 this value was 1.4 percent. Total recovery rate (direct recoveries plus all subsequent recoveries) for both periods, was 2.7 percent. Expansion of the direct recovery rate of 1.4 percent for the period 1964-71 using an assumed band reporting rate of 30 percent indicates that only 4.7 percent of the State's mourning doves were harvested by hunters during this period. If crippling loss is considered, the total death rate due to hunting would still not exceed 5-10 percent of the population.

The distribution of band recoveries for Utah banded doves shows that 78.6 percent of combined recoveries (including recoveries, returns or foreign retraps) have been made in Utah. Recoveries from Utah and apparent primary dove wintering areas in Arizona, California and Mexico combined account for 97.7 percent of all recoveries received as of March 31, 1972.

Only 31 bands have been recovered in Utah from doves banded in other states. Of this number, 14 were originally banded in Arizona, primarily during the winter months.

In summary, it is evident that Utah hunters primarily harvest doves that are raised in Utah. They do not harvest a significant number of migrating doves. Doves produced in Utah, but harvested elsewhere, are probably not harvested while migrating, but rather on the wintering area indicating rapid movement from summer to winter habitat.

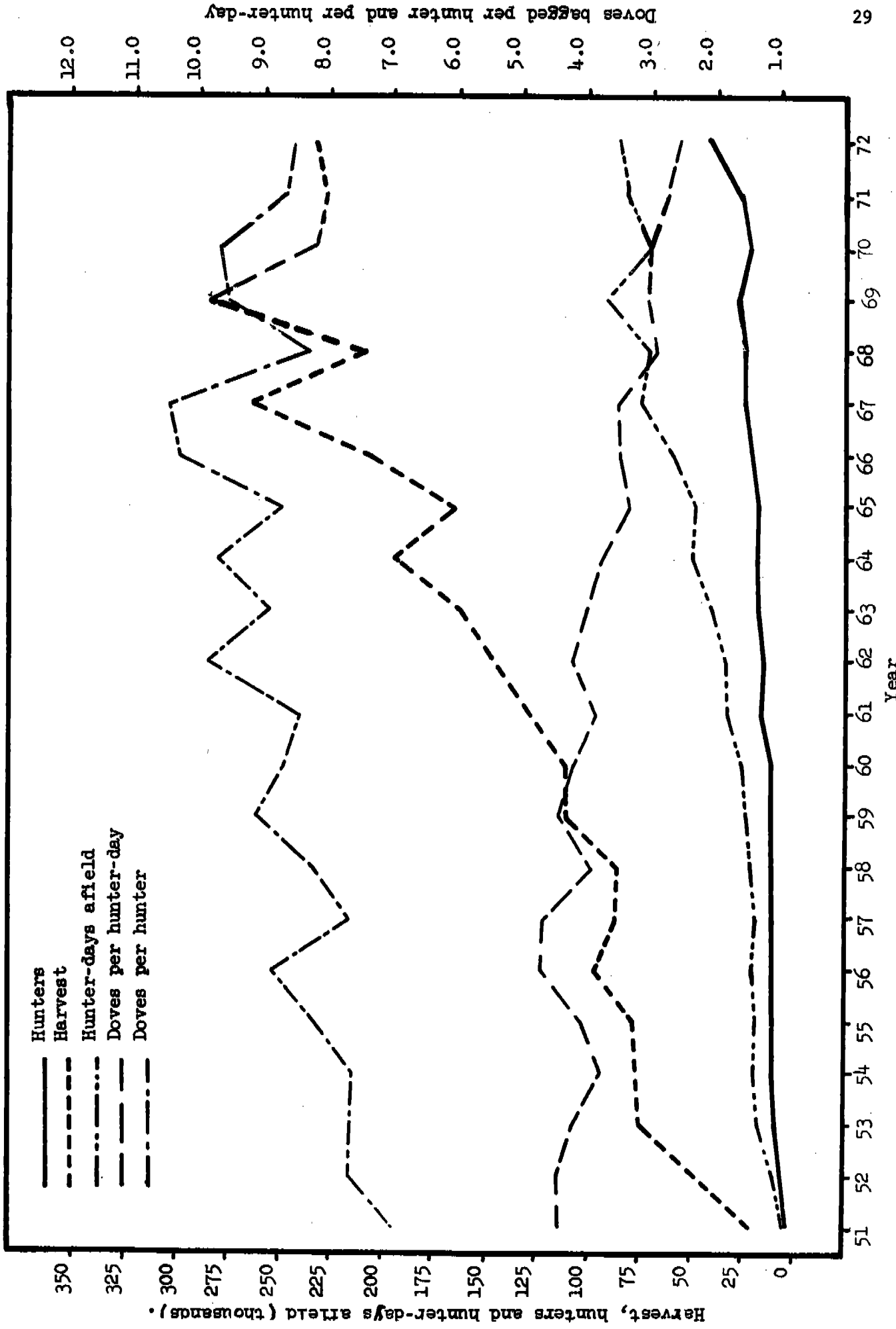


Figure 1. State-wide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call-count survey for 1972.

Region and County	Route Number	Total Doves Heard per Route	Total Calls Heard per Route	Total Doves Seen per Route
<u>Northern</u>				
Summit	R1020	7	38	31
Box Elder	R1500	2	2	3
<u>Regional Totals</u>		9	40	34
<u>Central</u>				
Juab	R2830	6	15	4
<u>Regional Totals</u>		6	15	4
<u>Southern</u>				
Sevier-Sanpete	R0370	0	0	0
Wayne-Sevier	R0660	20	44	3
Garfield	R1090	29	101	0
Millard	R3640	19	89	4
Beaver	R3820	13	45	6
Iron	R4000	20	137	12
Washington	R4310	61	246	22
<u>Regional Totals</u>		162	662	47
<u>Northeastern</u>				
Duchesne	R0080	8	24	3
Uintah	R0220	4	48	2
<u>Regional Totals</u>		12	72	5
<u>Southeastern</u>				
Emery	R0540	1	2	10
San Juan	R1170	24	44	29
San Juan	R1450	Automatic Zero		
<u>Regional Totals</u>		25	46	39
<u>STATE TOTALS</u>		214	835	129
<u>STATE AVERAGE</u>		14.3	55.7	8.6
<u>PERCENT CHANGE</u> (from previous year)		-37	-33	-69

Table 2. Regional and county summary of mourning dove breeding population trend as indicated by the number of doves heard per route during random call-count surveys, 1964-72.

Region and County	Route Number	Number of Doves Heard per Route									
		1964	1965	1966	1967	1968	1969	1970	1971	1972	
Northern Region											
Summit	R1020	11	9	16	10	16	7	11	10	7	
Box Elder	R1500	2	5	6	2	6	3	7	4	2	
Regional Totals		13	14	22	12	22	10	18	14	9	
Central Region											
Juab	R2830	28	17	22	42	23	8	15	32	6	
Regional Totals		28	17	22	42	23	8	15	32	6	
Southern Region											
Sevier-Sanpete	R0370	3	3	0	7	1	0	1	1	0	
Wayne-Sevier	R0660	8	8	5	12	7	2	8	11	20	
Garfield	R1090	22	19	29	27	17	18	6	14	29	
Millard	R3640	--	18	18	40	43	26	7	17	19	
Beaver	R3820	9	17	19	9	23	9	17	12	13	
Iron	R4000	26	33	13	19	13	26	15	24	20	
Washington	R4310	33	36	36	40	21	38	54	64	61	
Regional Totals		101	134	120	154	125	119	108	143	162	
Northeastern Region											
Duchesne	R0080	10	7	23	62	11	10	3	16	8	
Uintah	R0220	6	9	12	17	33	38	15	66	4	
Regional Totals		16	16	35	79	44	48	18	82	12	
Southeastern Region											
Emery	R0540	6	6	3	2	7	11	9	10	1	
San Juan	R1170	5	5	1	6	7	18	33	60	24	
San Juan	R1450	--	2	0	0	0	Automatic	Zero			
Regional Totals		11	13	4	8	14	29	42	70	25	
STATE TOTALS											
		169	194	203	295	228	214	201	341	214	
STATE AVERAGES											
		13.0	12.9	13.5	19.7	15.2	14.3	13.4	22.7	14.3	
PERCENT CHANGE											
(from previous year)											
			-1	+5	+46	-23	-6	-6	+69	-37	

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-Day	Birds per hunter*	% of Pressure	% of Harvest
Northern							
Box Elder	129	337	1,064	3.16	9.84	8.11	10.11
Cache	62	193	430	2.23	8.78	4.65	4.08
Davis	59	137	178	1.30	5.18	3.30	1.69
Morgan	22	62	131	2.11	6.83	1.49	1.24
Rich	7	13	40	3.08	2.50	0.31	0.38
Summit	8	39	79	2.03	10.00	0.94	0.75
Weber	96	319	532	1.67	6.54	7.68	5.05
Regional Totals	383	1,100	2,454	2.23	6.90	26.48	23.31
Central							
Juab	100	224	859	3.83	10.47	5.39	8.16
Salt Lake	165	514	930	1.81	7.89	12.37	8.83
Sanpete	34	110	224	2.04	8.69	2.65	2.13
Tooele	97	265	631	2.38	7.68	6.38	5.99
Utah	277	775	1,735	2.24	7.53	18.66	16.48
Wasatch	13	27	40	1.48	5.80	0.65	0.38
Regional Totals	686	1,915	4,419	2.31	7.83	46.10	41.97
Southern							
Beaver	20	77	363	4.71	10.87	1.85	3.45
Garfield	5	15	74	4.93	12.33	0.36	0.70
Iron	25	97	325	3.35	14.64	2.34	3.09
Kane	3	5	13	2.60	5.50	0.12	0.12
Millard	49	129	495	3.84	10.09	3.11	4.70
Piute	7	26	92	3.54	15.33	0.63	0.87
Sevier	40	160	391	2.44	10.16	3.85	3.71
Washington	32	127	423	3.33	12.97	3.06	4.02
Wayne	1	4	10	2.50	0.00	0.10	0.09
Regional Totals	182	640	2,186	3.42	11.88	15.41	20.76
Northeastern							
Daggett	5	10	27	2.70	10.00	0.24	0.26
Duchesne	14	33	162	4.91	8.80	0.79	1.54
Uintah	29	106	167	1.58	6.21	2.55	1.59
Regional Totals	48	149	356	2.39	7.14	3.59	3.38
Southeastern							
Carbon	35	98	289	2.95	9.66	2.36	2.75
Emery	19	47	126	2.68	4.87	1.13	1.20
Grand	11	58	182	3.14	22.13	1.40	1.73
San Juan	13	52	205	3.94	7.75	1.25	1.95
Regional Totals	78	255	802	3.15	11.83	6.14	7.62
Unknown counties	43	90	261	2.90	3.00	2.17	2.48
Mixed counties	1	5	50	10.00	2.00	0.12	0.47
STATE TOTALS	1,421	4,154	10,528	2.53	8.12	100	100

*Based on county of residence.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	4.97	5.37	4.35	3.79	3.88	3.60	3.85	3.16
Cache	2.96	3.83	3.27	3.03	2.49	3.27	2.62	2.23
Davis	1.75	1.81	1.76	1.56	1.68	1.56	1.64	1.30
Morgan	3.94	4.79	4.18	3.69	3.88	3.70	3.63	2.11
Rich	9.50	--	3.20	2.18	4.27	3.44	3.80	3.08
Summit	3.17	3.57	2.60	1.70	3.15	5.00	2.77	2.03
Weber	2.25	2.33	2.45	1.68	2.12	1.98	1.59	1.67
Regional Totals	3.32	3.57	3.30	2.59	2.84	2.77	2.53	2.23
Central								
Juab	5.86	5.67	6.21	5.05	4.88	5.89	5.06	3.83
Salt Lake	2.42	2.75	3.14	2.29	2.26	2.18	2.03	1.81
Sanpete	3.00	5.25	3.03	2.82	3.14	3.64	3.90	2.04
Tooele	3.70	3.39	3.78	3.23	3.33	3.76	2.98	2.38
Utah	3.27	3.27	3.32	2.92	3.10	3.41	2.71	2.24
Wasatch	3.90	2.71	4.48	4.11	1.49	2.41	1.75	1.48
Regional Totals	3.18	3.39	3.70	3.03	3.07	3.16	2.75	2.31
Southern								
Beaver	4.78	3.96	4.55	4.85	5.65	4.28	4.00	4.71
Garfield	2.44	1.20	3.61	1.60	3.11	1.33	3.25	4.93
Iron	4.83	4.55	3.59	4.97	2.91	3.72	3.41	3.35
Kane	8.04	5.00	5.86	1.64	3.60	3.00	3.53	2.60
Millard	4.90	5.35	4.41	4.81	3.84	5.83	4.45	3.84
Piute	3.64	2.00	6.78	0.55	2.16	7.67	3.60	3.54
Sevier	1.93	2.79	1.99	2.31	3.20	2.95	3.32	2.44
Washington	4.17	4.02	4.21	2.71	4.04	4.38	3.87	3.33
Wayne	5.69	10.00	0.47	2.50	--	2.58	3.00	2.50
Regional Totals	4.15	4.10	3.75	3.56	3.55	4.15	3.79	3.42
Northeastern								
Daggett	2.75	--	3.69	4.00	1.67	7.30	5.86	2.70
Duchesne	2.00	3.73	2.00	1.12	2.67	4.54	3.00	4.91
Uintah	4.13	3.59	2.37	2.62	2.21	3.05	2.30	1.58
Regional Totals	3.77	3.62	2.42	2.10	2.26	3.70	2.60	2.39
Southeastern								
Carbon	2.37	2.87	2.56	3.17	3.56	2.26	0.89	2.95
Emery	1.58	2.89	4.68	3.69	2.81	1.28	2.39	2.68
Grand	2.82	2.00	4.00	3.67	3.71	5.79	2.71	3.14
San Juan	3.88	5.60	4.65	7.00	3.27	2.29	3.15	3.94
Regional Totals	2.48	3.08	3.76	3.81	3.24	2.38	1.93	3.15
Unknown counties	2.18	1.84	3.28	2.88	--	4.55	2.49	2.90
Mixed counties	3.76	--	3.88	1.00	--	0.00	--	10.00
STATE TOTALS	3.36	3.51	3.56	2.96	3.07	3.14	2.79	2.53

Table 6. Distribution of mourning dove hunting pressure by region and county, 1965-72*.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	16.31	10.12	9.63	8.96	9.44	8.83	7.23	8.11
Cache	8.49	5.34	5.81	5.59	3.56	5.22	4.39	4.65
Davis	6.66	5.25	3.43	6.18	5.15	6.66	4.45	3.30
Morgan	1.50	1.59	1.96	1.83	2.20	1.50	0.71	1.49
Rich	0.17	--	0.28	0.33	0.25	0.44	0.53	0.31
Summit	--	1.31	0.83	0.68	0.77	0.44	0.68	0.94
Weber	4.33	6.28	6.64	8.85	7.73	5.58	8.08	7.68
Regional Totals	37.46	29.89	28.58	32.43	29.10	28.68	26.07	26.48
Central								
Juab	3.66	7.12	4.98	4.62	5.60	3.50	4.45	5.39
Salt Lake	18.30	16.21	10.38	13.05	13.86	17.38	15.23	12.37
Sanpete	1.16	2.34	3.85	2.25	2.18	3.14	1.89	2.65
Tooele	5.16	9.09	9.71	9.53	7.87	4.61	7.97	6.38
Utah	6.49	20.52	14.11	15.98	14.29	16.10	17.94	18.66
Wasatch	0.17	0.28	0.75	0.56	0.84	0.94	2.68	0.65
Regional Totals	34.94	44.56	43.77	45.98	44.64	45.67	50.17	46.10
Southern								
Beaver	1.16	0.75	1.30	1.63	0.77	0.89	1.29	1.86
Garfield	0.50	0.37	0.50	0.15	0.64	0.08	0.53	0.36
Iron	0.83	1.87	1.36	2.22	3.52	3.86	2.26	2.34
Kane	0.67	0.09	0.39	0.33	1.25	0.03	0.39	0.12
Millard	3.33	3.47	3.43	3.34	5.62	3.36	3.58	3.11
Piute	0.50	0.09	0.25	1.12	0.86	0.08	0.13	0.63
Sevier	1.33	2.16	2.21	2.63	2.40	3.22	3.00	3.85
Washington	1.00	1.12	1.72	2.07	2.49	0.94	2.47	3.06
Wayne	0.33	0.09	0.47	0.12	--	0.33	0.16	0.10
Regional Totals	9.65	10.01	11.62	13.61	17.55	12.80	13.81	15.41
Northeastern								
Daggett	0.50	--	0.36	0.09	0.14	0.28	0.18	0.24
Duchesne	0.50	0.56	0.86	0.98	0.54	0.36	0.39	0.79
Uintah	0.83	1.50	1.80	1.54	2.65	2.03	2.47	2.55
Regional Totals	1.83	2.06	3.02	2.62	3.33	2.67	3.05	3.59
Southeastern								
Carbon	3.16	1.12	1.69	1.92	2.45	3.97	2.00	2.36
Emery	1.00	0.66	1.02	1.07	2.11	2.28	0.95	1.13
Grand	0.67	0.09	0.80	0.44	0.32	0.92	0.74	1.40
San Juan	0.50	0.28	1.02	0.44	0.50	1.55	0.87	1.25
Regional Totals	5.33	2.15	4.54	3.88	5.38	8.72	4.55	6.14
Unknown counties	3.16	0.28	2.24	1.48	--	1.47	2.34	2.17
Mixed counties	7.65	--	6.23	0.03	--	0.00	--	0.12
STATE TOTALS	100	100	100	100	100	100	100	100

* Distribution of hunting pressure for 1967 and later is based on hunter-days rather than number of hunters reporting.

Table 7. State-wide summary of mourning dove harvest statistics, 1951-72.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Doves per Hunter Day	Doves per Hunter
1951	3,007	20,448	4,455	4.59	6.80
1952	6,420	49,498	10,784	4.59	7.71
1953	9,887	75,636	17,797	4.25	7.65
1954	9,901	75,941	19,724	3.85	7.67
1955	9,653	79,444	19,282	4.12	8.23
1956	10,744	95,729	20,411	4.69	8.91
1957	11,298*	86,769*	18,620*	4.66	7.68
1958	11,853	85,934	21,591	3.98	7.25
1959	12,142	110,856	24,911	4.45	9.13
1960	12,440	108,477	25,766	4.21	8.72
1961	15,192	128,001	33,434	3.89	8.42
1962	14,663	144,826	34,281	4.23	9.89
1963	18,258	162,769	40,490	4.02	8.91
1964	19,829	193,538	51,671	3.75	9.76
1965	18,710	164,087	48,835	3.36	8.69
1966	20,594	212,696	60,608	3.51	10.33
1967	25,161	263,949	74,171	3.56	10.49
1968	25,105	207,922	70,186	2.96	8.28
1969	29,131	279,311	90,965	3.07	9.59
1970	23,908	232,469	73,984	3.14	9.72
1971	26,064	226,645	81,271	2.79	8.70
1972	29,341	238,354	94,046	2.53	8.12

TOTALS

1951-1972	363,295	3,243,481	1,037,456	3.13	8.93
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AVERAGES

(1951-1971)	15,903	143,101	40,442	3.89	8.69
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*Estimated

Table 8. Mourning Dove Field Bag Check Summary, 1972.

Region and County	ALL HUNTS				COMPLETE HUNTS				Birds/100 hrs. Hunter
	Total Parties	Total Hunters	Total Hours	Total Birds/100 hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 hrs.	
<u>Northern</u>									
Box Elder	274	439	1,542	1,303	138	355	1,351	1,217	90
Cache	15	32	76	60	15	32	76	60	79
Davis	--	--	--	--	--	--	--	--	--
Morgan	9	20	53	24	3	5	15	12	80
Rich	3	13	28	11	0	0	0	0	--
Summit	--	--	--	--	--	--	--	--	--
Weber	29	53	83	90	19	35	63	79	125
<u>Regional Totals</u>	330	557	1,782	1,488	175	427	1,505	1,368	91
<u>Central</u>									
Juab	16	48	136	184	4	11	25	11	44
Salt Lake	49	104	215	102	17	36	86	55	64
Sanpete	12	30	57	95	1	2	6	9	150
Tooele	42	114	344	141	9	18	73	49	67
Utah	75	154	260	213	6	10	23	26	113
Wasatch	--	--	--	--	--	--	--	--	--
<u>Regional Totals</u>	194	450	1,012	735	37	77	213	150	70
<u>Southern</u>									
Beaver	6	10	16	13	0	0	0	0	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	4	7	13	39	2	5	10	33	330
Kane	5	7	12	28	3	4	5	12	240
Millard	30	73	214	231	3	5	26	42	162
Piute	--	--	--	--	--	--	--	--	--
Sevier	9	20	21	16	3	7	8	5	62
Washington	1	2	4	7	0	0	0	0	--
Wayne	3	4	15	14	1	1	4	6	150
<u>Regional Totals</u>	58	123	295	348	12	22	53	98	185
<u>Northeastern</u>									
Daggett	20	44	83	78	11	29	42	59	140
Duchesne	5	13	35	24	0	0	0	0	--
Uintah	38	88	152	227	20	39	81	127	157
<u>Regional Totals</u>	63	145	270	329	31	68	123	186	151
<u>Southeastern</u>									
Carbon									
Emery									
Grand									
San Juan									
<u>Regional Totals</u>	645	1,275	3,359	2,900	255	594	1,894	1,802	95
<u>STATE TOTALS</u>									
	645	1,275	3,359	2,900	255	594	1,894	1,802	95
									3.03

NO DATA COLLECTED

Table 9. Mourning dove hunter success trend determined by field bag checks, 1967-72.

Region and County	1967		1968		1969		1970		1971		1972	
	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter
<u>Northern</u>												
Box Elder	203	6.58	84	3.83	79	3.30	81	3.20	70	3.43	84	3.43
Cache	50	2.12	158	4.62	91	1.88	164	4.44	106	7.00	79	1.88
Davis	55	1.00	22	1.40	62	0.80	--	--	--	--	--	--
Morgan	41	0.70	--	--	--	--	--	--	131	3.70	45	1.20
Rich	45	4.40	186	6.92	118	2.20	--	--	67	3.00	39	0.85
Summit	--	--	--	--	191	4.66	91	1.44	12	0.43	--	--
Weber	102	0.50	29	0.35	85	1.98	116	3.75	33	0.37	108	2.26
Regional Totals	166	5.77	84	3.75	82	3.08	86	3.20	71	3.22	84	3.20
<u>Central</u>												
Juab	--	--	61	--	130	8.00	95	4.33	83	3.00	135	3.83
Salt Lake	84	2.16	35	0.85	43	0.65	72	1.28	71	1.36	47	1.53
Sanpete	--	--	52	1.12	--	--	19	0.47	22	0.82	167	3.17
Tooele	94	5.52	43	2.56	46	1.58	36	0.60	61	0.78	41	2.72
Utah	121	4.07	64	3.58	75	1.50	85	4.20	111	5.27	82	1.38
Wasatch	--	--	--	--	70	4.00	--	--	--	--	--	--
Regional Totals	101	3.32	46	2.12	63	1.92	66	1.46	70	1.58	73	1.95
<u>Southern</u>												
Beaver	264	7.63	--	--	--	--	--	--	88	--	81	1.30
Garfield	--	--	--	--	143	--	72	2.23	--	--	--	--
Iron	300	4.25	209	5.00	--	--	486	5.45	205	5.36	300	6.60
Kane	--	--	--	--	143	3.33	75	--	--	--	233	3.00
Millard	--	--	105	2.58	--	--	--	--	119	6.33	108	3.16
Piute	--	--	133	3.57	190	2.78	158	6.00	92	--	--	--
Sevier	--	--	--	--	--	--	217	--	133	5.33	76	0.80
Washington	114	2.54	86	1.29	220	6.24	238	4.33	--	--	175	3.50
Wayne	--	--	--	--	--	--	--	--	--	--	93	3.50
Regional Totals	190	4.32	110	2.77	205	4.06	217	4.42	124	5.86	118	4.45
<u>Northeastern</u>												
Daggett	--	--	--	--	38	0.69	--	--	152	4.20	94	2.03
Duchesne	--	--	--	--	78	1.83	36	3.00	--	--	69	1.85
Uintah	100	2.00	143	3.67	141	5.77	132	3.39	147	3.29	149	3.26
Regional Totals	100	2.00	143	3.67	122	3.98	109	3.37	150	3.78	122	2.74
<u>Southeastern</u>												
Carbon	126	5.36	--	--	175	3.71	0	0	--	--	--	--
Emery	109	2.00	--	--	161	3.54	159	6.44	207	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	111	3.73	--	--	339	10.00	--	--	--	--	--	--
Regional Totals	114	3.91	--	--	246	4.00	155	6.44	207	--	--	--
STATE TOTALS	146	5.19	76	3.62	87	3.00	87	2.98	82	3.07	86	3.03

Table 10. Summary of preseason mourning dove banding in Utah during 1972.

County	Immatures	Adults	Unclassified	Total
Box Elder	2	5		7
Daggett	39	60		99
Duchesne	15	128		143
Iron	125	124		249
Juab	71	151	7	229
Millard	15	12		27
Piute	75	15		90
San Juan	73	129		202
Tooele	60	158		218
Uintah	9	85		94
Washington	37	17	1	55
TOTALS	521 (36.9%)	884 (62.6%)	8 (0.6%)	1,413

Of the total 1,413 doves, 1,251 were banded by Division of Wildlife Resources personnel and 162 by Bureau of Sport Fisheries and Wildlife personnel.

Table 11. Summary of mourning doves banded in Utah, 1968-72.

Region and County	1968			1969			1970			1971			1972			Total 1961-72**		
	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total
Northern Region																		
Box Elder	10	35	45	30	189	219	14	83	97	--	--	--	2	5	7	995	2422	3417
Cache	--	--	--	30	36	66	--	--	--	--	--	--	--	--	--	30	39	69
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	22	20	45*	--	--	--	22	20	45*
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	10	35	45	60	225	285	14	83	97	22	20	45*	2	5	7	1047	2481	3531*
Central Region																		
Juab	61	113	174	213	148	361	67	58	125	64	53	117	71	151	229*	1587	2559	4209*
Salt Lake	--	--	--	31	59	90	--	--	--	--	--	--	--	--	--	47	214	261
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	138	193	331	227	447	674	126	228	354	85	370	455	60	158	218	1215	2051	3291*
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61	155	216
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	199	306	505	471	654	1125	193	286	479	149	423	572	131	309	447*	2910	4979	7977*
Southern Region																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	26	32
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	179	49	228	113	1	114	125	124	249	417	174	591
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	86	68	154
Millard	--	--	--	79	61	140	28	35	63	38	13	51	15	12	27	303	457	761*
Piute	--	--	--	172	171	343	132	268	400	166	211	377	75	15	90	545	665	1210
Sevier	--	--	--	--	--	--	--	--	--	2	0	2	--	--	--	4	26	30
Washington	--	--	--	17	24	41	13	26	40*	41	2	43	37	17	55*	117	978	1097*
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	8	12
Regional Totals	--	--	--	268	256	524	352	378	731*	360	227	587	252	168	421*	1482	2402	3887*
Northeastern Region																		
Daggett	1	3	4	--	--	--	7	2	9	7	28	35	39	60	99	54	93	147
Duchesne	--	--	--	--	--	--	4	26	30	7	64	71	15	128	143	26	218	244
Uintah	8	6	14	3	12	15	38	83	121	49	123	172	9	85	94	368	1167	1535
Regional Totals	9	9	18	3	12	15	49	111	160	63	215	278	63	273	336	448	1478	1926
Southeastern Region																		
Carbon	1	2	3	7	2	9	--	--	--	--	--	--	--	--	--	8	4	12
Emery	--	--	--	39	14	53	--	--	--	--	--	--	--	--	--	39	14	53
Grand	52	17	69	--	--	--	--	--	--	--	--	--	--	--	--	52	17	69
San Juan	--	--	--	--	--	--	15	5	20	37	52	89	73	129	202	439	219	658
Regional Totals	53	19	72	46	16	62	15	5	20	37	52	89	73	129	202	538	254	792
STATE TOTALS	271	369	640	848	1163	2011	623	863	1487*	631	937	1571	521	884	1413	6425	11594	18113*

*Includes some unclassified birds.

**Long term total.

Table 12. Summary of mourning dove band recovery rates for the period 1949-71.

Time Period	Doves Banded	Number of Recoveries		Recovery Rates	
		Direct*	Total**	Direct	Total
1949-62	4,001	43	110	.011	.027
1964	1,945	37	68	.019	.035
1965	1,416	33	57	.023	.040
1966	973	1	7	.001	.007
1967	2,233	37	60	.017	.027
1968	640	6	14	.009	.022
1969	2,006	36	55	.018	.027
1970	1,487	16	40	.011	.027
1971	1,571	8	13	.005	.008
<hr/>					
TOTALS 1964-71	12,271	174	314	.014	.026
<hr/>					
GRAND TOTALS	16,272	217	424	.013	.026

*Direct recovery - A banded dove that is killed during the first hunting season following banding.

**Total recovery - Direct recoveries plus all subsequent recoveries for any given cohort of banded doves.

Table 13. Summary of combined recoveries, returns and foreign retraps of mourning doves banded in Utah, 1961-71.

State and Country of Recovery	Recoveries as of		Recoveries During 1970		Total	
	August, 1970	(Percent)	and 1971*	Recoveries	(Percent)	
UNITED STATES						
Utah	540	(81.3)	15	555	(78.6)	
Arizona	38	(5.7)	16	54	(7.6)	
Northern	2		--	--		
Southern	36		--	--		
California	21	(3.2)	2	23	(3.2)	
Northern	3		--	--		
Central	4		--	--		
Southern	14		--	--		
New Mexico	4	(0.6)	1	5	(0.7)	
Northern	2		--	--		
Southern	2		--	--		
Idaho	2	(0.3)	0	2	(0.3)	
Texas	2	(0.3)	0	2	(0.3)	
Oregon	2	(0.3)	0	2	(0.3)	
Colorado	2	(0.3)	0	2	(0.3)	
Nevada	1	(0.2)	0	1	(0.1)	
Iowa	1	(0.2)	0	1	(0.1)	
States Other Than Utah	73	(11.0)	19	92	(13.0)	
United States Total	613	(92.3)	34	647	(91.6)	
MEXICO						
Jalisco	20	(3.0)	1	21	(3.0)	
Michoacan	7	(1.0)	4	11	(1.6)	
Sinaloa	9	(1.4)	0	9	(1.3)	
Sonora	5	(0.8)	0	5	(0.7)	
Unknown State	1	(0.2)	3	4	(0.6)	
Durango	2	(0.3)	0	2	(0.3)	
Guanajuato	1	(0.2)	0	1	(0.1)	
Aguascalientes	1	(0.2)	0	1	(0.1)	
Colima	1	(0.2)	0	1	(0.1)	
Nayarit	1	(0.2)	0	1	(0.1)	
Mexico State	1	(0.2)	0	1	(0.1)	
Baja California	1	(0.2)	0	1	(0.1)	
Mexico Total	50	(7.5)	8	58	(8.2)	
HONDURAS	1	(0.2)	0	1	(0.1)	
TOTAL RETURNS	664	(100)	42	706	(100)	

*As per reports received as of March 31, 1972

Table 14. Summary of mourning doves banded in other states and recovered in Utah through August, 1970.

<u>State Where Banded</u>	<u>Number of Returns</u>
Arizona	14
Idaho	7
Washington	4
Nevada	3
Texas	2
Oregon	<u>1</u>
Total Recoveries and Returns of Doves Banded In Other States:	31

CHUKAR PARTRIDGE

SUMMARY

All population indexes, except young-adult ratios, suggested a population level equal to or greater than 1971. Young-adult ratios suggested a substantial reduction.

Harvest questionnaire data proved the reduction indicated by the young-adult ratio to be correct. Hunting pressure declined slightly from 1971 while hunter-success and total harvest were substantially below 1971 and the average. Extensive rainfall preceeding the opening of the hunting season dispersed the birds and probably depressed hunter success in many areas.

Field bag checks reflected the reduced success shown by questionnaire and indicated that hunters spent more time per bird bagged with a longer average hunter day.



Brood Counts

Results of the annual random brood survey are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and chukars observed per 100 hours are found in Tables 2-4. Survey results for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total chukars observed	2,148	+41	+37
Young per 100 adults	235	-24	-45
Mean brood size	10.08	+29	+15
Chukars observed per 100 hours	556	+71	+38
Total hours effort	386	-18	-3

Considering the above average harvest and hunter success in 1971, the breeding population level should have been above average in 1972.

Weather conditions, particularly in the southern half of the State were not conducive to good production. Extremely dry conditions in late winter and spring resulted in poor forage conditions.

During brood counts, fieldmen exerted less effort and counted substantially more chukars compared to both 1971 and the average. Dry conditions may have concentrated birds in the vicinity of water making them easier to locate.

Mean broodsize was higher than both 1971 and the average while young per 100 adults was considerably lower than 1971 and the average.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire survey for 1972 are shown in Table 5. Long-term trends of chukars bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total State-wide harvest statistics in Table 9. Following is a comparison of 1972 harvest statistics to 1971 and the average:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Chukar hunters	16,685	-7	+5
Chukars harvested	36,925	-40	-15
Hunter-days afield	46,502	-16	+5
Chukars per hunter	2.21	-35	-7
Chukars per hunter-day	0.79	-28	-14

Hunting pressure, in terms of both total hunters and hunter-days afield declined from 1971 but were still slightly above average. Hunter success, both per day and per hunter, was below both 1971 and the average. The combination of reduced hunting pressure and success resulted in a total harvest that was lower than both 1971 and the average; the lowest total since 1965.

Chukar hunter success in 1971 was considerably poorer than expected. This was apparently due to poorer production than indicated by inventory data and wide-spread rainfall just prior to the season which seemed to disperse the birds more than usual. Long-term trends of chukar harvest statistics are shown in Figure 1.

Field Bag Checks

A summary of field-bag-check data for 1972 is shown in Table 10. The hunter success trend determined via bag check since 1966 is shown in Table 11. Data for the 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	571	-37	-30
Total hours hunted	3,532	-32	-6
Chukars per hunter (complete hunts)	0.97	-8	-18
Chukars bagged per 100 hours	14	-26	-46
Average hours per hunter-day (complete hunts)	6.6	+20	+47
Hours hunted per chukar bagged	7.0	+32	+67

This information confirms the reduced success indicated by questionnaire. The distribution of hunter's sampled was such that the state-wide index of hunter success (per day) is not comparable to that obtained via questionnaire. Most of the data were derived from checking stations sampling Box Elder, Juab and Tooele Counties.

The average chukar hunter spent more time afield each day in comparison to both 1971 and the average and hunted more hours for each chukar bagged.

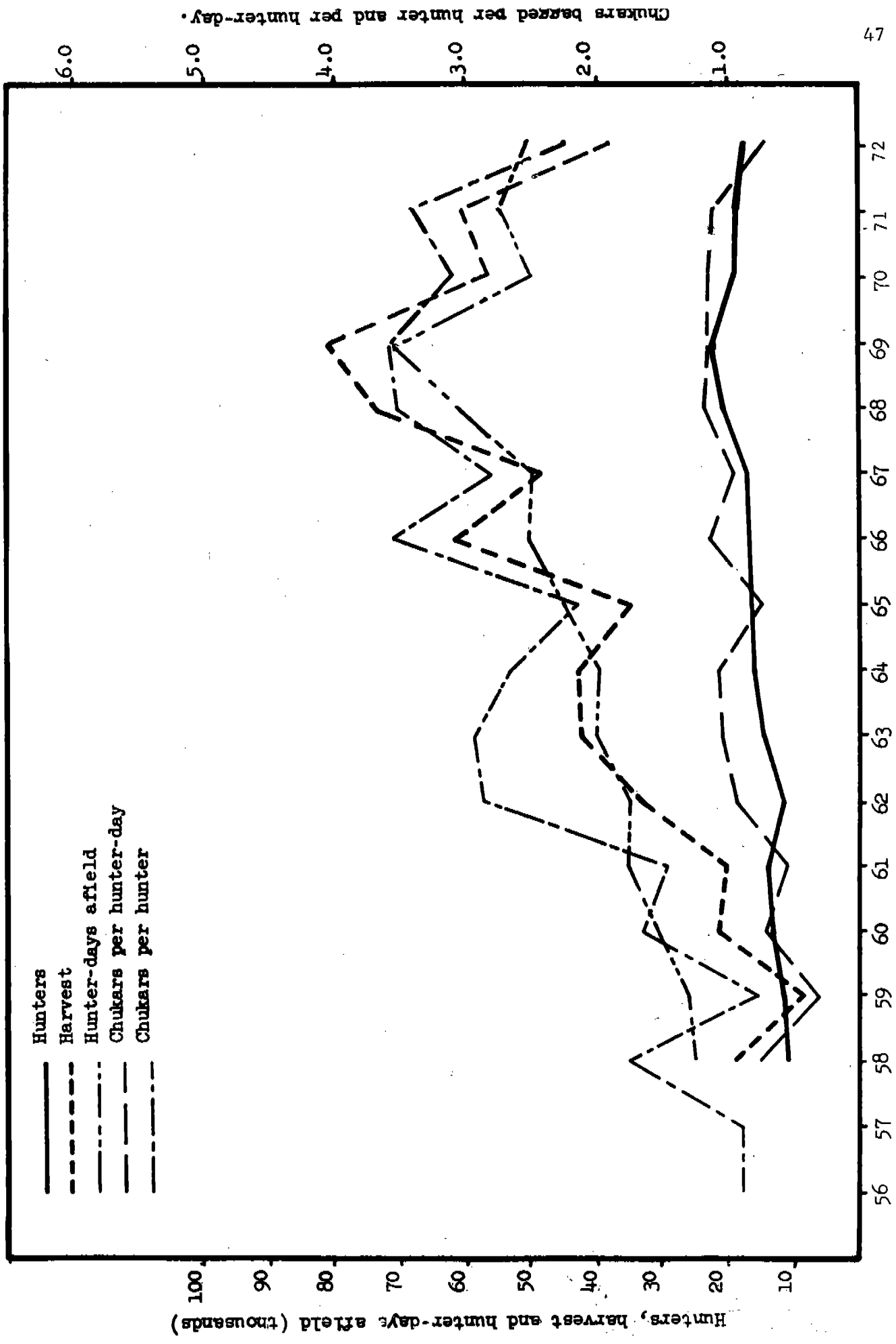


Figure 1. State-wide trends of chukar partridge harvest statistics.

Table 1. Chukar Partridge Summer Inventory Summary, 1972

Region and County	Distinct Broods		Mean		Mixed Yng. & Adults		Total Yng. 100 Ad.	Total Adults	Total Yng. 100 Ad.	Vehicle Miles		Hours Effort		Birds/100 hrs.	
	No. Ad.	Yng.	Brood	Ad.	Yng.	Ad.				Veh.	Horse	Walk.	Total		
<u>Northern</u>	13	17	172	13.23	8	89	28	53	492	589	35	46	3	84	374
Box Elder	0	0	0		0	0	2	2	0	123	4	--	3	7	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	17	172	13.23	8	89	30	55	475	712	39	46	6	91	347
<u>Central</u>	17	23	162	9.53	7	31	16	46	420	514	32	0	7	39	613
Juab	0	0	0	--	0	0	0	0	--	80	3	7	0	10	--
Salt Lake	2	2	12	6.00	13	42	10	25	216	104	7	8	0	15	527
Sanpete	36	41	390	10.83	35	118	254	330	508	559	36	0	5	41	2044
Tooele	6	6	45	7.50	13	82	4	23	552	135	16	0	2	18	833
Utah	0	0	0	--	0	0	0	0	--	31	8	0	0	8	--
Wasatch	0	0	0	--	0	0	0	0	--	1423	102	15	14	131	997
REGIONAL TOTALS	61	72	609	9.98	68	273	284	424	208	1423	102	15	14	131	997
<u>Southern</u>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	0	0	0	--	0	0	0	0	--	210	9	0	1	10	--
Millard	1	2	10	10.00	6	40	68	76	66	605	14	0	8	22	573
Piute	3	3	17	5.67	5	23	0	8	40	60	2	0	0	2	2400
Sevier	0	0	0	--	3	24	0	3	800	75	3	0	0	3	900
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	5	27	6.75	14	87	68	87	131	950	28	0	9	37	543
<u>Northeastern</u>	0	0	0	--	0	0	0	0	--	115	16	0	3	19	--
Daggett	0	0	0	--	0	0	0	0	--	400	27	0	0	27	--
Duchesne	1	1	10	10.00	0	0	0	1	10	497	23	0	0	23	48
Uintah	1	1	10	10.00	0	0	0	1	10	1000	66	0	3	69	16
REGIONAL TOTALS	1	1	10	10.00	0	0	0	1	10	1012	66	0	3	69	16
<u>Southeastern</u>	7	7	65	9.29	9	28	9	25	93	415	13	0	6	19	621
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	5	7	36	7.20	5	16	7	19	52	96	7	0	3	10	710
Grand	2	2	18	9.00	11	77	17	30	317	473	17	8	4	29	431
San Juan	14	16	119	8.50	25	121	33	74	240	984	37	8	13	58	541
REGIONAL TOTALS	93	111	937	10.08	115	570	415	641	1507	5081	272	69	45	386	556

Table 2. Trend of chukar young per 100 adults ratios, 1962-72.

Region and County	Year										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	--	214	535	410	416	360	455	600	247	529	492
Cache	--	467	625	700	317	220	--	1011	250	258	--
Davis	--	--	--	0	500	0	--	1100	--	--	--
Morgan	--	933	600	135	680	88	315	668	178	950	--
Rich	--	480	950	--	--	--	--	--	--	--	--
Summit	--	--	--	254	--	350	--	--	525	--	--
Weber	--	1200	--	--	600	--	--	91	--	286	--
Regional Totals	--	350	574	210	429	276	420	510	267	382	475
Central Region											
Juab	900	26	300	--	--	475	450	607	421	594	420
Salt Lake	608	208	670	--	--	671	409	372	0	367	--
Sanpete	765	758	375	--	--	368	400	194	256	171	216
Tooele	1267	628	--	--	--	--	1733	1360	922	372	154
Utah	860	300	405	--	--	--	240	463	360	352	552
Wasatch	--	--	480	--	--	--	--	767	--	--	--
Regional Totals	729	201	473	643	638	445	407	496	471	386	208
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	183	530	500	160	--	--	--	--	495	275	--
Iron	--	--	--	--	--	500	--	--	--	--	--
Kane	512	320	--	--	--	--	--	--	--	--	--
Millard	1038	390	--	770	514	--	1108	812	700	255	66
Piute	600	650	600	--	--	--	--	--	--	550	500
Sevier	1425	179	857	1350	833	--	--	--	--	--	800
Washington	--	660	--	--	817	315	--	--	--	--	--
Wayne	1036	619	364	0	--	--	--	--	--	67	--
Regional Totals	643	392	548	462	608	315	1108	812	581	245	131
Northeastern Region											
Daggett	182	--	--	--	1056	436	709	1250	150	--	--
Duchesne	833	--	--	833	--	0	515	548	--	120	--
Uintah	--	--	--	600	1273	1075	482	463	450	678	--
Regional Totals	235	--	--	654	1217	485	540	575	279	479	--
Southeastern Region											
Carbon	--	--	--	50	--	--	1000	--	383	474	372
Emery	264	--	722	300	1100	317	--	--	900	--	--
Grand	--	--	--	825	539	367	1000	--	446	205	274
San Juan	151	--	400	375	678	57	590	138	234	161	317
Regional Totals	169	--	655	389	604	269	635	138	338	226	324
STATE TOTALS	434	292	571	338	638	306	523	511	382	311	235

Table 3. Trend of chukar mean brood size from 1963-72.

Region and County	Year										
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	
<u>Northern</u>											
Box Elder	--	--	--	--	7.53	10.09	8.00	10.59	6.17	13.23	
Cache	--	--	--	--	8.00	--	12.00	10.00	3.43	--	
Davis	--	--	--	--	--	--	10.50	--	--	--	
Morgan	--	--	--	--	7.50	--	10.17	8.00	9.50	--	
Rich	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	7.00	--	--	7.33	--	--	
Weber	--	--	--	--	--	--	--	--	20.0	--	
REGIONAL TOTALS	7.88	9.08	7.50	7.38	7.52	10.09	9.67	9.91	6.25	13.23	
<u>Central</u>											
Juab	--	--	--	--	7.00	9.00	11.62	5.25	9.33	9.53	
Salt Lake	--	--	--	--	--	11.25	16.50	--	--	--	
Sanpete	--	--	--	--	7.00	6.00	--	6.67	7.00	6.00	
Tooele	--	--	--	--	--	17.33	14.50	12.14	11.29	10.83	
Utah	--	--	--	--	--	5.62	9.40	9.00	8.14	7.50	
Wasatch	--	--	--	--	--	--	11.50	--	--	--	
REGIONAL TOTALS	7.92	6.00	6.43	8.50	7.00	9.22	11.38	9.00	9.88	9.98	
<u>Southern</u>											
Beaver	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	5.00	--	--	8.20	5.00	--	
Iron	--	--	--	--	--	--	--	--	0	--	
Kane	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	15.43	9.67	--	11.50	10.00	
Piute	--	--	--	--	--	--	--	--	5.50	5.67	
Sevier	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	6.00	--	
REGIONAL TOTALS	8.98	11.50	6.17	8.83	5.00	15.43	9.67	8.20	7.80	6.75	
<u>Northeastern</u>											
Daggett	--	--	--	--	7.71	19.00	15.50	4.00	--	--	
Duchesne	--	--	--	--	--	7.64	11.50	--	6.00	--	
Uintah	--	--	--	--	--	--	9.00	4.50	7.00	10.00	
REGIONAL TOTALS	--	--	8.50	10.00	7.71	8.58	12.00	4.33	6.86	10.00	
<u>Southeastern</u>											
Carbon	--	--	--	--	--	10.00	--	7.67	7.29	9.29	
Emery	--	--	--	--	7.33	--	--	9.00	--	--	
Grand	--	--	--	--	9.35	10.00	--	7.20	8.33	7.20	
San Juan	--	--	--	--	6.50	--	6.60	6.50	5.82	9.00	
REGIONAL TOTALS	9.83	10.48	9.25	9.68	8.48	10.00	6.60	7.36	6.88	8.50	
STATE TOTALS	8.50	9.08	7.52	9.27	7.91	10.16	10.47	8.34	7.81	10.08	

Table 4. Trend of chukars observed per 100 hours ratios, 1967-72

Region and County	Year					
	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	165	274	1322	386	71	374
Cache	291	0	911	175	358	--
Davis	50	--	600	--	--	--
Morgan	107	--	1670	500	262	--
Rich	0	0	--	--	--	--
Summit	19	--	--	--	--	--
Weber	--	--	928	--	--	--
Regional Totals	125	288	1196	445	132	374
Central Region						
Juab	230	367	450	197	1724	613
Salt Lake	270	830	354	15	108	--
Sanpete	202	48	91	371	475	527
Tooele	--	688	730	1022	592	2044
Utah	--	567	938	177	210	833
Wasatch	--	0	867	0	--	--
Regional Totals	222	285	408	320	510	997
Southern Region						
Beaver	--	--	0	--	--	--
Garfield	300	--	0	761	123	--
Iron	--	--	--	--	0	--
Kane	--	--	0	--	--	--
Millard	--	--	3950	--	529	573
Piute	0	--	0	0	650	2400
Sevier	--	--	--	--	--	900
Washington	372	--	0	--	--	--
Wayne	--	--	--	--	600	--
Regional Totals	216	--	484	1448	259	543
Northeastern Region						
Daggett	2143	741	2700	1333	0	--
Duchesne	4	496	438	0	41	--
Uintah	115	200	255	110	350	48
Regional Totals	199	433	396	82	162	16
Southeastern Region						
Carbon	288	550	--	--	1282	621
Emery	3550	0	0	--	--	--
Grand	3329	37	--	693	643	710
San Juan	419	1144	438	731	321	431
Regional Totals	1550	284	211	816	364	541
STATE TOTALS	328	382	516	459	325	556

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters reporting	Days hunted	Birds bagged	Birds per hunter-day	Birds per hunter*	% of pressure	% of harvest
<u>Northern</u>							
Box Elder	187	565	499	0.88	2.56	27.51	30.59
Cache	63	140	105	0.75	2.33	6.82	6.44
Davis	18	36	32	0.89	1.85	1.75	1.96
Morgan	23	60	51	0.85	1.00	2.92	3.13
Rich	8	9	6	0.67	0.00	0.44	0.37
Summit	11	54	69	1.28	9.57	2.63	4.23
Weber	38	79	87	1.10	2.65	3.85	5.33
REGIONAL TOTALS	348	943	849	0.90	2.52	45.91	52.05
<u>Central</u>							
Juab	30	60	52	0.87	2.87	2.92	3.19
Salt Lake	49	140	90	0.64	2.12	6.82	5.52
Sanpete	12	19	12	0.63	1.20	0.93	0.74
Tooele	162	363	280	0.77	2.62	17.67	17.17
Utah	78	166	112	0.67	1.62	8.08	6.87
Wasatch	8	13	3	0.23	0.75	0.63	0.18
REGIONAL TOTALS	339	761	549	0.72	2.03	37.05	33.66
<u>Southern</u>							
Beaver	1	2	0	0.00	0.00	0.10	0.00
Garfield	1	2	1	0.50	0.00	0.10	0.06
Iron	4	19	33	1.74	0.00	0.93	2.02
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	17	42	56	1.33	5.29	2.04	3.43
Piute	4	7	9	1.29	3.50	0.34	0.55
Sevier	22	56	16	0.29	0.86	2.73	0.98
Washington	1	2	3	1.50	1.67	0.10	0.18
Wayne	6	23	20	0.87	0.00	1.12	1.23
REGIONAL TOTALS	56	153	138	0.90	1.76	7.45	8.46
<u>Northeastern</u>							
Daggett	4	4	0	0.00	4.00	0.19	0.00
Duchesne	11	39	23	0.59	5.17	1.90	1.41
Uintah	14	35	24	0.69	1.00	1.70	1.47
REGIONAL TOTALS	29	78	47	0.60	2.75	3.80	2.88
<u>Southeastern</u>							
Carbon	16	42	26	0.62	1.94	2.04	1.59
Emery	7	25	1	0.04	0.00	1.22	0.06
Grand	13	26	11	0.42	1.00	1.27	0.67
San Juan	3	4	1	0.25	0.00	0.19	0.06
REGIONAL TOTALS	39	97	39	0.40	1.43	4.72	2.39
Unknown counties	15	21	9	0.43	0.00	1.02	0.55
Mixed counties	1	1	0	0.00	0.00	0.05	0.00
STATE TOTALS	827	2054	1631	0.79	2.21	100	100

*Based on county of residence

Table 6. Summary of chukars bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
<u>Northern</u>								
Box Elder	1.37	1.75	1.55	1.28	1.31	1.00	1.66	0.88
Cache	0.66	0.89	1.02	1.21	0.82	1.28	0.91	0.75
Davis	0.45	0.56	0.48	1.35	0.70	0.93	0.98	0.89
Morgan	0.43	0.55	1.09	2.09	1.52	1.75	1.68	0.85
Rich	0.00	--	1.00	0.45	0.25	1.78	1.00	0.67
Summit	1.75	0.45	0.19	0.63	1.23	0.47	0.67	1.28
Weber	0.61	0.49	0.46	0.64	0.83	0.60	0.86	1.10
REGIONAL TOTALS	1.05	1.36	1.28	1.28	1.16	1.09	1.36	0.90
<u>Central</u>								
Juab	0.76	0.70	0.12	1.33	1.75	1.22	1.24	0.87
Salt Lake	0.67	0.93	0.99	0.92	0.71	1.15	0.77	0.64
Sanpete	0.67	1.05	0.93	0.47	0.48	0.21	0.83	0.63
Tooele	0.69	0.69	0.54	1.34	1.46	1.30	1.45	0.77
Utah	0.36	0.36	0.31	1.06	0.58	1.05	0.48	0.67
Wasatch	0.50	0.21	1.11	1.05	0.76	0.88	0.52	0.23
REGIONAL TOTALS	0.57	0.61	0.57	1.08	1.12	1.17	1.04	0.72
<u>Southern</u>								
Beaver	0.00	--	0.00	1.00	0.00	0.50	--	0.00
Garfield	--	1.00	0.55	1.25	2.00	2.57	0.00	0.50
Iron	0.00	--	--	--	--	2.00	1.17	1.74
Kane	5.00	--	0.00	--	--	0.00	2.00	0.00
Millard	1.35	0.90	0.26	3.77	2.53	2.10	1.63	1.33
Piute	0.28	1.00	0.83	0.40	1.50	0.42	1.15	1.29
Sevier	0.37	0.51	0.99	0.59	0.35	0.88	0.34	0.29
Washington	0.00	--	0.00	0.00	0.60	0.00	0.00	1.50
Wayne	0.10	0.78	1.75	0.60	0.00	0.44	0.80	0.87
REGIONAL TOTALS	0.54	0.72	0.69	1.29	1.22	1.29	0.86	0.90
<u>Northeastern</u>								
Daggett	0.17	0.82	2.50	1.95	0.11	0.00	0.00	0.00
Duchesne	0.36	1.62	1.21	0.69	1.53	0.29	0.88	0.59
Uintah	1.17	2.33	1.56	1.27	1.12	0.60	0.81	0.69
REGIONAL TOTALS	0.91	2.04	1.44	1.22	1.16	0.46	0.82	0.60
<u>Southeastern</u>								
Carbon	0.46	1.75	0.60	1.27	0.62	0.54	0.26	0.62
Emery	0.47	1.42	1.32	1.52	1.30	0.46	0.79	0.04
Grand	0.38	2.07	0.92	1.15	0.69	1.72	0.63	0.42
San Juan	2.00	1.56	0.50	1.64	0.67	5.00	0.11	0.25
REGIONAL TOTALS	0.46	1.85	0.85	1.29	0.80	0.94	0.44	0.40
Unknown counties	0.02	1.02	0.93	0.82	--	2.00	1.49	0.43
Mixed counties	1.85	--	0.78	--	--	0.00	--	0.00
STATE TOTALS	0.78	1.13	0.97	1.19	1.13	1.12	1.10	0.79

Table 8. Distribution of chukar hunting pressure by region and county, 1965-72.

Region and County	1965	1966	1967*	1968	1969	1970	1971	1972
<u>Northern</u>								
Box Elder	23.03	27.24	28.64	23.98	20.47	18.48	16.95	27.51
Cache	6.58	6.70	6.08	9.20	5.15	10.62	5.71	6.82
Davis	3.88	2.50	2.03	3.38	1.55	2.84	2.01	1.75
Morgan	1.41	1.36	3.24	3.92	4.46	2.18	3.13	2.92
Rich	0.24	--	0.34	0.37	0.58	0.37	0.23	0.44
Summit	0.71	0.79	0.29	1.35	0.89	0.70	0.81	2.63
Weber	8.58	3.52	2.55	2.54	5.53	2.59	4.29	3.85
REGIONAL TOTALS	44.43	42.11	44.35	44.74	38.63	37.78	33.13	45.91
<u>Central</u>								
Juab	1.76	2.84	1.38	1.42	4.03	2.43	3.17	2.92
Salt Lake	11.99	8.40	6.24	8.42	6.82	6.26	4.94	6.82
Sanpete	2.82	1.25	1.13	1.01	0.72	0.78	1.35	0.93
Tooele	6.82	10.67	9.36	8.25	21.15	18.81	23.24	17.67
Utah	11.99	13.85	12.39	14.98	11.14	12.55	12.99	8.08
Wasatch	0.82	0.79	2.15	1.25	0.95	0.99	2.43	0.63
REGIONAL TOTALS	36.20	37.80	32.64	35.34	44.81	41.81	48.11	37.05
<u>Southern</u>								
Beaver	0.12	--	0.04	0.07	0.06	0.08	--	0.10
Garfield	--	0.11	0.81	0.14	0.12	0.29	0.12	0.10
Iron	0.12	--	0.00	--	--	0.21	0.23	0.93
Kane	0.12	--	0.12	--	--	0.00	0.04	0.00
Millard	1.06	1.70	2.19	1.45	2.91	2.84	3.01	2.04
Piute	0.94	0.79	0.49	0.17	0.52	0.49	0.77	0.34
Sevier	2.59	2.27	3.48	4.60	4.05	4.12	4.48	2.73
Washington	0.12	--	0.45	0.07	0.14	0.08	0.23	0.10
Wayne	1.06	0.68	0.32	0.17	0.29	0.66	0.19	1.12
REGIONAL TOTALS	6.13	5.55	7.90	6.66	8.09	8.77	9.07	7.45
<u>Northeastern</u>								
Daggett	0.24	0.68	0.08	0.68	0.26	0.12	0.04	0.19
Duchesne	1.06	3.18	1.74	1.22	0.98	1.40	1.24	1.90
Uintah	2.47	4.31	2.84	3.18	1.93	1.98	1.81	1.70
REGIONAL TOTALS	3.77	8.17	4.66	5.07	3.17	3.50	3.09	3.80
<u>Southeastern</u>								
Carbon	2.12	2.72	1.01	1.76	2.22	3.33	1.62	2.04
Emery	0.94	0.79	0.77	0.91	1.24	1.07	0.73	1.22
Grand	1.29	1.59	1.58	2.03	1.41	1.93	1.47	1.27
San Juan	0.12	0.79	0.65	0.37	0.43	0.08	0.73	0.19
REGIONAL TOTALS	4.47	5.89	4.01	5.07	5.30	6.42	4.56	4.72
Unknown counties	3.17	0.45	2.31	3.11	--	1.73	2.05	1.02
Mixed counties	1.88	--	4.13	--	--	0.00	--	0.05
STATE TOTALS	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later is based on hunter-days rather than number of hunters reporting.

Table 9. State-wide summary of chukar partridge harvest statistics, 1956-72.

Year	Total hunters	Total harvest	Hunter days afield	Chukars per hunter-day	Chukars per hunter
1956	--	--	--	--	0.91
1957	--	--	--	--	0.92
1958	11,124	19,578	25,100	0.78	1.76
1959	11,154	8,700	26,364	0.33	0.78
1960	13,252	21,733	30,610	0.71	1.64
1961	14,046	20,821	35,675	0.58	1.48
1962	11,638	33,500	35,010	0.95	2.88
1963	14,532	42,806	40,824	1.05	2.95
1964	16,090	42,974	39,971	1.08	2.67
1965	16,431	35,335	45,067	0.78	2.15
1966	17,133	61,370	54,448	1.13	3.58
1967	17,485	48,906	50,671	0.97	2.80
1968	20,744	73,218	61,402	1.19	3.53
1969	22,529	80,917	71,674	1.13	3.59
1970	18,013	56,053	49,911	1.12	3.11
1971	17,917	61,151	55,378	1.10	3.41
1972	16,685	36,925	46,502	0.79	2.21
<hr/>					
TOTALS (1958-72)	238,773	643,987	668,607	0.96	2.70
<hr/>					
AVERAGES (1958-71)	15,863	43,362	44,436	0.92	2.38
<hr/>					

Table 10. Chukar Field Bag Check Summary, 1972.

Region and County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 hrs.	Total Hunts	Total Hunters	Total Hours	Total Birds/100 hrs.	Birds/Hunter	
<u>Northern</u>										
Box Elder	83	206	1,077	263	24	78	967	256	26	1.35
Cache	22	53	234	41	18	21	222	36	16	0.72
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	1	3	15	0	--	1	15	0	--	--
<u>REGIONAL TOTALS</u>	106	262	1,326	304	23	100	1,204	292	24	1.21
<u>Central</u>										
Juab	43	125	857	94	11	36	771	79	10	0.78
Salt Lake	3	6	18	3	17	0	0	0	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	47	139	1,225	75	6	34	1,087	66	6	0.60
Utah	4	7	16	3	19	0	0	0	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--
<u>REGIONAL TOTALS</u>	97	277	2,116	175	8	70	1,858	145	8	0.69
<u>Southern</u>										
Beaver										
Garfield										
Iron										
Kane										
Millard										
Piute										
Sevier										
Washington										
Wayne										
<u>REGIONAL TOTALS</u>										
<u>Northeastern</u>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	1	4	12	2	17	0	0	0	--	--
<u>REGIONAL TOTALS</u>	1	4	12	2	17	0	0	0	--	--
<u>Southeastern</u>										
Carbon	6	16	34	6	18	4	32	6	19	0.55
Emery	6	12	44	18	41	6	44	18	41	1.50
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
<u>REGIONAL TOTALS</u>	12	28	78	24	31	10	76	24	32	1.04
<u>STATE TOTALS</u>	216	571	3,532	505	14	180	3,138	461	15	0.97

N O D A T A C O L L E C T E D

Table 11. Chukar field bag check trend as determined via field bag checks, 1967-72.

Region and County	1967		1968		1969		1970		1971		1972	
	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter
Northern												
Box Elder	16	0.79	16	0.90	20	1.08	20	0.86	17	0.89	24	1.35
Cache	22	0.90	24	0.89	14	0.47	--	--	29	1.03	18	0.72
Davis	9	0.27	20	0.50	--	--	12	0.47	--	--	--	--
Morgan	--	--	--	--	--	--	37	2.86	36	1.00	--	--
Rich	--	--	100	1.00	--	--	--	--	--	--	--	--
Summit	33	0.66	28	1.00	--	--	96	3.00	--	--	--	--
Weber	0	0	--	--	100	0.50	7	0.17	--	--	0	0
REGIONAL TOTALS	16	0.78	17	0.90	18	0.91	21	0.83	18	0.90	23	1.21
Central												
Juab	62	1.25	76	3.18	48	3.72	20	1.08	24	1.72	11	0.78
Salt Lake	0	0	0	0	--	--	63	2.00	30	1.00	17	--
Sanpete	--	--	44	1.17	--	--	5	0.25	10	0.33	--	--
Tooele	43	1.60	65	2.73	69	1.45	38	2.35	14	1.18	6	0.60
Utah	--	--	10	0.30	28	0.81	10	0.31	--	--	19	0.43
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	42	1.42	55	1.98	41	1.49	21	0.96	16	1.28	8	0.69
Southern												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	27	0.75	--	--	--	--
Millard	--	--	72	6.23	--	--	54	3.24	33	2.93	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	0	0	25	1.00	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	72	6.35	--	--	44	1.78	33	2.93	--	--
Northeastern												
Daggett	97	1.67	116	2.40	--	--	39	1.00	49	0.41	--	--
Duchesne	33	1.00	47	2.38	4	0.19	7	0.50	29	0.83	--	--
Uintah	27	1.55	21	1.53	9	0.55	15	0.55	60	0.55	17	0.50
REGIONAL TOTALS	33	1.52	47	2.12	8	0.40	15	0.67	52	0.45	17	0.50
Southeastern												
Carbon	--	--	216	2.38	--	--	--	--	11	0.25	18	0.55
Emery	--	--	--	--	--	--	--	--	0	0	41	1.50
Grand	28	2.50	200	2.00	--	--	73	2.20	16	0.60	--	--
San Juan	--	--	47	1.46	49	2.23	--	--	--	--	--	--
REGIONAL TOTALS	28	2.50	93	1.97	49	2.23	73	2.20	11	0.40	31	1.04
STATE TOTALS	19	0.89	26	1.20	20	0.98	23	0.94	19	1.05	15	0.97

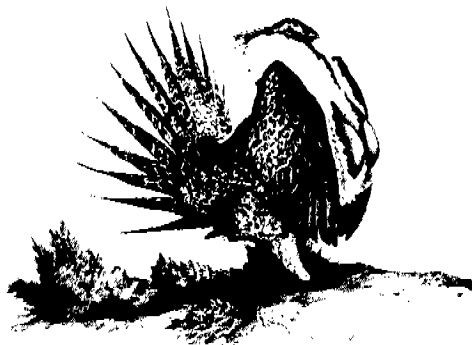
SAGE GROUSE

SUMMARY

Harvest data for 1971 and strutting ground counts in the spring of 1972 indicated a breeding population level for 1972 comparable to or slightly higher than in 1971. Production indexes, both mean brood size and young per 100 adults, were lower than both 1971 and the average indicating a reduced fall population.

Harvest data reflected the expected decline in the fall population level as both total harvest and hunter success declined. Total hunters and hunter-days afield in 1972 were slightly higher than in 1971.

The short-term trend of both inventory and harvest statistics has been downward since a peak in 1969 on a state-wide basis.



Strutting Ground Counts

The trend of the sage grouse breeding population as indicated by strutting ground counts is shown in Table 1 of this section. Results of this survey for 1972 compared to 1971 and the 1967-71 average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Number of grounds counted	113	+5	+57
Total grouse counted	2,472	+5	+41
Average male grouse per ground	21.9	+0.4	- 6
Percent change from previous year (comparable grounds)	-0.7	--	--

These counts indicate that the breeding population in 1972 was comparable to 1971. Harvest data for 1971 suggest a higher breeding population. The increase in total strutting grounds and total grouse counted reflects a continued effort in locating and mapping strutting grounds as part of a sage grouse habitat inventory.

Brood Counts

Results of this survey for 1972 are found in Table 2. Long-term trends of young-adult ratios, mean brood size and sage grouse observed per 100 hours are shown in Tables 3-5. Indexes for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total sage grouse counted	3,431	+10	+16
Young per 100 adults	100	-28	-34
Mean brood size	4.16	-10	- 9
Sage grouse observed per 100 hours	373	- 3	+ 1
Total hours effort	921	+13	+16

More grouse were counted during brood surveys due to increased effort. Production in terms of both mean brood size and young per 100 adults was lower than both 1971 and the average. A reduction in fall population level was indicated.

Harvest

Hunter Questionnaire

Results of the 1972 hunter questionnaire are shown in Table 6. Long-term trends of sage grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 7-9 and total state-wide harvest statistics in Table 10. The 1972 hunting season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Sage grouse hunters	13,040	+ 1	+57
Sage grouse harvested	15,983	-20	+40
Hunter-days afield	22,232	+ 3	+78
Sage grouse per hunter	1.23	-21	- 9
Sage grouse per hunter-day	0.72	-23	-22

Harvest information reflected the reduction in the fall population level from 1971 indicated by inventory data. Even though hunting pressure increased slightly total harvest and hunter success, both per day and per hunter, declined from 1971. Total harvest was above average while hunter success was below average.

Long-term sage grouse harvest trends are shown in Figure 1.

Field Bag Checks

A summary of field-bag-check data for 1972 is shown in Table 11. Hunter success trends determined via this method since 1966 are shown in Table 12. Results of the 1972 survey compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	2,496	-16	+13
Total hours hunted	10,620	-13	+18
Sage grouse per hunter (complete hunts)	0.71	- 4	-17
Sage grouse bagged per 100 hours	15	-12	-29
Average hours per hunter-day (complete hunts)	4.6	+ 2	+18
Hours hunted per grouse bagged	6.9	+15	+35

Hunter success (per day) shown by this survey was similar to that shown by questionnaire and was lower than 1971 and the average. The average hours per hunter-day index was similar to 1971 but higher than average. More time was required for each grouse bagged in comparison to both 1971 and the average.

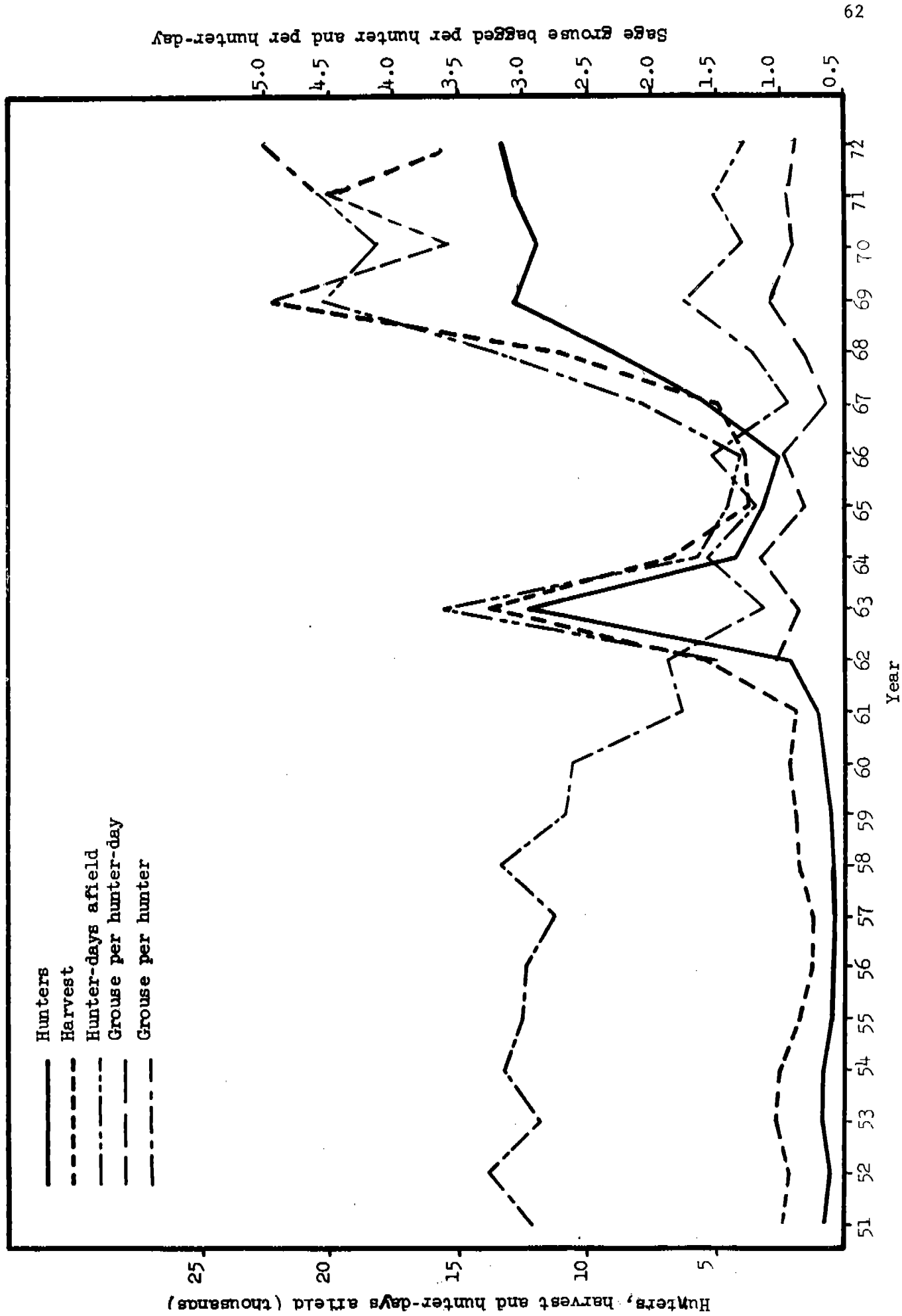


Figure 1. State-wide trend of sage grouse harvest statistics,

Table 1. Summary of sage grouse strutting ground counts by region and county, 1959-72.

Region and County	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region														
BOX ELDER														
No. strutting grounds counted	6	10	7	3	9	6	6	8	12	15	22	21	21	20
Total grouse counted	219	292	218	106	155	73	96	118	152	253	667	556	479	422
County average (All strutting grounds)	36.5	29.2	31.1	35.3	17.2	12.2	16.0	14.8	12.7	16.9	30.3	26.5	22.8	21.1
% Change from previous year - comparable grounds	--	-2.8	-13.1	-31.4	-37.1	-33.3	+35.7	-11.1	-33.3	+23.1	+94.1	-8.4	-14.0	-10.4
CACHE														
No. strutting grounds counted	1	1	1	3	2	2	2	2	2	2	2	2	2	3
Total grouse counted	24	45	45	30	45	59	59	68	59	68	68	68	68	57
County average (All strutting grounds)	24.0	45.0	45.0	10.0	22.5	29.5	29.5	22.7	22.7	19.0	19.0	19.0	19.0	19.0
% Change from previous year - comparable grounds		+87.5	-77.8	+57.0	+31.1	+6.8	-16.3							
MORGAN														
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Total grouse counted	85	85	45	35	35	35	35	35	35	35	35	35	35	53
County average (All strutting grounds)	42.5	22.5	17.5	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
% Change from previous year - comparable grounds	--	-47.0	-22.2	+29.0										
RICH														
No. strutting ground counted	6	3	6	6	6	5	6	5	5	10	6	8	7	9
Total grouse counted	214	207	405	231	339	172	98	111	134	280	298	324	240	254
County average (All strutting grounds)	35.7	69.0	67.5	38.5	56.5	34.4	16.3	22.2	26.8	28.0	49.7	40.5	34.3	28.2
% Change from previous year - comparable grounds	--	+26.1	+18.8	-43.0	+46.7	-38.9	-48.2	+24.7	+7.2	-1.5	+84.1	-20.0	-12.0	-18.1
SUMMIT														
No. strutting grounds counted	4	3	4	4	4	4	4	4	4	4	4	5	5	5
Total grouse counted	129	21	51	33	33	33	33	33	58	71	168	185	223	152
County average (All strutting grounds)	32.2	7.0	12.8	8.2	8.2	8.2	8.2	8.2	14.5	17.8	33.6	37.0	44.6	30.4
% Change from previous year - comparable grounds	--	-81.9	+75.7	-35.9	0.0	+24.5	+22.8	+60.1	+10.1	+20.5	-31.8	-31.8	-31.8	-31.8

Table 1. Continued

Region and County	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
REGIONAL TOTALS														
No. strutting grounds counted	12	13	13	13	18	15	16	18	22	32	37	37	38	40
Total grouse counted	433	499	623	466	515	296	227	286	389	634	1263	1147	1045	938
Regional average	36.1	38.4	47.9	35.8	28.6	19.7	14.2	15.9	17.7	19.8	34.1	31.0	27.5	23.4
(All strutting grounds)														
% Change from previous year - comparable grounds	--	+8.6	+1.8	-39.6	-5.8	-31.2	-29.3	+6.7	+1.1	+7.9	+84.7	-9.0	-15.9	-15.8
Southern Region														
GARFIELD														
No. strutting grounds counted	--	--	--	--	--	--	--	--	6	6	10	13	14	14
Total grouse counted									117	96	213	322	351	330
County average (All strutting grounds)									19.5	16.0	21.3	24.8	25.1	23.5
% Change from previous year - comparable grounds									--	-17.9	+59.4	+31.0	-0.3	-6.8
WAYNE														
No. strutting grounds counted									9	7	8	11	11	12
Total grouse counted									302	331	497	458	248	311
County average (All strutting grounds)									33.6	47.3	62.1	41.6	22.5	26.0
% Change from previous year - comparable grounds									--	+3.0	+46.6	-14.6	-45.9	+18.2
BEAVER														
No. strutting grounds counted									2	2	2	2	5	5
Total grouse counted									0	79	47	141	153	153
County average (All strutting grounds)									0.0	39.5	23.5	28.2	30.6	30.6
% Change from previous year - comparable grounds									--	--	-40.5	-49.4	+8.5	+8.5
PIUTE														
No. strutting grounds counted	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Total grouse counted	2	--	6	7	7	7	7	7	7	7	7	7	7	5
County average (All strutting grounds)	2.0	--	6.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	5.0
% Change from previous year - comparable grounds	--	--	--	--	--	--	--	--	--	+16.7	0	-28.5	0	-28.5

Table 1. Continued

Region and County	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
IRON														
No. strutting grounds counted							5	3	4	6	7			
Total grouse counted							3	23	64	47	66			
County average (All strutting grounds)							0.6	7.7	16.0	7.8	9.3			
% Change from previous year - comparable grounds							--	--	-8.7	-50.0	+42.3			
SEVIER														
No. strutting grounds counted				1	1	0	1	0	1	1	1			
Total grouse counted				11	0	--	0	--	0	0	0			
County average (All strutting grounds)				11.0	0.0	--	0.0	--	0.0	0.0	0.0			
% Change from previous year - comparable grounds				--	100	--	--	--	--	--	--			
REGIONAL TOTALS														
No. strutting grounds counted				17	21	24	33	38	40					
Total grouse counted				432	430	818	928	794	865					
Regional average (All strutting grounds)				25.4	20.5	34.1	28.1	20.9	21.6					
% Change from previous year - comparable grounds				--	-3.5	+75.4	-4.8	-30.3	+6.7					
Central Region														
SANPETE														
No. strutting grounds counted										2	1			
Total grouse counted										13	2			
County average (All strutting grounds)										6.5	2.0			
% Change from previous year - comparable grounds										--	-75.0			
TOOELE														
No. strutting grounds counted					2	3	3	4	5					
Total grouse counted					44	96	74	92	128					
County average (All strutting grounds)					22.0	32.0	24.7	23.0	25.6					
% Change from previous year - comparable grounds					--	+59.1	-22.9	-16.2	0.0					
WASATCH														
No. strutting grounds counted							2	2	2					
Total grouse counted							100	70	102					
County average (All strutting grounds)							50.0	35.0	51.0					
% Change from previous year - comparable grounds							--	-30.0	+45.7					

Table 1. Continued

Region and County	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
<u>Southeastern Region</u>														
CARBON														
No. strutting grounds counted	1		7	1	3									1
Total grouse counted	1		45	39	58									40
County average (All strutting grounds)	1.0		6.4	39.0	19.3									40.0
% Change from previous year - comparable grounds	--		+100	--	0									+2.0
EMERY														
No. strutting grounds counted	1		2	3	3									3
Total grouse counted	5		17	8	3									11
County average (All strutting grounds)	5.0		8.5	2.7	1.0									3.7
% Change from previous year - comparable grounds	--		+60	-82	-62.5									+270.0
SAN JUAN														
No. strutting grounds counted	2		3	6	6									6
Total grouse counted	8		42	115	152									168
County average (All strutting grounds)	4.0		14.0	19.2	25.3									28.0
% Change from previous year - comparable grounds	--		+312	+38.1	+31.8									+10.7
REGIONAL TOTALS														
No. strutting grounds counted	4		12	10	12									10
Total grouse counted	14		104	121	213									219
Regional average (All strutting grounds)	3.5		8.7	12.1	17.8									21.9
% Change from previous year - comparable grounds	--		+193.8	+3.4	+19.8									+12.9
STATE TOTALS														
No. strutting grounds counted	12		13	13	18									113
Total grouse counted	433		499	623	466									2472
State average grouse per strutting grounds	36.1		38.4	47.9	35.8									21.9
% Change from previous year - comparable grounds	--		+8.6	+1.8	-39.6									-0.7

Table 2. Sage grouse summer inventory summary - 1972.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Adults w/o Yng.	Total Adults Yng.	Total Young/100 Ad.	Vehicle Miles		Hours Effort		Birds/100 hrs.			
	No. Ad.	Yng.		Ad.	Yng.				Veh.	Horse	Walk	Total				
Northern																
Box Elder	30	30	118	3.93	32	119	224	286	237	83	578	40	66	6	112	467
Cache	8	8	39	4.88	3	14	20	31	53	171	183	17	29	0	46	183
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	6	6	36	6.00	0	0	0	6	36	600	23	2	36	0	38	111
Rich	13	13	61	4.69	6	8	107	126	69	55	467	26	0	30	56	348
Summit	22	22	104	4.73	0	0	38	60	104	173	372	16	23	8	47	349
Weber	2	2	13	6.50	0	0	7	9	13	144	5	1	5	18	24	92
Regional Totals	81	81	371	4.58	41	141	396	518	512	99	1628	102	159	62	323	319
Central																
Juab	2	2	15	7.50	0	21	0	2	36	1800	365	14	0	7	21	181
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	3	3	16	5.33	2	7	8	13	23	177	499	5	5	24	34	106
Tooele	21	21	101	4.81	6	31	14	41	132	322	196	9	5	8	22	786
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	36	36	110	3.06	11	32	51	98	142	145	127	22	14	30	66	364
Regional Totals	62	62	242	3.90	19	91	73	154	333	216	1187	50	24	69	143	341
Southern																
Beaver	6	6	23	3.83	0	5	0	6	28	467	210	7	0	0	7	486
Garfield	12	7	26	3.25	33	44	44	89	83	93	168	21	11	16	48	358
Iron	7	7	26	3.71	13	11	79	99	37	37	177	7	4	1	12	1133
Kane	8	8	32	4.00	2	5	1	11	37	336	33	7	0	12	19	253
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	22	22	74	3.36	42	49	135	199	123	62	163	52	0	6	58	555
Regional Totals	55	55	194	3.53	90	114	259	404	308	76	751	94	15	35	144	494
Northeastern																
Daggett	5	5	19	3.80	13	52	8	26	71	273	320	25	3	0	28	346
Duchesne	5	5	27	5.40	8	32	14	27	59	219	943	65	0	8	73	118
Uintah	40	40	184	4.60	8	26	152	200	210	105	862	50	11	8	69	594
Regional Totals	50	50	230	4.60	29	110	174	253	340	134	2125	140	14	16	170	349
Southeastern																
Carbon	22	22	91	4.14	31	57	65	118	148	125	620	32	30	24	86	309
Emery	--	--	--	--	--	--	--	--	--	--	--	--	3	0	3	--
Grand	0	0	0	--	0	0	2	2	0	--	120	6	0	2	8	25
San Juan	15	15	59	3.93	4	12	251	270	71	26	540	44	0	0	44	775
Regional Totals	37	37	150	4.05	35	69	318	390	219	56	1280	82	33	26	141	432
STATE TOTALS	285	285	1187	4.16	214	525	1220	1719	1712	100	6971	468	245	208	921	373

Table 3. Trend of sage grouse young per 100 adults, 1963-1972.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	143	104	200	93	176	162	153	62	75	83
Cache	233	400	320	300	680	600	71	10	168	171
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	71	0	100	50	160	--	533	400	58	600
Rich	71	144	54	100	85	92	98	133	137	55
Summit	156	267	243	140	89	133	121	211	158	173
Weber	--	550	411	--	650	--	208	--	325	144
Regional Totals	113	120	171	129	159	132	128	94	135	99
Central Region										
Juab	200	--	--	400	125	600	300	117	--	1800
Salt Lake	118	--	--	--	--	--	--	--	--	--
Sanpete	200	159	207	427	119	0	191	84	288	177
Tooele	--	250	286	617	200	416	395	215	188	322
Utah	400	--	--	--	--	--	--	--	--	--
Wasatch	50	179	450	200	101	90	89	205	212	145
Regional Totals	78	171	233	313	104	103	137	170	208	216
Southern Region										
Beaver	100	121	46	--	173	--	169	--	250	467
Garfield	--	112	168	141	132	263	238	107	93	93
Iron	--	100	200	--	400	--	550	214	183	37
Kane	--	--	--	--	--	--	470	300	--	336
Millard	--	900	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	357	350	322	98	82	107	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	188	270	124	140	371	178	347	63	62
Regional Totals	100	138	169	161	135	257	201	186	85	76
Northeastern Region										
Daggett	400	343	242	216	145	560	493	344	168	273
Duchesne	111	224	273	700	140	209	156	77	230	219
Uintah	287	420	304	612	237	596	450	419	339	105
Regional Totals	252	286	268	304	176	446	383	305	278	134
Southeastern Region										
Carbon	350	0	500	533	433	512	250	167	145	125
Emery	--	--	0	800	--	300	164	100	--	--
Grand	--	400	800	--	--	--	--	--	275	--
San Juan	158	38	--	--	61	214	37	28	70	26
Regional Totals	186	50	350	600	94	369	64	30	81	56
STATE TOTALS	123	130	196	179	141	178	160	117	138	100

Table 4. Trend of sage grouse mean brood size, 1963-1972.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	4.48	3.97	4.00	3.82	4.04	3.80	5.16	4.13	4.25	3.93
Cache	5.00	4.00	4.00	6.50	6.80	6.00	4.60	5.00	4.50	4.88
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	2.86	--	4.00	5.00	4.00	--	5.33	4.00	5.50	6.00
Rich	3.60	3.25	5.00	4.37	5.00	4.07	5.42	4.68	4.44	4.69
Summit	4.67	5.33	5.66	5.25	4.47	3.94	5.91	5.00	5.58	4.73
Weber	--	5.50	4.11	--	6.50	--	3.38	--	4.33	6.50
Regional Totals	4.12	4.07	4.54	4.90	4.43	3.94	5.18	4.55	4.98	4.58
Central Region										
Juab	4.00	--	--	4.00	--	6.00	2.00	3.50	--	7.50
Salt Lake	2.00	--	--	--	--	--	--	--	--	--
Sanpete	5.00	3.58	6.88	5.88	5.67	--	5.40	4.50	6.00	5.33
Tooele	--	2.50	5.00	6.17	2.00	5.75	5.62	4.44	4.19	4.81
Utah	4.00	--	--	--	--	--	--	--	--	--
Wasatch	4.36	5.66	4.50	5.60	5.15	4.29	4.64	4.52	2.94	3.06
Regional Totals	4.25	4.10	6.07	5.76	5.13	4.46	5.03	4.45	3.94	3.90
Southern Region										
Beaver	4.93	3.83	3.83	--	4.60	--	5.44	--	5.00	3.83
Garfield	3.82	5.52	4.44	5.10	3.50	4.10	3.86	3.67	3.73	3.25
Iron	--	3.00	--	--	4.00	--	--	3.67	4.33	3.71
Kane	--	--	--	--	--	--	5.00	3.00	--	4.00
Millard	--	9.00	--	--	--	--	--	--	--	--
Piute	2.31	--	--	--	--	--	--	--	--	--
Sevier	4.25	4.17	4.67	4.58	5.20	4.62	4.14	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	4.72	4.00	4.47	5.11	3.68	4.91	3.89	3.55	4.02	3.36
Regional Totals	4.24	4.76	4.49	4.96	3.89	4.42	4.07	3.60	4.10	3.53
Northeastern Region										
Daggett	7.25	3.43	3.83	5.33	3.00	6.00	4.93	4.37	4.00	3.80
Duchesne	4.44	4.75	3.75	7.00	5.20	4.09	5.00	5.00	5.17	5.40
Uintah	5.50	4.20	6.58	6.12	5.70	6.13	4.91	4.44	5.19	4.60
Regional Totals	5.40	4.15	4.57	5.72	4.90	5.54	4.92	4.46	5.04	4.60
Southeastern Region										
Carbon	--	--	5.00	5.33	4.00	5.86	2.50	5.00	4.67	4.14
Emery	3.50	--	--	8.00	--	3.00	9.33	1.00	--	--
Grand	--	4.00	8.00	--	--	--	--	--	--	--
San Juan	4.75	1.25	--	--	4.00	5.00	4.20	4.29	5.10	3.93
Regional Totals	4.33	1.80	7.00	6.00	4.00	5.36	4.92	4.00	5.00	4.05
STATE TOTALS	4.30	4.28	4.70	5.19	4.48	4.50	4.82	4.28	4.62	4.16

Table 5. Trend of sage grouse observed per 100 hours, 1967-1972.

Region and County	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	471	273	563	365	253	467
Cache	390	100	90	431	229	183
Davis	--	--	--	--	--	--
Morgan	34	--	59	333	176	111
Rich	27	436	678	987	228	348
Summit	131	522	236	161	420	349
Weber	375	--	800	--	155	92
Regional Totals	283	358	468	387	288	319
Central Region						
Juab	180	467	200	217	0	181
Salt Lake	--	--	--	--	--	--
Sanpete	128	80	135	123	107	106
Tooele	25	426	407	194	342	786
Utah	--	--	--	0	--	--
Wasatch	571	735	690	321	377	364
Regional Totals	318	475	427	208	230	341
Southern Region						
Beaver	--	--	1186	--	420	486
Garfield	--	941	646	409	604	358
Iron	--	--	118	346	426	1133
Kane	--	--	924	80	--	253
Millard	--	--	--	--	--	--
Piute	--	0	--	--	--	--
Sevier	--	283	581	--	--	--
Washington	--	--	--	--	--	--
Wayne	--	691	1363	447	2061	555
Regional Totals	244	601	714	388	911	494
Northeastern Region						
Daggett	715	388	626	414	835	346
Duchesne	400	117	122	100	159	118
Uintah	385	671	487	474	735	594
Regional Totals	444	313	361	319	523	349
Southeastern Region						
Carbon	--	63	26	59	45	309
Emery	--	22	152	33	0	--
Grand	--	--	--	0	133	25
San Juan	--	157	2875	653	560	775
Regional Totals	159	68	179	451	218	432
STATE TOTALS	296	374	443	346	383	373

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter**	% of Pressure	% of Harvest
<u>Northern</u>							
Box Elder	89	164	120	0.73	1.09	16.70	17.00
Cache	52	86	38	0.44	0.97	8.76	5.38
Davis	6	9	6	0.67	0.94	0.92	0.85
Morgan	16	29	25	0.86	1.75	2.95	3.54
Rich	67	99	63	0.64	1.25	10.08	8.92
Summit	51	72	47	0.65	1.33	7.33	6.66
Weber	27	42	23	0.55	1.21	4.28	3.26
Regional Totals	308	501	322	0.64	1.12	51.02	45.61
<u>Central</u>							
Juab	2	2	1	0.50	0.00	0.20	0.14
*Salt Lake	3	4	1	0.25	1.03	0.41	0.14
Sanpete	9	15	10	0.67	1.00	1.53	1.42
Tooele	23	34	12	0.35	0.58	3.46	1.70
Utah	23	34	31	0.91	1.37	3.46	4.39
Wasatch	14	17	6	0.35	0.00	1.73	0.85
Regional Totals	74	106	61	0.58	1.08	10.79	8.64
<u>Southern</u>							
Beaver	11	16	15	0.94	1.88	1.63	2.12
Garfield	31	44	48	1.09	2.38	4.48	6.80
Iron	10	18	12	0.67	1.00	1.83	1.70
Kane	1	2	2	1.00	3.33	0.20	0.28
Millard	1	4	0	0.00	0.00	0.41	0.00
Piute	10	17	7	0.41	0.75	1.73	0.99
Sevier	18	28	14	0.50	0.92	2.85	1.98
*Washington	0	0	0	0.00	0.89	0.00	0.00
Wayne	22	36	31	0.86	1.00	3.67	4.39
Regional Totals	104	165	129	0.78	1.34	16.80	18.27
<u>Northeastern</u>							
Daggett	9	17	19	1.12	3.67	1.73	2.69
Duchesne	25	48	59	1.23	2.08	4.89	8.36
Uintah	39	78	70	0.90	1.68	7.94	9.92
Regional Totals	73	143	148	1.03	1.91	14.56	20.96
<u>Southeastern</u>							
Carbon	13	20	22	1.10	1.67	2.04	3.12
Emery	2	2	2	1.00	1.33	0.20	0.28
Grand	1	1	1	1.00	4.00	0.10	0.14
San Juan	2	5	10	2.00	0.00	0.51	1.42
Regional Totals	18	28	35	1.25	2.00	2.85	4.96
Unknown counties	16	39	11	0.28	1.00	3.97	1.56
Mixed counties	0	0	0	0.00	--	--	--
STATE TOTALS	593	982	706	0.72	1.23	100	100

*Illegal areas

**Based on county of residence

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970*	1971	1972
<u>Northern</u>								
Box Elder	**	**	0.76	0.42	1.44	1.21	1.12	0.73
Cache	**	**	0.36	0.51	0.65	0.30	0.65	0.44
Davis	**	**	0.00	0.25	0.92	0.00	0.41	0.67
Morgan	**	**	1.20	0.50	0.57	0.55	0.48	0.86
Rich	**	**	0.76	0.79	0.68	0.55	0.84	0.64
Summit	**	**	0.68	0.51	0.62	0.68	0.68	0.65
Weber	**	**	0.36	0.96	1.63	0.38	0.49	0.55
Regional Totals	**	**	0.64	0.59	1.03	0.81	0.83	0.64
<u>Central</u>								
Juab	**	**	**	**	**	**	**	0.50
Salt Lake	**	**	**	**	**	**	**	0.25
Sanpete	**	**	**	0.86	0.81	0.40	0.82	0.67
Tooele	**	**	**	**	**	0.32	0.83	0.35
Utah	0.43	1.00	0.18	0.35	0.83	0.44	0.88	0.91
Wasatch	**	**	**	0.91	0.72	0.68	0.40	0.35
Regional Totals	0.43	1.00	0.18	0.77	0.79	0.56	0.79	0.58
<u>Southern</u>								
Beaver	1.11	1.13	**	1.43	1.59	0.83	0.95	0.94
Garfield	1.63	0.67	**	1.23	1.76	1.11	1.42	1.09
Iron	0.00	0.20	**	0.77	1.08	1.45	0.53	0.67
Kane	1.00	2.00	**	0.75	1.00	1.00	0.50	1.00
Millard	1.00	--	**	0.00	--	0.57	--	0.00
Piute	1.00	0.89	0.67	0.92	1.24	0.75	1.38	0.41
Sevier	0.65	0.39	0.17	0.95	0.93	1.04	0.77	0.50
Washington	--	4.00	**	0.00	1.00	0.00	**	**
Wayne	0.83	1.18	0.80	1.52	1.28	1.44	1.15	0.86
Regional Totals	1.12	1.31	0.48	1.18	1.39	1.19	1.11	0.78
<u>Northeastern</u>								
Daggett	0.67	0.50	0.40	1.00	1.57	0.20	1.55	1.12
Duchesne	1.15	1.20	0.60	1.11	1.05	1.30	1.39	1.23
Uintah	0.87	1.05	1.25	1.48	1.25	0.97	0.99	0.90
Regional Totals	0.95	0.80	0.95	1.29	1.24	1.02	1.19	1.03
<u>Southeastern</u>								
Carbon	0.48	1.50	0.55	0.75	0.36	0.52	0.77	1.10
Emery	0.00	--	2.00	0.70	0.71	1.50	0.00	1.00
Grand	--	--	--	--	2.00	0.00	1.33	1.00
San Juan	0.00	--	2.00	0.00	1.33	1.08	1.25	2.00
Regional Totals	0.35	1.50	0.74	0.70	0.52	0.73	0.75	1.25
Unknown counties	0.03	2.00	0.94	0.43	--	0.76	1.06	0.28
Mixed counties	--	--	0.00	--	--	0.00	--	--
Illegal areas	1.00	1.27	0.34	0.46	2.16	0.71	1.00	0.25
STATE TOTALS	0.83	0.99	0.65	0.82	1.09	0.86	0.93	0.72

*Northern Region counties (except part of Box Elder) and Tooele and Wasatch counties were limited to a one bird per day bag limit. Southern Region counties had a three bird daily bag limit in 1970. Season length was seven days in all but Wasatch and Tooele counties where it was two days.

**Closed Season.

Table 8. Distribution of sage grouse harvest by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	*	*	11.29	4.11	13.24	24.19	20.30	17.00
Cache	*	*	4.03	3.36	3.15	1.68	4.17	5.38
Davis	*	*	0.00	0.56	1.02	0.00	0.75	0.85
Morgan	*	*	2.42	0.75	0.74	1.55	1.18	3.54
Rich	*	*	12.90	7.10	4.35	4.01	6.20	8.92
Summit	*	*	7.66	3.55	3.06	5.43	4.49	6.66
Weber	*	*	2.02	4.67	7.87	1.29	2.46	3.26
Regional Totals	0.00	0.00	40.32	24.11	33.43	38.16	39.53	45.61
Central								
Juab	*	*	*	*	*	*	*	0.14
Salt Lake	*	*	*	*	*	*	*	*
Sanpete	*	*	*	2.24	1.20	1.03	0.96	1.42
Tooele	*	*	*	*	*	1.03	3.74	1.70
Utah	1.50	12.09	0.81	1.68	7.22	1.55	2.99	4.39
Wasatch	*	*	*	11.59	7.04	8.67	1.07	0.85
Regional Totals	1.50	12.09	4.04	15.51	15.46	12.94	10.58	8.64
Southern								
Beaver	5.00	2.20	*	3.74	2.50	2.46	1.92	2.12
Garfield	32.30	8.79	*	5.05	11.11	5.05	7.59	6.80
Iron	0.00	0.55	*	1.87	1.20	2.07	0.85	1.70
Kane	0.50	1.10	*	0.56	0.37	0.26	0.21	0.28
Millard	0.50	--	*	0.00	--	0.52	--	0.00
Piute	9.00	8.79	3.23	2.06	2.41	0.39	1.92	0.99
Sevier	5.50	3.85	2.02	3.55	2.31	3.23	1.82	1.98
Washington	--	2.20	*	0.00	0.19	0.00	0.21	*
Wayne	12.40	10.99	6.45	12.52	8.15	13.97	11.22	4.39
Regional Totals	65.20	38.47	12.50	29.35	28.24	27.94	25.75	18.27
Northeastern								
Daggett	1.00	1.10	0.81	1.31	3.06	0.26	1.82	2.69
Duchesne	7.40	9.89	7.26	7.29	3.80	6.73	6.84	8.36
Uintah	9.90	10.99	22.18	12.15	8.89	7.76	7.05	9.92
Regional Totals	18.30	21.98	30.24	20.75	15.74	14.75	15.71	20.96
Southeastern								
Carbon	5.50	4.95	4.44	2.24	1.11	2.07	2.88	3.12
Emery	0.00	--	0.81	1.31	0.46	0.78	0.00	0.28
Grand	--	--	--	--	0.19	0.00	0.43	0.14
San Juan	0.00	--	1.61	0.00	0.37	1.68	1.07	1.42
Regional Totals	5.50	4.95	6.85	3.55	2.13	4.53	4.38	4.96
Unknown counties	0.50	1.10	6.05	4.30	--	1.68	4.06	1.56
Mixed counties	--	--	0.00	--	--	0.00	--	--
Illegal areas	9.00	20.87	4.04	2.42	5.00	0.65	2.03	0.14
STATE TOTALS	100	100	100	100	100	100	100	100

*Closed Season

Table 9. Distribution of sage grouse hunting pressure by region and county, 1965-72.

Region and County	1965	1966	1967*	1968	1969	1970	1971	1972
Northern								
Box elder	**	**	9.66	8.09	9.98	17.20	16.90	16.70
Cache	**	**	7.31	5.34	5.24	4.77	5.96	8.76
Davis	**	**	0.52	1.83	1.21	0.11	1.69	0.92
Morgan	**	**	1.31	1.22	1.41	2.44	2.29	2.95
Rich	**	**	10.97	7.33	6.96	6.22	6.86	10.08
Summit	**	**	7.31	5.65	5.34	6.88	6.16	7.33
Weber	**	**	3.66	3.97	5.24	2.89	4.67	4.28
Regional Totals	0.00	0.00	40.73	33.44	35.38	40.51	44.53	51.02
Central								
Juab	**	**	**	**	**	**	**	0.20
Salt Lake	**	**	**	**	**	**	**	**
Sanpete	**	**	**	2.14	1.61	2.22	1.09	1.53
Tooele	**	**	**	**	**	2.77	4.17	3.46
Utah	2.98	9.92	2.87	3.97	9.48	3.00	3.18	3.46
Wasatch	**	**	**	10.38	10.58	10.88	2.49	1.73
Regional Totals	2.98	9.92	2.87	16.49	21.67	19.64	12.52	10.79
Southern								
Beaver	4.76	1.53	**	2.14	1.71	2.55	1.89	1.63
Garfield	16.07	12.21	**	3.36	6.85	3.88	4.97	4.48
Iron	0.60	3.05	**	1.98	1.21	1.22	1.49	1.83
Kane	0.60	0.76	**	0.61	0.40	0.22	0.40	0.20
Millard	0.60	--	**	0.31	--	0.78	--	0.41
Piute	7.74	9.16	3.13	1.83	2.12	0.44	1.29	1.73
Sevier	7.14	9.16	7.83	3.05	2.72	2.66	2.19	2.85
Washington	--	0.76	--	0.31	0.20	0.00	0.30	**
Wayne	10.71	9.16	5.22	6.72	6.96	8.32	9.05	3.67
Regional Totals	48.22	45.79	16.18	20.31	22.18	20.09	21.57	16.80
Northeastern								
Daggett	1.19	2.29	1.31	1.07	2.12	1.11	1.09	1.73
Duchesne	4.76	10.69	7.83	5.34	3.93	4.44	4.57	4.89
Uintah	9.52	11.45	11.49	6.72	7.76	6.88	6.66	7.94
Regional Totals	15.47	24.43	20.63	13.13	13.81	12.43	12.33	14.56
Southeastern								
Carbon	10.71	3.82	5.22	2.44	3.33	3.44	3.48	2.04
Emery	2.98	--	0.26	1.53	0.71	0.44	0.89	0.20
Grand	--	--	--	--	0.10	0.11	0.30	0.10
San Juan	0.60	--	0.52	0.15	0.30	1.33	0.80	0.51
Regional Totals	14.29	3.82	6.01	4.12	4.44	5.33	5.47	2.85
Unknown counties	10.71	0.76	4.18	8.24	--	1.89	3.58	3.97
Mixed counties	--	--	1.83	--	--	0.11	--	--
Illegal areas	8.35	15.26	7.57	4.27	2.52	0.77	1.89	0.41
STATE TOTALS	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later based on hunter-days rather than number of hunters reporting.

**Closed Season

Table 10. Statewide summary of sage grouse harvest statistics, 1951-72.

Year	Total* Hunters	Total* Harvest	Hunter Days Afield	Sage grouse per hunter-day	Sage grouse per hunter
1951	840	2,458	--	--	2.93
1952	678	2,230	--	--	3.29
1953	895	2,581	--	--	2.88
1954	802	2,510	--	--	3.13
1955	579	1,742	--	--	3.01
1956	495	1,375	--	--	2.97
1957	470	1,303	--	--	2.77
1958	567	1,797	--	--	3.17
1959	699	1,875	--	--	2.68
1960	861	2,246	--	--	2.61
1961	1,078**	1,918**	--	--	1.78**
1962***	2,382	5,352	5,097	1.05	1.89
1963	12,366	13,793	15,564	0.89	1.12
1964	4,362	6,827	5,807	1.18	1.56
1965	3,243	3,881	4,673	0.83	1.20
1966	2,612	3,962	4,006	0.99	1.52
1967	5,336	5,089	7,860	0.65	0.95
1968	9,115	11,109	13,601	0.82	1.22
1969	12,894	22,282	20,466	1.09	1.73
1970	12,036	15,877	18,506	0.86	1.32
1971	12,893	20,013	21,509	0.93	1.55
1972	13,040	15,983	22,232	0.72	1.23

TOTALS

(1963-72)	87,897	118,816	134,224	0.89	1.35
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AVERAGES

(1963-71)	8,317	11,426	12,444	0.92	1.35
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*The number of sage grouse hunters and consequently harvest was limited by permits available from 1951 through 1962.

**Estimated

***Totals and indexes based on indiscreet data.

Table II. Sage grouse field bag check summary, 1972.

Region and County	ALL HUNTS			COMPLETE HUNTS		
	Total Parties	Total Hunters	Total Total Birds/100 hrs.	Total Complete Hunts	Total Total Hunters Hours	Total Total Birds/100 hrs. Hunter
Northern						
Box Elder	327	836	4,080	632	15	0.88
Cache	65	155	689	50	7	0.31
Davis	--	--	--	--	--	--
Morgan	6	13	33	2	6	0.29
Rich	195	496	2,202	232	11	0.50
Summit	3	7	36	2	6	0.29
Weber	18	50	229	16	7	0.32
Regional Totals	614	1,557	7,269	934	13	0.68
Central						
Juab	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--
Tooele	24	76	220	49	22	0.46
Utah	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--
Regional Totals	24	76	220	49	22	0.46
Southern						
Beaver	--	--	--	--	--	--
Garfield	42	124	276	56	20	1.22
Iron	15	41	134	13	10	0.07
Kane	--	--	--	--	--	--
Millard	--	--	--	--	--	--
Piute	2	10	102	12	12	1.20
Sevier	--	--	--	--	--	--
Washington	--	--	--	--	--	--
Wayne	170	456	2,059	277	13	0.73
Regional Totals	229	631	2,571	358	14	0.75
Northeastern						
Daggett	15	45	144	21	15	1.00
Duchesne	21	71	155	44	28	2.00
Uintah	44	110	243	137	56	1.46
Regional Totals	80	226	542	202	37	1.40
Southeastern						
Carbon	1	6	18	6	33	1.00
Emery	--	--	--	--	--	--
Grand	--	--	--	--	--	--
San Juan	--	--	--	--	--	--
Regional Totals	1	6	18	6	33	1.00
STATE TOTALS	948	2,496	10,620	1,549	15	0.71

Table 12. Sage grouse hunter success trend determined by field bag checks, 1967-72.

Region and County	1967		1968		1969		1970		1971		1972	
	Birds/ 100 hrs. Hunter	Birds/ Hunter	Birds/ 100 hrs. Hunter	Birds/ Hunter	Birds/ 100 hrs. Hunter	Birds/ Hunter	Birds/ 100 hrs. Hunter	Birds/ Hunter	Birds/ 100 hrs. Hunter	Birds/ Hunter	Birds/ 100 hrs. Hunter	Birds/ Hunter
Northern												
Box Elder	29	0.81	16	0.86	23	1.24	24	1.00	19	0.99	15	0.88
Cache	6	0.38	18	0.52	11	0.63	35	1.10	7	0.29	7	0.31
Davis	--	--	--	--	--	--	27	0.98	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	10	0.21	6	0.29
Rich	14	0.52	12	0.46	9	0.62	--	--	14	0.55	11	0.50
Summit	45	0.93	36	0.91	28	0.75	--	--	26	1.00	6	0.29
Weber	25	0.25	10	0.42	15	0.63	10	0.52	9	0.38	7	0.32
Regional Totals	12	0.50	14	0.52	15	0.90	24	0.99	16	0.73	13	0.68
Central												
Juab	--	--	--	--	--	--	50	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	16	0.28	--	--	--	--
Sanpete	--	--	65	1.17	3	0.12	21	0.61	6	0.37	--	--
Tooele	--	--	--	--	--	--	20	2.18	16	0.68	22	0.46
Utah	--	--	--	--	--	--	26	0.77	--	--	--	--
Wasatch	--	--	41	0.98	28	0.84	--	--	--	--	--	--
Regional Totals	--	--	42	0.98	26	0.79	21	0.61	13	0.61	22	0.46
Southern												
Beaver	--	--	44	2.30	34	1.36	19	0.67	--	--	--	--
Garfield	--	--	--	--	39	1.51	20	0.50	21	0.72	20	1.22
Iron	--	--	37	1.62	27	0.71	19	0.77	34	1.02	10	0.07
Kane	--	--	--	--	36	1.05	--	--	--	--	--	--
Millard	--	--	--	--	--	--	12	0.98	--	--	--	--
Piute	--	--	--	--	--	--	32	1.32	23	1.00	12	1.20
Sevier	--	--	--	--	--	--	25	1.36	--	--	--	--
Washington	--	--	--	--	--	--	7	0.43	--	--	--	--
Wayne	--	--	35	1.31	27	2.02	--	--	13	0.65	13	0.73
Regional Totals	--	--	37	1.35	34	1.49	18	1.07	15	0.67	14	0.75
Northeastern												
Daggett	28	0.91	46	1.41	23	1.68	--	--	38	1.14	15	1.00
Duchesne	34	1.61	37	1.36	38	1.39	15	0.99	29	0.86	28	2.00
Uintah	43	1.54	39	1.42	33	1.10	19	1.16	40	1.48	56	1.46
Regional Totals	37	1.40	40	1.41	32	1.24	17	1.06	36	1.24	37	1.40
Southeastern												
Carbon	25	1.50	62	1.57	5	0.30	5	0.10	7	1.00	33	1.00
Emery	13	1.20	30	1.22	38	1.10	24	0.96	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	18	0.80	--	--	29	1.55	--	--
Regional Totals	19	1.41	52	1.49	17	0.72	23	0.90	22	1.46	33	1.00
STATE TOTALS	18	0.72	30	0.98	22	1.02	20	0.97	17	0.74	15	0.71

FOREST GROUSE

SUMMARY

Forest grouse harvest statistics for 1971 indicated an average or higher breeding population level in 1972. Production of ruffed grouse in 1972 was apparently higher than both 1971 and the average while blue grouse was lower than both 1971 and the average. Based on these data a fall population level comparable to 1971 was predicted for 1972.

The harvest of both ruffed and blue grouse was at an all-time high in 1972 due to increased hunters and hunter-days afield. Hunter success was similar to 1971 on a per day basis and slightly higher than 1971 on a per hunter basis.

Forest grouse population densities, as indicated by hunter success, have been above average for the past three years. This has resulted in increased interest and greater hunting pressure.



Brood Counts

Ruffed Grouse

Results of the annual random brood survey for 1972 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and ruffed grouse observed per 100 hours are found in Tables 2-4. A summary of effort expended on ruffed and blue grouse brood counts combined is shown in Table 9. Survey results for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total ruffed grouse observed	223	-50	-37
Young per 100 adults	385	+25	+7
Mean brood size	4.61	-11	-2
Ruffed grouse observed per 100 hours	28	-48	-53
Total hours effort (Forest grouse)	797	-4	+28

Judging from 1971 harvest statistics the breeding population level in 1972 was probably above average.

Fewer ruffed grouse were counted during brood surveys with slightly less effort than in 1971. Mean brood size was lower than in 1971 but about average while the young per 100 adults ratio was substantially higher than in 1971 and slightly higher than average. The small sample size precludes accurate assessment of production and trend.

Blue Grouse

Results of the annual random brood survey for 1972 are shown in Table 5 of this section. Long-term trends of young-adult ratios, mean brood size and blue grouse observed per 100 hours are found in Tables 6-8. Survey results for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total blue grouse observed	756	+29	+58
Young per 100 adults	224	-23	-22
Mean brood size	4.64	-5	-1
Blue grouse observed per 100 hours	95	+34	+30
Total hours effort (Forest grouse)	797	-4	+28

Harvest statistics for 1971 indicate an average breeding population level. Fieldmen exerted slightly less effort on brood surveys than in 1971 but observed more blue grouse. Indicated production, both mean brood size and young per 100 adults, was lower than 1971 and the average.

Field Bag Checks

A summary of field bag check data for 1972 is found in Table 15. Hunter success trends determined via this method since 1966 are shown in Table 16. Results of the 1972 survey compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	1,506	+34	+90
Total hours hunted	6,624	+67	+131
Forest grouse per hunter (complete hunts)	0.95	+19	+28
Forest grouse bagged per 100 hours	20	-9	-5
Average hours per hunter-day (complete hunts)	4.7	+27	+24
Hours hunted per grouse bagged	5.0	+9	-2

Results of this survey indicate an increase in hunter success over 1971 on a per day basis. The average hunter spent more hours afield per day compared to both 1971 and the average. The time required to bag a grouse was slightly more than in 1971 but about average.

Harvest

Hunter Questionnaire

Results of the 1972 forest grouse (ruffed and blue grouse combined) hunter questionnaire are shown in Table 10. Long-term trends of forest grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 11-13 and total State-wide harvest statistics in Table 14. Harvest statistics for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Forest grouse hunters	16,640	+25	+49
Forest grouse harvested	42,518	+33	+110
Hunter-days afield	38,940	+34	+106
Forest grouse per hunter	2.56	+7	+28
Forest grouse per hunter-day	1.09	-1	+3
Percent ruffed grouse	48.6	-2	+1
Percent blue grouse	45.2	+5	+2
Percent unidentified species	6.2	-17	-22

During 1972, hunting pressure was at an all-time high and resulted in a record harvest of 42,518 forest grouse. Hunter success per day was similar to 1971 and slightly above average while success per hunter for the season was slightly above 1971 but considerably higher than the average.

The long-term trend of forest grouse harvest statistics continues upward largely due to increasing interest in forest grouse hunting (Figure 1).

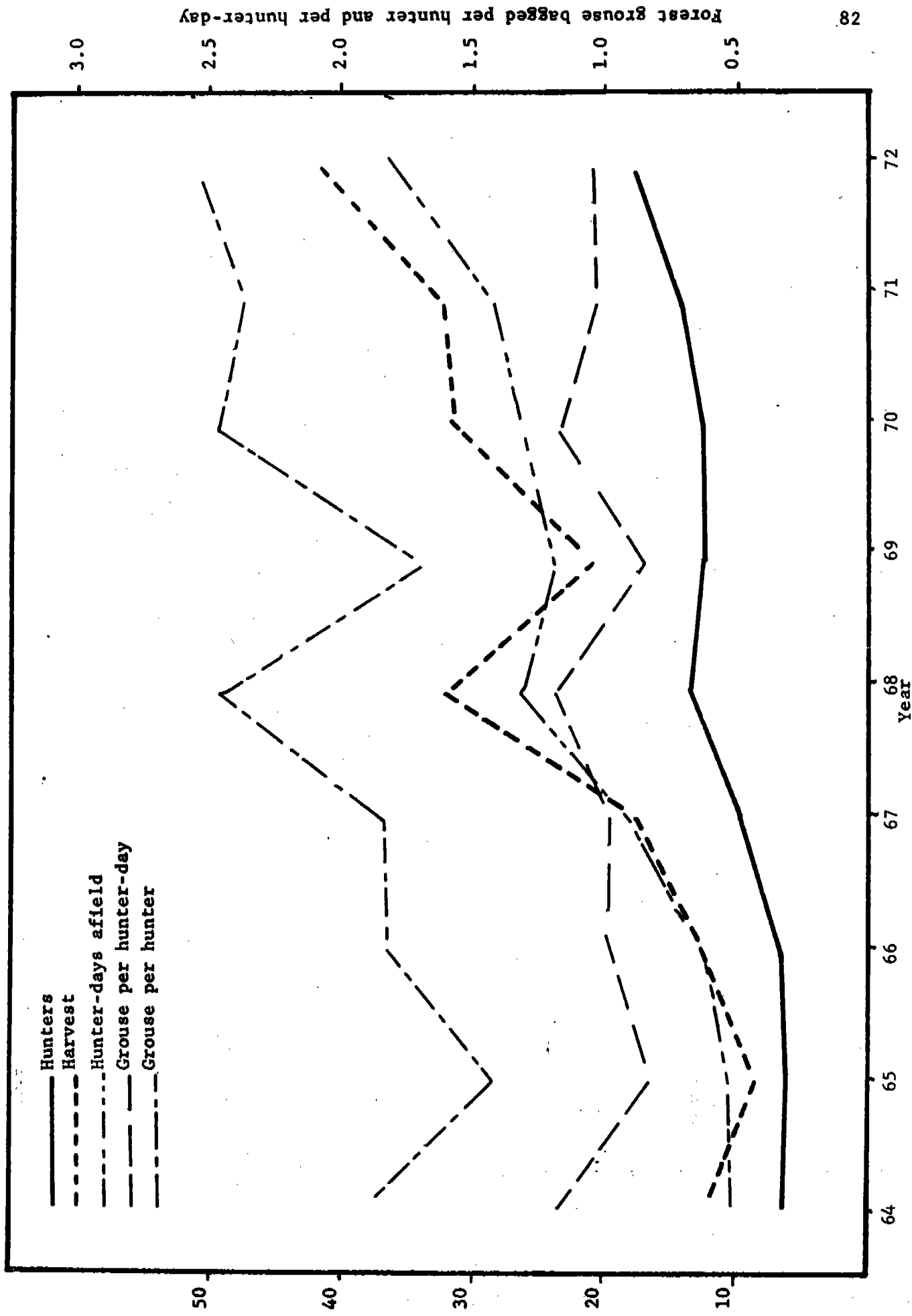


Figure 1. State-wide trends of forest grouse harvest statistics.

Table 1. Ruffed grouse summer inventory summary, 1972.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Ad.		Adults w/o Yng.	Total Adults	Total Young	Young/100 Ad.	Grouse/100 hrs.
	No. Adult	Yng.		Adults	Young					
Northern										
Box Elder	--	--	--	--	--	--	--	--	--	--
Cache	1	9	9.00	0	0	0	1	9	900	14
Davis	5	24	4.80	3	7	0	8	31	388	244
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	4	15	3.75	0	0	0	4	15	375	61
Summit	2	13	6.50	0	0	0	2	13	650	100
Weber	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	12	61	5.08	3	7	0	15	68	453	39
Central										
Juab	0	0	--	0	0	0	0	0	--	--
Salt Lake	0	0	--	0	0	0	0	0	--	--
Sanpete	6	28	4.67	6	18	2	14	46	329	240
Tooele	0	0	--	0	0	0	0	0	--	--
Utah	4	19	4.75	0	0	0	4	19	475	37
Wasatch	1	3	3.00	0	0	0	1	3	300	50
REGIONAL TOTALS	11	50	4.55	6	18	2	19	68	358	84
Southern										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	7	30	4.29	0	0	2	9	30	333	22
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	7	30	4.29	0	0	2	9	30	333	15
Northeastern										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	3	11	3.67	0	0	0	3	11	367	28
Uintah	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	11	3.67	0	0	0	3	11	367	10
Southeastern										
Carbon	0	0	--	0	0	0	0	0	--	--
Emery	--	--	--	--	--	--	--	--	--	--
Grand	0	0	--	0	0	0	0	0	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	--	0	0	0	0	0	--	--
STATE TOTALS	33	152	4.61	9	25	4	46	177	385	28

Table 2. Trend of ruffed grouse young per 100 adults ratios, 1963-72.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	--	--	--	--	400	0	--	--	--	--
Cache	362	--	314	630	425	225	321	468	383	900
Davis	300	--	--	525	600	400	0	--	--	388
Morgan	--	240	--	200	--	--	200	400	540	--
Rich	300	--	--	--	300	150	--	--	--	375
Summit	--	--	0	--	--	500	333	500	514	650
Weber	--	--	600	257	--	450	143	--	340	--
Regional Totals	331	240	280	522	427	292	260	471	426	453
Central Region										
Juab	--	--	--	--	550	275	333	470	325	--
Salt Lake	--	--	--	--	0	150	133	470	100	--
Sanpete	--	--	--	--	228	259	171	300	240	329
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	450	433	267	256	300	475
Wasatch	--	--	--	--	450	--	--	--	--	300
Regional Totals	226	171	311	375	333	236	214	331	242	358
Southern Region										
Beaver	--	--	--	--	--	--	97	--	200	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	0	--	--	--	--	--
Millard	--	--	--	500	--	--	225	183	280	--
Piute	--	--	--	--	--	--	--	--	300	--
Sevier	560	200	225	362	243	425	400	533	221	333
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	200	--	--	--
Regional Totals	560	200	225	378	189	425	139	300	235	333
Northeastern Region										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	457	--	--	--	--	450	800	225	--	367
Uintah	--	--	--	--	--	0	700	250	375	--
Regional Totals	457	--	--	--	--	386	766	233	375	367
Southeastern Region										
Carbon	--	--	--	--	--	40	--	0	--	--
Emery	300	500	300	--	--	350	400	700	500	--
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	257	--	--	--	--	--	--	--
Regional Totals	300	500	267	--	--	128	400	489	500	--
STATE TOTALS	306	212	285	468	335	268	219	372	308	385

Table 3. Trend of ruffed grouse mean brood size, 1962-72.

Region and County	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	--	--	--	--	--	4.00	--	--	--	--	--
Cache	7.33	3.62	--	4.40	6.59	6.38	2.00	4.09	4.78	5.55	9.00
Davis	--	3.00	--	--	5.25	6.00	4.00	--	--	--	4.80
Morgan	--	--	4.00	--	4.00	--	--	4.67	4.00	6.75	--
Rich	5.00	3.00	--	--	--	3.00	3.00	--	--	--	3.75
Summit	--	--	--	--	--	--	5.00	6.00	5.00	6.00	6.50
Weber	5.33	--	--	6.00	4.50	--	4.50	2.50	--	8.00	--
Regional Totals	6.00	3.31	4.00	4.66	6.01	5.82	4.00	4.30	4.79	6.09	5.08
Central Region											
Juab	--	--	--	--	--	6.60	5.33	4.00	4.67	4.33	--
Salt Lake	--	--	--	--	--	--	--	4.00	4.67	4.00	--
Sanpete	--	--	--	--	--	3.89	3.54	4.67	4.64	5.50	4.67
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	4.60	4.33	3.80	7.00	3.75	4.75
Wasatch	--	--	--	--	--	4.50	--	--	--	--	3.00
Regional Totals	--	4.00	4.08	5.09	5.00	4.76	4.00	4.17	4.78	4.75	4.55
Southern Region											
Beaver	--	--	--	--	--	--	--	6.00	--	5.00	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	5.00	--	--	2.25	--	4.67	--
Piute	--	--	--	--	--	--	--	--	--	3.00	--
Sevier	--	5.60	2.00	3.00	4.14	4.25	4.25	4.00	--	3.83	4.29
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	2.00	--	--	--
Regional Totals	--	5.60	2.00	3.00	4.25	4.25	4.25	3.30	--	4.08	4.29
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	4.00	5.33	--	--	--	--	4.50	8.00	3.00	--	3.67
Uintah	--	--	--	--	--	--	--	7.00	2.50	5.00	--
Regional Totals	4.00	5.33	--	--	--	--	4.50	7.67	2.80	5.00	3.67
Southeastern Region											
Carbon	--	--	--	--	--	--	2.00	--	--	--	--
Emery	5.50	3.00	6.67	6.00	--	--	3.50	3.00	7.00	5.00	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	4.50	--	--	--	--	--	--	--
Regional Totals	5.50	3.00	6.67	4.80	--	--	3.00	3.00	7.00	5.00	--
STATE TOTALS	5.58	4.10	4.24	4.32	5.56	5.33	4.05	4.24	4.66	5.16	4.61

Table 4 Trend of ruffed grouse observed per 100 hours, 1967-72.

Region and County	1967	1968	1969	1970	1971	1972
<u>Northern</u>						
Box Elder	--	2	--	--	--	--
Cache	--	54	83	270	67	14
Davis	--	31	3	--	--	244
Morgan	--	--	58	62	128	--
Rich	--	62	--	--	--	61
Summit	--	40	63	42	108	100
Weber	--	92	44	--	73	--
REGIONAL TOTALS	37	33	50	80	77	39
<u>Central</u>						
Juab	206	500	158	179	142	--
Salt Lake	--	111	20	47	16	--
Sanpete	87	316	158	143	167	240
Tooele	--	--	--	--	--	--
Utah	21	61	63	32	40	37
Wasatch	100	--	--	--	0	50
REGIONAL TOTALS	58	395	78	81	85	84
<u>Southern</u>						
Beaver	--	--	314	--	250	--
Garfield	--	--	--	--	--	--
Iron	--	--	--	--	--	--
Kane	--	--	--	--	--	--
Millard	--	--	--	213	317	--
Piute	--	--	--	--	267	--
Sevier	--	--	--	--	28	22
Washington	--	--	--	--	--	--
Wayne	--	--	--	--	--	--
REGIONAL TOTALS	78	--	314	62	35	15
<u>Northeastern</u>						
Daggett	--	--	--	--	0	--
Duchesne	--	157	58	29	0	28
Uintah	--	20	88	18	83	--
REGIONAL TOTALS	--	119	65	23	83	10
<u>Southeastern</u>						
Carbon	--	61	--	5	0	--
Emery	--	16	30	16	46	--
Grand	--	--	--	--	--	--
San Juan	--	--	--	--	--	--
REGIONAL TOTALS	--	17	30	12	46	--
STATE TOTALS	48	70	59	55	54	28

Table 5. Blue grouse summer inventory summary, 1972.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Ad.		Adults w/o Yng.	Total Adults	Total Young	Young/100 Ad.	Grouse/100 hrs.
	No.	Adult Yng.		Adults	Young					
<u>Northern</u>										
Box Elder	1	5	5.00	0	0	0	1	5	500	35
Cache	12	66	5.50	2	6	11	25	72	288	133
Davis	3	8	2.67	2	1	6	11	9	82	125
Morgan	3	16	5.33	3	9	4	10	25	250	125
Rich	2	9	4.50	0	0	1	3	9	300	39
Summit	3	16	5.33	0	0	0	3	16	533	127
Weber	4	19	4.75	0	0	24	28	19	68	147
REGIONAL TOTALS	28	139	4.96	7	16	46	81	155	191	111
<u>Central</u>										
Juab	0	0	--	0	0	0	0	0	--	--
Salt Lake	0	0	--	0	0	0	0	0	--	--
Sanpete	5	14	2.80	0	0	4	9	14	156	92
Tooele	0	0	--	0	0	0	0	0	--	--
Utah	9	38	4.22	2	7	1	12	45	375	92
Wasatch	3	18	6.00	0	0	0	3	18	600	262
REGIONAL TOTALS	17	70	4.12	2	7	5	24	77	321	98
<u>Southern</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	1	4	4.00	0	0	2	3	4	133	10
Iron	--	--	--	--	--	--	--	--	--	--
Kane	3	10	3.33	0	2	2	5	12	240	--
Millard	1	2	2.00	0	0	2	3	2	67	83
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	8	21	2.62	0	0	13	21	21	100	23
Washington	3	12	4.00	2	7	2	7	19	271	260
Wayne	0	0	--	0	0	0	0	0	--	--
REGIONAL TOTALS	16	49	3.06	2	9	21	39	58	149	37
<u>Northeastern</u>										
Daggett	8	40	5.00	0	0	6	14	40	286	146
Duchesne	7	33	4.71	0	0	5	12	33	275	90
Uintah	4	26	6.50	3	13	0	7	39	557	87
REGIONAL TOTALS	19	99	5.21	3	13	11	33	112	339	104
<u>Southeastern</u>										
Carbon	1	6	6.00	8	17	16	25	23	92	258
Emery	--	--	--	--	--	--	--	--	--	--
Grand	3	8	2.67	0	0	4	7	8	114	103
San Juan	12	74	6.17	4	16	8	24	90	375	238
REGIONAL TOTALS	16	88	5.50	12	33	28	56	121	216	216
STATE TOTALS	96	445	4.64	26	78	111	233	523	224	95

Table 6. Trend of blue grouse young per 100 adults ratios, 1963-72.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	254	700	200	--	133	382	222	389	--	500
Cache	333	--	200	487	350	318	154	316	245	288
Davis	250	--	--	442	400	138	250	--	520	82
Morgan	--	425	--	400	--	--	500	600	533	250
Rich	--	--	500	--	333	--	--	300	--	300
Summit	--	--	200	--	450	--	400	433	600	533
Weber	528	--	600	567	500	500	325	--	557	68
Regional Totals	317	517	265	478	193	289	248	361	305	191
Central Region										
Juab	--	--	--	--	300	--	383	--	--	--
Salt Lake	--	--	--	--	0	--	175	900	67	--
Sanpete	--	--	--	--	267	467	--	283	425	156
Tooele	--	--	--	--	800	400	--	--	--	--
Utah	--	--	--	--	275	267	230	314	422	375
Wasatch	--	--	--	--	333	360	--	550	450	600
Regional Totals	347	344	567	612	326	337	231	389	324	321
Southern Region										
Beaver	--	--	--	--	--	238	--	--	--	--
Garfield	--	--	--	--	--	140	--	100	600	133
Iron	--	--	--	700	--	400	8	--	267	--
Kane	--	--	--	--	233	--	--	150	200	240
Millard	--	--	--	--	--	--	--	--	280	67
Piute	--	--	--	--	--	200	--	--	--	--
Sevier	76	200	40	69	67	--	--	140	136	100
Washington	--	--	--	0	366	--	38	170	--	271
Wayne	--	300	--	900	--	--	182	--	--	--
Regional Totals	76	240	40	150	160	224	75	135	213	149
Northeastern Region										
Daggett	--	--	--	--	--	150	350	--	--	286
Duchesne	--	600	317	--	200	257	433	--	400	275
Uintah	--	--	500	--	666	--	480	400	167	557
Regional Totals	--	600	343	--	555	186	414	400	225	339
Southeastern Region										
Carbon	--	--	--	--	--	138	--	0	167	92
Emery	300	--	575	--	300	250	--	450	300	--
Grand	--	--	--	--	--	--	--	--	--	114
San Juan	--	--	0	--	200	400	456	153	386	375
Regional Totals	300	--	383	--	250	288	456	139	310	216
STATE TOTALS	258	381	312	354	246	268	235	253	292	224

Table 7. Trend of blue grouse mean brood size, 1962- 72.

Region and County	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region											
Box Elder	6.06	5.09	7.00	6.00	--	3.67	4.43	5.54	3.83	--	5.00
Cache	--	4.28	--	2.50	6.22	4.67	4.38	3.35	4.28	5.18	5.50
Davis	--	3.33	--	--	4.42	4.00	4.50	7.00	--	6.25	2.67
Morgan	--	--	4.25	--	6.00	--	--	5.00	6.00	5.33	5.33
Rich	--	--	--	5.00	--	3.33	--	--	3.00	--	4.50
Summit	5.00	--	--	4.00	--	4.50	--	8.00	4.33	6.00	5.33
Weber	3.00	5.28	--	6.00	5.67	4.00	5.00	4.75	--	6.50	4.75
Regional Totals	5.64	4.75	5.17	4.09	5.73	4.10	4.50	4.51	4.21	5.54	4.96
Central Region											
Juab	--	--	--	--	--	3.00	--	4.60	--	--	--
Salt Lake	--	--	--	--	--	--	--	4.40	9.00	2.00	--
Sanpete	--	--	--	--	--	4.00	4.67	--	2.83	4.25	2.80
Tooele	--	--	--	--	--	8.00	4.00	--	--	--	--
Utah	--	--	--	--	--	5.00	3.40	4.67	5.50	4.22	4.22
Wasatch	--	--	--	--	--	10.00	3.60	--	5.50	4.50	6.00
Regional Totals	--	3.88	4.43	5.67	6.13	4.78	3.80	4.54	4.67	4.00	4.12
Southern Region											
Beaver	--	--	--	--	--	--	3.75	--	--	--	--
Garfield	--	--	--	--	--	--	2.00	--	3.00	6.00	4.00
Iron	--	--	--	7.00	--	--	4.00	--	--	8.00	--
Kane	--	--	--	--	--	--	--	--	3.00	6.00	3.33
Millard	--	--	--	--	--	--	--	--	--	4.67	2.00
Piute	--	--	--	--	--	--	2.00	--	--	--	--
Sevier	--	3.20	3.00	2.00	2.57	2.00	--	1.50	--	3.00	2.62
Washington	--	--	--	--	--	6.00	--	4.00	3.40	--	4.00
Wayne	7.00	--	3.00	--	9.00	--	--	--	--	--	--
Regional Totals	--	3.20	3.00	2.00	4.36	3.00	3.22	5.50	3.25	4.45	3.06
Northeastern Region											
Daggett	--	--	--	--	--	--	--	3.50	--	--	5.00
Duchesne	5.00	--	6.00	4.75	--	2.00	9.00	4.33	--	4.00	4.71
Uintah	--	--	--	5.00	--	6.67	--	6.00	5.50	2.50	6.50
Regional Totals	5.00	--	6.00	4.80	--	5.50	9.00	4.46	5.50	3.00	5.21
Southeastern Region											
Carbon	--	--	--	--	--	--	4.00	--	--	5.00	6.00
Emery	7.00	3.00	--	5.75	--	6.00	5.00	--	4.50	3.00	--
Grand	--	--	--	--	--	--	--	--	--	--	2.67
San Juan	--	--	--	--	--	4.00	4.33	5.20	4.00	5.25	6.17
Regional Totals	7.00	3.00	--	5.75	--	5.00	4.33	5.20	4.20	4.82	5.50
STATE TOTALS	5.64	4.36	4.44	4.74	5.49	4.42	4.24	4.46	4.28	4.86	4.64

Table 8. Trend of blue grouse observed per 100 hours, 1967-72.

Region and County	1967	1968	1969	1970	1971	1972
<u>Northern</u>						
Box Elder	--	129	412	99	--	35
Cache	--	192	146	198	171	133
Davis	--	194	170	--	194	125
Morgan	--	--	50	88	76	125
Rich	--	--	--	33	--	39
Summit	--	--	32	56	18	127
Weber	--	150	364	--	153	147
REGIONAL TOTALS	63	103	127	97	135	111
<u>Central</u>						
Juab	138	--	175	--	0	--
Salt Lake	2	--	64	28	20	--
Sanpete	68	68	--	43	34	92
Tooele	675	500	--	--	--	--
Utah	32	106	38	63	94	92
Wasatch	100	87	--	260	1,100	262
REGIONAL TOTALS	64	97	52	57	51	98
<u>Southern</u>						
Beaver	--	88	--	--	--	--
Garfield	--	240	--	86	45	10
Iron	--	143	140	15	42	--
Kane	--	--	--	111	51	--
Millard	--	--	--	--	317	83
Piute	--	54	--	--	--	--
Sevier	--	--	38	--	16	23
Washington	--	--	86	174	--	260
Wayne	--	--	--	--	--	--
REGIONAL TOTALS	116	102	56	162	29	37
<u>Northeastern</u>						
Daggett	--	1,400	193	--	0	146
Duchesne	10	119	33	--	13	90
Uintah	255	--	156	41	35	87
REGIONAL TOTALS	51	210	150	41	18	104
<u>Southeastern</u>						
Carbon	--	543	9	32	80	258
Emery	29	12	--	12	31	--
Grand	--	--	--	--	13	103
San Juan	75	158	196	211	178	238
REGIONAL TOTALS	33	67	98	40	97	216
STATE TOTALS	67	101	84	71	71	95

Table 9. Summary of effort expended on forest grouse brood counts, 1972.

Region and County	Vehicle Miles Traveled	Hours Effort Expended			Total
		Vehicle	Horseback	Walking	
Northern					
Box Elder	60	3	13	1	17
Cache	540	37	28	8	73
Davis	260	12	0	4	16
Morgan	0	0	28	0	28
Rich	283	12	0	19	31
Summit	186	13	0	2	15
Weber	41	4	5	23	32
REGIONAL TOTALS	1,370	81	74	57	212
Central					
Juab	0	0	0	0	0
Salt Lake	31	3	0	1	4
Sanpete	247	17	0	8	25
Tooele	36	3	--	1	4
Utah	418	36	24	2	62
Wasatch	72	8	0	0	8
REGIONAL TOTALS	804	67	24	12	103
Southern					
Beaver	--	--	--	--	--
Garfield	127	14	57	0	71
Iron	--	--	--	--	--
Kane	--	--	--	--	--
Millard	110	5	--	1	6
Piute	--	--	--	--	--
Sevier	0	0	180	0	180
Washington	30	3	2	5	10
Wayne	54	1	0	2	3
REGIONAL TOTALS	214	13	239	8	260
Northeastern					
Daggett	320	25	3	9	37
Duchesne	629	44	0	6	50
Uintah	397	23	20	10	53
REGIONAL TOTALS	1,346	92	23	25	140
Southeastern					
Carbon	166	13	0	6	19
Emery	--	--	--	--	--
Grand	90	10	0	5	15
San Juan	95	10	35	3	48
REGIONAL TOTALS	351	33	35	14	82
STATE TOTALS	4,085	286	395	116	797

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters reporting	Days hunted	Birds Bagged				Total	Birds/Day	Birds/Hunter*	% of Pressure	% of Harvest
			Ruffed	Blue	Uniden.						
Northern											
Box Elder	33	71	50	36	8	94	1.32	3.09	4.13	5.01	
Cache	173	399	218	225	12	455	1.14	2.81	23.20	24.23	
Davis	25	46	11	28	0	39	0.85	2.71	2.67	2.08	
Morgan	25	51	50	34	4	88	1.73	0.50	2.97	4.69	
Rich	28	52	34	25	1	60	1.15	3.33	3.02	3.19	
Summit	48	105	53	23	5	81	0.77	2.83	6.10	4.31	
Weber	88	226	111	175	35	321	1.42	3.34	13.14	17.09	
REGIONAL TOTALS	420	950	527	546	65	1,138	1.20	3.03	55.23	60.60	
Central											
Juab	15	34	8	9	0	17	0.50	2.00	1.98	0.91	
Salt Lake	25	50	34	29	0	63	1.26	1.96	2.91	3.35	
Sanpete	33	55	23	41	13	77	1.40	2.07	3.20	4.10	
Tooele	7	10	2	3	2	7	0.70	1.17	0.58	0.37	
Utah	85	201	137	87	4	228	1.13	2.58	11.69	12.14	
Wasatch	34	66	30	29	7	66	1.00	2.67	3.84	3.51	
REGIONAL TOTALS	199	416	234	198	26	458	1.10	2.21	24.19	24.39	
Southern											
Beaver	5	9	7	0	2	9	1.00	2.50	0.52	0.48	
Garfield	6	10	3	3	0	6	0.60	0.67	0.58	0.32	
Iron	14	34	4	10	10	24	0.71	2.50	1.98	1.28	
Kane	7	16	0	11	0	11	0.69	1.00	0.93	0.59	
Millard	13	22	8	6	1	15	0.68	1.62	1.28	0.80	
Piute	5	10	2	0	0	2	0.20	1.33	0.58	0.11	
Sevier	28	55	35	9	4	48	0.87	1.59	3.20	2.56	
Washington	0	0	0	0	0	0	0.00	0.00	0.00	0.00	
Wayne	2	2	0	3	0	3	1.50	0.00	0.12	0.16	
REGIONAL TOTALS	80	158	59	42	17	118	0.75	1.76	9.19	6.28	
Northeastern											
Daggett	7	16	3	19	0	22	1.37	0.00	0.93	1.17	
Duchesne	15	30	32	5	0	37	1.23	1.80	1.74	1.97	
Uintah	15	30	5	5	2	12	0.40	0.50	1.74	0.64	
REGIONAL TOTALS	37	76	40	29	2	71	0.93	0.88	4.42	3.78	
Southeastern											
Carbon	15	34	24	10	1	35	1.03	3.08	1.98	1.86	
Emery	4	10	9	1	0	10	1.00	2.00	0.58	0.53	
Grand	2	3	1	1	0	2	0.67	1.50	0.17	0.11	
San Juan	3	3	3	3	0	6	2.00	0.00	0.17	0.32	
REGIONAL TOTALS	24	50	37	15	1	53	1.06	2.61	2.91	2.82	
Unknown counties	34	70	15	19	6	40	0.57	0.00	4.07	2.13	
Mixed counties	0	0	0	0	0	0	0.00	0.00	0.00	0.00	
STATE TOTALS	794	1,720	912	849	117	1,878	1.09	2.56	100	100	

*Based on county of residence.

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	0.67	1.08	0.83	0.72	0.88	1.17	1.07	1.32
Cache	0.98	1.12	1.24	1.17	1.11	1.33	1.36	1.14
Davis	0.71	0.38	0.57	0.40	0.52	0.82	0.47	0.85
Morgan	1.33	1.77	0.57	1.59	0.50	1.55	1.40	1.73
Rich	0.93	--	1.09	0.92	0.97	1.42	1.35	1.15
Summit	0.87	1.04	0.58	1.32	0.60	1.10	0.89	0.77
Weber	0.32	1.04	0.62	1.52	0.75	1.22	1.11	1.42
REGIONAL TOTALS	0.80	1.08	0.94	1.19	0.87	1.28	1.17	1.20
Central								
Juab	1.14	1.67	0.73	1.36	1.00	1.38	1.21	0.50
Salt Lake	0.55	0.69	0.74	1.21	0.96	0.80	1.26	1.26
Sanpete	1.06	0.87	1.15	1.53	0.77	1.56	0.92	1.40
Tooele	0.95	0.25	0.15	1.00	0.68	0.55	0.57	0.70
Utah	1.00	1.03	0.87	1.21	0.76	1.13	1.02	1.13
Wasatch	1.09	1.07	1.21	1.37	0.68	1.29	1.36	1.00
REGIONAL TOTALS	0.88	0.93	0.87	1.31	0.77	1.24	1.08	1.10
Southern								
Beaver	0.00	0.00	2.00	0.67	0.50	1.00	0.80	1.00
Garfield	1.00	1.00	0.33	2.00	0.25	0.00	0.00	0.60
Iron	0.00	0.33	0.60	1.03	1.15	1.19	1.00	0.71
Kane	--	--	--	0.25	0.80	0.00	0.63	0.69
Millard	0.00	0.00	1.60	0.00	4.00	1.83	1.50	0.68
Piute	3.00	1.00	--	1.00	1.00	0.43	1.33	0.20
Sevier	0.25	1.63	1.06	1.21	1.00	1.11	0.95	0.87
Washington	--	--	1.00	1.10	0.00	0.00	1.00	--
Wayne	0.00	--	4.00	0.33	2.00	0.00	0.00	1.50
REGIONAL TOTALS	0.35	1.00	1.09	1.06	0.99	1.07	0.92	0.75
Northeastern								
Daggett	--	0.00	1.69	1.20	2.22	0.14	0.50	1.37
Duchesne	1.60	1.36	0.78	1.33	1.08	0.84	1.64	1.23
Uintah	1.00	1.00	0.56	1.04	1.26	0.88	0.52	0.40
REGIONAL TOTALS	1.27	1.14	0.98	1.19	1.37	0.73	0.96	0.93
Southeastern								
Carbon	0.50	1.00	1.00	0.88	1.04	1.18	0.65	1.03
Emery	0.00	0.33	2.43	2.00	0.89	1.12	0.45	1.00
Grand	3.00	--	--	1.17	0.00	0.50	1.00	0.67
San Juan	0.00	--	1.00	--	0.43	0.00	--	2.00
REGIONAL TOTALS	0.60	0.87	1.43	1.12	0.85	1.12	0.61	1.06
Unknown counties	0.83	0.35	0.82	1.30	--	0.68	1.11	0.57
Mixed counties	1.00	--	1.51	--	--	0.00	2.00	--
STATE TOTALS	0.83	0.99	0.99	1.22	0.87	1.20	1.10	1.09

Table 13. Distribution of forest grouse hunting pressure by region and county, 1965-72.

Region and County	1965	1966	1967*	1968	1969	1970	1971	1972
Northern								
Box Elder	3.86	4.53	3.35	2.82	3.44	3.09	2.94	4.13
Cache	18.33	21.15	20.09	21.28	22.33	25.39	22.04	23.20
Davis	5.14	3.02	2.42	2.35	2.43	2.16	4.56	2.67
Morgan	0.61	1.51	0.81	3.21	3.02	2.24	2.57	2.97
Rich	3.22	--	2.66	2.90	3.27	2.55	3.75	3.02
Summit	2.89	6.95	8.43	7.59	6.72	3.24	4.48	6.10
Weber	10.29	9.37	5.43	6.57	13.85	10.03	10.36	13.14
REGIONAL TOTALS	44.34	46.53	43.19	46.71	55.08	48.69	50.70	55.23
Central								
Juab	1.29	0.91	1.27	1.72	1.26	3.01	2.06	1.98
Salt Lake	12.22	8.46	4.04	4.07	2.27	1.93	3.38	2.91
Sanpete	3.54	8.16	6.00	6.81	3.61	6.79	4.41	3.20
Tooele	3.22	1.81	3.81	0.78	1.60	0.85	1.54	0.58
Utah	13.18	17.82	10.51	13.38	14.60	12.81	13.74	11.69
Wasatch	4.50	2.11	4.97	5.63	5.04	4.55	4.85	3.84
REGIONAL TOTALS	37.95	39.27	30.60	32.39	28.38	29.94	29.98	24.19
Southern								
Beaver	0.64	0.30	0.23	0.47	0.17	0.31	0.73	0.52
Garfield	0.32	0.30	0.35	0.39	0.34	0.23	0.44	0.58
Iron	0.32	1.21	1.73	2.32	2.18	1.23	0.66	1.98
Kane	--	--	--	0.31	0.84	0.15	0.59	0.93
Millard	0.64	0.30	0.58	0.08	0.08	0.93	0.59	1.28
Piute	0.32	0.30	--	0.23	0.92	0.54	0.88	0.58
Sevier	0.96	2.42	1.85	2.66	1.68	4.09	4.04	3.20
Washington	--	--	0.12	0.78	0.42	0.00	0.07	--
Wayne	0.32	--	0.23	0.23	0.25	0.23	0.22	0.12
REGIONAL TOTALS	3.52	4.83	50.8	7.51	6.88	7.72	8.23	9.19
Northeastern								
Daggett	--	0.30	1.85	0.78	0.76	1.08	0.88	0.93
Duchesne	1.61	2.72	2.08	2.11	1.09	2.47	1.62	1.74
Uintah	0.96	0.91	2.08	2.03	3.19	2.47	1.54	1.74
REGIONAL TOTALS	2.57	3.93	6.00	4.93	5.04	6.02	4.04	4.42
Southeastern								
Carbon	1.61	2.42	1.73	3.21	2.27	5.25	2.50	1.98
Emery	0.32	0.60	0.81	0.86	1.51	0.62	0.81	0.58
Grand	0.32	--	--	0.47	0.25	0.15	0.07	0.17
San Juan	0.32	--	0.12	--	0.59	0.15	--	0.17
REGIONAL TOTALS	2.57	3.02	2.66	4.54	4.62	6.17	3.38	2.91
Unknown counties	7.07	2.42	3.93	3.91	--	1.47	3.38	4.07
Mixed counties	0.96	--	8.55	--	--	0.00	0.29	--
STATE TOTALS	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later based on hunter-days rather than number of hunters reporting.

Table 14. State-wide summary of forest grouse harvest statistics, 1961-72.

Year	Total hunters		Total harvest		Hunter-days afield	Grouse/ hunter-day		Grouse per season				
	Ruffed (%)	Blue (%)	Blue (%)	Unknown (%)		Ruffed	Blue	Ruffed	Blue	Total		
1961*	256	128 (36.3)	220 (62.3)	5 (1.4)	353	--	--	0.50	0.86	1.38		
1962**	2386	1885 (56.3)	1464 (43.7)	0 (0)	4276	1.19	0.76	--	--	--		
1963	7425	5470 (40.2)	7372 (54.2)	766 (5.6)	12,313	0.44	0.66	1.11	0.74	1.83		
1964	6487	5354 (42.2)	6685 (57.7)	652 (5.1)	10,566	0.51	0.63	1.20	0.82	1.96		
1965	6005	3225 (37.2)	4924 (56.8)	520 (6.0)	10,504	0.31	0.47	0.83	0.54	1.44		
1966	6683	6966 (56.6)	4659 (37.8)	696 (5.7)	12,387	0.56	0.38	0.99	1.04	1.84		
1967	9420	8476 (48.4)	6773 (38.6)	2277 (13.0)	17,773	0.48	0.38	0.99	0.87	1.86		
1968	13,061	17,048 (52.6)	12604 (38.9)	2762 (8.5)	26,537	0.64	0.47	1.22	1.30	2.48		
1969	12,523	9490 (44.1)	10419 (48.5)	1589 (7.4)	24,572	0.38	0.42	0.87	0.76	1.72		
1970	12,775	15,590 (48.9)	13515 (42.4)	2793 (8.7)	31,898	0.59	0.51	1.20	1.22	2.50		
1971	13,363	15,759 (49.4)	13749 (43.1)	2393 (7.5)	31,901	0.54	0.47	1.10	1.18	2.39		
1972	16,640	20,648 (48.6)	19221 (45.2)	2649 (6.2)	42,518	0.53	0.49	1.09	1.24	2.56		
TOTALS												
1963-72	116,905	108,026 (48.0)	99921 (44.4)	17097 (7.6)	225045	209,311	0.52	0.48	1.08	0.92	0.85	1.92
AVERAGES												
1963-71	11,141	9,709 (47.9)	8967 (44.2)	1605 (7.9)	20,281	18,930	0.49	0.49	1.06	0.94	0.90	2.00

*Estimated

**Totals and indexes based on indiscreet data.

Table 15. Forest grouse field bag check summary, 1972

Region and County	ALL HUNTS				COMPLETE HUNTS				Birds/100 hrs. Hunter
	Total Parties	Total Hunters	Total Hours	Total Birds	Total Hunts	Total Hunters	Total Hours	Total Birds	
Northern									
Box Elder	11	25	80	20	10	23	74	18	24
Cache	350	824	3,916	771	322	743	3,595	724	20
Davis	--	--	--	--	--	--	--	--	--
Morgan	2	4	12	0	2	4	12	0	0
Rich	93	237	1,122	177	83	207	982	167	17
Summit	--	--	--	--	--	--	--	--	--
Weber	87	226	955	211	74	196	881	196	22
REGIONAL TOTALS	543	1,316	6,085	1,179	491	1,173	5,544	1,105	20
Central									
Juab	5	15	49	16	3	11	36	15	42
Salt Lake	5	9	27	0	3	7	23	0	0
Sanpete	8	17	58	15	0	0	0	0	--
Tooele	1	2	6	2	0	0	0	0	--
Utah	37	101	276	74	8	26	96	18	19
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	56	144	416	107	14	44	155	33	21
Southern									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	3	9	45	23	3	9	45	23	51
Millard	--	--	--	--	--	--	--	--	--
Piute	2	4	16	2	1	1	4	1	25
Sevier	8	20	34	15	5	11	24	15	62
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	33	95	40	9	21	73	39	53
Northeastern									
Daggett	3	7	19	4	1	2	14	3	21
Duchesne	1	2	5	1	0	0	0	0	--
Uintah	2	4	4	6	1	2	1	1	100
REGIONAL TOTALS	6	13	28	11	2	4	15	4	27
Southeastern									
Carbon									
Emery									
Grand									
San Juan									
REGIONAL TOTALS									
STATE TOTALS	618	1,506	6,624	1,337	20	516	5,787	1,181	20
									0.95

NO DATA COLLECTED

Table 16. Forest grouse hunter success trend determined by field bag checks, 1967-72.

Region and County	1967		1968		1969		1970		1971		1972	
	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter
<u>Northern</u>												
Box Elder	7	0.17	--	--	33	1.00	--	--	--	--	25	0.78
Cache	14	0.62	21	0.60	17	0.70	18	0.86	21	0.80	20	0.97
Davis	4	0.16	--	--	1	0.05	--	--	--	--	--	--
Morgan	--	--	133	2.00	--	--	100	1.50	96	1.60	0	0.00
Rich	14	0.42	26	0.76	23	1.00	32	1.14	24	1.09	16	0.81
Summit	25	1.00	44	1.06	--	--	57	1.33	14	0.45	--	--
Weber	11	0.46	23	0.66	4	0.19	12	0.58	16	0.65	22	1.00
REGIONAL TOTALS	14	0.54	23	0.66	13	0.55	15	0.75	21	0.81	19	0.94
<u>Central</u>												
Juab	23	0.55	57	1.54	34	0.94	20	0.57	23	1.67	33	1.36
Salt Lake	0	0.00	6	0.22	14	1.50	12	0.88	0	0.00	0	0.00
Sanpete	13	1.00	29	1.11	10	0.10	38	1.29	31	0.88	26	0.88
Tooele	--	--	--	--	--	--	17	0.67	--	--	33	1.00
Utah	--	--	29	1.00	19	0.44	16	0.33	26	0.38	27	0.69
Wasatch	64	2.10	13	0.78	83	1.75	--	--	50	1.33	--	--
REGIONAL TOTALS	23	1.18	28	1.10	22	0.54	24	1.03	28	0.61	26	0.75
<u>Southern</u>												
Beaver	--	--	--	--	--	--	--	--	4	0.33	--	--
Garfield	--	--	--	--	--	--	6	0.21	4	0.05	--	--
Iron	--	--	--	--	--	--	25	0.43	32	0.70	--	--
Kane	--	--	26	1.17	--	--	5	0.14	--	--	51	2.56
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	12	0.75
Sevier	--	--	125	1.25	--	--	--	--	50	1.28	44	1.36
Washington	--	--	--	--	--	--	15	0.67	--	--	--	--
Wayne	--	--	--	--	--	--	40	1.33	--	--	--	--
REGIONAL TOTALS	--	--	39	1.25	--	--	12	0.32	17	0.38	42	1.86
<u>Northeastern</u>												
Daggett	--	--	--	--	30	2.00	0	0.00	80	1.33	21	0.57
Duchesne	--	--	18	0.56	20	0.33	38	1.17	50	2.00	20	0.50
Uintah	--	--	33	1.23	59	0.40	30	2.33	44	2.36	150	1.50
REGIONAL TOTALS	--	--	28	1.23	40	0.55	28	1.87	49	2.12	39	0.85
<u>Southeastern</u>												
Carbon	--	--	47	1.00	22	0.83	--	--	35	1.75	--	--
Emery	77	1.00	52	1.50	--	--	--	--	13	0.62	--	--
Grand	--	--	--	--	--	--	--	--	41	1.00	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	98
REGIONAL TOTALS	77	1.00	49	1.16	22	0.83	--	--	26	1.00	--	--
STATE TOTALS	16	0.61	26	0.78	14	0.55	16	0.76	22	0.80	20	0.95

QUAIL

SUMMARY

Quail inventory data indicated poor production during 1972. This, coupled with a low breeding population level, resulted in a low fall population level, especially for Gambel's quail in Washington County.

Total harvest and hunter success declined as expected during the 1972 hunting season; however the decline occurred primarily in the southern, northeastern and southeastern regions. Success in the northern and central regions was low but similar to 1971.



Brood Counts

Results of the annual random brood survey for 1972 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and quail observed per 100 hours are shown in Tables 2-4. Survey results for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total quail observed	990	-12	-29
Young per 100 adults	171	-33	-28
Mean brood size	7.21	+10	+2
Quail observed per 100 hours	664	-9	-20
Total hours effort	149	-3	-16

Harvest data for 1971 indicates a breeding population level for 1972 which was equal to or slightly lower than that for 1971.

Total effort on quail brood counts was low. Indicated density in terms of quail observed per 100 hours effort was less than both 1971 and the average.

Average brood size was higher than both 1971 and the average, but the number of young per 100 adults, the best index of production was considerably lower than both 1971 and the average.

The Gambel's quail population in Washington County was again at a low level due to very poor production.

Harvest

Results of the annual hunter questionnaire are shown in Table 5. Long-term trends of quail bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total State-wide harvest statistics in Table 9.

The 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Quail hunters	7,380	-8	-7
Quail harvested	16,504	-22	-31
Hunter-days afield	21,779	+0.9	+13
Quail per hunter	2.24	-14	-25
Quail per hunter-day	0.76	-22	-40

Total hunters in 1972 declined slightly from both 1971 and the average but the number of hunter-days increased, probably a reflection of the increased days spent hunting pheasants. Total harvest and hunter-days declined as expected.

Hunter success for Gambel's quail in Washington County was poor.

Long-term quail harvest statistics are shown in Figure 1.

Gambel's Quail Studies

Annual call-count surveys, long-period waterhole counts and vegetative surveys have been conducted on the west slope of the Beaver Dam Mountains since 1962. Trends of those surveys are shown in Tables 10-12.

Call-counts and waterhole counts decreased quail abundance compared to 1971. Hunter success for Washington County also reflected a decrease.

Vegetative surveys designed to measure the relative abundance of annual forbs, using filaree (Erodium cicutarium) as the indicator species, indicated the poorest production of annuals since these studies were initiated in 1962. This was in response to an extreme drought in southern Utah in early spring of 1972.

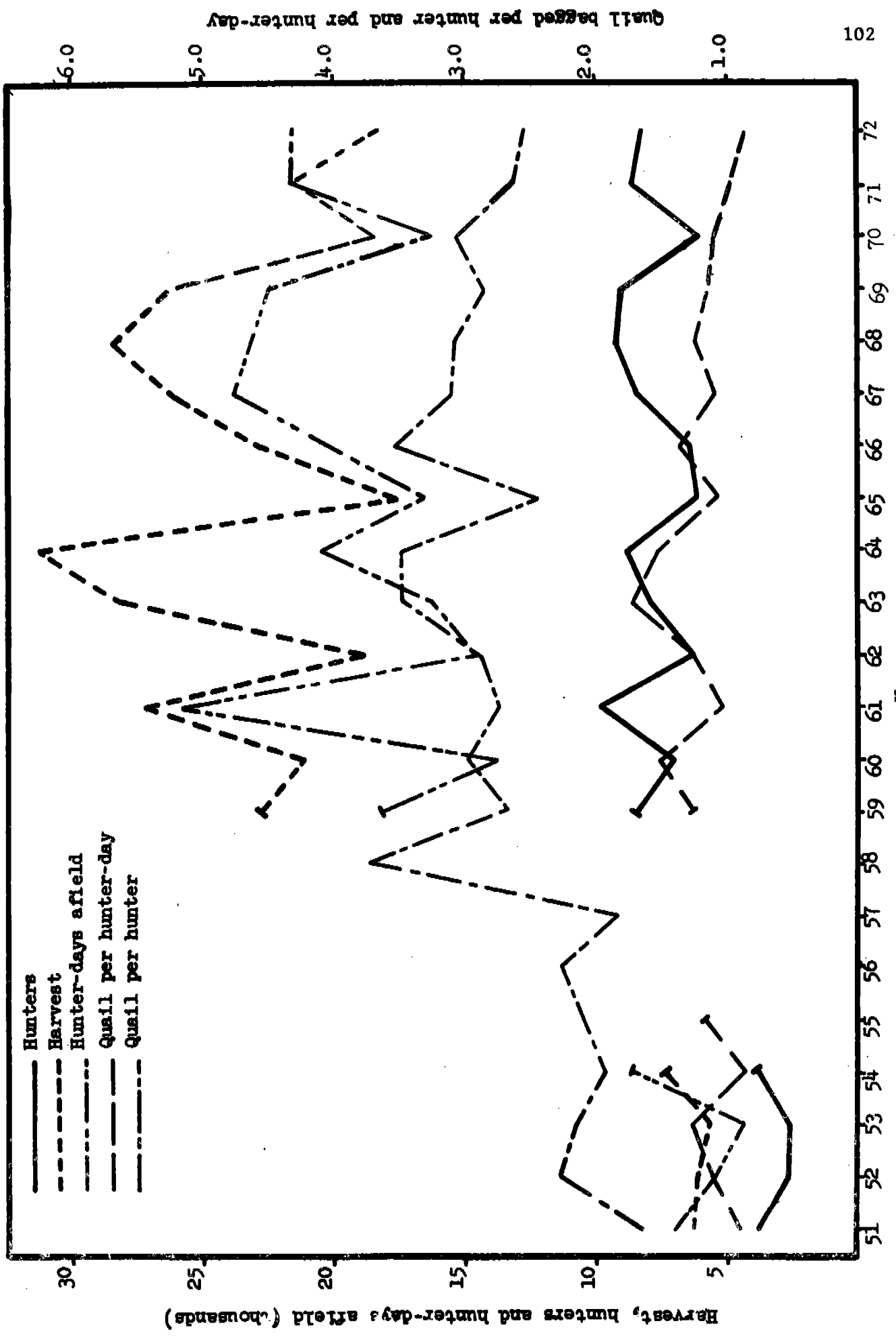


Figure 1. State-wide trend of quail harvest statistics.

Table 2. Trend of quail young per 100 adults ratios 1964-72*

Region and County	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region									
Box Elder	500	--	500	800	--	--	--	--	--
Cache	0	--	--	--	--	--	--	--	--
Davis	--	0	175	5	1500	400	--	314	--
Morgan	500	50	256	141	153	94	329	300	575
Rich	--	--	--	--	--	--	--	--	--
Summit	--	383	--	267	--	450	--	--	--
Weber	--	--	264	--	600	125	0	255	111
Regional Totals	250	83	275	83	273	183	230	290	254
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	629	150	--	241	230	360	173	240	114
Sanpete	467	350	464	262	625	327	476	440	500
Tooele	--	--	--	--	--	--	--	--	--
Utah	359	143	394	282	319	300	228	220	275
Wasatch	--	--	--	--	--	--	--	--	--
Regional Totals	392	158	414	264	306	337	198	267	143
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	0	--	--	--	--	--	--	--
*Kane	--	314	--	625	--	--	1075	160	--
Millard	--	--	150	--	--	122	--	233	117
Piute	--	--	--	333	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
*Washington	146	114	290	215	323	138	48	320	57
*Wayne	--	0	0	--	400	--	--	0	--
Regional Totals	146	115	270	223	324	260	98	270	75
Northeastern Region									
Daggett	--	--	--	--	--	--	524	267	--
Duchesne	140	156	100	171	183	54	0	--	--
Uintah	147	153	378	133	200	138	218	217	165
Regional Totals	146	154	288	141	194	123	301	243	165
Southeastern Region									
Carbon	--	--	233	220	200	114	283	125	--
Emery	--	--	167	--	0	--	--	50	438
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	1200	--	--	--	--	--
Regional Totals	--	--	211	383	150	114	283	100	438
STATE TOTALS	261	148	303	202	302	229	200	255	171

*Washington, Kane and Wayne counties, Gambel's quail. All others California.

Table 3. Trend of quail mean brood size from 1959-72*.

Region and County	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region														
Box Elder	--	2.83	7.75	8.00	--	5.00	--	10.00	8.0	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	9.33	11.67	7.50	5.00	--	--	--	--	15.0	8.20	--	11.00	--
Morgan	--	8.50	6.80	3.57	--	5.00	3.50	9.00	6.00	--	4.80	7.67	12.00	11.50
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	6.50	6.00	11.50	--	6.67	--	8.00	--	7.00	--	--	--
Weber	6.13	5.14	--	7.67	--	--	--	13.00	--	12.00	4.00	--	9.33	10.00
Regional Totals	6.13	7.58	7.41	4.91	7.17	5.00	5.40	10.25	6.57	14.25	5.94	7.67	10.50	11.00
Central Region														
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	9.29	5.50	7.67	--	7.00	8.80	--	--	9.00	6.67	11.42	8.61	7.00	8.00
Sanpete	--	--	7.25	--	5.80	7.00	7.00	9.29	6.30	7.50	6.00	5.67	5.70	5.40
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	8.13	6.33	6.43	--	7.20	8.09	8.24	8.38	6.80	8.24	8.75	7.85	7.43	7.17
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	8.70	6.04	6.88	--	6.90	8.14	8.00	8.65	6.86	7.91	9.67	7.98	6.50	7.18
Southern Region														
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	--	--	--	--	--	--	--	--	--	--	8.00	--
Millard	11.00	--	10.00	--	--	--	--	12.00	--	--	4.00	--	8.00	7.00
Piute	--	7.00	--	--	8.50	--	--	--	4.00	--	--	--	--	--
Sevier	--	--	--	--	6.70	--	--	--	--	--	--	--	--	--
*Washington	8.55	8.96	7.12	4.70	7.60	--	8.30	6.92	5.30	7.92	2.90	4.00	6.62	2.67
*Wayne	10.75	8.00	6.83	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	8.86	8.71	7.24	4.70	7.58	--	8.30	7.11	5.34	7.92	3.50	4.00	7.21	3.75
Northeastern Region														
Daggett	--	--	--	--	--	--	--	--	--	--	--	5.29	5.45	--
Duchesne	4.75	5.14	6.00	7.50	5.00	7.00	6.25	2.00	--	3.67	3.00	--	--	--
Uintah	9.00	--	5.00	--	6.20	7.09	9.67	9.80	6.25	4.80	6.00	5.43	5.33	5.92
Regional Totals	6.17	5.14	5.25	7.50	8.11	7.08	7.71	8.50	6.25	4.38	5.50	5.32	5.41	5.92
Southeastern Region														
Carbon	7.38	--	9.67	10.00	--	7.50	--	7.0	3.67	3.00	4.67	--	--	--
Emery	--	--	9.00	--	--	--	--	--	--	--	--	--	2.00	9.86
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Regional Totals	7.38	--	9.50	10.00	--	7.50	--	--	--	--	--	--	2.00	9.86
STATE TOTALS	8.45	7.17	7.21	4.77	7.37	7.56	7.61	8.10	5.80	7.76	6.95	6.97	6.58	7.21

*Washington, Kane and Wayne counties Gambel's quail. All others California.

Table 4. Trend of quail observed per 100 hours ratios, 1967-72*.

Region and County	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	--	--	--	--	--	--
Cache	0	0	--	--	--	--
Davis	727	1200	1625	0	829	--
Morgan	189	--	631	1200	400	1350
Rich	--	--	--	--	--	--
Summit	23	--	1100	--	--	--
Weber	--	65	100	86	300	271
Regional Totals	141	577	657	550	471	511
Central Region						
Juab	--	--	--	--	--	--
Salt Lake	1400	248	3684	2637	1133	2706
Sanpete	470	483	427	817	982	771
Tooele	--	--	--	--	--	--
Utah	2625	1351	2086	959	988	1071
Wasatch	--	--	--	--	--	--
Regional Totals	1418	1330	2083	1704	1030	1873
Southern Region						
Beaver	--	--	--	--	--	--
Garfield	--	--	--	--	--	--
Iron	66	--	--	--	--	--
*Kane	264	--	0	2350	578	--
Millard	--	--	1800	--	3000	118
Piute	400	--	--	--	--	--
Sevier	--	--	--	--	--	--
*Washington	673	1600	322	316	600	122
*Wayne	--	--	--	--	33	--
Regional Totals	866	1600	2122	420	708	90
Northeastern Region						
Daggett	--	--	--	3017	1900	--
Duchesne	43	45	170	29	0	--
Uintah	525	514	1575	894	1120	1005
Regional Totals	146	118	794	628	769	303
Southeastern Region						
Carbon	533	300	377	271	300	--
Emery	--	--	--	--	83	1950
Grand	--	--	--	--	--	--
San Juan	1300	--	--	--	--	--
Regional Totals	750	300	377	271	181	1950
STATE TOTALS	525	887	1049	939	728	664

*Washington, Kane and Wayne counties Gambel's quail. All others California.

Table 5. Summary of quail hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
Northern							
Box Elder	10	24	27	1.12	1.00	2.49	3.70
Cache	4	19	1	0.05	1.67	1.98	0.14
Davis	34	81	79	0.98	2.73	8.42	10.84
Morgan	6	16	8	0.50	1.67	1.66	1.10
Rich	1	1	1	1.00	0.00	0.10	0.14
Summit	2	3	2	0.67	1.00	0.31	0.27
Weber	27	69	51	0.74	1.91	7.17	7.00
Regional Totals	84	213	169	0.79	2.16	22.14	23.18
Central							
Juab	0	0	0	0.00	0.00	0.00	0.00
Salt Lake	39	87	99	1.14	2.25	9.04	13.58
Sanpete	8	24	4	0.17	3.00	2.49	0.55
Tooele	2	5	0	0.00	0.00	0.52	0.00
Utah	95	290	232	0.80	2.33	30.15	31.82
Wasatch	3	5	0	0.00	0.00	0.52	0.00
Regional Totals	147	411	335	0.82	2.27	42.72	45.95
Southern							
Beaver	1	2	3	1.50	3.00	0.21	0.41
Garfield	0	0	0	0.00	1.00	0.00	0.00
Iron	2	2	2	1.00	3.00	0.21	0.27
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	4	10	3	0.30	0.00	1.04	0.41
Piute	0	0	0	0.00	0.00	0.00	0.00
Sevier	3	4	0	0.00	1.00	0.42	0.00
Washington	38	124	133	1.07	3.39	12.89	18.24
Wayne	1	2	4	2.00	0.00	0.21	0.55
Regional Totals	49	144	145	1.01	2.84	14.97	19.89
Northeastern							
Daggett	1	1	0	0.00	0.00	0.10	0.00
Duchesne	3	4	9	2.25	0.00	0.42	1.23
Uintah	21	118	45	0.38	2.50	12.27	6.17
Regional Totals	25	123	54	0.44	2.50	12.79	7.41
Southeastern							
Carbon	18	45	14	0.31	0.74	4.68	1.92
Emery	5	11	0	0.00	0.00	1.14	0.00
Grand	0	0	0	0.00	0.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00	0.00
Regional Totals	23	56	14	0.25	0.74	5.82	1.92
Unknown counties	11	15	12	0.80	0.00	1.56	1.65
Mixed counties	0	0	0	0.00	0.00	0.00	0.00
STATE TOTALS	339	962	729	0.76	2.24	100	100

*Based on county of residence.

Table 6. Summary of quail bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	0.67	0.96	0.36	0.89	1.04	0.33	0.45	1.12
Cache	0.00	0.82	0.53	0.22	0.57	0.20	0.40	0.05
Davis	0.74	0.62	0.40	0.81	0.60	0.97	0.53	0.98
Morgan	2.35	2.75	2.10	1.56	2.22	1.68	0.83	0.50
Rich	--	--	--	--	0.29	0.00	--	1.00
Summit	1.71	3.13	0.93	0.65	1.00	1.50	0.58	0.67
Weber	1.31	0.85	1.33	0.76	0.95	0.66	0.91	0.74
REGIONAL TOTALS	1.19	0.95	0.96	0.90	1.00	1.00	0.67	0.79
Central								
Juab	0.67	2.80	0.00	0.50	0.00	0.00	0.00	--
Salt Lake	1.19	0.71	1.06	1.09	0.77	1.05	0.88	1.14
Sanpete	--	0.67	0.82	0.22	0.50	2.00	0.38	0.17
Tooele	0.56	1.00	0.14	0.00	0.33	3.00	0.00	0.00
Utah	1.04	1.26	1.14	1.09	1.30	1.12	0.83	0.80
Wasatch	0.00	6.00	2.00	--	0.83	1.00	0.00	0.00
REGIONAL TOTALS	1.06	1.19	1.06	1.06	1.14	1.12	0.80	0.82
Southern								
Beaver	--	--	--	3.00	--	1.33	3.00	1.50
Garfield	1.00	--	--	4.00	1.50	0.00	--	--
Iron	2.00	0.50	1.50	4.00	1.17	0.50	1.20	1.00
Kane	--	1.00	5.86	3.33	0.75	5.67	2.86	--
Millard	0.93	0.20	1.14	0.50	0.44	0.45	0.14	0.30
Piute	0.00	--	2.00	0.67	2.60	0.00	--	--
Sevier	0.40	2.60	1.23	0.83	1.80	0.00	0.60	0.00
Washington	2.03	2.82	1.80	2.45	1.86	1.50	1.81	1.07
Wayne	2.00	3.50	0.00	2.67	0.75	0.00	8.00	2.00
REGIONAL TOTALS	1.51	2.43	1.86	2.31	1.62	1.33	1.82	1.01
Northeastern								
Daggett	--	--	--	--	--	0.00	--	0.00
Duchesne	2.00	0.69	0.50	0.40	1.00	1.00	1.38	2.25
Uintah	0.76	1.12	0.69	0.71	0.54	1.22	0.53	0.38
REGIONAL TOTALS	0.95	1.02	0.59	0.67	0.60	1.17	0.83	0.44
Southeastern								
Carbon	0.60	1.79	1.07	1.00	0.89	1.87	0.95	0.31
Emery	1.67	3.50	0.50	0.25	0.86	1.50	1.50	0.00
Grand	0.00	0.00	--	--	3.00	0.00	--	--
San Juan	--	--	--	--	1.00	0.00	--	--
REGIONAL TOTALS	0.65	1.84	1.00	0.86	0.98	1.77	1.00	0.25
Unknown counties	0.11	--	1.44	0.17	--	0.00	1.12	0.80
Mixed counties	0.65	--	0.37	3.67	--	0.00	--	--
STATE TOTALS	1.06	1.36	1.10	1.23	1.16	1.15	0.98	0.76

Table 8. Distribution of quail hunting pressure by region and county, 1965-72.

Region and County	1965	1966	1967*	1968	1969	1970	1971	1972
Northern								
Box Elder	3.23	3.81	2.16	2.51	2.20	0.37	1.09	2.49
Cache	1.35	1.90	1.64	1.62	2.56	0.62	1.49	1.98
Davis	6.74	7.94	12.24	10.95	12.82	9.61	11.19	8.42
Morgan	3.77	3.81	2.59	5.12	5.77	5.12	2.87	1.66
Rich	--	--	--	--	0.64	0.00	--	0.10
Summit	2.96	1.90	2.59	1.80	0.46	0.25	1.19	0.31
Weber	12.94	8.25	16.38	6.01	9.62	7.62	7.72	7.17
REGIONAL TOTALS	30.99	27.61	37.59	28.01	34.07	23.60	25.54	22.14
Central								
Juab	0.54	1.27	1.03	0.54	0.37	0.25	0.10	--
Salt Lake	14.56	12.38	7.07	8.53	8.61	7.99	7.23	9.04
Sanpete	--	0.95	0.95	0.81	0.37	0.12	1.29	2.49
Tooele	1.35	0.63	0.60	0.09	0.55	0.50	0.40	0.52
Utah	26.15	32.38	23.28	31.69	28.11	34.83	30.00	30.15
Wasatch	0.27	0.32	0.09	--	0.55	0.12	0.50	0.52
REGIONAL TOTALS	42.87	47.93	33.02	41.65	38.55	43.82	39.50	42.72
Southern								
Beaver	--	--	--	0.09	--	0.37	0.20	0.21
Garfield	0.27	--	--	0.09	0.18	0.00	--	--
Iron	0.81	0.63	0.69	0.18	0.55	2.25	0.50	0.21
Kane	--	0.32	0.60	0.27	0.73	0.37	0.69	--
Millard	1.35	1.59	0.60	1.08	2.29	1.37	0.69	1.04
Piute	0.27	--	0.09	0.27	0.46	0.00	--	--
Sevier	1.35	1.27	1.12	0.54	0.46	0.62	0.99	0.42
Washington	6.47	8.89	12.41	16.52	14.47	13.36	14.06	12.89
Wayne	0.27	0.63	0.17	0.27	0.37	0.00	0.30	0.21
REGIONAL TOTALS	10.79	13.33	15.69	19.30	19.51	18.35	17.43	14.97
Northeastern								
Daggett	--	--	--	--	--	0.00	--	0.10
Duchesne	1.08	1.59	2.93	0.45	0.46	2.00	2.08	0.42
Uintah	3.50	4.44	2.76	3.41	3.21	8.11	3.76	12.27
REGIONAL TOTALS	4.58	6.03	5.69	3.86	3.66	10.11	5.84	12.79
Southeastern								
Carbon	4.31	4.44	2.59	3.14	3.30	2.87	6.24	4.68
Emery	0.81	0.32	0.34	0.72	0.64	0.25	0.59	1.14
Grand	--	--	--	--	0.18	0.12	--	--
San Juan	--	--	--	--	0.09	0.00	--	--
REGIONAL TOTALS	5.39	5.08	2.93	3.86	4.21	3.25	6.83	5.82
Unknown counties	4.04	--	1.38	3.05	--	0.87	4.85	1.56
Mixed counties	1.35	--	3.71	0.27	--	0.00	--	--
STATE TOTALS	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later based on hunter-days rather than number of hunters reporting.

Table 9. State-wide summary of quail harvest statistics, 1951-72.

Year	Total Hunters	Total harvest	Hunter days afield	Quail per hunter-day	Quail per hunter
1951	3,856	6,362	7,069	0.90	1.65
1952	2,694	6,105	5,500	1.11	2.27
1953	2,676	5,753	4,494	1.28	2.15
1954	3,855	7,479	8,696	0.86	1.94
1955	--	--	--	1.17	2.10
1956	--	--	--	--	2.26
1957	--	--	--	--	1.85
1958	--	--	--	--	3.73
1959	8,554	22,854	18,174	1.26	2.67
1960	7,117	21,272	13,971	1.52	2.99
1961	9,980	27,362	25,746	1.06	2.74
1962	6,462	18,710	14,660	1.27	2.89
1963	8,059	28,088	16,383	1.71	3.49
1964	8,951	31,189	20,510	1.52	3.48
1965	6,163	17,532	16,528	1.06	2.45
1966	6,465	22,771	16,720	1.36	3.52
1967	8,455	26,187	23,806	1.10	3.10
1968	9,302	28,469	23,132	1.23	3.06
1969	9,160	26,119	22,529	1.16	2.85
1970	6,141	18,896	16,452	1.15	3.08
1971	8,039	21,082	21,595	0.98	2.62
1972	7,380	16,504	21,779	0.76	2.24
TOTALS (1959-72)	110,228	327,035	271,985	1.20	2.97
AVERAGES (1959-71)	7,911	23,887	19,247	1.26	3.00

Table 10. Gambel's quail call-count trends on the west slope of the Beaver Dam Mountains, Washington County, 1962-72.

Index	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Mean calls per station	2.71	1.67	0.68	--	9.2	1.23	6.08	--	0.08	1.57	0.36
Mean quail calling per station	0.41	0.22	0.15	--	1.10	0.33	1.16	--	0.08	0.37	0.11
Mean total calls-route	41.0	25.0	10.1	--	138.5	18.4	91.2	--	1.33	23.5	5.3
Mean total quail calling-route	7.0	3.3	2.3	--	17.0	5.0	17.4	--	1.33	5.5	1.7

Table 11. Gambel's quail long-period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1962-72.

Index	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Total young	66	33	19	--	130	50	98	90	21	33	0
Total adults	142	45	13	--	40	30	24	40	45	8	0
Total quail	208	78	32	--	170	80	122	130	66	41	--
Young per 100 adults	46	73	146	--	325	167	408	225	47	412	--

Table 12. Trend of filaree plants per square foot on the west slope of the Beaver Dam Mountains, 1962-72.

Area	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Vern's Wash (B-1)	0.12	0.03	0.19	0.85	--	1.89	0.39	0.10	0.10	0.07	--
Reber Wash (B-2)	0.92	0.59	0.82	2.23	--	3.35	1.07	0.32	0.17	0.00	0.00
Brick Wash (A-1)	2.80	0.28	1.02	2.02	--	1.84	0.54	0.14	0.11	0.13	0.04
Gravel Canyon (A-2)	4.60	0.46	0.46	1.36	--	4.39	0.28	1.28	0.05	0.28	0.04
AVERAGE	2.11	0.34	0.62	1.62	--	2.87	0.57	0.46	0.11	0.14	0.03

HUNGARIAN PARTRIDGE

SUMMARY

Harvest data for 1971 indicated an increased breeding population level in the northern region for 1972 and a reduction in the central region. Production data was too limited to estimate population trend.

During the 1972 hunting season, more hunters spent more days afield, but bagged fewer Huns. The increased pressure probably reflects a substantial increase in pheasant hunter-days afield and the fact that Huns are bagged largely coincidental to hunting pheasants.



Brood Counts

Results of the annual random brood counts are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and Huns observed per 100 hours are shown in Tables 2-4. Results of this survey for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total Huns observed	194	-22	-54
Young per 100 adults	424	-14	-7
Mean brood size	10.33	+27	+13
Huns observed per 100 hours	139	-43	-58
Total hours effort	140	+36	+9

Harvest data for 1971 indicated an increased breeding population level in Box Elder County and a reduced one in Wasatch County.

Production data shows a reduction in young per 100 adults, but an increased brood size. The sample size was too small to be reliable in estimating fall population trend.

Harvest

Hunter Questionnaire

Results of the annual hunter questionnaire are shown in Table 5. Long-term trends of Huns bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total State-wide harvest statistics in Table 9. The 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Hungarian partridge hunters	4,754	+11	+9
Hungarian partridge harvest	7,335	-22	-29
Hunter-days afield	12,135	+10	+14
Huns per hunter	1.54	-30	-32
Huns per hunter-day	0.60	-29	-36

Total hunters and hunter-days afield in 1972 increased slightly from both 1971 and the average. Total harvest and hunter success both declined.

The trend of harvest statistics is shown in Figure 1. An undetermined, but presumed substantial, percentage of the annual harvest of Hungarian partridge occurs incidental to hunting pheasants. Consequently, indicated Hun hunting pressure trends may reflect changes in pheasant hunting pressure rather than abundance of Huns.

Field Bag Checks

Results of this survey for 1972 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indexes obtained for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	137	-20	-42
Total hours hunted	614	-34	-46
Huns per hunter (complete hunts)	0.75	-9	+7
Huns bagged per 100 hours	17	+13	+21
Average hours per hunter-day (complete hunts)	4.3	+20	+14
Hours hunted per Hun bagged	6.0	-9	-13

Results of this survey suggest that hunter success in 1972 was similar to or only slightly less than in 1971. Hunters spent less time per hunter-day with less effort required per bird bagged. All data compiled was from Box Elder County.

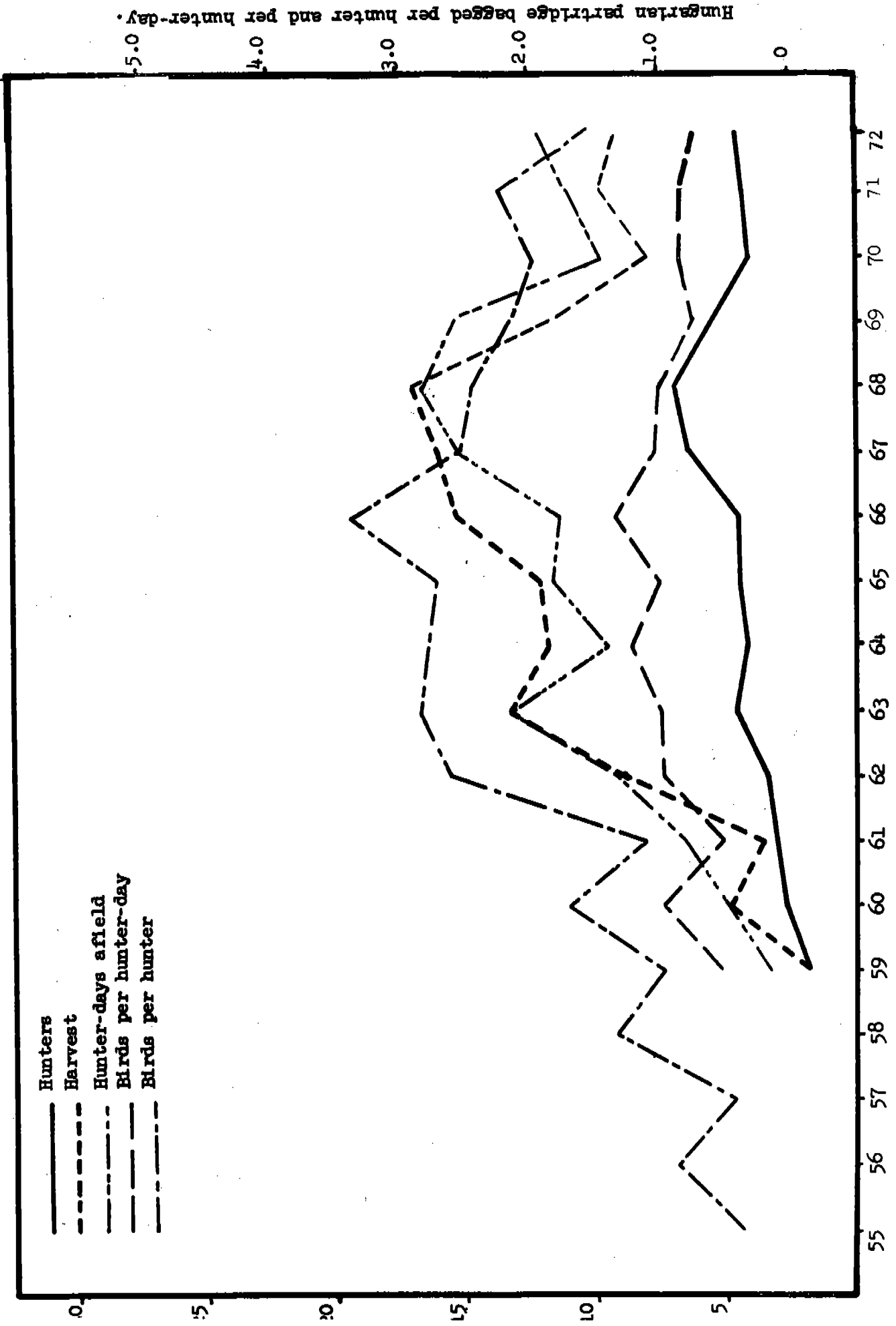


Figure 1. State-wide trend of Hungarian partridge harvest statistics.

Hungarian partridge bagged per hunter and per hunter-day.

Table 1. Hungarian partridge summer inventory summary, 1972.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Adults w/o Yng.	Total Adults	Total Young/100 Ad.	Vehicle Miles		Hours Effort		Birds/100 hrs.
	No. Ad.	Yng.		Ad.	Yng.				Veh.	Horse	Walk	Total	
Northern													
Box Elder	8	13	92	3	33	17	33	379	1,255	62	54	3	119
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	8	13	92	3	33	17	33	379	1,255	62	54	3	119
Central													
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	80	3	7	0	10
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	15	3	0	0	3
Wasatch	4	4	32	0	0	0	4	800	31	8	0	0	8
REGIONAL TOTALS	4	4	32	0	0	0	4	800	126	14	7	0	21
Southern													
Beaver													
Garfield													
Iron													
Kane													
Millard													
Piute													
Sevier													
Washington													
Wayne													
REGIONAL TOTALS													
Northeastern													
Daggett													
Duchesne													
Uintah													
REGIONAL TOTALS													
Southeastern													
Carbon													
Emery													
Grand													
San Juan													
REGIONAL TOTALS													
STATE TOTALS	12	17	124	3	33	17	37	424	1,381	76	61	3	140
													139

Table 2. Trend of Hungarian partridge young per 100 adults ratios, 1963-72.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	1000	828	326	510	447	400	325	306	524	379
Cache	--	--	--	152	875	450	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	300	--	--	--	1400	--
Rich	690	400	683	675	288	900	0	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	260	--	--	--	--	--	--	--	--	--
Regional Totals	653	776	380	395	449	421	319	306	553	379
Central Region										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	550	390	385	270	403	442	497	414	350	800
Regional Totals	550	390	385	270	403	442	497	414	350	800
Southern Region										
Beaver										
Garfield										
Iron										
Kane										
Millard										
Piute										
Sevier										
Washington										
Wayne										
Regional Totals										
Northeastern Region										
Daggett										
Duchesne										
Uintah										
Regional Totals										
Southeastern Region										
Carbon										
Emery										
Grand										
San Juan										
Regional Totals										
STATE TOTALS	642	710	382	370	435	430	325	319	495	424

Table 3. Trend of Hungarian partridge mean brood size from 1963-72.

Region and County	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northern Region										
Box Elder	10.00	13.69	6.53	11.06	8.60	7.00	5.75	11.82	7.82	11.50
Cache	--	--	--	7.00	11.67	9.00	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	14.00	--
Rich	9.60	8.00	13.66	13.50	7.67	9.00	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
Regional Totals	9.25	13.10	7.60	10.44	8.77	7.24	5.75	11.58	8.16	11.50
Central Region										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	--	7.80	7.70	6.57	10.00	9.00	9.94	7.25	--	8.00
Regional Totals	--	7.80	7.70	6.57	10.00	9.00	9.94	7.25	--	8.00
Southern Region										
Beaver										
Garfield										
Iron										
Kane										
Millard										
Piute										
Sevier										
Washington										
Wayne										
Regional Totals										
Northeastern Region										
Daggett										
Duchesne										
Uintah										
Regional Totals										
Southeastern Region										
Carbon										
Emery										
Grand										
San Juan										
Regional Totals										
STATE TOTALS	9.25	12.32	7.63	9.59	9.07	7.93	6.87	10.50	8.16	10.33

Table 4. Trend of Hungarian partridge observed per 100 hours, 1967-72.

Region and County	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	256	261	416	210	213	133
Cache	175	209	0	--	--	--
Davis	--	--	--	--	--	--
Morgan	73	--	--	--	--	--
Rich	238	333	--	--	--	--
Summit	--	--	--	--	--	--
Weber	--	--	--	--	--	--
Regional Totals	235	261	385	210	213	133
Central Region						
Juab	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--
Tooele	--	--	--	--	--	--
Utah	--	--	--	--	--	--
Wasatch	777	1193	1415	720	300	450
Regional Totals	777	1193	1415	720	300	171
Southern Region						
Beaver						
Garfield						
Iron						
Kane						
Millard						
Piute						
Sevier						
Washington						
Wayne						
Regional Totals						
Northeastern Region						
Daggett						
Duchesne						
Uintah						
Regional Totals						
Southeastern Region						
Carbon						
Emery						
Grand						
San Juan						
Regional Totals						
STATE TOTALS	292	383	508	249	243	139

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern</u>							
Box Elder	105	277	156	0.56	1.93	51.68	48.15
Cache	34	63	44	0.70	1.19	11.75	13.58
Davis	3	6	8	1.33	2.17	1.12	2.47
Morgan	10	29	33	1.14	0.00	5.41	10.19
Rich	3	7	3	0.43	0.00	1.31	0.93
Summit	3	4	2	0.50	3.00	0.75	0.62
Weber	14	36	28	0.78	1.68	6.72	8.64
Regional Totals	172	422	274	0.65	1.76	78.73	84.57
<u>Central</u>							
Juab	2	2	0	0.00	0.00	0.37	0.00
Salt Lake	5	6	0	0.00	1.06	1.12	0.00
Sanpete	2	2	2	1.00	0.00	0.37	0.62
Tooele	4	6	1	0.17	0.00	1.12	0.31
Utah	9	20	3	0.15	0.46	3.73	0.93
Wasatch	13	52	23	0.44	3.00	9.70	7.10
Regional Totals	35	88	29	0.33	1.11	16.42	8.95
<u>Southern</u>							
Beaver	0	0	0	0.00	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	0	0	0	0.00	0.00	0.00	0.00
Piute	0	0	0	0.00	0.00	0.00	0.00
Sevier	2	3	0	0.00	0.00	0.56	0.00
Washington	0	0	0	0.00	0.00	0.00	0.00
Wayne	1	1	0	0.00	0.00	0.19	0.00
Regional Totals	3	4	0	0.00	0.00	0.75	0.00
<u>Northeastern</u>							
Daggett	1	1	1	1.00	0.00	0.19	0.31
Duchesne	0	0	0	0.00	0.00	0.00	0.00
Uintah	2	4	0	0.00	0.00	0.75	0.00
Regional Totals	3	5	1	0.20	0.00	0.93	0.31
<u>Southeastern</u>							
Carbon	2	3	1	0.33	0.00	0.56	0.31
Emery	0	0	0	0.00	0.00	0.00	0.00
Grand	0	0	0	0.00	1.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00	0.00
Regional Totals	2	3	1	0.33	0.33	0.56	0.31
Unknown counties	8	13	19	1.46	0.00	2.43	5.86
Mixed counties	1	1	0	0.00	0.00	0.19	0.00
STATE TOTALS	224	536	324	0.60	1.54	100	100

*Based on county of residence.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1965-72.

Region and County	1965	1966	1967	1968	1969	1970	1971	1972
Northern								
Box Elder	1.32	1.65	1.45	1.04	0.81	0.87	0.94	0.56
Cache	0.77	1.14	0.65	1.23	0.71	1.14	0.87	0.70
Davis	--	0.00	0.50	1.81	0.92	0.09	0.50	1.33
Morgan	--	1.00	0.00	0.96	0.68	1.00	1.24	1.14
Rich	3.22	--	1.43	0.40	0.00	0.57	1.33	0.43
Summit	0.00	0.00	0.16	0.40	2.56	0.00	1.50	0.50
Weber	0.33	0.46	0.88	1.09	0.58	0.31	0.75	0.78
REGIONAL TOTALS	1.14	1.42	1.16	1.07	0.78	0.87	0.94	0.65
Central								
Juab	--	2.00	0.00	3.00	0.00	0.57	0.00	0.00
Salt Lake	0.25	0.00	0.17	0.23	0.85	0.50	0.50	0.00
Sanpete	0.00	--	--	--	2.27	0.67	--	1.00
Tooele	0.00	0.20	0.41	0.00	0.62	0.81	0.20	0.17
Utah	0.37	0.23	0.25	0.57	0.22	0.56	0.17	0.15
Wasatch	1.23	0.24	1.74	1.00	0.29	1.03	0.71	0.44
REGIONAL TOTALS	0.71	0.26	0.76	0.85	0.70	0.77	0.54	0.33
Southern								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	0.00	--	--	--	--	--	--
Millard	--	--	0.00	--	--	--	--	--
Piute	--	--	--	0.00	--	1.00	--	--
Sevier	0.00	2.00	0.00	0.00	--	--	0.60	--
Washington	--	--	0.00	0.00	--	--	1.00	--
Wayne	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.00	0.67	0.00	0.00	--	1.00	0.64	--
Northeastern								
Daggett	--	--	--	--	0.00	0.00	--	1.00
Duchesne	0.00	1.67	0.00	1.67	2.00	--	3.00	--
Uintah	--	--	0.25	0.00	0.00	0.00	--	0.00
REGIONAL TOTALS	0.00	1.67	0.20	1.25	0.75	0.00	3.00	0.20
Southeastern								
Carbon	--	--	0.00	--	1.50	1.00	0.00	0.33
Emery	--	--	--	--	--	0.00	--	--
Grand	--	--	--	--	--	1.67	--	--
San Juan	--	--	--	--	2.00	--	--	--
REGIONAL TOTALS	--	--	0.00	--	1.67	0.86	0.00	0.33
Unknown counties	0.39	--	1.12	0.82	--	0.00	1.17	1.46
Mixed counties	1.13	--	0.20	--	--	--	--	0.00
STATE TOTALS	1.03	1.34	1.06	1.02	0.77	0.84	0.85	0.60

Table 8. Distribution of Hungarian partridge hunting pressure by region and county, 1965-72.

Region and County	1965	1966	1967*	1968	1969	1970	1971	1972
Northern								
Box Elder	56.65	58.45	53.13	50.93	50.27	39.96	50.49	51.68
Cache	18.45	24.20	16.30	15.94	8.64	23.85	10.68	11.75
Davis	--	1.37	1.63	2.62	1.73	2.30	0.39	1.12
Morgan	--	0.91	1.63	2.86	8.78	1.26	3.30	5.41
Rich	1.29	--	1.90	1.25	0.27	1.46	1.17	1.31
Summit	0.43	0.46	3.40	2.49	1.20	1.05	0.78	0.75
Weber	6.44	3.65	3.26	4.11	10.77	6.69	5.44	6.72
REGIONAL TOTALS	83.26	89.04	81.25	80.20	81.65	76.57	72.23	78.73
Central								
Juab	--	0.46	0.27	0.25	0.66	1.46	0.19	0.37
Salt Lake	0.43	0.91	2.45	1.62	1.73	1.67	1.17	1.12
Sanpete	0.43	--	--	--	2.93	0.63	--	0.37
Tooele	2.15	1.83	2.31	0.25	1.73	4.39	1.94	1.12
Utah	2.58	2.74	2.17	2.62	2.39	5.65	4.66	3.73
Wasatch	5.58	3.20	3.67	9.09	7.45	7.11	14.17	9.70
REGIONAL TOTALS	11.17	9.14	10.87	13.82	16.89	20.92	22.14	16.42
Southern								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	0.46	--	--	--	--	--	--
Millard	--	--	0.27	--	--	--	--	--
Piute	--	--	--	0.12	--	0.21	--	--
Sevier	0.43	0.46	0.14	0.12	--	--	1.94	0.56
Washington	--	--	0.95	0.25	--	--	0.19	--
Wayne	--	--	--	--	--	--	--	0.19
REGIONAL TOTALS	0.43	0.92	1.36	0.50	0.00	0.21	2.13	0.75
Northeastern								
Daggett	--	--	--	--	0.40	0.21	--	0.19
Duchesne	0.86	0.91	0.41	0.37	0.40	--	0.58	--
Uintah	--	--	1.63	0.12	0.27	0.21	--	0.75
REGIONAL TOTALS	0.86	0.91	2.04	0.50	1.06	0.42	0.58	0.93
Southeastern								
Carbon	--	--	0.14	--	0.27	0.21	0.58	0.56
Emery	--	--	--	--	--	0.63	--	--
Grand	--	--	--	--	--	0.63	--	--
San Juan	--	--	--	--	0.13	--	--	--
REGIONAL TOTALS	0.00	0.00	0.14	0.00	0.40	1.46	0.58	0.56
Unknown counties	2.58	--	2.31	4.98	--	0.42	2.33	2.43
Mixed counties	1.72	--	2.04	--	--	0.00	--	0.19
STATE TOTALS	100	100	100	100	100	100	100	100

*Distribution of hunting pressure for 1967 and later based on hunter-days rather than number of hunters reporting.

Table 9. State-wide summary of Hungarian partridge harvest statistics, 1955-72.

Year	Total hunters	Total harvest	Hunter days afield	Huns per hunter-day	Huns per hunter
1955	--	--	--	--	0.39
1956	--	--	--	--	0.89
1957	--	--	--	--	0.45
1958	--	--	--	--	1.34
1959	1,846	1,820	3,354	0.54	0.99
1960	2,847	4,877	4,929	0.99	1.71
1961	3,205	3,648	6,645	0.54	1.13
1962	3,440	8,970	9,153	0.98	2.61
1963	4,676	13,343	13,291	1.00	2.85
1964	4,249	11,812	9,688	1.22	2.78
1965	4,498	12,183	11,798	1.03	2.71
1966	4,549	15,348	11,473	1.34	3.37
1967	6,321	16,049	15,105	1.06	2.54
1968	6,935	17,089	16,674	1.02	2.46
1969	5,591	11,966	15,515	0.77	2.14
1970	4,128	8,236	9,818	0.84	2.00
1971	4,276	9,407	11,011	0.85	2.20
1972	4,754	7,335	12,135	0.60	1.54
<hr/>					
TOTALS (1955-72)	61,315	142,083	150,589	0.94	2.32
<hr/>					
AVERAGE (1959-71)	4,351	10,365	10,650	0.94	2.27

Table 10. Hungarian partridge field bag check summary, 1972.

Region and County	ALL HUNTS				COMPLETE HUNTS				
	Total Parties	Total Hunters	Total Hours	Total Birds/100 hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 hrs.	Birds/Hunter
<u>Northern</u>									
Box Elder	42	122	577	93	16	35	456	77	17
Cache	4	12	34	5	15	4	34	5	15
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	1	3	3	4	133	1	3	4	133
Weber	--	--	--	--	--	--	--	--	--
<u>REGIONAL TOTALS</u>	47	137	614	102	17	40	493	86	17
<u>Central</u>									
Juab									
Salt Lake									
Sanpete									
Tooele									
Utah									
Wasatch									
<u>REGIONAL TOTALS</u>									
<u>Southern</u>									
Beaver									
Garfield									
Iron									
Kane									
Millard									
Piute									
Sevier									
Washington									
Wayne									
<u>REGIONAL TOTALS</u>									
<u>Northeastern</u>									
Daggett									
Duchesne									
Uintah									
<u>REGIONAL TOTALS</u>									
<u>Southeastern</u>									
Carbon									
Emery									
Grand									
San Juan									
<u>REGIONAL TOTALS</u>									
<u>STATE TOTALS</u>	47	137	614	102	17	40	493	86	17

NO DATA COLLECTED

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1967-72.

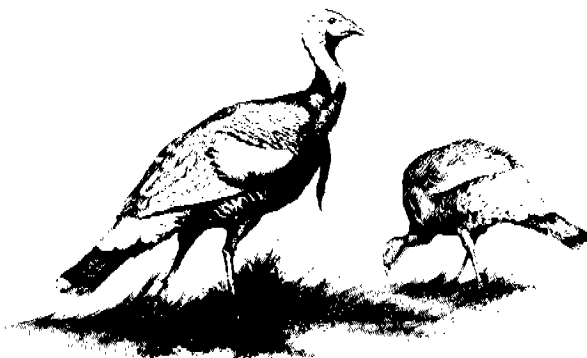
Region and County	1967		1968		1969		1970		1971		1972	
	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter	Birds/ 100 hrs. Hunter
<u>Northern</u>												
Box Elder	15	0.67	14	0.59	14	0.69	11	0.69	13	0.80	16	0.78
Cache	6	0.42	33	1.26	21	0.66	--	--	57	1.00	15	0.42
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	50	0.50	--	--	--	--
Rich	9	0.91	31	0.83	25	0.25	--	--	77	0.91	--	--
Summit	--	--	--	--	--	--	--	--	--	--	133	1.33
Weber	--	--	12	0.67	--	--	15	0.80	--	--	--	--
<u>REGIONAL TOTALS</u>	14	0.68	17	0.69	15	0.68	11	0.69	15	0.81	17	0.75
<u>Central</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	100	2.00	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	20	--	--	--	--	--	--	--
Wasatch	24	0.40	25	0.94	15	0.36	15	0.35	--	--	--	--
<u>REGIONAL TOTALS</u>	24	0.40	25	0.94	15	0.36	15	0.35	100	2.00	--	--
<u>Southern</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<u>REGIONAL TOTALS</u>												
<u>Northeastern</u>												
Daggett												
Duchesne												
Uintah												
<u>REGIONAL TOTALS</u>												
<u>Southeastern</u>												
Carbon												
Emery												
Grand												
San Juan												
<u>REGIONAL TOTALS</u>												
<u>STATE TOTALS</u>	15	0.67	17	0.71	15	0.66	11	0.68	15	0.82	17	0.75

WILD TURKEY

SUMMARY

Harvest data for 1971 and the spring of 1972 indicated that the breeding population level for 1972 was near average.

Severe drought throughout southern Utah from late December 1971 through mid-summer of 1972 apparently was extremely detrimental to production. Although brood data were insufficient to indicate population trend or production, subsequent harvest statistics in the fall of 1972 indicate the fall population to be at an extremely low level, probably due to poor reproductive success.



Brood Counts

Annual random brood counts have been conducted each year since the introduction of turkeys into Utah in the early 1950's; however, success in finding broods has usually been poor. Sample sizes have generally been too low to meaningfully indicate relative density or production from year to year. During 1972, a total of 64 turkeys were observed during the brood survey period with a ratio of 392 young per 100 adults. Three distinct broods averaged 4.3 poults each. No data were available from 1971 for comparison. This information was too limited to suggest trend.

Harvest

Spring Gobbler Seasons

Results of the 1972 spring season are shown in Table 1 of this section. The trend of these data since the first season in 1967 is shown in Table 2. The 1972 spring season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Permits sold	285	+28	+33
Hunters afield	269	+25	+31
Turkeys harvested	35	+35	+75
Hunter-days afield	751	+30	+47
Percent hunter success	12	+ 9	0
Turkeys bagged per hunter-day	0.05	+25	0
Percent of hunters who observed turkeys	39	+ 3	- 2
Total turkeys reported observed	296	-15	+ 1
Crippling loss (loss:100 bagged)	20	-56	-57

Total hunters and hunter-days afield in 1972 increased from both 1971 and the average. Percent hunter success and turkeys per day increased slightly from 1971 to the average since 1967. Paradoxically, fewer turkeys were observed by hunters in 1972 than were reported for 1971. Reported crippling loss was below both 1971 and the average. The trend of spring turkey harvest statistics is shown in Figure 1.

Fall Seasons

Results of the 1972 fall season are shown in Table 3. Harvest trends for each hunting unit are shown in Tables 4-8 and State-wide trends in Table 9. The 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Permits sold	124	-33	-46
Hunters afield	118	-32	-44
Turkeys harvested	12	-80	-83
Hunter-days afield	303	-32	-38
Percent hunter success	7	-67	-74
Turkeys bagged per hunter-day	0.04	-71	-71
Percent of hunters who observed turkeys	21	-25	-46
Total turkeys reported observed	173	-62	-81
Crippling loss (loss:100 bagged)	10	+25	-17

Hunting pressure, both hunters and hunter-days, declined from 1971 and the average. Hunter success and total harvest dropped to an all-time low. In view of relatively good spring hunter success the low success during the fall season apparently reflects extremely poor production. This was expected as a result of a widespread drought in southern Utah during the late winter and early spring of 1972.

Total turkeys observed and the percent of hunters observing turkeys were also extremely low.

The rate of reported crippling loss was slightly higher than in 1971 but well below average.

The trend of fall turkey harvest statistics is shown in Figure 2. It indicates that the fall population level for 1972 was probably as low as it has been for several years.

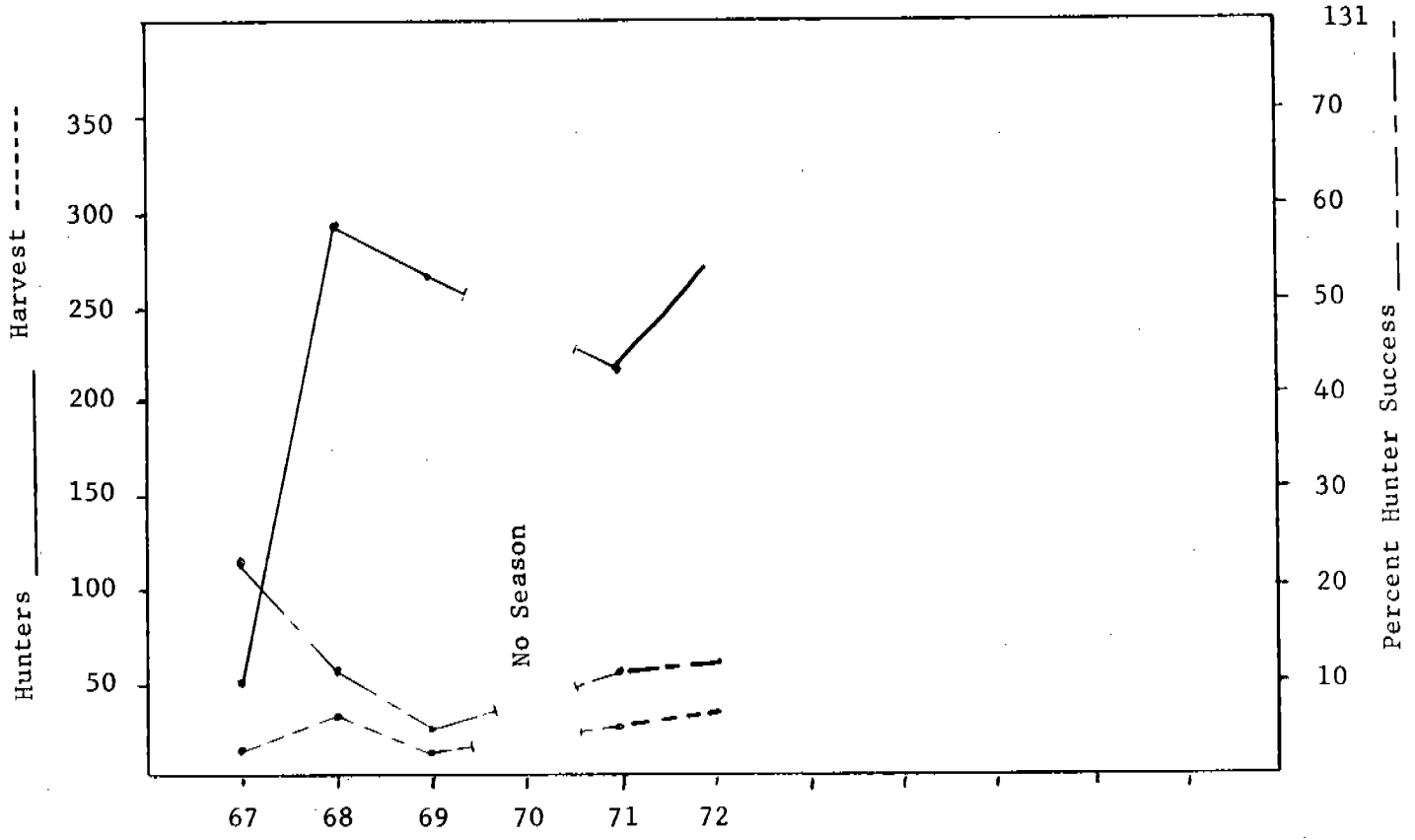


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

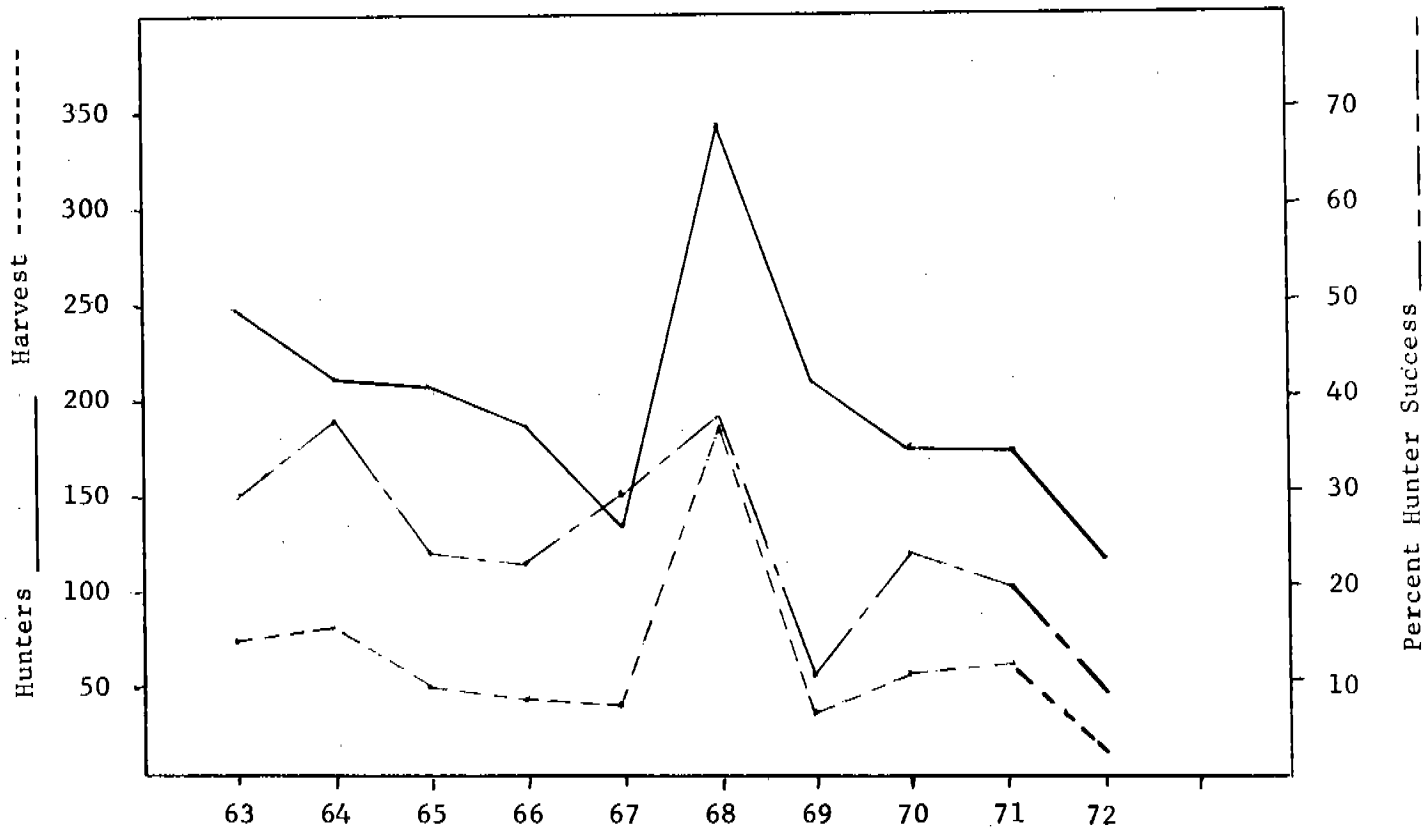


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1972 spring turkey season.

DATA	EAST ZION		BOULDER		LA SAL		BEAVER		PINE VALLEY		MIXED UNITS		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold	--	--	--	--	--	--	--	--	--	--	--	--	285	--
No hunts	--	--	--	--	--	--	--	--	--	--	--	--	14	--
Hunters afield	98	113	36	42	43	50	15	17	19	22	22	25	233	269
Hunter days	278	321	93	107	112	129	46	53	45	52	77	89	651	751
Turkeys bagged	17	20	3	3	3	3	2	2	1	1	4	5	30	35
Percent success* (1 or more turkeys)	14	--	8	--	7	--	13	--	5	--	18	--	11.6	--
No. hunters bagging two turkeys	3	--	0	--	0	--	0	--	0	--	0	--	3	--
Percent bagging two turkeys	3	--	0	--	0	--	0	--	0	--	0	--	1.3	--
Turkeys bagged per hunter day	0.06	--	0.03	--	0.03	--	0.04	--	0.02	--	0.05	--	0.05	--
Reported crippling loss (loss/100 bagged)	24	--	33	--	33	--	0	--	200	--	0	--	20	--
Turkeys observed	169	--	13	--	39	--	9	--	39	--	27	--	296	--
Gobblers	61	--	8	--	18	--	5	--	6	--	11	--	109	--
Hens	92	--	2	--	17	--	4	--	30	--	7	--	152	--
Unidentified	16	--	3	--	4	--	0	--	3	--	9	--	35	--
Number of hunters who saw turkeys	46	--	10	--	12	--	3	--	8	--	11	--	90	--
Percent of hunters who saw turkeys	47	--	28	--	29	--	20	--	42	--	50	--	39	--

Projection factor 1.1538

*Based on number of hunters who bagged one or more turkeys, not total turkeys.

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-72.

Hunting Unit and Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day		Percent of Hunters Observing Turkeys	Total Permits
	Afield			Afield						
1967	24		9	59		38	0.15		58	
1968	130		16	364		11	0.04		48	
1969	77		4	210		6	0.02		35	
1970		NO SEASON								
1971	106		14	272		12	0.05		38	
1972	113		20	321		14	0.06		47	
1967	17		2	43		12	0.05		75	
1968	134		15	330		10	0.05		33	
1969	141		6	300		4	0.02		16	
1970		NO SEASON								
1971	27		1	64		4	0.02		13	
1972	42		3	107		8	0.03		28	
1967	6		0	16		0	0		33	
1968	17		0	44		0	0		62	
1969	39		3	102		9	0.03		24	
1970		NO SEASON								
1971	17		1	34		6	0.03		20	
1972	50		3	129		7	0.03		29	
1971	27		2	54		8	0.04		39	
1972	17		2	53		13	0.04		20	
1971	23		4	92		15	0.04		70	
1972	22		1	52		5	0.02		42	
1967	2			By		0	By		0	
1968	9			Unit		12	Unit		12	
1969	10					0			11	
1970		NO SEASON								
1971	15		4			15			61	
1972	25		5	89		18	0.05		50	
1967	49		11	118		22	0.09		59	52
1968	290		31	738		11	0.04		41	310
1969	267		13	612		5	0.02		22	276
1970		NO SEASON								NO SEASON
1971	215		26	576		11	0.04		38	223
1972	269		35	751		12	0.05		39	285
STATE AVERAGES (1967-71)	205		20	511		12	0.05		40	215

*Based on the number of hunters bagging one or more turkeys.

Table 3. Summary of the 1972 fall turkey season.

DATA	PINE VALLEY		EAST ZION		BEAVER		BOULDER		LA SAL		MIXED UNITS		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold	--	--	--	--	--	--	--	--	--	--	--	--	124	--
No hunts	--	--	--	--	--	--	--	--	--	--	--	--	5	--
Hunters afield	9	10.84	49	59	5	6	6	7.22	26	31.30	3	3.61	98	117.99
Hunter days	16	19.26	128	154.11	10	12.04	14	16.86	58	69.83	26	31.30	252	303.40
Turkeys bagged	0	--	8	9.63	0	--	0	--	2	2.40	0	--	10	12.04
Percent success* (1 or more turkeys)	0	--	12.24	--	0	--	0	--	3.84	--	0	--	7.14	--
No. hunters bagging two turkeys	0	--	2	--	0	--	0	--	1	--	0	--	3	--
Percent bagging two turkeys	0	--	4.08	--	0	--	0	--	3.84	--	0	--	3.06	--
Turkeys bagged per hunter day	0	--	.06	--	0	--	0	--	.017	--	0	--	.039	--
Reported crippling loss (loss/100 bagged)	0	--	12.50	--	0	--	0	--	0	--	0	--	10	--
Turkeys observed	0	--	96	--	11	--	0	--	63	--	3	--	173	--
Number of hunters who saw turkeys	0	--	11	--	2	--	0	--	7	--	1	--	21	--
Percent of hunters who saw turkeys	0	--	22.45	--	40	--	0	--	26.92	--	33.3	--	21.42	--

Projection factor 1.204 (124 ÷ 103)

*Based on number of hunters who bagged one or more turkeys, not total turkeys.

Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1963 through 1972*.

Harvest Data	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Hunters afield	21	20	19	50	22	77	45	24	20	7
Hunter-days	--	45	44	132	71	195	103	77	46	17
Turkeys bagged	2	8	8	11	4	37	0	2	0	0
Percent success**	10	40	44	22	20	32	0	8	0	0
Percent bagging two turkeys	--	--	--	--	--	13	0	0	0	0
Birds bagged/day	--	0.18	0.18	0.08	0.06	0.19	0	0.03	0	0
Reported crippling loss (loss:100 bagged)	100	37	12	9	25	18	--	0	0	0
Turkeys observed	--	86	99	260	55	436	0	16	0	0
No. hunters who observed turkeys	8	14	9	22	8	27	0	2	0	0
Percent of hunters who observed turkeys	38	70	53	44	40	38	0	10	0	0

*Data for 1963 were collected at hunter checking stations; for 1964 and later years via mailed questionnaires.

**Season bag limits after 1968 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 5. Summary of East Zion wild turkey harvest data for fall hunts from 1963 through 1972*.

Harvest Data	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Hunters afield	112	71	86	111	113	218	137	87	90	59
Hunter-days	--	127	170	266	334	569	374	203	229	154
Turkeys bagged	43	26	26	31	36	127	35	43	39	10
Percent success**	38	39	30	28	32	40	16	32	27	12
Percent bagging two turkeys	--	--	--	--	--	19	10	16	16	4
Birds bagged/day	--	0.20	0.15	0.12	0.11	0.22	0.9	0.21	0.17	0.06
Reported crippling loss (loss:100 bagged)	5	15	8	6	15	15	19	5	6	12
Turkeys observed	--	270	403	476	693	1661	426	469	264	96
No. hunters who observed turkeys	54	14	32	43	51	122	30	30	23	11
Percent of hunters who observed turkeys	48	62	40	39	50	60	25	40	31	22

*Data for 1963 were collected at hunter checking stations; for 1964 and later via mailed questionnaire.

**Season bag limits after 1968 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 6. Summary of LaSal Mountain wild turkey harvest data for fall hunts from 1963 through 1972*.

Harvest Data	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Hunters afield	115	120	102			45	17	18	13	31
Hunter-days	--	180	192			119	51	30	27	70
Turkeys bagged	30	47	16			19	1	3	5	2
Percent success**	26	37	15			43	7	11	18	4
Percent bagging two turkeys	--	--	--			0	0	6	18	4
Birds bagged/day	--	0.26	0.08			0.16	0.02	0.10	0.18	0.02
Reported crippling loss (loss:100 bagged)	23	11	6			11	0	0	0	0
Turkeys observed	--	802	228			214	40	15	25	63
No. hunters who observed turkeys	56	69	20			21	1	3	3	7
Percent of hunters who observed turkeys	54	58	21			50	7	20	27	27

*Data for 1963 collected at hunter checking stations; for 1964 and later via mailed questionnaire.

**Season bag limits after 1969 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 7. Summary of Beaver Mountain wild turkey harvest data for the fall hunt, 1972.

Harvest Data	1970*	1971	1972
Hunters afield	30	13	6
Hunter-days	87	24	12
Turkeys bagged	7	5	0
Percent success	15	18	0
Percent bagging two turkeys	8	18	0
Birds bagged/day	0.08	0.20	0
Reported crippling loss(loss:100 bagged)	0	0	0
Turkeys observed	48	64	11
No. hunters who observed turkeys	8	5	2
Percent of hunters who observed turkeys	31	46	40

*Wild turkeys were transplanted onto the Beaver Mountain during the winter of 1967-68. The first hunting season was held in 1970.

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for the fall hunt, 1972.

Harvest Data	1970*	1971	1972
Hunters afield	6	32	11
Hunter-days	21	87	19
Turkeys bagged	3	11	0
Percent success	50	23	0
Percent bagging two turkeys	0	12	0
Birds bagged/day	0.14	0.13	0
Reported crippling loss(loss:100 bagged)	33	22	0
Turkeys observed	16	98	0
No. hunters who observed turkeys	4	9	0
Percent of hunters who observed turkeys	80	35	0

*Wild turkeys were transplanted onto the Pine Valley Mountain during the winter of 1967-68. The first hunting season was held in 1970.

Table 9. State-wide summary of wild turkey harvest data for fall hunts from 1963 through 1972*.

Harvest Data	1963	1964	1965	1966**	1967	1968**	1969	1970	1971	1972	Averages (1963-71)
Permits sold	297	229	214	192	146	368	223	197	184	124	228
Hunters afield	248	211	207	187	135	344	210	174	174	118	210
Hunter-days	--	362	406	471	405	883	549	418	444	303	492
Turkeys bagged	75	81	50	43	40	183	36	58	60	12	70
Percent success***	30	38	24	23	30	38	11	24	21	7	27
Percent bagging two turkeys	--	--	--	--	--	15	6	10	13	3	11
Birds bagged/day	--	0.22	0.12	0.09	0.10	0.21	0.06	0.14	0.14	0.04	0.14
Reported crippling loss (loss:100 bagged)	15	15	8	7	16	15	19	6	8	10	12
Turkeys observed	--	1158	730	756	748	2321	466	564	451	173	899
No. hunters who observed turkeys	118	127	61	68	59	171	31	47	40	21	80
Percent of hunters who observed turkeys	48	60	29	36	48	54	17	31	28	21	39

*Data for 1963 collected by hunter checking stations, for 1964 and later via mailed questionnaire.

**During 1966, 1968 and later years some hunters hunted more than one area or failed to designate areas hunted. This accounts for the difference between totals given above and combined tables of separate units in Tables 5, 6, and 7.

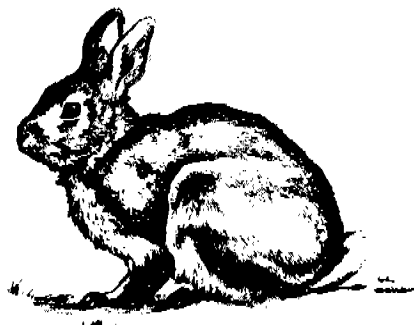
***During 1968 the Boulder Mountain and East Zion units had two-bird season limits and the LaSal Mountain a one-bird limit; in 1969 and later years all areas had a two-bird limit. Hunter success was based on the number of successful hunters rather than total turkeys bagged.

COTTONTAIL RABBIT

SUMMARY

Harvest data for 1972 suggested a breeding population lower than in 1971. Roadside counts indicated a population in 1972 comparable to 1971; however, indicated production was lower than in 1971.

During the 1972 hunting season a marked reduction in total hunters, hunter-days, harvest and hunter-success was evident. This decline was attributed to a combination of reduced abundance and relatively severe winter weather during most of the hunting seasons.



Roadside Counts

Results of the annual roadside counts are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1967 is shown in Tables 2 and 3 respectively. Indexes for 1972 compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total cottontails counted	1,140	-4	-8
Total miles driven	2,643	-2	0
Cottontails observed per mile	0.43	-2	+6
Young observed per 100 adults	99	-19	-7

Hunter success in 1971 suggests a breeding population for 1972 slightly below the average since 1967. Indicated density from roadside counts is similar to 1971, but slightly higher than average. Production was apparently lower than in 1971.

Harvest

Hunter Questionnaire

Results of the 1972 hunter questionnaire are found in Table 4. Trends of cottontails bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county since 1967 are found in Tables 5-7. Monthly distribution of harvest and hunting pressure each year since 1967 is shown in Table 8. Trend of State-wide harvest statistics is found in Table 9 and Figure 2. The 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Cottontail hunters	22,835	-26	-16
Cottontail harvest	155,102	-35	-24
Hunter-days afield	105,941	-27	-4
Cottontails per hunter	6.79	-13	-11
Cottontails per hunter-day	1.46	-12	-23

Total hunters, hunter-days afield, harvest and hunter success in 1972 declined from both 1971 and the average. This was probably a reflection of both poorer production in 1972 and relatively severe winter weather during most of the hunting season.

Field Bag Checks

Results of this survey for 1972 are shown in Table 10. Trend of hunter success as determined by bag checks are shown in Table 11. The 1972 season compared to 1971 and the average as follows:

	<u>1972</u>	<u>Percent change from</u>	
		<u>1971</u>	<u>Average</u>
Total hunters checked	266	-41	-49
Total hours hunted	870	-8	-38
Cottontails per hunter (complete hunts)	2.27	+89	+40
Cottontails bagged per 100 hours	58	+35	+16
Hours per hunter-day (complete hunts)	3.4	+36	+6
Hours per cottontail bagged	1.7	-26	-23

Results of this survey suggest increased hunter success; however, most of these data were compiled in the northeastern and southeastern regions, where success is generally higher, and are not comparable on a statewide basis.

The average hunter contacted spent more time afield per day than in 1971 with less time required to bag a cottontail.

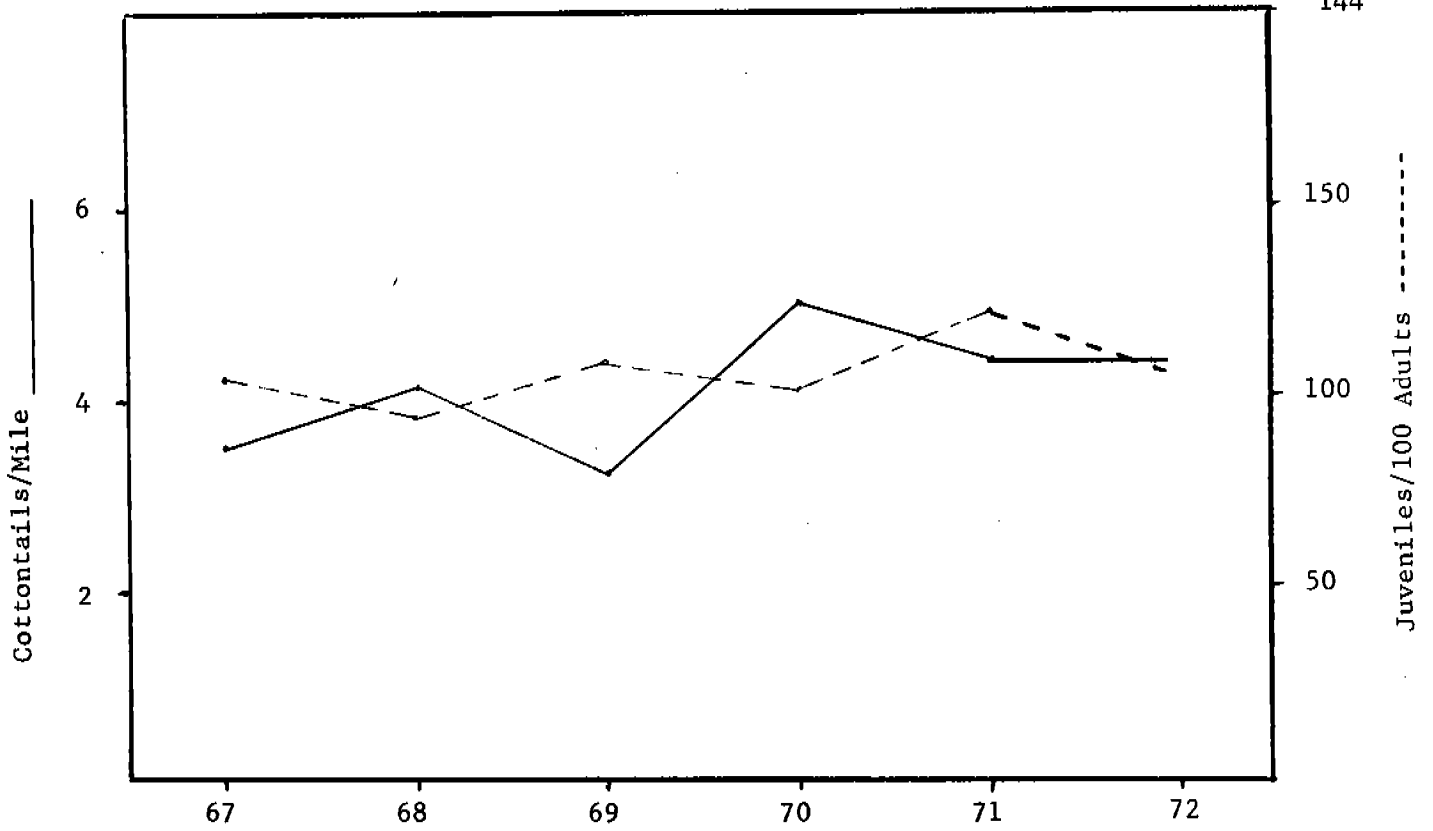


Figure 1. Cottontail Rabbit Population Indexes Trend.

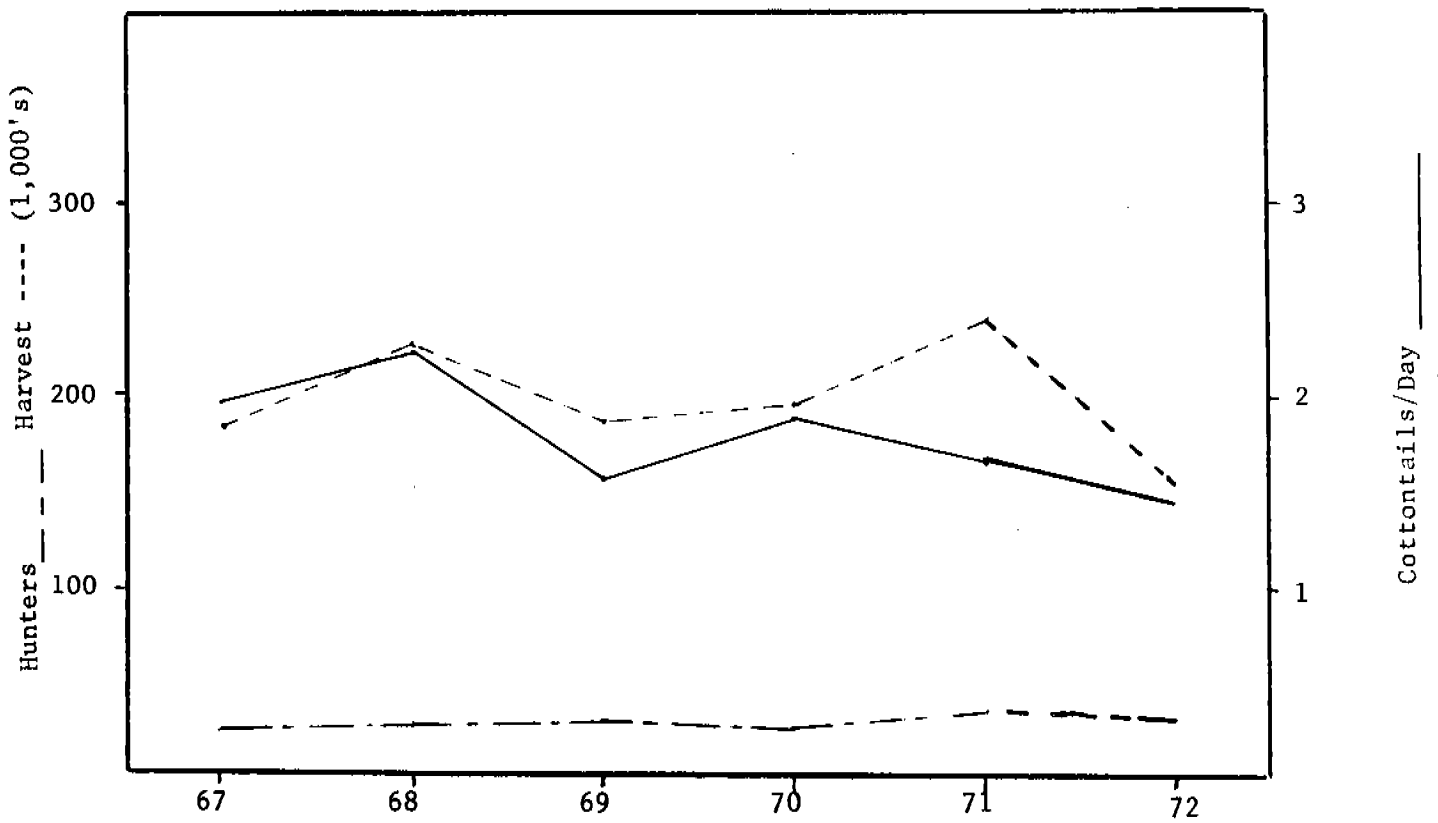


Figure 2. Cottontail Rabbit Harvest Trend.

Table 1. Cottontail rabbit summer inventory summary, 1972.

Region and County	Miles Driven	Rabbits Observed			Total	Young per 100 adults	Rabbits/Mile
		Adults	Young	Unclass.			
Northern							
Box Elder	270	42	26	33	101	62	0.37
Cache	60	3	0	1	4	0	0.07
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	90	5	5	0	10	100	0.11
Summit	90	7	1	4	12	14	0.13
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	510	57	32	38	127	56	0.25
Central							
Juab	99	6	7	1	14	117	0.14
Salt Lake	--	--	--	--	--	--	--
Sanpete	90	25	37	3	65	148	0.72
Tooele	90	6	6	1	13	100	0.14
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	279	37	50	5	92	135	0.33
Southern							
Beaver	102	23	14	0	37	61	0.36
Garfield	150	22	19	3	44	86	0.29
Iron	60	15	15	5	35	100	0.58
Kane	90	29	25	0	54	86	0.60
Millard	90	7	19	0	26	271	0.29
Piute	60	0	0	0	0	--	--
Sevier	123	8	36	7	51	450	0.41
Washington	174	116	13	72	201	11	1.16
Wayne	90	4	2	0	6	50	0.07
REGIONAL TOTALS	939	224	143	87	454	64	0.48
Northeastern							
Daggett	120	29	35	24	88	121	0.73
Duchesne	144	18	14	3	35	78	0.24
Uintah	96	37	52	4	93	141	0.97
REGIONAL TOTALS	360	84	101	31	216	120	0.60
Southeastern							
Carbon	135	11	16	0	27	145	0.20
Emery	60	8	10	0	18	125	0.30
Grand	180	30	89	0	119	297	0.66
San Juan	180	38	42	7	87	111	0.48
REGIONAL TOTALS	555	87	157	7	251	180	0.45
STATE TOTALS	2,643	489	483	168	1,140	99	0.43

Table 2. Summary of cottontail rabbits observed per mile during Summer Inventory, 1967-72.

Region and County	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	0.36	0.78	0.50	0.76	0.43	0.37
Cache	0	0.02	0.01	--	0.06	0.07
Davis	--	--	--	--	--	--
Morgan	0.02	0.17	0.10	--	0.28	--
Rich	0.26	0.50	0.52	0.43	0.22	0.11
Summit	0.16	0.22	0.08	0.39	--	0.13
Weber	--	--	0.16	--	--	--
Regional Totals	0.19	0.44	0.23	0.59	0.31	0.25
Central Region						
Juab	0.26	0.42	0.51	0.72	0.33	0.14
Salt Lake	0.01	0	0	--	--	--
Sanpete	0.30	0.36	0.53	0.63	0.77	0.72
Tooele	0.07	0.34	0.28	0.28	0.22	0.14
Utah	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--
Regional Totals	0.15	0.29	0.32	0.54	0.46	0.33
Southern Region						
Beaver	0	0.23	0.36	--	0.18	0.36
Garfield	0.15	0.25	0.48	0.48	0.33	0.29
Iron	0.09	0.64	0.40	--	0.38	0.58
Kane	0.67	--	--	0.71	0.17	0.60
Millard	0.22	0.30	0.39	0.28	0.15	0.29
Piute	0.01	0.09	0	0	0	0
Sevier	0.18	0.13	0.47	0.58	0.46	0.41
Washington	0.80	0.55	0.61	0.17	0.46	1.16
Wayne	0.08	0.10	0.12	--	0.08	0.07
Regional Totals	0.27	0.32	0.35	0.35	0.25	0.48
Northeastern Region						
Daggett	1.93	0.81	0.60	0.77	0.76	0.73
Duchesne	1.40	0.77	0.68	0.56	0.58	0.24
Uintah	1.00	0.98	0.84	1.56	1.39	0.97
Regional Totals	1.30	0.82	0.68	0.93	0.89	0.60
Southeastern Region						
Carbon	0.05	0.64	0.13	0.13	0.24	0.20
Emery	0.37	0.33	0.17	0.20	0.04	0.30
Grand	0.34	0.16	--	0.14	0.53	0.66
San Juan	0.58	0.64	0.50	0.30	0.97	0.48
Regional Totals	0.39	0.42	0.21	0.25	0.53	0.45
STATE TOTALS	0.35	0.41	0.32	0.50	0.44	0.43

Table 3. Summary of cottontail rabbits young per 100 adults ratios, 1967-72.

Region and County	1967	1968	1969	1970	1971	1972
Northern Region						
Box Elder	94	106	94	95	129	62
Cache	--	--	0	--	0	0
Davis	--	--	--	--	--	--
Morgan	--	100	900	--	25	--
Rich	125	86	186	40	80	100
Summit	67	56	33	64	--	14
Weber	--	--	75	--	--	--
Regional Totals	104	97	115	76	100	56
Central Region						
Juab	175	257	239	246	171	117
Salt Lake	--	--	0	--	--	--
Sanpete	257	133	311	123	144	148
Tooele	200	113	127	100	100	100
Utah	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--
Regional Totals	218	179	224	157	145	135
Southern Region						
Beaver	--	36	56	--	14	61
Garfield	28	85	138	103	118	86
Iron	200	75	33	--	162	100
Kane	129	--	--	28	50	86
Millard	32	143	22	41	32	271
Piute	--	0	--	--	--	--
Sevier	157	22	360	350	390	450
Washington	271	71	114	22	71	11
Wayne	100	50	300	--	167	50
Regional Totals	115	75	85	68	93	64
Northeastern Region						
Daggett	56	62	34	57	81	121
Duchesne	142	146	148	131	150	78
Uintah	231	117	154	203	191	141
Regional Totals	118	107	77	126	139	120
Southeastern Region						
Carbon	150	55	122	100	53	145
Emery	73	238	200	183	100	125
Grand	106	7	--	160	79	297
San Juan	45	--	166	228	215	111
Regional Totals	62	92	161	115	132	180
STATE TOTALS	106	96	110	102	123	99

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1972.

Region and County	Hunters Reporting	Days Hunted	Cottontails Bagged	Cottontails/Hunter-day	Cottontails per Hunter*	% of Pressure	% of Harvest
Northern							
Box Elder	209	601	887	1.48	4.74	14.54	14.43
Cache	21	72	123	1.71	7.00	2.02	1.73
Davis	14	40	23	0.57	3.79	0.38	0.96
Morgan	21	129	33	0.26	4.33	0.54	3.10
Rich	20	37	147	3.97	0.00	2.41	0.89
Summit	28	129	153	1.19	6.17	2.51	3.10
Weber	22	79	22	0.28	4.12	0.36	1.90
Regional Totals	335	1087	1388	1.28	4.43	22.75	26.10
Central							
Juab	70	197	224	1.14	10.60	3.67	4.73
Salt Lake	30	93	115	1.24	7.04	1.89	2.23
Sanpete	33	187	250	1.34	11.25	4.10	4.49
Tooele	123	319	400	1.25	6.45	6.56	7.66
Utah	120	362	397	1.10	5.25	6.51	8.69
Wasatch	21	119	150	1.26	11.22	2.46	2.86
Regional Totals	397	1277	1536	1.20	6.68	25.18	30.67
Southern							
Beaver	6	18	19	1.06	3.00	0.31	0.43
Garfield	7	11	16	1.45	1.33	0.26	0.26
Iron	16	80	105	1.31	6.71	1.72	1.92
Kane	4	8	13	1.62	4.33	0.21	0.19
Millard	60	174	326	1.87	5.06	5.34	4.18
Piute	2	4	3	0.75	3.00	0.05	0.10
Sevier	19	61	114	1.87	3.43	1.87	1.46
Washington	20	121	302	2.29	26.17	4.95	3.17
Wayne	8	13	28	2.15	7.33	0.46	0.31
Regional Totals	142	501	926	1.85	10.34	15.18	12.03
Northeastern							
Daggett	20	54	158	2.93	8.00	2.59	1.30
Duchesne	58	206	600	2.91	8.67	9.84	4.95
Uintah	57	292	429	1.47	8.97	7.03	7.01
Regional Totals	135	552	1187	2.15	8.88	19.46	13.26
Southeastern							
Carbon	38	258	296	1.15	8.77	4.85	6.20
Emery	20	86	128	1.49	7.00	2.10	2.07
Grand	17	43	101	2.35	15.38	1.66	1.03
San Juan	28	186	397	2.13	14.91	6.51	4.47
Regional Totals	103	573	922	1.61	11.58	15.11	13.76
Unknown counties	35	167	127	0.76	--	2.08	4.01
STATE TOTALS	1147	4157	6086	1.46	6.75	100	100

*Based on county of residence.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1967-72.

Region and county	1967	1968	1969	1970	1971	1972
Northern						
Box Elder	1.81	3.54	2.29	2.62	2.28	1.48
Cache	1.35	3.00	1.87	2.00	2.02	1.71
Davis	0.78	0.27	1.10	0.56	0.60	0.57
Morgan	1.01	1.02	1.21	1.80	2.06	0.26
Rich	0.07	3.11	2.65	2.62	1.91	3.97
Summit	1.70	1.78	1.40	1.93	1.24	1.19
Weber	1.03	1.16	0.94	1.02	0.36	0.28
Regional Totals	1.49	2.81	2.02	2.41	1.90	1.28
Central						
Juab	1.89	2.58	1.74	2.38	1.75	1.14
Salt Lake	1.33	1.40	0.83	0.94	0.92	1.24
Sanpete	0.80	1.93	1.86	1.72	1.23	1.34
Tooele	1.59	1.62	1.27	1.50	1.60	1.25
Utah	1.19	1.55	1.24	1.11	1.32	1.10
Wasatch	1.21	1.39	0.59	1.80	0.95	1.26
Regional Totals	1.34	1.73	1.30	1.47	1.41	1.20
Southern						
Feaver	2.04	2.06	1.84	1.41	1.15	1.06
Garfield	2.83	2.26	0.96	0.62	2.40	1.45
Iron	1.18	2.82	1.57	0.99	1.74	1.31
Kane	4.04	3.30	0.00	0.75	0.20	1.62
Millard	2.25	2.69	1.34	2.43	2.26	1.87
Miute	4.45	1.33	1.43	1.00	0.46	0.75
Sevier	0.65	2.54	1.09	0.68	0.93	1.87
Washington	0.83	8.00	1.11	1.54	1.55	2.29
Wayne	1.50	4.00	0.79	1.39	1.58	2.15
Regional Totals	1.95	2.59	1.23	1.41	1.45	1.85
Northeastern						
Daggett	3.87	4.08	2.08	2.67	2.73	2.93
Duchesne	3.31	2.40	1.47	2.45	3.14	2.91
Uintah	3.53	3.69	1.95	2.30	1.80	1.47
Regional Totals	3.49	3.39	1.86	2.38	2.30	2.15
Southeastern						
Carbon	1.70	1.47	1.62	1.27	0.63	1.15
Emery	1.98	2.58	1.68	2.22	1.06	1.49
Grand	0.74	1.28	1.26	2.26	1.71	2.35
San Juan	3.35	2.20	1.39	2.04	2.73	2.13
Regional Totals	2.17	1.83	1.52	1.85	1.25	1.61
Unknown counties	0.38	1.03	0.53	1.79	1.13	0.76
STATE TOTALS	1.95	2.42	1.54	1.86	1.65	1.46

Table 8. Summary of the monthly distribution of cottontail harvest and hunting pressure each year from 1968 through 1972.

Month	Percent of Harvest					Percent of Hunting Pressure				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
September	6.3	7.8	7.6	7.1	7.8	6.5	7.0	8.1	7.0	8.1
October	12.0	11.5	11.3	12.8	21.3	14.1	12.2	12.4	14.4	16.7
November	22.6	24.6	21.2	22.7	22.5	21.4	23.3	21.8	21.1	23.0
December	28.6	24.2	25.7	26.2	23.4	25.0	24.1	22.7	23.4	20.4
January	20.0	19.9	21.2	19.4	15.9	20.9	20.0	20.0	19.1	18.4
February	9.2	9.6	10.4	8.7	7.5	11.7	10.8	11.5	10.8	10.0
March	1.2	2.4	2.6	3.1	1.5	1.2	2.6	3.4	4.2	3.4

Table 9. State-wide summary of cottontail rabbit harvest statistics, 1967-72.

Year	Total hunters	Total harvest	Hunter days afield	Cottontail per hunter-day	Cottontails* per hunter
1967	23,349	181,812	92,681	1.95	7.79
1968	26,889	225,450	93,126	2.42	8.38
1969	29,760	184,034	119,596	1.54	6.18
1970	24,486	195,248	103,725	1.88	7.97
1971	30,824	239,511	145,287	1.65	7.78
1972	22,835	155,102	105,941	1.46	6.79

TOTALS (1967-72)	158,143	1,181,157	660,356	1.79	7.47
AVERAGES (1967-71)	27,062	205,211	110,883	1.89	7.62

*Based on county of residence.

Table 10. Cottontail rabbit field bag check summary, 1972.

Region and County	ALL HUNTS						COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Rabbits	Total Rabbits/100 hrs.	Total Rabbits/100 hrs.	Total Hunters	Total Hours	Total Rabbits	Total Rabbits/100 hrs.	Total Rabbits/100 hrs. Hunter	
<u>Northern</u>												
Box Elder	9	25	134	13	10	7	21	131	8	6	0.38	
Cache	1	2	1	1	100	1	2	1	1	100	0.50	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	5	15	47	5	11	4	12	38	3	8	0.25	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	15	42	182	19	10	12	35	170	12	7	0.34	
<u>Central</u>												
Juab	1	1	1	1	100	1	1	1	1	100	1.00	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	6	15	47	18	38	4	10	35	15	43	1.50	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	7	16	48	19	40	5	11	36	16	44	1.45	
<u>Southern</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
<u>Northeastern</u>												
Daggett	11	29	44	48	109	5	12	19	22	116	1.83	
Duchesne	19	43	103	104	101	10	22	80	95	119	4.32	
Uintah	17	28	81	82	101	6	10	50	61	122	6.10	
REGIONAL TOTALS	47	100	228	234	103	21	44	149	178	119	4.05	
<u>Southeastern</u>												
Carbon	17	19	41	40	98	16	18	39	39	100	2.17	
Emery	8	26	127	7	6	1	1	1	1	100	1.00	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	31	63	244	190	78	9	19	37	44	119	2.32	
REGIONAL TOTALS	56	108	412	237	58	26	38	77	84	109	2.21	
STATE TOTALS	125	266	870	509	58	64	128	432	290	67	2.27	

NO DATA COLLECTED

Region and County	1967		1968		1969		1970		1971		1972	
	Bag/ 100 hrs. Hunter	Bag/ Hunter	Bag/ 100 hrs. Hunter	Bag/ Hunter	Bag/ 100 hrs. Hunter	Bag/ Hunter	Bag/ 100 hrs. Hunter	Bag/ Hunter	Bag/ 100 hrs. Hunter	Bag/ Hunter	Bag/ 100 hrs. Hunter	Bag/ Hunter
Northern												
Box Elder	8	0.33	40	4.23	31	1.55	85	2.12	--	--	10	0.38
Cache	--	--	--	--	--	--	--	--	--	--	100	0.50
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	33	0.50	34	1.67	--	--
Rich	45	0.86	53	1.17	--	--	57	2.11	200	3.33	11	0.25
Summit	38	1.22	72	2.93	--	--	56	1.33	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	27	0.79	48	3.35	31	1.55	56	1.44	57	2.50	10	0.34
Central												
Juab	--	--	--	--	223	4.14	--	--	--	--	100	1.00
Salt Lake	--	--	18	1.00	--	--	--	--	--	--	--	--
Sanpete	25	0.40	25	0.70	13	0.44	15	0.54	19	0.57	--	--
Tooele	--	--	25	0.79	92	2.40	21	0.88	--	--	38	1.50
Utah	83	2.50	6	0.25	50	0.50	--	--	--	--	--	--
Wasatch	19	0.40	18	--	--	--	21	0.75	--	--	--	--
REGIONAL TOTALS	24	0.40	23	0.70	20	0.54	16	0.59	19	0.57	40	1.45
Southern												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	52	1.20	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	25	1.00	--	--
Millard	--	--	--	--	--	--	50	0.30	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	383	3.83	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	38	1.50	--	--
REGIONAL TOTALS	--	--	--	--	--	--	34	1.52	31	1.25	--	--
Northeastern												
Daggett	171	5.56	72	3.72	66	2.00	58	1.84	119	1.58	109	1.83
Duchesne	102	4.75	26	0.95	15	0.80	31	0.95	21	0.85	101	4.32
Uintah	159	2.58	64	0.86	27	0.92	112	2.28	55	1.15	101	6.10
REGIONAL TOTALS	135	3.94	51	2.84	32	1.17	57	1.72	57	1.29	103	4.05
Southeastern												
Carbon	--	--	97	1.50	--	--	77	4.00	59	1.94	98	2.17
Emery	--	--	147	2.66	--	--	--	--	17	0.20	6	0.27
Grand	--	--	--	--	--	--	--	--	70	2.13	--	--
San Juan	--	--	--	--	--	--	33	4.00	44	1.25	78	2.32
REGIONAL TOTALS	--	--	140	2.44	--	--	43	4.00	56	1.72	58	2.21
STATE TOTALS	92	2.67	54	2.00	29	1.16	42	1.32	43	1.20	58	2.27

APPENDIX

Table 1. State-wide temperature and precipitation departures from normal as determined by averaging similar values for the seven weather divisions in Utah, 1960-72.

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
1960	Temp.	-2.8	-3.7	+3.1	+0.7	+3.3	+1.6	-0.3	+2.4	-1.5	+1.4	-0.7
	Precip.	+0.30	+0.47	-0.37	-0.26	-0.46	-0.51	-0.65	+0.24	+0.56	+0.41	-0.81
1961	Temp.	+2.59	+5.37	+1.27	+1.27	+5.34	+1.21	+0.97	-5.56	-2.76	-3.24	-3.37
	Precip.	-0.88	-0.45	+0.48	-0.32	-0.60	-0.02	+0.80	+1.29	+0.42	+0.09	-0.27
1962	Temp.	-3.44	+1.86	-4.51	+3.00	-0.77	-2.20	-1.04	+0.27	+1.53	+4.39	+0.70
	Precip.	-0.05	+1.18	-0.08	-0.30	-0.18	-0.36	-0.81	+0.24	-0.33	-0.51	-0.84
1963	Temp.	-4.71	+8.01	-0.83	-4.14	-2.79	+0.21	+0.21	+1.64	+4.26	+2.17	-2.96
	Precip.	-0.26	-0.22	-0.20	+0.84	+0.36	-0.60	+0.89	+0.70	-0.33	+0.25	-0.83
1964	Temp.	-1.81	-4.37	-6.49	-3.20	-2.59	+1.13	-1.54	-2.46	+1.73	-3.61	-0.31
	Precip.	-0.48	-0.91	+0.02	+0.54	+0.68	-0.42	-0.28	-0.35	-0.93	+0.45	+0.97
1965	Temp.	+4.07	+0.07	-3.59	-1.50	-3.70	-2.07	-2.67	-7.20	+1.37	+5.19	-0.06
	Precip.	-0.16	-0.31	-0.21	+0.89	+0.60	+0.53	+0.45	+0.84	-0.61	+1.02	+0.71
1966	Temp.	-0.21	-3.33	+1.51	-0.54	+0.24	+0.71	+0.09	+0.53	-2.20	+3.97	-3.60
	Precip.	-0.74	-0.13	-0.79	-0.48	-0.47	-0.13	-0.26	+0.13	-0.19	-0.12	+1.10
1967	Temp.	+0.47	+1.84	+3.47	-4.96	-3.76	+0.76	+1.54	+0.06	+0.39	+3.80	-7.19
	Precip.	+0.25	-0.79	-0.30	+0.14	+1.15	+0.01	-0.27	+0.74	-0.71	-0.16	+0.54
1968	Temp.	-3.33	+4.53	+2.90	-4.87	+0.64	-0.49	-5.07	-3.10	-0.99	-0.26	-4.11
	Precip.	-0.62	+0.35	-0.00	+0.59	+0.29	+0.02	+1.05	-0.50	-0.32	-0.34	-0.09
1969	Temp.	+5.36	-1.11	-4.76	+0.21	-2.54	+0.04	+3.03	+1.80	-6.59	-0.01	+1.91
	Precip.	+1.36	+1.22	-0.58	-0.22	+1.17	+0.10	-0.21	-0.01	+0.32	-0.29	-0.45
1970	Temp.	+3.04	+6.93	-1.17	-6.50	-0.06	-0.31	+2.09	-4.70	-5.77	+2.06	-1.49
	Precip.	-0.17	-0.58	+0.06	-0.05	+0.66	+0.33	-0.03	+0.34	-0.18	+0.68	+0.02
1971	Temp.	+2.96	+1.61	-0.57	-1.66	+0.39	+0.59	+1.53	-4.61	-4.93	-2.83	-5.19
	Precip.	-0.49	+0.02	-0.50	+0.28	-0.29	-0.49	+0.58	-0.13	+1.23	-0.08	+0.65
1972	Temp.	+2.71	+4.50	+6.87	-0.66	+1.53	+0.19	-0.90	-2.47	-1.63	-2.40	-7.50
	Precip.	-0.74	-0.92	-0.82	+0.08	+0.39	-0.62	-0.11	+0.59	+2.08	+0.57	+0.30

Table 2. Number and percent of total upland game hunters afield who reported hunting each game species during 1966-72

Species	Number of Hunters							Percent of Total						
	1966	1967	1968	1969	1970	1971	1972	1966	1967	1968	1969	1970	1971	1972
Pheasant	78,721	85,664	90,453	90,573	78,585	87,878	84,311	96.3	96.6	95.4	94.8	87.6	87.7	87.8
Chukars	17,133	17,485	20,744	22,529	18,013	17,917	16,685	21.0	19.7	21.9	23.6	20.1	17.9	17.4
Mourning doves	20,594	25,161	25,105	29,131	23,908	26,064	29,341	25.2	28.4	26.5	30.5	26.7	26.0	30.5
Sage grouse	2,612	5,336	9,115	12,894	12,036	12,893	13,040	3.2	6.0	9.6	13.5	13.4	12.9	13.6
Forest grouse	6,683	9,420	13,061	12,523	12,775	13,363	16,640	8.2	10.6	13.8	13.1	14.2	13.3	17.3
Quail	6,465	8,455	9,302	9,160	6,141	8,039	7,380	7.9	9.5	9.8	9.6	6.8	8.0	7.7
Hungarian part.	4,549	6,321	6,935	5,591	4,128	4,276	4,754	5.6	7.1	7.3	5.8	4.6	4.3	4.9
Wild turkey**	187	184*	634*	477*	174	389*	351*	0.2	0.2	0.7	0.5	0.2	0.4	0.4
Cottontail***	--	23,349	26,889	29,760	24,486	30,824	22,835	--	27.2	28.4	31.2	27.3	30.8	23.8
Total Hunters	81,760	88,639	94,814	95,483	89,657	100,183	96,047							

*Includes both spring and fall hunts

**Although wild turkey harvest was determined by separate questionnaire, it is assumed that these hunters are derived from the same group of hunters who reported hunting other upland game bird species.

***Of the total 30,824 cottontail hunters, 7,644 did not hunt upland game birds.

Table 3. Season framework for upland game during 1972.

Species	Season dates	Daily bag limit	Possession limit	Area open
Pheasant	Nov. 11-Dec. 10	3 cocks	6 cocks	State-wide except Salt Lake, Sevier and Utah counties.
	Nov. 11-21	3 cocks	6 cocks	Salt Lake, Sevier and Utah counties.
Mourning dove	Sept. 1-30	10	20	State-wide
Chukar	Sept. 23, 1972 to January 15, 1973	8	16	State-wide
Sage Grouse	Sept. 23-29	2	4	Beaver, Daggett, Duchesne, Garfield, Grand, Iron, Kane, Millard, Morgan, Piute, San Juan, Sevier, Summit, Uintah, Wayne, West Box Elder.
	Sept. 23-29	1	2	Cache, Carbon, Davis, East Box Elder, Emery, Juab (part), Rich, Sanpete, Tooele, Utah (part), Wasatch (part) and Weber counties.
The following counties were closed to sage grouse hunting during 1972:				Salt Lake, Washington, Wasatch and Utah except drainages of the Price River, Juab except the Sheeprock Mountains.
Forest grouse	Sept. 23-Nov. 30	4 aggregate	8 aggregate	State-wide
Quail	Nov. 11-Dec. 10	8	16	State-wide
Hungarian partridge	Sept. 23, 1972 to January 15, 1973	8	16	State-wide
Wild turkeys				
Spring hunt	April 29-May 14	Season limit 2 gobblers		Beaver, Garfield, Grand, Iron, Kane, Piute, Sevier, Washington and Wayne counties. Also San Juan County north and east of U.S. Highway 160, Highway 46 and the Lisbon Valley Road.
Fall hunt	Sept. 23-Oct. 8	Season limit 2 turkeys		Same as above.
Cottontail	Sept. 23, 1972 to March 1, 1973	10	20	State-wide