

# UTAH UPLAND GAME

Annual Report 1979



Utah Division of Wildlife Resources  
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UTAH  
UPLAND GAME  
Annual Report  
1979

Prepared by:

S. Dwight Bunnell  
Upland Game Supervisor

and

Jon P. Leatham  
Upland Game Biologist

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Annual Performance Report for Federal Aid Project W-65-R-28 Job A-4

Utah State Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

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Douglas F. Day  
Director

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JOB PERFORMANCE REPORT  
RESEARCH PROJECT SEGMENT  
(Inventory)

State of U T A H

Project Title: Statewide Wildlife  
Management Inventory

Project No. W-65-R-28

Job Title: Statewide Upland Game  
Inventory and Management

Job No. A-4

Period Covered: December 15, 1978 to April 30, 1980

Abstract: This report includes upland game inventory and harvest data relating to the 1979-80 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indexes derived by each method are included. Data obtained in 1979 are compared to 1978 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, 1978, through February 10, 1979, 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 U. S. Fish and Wildlife Service. Call-counts are conducted over 15 permanent, 20-mile routes. One count was made on each route between May 20-30.

Random brood counts were conducted on chukar and Hungarian partridge, forest grouse (ruffed and blue), sage grouse, sharp-tailed grouse, wild turkey and quail from June 15 - 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 and sharp-tailed grouse dancing ground counts were conducted from March 15 - May 15. Total cocks counted, average cocks per ground and percent change from 1978 for comparable grounds were determined on a county basis.

One Gambel 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 preestablished routes between July 15 and August 5. Indexes derived include rabbits per mile and young per 100 adults.

Harvest questionnaires were used to determine the harvest of upland game birds, cottontail rabbit and snowshoe hare, band-tailed pigeon, sharp-tailed grouse and wild turkey. An approximate 20 percent sample of eligible licensees from the previous year (1978) license file was selected for the game bird and rabbit and hare questionnaire. Questionnaires were mailed to all band-tailed pigeon, sharp-tailed grouse and wild turkey permittees. Indexes derived include total hunters, hunter-days and harvest plus hunter success per day and for each season.

The game bird and rabbit and hare questionnaires were analyzed by the University of Utah Computer Center. Due to accumulated rounding errors associated with transferring data from the printout, some totals (columns and percentages) may not total exactly.

Beginning in 1979, the program was expanded to report total estimated hunter-days and harvest by species and county rather than just the percent of pressure and harvest. Wild turkey, sharp-tailed grouse and band-tailed pigeon questionnaires were analyzed by the Game Management Section personnel.

Field bag checks of upland game hunters were made primarily at checking stations, with additional random field checks made 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. Additional sex and age composition data were compiled for some species using wing samples collected at checking stations.

Recommendations:

This project should be continued for the purpose of determining trends of upland game populations and harvest statistics in Utah.

# 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 ninth edition of this annual Upland Game Report. It is a consolidation of, and annual performance report for, information compiled during inventory and harvest surveys conducted under Federal Aid Project, W-65-R, Job A-4. Information contained herein was compiled by conservation officers, biologists, game managers and the upland game management staff of the Division of Wildlife Resources.

This report serves as a handbook of inventory and harvest 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 1979, a total of 104,834 Utah sportsmen spent 684,654 days afield in pursuit of various upland game species. The harvest of upland game totaled 945,051. The proportion of the total upland game hunters which pursued each species is shown in Appendix Table 3 and the percentage failing to bag at least one bird of each species in Appendix Table 4. The framework for 1979 upland game hunting seasons is shown in Appendix Table 6. Harvest statistics by species were as follows:



Species	Hunters Afield	Total Harvest	Hunter Days	Bag per Hunter-day	Bag/Hunter For Season
Pheasant	87,462	216,700	266,245	0.81	2.48
Mourning dove	34,903	351,161	120,459	2.92	10.06
Chukar partridge	15,210	51,916	42,254	1.23	3.41
Sage grouse	16,927	28,280	30,682	0.92	1.67
Forest grouse	21,993	59,851	57,404	1.04	2.72
Quail	5,632	15,882	13,550	1.17	2.81
Hungarian partridge	3,435	6,200	7,787	0.80	1.80
Wild turkey					
spring	90	1	237	--	--
fall	36	3	71	0.05	0.08
Band-tailed pigeon	62	117	133	.88	1.88
Sharp-tailed grouse	156	76	220	0.35	0.49
Cottontail	33,385	200,223	127,497	1.57	6.00
Snowshoe hare	6,787	14,641	18,115	0.81	2.16
		<u>945,051</u>	<u>684,654</u>		

Total hunters afield for all species of upland game = 104,834

A total of 31,103 upland game bird questionnaires were mailed, an approximate 23 percent sample. This year's questionnaire combined the two (upland game bird and rabbit and hare) questionnaires used previously. However, the questionnaires were analyzed separately, employing the same techniques as in past years. A total of 3,487 (11.2%) questionnaires were undeliverable. There were 1,224 returns from persons who did not purchase a license during 1979.

Of the 27,616 questionnaires delivered, 9,274 (33.6%) usable game bird questionnaires were returned. Of those, 2,448 did not hunt game birds leaving a total of 6,826 hunters sampled. This combined with a total of 134,986 eligible licensees to produce a projection factor of 14.555316.

A total of 9,247 usable rabbit and hare questionnaires were returned. Of these, 2,032 did not hunt game rabbits. There were 7,215 hunters who reported hunting cottontails and/or snowshoes. This combined with the 134,986 eligible licensees resulted in a projection factor of 14.597816.

The annual weather summary for 1979, prepared by State Climatologist, E. Arlo Richardson, was not available for analysis this year due to the fact that this report is being published three months earlier than in previous years. However, monthly temperature and precipitation patterns are shown by Figures 1 and 2.



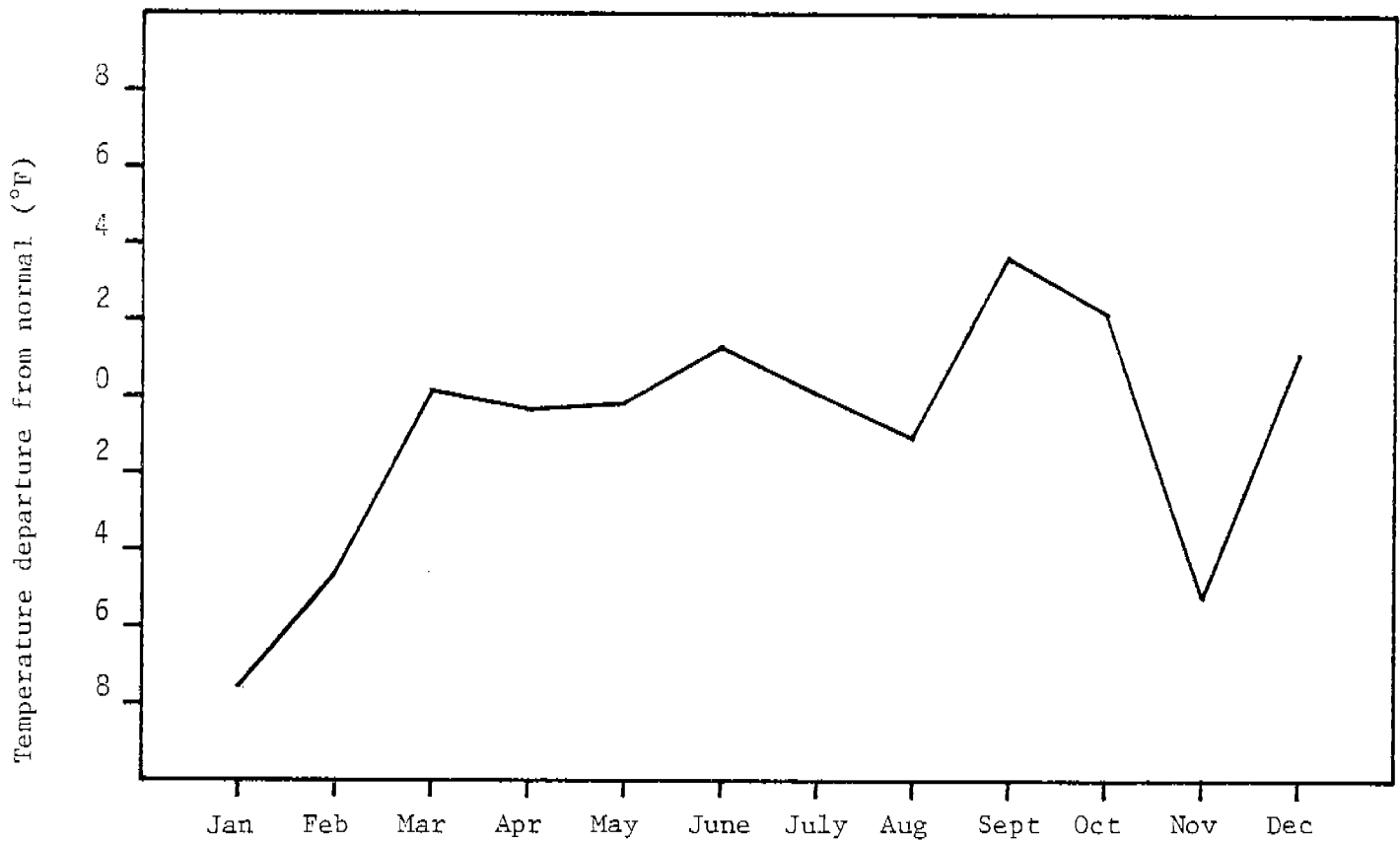


Figure 1. Monthly average temperature departure from normal, 1979.

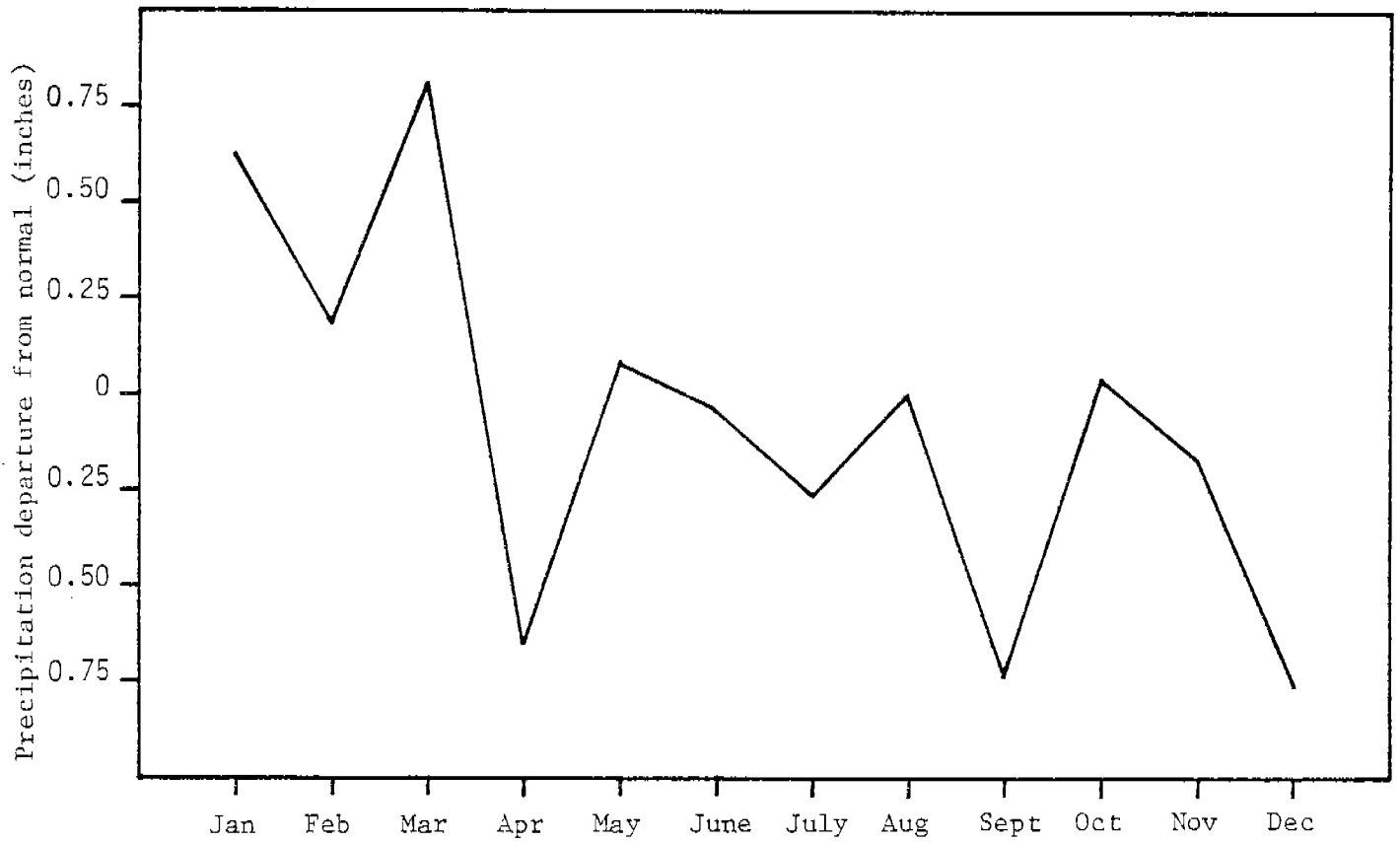


Figure 2. Monthly average precipitation departure from normal, 1979.

# RING-NECKED PHEASANT

## SUMMARY

The statewide breeding population indexes, based on 1978 harvest data, were above the 1978 level and below average except in the Northeastern Region. However, winter sex-ratio indexes indicated increased breeding populations. Winter carry-over from 1978 appeared good due to the generally mild, open winter.

Weather conditions during the nesting season were generally favorable. Production was generally above 1978 and slightly above average statewide. The combination of good carry-over and higher production than 1978 resulted in excellent fall populations.

Harvest statistics compiled from the questionnaire indicated an excellent hunt. Harvest was second highest since 1972 and was only 2 percent less than 1978. Hunter numbers increased 4 percent over 1978, and likewise, hunter-days afield showed slight increases. However, birds per hunter-day decreased 6 percent from 1978. Field bag check data showed that hunters spent less time afield per hunter-day. The 0.89 birds per hunter index from field bag checks was comparable to the index from hunter questionnaires.



### Winter Sex-ratio Counts

Results of the survey for the winter of 1978-79 and long-term trends are shown in Tables 1 and 2 of this section. Statewide comparisons to the winter of 1977-78 and the average are as follows:

	<u>Winter of</u> <u>1978-79</u>	<u>Percent change from</u>	
		<u>1977-78</u>	<u>Average</u>
Total pheasants counted (roadside)	10,584	+118	- 4
Hens per cock	3.3	- 11	-23
Pheasants observed per 100 hours	1,748	+146	+28
Total hours effort (roadside)	605.5	- 11	-24

Winter sex-ratio counts indicated an increased breeding population in 1979 than in 1978 and much below average. Counting conditions were generally good with adequate snow cover. Winter carry-over was good. The hen-cock ratio decreased from 1978 and remained below average.

### Roadside Counts

A summary of summer roadside pheasant counts for 1979 is shown on 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. Summer 1979 survey results compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total pheasants observed	3,517	+20	+13
Total miles driven	2,572	-11	-12
Pheasants per mile	1.37	+34	+11
Average brood size	5.79	+ 2	+ 6
Young per hen	4.05	- 6	+ 1
Percent of hens with young	73	- 4	0

April temperatures were slightly below normal with below normal precipitation. May temperatures and precipitation were slightly below normal. June was warm and dry. Counting conditions were good over most of the state.

Production increased significantly from 1978 and was above 1978 levels in all regions. The density index (pheasants per mile) increased from 1.02 in 1978 to 1.37 in 1979 and was above the average of 1.23 pheasants per mile.

A good carry-over from 1978, coupled with increased production during 1979, resulted in an excellent pheasant population throughout Utah.

## Harvest

### Hunter Questionnaire

Results of the hunter questionnaire for 1979 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 statewide harvest statistics in Table 13. Following is a comparison of 1979 harvest statistics to 1978 and the average:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Pheasant hunters	87,462	+ 4	+ 5
Pheasants harvested	216,700	- 2	- 8
Hunter-days afield	266,245	+ 3	+23
Pheasants per hunter-day	0.81	- 6	-26
Pheasants per hunter	2.48	- 6	-12

Total hunters increased from 1978 to the highest level since 1971—five percent more than the long-term average (1948-78). Hunter-days afield also increased, however, the total harvest decreased 2 percent from 1978. Hunter success (pheasants per hunter-day) decreased from 1978 and remained below average. Pheasants per hunter remained below average by 12 percent.

Long-term trends (1964-79) of total hunters, hunter-days, harvest and hunter success are shown in Figure 1.

### Field Bag Checks

A summary of pheasant field bag check data for 1979 is shown in Table 14. The hunter success trend determined via bag checks since 1974 is found in Table 15. A comparison of 1979 data, on a statewide basis, to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	5,262	- 1	+14
Total hours hunted	17,314	- 1	+10
Pheasants per hunter (complete hunts)	0.89	+ 1	+ 1
Pheasants bagged per 100 hours	22	+10	+16
Average hours per hunter-day (complete hunts)	4.1	- 7	-11
Hours hunted per pheasant bagged	4.6	-10	-16

The decrease in total hunters checked most likely reflects decreased efforts to collect data rather than decreased hunter pressure. The 0.89 birds per hunter index was comparable to the index derived from the harvest questionnaire (0.81 birds per hunter-day).

Overall, the field bag check showed decreased hunter effort per day and increased hunter success compared to 1978. The average hunter spent 4.1 hours afield, compared to 4.4 for 1978.

Pheasants bagged per hunter and per hunter-day

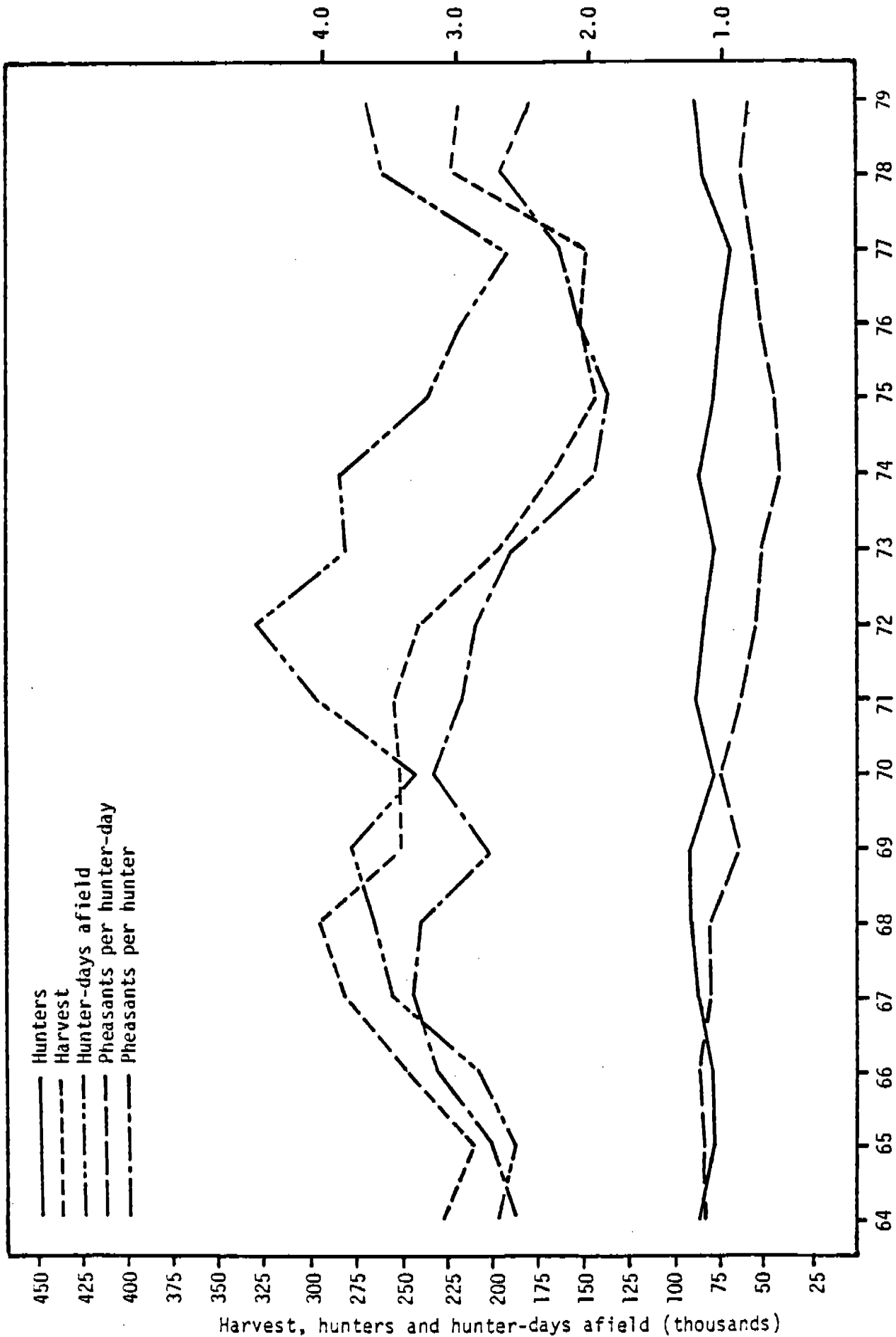


Figure 1. Statewide trend of pheasant harvest statistics

Table 1. Summary of pheasant winter sex-ratio counts, 1978-79.

Region and County	Roadside Observations				Flushing Observations				Effort Expended			Pheas. Obs./ 100 Hrs. of Road. Obs.	
	Cocks		Hens		Cocks		Hens		Hours		Vehicle Miles		
	Total	100 Hens	Total	100 Hens	Total	100 Hens	Total	100 Hens	Vehicle	Walk			
<b>Northern Region</b>													
Box Elder	77	404	481	5.2	19	--	--	--	--	22.5	205	22.5	2,138
Cache	188	448	636	2.4	42	--	--	--	--	80.5	905	80.5	790
Davis	56	312	368	5.6	18	--	--	--	--	21.5	317	21.5	1,712
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	67	579	646	8.6	12	--	--	--	--	6.5	81	6.5	9,938
<b>REGIONAL TOTALS</b>	<b>388</b>	<b>1,743</b>	<b>2,131</b>	<b>4.5</b>	<b>22</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>131.0</b>	<b>1,508</b>	<b>131.0</b>	<b>1,627</b>
<b>Central Region</b>													
Juab	142	657	799	4.6	22	0	21	21	--	29	376	29	2,755
Salt Lake	72	267	339	3.7	27	--	--	--	--	95	1,110	95	357
Sanpete	345	1,061	1,406	3.0	33	6	27	33	4.5	61	803	61	2,305
Tooele	51	182	233	3.5	28	10	45	55	4.5	18	195	18	1,294
Utah	234	1,176	1,410	5.0	20	--	--	--	--	80	850	80	1,763
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>844</b>	<b>3,343</b>	<b>4,187</b>	<b>3.9</b>	<b>25</b>	<b>16</b>	<b>93</b>	<b>109</b>	<b>5.8</b>	<b>283</b>	<b>3,334</b>	<b>283</b>	<b>1,480</b>
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	28	16	44	0.6	175	10	36	46	3.6	8	86	8	550
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	264	768	1,032	2.9	34	15	47	62	3.1	19.5	278	19.5	5,292
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	86	345	431	4.0	25	3	28	31	9.3	31.5	290	31.5	1,368
Washington	184	459	643	2.5	40	0	9	9	--	31.5	338	31.5	2,041
Wayne	2	1	3	0.5	200	--	--	--	--	4	114	4	75
<b>REGIONAL TOTALS</b>	<b>564</b>	<b>1,589</b>	<b>2,153</b>	<b>2.8</b>	<b>35</b>	<b>28</b>	<b>120</b>	<b>148</b>	<b>4.3</b>	<b>94.5</b>	<b>1,106</b>	<b>94.5</b>	<b>2,278</b>
<b>Northeastern Region</b>													
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	296	622	918	2.1	48	76	222	298	2.9	30	310	30	3,060
Uintah	207	619	826	3.0	33	45	187	232	4.2	26.5	295	26.5	3,117
<b>REGIONAL TOTALS</b>	<b>503</b>	<b>1,241</b>	<b>1,744</b>	<b>2.5</b>	<b>41</b>	<b>121</b>	<b>409</b>	<b>530</b>	<b>3.4</b>	<b>56.5</b>	<b>605</b>	<b>56.5</b>	<b>3,087</b>
<b>Southeastern Region</b>													
Carbon	58	129	187	2.3	50	26	32	58	1.2	17	249	17	1,100
Emery	65	98	163	1.5	67	29	62	91	2.1	18	107	18	906
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	19	0	19	--	--	10	26	36	2.6	5.5	251	5.5	345
<b>REGIONAL TOTALS</b>	<b>142</b>	<b>227</b>	<b>369</b>	<b>1.6</b>	<b>63</b>	<b>65</b>	<b>120</b>	<b>185</b>	<b>1.8</b>	<b>40.5</b>	<b>607</b>	<b>40.5</b>	<b>911</b>
<b>STATE TOTALS</b>	<b>2,441</b>	<b>8,143</b>	<b>10,584</b>	<b>3.3</b>	<b>30</b>	<b>230</b>	<b>742</b>	<b>972</b>	<b>3.2</b>	<b>605.5</b>	<b>7,160</b>	<b>605.5</b>	<b>1,748</b>

Table 2. Trend of pheasant winter sex-ratio counts, 1974-79.

Region and County	1974-75		1975-76		1976-77		1977-78		1978-79		Averages 1969-78
	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	Hens/ Cock	Birds/ 100 hr.	
<u>Northern Region</u>											
Box Elder	4.4	2,074	4.4	1,954	2.6	738	2.1	700	5.2	2,138	
Cache	3.4	575	3.4	839	4.2	747	3.8	430	2.4	790	
Davis	3.8	1,200	11.7	3,817	6.5	1,464	7.3	631	5.6	1,712	
Morgan	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	13.5	725	4.5	1,326	6.7	1,283	7.8	469	8.6	9,938	
<b>REGIONAL TOTALS</b>	<b>4.5</b>	<b>1,202</b>	<b>4.7</b>	<b>1,481</b>	<b>4.7</b>	<b>982</b>	<b>4.8</b>	<b>515</b>	<b>4.5</b>	<b>1,627</b>	<b>5.1</b>
<u>Central Region</u>											
Juab	19.0	111	2.7	110	7.0	400	1.5	83	4.6	2,755	
Salt Lake	5.2	899	2.2	1,300	3.1	433	1.3	202	3.7	357	
Sanpete	6.0	1,314	5.3	2,018	7.4	891	6.5	762	3.0	2,305	
Tooele	6.6	1,281	3.8	569	1.7	616	3.0	868	3.5	1,294	
Utah	5.3	1,144	2.9	1,790	4.1	1,291	4.9	643	5.0	1,763	
Wasatch	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>5.6</b>	<b>1,075</b>	<b>3.1</b>	<b>1,574</b>	<b>4.3</b>	<b>924</b>	<b>4.6</b>	<b>596</b>	<b>3.9</b>	<b>1,480</b>	<b>5.0</b>
<u>Southern Region</u>											
Beaver	2.7	480	1.4	277	8.0	300	3.0	514	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	
Iron	3.8	614	5.9	1,200	3.8	580	2.2	145	0.6	550	
Kane	--	--	--	--	--	--	--	--	--	--	
Millard	4.1	542	4.0	909	2.5	402	2.6	1,144	2.9	5,292	
Piute	--	--	--	--	--	--	--	--	--	--	
Sevier	5.4	1,316	5.3	1,024	2.5	567	4.0	354	4.0	1,368	
Washington	5.0	360	4.2	595	5.4	1,768	5.4	643	2.5	2,041	
Wayne	2.1	450	2.0	447	1.6	388	0.5	60	0.5	75	
<b>REGIONAL TOTALS</b>	<b>4.4</b>	<b>781</b>	<b>3.9</b>	<b>712</b>	<b>3.5</b>	<b>653</b>	<b>3.3</b>	<b>474</b>	<b>2.8</b>	<b>2,278</b>	<b>4.6</b>
<u>Northeastern Region</u>											
Daggett	--	--	--	--	--	--	--	--	--	--	
Duchesne	2.5	587	2.6	664	1.6	1,830	2.6	1,477	2.1	3,060	
Uintah	3.4	1,316	2.6	1,065	2.5	1,760	3.4	2,581	3.0	3,117	
<b>REGIONAL TOTALS</b>	<b>2.9</b>	<b>827</b>	<b>2.6</b>	<b>833</b>	<b>2.0</b>	<b>1,797</b>	<b>3.0</b>	<b>1,919</b>	<b>2.5</b>	<b>3,087</b>	<b>2.6</b>
<u>Southeastern Region</u>											
Carbon	--	--	2.8	870	1.3	800	2.3	548	2.3	1,100	
Emery	3.1	372	1.6	214	2.0	1,571	2.2	642	1.5	906	
Grand	1.9	289	--	--	--	--	--	--	--	--	
San Juan	--	600	--	--	--	--	--	--	--	345	
<b>REGIONAL TOTALS</b>	<b>3.1</b>	<b>367</b>	<b>1.9</b>	<b>287</b>	<b>1.8</b>	<b>1,240</b>	<b>2.2</b>	<b>524</b>	<b>1.6</b>	<b>911</b>	<b>2.7</b>
<b>STATE TOTALS</b>	<b>4.5</b>	<b>944</b>	<b>3.2</b>	<b>1,156</b>	<b>3.3</b>	<b>1,014</b>	<b>3.7</b>	<b>711</b>	<b>3.3</b>	<b>1,748</b>	<b>4.3</b>

Table 3. Pheasant summer inventory summary, 1979.

Region and County	No. Routes	Total Miles	Distinct Broods		Mixed Observ.		Adults w/o		Total Hens	Total Yng.	Total Cocks	Total Pheas. Mile	Yng./ Mile	Mean Brood Ad.	Yng./ Hen. w/Yng.	% Hens		
			No.	Yng.	Hens	Yng.	Cocks	Hens									Hens	Yng.
<b>Northern Region</b>																		
Box Elder	2	170	8	51	0	0	5	5	13	51	5	69	0.41	0.30	6.38	3.92	62	
Cache	2	120	6	21	0	3	7	4	10	24	7	41	0.34	0.20	3.50	2.40	60	
Davis	1	70	8	32	16	37	4	6	30	69	4	103	1.47	0.99	4.00	2.30	80	
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	1	78	14	84	2	11	3	7	23	95	3	121	1.55	1.22	6.00	4.13	70	
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>438</b>	<b>36</b>	<b>188</b>	<b>18</b>	<b>51</b>	<b>19</b>	<b>22</b>	<b>76</b>	<b>239</b>	<b>19</b>	<b>334</b>	<b>0.76</b>	<b>0.55</b>	<b>5.22</b>	<b>3.14</b>	<b>71</b>	
<b>Central Region</b>																		
Juab	1	37	0	0	0	1	2	1	1	1	3	5	0.13	0.02	--	1.00	--	
Salt Lake	1	87	7	36	0	0	5	4	11	36	5	52	0.64	0.44	5.13	3.27	64	
Sanpete	2	170	43	257	1	3	10	0	44	260	10	314	1.85	1.53	5.98	5.91	100	
Tooele	1	60	14	125	29	115	8	2	45	177	8	230	3.83	2.95	8.93	3.93	96	
Utah	4	294	124	676	34	206	62	118	276	882	62	1,220	4.14	3.00	5.45	3.20	57	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>642</b>	<b>188</b>	<b>1094</b>	<b>64</b>	<b>325</b>	<b>87</b>	<b>125</b>	<b>377</b>	<b>1356</b>	<b>88</b>	<b>1,821</b>	<b>2.83</b>	<b>2.11</b>	<b>5.81</b>	<b>3.59</b>	<b>66</b>	
<b>Southern Region</b>																		
Beaver	1	90	10	71	0	7	0	3	13	78	0	91	1.01	0.87	7.10	6.00	77	
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	1	69	8	34	2	17	4	2	12	51	4	67	0.97	0.74	4.25	4.25	83	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2	248	35	221	--	--	15	5	40	221	15	276	1.11	0.89	6.31	5.52	88	
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	180	17	101	10	66	4	1	28	167	4	199	1.10	0.93	5.94	5.96	96	
Washington	2	102	9	45	11	59	14	1	21	104	14	139	1.36	1.02	5.00	4.95	95	
Wayne	1	32	1	5	--	--	1	--	1	5	1	7	0.21	0.15	5.00	5.00	100	
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>721</b>	<b>80</b>	<b>477</b>	<b>23</b>	<b>149</b>	<b>38</b>	<b>12</b>	<b>115</b>	<b>626</b>	<b>38</b>	<b>779</b>	<b>1.08</b>	<b>0.87</b>	<b>5.96</b>	<b>5.44</b>	<b>90</b>	
<b>Northeastern Region</b>																		
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	370	15	99	0	0	23	2	17	99	23	139	0.38	0.27	6.60	5.82	88	
Uintah	2	192	27	150	21	139	21	7	55	289	21	365	1.90	1.50	5.56	5.25	87	
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>562</b>	<b>42</b>	<b>249</b>	<b>21</b>	<b>139</b>	<b>44</b>	<b>9</b>	<b>72</b>	<b>388</b>	<b>44</b>	<b>504</b>	<b>0.90</b>	<b>0.69</b>	<b>5.93</b>	<b>5.39</b>	<b>88</b>	
<b>Southeastern Region</b>																		
Carbon	1	90	3	10	2	14	4	--	5	24	4	33	0.40	0.30	3.33	4.80	100	
Emery	2	105	5	30	--	--	2	4	9	30	2	41	0.39	0.28	6.00	4.29	43	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	1	14	0	0	0	0	1	4	4	0	1	5	0.35	0.00	--	0.00	0	
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>209</b>	<b>8</b>	<b>40</b>	<b>2</b>	<b>14</b>	<b>7</b>	<b>8</b>	<b>18</b>	<b>54</b>	<b>7</b>	<b>79</b>	<b>0.38</b>	<b>0.26</b>	<b>5.00</b>	<b>3.00</b>	<b>56</b>	
<b>STATE TOTALS</b>	<b>33</b>	<b>2,572</b>	<b>354</b>	<b>2048</b>	<b>128</b>	<b>678</b>	<b>195</b>	<b>176</b>	<b>658</b>	<b>2,663</b>	<b>196</b>	<b>3,517</b>	<b>1.37</b>	<b>1.04</b>	<b>5.79</b>	<b>4.05</b>	<b>73</b>	



Table 4. Trend of pheasants observed per mile during summer roadside counts, 1969-79.

Region and County	Year											Average 1962-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	0.68	0.57	1.75	1.10	0.38	0.87	0.21	0.46	0.60	0.78	0.41	
Cache	1.46	1.90	1.98	1.10	0.36	0.48	0.68	0.44	0.22	0.71	0.34	
Davis	4.04	0.70	2.75	1.77	--	0.32	1.55	0.54	1.67	1.59	1.47	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	3.18	0.71	1.82	2.44	2.36	1.77	1.23	2.24	1.30	1.01	1.55	
<b>REGIONAL TOTALS</b>	<b>1.89</b>	<b>1.20</b>	<b>2.04</b>	<b>1.45</b>	<b>1.04</b>	<b>0.80</b>	<b>0.71</b>	<b>0.86</b>	<b>0.85</b>	<b>0.96</b>	<b>0.76</b>	<b>1.36</b>
<b>Central Region</b>												
Juab	0.46	1.20	0.32	0.64	0.23	0.46	0.82	1.20	0.54	0.09	0.13	
Salt Lake	2.60	0.88	1.74	1.29	0.44	0.48	0.54	0.55	0.29	0.09	0.64	
Sanpete	2.33	3.34	2.22	3.27	1.78	1.60	0.08	1.37	1.23	1.28	1.85	
Tooele	2.82	3.18	1.69	2.52	0.07	0.87	0.17	1.02	0.77	1.11	3.83	
Utah	2.49	1.84	2.31	2.02	1.36	1.29	0.64	1.45	0.98	1.96	4.14	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>2.38</b>	<b>1.97</b>	<b>2.00</b>	<b>2.06</b>	<b>0.98</b>	<b>1.11</b>	<b>0.62</b>	<b>1.16</b>	<b>0.93</b>	<b>1.40</b>	<b>2.83</b>	<b>1.86</b>
<b>Southern Region</b>												
Beaver	0.46	0.96	0.69	0.75	0.60	0.60	0.07	0.69	0.49	0.71	1.01	
Garfield	1.05	0.36	0.03	--	--	--	--	--	--	--	--	
Iron	0.73	0.87	0.77	0.51	0.56	0.53	0.19	0.39	0.30	0.49	0.97	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	1.68	1.01	1.15	1.09	0.57	0.79	0.41	0.47	0.49	1.38	1.11	
Piute	0.64	0.53	0.35	--	--	--	--	--	--	--	--	
Sevier	1.66	1.99	4.13	2.37	1.03	0.89	0.40	0.72	0.88	1.72	1.10	
Washington	0.67	0.29	1.32	0.92	1.12	1.34	0.47	0.47	0.57	1.40	1.36	
Wayne	--	--	--	--	--	0.48	0.09	1.33	0.03	2.10	0.21	
<b>REGIONAL TOTALS</b>	<b>1.12</b>	<b>0.92</b>	<b>1.48</b>	<b>1.19</b>	<b>0.79</b>	<b>0.78</b>	<b>0.28</b>	<b>0.58</b>	<b>0.57</b>	<b>1.29</b>	<b>1.08</b>	<b>1.13</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.36	0.45	0.32	0.27	0.31	0.33	0.33	0.34	0.39	0.68	0.38	
Uintah	1.27	0.66	0.82	0.74	0.61	1.33	0.54	1.45	1.15	1.75	1.90	
<b>REGIONAL TOTALS</b>	<b>0.70</b>	<b>0.51</b>	<b>0.51</b>	<b>0.42</b>	<b>0.39</b>	<b>0.61</b>	<b>0.39</b>	<b>0.67</b>	<b>0.65</b>	<b>1.02</b>	<b>0.90</b>	<b>0.64</b>
<b>Southeastern Region</b>												
Carbon	0.09	0.20	0.05	0.15	0.01	0	0.02	0.39	0.23	0.22	0.40	
Emery	0.69	0.83	0.55	1.32	0.64	1.06	0.88	0.47	0.61	0.53	0.39	
Grand	--	--	--	1.03	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	5.00	3.57	0.93	0.93	0.00	0.35	
<b>REGIONAL TOTALS</b>	<b>0.39</b>	<b>0.57</b>	<b>0.31</b>	<b>0.76</b>	<b>0.34</b>	<b>0.64</b>	<b>0.60</b>	<b>0.44</b>	<b>0.44</b>	<b>0.35</b>	<b>0.38</b>	<b>0.73</b>
<b>STATE TOTALS</b>	<b>1.40</b>	<b>1.18</b>	<b>1.40</b>	<b>1.33</b>	<b>0.74</b>	<b>0.83</b>	<b>0.49</b>	<b>0.78</b>	<b>0.71</b>	<b>1.02</b>	<b>1.37</b>	<b>1.23</b>

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1969-79.

Region and County	Year											Average 1962-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	0.40	0.35	1.32	0.76	0.28	0.62	0.13	0.31	0.41	0.55	0.30	
Cache	1.05	1.39	1.62	0.81	0.32	0.35	0.43	0.30	0.17	0.47	0.20	
Davis	3.11	0.54	2.25	1.28	--	0.22	0.84	0.54	1.17	1.26	0.99	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	2.35	0.58	1.35	1.74	1.72	1.31	0.77	1.47	0.84	0.62	1.22	
<b>REGIONAL TOTALS</b>	<b>1.37</b>	<b>0.86</b>	<b>1.62</b>	<b>1.04</b>	<b>0.77</b>	<b>0.59</b>	<b>0.43</b>	<b>0.58</b>	<b>0.58</b>	<b>0.68</b>	<b>0.55</b>	<b>0.99</b>
<u>Central Region</u>												
Juab	0.27	0.95	0.18	0.50	0.17	0.38	0.71	1.06	0.46	0.76	0.02	
Salt Lake	1.91	0.61	1.31	1.04	0.32	0.32	0.35	0.37	0.21	0.07	0.44	
Sanpete	1.90	2.54	1.74	2.64	1.43	1.26	0.56	1.12	0.98	1.06	1.53	
Tooele	2.49	2.74	1.41	2.09	0.00	0.62	0.07	0.69	0.45	0.72	2.95	
Utah	1.88	1.30	1.68	1.35	1.02	0.95	0.33	0.99	0.60	1.43	3.00	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1.84</b>	<b>1.46</b>	<b>1.50</b>	<b>1.53</b>	<b>0.73</b>	<b>0.83</b>	<b>0.38</b>	<b>0.84</b>	<b>0.63</b>	<b>1.06</b>	<b>2.11</b>	<b>1.43</b>
<u>Southern Region</u>												
Beaver	0.26	0.64	0.48	0.57	0.39	0.47	0.03	0.54	0.33	0.58	0.87	
Garfield	0.74	0.19	0.00	--	--	--	--	--	--	--	--	
Iron	0.53	0.55	0.62	0.39	0.51	0.46	0.08	0.31	0.17	0.38	0.74	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	1.32	0.84	0.90	0.87	0.48	0.57	0.27	0.34	0.34	1.12	0.89	
Piute	0.53	0.31	0.25	--	--	--	--	--	--	--	--	
Sevier	1.26	1.58	3.21	1.93	0.85	0.70	0.28	0.56	0.70	1.45	0.93	
Washington	0.46	0.17	0.95	0.65	0.72	1.03	0.26	0.35	0.37	1.08	1.02	
Wayne	--	--	--	--	--	0.14	0.02	0.87	0.00	1.76	0.15	
<b>REGIONAL TOTALS</b>	<b>0.85</b>	<b>0.69</b>	<b>1.14</b>	<b>0.95</b>	<b>0.61</b>	<b>0.59</b>	<b>0.17</b>	<b>0.44</b>	<b>0.41</b>	<b>1.05</b>	<b>0.87</b>	<b>0.87</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.25	0.27	0.21	0.15	0.18	0.21	0.23	0.21	0.25	0.53	0.27	
Uintah	0.86	0.40	0.55	0.55	0.47	1.08	0.27	1.07	0.79	1.41	1.50	
<b>REGIONAL TOTALS</b>	<b>0.47</b>	<b>0.31</b>	<b>0.34</b>	<b>0.28</b>	<b>0.26</b>	<b>0.45</b>	<b>0.24</b>	<b>0.47</b>	<b>0.44</b>	<b>0.81</b>	<b>0.69</b>	<b>0.46</b>
<u>Southeastern Region</u>												
Carbon	0.03	0.17	0.03	0.10	--	0.00	0.00	0.22	0.03	0.15	0.30	
Emery	0.58	0.56	0.30	0.96	0.47	0.81	0.57	0.20	0.33	0.35	0.28	
Grand	--	--	--	0.67	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	4.07	2.43	0.47	0.40	--	0.00	
<b>REGIONAL TOTALS</b>	<b>0.31</b>	<b>0.39</b>	<b>0.17</b>	<b>0.54</b>	<b>0.25</b>	<b>0.50</b>	<b>0.39</b>	<b>0.22</b>	<b>0.18</b>	<b>0.24</b>	<b>0.26</b>	<b>0.52</b>
<b>STATE TOTALS</b>	<b>1.06</b>	<b>0.86</b>	<b>1.06</b>	<b>0.99</b>	<b>0.55</b>	<b>0.62</b>	<b>0.30</b>	<b>0.55</b>	<b>0.47</b>	<b>0.78</b>	<b>1.04</b>	<b>0.94</b>

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1969-79.

Region and County	Year											Average 1962-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	2.00	2.19	4.02	3.26	3.23	3.19	2.44	4.18	3.68	3.64	3.92	
Cache	3.38	3.65	6.64	3.88	10.00	3.00	2.69	4.50	4.00	2.80	2.40	
Davis	4.00	4.00	5.45	3.42	--	3.00	1.53	3.75	3.18	4.71	2.30	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	3.70	4.22	3.40	3.49	3.72	3.66	2.07	2.35	2.12	1.81	4.13	
<b>REGIONAL TOTALS</b>	<b>3.27</b>	<b>3.32</b>	<b>5.02</b>	<b>3.50</b>	<b>3.82</b>	<b>3.35</b>	<b>2.10</b>	<b>2.91</b>	<b>2.88</b>	<b>3.10</b>	<b>3.14</b>	<b>3.70</b>
<b>Central Region</b>												
Juab	3.25	4.22	2.33	4.50	4.00	5.00	6.00	7.40	8.00	5.60	1.00	
Salt Lake	3.63	2.96	4.08	4.74	3.24	2.87	2.39	3.50	5.33	6.00	3.27	
Sanpete	5.48	4.02	4.73	5.52	5.33	4.45	2.67	5.22	5.09	6.03	5.91	
Tooele	7.89	6.78	5.95	5.95	0.00	3.36	1.33	3.06	1.93	2.69	3.93	
Utah	3.85	3.69	3.28	2.71	3.33	3.58	1.62	3.32	2.53	3.42	3.20	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>4.30</b>	<b>3.94</b>	<b>3.86</b>	<b>3.78</b>	<b>3.46</b>	<b>3.77</b>	<b>2.16</b>	<b>3.85</b>	<b>3.19</b>	<b>3.88</b>	<b>3.59</b>	<b>4.01</b>
<b>Southern Region</b>												
Beaver	1.86	5.33	3.27	5.38	2.78	5.83	0.86	6.14	3.33	4.72	6.00	
Garfield	3.50	2.00	--	--	--	--	--	--	--	--	--	
Iron	3.21	2.53	4.43	4.54	13.67	9.50	0.86	5.50	6.00	5.00	4.25	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	4.58	5.89	4.62	5.65	5.75	2.91	2.52	3.67	3.57	6.05	5.52	
Piute	5.33	1.75	5.00	--	--	--	--	--	--	--	--	
Sevier	3.74	4.30	4.34	4.94	5.18	3.80	3.06	4.79	4.90	6.67	5.96	
Washington	2.88	1.50	3.45	3.50	2.62	3.89	1.94	5.83	2.47	4.52	4.95	
Wayne	--	--	--	--	--	0.54	0.25	2.60	--	7.57	5.00	
<b>REGIONAL TOTALS</b>	<b>3.84</b>	<b>3.92</b>	<b>4.19</b>	<b>4.98</b>	<b>4.41</b>	<b>3.73</b>	<b>1.93</b>	<b>4.36</b>	<b>3.88</b>	<b>5.85</b>	<b>5.44</b>	<b>4.35</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	5.00	2.51	3.50	3.00	4.06	3.71	3.73	4.06	3.41	5.11	5.82	
Uintah	3.37	2.62	3.08	4.84	5.64	5.43	1.78	4.48	3.06	5.63	5.25	
<b>REGIONAL TOTALS</b>	<b>3.77</b>	<b>2.56</b>	<b>3.23</b>	<b>3.92</b>	<b>4.70</b>	<b>4.69</b>	<b>2.73</b>	<b>4.34</b>	<b>3.18</b>	<b>5.39</b>	<b>5.39</b>	<b>4.23</b>
<b>Southeastern Region</b>												
Carbon	1.40	5.00	5.00	4.33	--	--	0.00	2.05	0.42	3.00	4.80	
Emery	6.78	3.55	2.25	3.34	4.70	7.46	3.96	1.46	2.36	2.61	4.29	
Grand	--	--	--	2.22	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	7.62	2.55	1.75	1.20	0.00	0.00	
<b>REGIONAL TOTALS</b>	<b>5.61</b>	<b>3.74</b>	<b>2.36</b>	<b>3.20</b>	<b>4.70</b>	<b>7.52</b>	<b>3.28</b>	<b>1.74</b>	<b>1.62</b>	<b>2.70</b>	<b>3.00</b>	<b>4.06</b>
<b>STATE TOTALS</b>	<b>3.94</b>	<b>3.68</b>	<b>4.09</b>	<b>3.93</b>	<b>3.95</b>	<b>3.95</b>	<b>2.28</b>	<b>3.56</b>	<b>3.11</b>	<b>4.32</b>	<b>4.05</b>	<b>4.01</b>

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1969-79.

Region and County	Year											Average 1963-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	58	59	75	69	62	78	78	73	79	80	62	
Cache	62	66	86	78	50	68	66	80	100	60	60	
Davis	56	82	87	85	--	100	97	75	58	88	80	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	38	--	--	--	--	--	--	--	--	--	--	
Weber	80	100	77	54	82	69	34	58	44	39	70	
<b>REGIONAL TOTALS</b>	66	68	82	70	77	74	68	64	58	64	71	72
<b>Central Region</b>												
Juab	75	100	67	100	100	100	100	100	100	100	--	
Salt Lake	76	62	66	78	71	52	45	59	100	100	64	
Sanpete	91	78	95	91	93	88	64	90	85	90	100	
Tooele	100	100	84	74	0	64	33	78	57	69	96	
Utah	74	60	69	57	62	58	42	66	61	69	57	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	79	71	74	69	66	68	49	73	67	74	66	72
<b>Southern Region</b>												
Beaver	72	100	82	88	64	83	14	86	56	73	77	
Garfield	83	50	--	--	--	--	--	--	--	--	--	
Iron	75	59	62	54	100	80	14	100	100	86	83	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	77	94	81	88	100	50	48	81	68	85	88	
Piute	100	50	100	--	--	--	--	--	--	--	--	
Sevier	96	88	85	90	85	83	59	92	90	97	96	
Washington	42	67	74	62	66	78	31	50	73	87	95	
Wayne	--	--	--	--	--	8	50	40	--	100	100	
<b>REGIONAL TOTALS</b>	79	77	80	83	79	64	42	78	76	89	90	77
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	81	44	68	68	81	76	59	88	81	83	88	
Uintah	59	42	55	84	91	100	48	94	61	95	87	
<b>REGIONAL TOTALS</b>	65	43	60	76	85	90	53	91	68	90	88	76
<b>Southeastern Region</b>												
Carbon	20	75	100	67	--	--	0	59	17	44	100	
Emery	94	70	42	66	76	77	65	29	55	48	43	
Grand	--	--	--	56	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	100	55	50	60	0	0	
<b>REGIONAL TOTALS</b>	78	71	44	64	76	86	60	44	44	48	56	67
<b>STATE TOTALS</b>	74	69	75	72	74	71	54	71	65	76	73	73

Table 8. Trend of average brood size for pheasants, 1969-79.

Region and County	Year											Average 1962-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	3.53	3.68	4.96	4.81	4.75	4.17	3.14	5.75	4.67	5.71	6.38	
Cache	5.63	7.12	8.34	5.47	5.00	4.38	4.67	5.83	4.00	4.60	3.50	
Davis	6.67	5.14	6.52	4.50	--	3.50	2.75	4.33	5.73	4.79	4.00	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	5.33	3.43	4.80	6.07	6.55	7.27	5.78	5.05	6.57	4.80	6.00	
REGIONAL TOTALS	5.56	5.28	6.33	5.13	6.00	4.84	4.26	5.19	5.29	5.00	5.22	5.21
<b>Central Region</b>												
Juab	4.33	4.22	7.00	4.50	--	5.00	9.00	7.33	8.00	5.60	--	
Salt Lake	5.35	4.95	5.76	6.93	4.58	5.00	5.73	6.09	5.33	6.00	5.13	
Sanpete	5.13	5.52	4.94	6.11	5.92	4.59	4.72	5.88	4.92	6.56	5.98	
Tooele	7.89	6.78	6.81	8.07	--	6.50	4.00	4.38	3.33	4.57	8.93	
Utah	5.08	5.13	5.89	5.31	5.78	6.24	4.12	4.86	4.56	4.91	5.45	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.37	5.41	5.70	5.92	5.60	5.46	4.73	5.35	4.70	5.29	5.81	5.43
<b>Southern Region</b>												
Beaver	--	--	5.75	6.17	4.33	8.00	6.00	7.75	6.00	6.50	7.10	
Garfield	4.25	3.00	--	--	--	--	--	--	--	--	--	
Iron	11.00	4.50	7.17	5.67	6.00	9.50	6.00	5.25	6.00	5.00	4.25	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	5.74	6.24	4.44	5.31	5.50	6.20	5.73	6.93	5.23	6.88	6.31	
Piute	5.00	3.50	5.00	--	--	--	--	--	--	--	--	
Sevier	4.22	5.00	5.24	5.67	6.14	4.82	4.25	5.17	6.17	6.40	5.94	
Washington	8.00	--	5.25	6.33	4.33	4.42	5.80	8.00	3.57	6.33	5.00	
Wayne	--	--	--	--	--	7.00	--	7.00	--	10.25	5.00	
REGIONAL TOTALS	5.42	5.30	5.13	5.60	5.38	5.83	5.31	6.37	5.45	6.71	5.96	5.56
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	6.45	4.82	6.50	4.45	5.64	5.43	6.40	4.64	4.55	6.54	6.60	
Uintah	6.65	6.14	6.05	5.75	6.28	5.21	4.22	5.00	5.00	5.75	5.56	
REGIONAL TOTALS	6.59	5.33	6.21	5.13	5.89	5.29	5.37	4.85	4.80	6.12	5.93	5.65
<b>Southeastern Region</b>												
Carbon	1.00	4.00	5.00	6.50	--	--	--	3.00	2.50	6.75	3.33	
Emery	8.42	5.64	6.00	5.08	6.22	6.67	5.00	4.86	4.33	5.27	6.00	
Grand	--	--	--	4.00	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	6.12	--	3.50	4.00	--	--	
REGIONAL TOTALS	7.85	5.29	5.89	5.00	6.22	6.36	5.00	4.40	4.07	5.67	5.00	5.68
STATE TOTALS	5.59	5.36	5.73	5.62	5.65	5.46	4.80	5.37	4.94	5.69	5.79	5.45

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	733	27,611	26,083	0.94	10.37	12.04
Cache	502	18,500	15,021	0.81	6.95	6.93
Davis	675	27,902	17,655	0.63	10.48	8.15
Morgan	30	1,266	757	0.60	0.48	0.35
Rich	0	0	0	0.00	0.00	0.00
Summit	0	0	0	0.00	0.00	0.00
Weber	787	33,070	23,492	0.71	12.42	10.84
REGIONAL TOTALS	2,727	108,349	83,008	0.77	40.70	38.31
<u>Central Region</u>						
Juab	135	3,988	3,479	0.87	1.50	1.61
Salt Lake	672	25,021	15,472	0.62	9.40	7.14
Sanpete	352	13,915	14,890	1.07	5.23	6.87
Tooele	175	6,331	3,683	0.58	2.38	1.70
Utah	1,343	46,548	38,295	0.82	17.48	17.67
Wasatch	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	2,677	95,803	75,819	0.79	35.99	34.99
<u>Southern Region</u>						
Beaver	35	1,063	597	0.56	0.40	0.28
Garfield	11	393	190	0.48	0.15	0.09
Iron	49	1,732	1,135	0.66	0.65	0.52
Kane	0	0	0	0.00	0.00	0.00
Millard	322	11,411	11,833	1.04	4.29	5.46
Piute	13	291	277	0.95	0.11	0.13
Sevier	311	12,314	12,401	1.01	4.62	5.72
Washington	84	3,551	2,140	0.60	1.33	0.99
Wayne	8	262	306	1.17	0.10	0.14
REGIONAL TOTALS	833	31,017	28,879	0.93	11.65	13.33
<u>Northeastern Region</u>						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	256	10,101	11,368	1.13	3.79	5.25
Uintah	270	11,935	11,353	0.95	4.48	5.24
REGIONAL TOTALS	526	22,036	22,721	1.03	8.28	10.49
<u>Southeastern Region</u>						
Carbon	82	2,795	1,848	0.66	1.05	0.85
Emery	148	5,080	3,595	0.71	1.91	1.66
Grand	6	160	73	0.45	0.06	0.03
San Juan	4	175	58	0.33	0.07	0.03
REGIONAL TOTALS	240	8,210	5,574	0.58	3.09	2.57
Unknown counties	21	830	699	0.84	0.32	0.31
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	7,024	266,245	216,700	0.81	100	100

\*Total hunter-trips from questionnaire returns.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>								
Box Elder	0.85	0.85	0.69	0.83	0.76	0.96	1.01	0.94
Cache	0.85	0.87	0.70	0.79	0.82	0.88	0.99	0.81
Davis	0.54	0.50	0.47	0.52	0.54	0.68	0.69	0.63
Morgan	0.54	0.63	0.30	0.24	0.87	0.73	0.78	0.60
Rich	0.38	0.00	1.00	0.56	0.00	0.33	1.86	0.00
Summit	1.00	0.33	0.69	0.50	0.00	0.00	0.40	0.00
Weber	0.69	0.63	0.52	0.59	0.66	0.76	0.70	0.71
REGIONAL TOTALS	0.75	0.72	0.59	0.66	0.68	0.81	0.83	0.77
<u>Central Region</u>								
Juab	0.52	0.43	0.39	0.38	0.59	0.68	0.79	0.87
Salt Lake	0.55	0.61	0.44	0.47	0.56	0.60	0.72	0.62
Sanpete	0.91	0.81	0.89	0.80	0.78	0.79	0.91	1.07
Tooele	0.46	0.48	0.37	0.47	0.71	0.55	0.81	0.58
Utah	0.75	0.67	0.61	0.58	0.73	0.78	0.83	0.82
Wasatch	0.25	0.00	0.00	0.22	0.54	0.50	2.00	0.00
REGIONAL TOTALS	0.68	0.65	0.56	0.56	0.68	0.71	0.81	0.79
<u>Southern Region</u>								
Beaver	0.70	0.53	0.58	0.58	0.70	0.74	0.97	0.56
Garfield	0.50	0.88	0.44	0.21	0.27	0.88	0.97	0.48
Iron	0.63	0.45	0.55	0.43	0.38	0.59	0.83	0.66
Kane	--	--	--	0.33	1.00	0.00	0.00	0.00
Millard	0.81	0.86	0.65	0.73	0.71	0.79	1.06	1.04
Piute	0.39	0.77	0.88	0.40	0.73	0.56	0.97	0.95
Sevier	0.84	0.73	0.70	0.56	0.73	0.76	0.82	1.01
Washington	0.49	0.36	0.38	0.39	0.97	0.46	0.70	0.60
Wayne	0.00	1.57	1.09	0.00	0.71	0.40	1.00	1.17
REGIONAL TOTALS	0.74	0.70	0.63	0.58	0.72	0.72	0.91	0.93
<u>Northeastern Region</u>								
Daggett	1.00	0.50	0.50	2.25	1.40	0.00	1.00	0.00
Duchesne	1.09	1.15	0.83	0.76	1.08	1.09	1.41	1.13
Uintah	0.82	0.92	0.70	0.74	1.12	1.11	1.05	0.95
REGIONAL TOTALS	0.93	1.03	0.76	0.76	1.10	1.10	1.20	1.03
<u>Southeastern Region</u>								
Carbon	0.45	0.52	0.25	0.34	0.54	0.50	0.86	0.66
Emery	0.92	0.60	0.46	0.53	0.67	0.55	0.65	0.71
Grand	0.20	0.30	0.00	0.31	0.42	0.75	0.73	0.45
San Juan	--	1.08	0.94	0.31	0.56	0.33	0.57	0.33
REGIONAL TOTALS	0.73	0.57	0.42	0.46	0.61	0.54	0.72	0.68
Unknown counties	0.75	0.75	0.63	0.83	0.74	0.70	0.85	0.84
Mixed counties	0.00	0.75	1.95	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.73	0.70	0.59	0.61	0.71	0.78	0.86	0.81

Table 11. Percentage distribution of pheasant harvest by region and county, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>								
Box Elder	16.87	12.86	11.64	13.05	10.10	11.45	11.06	12.04
Cache	12.07	11.31	11.76	8.75	9.13	8.28	8.55	6.93
Davis	6.81	5.70	8.27	8.73	7.99	8.97	8.47	8.15
Morgan	0.37	0.38	0.24	0.09	0.27	0.24	0.25	0.35
Rich	0.03	0.00	0.05	0.06	0.00	0.01	0.24	0.00
Summit	0.02	0.04	0.10	0.01	0.00	0.00	0.04	0.00
Weber	9.21	8.31	10.26	13.21	13.40	12.17	10.11	10.84
REGIONAL TOTALS	45.39	38.60	42.31	43.91	40.89	41.12	38.71	38.31
<u>Central Region</u>								
Juab	1.31	0.87	0.96	0.69	1.25	1.03	1.24	1.61
Salt Lake	6.33	7.80	8.12	8.73	7.65	7.51	8.19	7.14
Sanpete	4.90	6.88	6.56	6.03	5.59	4.68	4.44	6.87
Tooele	1.46	1.87	1.72	1.80	3.00	1.77	2.22	1.70
Utah	14.51	15.84	14.27	14.70	14.35	17.08	18.83	17.67
Wasatch	0.01	0.00	0.00	0.02	0.09	0.01	0.07	0.00
REGIONAL TOTALS	28.52	33.26	31.65	31.97	31.94	32.08	35.00	34.99
<u>Southern Region</u>								
Beaver	0.79	0.82	0.64	0.34	1.23	0.65	0.51	0.28
Garfield	0.07	0.07	0.05	0.05	0.04	0.07	0.26	0.09
Iron	1.41	1.06	0.77	0.98	0.55	0.48	0.92	0.52
Kane	--	--	--	0.03	0.01	0.00	0.00	0.00
Millard	5.05	6.01	5.32	5.23	3.71	4.02	4.69	5.46
Piute	0.08	0.35	0.17	0.07	0.25	0.10	0.30	0.13
Sevier	4.25	4.06	5.39	4.62	4.47	4.24	3.99	5.72
Washington	0.93	0.74	0.89	1.06	2.28	0.73	0.78	0.99
Wayne	0.00	0.32	0.14	0.00	0.13	0.04	0.09	0.14
REGIONAL TOTALS	12.59	13.42	13.36	12.38	12.68	10.34	11.53	13.33
<u>Northeastern Region</u>								
Daggett	0.01	0.02	0.02	0.10	0.09	0.00	0.07	0.00
Duchesne	3.30	4.45	3.97	2.86	4.00	5.85	5.61	5.25
Uintah	3.95	4.24	4.24	4.24	4.39	5.27	5.63	5.24
REGIONAL TOTALS	7.27	8.71	8.24	8.24	8.49	11.12	11.31	10.49
<u>Southeastern Region</u>								
Carbon	1.05	1.51	0.36	0.87	0.95	0.79	1.04	0.85
Emery	3.62	2.32	1.86	2.69	2.34	1.80	1.43	1.56
Grand	0.04	0.03	0.00	0.05	0.11	0.06	0.10	0.03
San Juan	--	0.13	0.17	0.05	0.07	0.02	0.04	0.03
REGIONAL TOTALS	4.71	3.99	2.39	3.65	3.46	2.68	2.61	2.57
Unknown counties	1.52	1.99	1.59	1.04	2.55	2.68	0.84	0.31
Mixed counties	0.00	0.03	0.47	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100



Table 12. Percentage distribution of pheasant hunting pressure by county hunted, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>								
Box Elder	14.61	10.71	9.95	9.61	9.39	9.22	9.37	10.37
Cache	10.42	9.21	9.92	6.75	7.90	7.25	7.42	6.95
Davis	9.28	8.05	10.34	10.24	10.54	10.24	10.52	10.48
Morgan	0.50	0.42	0.46	0.23	0.22	0.26	0.28	0.48
Rich	0.06	0.01	0.03	0.06	0.02	0.02	0.11	0.00
Summit	0.01	0.08	0.09	0.01	0.01	0.01	0.08	0.00
Weber	9.76	9.24	11.64	13.70	14.28	12.35	12.30	12.42
<b>REGIONAL TOTALS</b>	<b>44.64</b>	<b>37.72</b>	<b>42.43</b>	<b>40.60</b>	<b>42.35</b>	<b>39.35</b>	<b>40.07</b>	<b>40.70</b>
<u>Central Region</u>								
Juab	1.84	1.44	1.48	1.12	1.49	1.17	1.35	1.50
Salt Lake	8.46	8.99	11.06	11.37	9.70	9.70	9.71	9.40
Sanpete	3.95	6.00	4.39	4.62	5.08	4.60	4.18	5.23
Tooele	2.31	2.72	2.74	2.33	2.98	2.50	2.34	2.38
Utah	14.27	16.68	13.87	15.42	13.95	16.95	19.43	17.48
Wasatch	0.03	0.03	0.01	0.06	0.12	0.02	0.03	0.00
<b>REGIONAL TOTALS</b>	<b>30.86</b>	<b>35.85</b>	<b>33.54</b>	<b>34.92</b>	<b>33.32</b>	<b>34.93</b>	<b>37.03</b>	<b>35.99</b>
<u>Southern Region</u>								
Beaver	0.83	1.10	0.65	0.36	1.25	0.68	0.45	0.40
Garfield	0.10	0.05	0.06	0.13	0.10	0.06	0.23	0.15
Iron	1.66	1.66	0.83	1.40	1.01	0.62	0.95	0.65
Kane	--	--	--	0.06	0.01	0.00	0.00	0.00
Millard	4.60	4.95	4.89	4.42	3.67	3.95	3.80	4.29
Piute	0.16	0.32	0.11	0.10	0.25	0.14	0.26	0.11
Sevier	3.70	3.93	4.55	5.04	4.35	4.31	4.15	4.62
Washington	1.39	1.44	1.39	1.65	1.66	1.24	0.96	1.33
Wayne	0.07	0.14	0.07	0.01	0.13	0.08	0.08	0.10
<b>REGIONAL TOTALS</b>	<b>12.50</b>	<b>13.59</b>	<b>12.55</b>	<b>13.18</b>	<b>12.44</b>	<b>11.08</b>	<b>10.89</b>	<b>11.65</b>
<u>Northeastern Region</u>								
Daggett	0.01	0.03	0.03	0.03	0.05	0.00	0.06	0.00
Duchesne	2.22	2.72	2.83	2.29	2.63	4.15	3.41	3.79
Uintah	3.52	3.23	3.58	3.38	2.78	3.67	4.58	4.48
<b>REGIONAL TOTALS</b>	<b>5.76</b>	<b>5.98</b>	<b>6.43</b>	<b>5.70</b>	<b>5.45</b>	<b>7.82</b>	<b>8.05</b>	<b>8.28</b>
<u>Southeastern Region</u>								
Carbon	1.71	2.05	0.85	1.56	1.25	1.22	1.03	1.05
Emery	2.88	2.73	2.40	3.09	2.47	2.52	1.90	1.91
Grand	0.14	0.07	0.03	0.09	0.18	0.06	0.12	0.06
San Juan	--	0.08	0.11	0.09	0.09	0.05	0.05	0.07
<b>REGIONAL TOTALS</b>	<b>4.73</b>	<b>4.93</b>	<b>3.40</b>	<b>4.82</b>	<b>3.99</b>	<b>3.86</b>	<b>3.10</b>	<b>3.09</b>
Unknown counties	1.49	1.88	1.50	0.77	2.45	2.95	0.84	0.32
Mixed counties	0.03	0.03	0.14	0.00	0.00	0.01	0.01	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 13. Statewide summary of pheasant harvest statistics, 1948-1979.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Pheasants Per Hunter-day	Pheasants Per Hunter
1948	96,534	280,914	--	--	2.91
1949	88,369	263,340	189,453	1.39	2.98
1950	92,724	249,428	235,309	1.06	2.69
1951	76,576	246,575	171,233	1.44	3.22
1952	78,773	246,559	185,383	1.33	3.13
1953	82,595	245,307	176,480	1.39	2.97
1954	82,370	260,289	201,774	1.29	3.16
1955	78,793	196,195	178,359	1.10	2.49
1956	77,826	206,239	182,512	1.13	2.65
1957	83,025	228,319	170,387	1.34	2.75
1958	88,290	309,015	220,725	1.40	3.50
1959	86,268	243,276	202,730	1.21	2.82
1960	81,976	232,812	177,719	1.31	2.84
1961	83,493	238,439	243,305	0.98	2.86
1962	86,336	262,448	209,921	1.25	3.04
1963	87,647	297,873	198,582	1.50	3.40
1964	88,242	225,775	196,314	1.15	2.56
1965	77,409	211,876	186,215	1.14	2.74
1966	78,721	249,814	209,082	1.19	3.17
1967	85,664	284,000	257,033	1.10	3.32
1968	90,453	297,752	267,788	1.11	3.29
1969	90,573	250,241	277,887	0.90	2.76
1970	78,585	250,503	244,958	1.02	3.19
1971	87,878	259,189	294,618	0.88	2.95
1972	84,311	240,573	327,669	.73	2.85
1973	75,968	196,012	278,033	0.70	2.58
1974	85,252	167,408	282,294	0.59	1.96
1975	77,566	143,783	234,615	0.61	1.85
1976	74,029	151,476	214,023	0.71	2.05
1977	67,195	148,168	191,142	0.78	2.21
1978	83,800	220,398	257,305	0.86	2.63
1979	87,462	216,700	266,245	0.81	2.48
<hr/>					
TOTALS					
1948-79	2,664,703	7,520,696	6,929,093	1.09	2.82
<hr/>					
AVERAGES					
1948-78	83,271	235,022	216,534	1.10	2.83

Table 14. Pheasant field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Total Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs. Hunter	
<u>Northern Region</u>										
Box Elder	288	635	1,588	369	227	460	1,187	314	27	0.68
Cache	--	226	600	114	--	--	--	--	--	--
Davis	36	81	272	48	23	55	213	41	19	0.75
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>324</b>	<b>942</b>	<b>2,460</b>	<b>531</b>	<b>250</b>	<b>515</b>	<b>1,400</b>	<b>355</b>	<b>25</b>	<b>0.69</b>
<u>Central Region</u>										
Juab	14	35	87	21	10	23	57	14	24	0.61
Salt Lake	17	27	18	1	3	4	4	0	0	0.00
Sanpete	98	299	688	206	17	47	120	66	55	1.40
Tooele	60	104	261	65	4	4	5	8	160	2.00
Utah	334	868	1,869	425	61	141	376	128	34	0.91
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>523</b>	<b>1,333</b>	<b>2,923</b>	<b>718</b>	<b>95</b>	<b>219</b>	<b>562</b>	<b>216</b>	<b>38</b>	<b>0.99</b>
<u>Southern Region</u>										
Beaver	36	101	247	63	9	21	83	20	24	0.95
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	28	69	179	39	9	16	49	18	37	1.13
Kane	--	--	--	--	--	--	--	--	--	--
Millard	436	1,261	4,567	926	284	839	3,351	700	21	0.83
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	107	365	1,033	322	67	240	749	234	31	0.98
Washington	22	60	129	27	4	6	10	6	60	1.00
Wayne	4	12	18	6	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>633</b>	<b>1,868</b>	<b>6,173</b>	<b>1,383</b>	<b>373</b>	<b>1,122</b>	<b>4,242</b>	<b>978</b>	<b>23</b>	<b>0.87</b>
<u>Northeastern Region</u>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	185	448	3,282	516	147	463	2,930	451	15	0.97
Uintah	144	378	1,852	370	103	236	1,586	297	19	1.26
<b>REGIONAL TOTALS</b>	<b>329</b>	<b>826</b>	<b>5,134</b>	<b>886</b>	<b>250</b>	<b>699</b>	<b>4,516</b>	<b>748</b>	<b>17</b>	<b>1.07</b>
<u>Southeastern Region</u>										
Carbon	44	130	261	54	16	43	118	32	27	0.74
Emery	57	149	338	73	31	79	225	66	29	0.83
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	5	14	25	5	1	1	2	0	0	0.00
<b>REGIONAL TOTALS</b>	<b>106</b>	<b>293</b>	<b>624</b>	<b>132</b>	<b>48</b>	<b>123</b>	<b>345</b>	<b>98</b>	<b>28</b>	<b>0.79</b>
<b>STATE TOTALS</b>	<b>1,915</b>	<b>5,262</b>	<b>17,314</b>	<b>3,650</b>	<b>1,016</b>	<b>2,678</b>	<b>11,065</b>	<b>2,395</b>	<b>22</b>	<b>0.89</b>

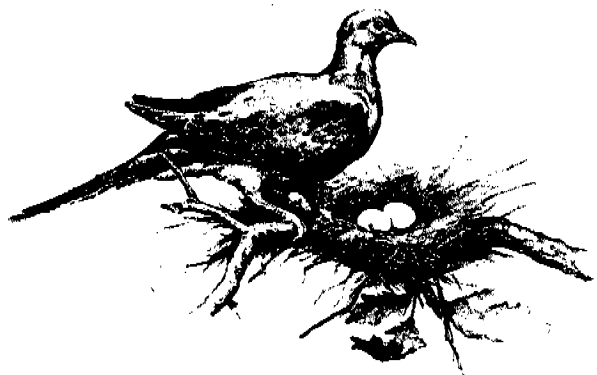
Table 15. Pheasant hunter success trend as determined by field bag check, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. hunter	Birds/ hunter
<u>Northern Region</u>												
Box Elder	13	0.43	18	0.52	24	0.74	18	0.54	24	0.62	27	0.68
Cache	16	0.61	15	0.61	13	0.46	17	0.63	17	0.62	--	--
Davis	11	0.55	8	0.28	14	0.51	9	0.25	19	0.54	19	0.75
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	14	0.54	8	0.38	10	0.35	13	0.75	16	1.25	--	--
REGIONAL TOTALS	14	0.47	12	0.48	17	0.60	16	0.51	21	0.61	25	0.69
<u>Central Region</u>												
Juab	5	0.10	16	0.28	7	0.11	27	0.67	82	0.75	24	0.61
Salt Lake	9	0.27	15	0.47	11	0.12	4	0.07	3	0.05	0	0.00
Sanpete	13	0.14	14	0.73	15	1.09	27	0.73	17	0.71	55	1.40
Tooele	10	1.67	13	0.34	27	0.53*	67	2.00	167	2.00	160	2.00
Utah	17	0.94	11	0.42	14	1.05	25	0.66	27	0.80	34	0.91
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	14	0.46	13	0.58	15	0.89	23	0.59	24	0.73	38	0.99
<u>Southern Region</u>												
Beaver	--	--	14	0.56	14	0.16*	43	0.67	12	0.33	24	0.95
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	18	0.44	39	0.37	--	--	17	0.67	43	1.25	37	1.13
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	14	0.79	12	0.70	13	0.44	10	0.37	19	0.62	21	0.83
Piute	20	1.00	--	--	--	--	--	--	25	0.50	--	--
Sevier	16	0.30	15	0.66	17	0.63	20	1.00	23	1.04	31	0.99
Washington	--	--	15	0.29	21	0.33	12	0.29	32	0.59	60	1.00
Wayne	--	--	17	0.35*	--	--	--	--	--	--	--	--
REGIONAL TOTALS	15	0.57	14	0.65	15	0.50	13	0.50	21	0.75	23	0.87
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	9	0.57	12	0.89	15	1.41	16	1.14	18	1.37	15	0.97
Uintah	10	0.59	13	0.71	18	1.27	15	1.01	20	1.48	19	1.26
REGIONAL TOTALS	9	0.58	12	0.81	16	1.34	16	1.10	19	1.41	17	1.07
<u>Southeastern Region</u>												
Carbon	3	0.40	14	0.54	9	0.24	11	0.25	18	0.41	27	0.74
Emery	12	0.42	10	0.41	18	0.44	21	0.75	10	0.72	29	0.83
Grand	--	--	--	--	19	1.00	--	--	--	--	--	--
San Juan	15	0.62	11	0.38	8	0.23	0	0.00	40	1.00	0	0.00
REGIONAL TOTALS	11	0.46	12	0.47	16	0.42	18	0.58	12	0.58	28	0.79
STATE TOTALS	12	0.51	13	0.63	16	0.85	16	0.66	20	0.88	22	0.89

\*Pheasants per hunter index based on all hunts.

# MIGRATORY UPLAND GAME BIRDS

## SUMMARY



### Mourning Doves

The breeding density index increased slightly in 1979 but was well below average.

Harvest statistics derived from the questionnaire showed decreased hunter pressure and harvest compared to 1978. The total harvest was the third highest ever recorded and was 19 percent above the 1969-1978 average. Hunter success decreased slightly.

Field bag checks indicated a slight increase in hunter success contrary to the questionnaire survey. The 1979 hunt was very good and comparable to the 1978 hunt.

Considerably more wings were collected for aging during 1979 than in 1978 and 1977. The juvenile per 100 adult ratio was relatively low, 91 compared to 75 in 1978, and a nine-year average of 124.

### Band-tailed Pigeons

Banding of band-tailed pigeons was discontinued in 1979, as a result of recommendations by the Four-Corners Band-tailed Pigeon Study Committee, to limit banding to specific research projects.

Hunter participation during the 1979 season remained at a low level with only 62 hunters afield. Total hunter-days and harvest decreased from 1978 and the average. Total harvest was 117 pigeons, compared to 264 in 1978.



## MOURNING DOVE

### Call-Count Survey

Results of the 1979 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 from those published in the annual Mourning Dove Status Report compiled by the Fish and Wildlife Service; however, indicated trends are similar (Figure 1). The following is a comparison of the results of the 1979 survey to 1978 and the average for the period 1964-78:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total doves heard per route	7.1	+ 3	-51
Total calls heard per route	28.1	+10	-54
Total doves seen per route	5.8	-25	-62

Coo count data indicated increased breeding activity in late May compared to 1978, but continued to be well below average.

### Harvest

#### Hunter Questionnaire

Information obtained from the hunter questionnaire for 1979 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 statewide harvest statistics in Table 7. The following is a comparison of the harvest statistics for 1979 compared to 1978 and the 10-year (1969-78) average:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Mourning dove hunters	34,903	-3	+16
Mourning dove harvest	351,161	-8	+19
Hunter-days afield	120,459	-7	+20
Mourning doves per hunter-day	2.92	-1	- 1
Mourning doves per hunter	10.06	-6	+ 3

Hunting pressure and harvest decreased from 1978. Hunter success also decreased slightly. The harvest was third highest on record.

Long-term harvest trends are depicted in Figure 2.

### Field Bag Checks

A summary of field bag check data for 1979 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1979 survey compared to 1978 and the average (1967-78) follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	4,422	+48	+203
Total hours hunted	16,800	+78	+263
Doves per hunter (complete hunts)	2.86	+ 8	- 19
Doves bagged per 100 hours	69	-16	- 29
Average hours per hunter-day (complete hunts)	4.1	+28	+ 17
Hours hunted per dove bagged	1.4	+ 8	+ 27

Field bag checks indicated an 8 percent increase in hunter success. However, the questionnaire results indicated a slight decrease in hunter success. The total number of hunters checked was up 48 percent as a result of increased effort. Dove hunters spent a greater amount of time afield per hunter-day than in 1978 and more time was spent per dove bagged, according to field bag check data.

### Age Composition of the Harvest

A summary of the age composition of harvested mourning doves from 1970 through 1979 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region are shown in Table 11.

Following is a comparison of data collected in 1979 to 1978 and long-term averages:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Sample size	5,330	+ 3	+96
Immatures/100 adults	91	+21	-27
Percent of immatures hatched on:			
August 3 or later	45.6	-14	+18
July 25 or later	82.6	- 8	+ 4
Before July 25	17.4	+78	-14

More wings were collected for aging during the 1979 season compared to 1978 and 1977. The 91 immatures per 100 adults ratio was the second lowest recorded and indicated an early hatch and subsequent early migration of newly hatched young. Wing analysis substantiated earlier hatching for 1979 compared with 1978.

### Banding

A banding moratorium was declared for the Western Management Unit beginning in 1976 to facilitate a complete analysis of past accumulated banding data.

A summary of banding accomplished by county and region through 1975 is contained in Table 12, a summary of statewide recovery rates through 1975 in Table 13 and a summary of recovery and return locations through 1975 in Table 14.

A summary of doves recovered in Utah that were banded in other states through 1975 is found in Table 15.

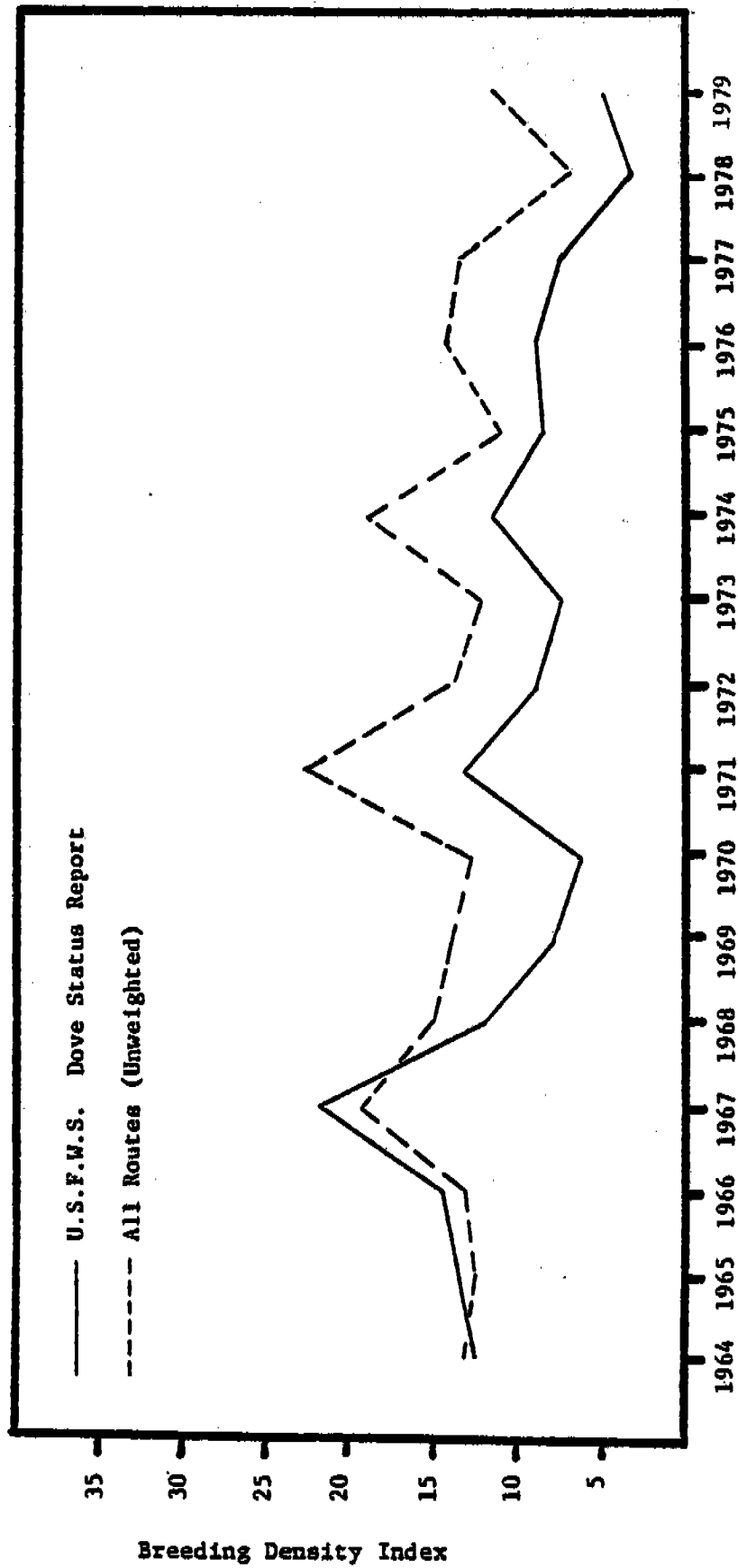


Figure 1. Mourning dove breeding density index trend, 1964-79



Doves bagged per hunter and per hunter-day.

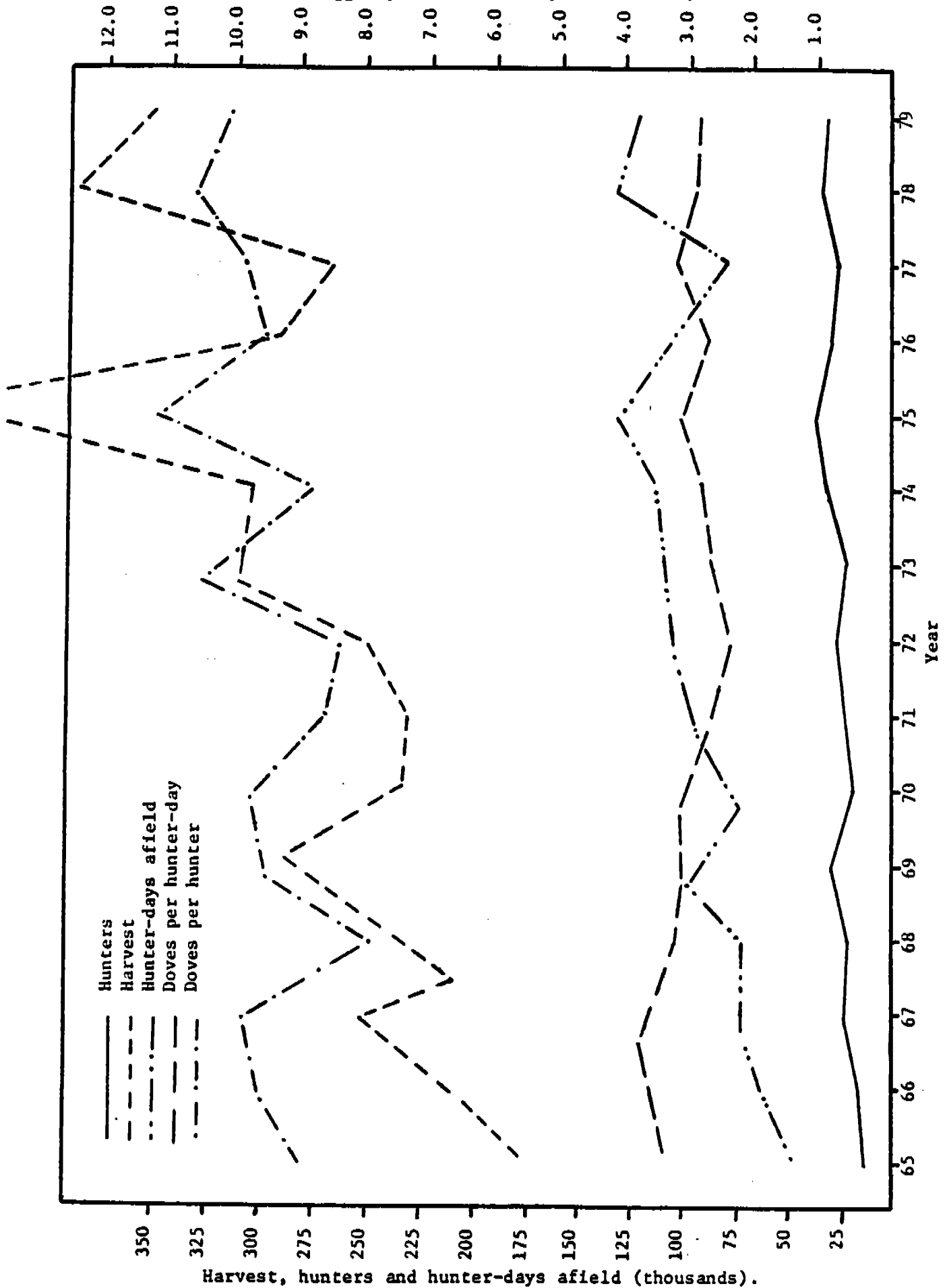


Figure 2. Statewide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call-count survey for 1979.

Region and County	Route Number	Total Doves Heard Per Route	Total Calls Heard Per Route	Total Doves Seen Per Route
<b>Northern Region</b>				
Summit	R1020	6	23	2
Box Elder	R1500	9	9	26
<b>REGIONAL TOTALS</b>		15	32	28
<b>Central Region</b>				
Juab	R2830	15	37	2
<b>REGIONAL TOTALS</b>		15	37	2
<b>Southern Region</b>				
Sevier-Sanpete	R0370	0	0	3
Wayne-Sevier	R0660	2	4	2
Garfield	R1090	0	0	0
Millard	R3640	4	4	4
Beaver	R3820	5	25	5
Iron	R4000	14	66	2
Washington	R4310	4	21	0
<b>REGIONAL TOTALS</b>		29	120	16
<b>Northeastern Region</b>				
Duchesne	R0080	2	2	4
Uintah	R0220	---	83	11
<b>REGIONAL TOTALS</b>		2	85	15
<b>Southeastern Region</b>				
Emery	R0540	9	26	3
San Juan	R1170	28	109	19
San Juan	R1450	1	12	4
<b>REGIONAL TOTALS</b>		38	147	26
<b>STATE TOTALS</b>		99	421	87
<b>STATE AVERAGE</b>		7.1	28.1	5.8
<b>PERCENT CHANGE (from previous year)</b>		+ 2.9	+10.2	-24.7

\*Unable to determine.

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, 1969-79.

Region and County	Route Number	Number of Doves Heard Per Route										
		1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>												
Summit	R1020	7	11	10	7	3	3	3	11	10	5	6
Box Elder	R1500	3	7	4	2	5	3	5	1	4	2	9
<b>REGIONAL TOTALS</b>		10	18	14	9	8	6	8	12	14	7	15
<b>Central Region</b>												
Juab	R2830	8	15	32	6	17	16	13	28	25	31	15
<b>REGIONAL TOTALS</b>		8	15	32	6	17	16	13	28	25	31	15
<b>Southern Region</b>												
Sevier-Sanpete	R0370	0	1	1	0	0	0	0	0	2	0	0
Wayne-Sevier	R0660	2	8	11	20	11	16	7	5	8	1	2
Garfield	R1090	18	6	14	29	0	0	0	3	1	0	0
Millard	R3640	26	7	17	19	24	22	21	6	29	8	4
Beaver	R3820	9	17	12	13	6	24	0	0	0	0	5
Iron	R4000	26	15	24	20	35	103	42	45	27	12	14
Washington	R4310	38	54	64	61	26	32	37	19	15	1	4
<b>REGIONAL TOTALS</b>		119	108	143	162	102	197	107	78	82	22	29
<b>Northeastern Region</b>												
Duchesne	R0080	10	3	16	8	3	14	9	11	14	2	2
Uintah	R0220	38	15	66	4	18	12	7	27	7	4	--
<b>REGIONAL TOTALS</b>		48	18	82	12	21	26	16	38	21	6	2
<b>Southeastern Region</b>												
Emery	R0540	11	9	10	1	27	4	6	14	4	10	9
San Juan	R1170	18	33	60	24	17	41	32	51	67	24	28
San Juan	R1450	Automatic Zero										
<b>REGIONAL TOTALS</b>		29	42	70	25	44	45	38	67	72	37	38
<b>STATE TOTALS</b>		214	201	341	214	192	290	182	223	214	103	99
<b>STATE AVERAGES</b>		14.3	13.4	22.7	14.3	12.8	19.3	12.1	14.9	14.3	6.9	7.1
<b>PERCENT CHANGE</b> (from previous year)		-6	-6	+69	-37	-10	+51	-37	+23	-4	-52	+3

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<b>Northern Region</b>						
Box Elder	258	9,344	35,151	3.76	7.76	10.01
Cache	92	4,265	10,538	2.47	3.54	3.00
Davis	99	6,273	8,398	1.34	5.21	2.39
Morgan	47	1,149	3,610	3.14	0.95	1.03
Rich	14	451	771	1.71	0.37	0.22
Summit	5	203	684	3.36	0.17	0.19
Weber	142	6,943	13,274	1.91	5.76	3.78
<b>REGIONAL TOTALS</b>	<b>657</b>	<b>28,628</b>	<b>72,427</b>	<b>2.53</b>	<b>23.77</b>	<b>20.63</b>
<b>Central Region</b>						
Juab	247	7,656	33,535	4.38	6.36	9.55
Salt Lake	261	14,453	32,982	2.28	12.00	9.39
Sanpete	100	5,851	15,253	2.61	4.86	4.34
Tooele	200	7,729	19,562	2.53	6.42	5.57
Utah	490	20,115	44,714	2.22	16.70	12.73
Wasatch	14	859	2,227	2.59	0.71	0.63
<b>REGIONAL TOTALS</b>	<b>1,312</b>	<b>56,663</b>	<b>148,273</b>	<b>2.62</b>	<b>47.04</b>	<b>42.22</b>
<b>Southern Region</b>						
Beaver	29	1,150	5,677	4.94	0.95	1.62
Garfield	17	859	3,915	4.56	0.71	1.11
Iron	41	2,023	9,141	4.52	1.68	2.60
Kane	14	670	2,795	4.17	0.56	0.80
Millard	163	7,743	38,062	4.92	6.43	10.84
Piute	15	728	1,587	2.18	0.60	0.45
Sevier	108	6,317	18,369	2.91	5.24	5.23
Washington	44	2,649	8,617	3.25	2.20	2.45
Wayne	16	728	4,396	6.04	0.60	1.25
<b>REGIONAL TOTALS</b>	<b>447</b>	<b>22,867</b>	<b>92,559</b>	<b>4.05</b>	<b>18.98</b>	<b>26.36</b>
<b>Northeastern Region</b>						
Daggett	11	277	771	2.79	0.23	0.22
Duchesne	34	1,863	5,837	3.13	1.55	1.66
Uintah	66	3,304	9,796	2.96	2.74	2.79
<b>REGIONAL TOTALS</b>	<b>111</b>	<b>5,444</b>	<b>16,404</b>	<b>3.01</b>	<b>4.52</b>	<b>4.67</b>
<b>Southeastern Region</b>						
Carbon	48	2,198	6,899	3.14	1.82	1.96
Emery	53	2,664	6,754	2.54	2.21	1.92
Grand	18	859	3,159	3.68	0.71	0.90
San Juan	21	975	3,872	3.97	0.81	1.10
<b>REGIONAL TOTALS</b>	<b>140</b>	<b>6,696</b>	<b>20,684</b>	<b>3.09</b>	<b>5.56</b>	<b>5.89</b>
Unknown counties	4	160	815	5.09	0.13	0.23
Mixed counties	0	0	0	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>2,671</b>	<b>120,458</b>	<b>351,162</b>	<b>2.92</b>	<b>100</b>	<b>100</b>

\*Total hunter-trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>								
Box Elder	3.16	4.25	3.34	4.74	3.55	3.92	3.60	3.76
Cache	2.23	2.29	1.92	2.62	2.26	2.84	1.98	2.47
Davis	1.30	1.43	1.30	1.70	1.54	1.81	1.49	1.34
Morgan	2.11	3.42	3.09	3.14	2.58	3.87	2.10	3.14
Rich	3.08	1.30	1.97	2.89	1.53	0.82	4.19	1.71
Summit	2.03	2.65	2.21	2.73	1.52	5.69	1.86	3.36
Weber	1.67	1.36	1.53	1.78	1.67	1.97	1.66	1.91
<b>REGIONAL TOTALS</b>	<b>2.23</b>	<b>2.53</b>	<b>2.14</b>	<b>2.89</b>	<b>2.39</b>	<b>2.91</b>	<b>2.38</b>	<b>2.53</b>
<b>Central Region</b>								
Juab	3.83	5.38	3.62	5.30	4.11	5.07	4.46	4.38
Salt Lake	1.81	2.36	1.88	2.35	2.16	2.58	2.13	2.28
Sanpete	2.04	2.50	3.65	2.65	3.15	4.16	2.73	2.61
Tooele	2.38	2.58	2.80	3.70	3.53	3.26	3.19	2.53
Utah	2.24	2.78	2.66	2.50	2.30	2.92	2.39	2.22
Wasatch	1.48	2.12	2.00	3.12	1.83	2.50	2.89	2.59
<b>REGIONAL TOTALS</b>	<b>2.31</b>	<b>2.90</b>	<b>2.70</b>	<b>2.98</b>	<b>2.71</b>	<b>3.20</b>	<b>2.73</b>	<b>2.62</b>
<b>Southern Region</b>								
Beaver	4.71	4.31	2.94	5.37	2.87	5.27	5.67	4.94
Garfield	4.93	6.03	1.79	5.35	2.44	1.04	1.70	4.56
Iron	3.35	3.96	4.65	4.09	4.45	4.00	4.48	4.52
Kane	2.60	4.98	2.83	4.92	3.52	3.05	5.08	4.17
Millard	3.84	4.63	5.14	4.73	3.78	4.62	5.13	4.92
Piute	3.54	2.00	2.00	3.30	2.59	3.10	2.60	2.18
Sevier	2.44	3.22	2.83	3.67	2.47	3.66	2.52	2.91
Washington	3.33	3.92	3.85	5.05	2.70	4.84	3.90	3.25
Wayne	2.50	6.74	2.83	4.10	4.93	6.40	3.64	6.04
<b>REGIONAL TOTALS</b>	<b>3.42</b>	<b>4.15</b>	<b>3.82</b>	<b>4.36</b>	<b>3.25</b>	<b>4.23</b>	<b>3.88</b>	<b>4.05</b>
<b>Northeastern Region</b>								
Daggett	2.70	0.82	2.12	4.63	5.00	3.44	3.40	2.79
Duchesne	4.91	4.73	2.80	3.55	4.76	2.65	3.43	3.13
Uintah	1.58	2.97	1.78	3.03	2.27	3.10	2.70	2.96
<b>REGIONAL TOTALS</b>	<b>2.39</b>	<b>3.04</b>	<b>2.05</b>	<b>3.21</b>	<b>3.01</b>	<b>2.94</b>	<b>3.01</b>	<b>3.01</b>
<b>Southeastern Region</b>								
Carbon	2.95	3.65	2.55	2.87	2.31	2.25	2.85	3.14
Emery	2.68	2.66	1.86	1.93	2.86	2.88	3.00	2.54
Grand	3.14	3.84	3.62	3.68	1.94	1.26	4.00	3.68
San Juan	3.94	4.36	4.22	3.21	2.24	3.88	4.09	3.97
<b>REGIONAL TOTALS</b>	<b>3.15</b>	<b>3.61</b>	<b>2.49</b>	<b>2.73</b>	<b>2.41</b>	<b>2.61</b>	<b>3.40</b>	<b>3.09</b>
Unknown counties	2.90	2.58	3.55	4.18	3.45	2.13	3.46	5.09
Mixed counties	10.00	0.00	3.00	--	--	10.00	2.00	0.00
<b>STATE TOTALS</b>	<b>2.53</b>	<b>3.14</b>	<b>2.71</b>	<b>3.20</b>	<b>2.74</b>	<b>3.21</b>	<b>2.95</b>	<b>2.92</b>

Table 5. Percentage distribution of mourning dove harvest by region and county, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>								
Box Elder	10.11	7.85	9.09	9.86	9.82	8.44	8.10	10.01
Cache	4.08	3.29	3.68	3.50	4.19	2.64	2.71	3.00
Davis	1.69	1.80	2.62	1.68	2.16	1.81	1.61	2.39
Morgan	1.24	1.27	1.57	1.02	0.96	1.55	0.65	1.03
Rich	0.38	0.08	0.47	0.30	0.33	0.08	0.59	0.22
Summit	0.75	0.61	0.40	0.35	0.41	1.16	0.36	0.19
Weber	5.05	2.03	4.00	3.74	3.39	3.72	3.07	3.78
<b>REGIONAL TOTALS</b>	<b>23.31</b>	<b>16.93</b>	<b>21.83</b>	<b>20.43</b>	<b>21.26</b>	<b>19.40</b>	<b>17.08</b>	<b>20.63</b>
<b>Central Region</b>								
Juab	8.16	8.58	8.30	9.64	6.98	7.62	8.88	9.55
Salt Lake	8.83	7.95	6.51	8.02	7.67	8.49	7.16	9.39
Sanpete	2.13	2.51	3.61	2.10	5.31	3.31	3.87	4.34
Tooele	5.99	6.07	5.06	6.83	8.39	7.15	6.18	5.57
Utah	16.48	14.30	19.26	16.31	16.70	16.40	16.20	12.73
Wasatch	0.38	1.11	0.53	0.83	0.37	0.56	0.66	0.63
<b>REGIONAL TOTALS</b>	<b>41.97</b>	<b>40.52</b>	<b>43.26</b>	<b>43.73</b>	<b>45.42</b>	<b>43.54</b>	<b>42.95</b>	<b>42.22</b>
<b>Southern Region</b>								
Beaver	3.45	2.26	1.15	2.03	2.00	2.55	1.68	1.62
Garfield	0.70	1.08	0.52	0.64	0.30	0.15	0.65	1.11
Iron	3.09	5.63	3.87	3.96	4.40	3.97	4.20	2.60
Kane	0.12	1.35	0.51	0.49	1.10	0.38	0.98	0.80
Millard	4.70	8.04	8.68	5.30	5.92	7.27	9.28	10.84
Piute	0.87	0.31	0.22	0.42	1.10	0.37	0.81	0.45
Sevier	3.71	3.26	4.57	6.07	4.01	4.83	4.26	5.23
Washington	4.02	3.63	3.87	4.31	2.38	3.82	2.91	2.45
Wayne	0.09	0.79	0.11	0.66	1.00	0.36	0.86	1.25
<b>REGIONAL TOTALS</b>	<b>20.76</b>	<b>26.37</b>	<b>23.48</b>	<b>23.89</b>	<b>22.21</b>	<b>23.70</b>	<b>25.63</b>	<b>26.36</b>
<b>Northeastern Region</b>								
Daggett	0.26	0.20	0.11	0.34	0.03	0.35	0.09	0.22
Duchesne	1.54	1.61	1.06	1.00	1.58	1.51	2.31	1.66
Uintah	1.59	1.85	1.87	3.35	1.81	2.18	2.61	2.79
<b>REGIONAL TOTALS</b>	<b>3.38</b>	<b>3.66</b>	<b>3.03</b>	<b>4.69</b>	<b>3.43</b>	<b>4.04</b>	<b>5.01</b>	<b>4.67</b>
<b>Southeastern Region</b>								
Carbon	2.75	3.47	1.56	2.22	1.50	2.03	1.75	1.96
Emery	1.20	2.02	2.12	1.60	1.74	1.84	2.38	1.92
Grand	1.73	2.51	0.65	1.12	0.62	0.33	2.32	0.90
San Juan	1.95	3.18	1.20	1.70	0.74	1.51	1.90	1.10
<b>REGIONAL TOTALS</b>	<b>7.62</b>	<b>11.18</b>	<b>5.54</b>	<b>6.64</b>	<b>4.61</b>	<b>5.70</b>	<b>8.35</b>	<b>5.89</b>
Unknown counties	2.48	1.34	2.66	0.61	3.08	3.51	0.94	0.23
Mixed counties	0.47	0.00	0.19	--	--	0.11	0.05	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1972-79.

Region and County	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>								
Box Elder	8.11	5.80	7.37	6.65	7.58	6.92	6.63	7.76
Cache	4.65	4.50	5.20	4.28	5.09	2.99	4.03	3.54
Davis	3.30	3.96	5.46	3.17	3.85	3.22	3.18	5.21
Morgan	1.49	1.16	1.38	1.04	1.02	1.29	0.91	0.95
Rich	0.31	0.19	0.64	0.33	0.59	0.31	0.42	0.37
Summit	0.94	0.72	0.49	0.41	0.74	0.65	0.57	0.17
Weber	7.68	4.70	7.10	6.73	5.58	6.07	5.44	5.76
<b>REGIONAL TOTALS</b>	<b>26.48</b>	<b>21.03</b>	<b>27.63</b>	<b>22.60</b>	<b>24.46</b>	<b>21.45</b>	<b>21.17</b>	<b>23.77</b>
<b>Central Region</b>								
Juab	5.39	5.01	6.20	5.82	4.66	4.84	5.87	6.36
Salt Lake	12.37	10.59	9.38	10.91	9.76	10.58	9.92	12.00
Sanpete	2.65	3.16	2.67	2.53	4.63	2.55	4.18	4.86
Tooele	6.38	7.37	4.89	5.90	6.52	7.05	5.70	6.42
Utah	18.66	16.12	19.61	20.89	19.88	18.02	20.00	16.70
Wasatch	0.65	1.65	0.72	0.85	0.56	0.72	0.68	0.71
<b>REGIONAL TOTALS</b>	<b>46.10</b>	<b>43.91</b>	<b>43.48</b>	<b>46.90</b>	<b>46.01</b>	<b>43.76</b>	<b>46.36</b>	<b>47.04</b>
<b>Southern Region</b>								
Beaver	1.86	1.65	1.06	1.21	1.91	1.56	0.88	0.95
Garfield	0.36	0.56	0.79	0.38	0.33	0.47	1.12	0.71
Iron	2.34	4.46	2.25	3.10	2.71	3.19	2.77	1.68
Kane	0.12	0.85	0.49	0.32	0.85	0.40	0.57	0.56
Millard	3.11	5.45	4.57	3.59	4.29	5.05	5.34	6.43
Piute	0.63	0.49	0.30	0.41	1.17	0.38	0.92	0.60
Sevier	3.85	3.18	4.37	5.29	4.46	4.24	4.98	5.24
Washington	3.06	2.91	2.72	2.73	2.42	2.54	2.20	2.20
Wayne	0.10	0.37	0.10	0.52	0.56	0.18	0.69	0.60
<b>REGIONAL TOTALS</b>	<b>15.41</b>	<b>19.93</b>	<b>16.66</b>	<b>17.56</b>	<b>18.71</b>	<b>18.00</b>	<b>19.46</b>	<b>18.98</b>
<b>Northeastern Region</b>								
Daggett	0.24	0.76	0.13	0.23	0.02	0.33	0.08	0.23
Duchesne	0.79	1.07	1.03	0.90	0.91	1.83	1.98	1.55
Uintah	2.55	1.96	2.84	3.54	2.19	2.26	2.84	2.74
<b>REGIONAL TOTALS</b>	<b>3.59</b>	<b>3.78</b>	<b>4.00</b>	<b>4.67</b>	<b>3.12</b>	<b>4.22</b>	<b>4.90</b>	<b>4.52</b>
<b>Southeastern Region</b>								
Carbon	2.36	2.99	1.66	2.47	1.78	2.90	1.81	1.82
Emery	1.13	2.39	3.09	2.65	1.67	2.05	2.34	2.21
Grand	1.40	2.06	0.49	0.98	0.87	0.83	1.71	0.71
San Juan	1.25	2.29	0.77	1.69	0.91	1.25	1.37	0.81
<b>REGIONAL TOTALS</b>	<b>6.14</b>	<b>9.72</b>	<b>6.02</b>	<b>7.79</b>	<b>5.24</b>	<b>7.03</b>	<b>7.23</b>	<b>5.56</b>
Unknown counties	2.17	1.63	2.03	0.47	2.45	5.31	0.80	0.13
Mixed counties	0.12	0.00	0.17	--	--	0.04	0.08	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 7. Statewide summary of mourning dove harvest statistics, 1951-79.

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
1973	27,435	307,062	97,788	3.14	11.19
1974	34,021	306,076	112,967	2.71	9.00
1975	37,378	420,308	131,312	3.20	11.24
1976	31,293	298,505	108,780	2.74	9.54
1977	26,905	267,487	83,218	3.21	9.94
1978	35,985	383,696	130,173	2.95	10.66
1979	34,903	351,161	120,459	2.92	10.06
<hr/>					
TOTALS					
1951-79	591,221	5,577,594	1,721,980	3.25	9.41
<hr/>					
AVERAGES					
1951-78	19,869	186,658	57,197	3.26	9.39

\*Estimated.



Table 8. Mourning dove field bag check summary, 1979.

Region and County	ALL HUNTS					COMPLETE HUNTS				
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Total Complete Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Birds/Hunter
<b>Northern Region</b>										
Box Elder	159	418	1,644	1,557	95	139	1,416	1,389	98	3.74
Cache	--	--	--	--	--	--	--	--	--	--
Davis	29	54	119	79	66	16	74	59	80	1.78
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	9	20	55	43	79	9	55	43	80	2.15
Summit	--	--	--	--	--	--	--	--	--	--
Weber	13	29	69	40	58	2	23	15	67	3.00
<b>REGIONAL TOTALS</b>	<b>210</b>	<b>521</b>	<b>1,887</b>	<b>1,719</b>	<b>91</b>	<b>166</b>	<b>1,568</b>	<b>1,506</b>	<b>96</b>	<b>3.51</b>
<b>Central Region</b>										
Juab	20	59	128	175	137	1	14	59	421	9.83
Salt Lake	39	72	88	21	24	28	73	17	23	0.38
Sanpete	24	97	178	187	105	4	47	38	81	2.23
Tooele	36	91	202	147	73	1	18	42	233	7.00
Utah	1,004	2,181	8,192	3,737	46	807	6,960	3,296	47	1.84
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1,123</b>	<b>2,500</b>	<b>8,788</b>	<b>4,267</b>	<b>49</b>	<b>841</b>	<b>7,112</b>	<b>3,452</b>	<b>49</b>	<b>1.85</b>
<b>Southern Region</b>										
Beaver	12	35	100	179	179	1	12	19	158	4.75
Garfield	6	12	30	61	20	5	30	59	196	5.36
Iron	24	58	89	205	230	5	19	61	321	6.77
Kane	18	42	88	211	240	7	49	162	331	9.53
Millard	45	130	556	579	104	22	373	364	98	5.60
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	4	16	70	87	124	1	4	20	500	10.00
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>109</b>	<b>293</b>	<b>933</b>	<b>1,322</b>	<b>142</b>	<b>41</b>	<b>487</b>	<b>685</b>	<b>141</b>	<b>6.34</b>
<b>Northeastern Region</b>										
Daggett	18	36	56	65	116	10	16	36	225	2.12
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	9	25	46	38	83	3	16	14	87	1.75
<b>REGIONAL TOTALS</b>	<b>27</b>	<b>61</b>	<b>102</b>	<b>103</b>	<b>101</b>	<b>13</b>	<b>32</b>	<b>50</b>	<b>156</b>	<b>2.00</b>
<b>Southeastern Region</b>										
Carbon	9	23	55	38	69	6	46	28	61	1.75
Emery	3	15	21	11	53	--	--	--	--	--
Grand	1	2	2	1	50	1	2	1	50	0.50
San Juan	13	26	57	127	222	8	41	88	217	4.19
<b>REGIONAL TOTALS</b>	<b>26</b>	<b>66</b>	<b>135</b>	<b>177</b>	<b>132</b>	<b>15</b>	<b>89</b>	<b>117</b>	<b>133</b>	<b>3.00</b>
<b>NEPHI CHECKING STATION*</b>	<b>392</b>	<b>981</b>	<b>4,955</b>	<b>4,142</b>	<b>83</b>	<b>326</b>	<b>3,731</b>	<b>3,224</b>	<b>86</b>	<b>4.65</b>
<b>STATE TOTALS</b>	<b>1,887</b>	<b>4,422</b>	<b>16,800</b>	<b>11,730</b>	<b>70</b>	<b>1,402</b>	<b>13,019</b>	<b>9,034</b>	<b>69</b>	<b>2.86</b>

\*Includes Millard and Juab counties.

Table 9. Mourning dove hunter success trend determined by field bag checks, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter
<b>Northern Region</b>												
Box Elder	77	3.74	120	5.34	114	4.35	82	2.96	74	2.76	98	3.74
Cache	25	1.12	76	1.69*	--	--	177	2.88	--	--	--	--
Davis	7	0.18	92	2.01	--	--	31	0.36	--	--	80	1.78
Morgan	--	--	169	5.30	--	--	38	0.56	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	80	2.15
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	38	1.59	34	0.67*	20	0.38	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>72</b>	<b>3.40</b>	<b>114</b>	<b>4.85</b>	<b>107</b>	<b>3.94</b>	<b>81</b>	<b>2.82</b>	<b>74</b>	<b>2.76</b>	<b>96</b>	<b>3.51</b>
<b>Central Region</b>												
Juab	171	3.95*	178	7.53	100	8.36	81	4.49	80	4.00	421	9.83
Salt Lake	27	0.32	78	1.61	50	0.98	91	1.80	76	2.00	23	0.38
Sanpete	49	0.63	--	--	64	1.28*	38	0.69	0	0.00	81	2.23
Tooele	85	3.33	109	6.82	40	1.08*	93	4.00	80	3.00	233	7.00
Utah	45	1.06	85	3.47	67	2.63	73	2.61	70	2.08	47	1.84
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>58</b>	<b>0.90</b>	<b>104</b>	<b>3.35</b>	<b>66</b>	<b>2.50</b>	<b>77</b>	<b>2.53</b>	<b>72</b>	<b>2.29</b>	<b>49</b>	<b>1.85</b>
<b>Southern Region</b>												
Beaver	114	6.56	181	4.40*	179	9.86	--	--	--	--	158	4.75
Garfield	100	10.00	164	4.00	98	2.32	--	--	250	6.67	196	5.36
Iron	--	--	204	4.95*	238	7.47	666	10.00	165	5.06	321	6.77
Kane	352	6.75	--	--	--	--	--	--	393	7.66	334	9.53
Millard	109	7.08	142	6.70	150	3.90*	136	6.80	213	7.62	98	5.60
Plute	86	1.50	--	--	--	--	--	--	--	--	--	--
Sevier	151	3.32*	121	5.30	64	0.64*	--	--	--	--	--	--
Washington	--	--	--	--	--	--	231	3.92	137	4.11	500	10.00
Wayne	100	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>120</b>	<b>6.71</b>	<b>148</b>	<b>6.05</b>	<b>158</b>	<b>5.29</b>	<b>150</b>	<b>6.08</b>	<b>236</b>	<b>6.52</b>	<b>141</b>	<b>6.34</b>
<b>Northeastern Region</b>												
Daggett	5	0.40	12	0.00	--	--	--	--	0	0.00	225	2.12
Duchesne	98	3.92	265	5.48	115	2.07	--	--	380	4.75	--	--
Uintah	135	4.23	167	7.60	108	2.59	121	2.66	97	2.00	87	1.75
<b>REGIONAL TOTALS</b>	<b>104</b>	<b>3.65</b>	<b>181</b>	<b>5.77</b>	<b>110</b>	<b>2.35</b>	<b>121</b>	<b>2.66</b>	<b>146</b>	<b>2.77</b>	<b>156</b>	<b>2.00</b>
<b>Southeastern Region</b>												
Carbon	--	--	256	7.00	0	0.00	127	3.12	100	2.17	61	1.75
Emery	--	--	162	4.05	50	1.50	33	2.00	50	0.50	--	--
Grand	--	--	188	5.75	47	1.06*	50	1.50	--	--	50	0.50
San Juan	185	6.32	187	5.08	203	5.69	250	6.33	400	10.00	217	4.19
<b>REGIONAL TOTALS</b>	<b>185</b>	<b>6.32</b>	<b>181</b>	<b>5.05</b>	<b>155</b>	<b>5.21</b>	<b>168</b>	<b>4.27</b>	<b>196</b>	<b>4.00</b>	<b>133</b>	<b>3.00</b>
<b>NEPHI CHECKING STATION</b>												
STATE TOTALS	81	3.51	124	4.81	97	3.81	93	3.14	82	2.65	69	2.86

\*Doves per hunter index based on all hunts.

Table 10. Age composition (Immatures/100 Adults) of mourning doves harvested, 1970-79.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1970-78 Average
	I/100A (n <sup>a</sup> )	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)
<b>Northern Region</b>											
Box Elder	109 (991)	145 (963)	112 (1380)	102 (1324)	129 (1430)	123 (2830)	103 (1870)	216 (1296)	88 (999)	84 (1271)	125 (1454)
Cache	—	100 (58)	155 (28)	100 (2)	—	66 (128)	114 (15)	0 (2)	—	106 (33)	89 (39)
Davis	—	—	—	450 (11)	—	100 (4)	—	150 (10)	—	71 (65)	233 (8)
Morgan	288 (101)	151 (93)	41 (24)	—	250 (7)	84 (116)	—	—	—	—	163 (68)
Rich	—	—	125 (9)	100 (10)	—	—	—	—	—	92 (25)	113 (10)
Summit	66 (10)	—	—	—	—	—	—	—	—	—	—
Weber	160 (39)	—	70 (136)	71 (24)	213 (119)	100 (26)	117 (13)	233 (20)	—	190 (29)	138 (54)
<b>REGIONAL TOTALS</b>	<b>118 (1141)</b>	<b>106 (1114)</b>	<b>106 (1577)</b>	<b>103 (1371)</b>	<b>134 (1556)</b>	<b>118 (3104)</b>	<b>103 (1898)</b>	<b>216 (1328)</b>	<b>88 (999)</b>	<b>86 (1423)</b>	<b>121 (1565)</b>
<b>Central Region</b>											
Juab	32 (139)	77 (39)	79 (86)	29 (66)	105 (88)	228 (220)	240 (136)	283 (199)	63 (75)	—	126 (116)
Salt Lake	111 (213)	204 (164)	57 (74)	136 (33)	50 (9)	109 (338)	147 (42)	275 (120)	—	—	136 (124)
Sanpete	—	—	227 (85)	46 (114)	185 (111)	650 (30)	222 (87)	139 (74)	—	—	245 (84)
Tooele	88 (45)	129 (16)	211 (28)	290 (82)	99 (219)	76 (202)	156 (115)	195 (177)	60 (262)	84 (103)	145 (127)
Utah	88 (139)	170 (189)	178 (153)	132 (267)	123 (261)	128 (392)	170 (278)	113 (286)	61 (1814)	80 (1823)	129 (420)
Wasatch	—	—	—	—	—	—	—	—	—	—	—
<b>REGIONAL TOTALS</b>	<b>76 (536)</b>	<b>167 (408)</b>	<b>130 (426)</b>	<b>101 (562)</b>	<b>118 (688)</b>	<b>128 (1182)</b>	<b>184 (658)</b>	<b>177 (856)</b>	<b>61 (2151)</b>	<b>81 (1926)</b>	<b>127 (830)</b>
<b>Southern Region</b>											
Beaver	—	—	—	—	—	—	—	—	—	—	—
Garfield	—	—	—	—	—	176 (47)	—	—	—	—	—
Iron	—	—	—	—	—	—	—	—	—	—	—
Kane	—	—	—	—	—	—	—	—	—	—	—
Millard	—	—	—	—	—	—	—	—	—	—	—
Piute	—	—	—	—	—	—	—	—	—	—	—
Sevier	—	—	—	—	—	—	—	—	—	—	—
Washington	—	—	—	—	—	—	—	—	—	—	—
Wayne	—	—	—	—	—	—	—	—	—	—	—
<b>REGIONAL TOTALS</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>176 (47)</b>	<b>320 (30)</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Northeastern Region</b>											
Daggett	—	—	—	—	—	—	—	—	—	—	—
Duchesne	—	—	—	—	—	—	—	—	—	—	—
Utah	—	—	—	—	—	—	—	—	—	—	—
<b>REGIONAL TOTALS</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Southeastern Region</b>											
Carbon	—	—	—	—	—	—	—	—	—	67 (167)	—
Emery	—	—	—	—	—	233 (30)	—	—	—	—	—
Grand	—	—	—	—	—	300 (84)	—	—	—	—	—
San Juan	—	—	—	—	—	189 (214)	97 (274)	—	—	—	—
<b>REGIONAL TOTALS</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>263 (196)</b>	<b>215 (328)</b>	<b>97 (274)</b>	<b>—</b>	<b>—</b>	<b>67 (167)</b>	<b>—</b>
<b>NEPHI CHECKING STATION</b>											
<b>STATE TOTALS</b>	<b>103 (1677)</b>	<b>149 (1522)</b>	<b>111 (2003)</b>	<b>102 (1933)</b>	<b>136 (2440)</b>	<b>126 (4661)</b>	<b>118 (2860)</b>	<b>200 (2184)</b>	<b>87 (2013)</b>	<b>114 (1814)</b>	<b>124 (2716)</b>

<sup>a</sup>n = wing sample

Table 11. Percent of harvest by hatching date of immature mourning doves in northern Utah, 1970-79.

Date Hatched	Age* (Days)	P	Percent of Harvest by Hatch Date							Sample Size												
			1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Aug. 3	29	none	36.1	36.2	40.8	22.2	48.3	11.1	42.5	36.4	52.8	45.6	224	236	322	154	428	177	409	329	246	265
July 31	32	1	30.8	23.0	27.2	21.4	28.6	24.3	22.9	27.9	25.3	22.7	191	150	215	149	253	389	220	252	118	132
July 25	38	2	17.2	17.2	15.7	18.8	14.3	32.3	17.9	17.3	12.0	14.3	107	112	124	131	127	517	172	156	56	83
July 18	45	3	9.4	10.3	9.6	15.4	3.7	18.4	7.2	6.7	5.8	8.1	58	67	76	107	33	295	69	60	27	47
July 9	54	4	3.9	7.8	3.9	9.9	2.3	8.6	4.0	4.3	3.0	5.0	24	51	31	69	20	137	38	39	14	29
June 30	63	5	1.9	2.9	2.3	6.8	1.1	5.3	2.0	2.4	0.4	1.5	12	19	18	47	10	85	19	22	2	9
June 21	72	6	0.6	1.8	0.2	3.7	1.2	--	1.0	2.9	0.2	1.7	4	12	2	26	11	--	10	26	1	10
June 8	85	7	--	0.5	0.1	1.6	0.4	--	0.9	2.2	--	--	--	3	1	11	4	--	9	20	0	0
May 22	102	8	--	0.2	--	0.1	--	--	1.7	--	0.2	0.2	--	1	--	1	--	--	16	--	1	1
Apr. 27	127	9	--	--	--	--	--	--	--	--	0.2	0.9	--	--	--	--	--	--	--	--	1	5
Apr. 21	133	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
			100	100	100	100	100	100	100	100	100	100	620	651	789	695	886	1600	962	904	466	581

\*Allen, J.M., 1963.

P = Last primary molted.

Table 12. Summary of mourning doves banded in Utah, 1971-75.

Region and County	1971		1972		1973		1974		1975		Totals 1961-75			
	Imm.	Adult Total	Imm.	Adult Total	Imm.	Adult Total	Imm.	Adult Total	Imm.	Adult Total	Imm.	Adult Total		
<b>Northern Region</b>														
Box Elder	--	--	2	5	7	--	16	22	38	--	--	1011	2444	3455
Cache	--	--	--	--	--	--	--	--	--	--	--	30	39	69
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	22	20	45*	--	--	--	59	12	71	28	37	65	109	178*
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	22	20	45*	5	7	--	75	34	109	28	37	65	1,150	2,552
<b>Central Region</b>														
Juab	64	53	117	71	151	229*	91	297	388	137	153	290	1,815	3,009
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	47	214
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	85	370	455	60	158	218	158	329	487	138	113	251	1,538	2,550
Utah	--	--	--	--	--	--	--	--	--	--	--	--	61	155
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	149	423	572	131	309	447*	27	57	84	249	275	541	3,461	5,928
<b>Southern Region</b>														
Beaver	--	--	--	--	--	--	6	4	10	22	--	--	34	92
Garfield	--	--	--	--	--	--	--	--	--	5	41	46	5	41
Iron	113	1	114	125	124	249	4	13	36	70	47	117	504	257
Kane	--	--	--	--	--	--	206	--	--	115	66	181	407	151
Millard	38	13	51	15	12	27	1	56	57	197	125	322	589	766
Piute	166	211	377	75	15	90	--	--	--	3	3	6	548	668
Sevier	2	0	2	--	--	--	--	--	--	30	199	299	34	225
Washington	41	2	43	37	17	55*	136	84	220	87	158	245	452	1,408
Wayne	--	--	--	--	--	--	--	28	54	5	13	18	37	75
<b>REGIONAL TOTALS</b>	360	227	587	252	168	421*	353	161	514	303	512	652	1,164	2,650
<b>Northeastern Region</b>														
Daggett	7	28	35	39	60	99	0	137	137	0	68	68	54	457
Duchesne	7	64	71	15	128	143	1	2	3	37	80	114	98	371
Uintah	49	123	172	9	85	94	--	48	247	0	95	95	416	1,509
<b>REGIONAL TOTALS</b>	63	215	278	63	273	336	1	139	140	85	243	277	568	2,337
<b>Southeastern Region</b>														
Carbon	--	--	--	--	--	--	--	58	42	100	--	--	66	46
Emery	--	--	--	--	--	--	--	153	76	229	118	107	225	310
Grand	--	--	--	--	--	--	--	--	--	0	1	1	52	18
San Juan	37	52	89	73	129	202	7	289	94	45	370	415	780	693
<b>REGIONAL TOTALS</b>	37	52	89	73	129	202	7	500	212	163	478	641	1,208	954
<b>STATE TOTALS</b>	631	937	1,571	521	884	1,413	388	367	755	1,212	1,777	2,989	1,012	2,688
*Includes some unclassified birds.														

Table 13. Summary of mourning dove band recovery rates for the period 1949-75.

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***	1,733	34	51	.020	.029
1968	640	8	12	.013	.019
1969	1,981	35	54	.013	.021
1970	1,485	19	31	.011	.027
1971	1,684	11	23	.007	.014
1972	1,370	8	14	.006	.010
1973	655	7	10	.010	.015
1974	2,869	7	17	.002	.006
1975	2,638	22	30	.008	.011
<hr/>					
TOTALS 1964-75	19,389	222	374	.011	.019
<hr/>					
GRAND TOTALS	23,390	265	484	.011	.021

\*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.

\*\*\*Data reported for 1967-1973 differs from previous reports. Data reported here includes all bands returned through December 1977, but excludes some bands previously reported because the bands did not conform to all Fish and Wildlife Service criteria for proper analysis. Problems causing rejection of data include banding before or after banding season, failure to read age class, etc. Band returns from reported bandings were not recorded.

Table 14. Summary of combined recoveries (returns and retraps) of mourning doves banded in Utah, 1967-75.

State & Country of Recovery	Recoveries as of December 1975			
	Direct	(%)	Total	(%) of Total
<b>United States</b>				
Utah	80	(53)	116	(48)
Arizona	33	(22)	54	(22)
California	10	(7)	16	(7)
New Mexico	2	(1)	2	(1)
Idaho	0	(0)	4	(2)
Texas	2	(1)	2	(1)
Oregon	0	(0)	1	(0)
Colorado	0	(0)	1	(0)
	Subtotal		127	196
<b>Foreign Countries</b>				
Mexico	23	(15)	45	(19)
Honduras	1	(0)	1	(0)
	Subtotal		24	46
<b>TOTAL</b>			151	242

Table 15. Summary of mourning doves banded in other states and recovered in Utah, 1967-1975.

State Where Banded	Number of Returns
Arizona	4
California	1
Colorado	3
Idaho	1
Montana	6
Nevada	2
New Mexico	1
Texas	7
Washington	2
TOTAL	27



## BAND-TAILED PIGEON

### Banding

Banding efforts were discontinued in 1979 as a result of recommendations of the Four-Corners Band-tailed Pigeon Study Committee. The Committee concluded that, from 1979, banding should be limited to specific research needs.

During 1979, no pigeons were banded in Utah. Since 1969, 2,649 total pigeons have been banded in Utah and 975 recaptured. Results of banding efforts through 1972 indicated a direct recovery rate of 1.4 percent. If expanded, using an assumed 30 percent band reporting rate, an estimated harvest rate of less than 5 percent of the state's pigeon population is indicated. Addition of an estimated 16 percent crippling loss would result in a total kill rate of from 5-10 percent, well within the harvestable surplus.

### Harvest

Results of the 1979 harvest questionnaire are shown in Table 18 and harvest trends since 1970 in Table 19. A comparison of the 1979 season to 1978 and the average follows:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Band-tailed pigeon hunters	62	-21	+11
Band-tailed pigeon harvest	117	-56	-31
Hunter-days afield	133	-44	- 1
Pigeons per hunter-day	0.9	-18	-25
Pigeons per hunter	1.9	-44	-32

Total hunters decreased slightly from 1978 and hunter-days afield also decreased 44 percent. Total harvest also decreased dramatically from 1978. Most of the 1979 harvest occurred in Grand and San Juan counties.

Table 16. Results of band-tailed pigeon banding efforts in Utah during 1979.

Area	Time Period	Adults		Total Pigeons	Immatures/100 adults	Total Recaptures*
		Males	Females			
Monticello, San Juan County	--	--	--	--	--	--
New Harmony, Washington County	--	--	--	--	--	--

TOTALS

BANDING DISCONTINUED IN 1979

\*Includes repeats and returns.

Table 17. Band-tailed pigeon banding trend for Utah, 1969-79.

Year	Adults		Total Pigeons	Immatures/100 Adults	Total Recaptures*
	Males	Females			
1969	147	51	198	39	237
1970	254	94	348	54	402
1971	110	52	162	79	241
1972	284	117	401	4	405
1973	263	54	317	14	331
1974	87	12	99	11	110
1975	202	70	272	13	285
1976	180	33	213	4	217
1977	286	25	311	8	319
1978	67	35	102	0	102
1979	BANDING DISCONTINUED				
TOTALS	1,880	543	2,423	226	2,649
				9	975

\*Includes repeats and returns.

Table 18. Band-tailed pigeon harvest statistics, 1979.

Area Hunted	Participating Hunters		Hunter-days		Harvest		Pigeons/ Hunter-day	Percent of Pressure*	Percent of Harvest
	Reported	Calc.	Reported	Calc.	Reported	Calc.			
Beaver County	1	2	1	2	1	2	1.0	1	1
Blue Mountain-Elk Ridge	11	17	31	48	38	59	1.2	36	51
Garfield County	--	--	--	--	--	--	--	--	--
Iron County	11	17	18	28	8	12	0.4	21	11
Kane County	4	6	4	6	0	0	0.0	5	0
LaSal Mountain	12	19	24	37	27	42	1.1	28	36
Millard County	--	--	--	--	--	--	--	--	--
Piute County	--	--	--	--	--	--	--	--	--
Washington County	4	6	8	12	1	2	0.1	9	1
Wayne County	--	--	--	--	--	--	--	--	--
TOTALS	43**	67	86	133	75	117	0.9	100	100

\*Based on hunter-days.

\*\*The number of hunters afield who reported was 40; 2 hunters report hunting more than one area, and are included as participating hunters. Calculated number of hunters afield is 62.

Projection factor = 1.5465 (133 permits issued; 86 questionnaires returned).

Table 19. Band-tailed pigeon harvest trend, 1970-79.

Year	Total		Hunter-days Afield	Pigeons Per	
	Hunters Afield	Harvest		Hunter-day	Hunter
1970	34	109	53	2.1	3.2
1971	54	156	110	1.4	2.9
1972	61	211	122	1.7	3.5
1973	25	18	42	0.4	0.7
1974	74	95	141	0.7	1.3
1975	54	116	119	1.0	2.2
1976	54	119	162	0.7	2.2
1977	70	435	225	1.9	6.2
1978	78	264	238	1.1	3.4
1979	62	117	133	0.9	1.9
<hr/>					
TOTALS					
1970-79	566	1,640	1,345	1.2	2.9
<hr/>					
AVERAGES					
1970-78	56	169	135	1.2	2.8

# CHUKAR PARTRIDGE

## SUMMARY

The statewide breeding population of chukars was significantly increased in 1979 following the excellent production during 1978. Overwinter survival was near normal. Late winter and early spring precipitation, critical to successful chukar production, was again above average, indicating good reproductive potential.

Results of the brood survey confirmed the good reproduction expected due to the abundance of spring moisture and resulting excellent forage conditions during breeding and nesting. The indicated chukar density increased more than 80 percent from 1978. Chukars observed per 100 hours of effort increased from 96 in 1977, to 213 in 1978, to 396 in 1979--a 312 percent increase. Broods located were larger than the long-term average.

Harvest statistics reflected the high chukar density with harvest success (chukars/hunter-day) remaining well above average and comparable to 1978, but hunter pressure decreased significantly resulting in a lower overall harvest.



### Brood Counts

Results of the annual random brood survey for 1979 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 Table 2-4. Following are the survey results for 1979 compared to 1978 and the average:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total chukars observed	729	+147	-40
Young per 100 adults	245	- 45	-34
Mean brood size	10.35	+ 18	+20
Chukars observed per 100 hours	396	+ 86	+14
Total hours effort	199	+ 25	-43

Harvest data for 1978 indicated increased breeding populations for 1979 in all regions. Late winter and early spring precipitation (Dec.-April) was above average over the entire state (Fig. 2) producing favorable conditions for good production.

Effort on chukar brood counts increased from 1978 but remained far below average.

Brood count sample sizes were extremely small for all regions. The Central Region counted 21 of the state total of 34 broods. Chukar density increased to 14 percent above average as a result of high carry-over from 1978 and good production during 1979.

### Harvest

#### Hunter Questionnaire

Results of the hunter questionnaire survey for 1979 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 statewide harvest statistics in Table 9. Following is a comparison of 1979 harvest statistics to 1978 and the average:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Chukar hunters	15,210	- 6	- 3
Chukars harvested	51,918	-21	+18
Hunter-days afield	42,254	-22	- 8
Chukars per hunter-day	1.23	+ 2	+28
Chukars per hunter	3.41	-16	+21

Chukars harvested, chukar hunters, hunter-days afield and chukars per hunter all decreased from 1978. However, harvest (total birds, chukars per hunter and per hunter-day) remained above average while pressure (total hunters and days afield) dropped somewhat below average.

Field Bag Check

A summary of field bag check data for 1979 is shown in Table 10. The hunter success trend determined by field bag checks since 1974 is shown in Table 11. Data for the 1979 season compared to 1978 and the average follow:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	300	+25	-50
Total hours hunted	996	+ 1	-64
Chukars per hunter (complete hunts)	1.07	-33	- 5
Chukars bagged per 100 hours	29	-19	+26
Average hours per hunter-day (complete hunts)	3.7	-18	-21
Hours hunted per chukar bagged	3.5	+25	-30

Field bag checks reflected the somewhat decreased success shown by the questionnaire. Chukars per hunter decreased by 33 percent from 1978 but was only 5 percent below average.

The daily hunter success rate (birds/hunter) shown by field bag checks was about 15 percent below the rate shown by the questionnaire. Field bag checks were almost entirely confined to the opening weekend while the questionnaires reflect season-long success. Many hunters reported difficulty locating chukars during the late fall period when temperatures were above average. Chukars apparently moved to high inaccessible areas during a heavy snow storm in late October and remained there through the rest of the season, despite the moderation in the weather.

The average hours hunted per day increased somewhat from 1978 and the amount of time spent to bag each chukar decreased dramatically.

Chukars bagged per hunter and per hunter-day.

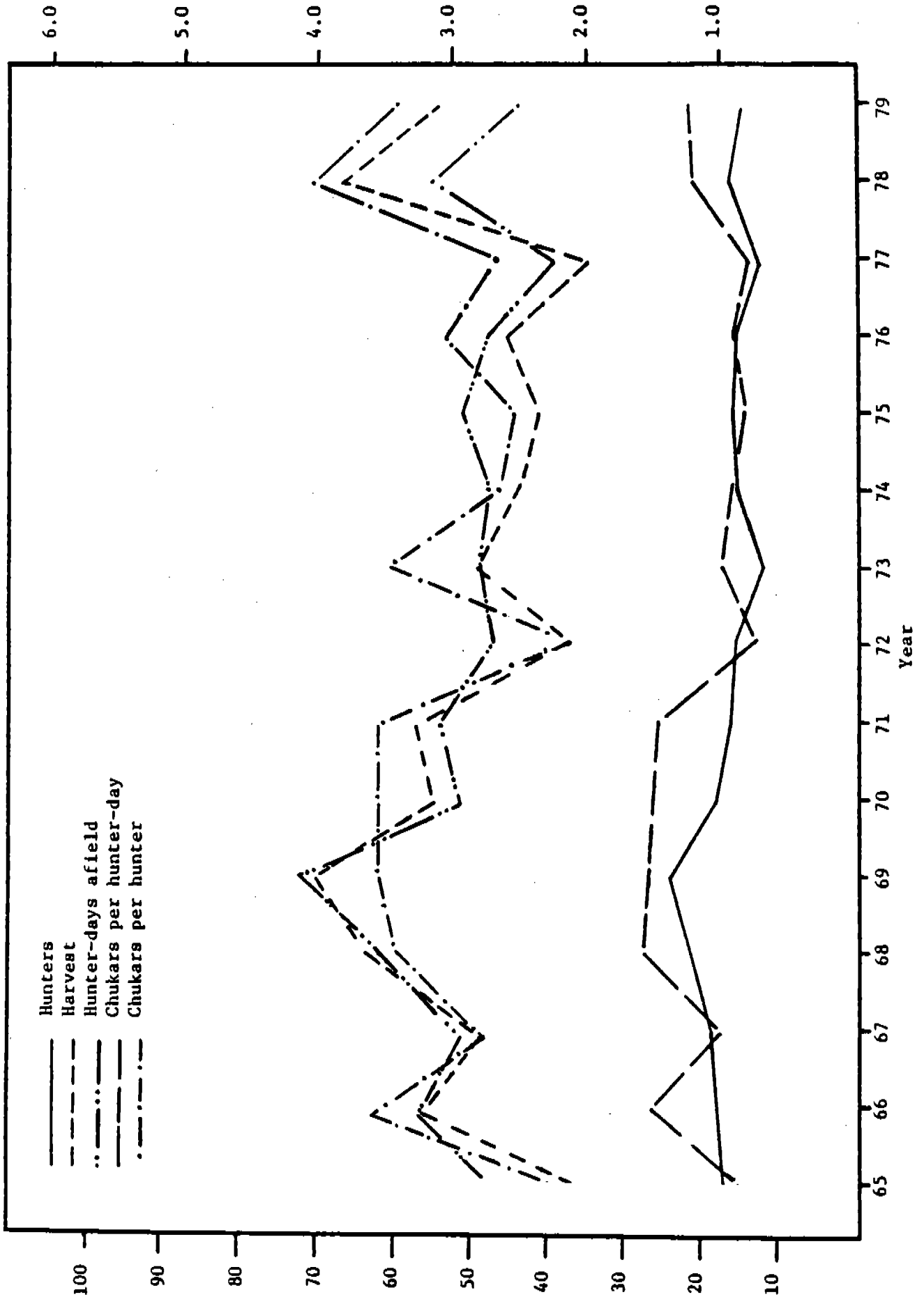


Figure 1. Statewide trends of chukar partridge harvest statistics.

Hunters, harvest and hunter-days afield (thousands).



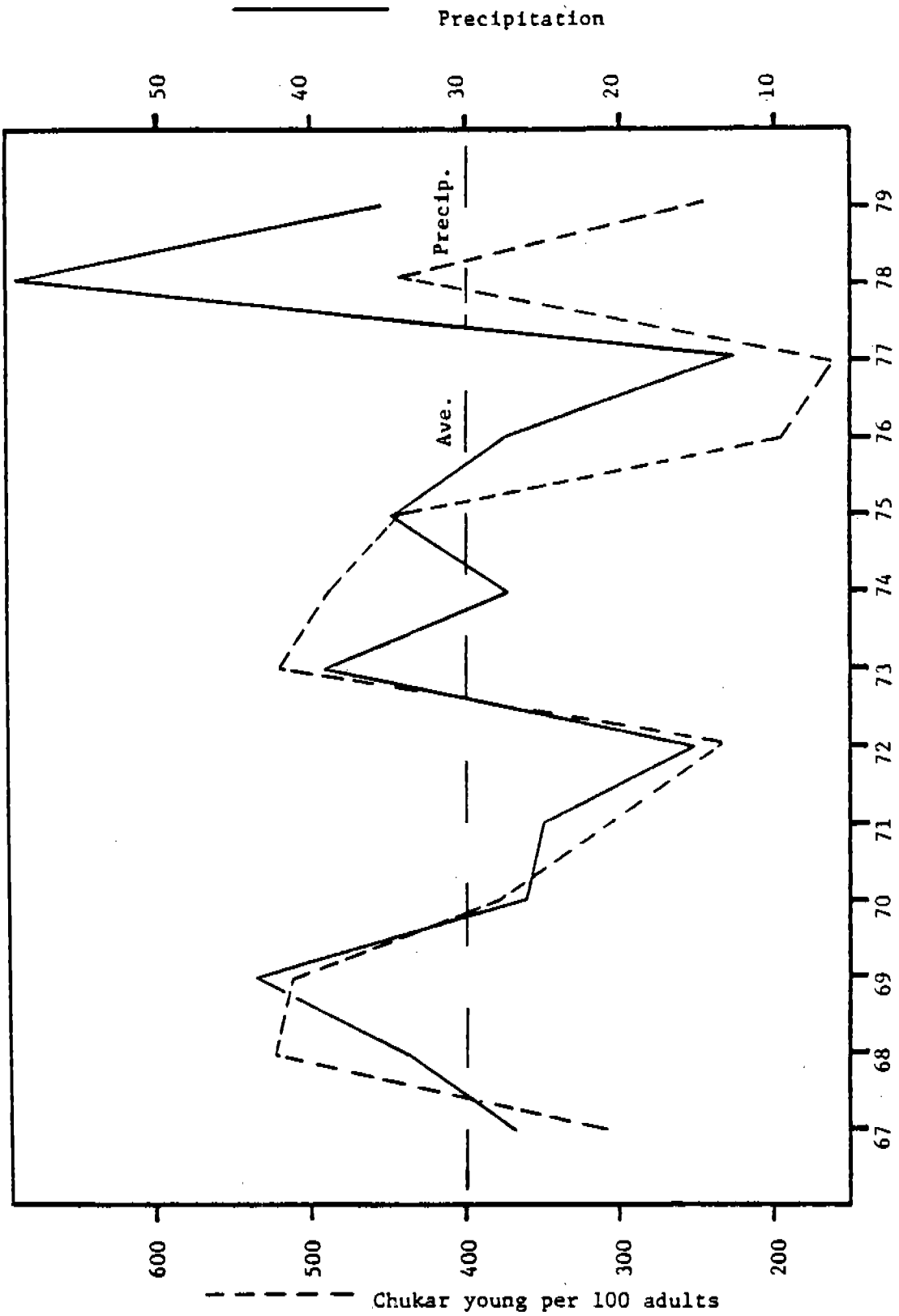


Figure 2. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production.

Table 1. Chukar summer inventory summary, 1979.

Region and County	Distinct Broods			Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults	Total Yng.	Young/100 Ad.	Vehicle Miles	Hours Effort		Birds/100 hrs.		
	No. Ad.	Yng.	Brood		Ad.	Yng.						Veh.	Horse		Walk	Total
<b>Northern Region</b>																
Box Elder	7	7	67	9.57	3	32	40	50	99	198	434	24	0	10	34	438
Cache	1	1	3	3.00	0	0	0	1	3	300	50	7	0	0	7	57
Davis	1	1	2	2.00	0	0	76	77	2	3	62	5	3	5	13	608
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>9</b>	<b>72</b>	<b>8.00</b>	<b>3</b>	<b>32</b>	<b>116</b>	<b>128</b>	<b>104</b>	<b>81</b>	<b>546</b>	<b>36</b>	<b>3</b>	<b>15</b>	<b>54</b>	<b>430</b>
<b>Central Region</b>																
Juab	(60 unclassified in one flock)															
Salt Lake	3	3	17	5.67	0	0	3	6	17	283	136	10	0	1	11	209
Sanpete	3	3	19	6.33	7	31	0	10	50	500	214	20	8	2	30	200
Tooele	14	14	197	14.07	5	42	12	31	239	771	361	22	0	4	26	1,038
Utah	1	1	6	6.00	7	35	12	20	41	205	42	5	0	0	5	1,220
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>21</b>	<b>239</b>	<b>11.38</b>	<b>19</b>	<b>108</b>	<b>27</b>	<b>67</b>	<b>347</b>	<b>518</b>	<b>793</b>	<b>60</b>	<b>8</b>	<b>8</b>	<b>76</b>	<b>623</b>
<b>Southern Region</b>																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	4	14	--	4	14	350	90	1.5	--	--	1.5	1,200
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	1	1	6	6.00	3	12	--	4	18	450	205	10	--	--	10	220
Piute	1	2	10	10.00	--	--	--	2	10	500	120	10	--	--	10	120
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>3</b>	<b>16</b>	<b>8.00</b>	<b>7</b>	<b>26</b>	<b>--</b>	<b>10</b>	<b>42</b>	<b>420</b>	<b>415</b>	<b>21.5</b>	<b>--</b>	<b>--</b>	<b>21.5</b>	<b>242</b>
<b>Northeastern Region</b>																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0	0	0	--	0	0	0	0	0	--	158	13	--	--	13	0
Uintah	0	0	0	--	0	0	0	0	0	--	135	10	--	--	10	0
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>293</b>	<b>23</b>	<b>--</b>	<b>--</b>	<b>23</b>	<b>0</b>
<b>Southeastern Region</b>																
Carbon	0	0	0	--	0	0	0	0	0	--	102	4	--	--	4	0
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	2	3	25	12.50	--	--	3	6	25	416	45	5	--	--	5	1,020
San Juan	0	0	0	--	0	0	0	0	0	--	120	4.5	--	--	4.5	0
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>3</b>	<b>25</b>	<b>12.50</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>25</b>	<b>416</b>	<b>267</b>	<b>13.5</b>	<b>--</b>	<b>--</b>	<b>13.5</b>	<b>230</b>
<b>STATE TOTALS</b>	<b>34</b>	<b>36</b>	<b>352</b>	<b>10.35</b>	<b>29</b>	<b>166</b>	<b>146</b>	<b>211</b>	<b>518</b>	<b>245</b>	<b>2,314</b>	<b>154</b>	<b>11</b>	<b>23</b>	<b>199</b>	<b>396</b>

Table 2. Trend of chukar young per 100 adults, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	600	247	529	492	760	663	842	733	300	562	198	
Cache	1,011	250	258	--	488	750	550	1,900	--	--	300	
Davis	1,100	--	--	--	--	--	--	--	--	--	3	
Morgan	668	178	950	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	525	--	--	--	--	--	--	--	--	--	
Weber	91	--	286	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>510</b>	<b>267</b>	<b>382</b>	<b>475</b>	<b>639</b>	<b>684</b>	<b>814</b>	<b>722</b>	<b>300</b>	<b>562</b>	<b>81</b>	<b>536</b>
<b>Central Region</b>												
Juab	607	421	594	420	725	350	500	352	356	1,100	--	
Salt Lake	372	0	367	--	0	--	0	--	380	--	283	
Sanpete	194	256	171	216	0	--	--	488	331	440	500	
Tooele	1,360	922	372	154	410	356	264	417	96	686	771	
Utah	463	360	352	552	335	96	--	800	150	0	205	
Wasatch	767	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>496</b>	<b>471</b>	<b>386</b>	<b>208</b>	<b>364</b>	<b>300</b>	<b>308</b>	<b>411</b>	<b>230</b>	<b>386</b>	<b>518</b>	<b>356</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	495	275	--	--	--	--	450	--	--	350	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	812	700	255	66	--	--	50	264	95	150	450	
Piute	--	--	550	500	--	--	500	--	--	0	500	
Sevier	--	--	--	800	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	67	--	--	--	--	--	--	900	--	
<b>REGIONAL TOTALS</b>	<b>812</b>	<b>581</b>	<b>245</b>	<b>131</b>	<b>--</b>	<b>0</b>	<b>114</b>	<b>294</b>	<b>95</b>	<b>233</b>	<b>420</b>	<b>278</b>
<b>Northeastern Region</b>												
Daggett	1,250	150	--	--	--	--	--	--	--	--	--	
Duchesne	548	--	120	--	--	--	--	800	375	0	--	
Uintah	463	450	678	--	--	733	--	766	--	--	--	
<b>REGIONAL TOTALS</b>	<b>575</b>	<b>279</b>	<b>479</b>	<b>--</b>	<b>--</b>	<b>733</b>	<b>--</b>	<b>775</b>	<b>375</b>	<b>--</b>	<b>--</b>	<b>536</b>
<b>Southeastern Region</b>												
Carbon	--	383	474	372	650	794	633	--	125	--	--	
Emery	--	900	--	--	725	842	367	200	--	500	--	
Grand	--	446	205	274	871	656	377	98	0	980	416	
San Juan	138	234	161	317	500	650	552	40	58	220	--	
<b>REGIONAL TOTALS</b>	<b>138</b>	<b>338</b>	<b>226</b>	<b>324</b>	<b>712</b>	<b>717</b>	<b>437</b>	<b>94</b>	<b>59</b>	<b>591</b>	<b>416</b>	<b>364</b>
<b>STATE TOTALS</b>	<b>511</b>	<b>382</b>	<b>311</b>	<b>235</b>	<b>519</b>	<b>487</b>	<b>443</b>	<b>196</b>	<b>170</b>	<b>444</b>	<b>245</b>	<b>370</b>

Table 3. Trend of chukar mean brood size from 1969-79.

Region and County	Year												Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979		
<b>Northern Region</b>													
Box Elder	8.00	10.59	6.17	13.23	13.00	11.00	11.00	10.50	6.00	14.60	9.57		
Cache	12.00	10.00	3.43	--	13.00	7.00	--	19.00	--	--	3.00		
Davis	10.50	--	--	--	--	--	--	--	--	--	2.00		
Morgan	10.17	8.00	9.50	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	7.33	--	--	--	--	--	--	--	--	--		
Weber	--	--	20.00	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>9.67</b>	<b>9.91</b>	<b>6.25</b>	<b>13.23</b>	<b>13.00</b>	<b>8.00</b>	<b>11.00</b>	<b>13.33</b>	<b>6.00</b>	<b>14.60</b>	<b>8.00</b>	<b>10.50</b>	
<b>Central Region</b>													
Juab	11.62	5.25	9.33	9.53	9.67	11.00	8.67	7.75	9.00	11.00	--		
Salt Lake	16.50	--	--	--	--	--	--	--	--	--	5.67		
Sanpete	--	6.67	7.00	6.00	--	--	--	11.00	6.50	5.00	6.33		
Tooele	14.50	12.14	11.29	10.83	15.00	11.89	9.00	7.20	6.00	6.50	14.07		
Utah	9.40	9.00	8.14	7.50	8.40	8.00	--	8.00	3.00	0.00	6.00		
Wasatch	11.50	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>11.38</b>	<b>9.00</b>	<b>9.88</b>	<b>9.98</b>	<b>10.10</b>	<b>11.35</b>	<b>8.83</b>	<b>7.68</b>	<b>6.64</b>	<b>6.50</b>	<b>11.38</b>	<b>9.13</b>	
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--		
Garfield	--	8.20	5.00	--	--	--	--	9.50	--	--	--		
Iron	--	--	0	--	--	--	--	--	--	--	--		
Kane	--	--	--	--	--	--	--	--	--	--	--		
Millard	9.67	--	11.50	10.00	--	--	3.00	6.71	3.50	0.00	6.00		
Piute	--	--	5.50	5.67	--	--	5.00	--	--	0.00	10.00		
Sevier	--	--	--	--	--	--	--	--	--	--	--		
Washington	--	--	--	--	--	--	--	--	--	--	--		
Wayne	--	--	6.00	--	--	--	--	--	--	9.00	--		
<b>REGIONAL TOTALS</b>	<b>9.67</b>	<b>8.20</b>	<b>7.80</b>	<b>6.75</b>	<b>--</b>	<b>--</b>	<b>4.00</b>	<b>7.33</b>	<b>3.50</b>	<b>9.00</b>	<b>8.00</b>	<b>7.03</b>	
<b>Northeastern Region</b>													
Daggett	15.50	4.00	--	--	--	--	--	--	--	--	--		
Duchesne	11.50	--	6.00	--	--	--	--	8.00	3.75	0.00	--		
Uintah	9.00	4.50	7.00	10.00	--	6.00	--	7.67	--	--	--		
<b>REGIONAL TOTALS</b>	<b>12.00</b>	<b>4.33</b>	<b>6.86</b>	<b>10.00</b>	<b>--</b>	<b>6.00</b>	<b>--</b>	<b>7.75</b>	<b>3.75</b>	<b>--</b>	<b>--</b>	<b>7.24</b>	
<b>Southeastern Region</b>													
Carbon	--	7.67	7.29	9.29	9.00	9.50	9.00	--	--	--	--		
Emery	--	9.00	--	--	12.00	9.80	12.00	6.17	--	5.00	--		
Grand	--	7.20	8.33	7.20	1.00	6.25	4.00	6.00	--	0.00	12.50		
San Juan	6.60	6.50	5.82	9.00	--	10.00	4.33	3.00	--	1.00	--		
<b>REGIONAL TOTALS</b>	<b>6.60</b>	<b>7.36</b>	<b>6.88</b>	<b>8.50</b>	<b>8.50</b>	<b>9.05</b>	<b>6.00</b>	<b>5.58</b>	<b>--</b>	<b>3.00</b>	<b>12.50</b>	<b>6.83</b>	
<b>STATE TOTALS</b>	<b>10.47</b>	<b>8.34</b>	<b>7.81</b>	<b>10.08</b>	<b>10.65</b>	<b>10.00</b>	<b>7.12</b>	<b>7.10</b>	<b>5.77</b>	<b>8.75</b>	<b>10.35</b>	<b>8.61</b>	

Table 4. Trend of chukars observed per 100 hours, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	1,322	386	71	374	77	468	895	208	32	307	438	
Cache	911	175	358	--	--	--	130	167	--	--	57	
Davis	600	--	--	--	--	--	--	--	--	--	608	
Morgan	1,670	500	262	--	--	--	--	100	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	928	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1,196</b>	<b>445</b>	<b>132</b>	<b>374</b>	<b>119</b>	<b>632</b>	<b>640</b>	<b>197</b>	<b>32</b>	<b>307</b>	<b>430</b>	<b>407</b>
<b>Central Region</b>												
Juab	450	197	1,724	613	174	338	229	413	152	109	1,500	
Salt Lake	354	15	108	--	60	--	25	0	400	--	209	
Sanpete	91	371	475	527	7	0	0	157	192	142	200	
Tooele	730	1,022	592	2,044	198	730	291	452	136	917	1,038	
Utah	938	177	210	833	336	140	0	129	33	133	1,220	
Wasatch	867	0	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>408</b>	<b>320</b>	<b>510</b>	<b>997</b>	<b>167</b>	<b>437</b>	<b>178</b>	<b>302</b>	<b>157</b>	<b>243</b>	<b>623</b>	<b>372</b>
<b>Southern Region</b>												
Beaver	0	--	--	--	--	--	--	--	--	--	--	
Garfield	0	761	123	--	0	0	0	440	--	--	1,200	
Iron	--	--	0	--	--	--	--	--	--	--	--	
Kane	0	--	--	--	--	0	--	--	--	--	--	
Millard	3,950	--	529	573	--	291	36	1,020	216	182	220	
Piute	0	0	650	2,400	--	--	150	0	--	0	120	
Sevier	--	--	--	900	--	100	--	--	--	--	--	
Washington	0	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	600	--	--	--	0	--	10	83	--	
<b>REGIONAL TOTALS</b>	<b>484</b>	<b>1,448</b>	<b>259</b>	<b>543</b>	<b>0</b>	<b>79</b>	<b>37</b>	<b>616</b>	<b>114</b>	<b>115</b>	<b>242</b>	<b>370</b>
<b>Northeastern Region</b>												
Daggett	2,700	1,333	0	--	0	0	0	--	0	--	--	
Duchesne	438	0	41	--	0	0	0	22	73	0	0	
Uintah	255	110	350	48	0	227	0	96	0	--	0	
<b>REGIONAL TOTALS</b>	<b>396</b>	<b>82</b>	<b>162</b>	<b>16</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>52</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>82</b>
<b>Southeastern Region</b>												
Carbon	--	--	1,282	621	375	947	1,100	--	450	--	0	
Emery	0	--	--	--	194	1,130	233	370	0	200	--	
Grand	--	693	643	710	358	900	2,277	2,950	40	379	1,020	
San Juan	438	731	321	431	800	789	721	492	136	67	0	
<b>REGIONAL TOTALS</b>	<b>211</b>	<b>816</b>	<b>364</b>	<b>541</b>	<b>298</b>	<b>915</b>	<b>996</b>	<b>883</b>	<b>98</b>	<b>185</b>	<b>230</b>	<b>531</b>
<b>STATE TOTALS</b>	<b>516</b>	<b>459</b>	<b>325</b>	<b>556</b>	<b>150</b>	<b>469</b>	<b>303</b>	<b>370</b>	<b>96</b>	<b>213</b>	<b>396</b>	<b>346</b>

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	307	10,698	14,351	1.34	25.32	27.64
Cache	41	1,121	670	0.60	2.65	1.29
Davis	21	611	1,339	2.19	1.45	2.58
Morgan	31	1,033	1,426	1.38	2.45	2.75
Rich	11	466	175	0.38	1.10	0.34
Summit	14	582	597	1.02	1.38	1.15
Weber	25	670	451	0.67	1.58	0.87
REGIONAL TOTALS	450	15,181	19,009	1.25	35.93	36.61
<u>Central Region</u>						
Juab	41	1,354	1,528	1.13	3.20	2.94
Salt Lake	36	1,790	2,140	1.20	4.24	4.12
Sanpete	40	2,096	2,401	1.15	4.96	4.63
Tooele	223	7,773	10,611	1.37	18.39	20.44
Utah	135	5,051	4,177	0.83	11.95	8.05
Wasatch	10	233	102	0.44	0.55	0.20
REGIONAL TOTALS	485	18,297	20,959	1.15	43.30	40.37
<u>Southern Region</u>						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	5	102	175	1.71	0.24	0.34
Iron	1	29	0	0.00	0.07	0.00
Kane	3	87	262	3.00	0.21	0.50
Millard	34	990	1,281	1.29	2.34	2.47
Piute	16	1,048	815	0.78	2.48	1.57
Sevier	57	2,780	1,863	0.67	6.58	3.59
Washington	1	44	73	1.67	0.10	0.14
Wayne	1	29	87	3.00	0.07	0.17
REGIONAL TOTALS	118	5,109	4,556	0.89	12.09	8.77
<u>Northeastern Region</u>						
Daggett	3	58	131	2.25	0.14	0.25
Duchesne	12	291	349	1.20	0.69	0.67
Uintah	10	189	262	1.38	0.45	0.50
REGIONAL TOTALS	25	538	742	1.38	1.27	1.43
<u>Southeastern Region</u>						
Carbon	23	1,441	2,707	1.88	3.41	5.21
Emery	20	815	1,033	1.27	1.93	1.99
Grand	27	815	2,765	3.39	1.93	5.33
San Juan	1	29	116	4.00	0.07	0.22
REGIONAL TOTALS	71	3,100	6,621	2.14	7.34	12.76
Unknown counties	1	29	29	1.00	0.07	0.06
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,150	42,254	51,916	1.23	100	100

\*Total hunter-trips from questionnaire returns.

Table 6. Summary of chukars bagged per hunter-day by region and county, 1971-79.

Region and County	1971	1972	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>									
Box Elder	1.66	0.88	1.41	1.47	1.20	1.31	1.23	1.80	1.34
Cache	0.91	0.75	0.68	0.92	0.64	0.70	1.11	0.89	0.60
Davis	0.98	0.89	1.12	1.61	0.31	0.89	1.29	2.20	2.19
Morgan	1.68	0.85	1.64	0.48	0.69	0.31	0.88	1.08	1.38
Rich	1.00	0.67	0.80	1.33	0.20	0.81	0.13	1.22	0.38
Summit	0.67	1.28	1.00	0.43	1.47	1.43	1.00	0.75	1.02
Weber	0.86	1.10	0.35	0.54	0.46	0.60	0.75	0.77	0.67
<b>REGIONAL TOTALS</b>	<b>1.36</b>	<b>0.90</b>	<b>1.17</b>	<b>1.19</b>	<b>0.97</b>	<b>1.07</b>	<b>1.15</b>	<b>1.57</b>	<b>1.25</b>
<u>Central Region</u>									
Juab	1.24	0.87	0.81	0.79	0.55	0.46	0.73	0.63	1.13
Salt Lake	0.77	0.64	1.01	0.55	0.76	0.54	1.41	0.89	1.20
Sanpete	0.83	0.63	1.12	0.96	0.72	0.35	0.90	0.70	1.15
Tooele	1.45	0.77	0.88	0.79	0.67	0.86	0.86	1.06	1.37
Utah	0.48	0.67	0.85	0.71	0.42	0.90	0.56	0.66	0.83
Wasatch	0.52	0.23	1.46	0.88	0.18	0.56	0.56	1.29	0.44
<b>REGIONAL TOTALS</b>	<b>1.04</b>	<b>0.72</b>	<b>0.90</b>	<b>0.74</b>	<b>0.58</b>	<b>0.77</b>	<b>0.80</b>	<b>0.91</b>	<b>1.15</b>
<u>Southern Region</u>									
Beaver	--	0.00	--	0.00	0.00	0.59	0.20	0.00	0.00
Garfield	0.00	0.50	0.00	1.00	5.00	0.50	0.00	2.00	1.71
Iron	1.17	1.74	0.33	0.00	0.00	0.76	--	0.00	0.00
Kane	2.00	0.00	--	0.00	0.00	0.00	--	0.00	3.00
Millard	1.63	1.33	0.96	0.52	0.48	0.87	0.66	0.98	1.29
Piute	1.15	1.29	0.58	0.29	0.69	0.24	0.67	1.35	0.78
Sevier	0.34	0.29	0.41	0.54	0.40	0.57	0.53	0.76	0.67
Washington	0.00	1.50	--	0.00	0.33	0.80	0.33	0.00	1.67
Wayne	0.80	0.87	0.00	0.73	2.43	2.74	3.94	1.10	3.00
<b>REGIONAL TOTALS</b>	<b>0.86</b>	<b>0.90</b>	<b>0.62</b>	<b>0.51</b>	<b>0.64</b>	<b>0.79</b>	<b>0.80</b>	<b>0.95</b>	<b>0.89</b>
<u>Northeastern Region</u>									
Daggett	0.00	0.00	0.00	0.00	0.00	2.00	--	0.00	2.25
Duchesne	0.88	0.59	0.71	0.50	0.34	0.77	0.19	1.78	1.20
Uintah	0.81	0.69	0.22	0.12	1.32	0.40	0.33	1.80	1.38
<b>REGIONAL TOTALS</b>	<b>0.82</b>	<b>0.60</b>	<b>0.40</b>	<b>0.30</b>	<b>0.67</b>	<b>0.74</b>	<b>0.25</b>	<b>1.56</b>	<b>1.38</b>
<u>Southeastern Region</u>									
Carbon	0.26	0.62	0.35	0.61	0.72	0.69	0.19	0.58	1.88
Emery	0.79	0.04	0.67	0.65	1.44	1.37	0.39	0.18	1.27
Grand	0.63	0.42	0.79	2.84	1.85	1.42	0.26	0.33	3.39
San Juan	0.11	0.25	1.46	1.33	0.50	0.43	0.00	1.56	4.00
<b>REGIONAL TOTALS</b>	<b>0.44</b>	<b>0.40</b>	<b>0.64</b>	<b>1.22</b>	<b>1.31</b>	<b>1.05</b>	<b>0.27</b>	<b>0.40</b>	<b>2.14</b>
Unknown counties	1.49	0.43	0.35	0.60	0.59	1.18	0.77	1.48	1.00
Mixed counties	--	0.00	--	3.00	0.00	0.00	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>1.10</b>	<b>0.79</b>	<b>0.95</b>	<b>0.91</b>	<b>0.81</b>	<b>0.93</b>	<b>0.88</b>	<b>1.21</b>	<b>1.23</b>

Table 7. Percentage distribution of chukar harvest by region and county, 1971-79.

Region and County	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>									
Box Elder	25.52	30.59	27.24	40.28	30.32	32.64	37.25	49.32	27.64
Cache	4.69	6.44	5.44	5.70	3.56	5.04	6.97	4.51	1.29
Davis	1.78	1.96	3.00	1.57	0.39	2.31	1.77	2.95	2.58
Morgan	4.76	3.13	7.17	2.00	3.71	0.79	2.21	2.74	2.75
Rich	0.21	0.37	0.16	0.34	0.08	0.60	0.09	0.33	0.34
Summit	0.49	4.23	1.69	0.55	2.31	0.46	0.66	0.27	1.15
Weber	3.36	5.33	1.02	2.08	2.03	1.16	1.19	2.19	0.87
<b>REGIONAL TOTALS</b>	<b>40.80</b>	<b>52.05</b>	<b>45.72</b>	<b>52.53</b>	<b>42.40</b>	<b>43.00</b>	<b>50.13</b>	<b>62.31</b>	<b>36.61</b>
<b>Central Region</b>									
Juab	3.57	3.19	3.23	2.85	2.23	1.85	2.12	0.88	2.94
Salt Lake	3.46	5.52	6.23	3.66	3.79	2.36	5.78	3.65	4.12
Sanpete	1.01	0.74	1.14	2.21	2.62	0.69	2.07	1.43	4.63
Tooele	30.42	17.17	15.33	14.16	13.09	12.71	17.08	16.74	20.44
Utah	5.59	6.87	16.24	11.23	6.57	13.96	8.52	5.18	8.05
Wasatch	1.15	0.18	2.64	0.64	0.23	0.42	0.44	1.10	0.20
<b>REGIONAL TOTALS</b>	<b>45.21</b>	<b>33.66</b>	<b>44.82</b>	<b>34.75</b>	<b>28.53</b>	<b>31.99</b>	<b>36.01</b>	<b>28.98</b>	<b>40.37</b>
<b>Southern Region</b>									
Beaver	--	0.00	--	0.00	0.00	0.46	0.04	0.00	0.00
Garfield	0.00	0.06	0.00	0.30	0.39	0.23	0.00	0.55	0.34
Iron	0.24	2.02	0.08	0.00	0.00	0.14	--	0.00	0.00
Kane	0.07	0.00	--	0.00	0.00	0.00	--	0.00	0.50
Millard	4.44	3.43	2.84	1.53	1.25	2.54	2.52	1.49	2.47
Piute	0.80	0.55	0.59	0.43	0.70	0.37	0.71	0.70	1.57
Sevier	1.40	0.98	1.69	1.62	2.34	1.57	2.56	1.83	3.59
Washington	0.00	0.18	--	0.00	0.04	0.18	0.04	0.00	0.14
Wayne	0.14	1.23	0.00	0.34	2.19	2.40	2.78	0.33	0.17
<b>REGIONAL TOTALS</b>	<b>7.10</b>	<b>8.46</b>	<b>5.20</b>	<b>4.21</b>	<b>6.92</b>	<b>7.91</b>	<b>8.65</b>	<b>4.90</b>	<b>8.77</b>
<b>Northeastern Region</b>									
Daggett	0.00	0.00	0.00	0.00	0.00	0.18	--	0.00	0.25
Duchesne	0.98	1.41	0.39	0.68	0.59	0.79	0.40	0.49	0.67
Uintah	1.33	1.47	0.16	0.17	1.29	0.18	0.52	0.27	0.50
<b>REGIONAL TOTALS</b>	<b>2.31</b>	<b>2.88</b>	<b>0.55</b>	<b>0.85</b>	<b>1.88</b>	<b>1.16</b>	<b>1.02</b>	<b>0.76</b>	<b>1.43</b>
<b>Southeastern Region</b>									
Carbon	0.38	1.59	0.79	1.40	3.17	2.22	0.26	0.33	5.21
Emery	0.52	0.06	0.39	0.85	7.93	1.90	0.88	0.21	1.99
Grand	0.84	0.67	1.02	3.74	7.89	5.50	0.93	0.76	5.33
San Juan	0.07	0.06	0.75	0.34	0.27	0.46	0.00	0.43	0.22
<b>REGIONAL TOTALS</b>	<b>1.82</b>	<b>2.39</b>	<b>2.96</b>	<b>6.34</b>	<b>19.27</b>	<b>10.08</b>	<b>2.07</b>	<b>1.74</b>	<b>12.76</b>
Unknown counties	2.76	0.55	0.75	1.19	1.02	5.87	2.12	1.31	0.06
Mixed counties	--	0.00	--	0.13	0.00	0.00	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>



Table 8. Percentage distribution of chukar hunting pressure by region and county, 1971-79.

Region and County	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>									
Box Elder	16.95	27.51	18.38	25.08	20.53	23.07	26.68	33.14	25.32
Cache	5.71	6.82	7.56	5.68	4.55	6.65	5.51	6.13	2.65
Davis	2.01	1.75	2.55	0.89	1.02	2.40	1.20	1.62	1.45
Morgan	3.13	2.92	4.16	3.77	4.39	2.36	2.21	3.06	2.45
Rich	0.23	0.44	0.19	0.23	0.32	0.69	0.58	0.33	1.10
Summit	0.81	2.63	1.61	1.17	1.27	0.30	0.58	0.44	1.38
Weber	4.29	3.85	2.77	3.54	3.56	1.80	1.40	3.43	1.58
<b>REGIONAL TOTALS</b>	<b>33.13</b>	<b>45.91</b>	<b>37.21</b>	<b>40.36</b>	<b>35.63</b>	<b>37.26</b>	<b>38.15</b>	<b>48.15</b>	<b>35.93</b>
<b>Central Region</b>									
Juab	3.17	2.92	3.78	3.30	3.31	3.73	2.56	1.70	3.20
Salt Lake	4.94	6.82	5.84	6.03	4.07	4.03	3.61	4.98	4.24
Sanpete	1.35	0.93	0.97	2.10	2.96	1.84	2.02	2.47	4.96
Tooele	23.24	17.67	16.51	16.41	15.80	13.77	17.49	19.08	18.39
Utah	12.99	8.08	18.23	14.42	12.71	14.45	13.38	9.45	11.95
Wasatch	2.43	0.63	1.72	0.66	1.05	0.69	0.70	1.03	0.55
<b>REGIONAL TOTALS</b>	<b>48.11</b>	<b>37.05</b>	<b>47.06</b>	<b>42.92</b>	<b>39.89</b>	<b>38.51</b>	<b>39.74</b>	<b>38.71</b>	<b>43.30</b>
<b>Southern Region</b>									
Beaver	—	0.10	—	0.00	0.00	0.73	0.19	0.07	0.00
Garfield	0.12	0.10	0.04	0.27	0.06	0.43	0.04	0.33	0.24
Iron	0.23	0.93	0.22	0.00	0.25	0.17	—	0.07	0.07
Kane	0.04	0.00	—	0.00	0.00	0.21	—	0.00	0.21
Millard	3.01	2.04	2.81	2.68	2.10	2.70	3.33	1.85	2.34
Piute	0.77	0.34	0.97	1.36	0.83	1.42	0.93	0.63	2.48
Sevier	4.48	2.73	3.89	2.76	4.74	2.57	4.23	2.92	6.58
Washington	0.23	0.10	—	0.00	0.10	0.21	0.12	0.00	0.10
Wayne	0.19	1.12	0.04	0.43	0.73	0.81	0.62	0.37	0.07
<b>REGIONAL TOTALS</b>	<b>9.07</b>	<b>7.45</b>	<b>7.97</b>	<b>7.50</b>	<b>8.80</b>	<b>9.26</b>	<b>9.46</b>	<b>6.24</b>	<b>12.09</b>
<b>Northeastern Region</b>									
Daggett	0.04	0.18	0.11	0.08	0.10	0.09	—	0.07	0.14
Duchesne	1.24	1.90	0.52	1.24	1.40	0.94	1.86	0.33	0.69
Uintah	1.81	1.70	0.67	1.28	0.79	0.43	1.67	0.18	0.45
<b>REGIONAL TOTALS</b>	<b>3.09</b>	<b>3.80</b>	<b>1.31</b>	<b>2.60</b>	<b>2.29</b>	<b>1.46</b>	<b>3.53</b>	<b>0.59</b>	<b>1.27</b>
<b>Southeastern Region</b>									
Carbon	1.62	2.04	2.13	2.10	3.59	3.00	1.20	0.70	3.41
Emery	0.73	1.22	0.56	1.21	4.48	1.29	1.98	1.44	1.93
Grand	1.47	1.27	1.24	1.21	3.46	3.60	3.10	2.77	1.93
San Juan	0.73	0.19	0.49	0.23	0.45	0.99	0.39	0.33	0.07
<b>REGIONAL TOTALS</b>	<b>4.56</b>	<b>4.72</b>	<b>4.42</b>	<b>4.74</b>	<b>11.98</b>	<b>8.88</b>	<b>6.67</b>	<b>5.24</b>	<b>7.34</b>
Unknown counties	2.05	1.02	2.02	1.83	1.40	4.63	2.40	1.07	0.07
Mixed counties	—	0.05	—	0.04	0.00	0.00	0.04	0.00	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 9. Statewide summary of chukar partridge harvest statistics, 1958-79.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Chukars Per Hunter-day	Chukars Per Hunter
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
1973	13,888	48,135	50,677	0.95	3.47
1974	16,412	44,658	48,856	0.91	2.72
1975	16,156	41,151	51,083	0.81	2.57
1976	14,171	43,726	47,143	0.93	3.09
1977	12,691	34,155	38,873	0.88	2.69
1978	16,291	65,747	54,239	1.21	4.04
1979	15,210	51,918	42,254	1.23	3.41
TOTALS (1958-79)	343,592	973,477	1,001,732	0.97	2.84
AVERAGES (1958-78)	15,637	43,884	45,689	0.96	2.81

Table 10. Chukar field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS				Birds/100 Hrs. Hunter		
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours		Total Birds	
<u>Northern Region</u>											
Box Elder	66	152	584	103	18	63	140	554	103	19	0.74
Cache	3	7	30	2	7	3	7	30	2	7	0.29
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>69</b>	<b>159</b>	<b>614</b>	<b>105</b>	<b>17</b>	<b>66</b>	<b>147</b>	<b>574</b>	<b>105</b>	<b>18</b>	<b>0.71</b>
<u>Central Region</u>											
Juab	--	--	--	--	--	1	2	4	0	0	0.00
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	5	10	40	33	83	4	8	35	31	89	3.88
Utah	28	80	229	111	48	15	42	147	22	15	0.52
Wasatch	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>33</b>	<b>90</b>	<b>269</b>	<b>144</b>	<b>54</b>	<b>20</b>	<b>52</b>	<b>186</b>	<b>53</b>	<b>28</b>	<b>1.02</b>
<u>Southern Region</u>											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	5	13	25	19	76	5	13	25	19	76	1.46
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>13</b>	<b>25</b>	<b>19</b>	<b>76</b>	<b>5</b>	<b>13</b>	<b>25</b>	<b>19</b>	<b>76</b>	<b>1.46</b>
<u>Northeastern Region</u>											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<u>Southeastern Region</u>											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	19	38	88	79	90	10	18	64	69	108	3.83
San Juan	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>19</b>	<b>38</b>	<b>88</b>	<b>79</b>	<b>90</b>	<b>10</b>	<b>18</b>	<b>64</b>	<b>69</b>	<b>108</b>	<b>3.83</b>
<b>STATE TOTALS</b>	<b>126</b>	<b>300</b>	<b>996</b>	<b>347</b>	<b>237</b>	<b>101</b>	<b>230</b>	<b>849</b>	<b>246</b>	<b>29</b>	<b>1.07</b>

Table 11. Chukar hunter success trend as determined by field bag checks, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter
<u>Northern Region</u>												
Box Elder	29	2.12	17	1.05	27	1.10	16	0.75	40	1.77	19	0.74
Cache	16	0.79	53	1.00	18	0.56	2	0.12	1	--	7	6.29
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	25	0.50	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>28</b>	<b>1.94</b>	<b>18</b>	<b>1.04</b>	<b>25</b>	<b>0.98</b>	<b>10</b>	<b>0.47</b>	<b>34</b>	<b>1.48</b>	<b>18</b>	<b>0.71</b>
<u>Central Region</u>												
Juab	3	0.16	4	0.33	11	1.00	8	0.36	7	0.75	0	0.00
Salt Lake	0	0.00	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	21	0.68	21	0.84	21	1.39	10	0.18	33	2.08	89	3.88
Utah	--	--	7	0.29*	11	0.50	33	0.00	75	2.50	15	0.52
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>17</b>	<b>0.55</b>	<b>17</b>	<b>0.78</b>	<b>16</b>	<b>1.13</b>	<b>10</b>	<b>0.27</b>	<b>40</b>	<b>2.15</b>	<b>28</b>	<b>1.02</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	233	1.75	--	--	--	--	76	1.46
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	22	0.72	37	1.54	1	--	--	--	--	--
Piute	--	--	100	0.50	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>22</b>	<b>0.70</b>	<b>40</b>	<b>1.60</b>	<b>1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>76</b>	<b>1.46</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0	0.00	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	33	0.50	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>33</b>	<b>0.50</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	200	1.33	47	1.75	9	1.00	--	--	--	--	--	--
Grand	112	4.00	53	2.73	20	2.08	10	0.20	--	--	108	3.83
San Juan	0	0.00	34	1.14	56	2.00	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>104</b>	<b>2.40</b>	<b>48</b>	<b>1.68</b>	<b>22</b>	<b>1.95</b>	<b>10</b>	<b>0.20</b>	<b>--</b>	<b>--</b>	<b>108</b>	<b>3.83</b>
<b>STATE TOTALS</b>	<b>27</b>	<b>1.60</b>	<b>24</b>	<b>0.95</b>	<b>24</b>	<b>1.11</b>	<b>10</b>	<b>0.44</b>	<b>36</b>	<b>1.60</b>	<b>29</b>	<b>1.07</b>

\*Chukars per hunter index based on all hunts.

# SAGE GROUSE

## SUMMARY

Harvest data for 1978 indicated a good breeding population of sage grouse for 1979. Strutting ground surveys were hampered by poor access over much of the state.

Brood surveys showed significantly increased populations throughout the state during 1979. Birds observed per 100 hours increased 53 percent compared to 1978 and was 70 percent above average.

The good population of 1979 was apparent in harvest statistics collected from questionnaires and from field bag checks. Total statewide harvest increased by 9 percent and established a record high harvest for sage grouse. Total hunters and hunter-days afield both increased to record levels. Sage grouse bagged per hunter and per 100 hours effort likewise showed an increase over 1978.

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### Strutting Ground Counts

The status of the sage grouse breeding population for 1979 as indicated by strutting ground counts is shown in Table 1 of this section. Results of this survey for 1979 compared to 1978 and the 1969-78 average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Number of grounds counted	120	-13	+ 3
Total grouse counted	2,808	0	+15
Average male grouse per ground	23.4	+15	+ 9
Percent change from previous year (comparable grounds)	-13	--	--

Access for spring 1979, strutting ground counts was extremely poor in the central, southern and eastern areas of the state. Counts were down 39 percent in the Central Region, 22 percent in the Southern Region and 25 percent in the Northeastern Region. The statewide index for comparable grounds was down 13 percent. Harvest data for 1978 indicated increased and above average populations going into the 1978-79 winter. Much of the decrease in grouse population, indicated by strutting ground counts, resulted from poor access rather than actual decreases in grouse populations.

### Brood Counts

Results of the survey for 1979 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 1979 are compared to 1978 and the previous 10 year average as follows:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total sage grouse counted	4,024	+13	+21
Young per 100 adults	175	- 3	+22
Mean brood size	4.77	- 4	+ 6
Sage grouse observed per 100 hours	624	+53	+71
Total hours effort	645	-26	-29

The effort devoted to sage grouse brood counts was down significantly compared to 1978 and well below average. However, the total number of grouse counted was 13 percent above 1978 and 21 percent above average.

Very good production, even better than during 1978, was apparent throughout the state during 1979. Sage grouse density increased from 1978 and sage grouse numbers were high statewide.

## Harvest

### Hunter Questionnaire

Results of the 1979 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 statewide harvest statistics in Table 10. The results of the 1979 hunting season compared to 1978 and the 1963-78 average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Sage grouse hunters	16,927	+ 4	+60
Sage grouse harvested	28,280	+ 9	+92
Hunter-days afield	30,682	+ 3	+71
Sage grouse per hunter-day	0.92	+ 5	+12
Sage grouse per hunter	1.67	+ 4	+20

The very good production of 1979 was quite apparent in the harvest. Total statewide harvest increased by 9 percent and set a new record for sage grouse harvested in Utah. Total sage grouse hunters and hunter-days afield both increased to record numbers, reflecting the increasing interest in sage grouse hunting. Hunter success increased in every region except the Southeastern Region.

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

### Field Bag Checks

A summary of field big check data for 1979 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12. Results of the 1979 survey compared to 1978 and the 1969-78 average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	2,290	- 2	- 9
Total hours hunted	7,885	-19	-22
Sage grouse per hunter (complete hunts)	1.01	+ 3	+28
Sage grouse bagged per 100 hours	27	+17	+50
Average hours per hunter-day (complete hunts)	3.7	-12	-35
Hours hunted per grouse bagged	3.7	-15	-36

Field bag checks substantiated the harvest questionnaire data on hunter success. Sage grouse bagged per hunter increased and remained high and grouse bagged per 100 hours effort increased by 17 percent to 50 percent above average. The average hunter spent less time afield than in 1978, but was more successful because of the increased populations of sage grouse.

### Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1979 is found in Table 13 and the trend from 1976-79 in Table 14.

Following is data derived from wing surveys in 1979, compared to 1978 and the 1973-78 averages:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Sample size	1,956	+ 9	+60
Percent males	42	- 4	0
Percent females	58	+ 4	0
Young per 100 adults	125	-32	-18
Young per 100 hens (adult)	196	-33	-18

Analysis of wings collected at checking stations during the 1979 season would seem to indicate that production was down compared to 1978. However, one must keep in mind that 1978 was an exceptional production year and, as a result, the 1979 spring population consisted of a very high percentage of yearlings. Yearling hens are less successful nesters than adults. Yearlings cannot be separated from adults in the wing samples. Therefore, a high percentage of yearlings in the population tends to deflate young/adult hen ratios.



Sage grouse bagged per hunter and per hunter-day.

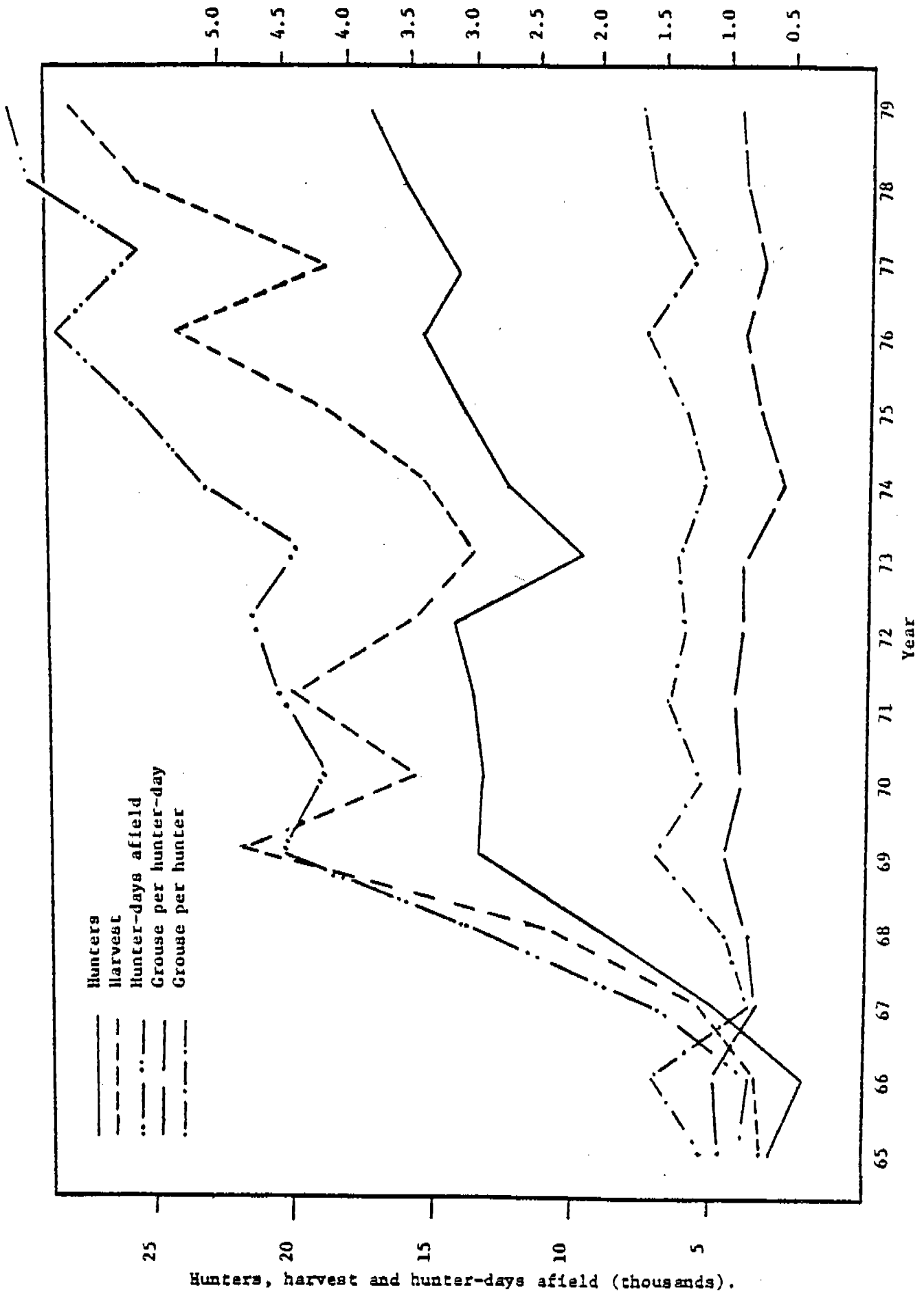


Figure 1. Statewide trend of sage grouse harvest statistics.

Hunters, harvest and hunter-days afield (thousands).

Table 1. Summary of sage grouse strutting ground counts by region and county, 1969-79.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>											
<b>BOX ELDER</b>											
No. strutting grounds counted	22	21	21	20	21	25	19	15	22	18	24
Total grouse counted	667	556	479	422	325	306	346	239	621	452	763
County average	30.3	26.5	22.8	21.1	15.5	12.2	18.2	15.9	28.2	25.1	31.8
% change from previous year - comparable grounds	+94	-8	-14	-10	-30	-19	+29	0	+53	+3	+69
<b>CACHE</b>											
No. strutting grounds counted	2	2	3	3	2	3	3	3	3	1	3
Total grouse counted	45	59	58	57	50	44	100	35	45	15	32
County average	22.5	29.5	22.7	19.0	25.0	14.7	33.1	11.7	15.0	15.0	10.7
% change from previous year - comparable grounds	+57	+31	+7	-16	+6	-14	+133	-68	+29	-10	0
<b>MORGAN</b>											
No. strutting grounds counted	2	2	2	3	3	3	3	3	3	3	3
Total grouse counted	85	45	35	53	61	63	41	52	43	111	75
County average	42.5	22.5	17.5	17.7	20.3	21.0	13.7	17.3	14.3	37.0	25.0
% change from previous year - comparable grounds	--	-47	-22	+29	+15	+3	-35	+27	-17	+158	-32
<b>RICH</b>											
No. strutting grounds counted	6	8	7	9	12	14	10	8	13	15	11
Total grouse counted	298	324	240	254	299	389	268	326	321	417	382
County average	49.7	40.5	34.3	28.2	24.9	27.8	26.8	40.8	24.7	27.8	34.7
% change from previous year - comparable grounds	+84	-20	-12	-18	-13	+31	-32	+57	-13	+17	+11

Table 1. Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>SUMMIT</b>											
No. strutting grounds counted	5	5	5	5	5	5	4	6	6	6	8
Total grouse counted	168	185	223	152	138	113	88	107	169	91	116
County average											
(all strutting grounds)	33.6	37.0	44.6	30.4	27.6	22.6	22.0	17.8	28.2	15.2	14.5
% change from previous year - comparable grounds	+60	+10	+21	-32	-18	-18	-30	-10	+52	-29	+5
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	37	37	38	40	43	50	39	35	47	43	49
Total grouse counted	1,263	1,147	1,045	938	873	915	843	759	1,199	1,086	1,368
Regional average											
(all strutting grounds)	34.1	31.0	27.5	23.4	20.3	18.3	21.6	22.7	25.5	25.3	27.9
% change from previous year - comparable grounds	+85	-9	-16	-16	-20	-1	-1	+8	+19	+10	+29
<b>Southern Region</b>											
<b>GARFIELD</b>											
No. strutting grounds counted	10	13	14	14	14	14	14	14	10	11	9
Total grouse counted	213	322	351	330	166	327	233	201	192	224	211
County average											
(all strutting grounds)	21.3	24.8	25.1	23.5	11.9	23.4	16.6	14.3	19.2	20.4	23.4
% change from previous year - comparable grounds	+59	+31	0	-7	-50	+114	-35	-14	+2	+4	0
<b>WAYNE</b>											
No. strutting grounds counted	8	11	11	12	10	11	11	13	12	12	9
Total grouse counted	497	458	248	311	231	237	160	260	256	166	221
County average											
(all strutting grounds)	62.1	41.6	22.5	26.0	23.1	21.5	14.5	20.0	21.3	13.8	24.5
% change from previous year - comparable grounds	+47	-15	-46	+18	-21	+3	-33	+3	+19	-31	-59

Table 1. Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>BEAVER</b>											
No. strutting grounds counted	2	2	5	5	5	5	6	8	7	7	6
Total grouse counted	79	47	141	153	82	110	122	108	90	66	134
County average (all strutting grounds)	39.5	23.5	28.2	30.6	16.4	22.0	20.3	13.5	12.9	9.4	22.3
% change from previous year - comparable grounds	--	-41	-49	+9	-47	+34	+1	-32	+8	-27	+137
<b>PIUTE</b>											
No. strutting grounds counted	1	1	1	1	1	--	--	--	--	--	--
Total grouse counted	6	7	7	5	0	--	--	--	--	--	--
County average (all strutting grounds)	6.0	7.0	7.0	5.0	--	--	--	--	--	--	--
% change from previous year - comparable grounds	--	+17	0	-29	--	--	--	--	--	--	--
<b>IRON</b>											
No. strutting grounds counted	3	4	6	7	0	9	9	9	5	10	5
Total grouse counted	23	64	47	66	0	86	51	26	54	87	83
County average (all strutting grounds)	7.7	16.0	7.8	9.3	--	9.6	5.6	2.8	10.8	8.7	16.6
% change from previous year - comparable grounds	--	-9	-50	+42	--	--	-41	-50	+108	+11	+118
<b>SEVIER</b>											
No. strutting grounds counted	0	1	1	1	1	1	--	2	3	4	4
Total grouse counted	--	0	0	0	0	9	--	2	26	23	9
County average (all strutting grounds)	--	0.0	0.0	0.0	--	9.0	--	1.0	8.9	5.7	2.3
% change from previous year - comparable grounds	--	--	--	--	--	--	--	--	+200	-11	-60

Table 1. Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>MILLARD</b>											
No. strutting grounds counted	--	--	--	--	--	--	--	1	1	1	--
Total grouse counted	--	--	--	--	--	--	--	11	3	14	--
County average (all strutting grounds)	--	--	--	--	--	--	--	11.0	3.0	14.0	--
% change from previous year - comparable grounds	--	--	--	--	--	--	--	--	-73	+367	--
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	24	33	38	40	31	40	40	47	37	45	33
Total grouse counted	818	928	794	865	479	769	566	608	618	580	691
Regional average (all strutting grounds)	34.1	28.1	20.9	21.6	15.4	19.2	14.3	12.9	16.7	12.9	20.9
% change from previous year - comparable grounds	+75	-5	-30	+7	-40	+49	-30	-13	+14	-13	-22
<b>Central Region</b>											
<b>SANPETE</b>											
No. strutting grounds counted			2	1	2	2	2	2	2	2	2
Total grouse counted			13	2	0	0	5	10	4	7	6
County average (all strutting grounds)			6.5	2.0	--	--	2.5	5.0	2.0	3.5	3.0
% change from previous year - comparable grounds			--	-75	--	--	--	+100	-60	+75	-14
<b>TOOELE</b>											
No. strutting grounds counted	3	3	4	5	5	5	5	5	5	5	5
Total grouse counted	96	74	92	128	60	95	59	80	77	37	116
County average (all strutting grounds)	32.0	24.7	23.0	25.6	12.0	19.0	11.8	16.0	15.4	7.4	23.2
% change from previous year - comparable grounds	+59	-23	-16	0	-35	+43	-30	+15	-4	-52	-38

Table 1. Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>WASATCH</b>											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total grouse counted	100	70	102	52	201	216	206	184	119		
County average (all strutting grounds)	50.0	35.0	51.0	26.0	100.5	108.0	103.0	92.0	59.5		
% change from previous year - comparable grounds	--	-30	+46	-49	+103	+7	-5	-11	-35		
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	5	8	9	9	9	9	9	9	9	9	9
Total grouse counted	174	175	232	112	265	306	287	228	197		
Regional average (all strutting grounds)	34.8	21.9	29.0	12.4	29.4	34.0	31.9	25.3	21.8		
% change from previous year - comparable grounds	-23	-24	+15	-42	+45	+12	-6	-21	-35		
<b>Northeastern Region</b>											
<b>DAGGETT</b>											
No. strutting grounds counted	1	4	4	5	3	3	3	3	3	3	3
Total grouse counted	26	37	26	41	30	40	55	78	47		
County average (all strutting grounds)	26.0	9.2	6.5	8.2	10.0	13.3	18.3	26.0	15.7		
% change from previous year - comparable grounds	--	-39	-28	+31	-19	+33	+38	+42	-40		
<b>DUCHESNE</b>											
No. strutting grounds counted	2	3	5	5	11	11	11	14	14	14	10
Total grouse counted	27	27	74	43	172	172	161	227	93		
County average (all strutting grounds)	13.5	9.0	14.8	8.6	15.6	16.3	11.5	16.2	9.3		
% change from previous year - comparable grounds	--	-26	0	-41	+44	-5	-14	+37	-35		

Table 1. Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>UINTAH</b>											
No. strutting grounds counted	2	4	5	6	11	11	9	10	11	13	11
Total grouse counted	98	105	63	118	156	163	240	257	245	454	338
County average											
(all strutting grounds)	49.0	26.2	12.6	19.7	14.2	14.8	26.7	25.7	22.3	34.9	30.7
% change from previous year - comparable grounds	--	-32	-42	+77	-25	+8	+29	0	-16	+63	-18
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	2	7	12	15	21	26	23	28	28	30	24
Total grouse counted	98	158	127	218	240	388	442	542	461	759	478
Regional average											
(all strutting grounds)	49.0	22.6	10.6	14.5	11.4	14.9	19.2	19.4	16.5	25.3	19.9
% change from previous year - comparable grounds	--	-32	-39	+32	-25	+13	+12	-3	-13	+51	-25
<b>Southeastern Region</b>											
<b>CARBON</b>											
No. strutting grounds counted	7	1	3	1	0	8	2	5	9	5	--
Total grouse counted	45	39	58	40	0	77	65	134	140	41	--
County average											
(all strutting grounds)	6.4	39.0	19.3	40.0	--	9.6	32.5	26.8	15.6	8.2	--
% change from previous year - comparable grounds	+100	--	0	+2	--	--	+48	+83	-10	-64	--
<b>EMERY</b>											
No. strutting grounds counted	2	3	3	3	0	3	--	1	2	1	--
Total grouse counted	17	8	3	11	0	2	--	13	33	12	--
County average											
(all strutting grounds)	8.5	2.7	1.0	3.7	--	0.6	--	13.0	16.5	12.0	--
% change from previous year - comparable grounds	+60	-82	-63	+270	--	--	--	--	+23	-25	--

Table 4: Continued.

Region and County	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
<b>SAN JUAN</b>											
No. strutting grounds counted	3	6	6	6	4	6	6	6	4	5	4
Total grouse counted	42	115	152	168	105	137	115	98	117	96	67
County average											
(all strutting grounds)	14.0	19.2	25.3	28.0	26.2	22.8	19.1	16.3	29.2	18.2	16.7
% change from previous year - comparable grounds	+312	+38	+32	+11	+42	-19	-9	-14	+22	-17	+1
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	12	10	12	10	4	17	8	12	15	11	4
Total grouse counted	104	121	213	219	105	216	180	245	290	149	67
Regional average											
(all strutting grounds)	8.7	12.1	17.8	21.9	26.2	12.8	22.5	20.4	19.3	13.5	16.7
% change from previous year - comparable grounds	+194	+3	+20	+13	+42	-19	+21	+20	+4	-37	+1
<b>STATE TOTALS</b>											
No. strutting grounds counted	78	92	108	113	108	142	119	131	136	138	120
Total grouse counted	2,379	2,528	2,354	2,472	1,809	2,482	2,296	2,460	2,855	2,802	2,808
State average-grouse per strutting ground	30.5	27.5	21.8	21.9	16.8	17.5	19.3	18.8	21.0	20.3	23.4
% change from previous year - comparable grounds	+81	-8	-17	-1	-26	+17	-4	+2	+6	-15	-13



Table 2. Sage grouse summer inventory summary, 1979.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults	Total Yng.	Young/100 Ad.	Vehicle Miles		Hours Effort		Birds/100 hrs.	
	No. Ad.	Yng.		Ad.	Yng.					Ad.	Miles	Veh.	Horse		Walk
<u>Northern Region</u>															
Box Elder	28	28	121	8	19	136	172	140	81	18	2	15	0	17	1,835
Cache	0	0	0	0	0	0	0	0	0	310	15	0	4	19	0
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	6	6	24	2	9	50	58	33	66	10	4	20	0	24	412
Rich	26	26	119	11	20	100	137	139	101	372	10	0	19	29	952
Summit	15	15	75	8	20	20	43	95	221	341	19	27	15	61	226
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>75</b>	<b>75</b>	<b>339</b>	<b>29</b>	<b>68</b>	<b>306</b>	<b>410</b>	<b>407</b>	<b>99</b>	<b>1,051</b>	<b>50</b>	<b>62</b>	<b>38</b>	<b>150</b>	<b>545</b>
<u>Central Region</u>															
Juab	8	8	34	0	0	5	13	34	262	15	2	6	0	8	588
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	9	9	58	42	68	31	82	126	154	220	5	16	7	28	743
Tooele	22	22	124	14	60	5	41	184	449	105	8	9	12	29	776
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	50	50	245	10	26	106	166	271	163	360	41	17	9	67	652
<b>REGIONAL TOTALS</b>	<b>89</b>	<b>89</b>	<b>461</b>	<b>66</b>	<b>154</b>	<b>147</b>	<b>302</b>	<b>615</b>	<b>204</b>	<b>700</b>	<b>56</b>	<b>48</b>	<b>28</b>	<b>132</b>	<b>695</b>
<u>Southern Region</u>															
Beaver	1	1	4	--	--	3	4	4	100	90	3	--	6	9	89
Garfield	23	23	101	40	125	20	83	226	272	198	19	28	19	66	468
Iron	41	41	192	24	55	43	108	247	229	10	1	22	4	27	1,315
Kane	--	--	--	26	17	4	30	17	57	60	5	--	3	8	588
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	23	23	109	2	12	17	42	121	288	205	16	12	5	33	494
<b>REGIONAL TOTALS</b>	<b>88</b>	<b>88</b>	<b>406</b>	<b>92</b>	<b>209</b>	<b>87</b>	<b>267</b>	<b>615</b>	<b>230</b>	<b>563</b>	<b>44</b>	<b>62</b>	<b>37</b>	<b>143</b>	<b>617</b>
<u>Northeastern Region</u>															
Daggett	29	29	148	25	68	74	128	216	169	310	17	--	10	27	1,274
Duchesne	37	37	175	33	53	110	180	228	127	441	43	8	38	89	458
Uintah	60	60	280	37	172	65	162	452	279	968	77	7	3	87	705
<b>REGIONAL TOTALS</b>	<b>126</b>	<b>126</b>	<b>603</b>	<b>95</b>	<b>293</b>	<b>249</b>	<b>470</b>	<b>896</b>	<b>191</b>	<b>1,719</b>	<b>137</b>	<b>15</b>	<b>51</b>	<b>203</b>	<b>673</b>
<u>Southeastern Region</u>															
Carbon	3	3	8	4	16	3	6	24	400	209	15	--	--	15	200
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	1	1	5	--	--	6	7	5	71	70	5	--	--	5	240
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>4</b>	<b>13</b>	<b>4</b>	<b>16</b>	<b>9</b>	<b>13</b>	<b>29</b>	<b>223</b>	<b>279</b>	<b>20</b>	<b>--</b>	<b>--</b>	<b>20</b>	<b>210</b>
<b>STATE TOTALS</b>	<b>382</b>	<b>382</b>	<b>1822</b>	<b>477</b>	<b>740</b>	<b>798</b>	<b>1,462</b>	<b>2,562</b>	<b>175</b>	<b>4,312</b>	<b>307</b>	<b>187</b>	<b>154</b>	<b>648</b>	<b>621</b>

Table 3. Trend of sage grouse young per 100 adults, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	153	62	75	83	225	119	106	250	75	125	81	
Cache	71	10	168	171	80	161	329	486	450	--	0	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	533	400	58	600	245	131	64	71	35	414	66	
Rich	98	133	137	55	132	153	94	106	81	273	101	
Summit	121	211	158	173	146	275	52	247	106	316	221	
Weber	208	--	325	144	500	--	--	200	0	--	--	
<b>REGIONAL TOTALS</b>	128	94	135	99	167	131	102	170	77	194	99	130
<b>Central Region</b>												
Juab	300	117	--	1800	500	--	--	--	76	46	262	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	191	84	288	177	138	89	280	414	257	224	154	
Tooele	395	215	188	322	318	314	168	286	123	283	449	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	89	205	212	145	68	101	118	123	54	93	163	
<b>REGIONAL TOTALS</b>	137	170	208	216	106	141	138	187	77	112	204	149
<b>Southern Region</b>												
Beaver	169	--	250	467	329	219	205	181	69	156	100	
Garfield	238	107	93	93	121	143	277	174	174	176	272	
Iron	550	214	183	37	350	46	--	--	80	313	229	
Kane	470	300	--	336	450	--	--	0	--	--	57	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	317	67	0	--	--	--	
Sevier	107	--	--	--	500	400	0	533	0	625	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	178	347	63	62	394	166	545	286	115	308	288	
<b>REGIONAL TOTALS</b>	201	186	85	76	311	157	287	194	103	224	230	182
<b>Northeastern Region</b>												
Daggett	493	344	168	273	150	266	51	190	169	198	169	
Duchesne	156	77	230	219	--	161	120	161	53	199	127	
Uintah	450	419	339	105	312	446	107	249	235	269	279	
<b>REGIONAL TOTALS</b>	383	305	278	134	234	321	97	206	154	226	191	234
<b>Southeastern Region</b>												
Carbon	250	167	145	125	328	185	116	214	46	164	400	
Emery	164	100	--	--	--	0	--	--	--	--	--	
Grand	--	--	275	--	0	--	400	25	3	--	71	
San Juan	37	28	70	26	375	82	47	22	24	94	--	
<b>REGIONAL TOTALS</b>	64	30	81	56	340	100	63	68	25	142	223	97
<b>STATE TOTALS</b>	160	117	138	100	195	160	120	171	87	181	175	143

Table 4. Trend of sage grouse mean brood size, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	5.16	4.13	4.25	3.93	4.69	4.07	3.81	5.59	4.36	4.76	4.32	
Cache	4.60	5.00	4.50	4.88	4.00	4.62	5.00	6.25	4.50			
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	5.33	4.00	5.50	6.00	4.40	4.75	3.80	4.25	3.50	6.44	4.00	
Rich	5.42	4.68	4.44	4.69	4.48	3.91	4.00	6.04	3.83	5.24	4.58	
Summit	5.91	5.00	5.58	4.73	4.56	5.00	3.75	5.00	4.50	5.77	5.00	
Weber	3.38	--	4.33	6.50	5.00	--	--	2.00	--	--	--	
<b>REGIONAL TOTALS</b>	5.18	4.55	4.98	4.58	4.55	4.17	4.03	5.45	4.17	5.20	4.52	4.69
<b>Central Region</b>												
Juab	2.00	3.50	--	7.50	5.00	--	--	--	4.50	3.33	4.25	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	5.40	4.50	6.00	5.33	4.75	4.00	4.00	5.67	3.20	4.57	6.44	
Tooele	5.62	4.44	4.19	4.81	4.90	5.25	5.50	5.07	4.17	5.13	5.64	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	4.64	4.52	2.94	3.06	4.00	4.24	3.86	4.70	3.27	4.90	4.90	
<b>REGIONAL TOTALS</b>	5.03	4.45	3.94	3.90	4.38	4.49	4.22	4.98	3.44	4.82	5.18	4.37
<b>Southern Region</b>												
Beaver	5.44	--	5.00	3.83	4.31	3.64	3.90	4.95	3.57	4.29	4.00	
Garfield	3.86	3.67	3.73	3.25	3.50	5.41	4.18	3.50	4.00	4.00	4.39	
Iron	--	3.67	4.33	3.71	5.33	6.33	--	--	3.00	5.50	4.68	
Kane	5.00	3.00	--	4.00	4.50	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	5.67	1.00	--	--	--	--	
Sevier	4.14	--	--	--	5.00	4.00	--	5.33	--	6.25	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	3.89	3.55	4.02	3.36	5.17	4.70	5.45	3.95	4.40	4.56	4.74	
<b>REGIONAL TOTALS</b>	4.07	3.60	4.10	3.53	4.72	4.54	4.27	4.18	4.00	4.55	4.61	4.16
<b>Northeastern Region</b>												
Daggett	4.93	4.37	4.00	3.80	4.65	4.93	3.25	4.55	4.80	5.05	5.10	
Duchesne	5.00	5.00	5.17	5.40	--	3.82	3.60	4.11	3.56	5.00	4.73	
Uintah	4.91	4.44	5.19	4.60	4.60	5.06	4.69	5.21	4.48	4.87	4.67	
<b>REGIONAL TOTALS</b>	4.92	4.46	5.04	4.60	4.61	4.82	4.24	4.70	4.30	4.94	4.79	4.66
<b>Southeastern Region</b>												
Carbon	2.50	5.00	4.67	4.14	3.50	3.92	2.67	5.05	4.14	5.17	2.67	
Emery	9.33	1.00	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	4.00	3.00	--	--	5.00	
San Juan	4.20	4.29	5.10	3.93	5.67	6.65	3.50	--	3.29	--	--	
<b>REGIONAL TOTALS</b>	4.92	4.00	5.00	4.05	4.43	5.47	3.17	4.77	3.71	5.17	3.25	4.47
<b>STATE TOTALS</b>	4.82	4.28	4.62	4.16	4.58	4.57	4.15	4.89	3.99	4.97	4.77	4.50

Table 5. Trend of sage grouse observed per 100 hours, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	563	365	253	467	166	459	187	457	670	452	1,835	
Cache	90	431	229	183	150	250	261	410	29	--	0	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	59	333	176	111	345	514	140	433	218	160	412	
Rich	678	987	228	348	298	428	452	724	580	838	952	
Summit	236	161	420	349	119	188	109	268	361	369	226	
Weber	800	--	155	92	40	--	--	12	--	--	--	
<b>REGIONAL TOTALS</b>	<b>468</b>	<b>387</b>	<b>288</b>	<b>319</b>	<b>188</b>	<b>398</b>	<b>204</b>	<b>429</b>	<b>461</b>	<b>400</b>	<b>545</b>	<b>354</b>
<b>Central Region</b>												
Juab	200	217	0	181	30	--	0	0	580	255	588	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	135	123	107	106	135	85	86	263	255	594	743	
Tooele	407	194	342	786	161	665	257	781	311	265	776	
Utah	--	0	--	--	--	--	--	--	--	--	--	
Wasatch	690	321	377	364	666	529	520	1,353	1,253	767	652	
<b>REGIONAL TOTALS</b>	<b>427</b>	<b>208</b>	<b>230</b>	<b>341</b>	<b>244</b>	<b>402</b>	<b>329</b>	<b>740</b>	<b>618</b>	<b>556</b>	<b>695</b>	<b>410</b>
<b>Southern Region</b>												
Beaver	1,186	--	420	486	277	460	188	555	428	242	89	
Garfield	646	409	604	358	258	603	112	226	211	545	468	
Iron	118	346	426	1,133	200	241	--	--	771	220	1,315	
Kane	924	80	--	253	550	--	--	233	0	--	588	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Plute	--	--	--	--	--	833	62	100	--	--	--	
Sevier	581	--	--	--	--	500	0	950	83	207	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	1,363	447	2,061	555	742	335	209	491	240	444	494	
<b>REGIONAL TOTALS</b>	<b>714</b>	<b>388</b>	<b>911</b>	<b>494</b>	<b>393</b>	<b>413</b>	<b>134</b>	<b>348</b>	<b>265</b>	<b>380</b>	<b>617</b>	<b>444</b>
<b>Northeastern Region</b>												
Daggett	626	414	835	346	308	381	132	352	575	637	1,274	
Duchesne	122	100	159	118	0	196	84	347	446	392	458	
Uintah	487	474	735	594	310	459	386	716	513	397	705	
<b>REGIONAL TOTALS</b>	<b>361</b>	<b>319</b>	<b>523</b>	<b>349</b>	<b>233</b>	<b>358</b>	<b>217</b>	<b>473</b>	<b>509</b>	<b>427</b>	<b>673</b>	<b>377</b>
<b>Southeastern Region</b>												
Carbon	26	59	45	309	500	146	49	147	283	295	200	
Emery	152	33	0	--	--	11	0	--	0	0	--	
Grand	--	0	133	25	25	--	500	1,125	550	71	240	
San Juan	2,875	653	560	775	300	856	321	304	341	194	--	
<b>REGIONAL TOTALS</b>	<b>179</b>	<b>451</b>	<b>218</b>	<b>432</b>	<b>215</b>	<b>360</b>	<b>128</b>	<b>220</b>	<b>332</b>	<b>237</b>	<b>210</b>	<b>277</b>
<b>STATE TOTALS</b>	<b>443</b>	<b>346</b>	<b>383</b>	<b>373</b>	<b>237</b>	<b>387</b>	<b>196</b>	<b>428</b>	<b>445</b>	<b>407</b>	<b>621</b>	<b>365</b>

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	131	3,362	4,265	1.27	10.96	15.08
Cache	90	2,503	1,863	0.74	8.16	6.59
Davis	0	0	0	0.00	0.00	0.00
Morgan	39	990	670	0.68	3.23	2.37
Rich	158	4,046	3,086	0.76	13.19	10.91
Summit	100	2,343	1,805	0.77	7.64	6.38
Weber	40	873	509	0.58	2.85	1.80
<b>REGIONAL TOTALS</b>	<b>558</b>	<b>14,117</b>	<b>12,198</b>	<b>0.87</b>	<b>46.03</b>	<b>43.13</b>
<u>Central Region</u>						
Juab (1)	10	306	378	1.24	1.00	1.34
Salt Lake (1)	15	437	378	0.87	1.42	1.34
Sanpete	28	859	509	0.59	2.80	1.80
Tooele (1)	10	233	160	0.69	0.76	0.57
Utah	60	1,528	1,368	0.90	4.98	4.84
Wasatch	125	2,605	1,747	0.67	8.49	6.18
<b>REGIONAL TOTALS</b>	<b>248</b>	<b>5,968</b>	<b>4,540</b>	<b>0.76</b>	<b>19.45</b>	<b>16.06</b>
<u>Southern Region</u>						
Beaver	14	233	247	1.06	0.76	0.87
Garfield	32	990	1,223	1.24	3.23	4.32
Iron	5	146	73	0.50	0.47	0.26
Kane	0	0	0	0.00	0.00	0.00
Millard	2	87	0	0.00	0.28	0.00
Piute	11	349	320	0.92	1.14	1.13
Sevier	22	553	291	0.53	1.80	1.03
Washington (1)	1	15	29	2.00	0.05	0.10
Wayne	50	1,150	1,717	1.49	3.75	6.07
<b>REGIONAL TOTALS</b>	<b>137</b>	<b>3,523</b>	<b>3,900</b>	<b>1.11</b>	<b>11.48</b>	<b>13.79</b>
<u>Northeastern Region</u>						
Daggett	23	728	932	1.28	2.37	3.29
Duchesne	61	1,412	1,776	1.26	4.60	6.28
Uintah	97	2,271	2,736	1.21	7.40	9.68
<b>REGIONAL TOTALS</b>	<b>181</b>	<b>4,411</b>	<b>5,444</b>	<b>1.23</b>	<b>14.37</b>	<b>19.25</b>
<u>Southeastern Region</u>						
Carbon	53	1,470	1,208	0.82	4.79	4.27
Emery	11	378	349	0.92	1.23	1.24
Grand	2	44	0	0.00	0.14	0.00
San Juan	1	175	44	0.25	0.57	0.15
<b>REGIONAL TOTALS</b>	<b>67</b>	<b>2,067</b>	<b>1,601</b>	<b>0.77</b>	<b>6.74</b>	<b>5.66</b>
Unknown counties	24	596	597	1.95	1.93	2.11
Mixed counties	0	0	0	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>1,215</b>	<b>30,682</b>	<b>28,280</b>	<b>0.92</b>	<b>100</b>	<b>100</b>

\*Total hunter-trips from questionnaire returns.

(1) Closed to sage grouse hunting.

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	0.68	0.85	1.02	0.70	1.12	1.27
Cache	0.52	0.78	0.78	0.51	0.43	0.74
Davis	0.25	0.60	0.43	0.45	0.53	0.00
Morgan	0.34	0.63	0.50	0.57	0.69	0.68
Rich	0.52	0.47	0.77	0.59	0.87	0.76
Summit	0.63	0.63	0.80	0.61	0.80	0.77
Weber	0.70	0.75	0.79	0.79	0.84	0.58
REGIONAL TOTALS	0.56	0.70	0.77	0.61	0.80	0.87
<u>Central Region</u>						
Juab	0.73	0.50	1.11	0.64	0.86*	1.24*
Salt Lake	*	*	*	*	0.38*	0.87*
Sanpete	0.50	*	1.37	0.61	0.55	0.59
Tooele	0.72	0.45	0.54	0.60	0.54*	0.69*
Utah	0.53	0.56	0.47	1.19	0.74	0.90
Wasatch	0.91	0.91	0.80	0.71	0.71	0.67
REGIONAL TOTALS	0.55	0.66	0.71	0.73	0.69	0.76
<u>Southern Region</u>						
Beaver	0.58	0.37	0.98	0.83	1.12	1.06
Garfield	0.81	1.16	0.90	0.71	1.09	1.24
Iron	1.89	0.57	1.20	0.84	0.71	0.50
Kane	0.67	0.00	0.00	2.00	3.00	0.00
Millard	2.50	0.00	0.33	0.50	0.50	0.00
Piute	0.55	0.94	1.50	0.57	0.46	0.92
Sevier	0.92	0.74	0.77	0.48	1.07	0.55
Washington	*	*	*	*	2.00*	2.00*
Wayne	1.00	0.91	1.26	0.69	0.94	1.49
REGIONAL TOTALS	0.92	0.85	0.96	0.69	0.99	1.11
<u>Northeastern Region</u>						
Daggett	1.07	0.68	1.19	1.50	1.15	1.28
Duchesne	0.64	0.94	1.05	0.84	1.14	1.26
Uintah	1.12	0.95	1.36	1.22	1.21	1.21
REGIONAL TOTALS	0.92	0.90	1.29	1.14	1.18	1.23
<u>Southeastern Region</u>						
Carbon	0.76	0.95	1.26	0.85	0.93	0.82
Emery	1.00	0.18	0.50	0.33	1.14	0.92
Grand	*	--	2.00	0.00	1.33	0.00
San Juan	0.75	0.67	0.00	2.00	1.37	0.25
REGIONAL TOTALS	0.77	0.82	1.24	0.79	1.03	0.77
Unknown counties	0.36	0.43	0.87	0.46	0.55	1.95
Mixed counties	--	--	3.00	2.00	2.40	0.00
Illegal areas	1.50	1.68	0.36	0.51	0.75	0.00
STATE TOTALS	0.65	0.74	0.87	0.72	0.87	0.92

\*Closed season.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	6.74	8.58	8.32	7.04	14.04	15.08
Cache	9.99	10.73	11.53	5.75	4.71	6.59
Davis	0.25	0.77	1.89	0.81	0.62	0.00
Morgan	2.00	2.06	1.57	2.19	2.39	2.37
Rich	6.87	4.03	10.21	6.56	7.41	10.91
Summit	6.37	7.04	4.28	7.85	4.94	6.33
Weber	5.37	6.18	4.45	3.89	4.55	1.80
REGIONAL TOTALS	37.58	39.40	42.26	34.09	38.66	43.13
<u>Central Region</u>						
Juab	1.00	0.26	1.73	1.46	0.93*	1.34*
Salt Lake	*	*	*	*	0.23*	1.34*
Sanpete	0.62	*	3.95	2.02	1.39	1.80
Tooele	5.24	1.89	3.54	5.59	1.00*	0.57*
Utah	5.74	8.93	2.64	7.21	5.48	4.84
Wasatch	3.62	6.09	3.95	8.26	8.64	6.18
REGIONAL TOTALS	17.85	21.46	16.47	25.75	17.67	16.06
<u>Southern Region</u>						
Beaver	1.37	0.60	3.79	1.54	1.39	0.87
Garfield	4.87	6.87	3.79	3.32	5.40	4.32
Iron	2.12	1.12	0.49	1.30	1.16	0.26
Kane	0.25	0.00	0.00	0.16	0.23	0.00
Millard	0.62	0.00	0.25	0.40	0.15	0.00
Piute	0.75	1.29	0.49	0.32	0.46	1.13
Sevier	2.75	3.86	1.98	1.21	2.24	1.03
Washington	*	*	*	*	0.77*	0.10*
Wayne	6.99	7.47	5.52	3.97	3.55	6.07
REGIONAL TOTALS	19.98	21.37	16.31	12.39	15.35	13.79
<u>Northeastern Region</u>						
Daggett	1.87	1.29	1.57	2.67	2.39	3.29
Duchesne	4.00	2.75	1.89	3.97	5.56	6.28
Uintah	8.36	6.44	9.88	12.63	10.73	9.68
REGIONAL TOTALS	14.23	10.47	13.34	19.27	18.67	19.25
<u>Southeastern Region</u>						
Carbon	3.12	5.32	4.04	4.86	4.40	4.27
Emery	0.37	0.17	0.08	0.32	1.93	1.24
Grand	*	--	0.16	0.00	0.31	0.00
San Juan	0.75	0.69	0.00	0.32	0.85	0.15
REGIONAL TOTALS	4.24	6.18	4.28	5.51	7.48	5.66
Unknown counties	4.24	1.12	5.60	2.51	1.23	2.11
Mixed counties	1.87	--	1.73	0.49	0.93	0.00
Illegal areas	1.87	4.46	0.66	1.37	2.93	0.00
STATE TOTALS	100	100	100	100	100	100

\*Closed season.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<b>Northern Region</b>						
Box Elder	6.38	7.45	7.06	7.31	10.92	10.96
Cache	12.44	10.16	12.77	8.13	9.58	8.16
Davis	0.65	0.95	3.78	1.29	1.01	0.00
Morgan	3.80	2.40	2.71	2.75	3.02	3.23
Rich	8.48	6.25	11.41	8.02	7.37	13.19
Summit	6.54	8.27	4.64	9.25	5.36	7.64
Weber	4.93	6.06	4.85	3.57	4.69	2.85
<b>REGIONAL TOTALS</b>	<b>43.21</b>	<b>41.54</b>	<b>47.22</b>	<b>40.32</b>	<b>41.96</b>	<b>46.03</b>
<b>Central Region</b>						
Juab	0.89	0.38	1.36	1.64	0.94*	1.00*
Salt Lake	*	*	*	*	0.54*	1.42*
Sanpete	0.81	*	2.50	2.40	2.21	2.80
Tooele	4.68	3.09	5.71	6.73	1.61*	0.76*
Utah	6.95	11.81	4.85	4.39	6.43	4.98
Wasatch	2.58	4.92	4.28	8.43	10.59	8.49
<b>REGIONAL TOTALS</b>	<b>20.84</b>	<b>23.99</b>	<b>19.97</b>	<b>25.34</b>	<b>22.32</b>	<b>19.45</b>
<b>Southern Region</b>						
Beaver	1.53	1.20	3.35	1.35	1.07	0.76
Garfield	3.88	4.36	3.64	3.39	4.29	3.23
Iron	0.73	1.45	0.36	1.11	1.41	0.47
Kane	0.24	0.25	0.21	0.06	0.07	0.00
Millard	0.16	0.25	0.64	0.59	0.27	0.28
Piute	0.89	1.01	0.29	0.41	0.87	1.14
Sevier	1.94	3.85	2.21	1.81	1.81	1.80
Washington	*	*	*	*	0.34*	0.05*
Wayne	4.52	6.06	3.78	4.15	3.28	3.75
<b>REGIONAL TOTALS</b>	<b>13.97</b>	<b>18.50</b>	<b>14.76</b>	<b>13.05</b>	<b>13.40</b>	<b>11.48</b>
<b>Northeastern Region</b>						
Daggett	1.13	1.39	1.14	1.29	1.81	2.37
Duchesne	4.04	2.15	1.57	3.39	4.22	4.60
Uintah	4.85	4.99	6.28	7.49	7.71	7.40
<b>REGIONAL TOTALS</b>	<b>10.02</b>	<b>8.52</b>	<b>8.99</b>	<b>12.17</b>	<b>13.74</b>	<b>14.37</b>
<b>Southeastern Region</b>						
Carbon	2.67	4.10	2.78	4.15	4.09	4.79
Emery	0.24	0.69	0.14	0.70	1.47	1.23
Grand	*	0.00	0.07	0.06	0.20	0.14
San Juan	0.65	0.76	0.00	0.12	0.54	0.57
<b>REGIONAL TOTALS</b>	<b>3.55</b>	<b>5.56</b>	<b>3.00</b>	<b>5.03</b>	<b>6.30</b>	<b>6.74</b>
Unknown counties	7.59	1.89	5.56	3.92	1.94	1.93
Mixed counties	0.81	—	0.50	0.18	0.34	0.00
Illegal areas	5.01	3.85	1.57	1.94	3.42	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\*Closed season.



Table 10. Statewide summary of sage grouse harvest statistics, 1951-79.

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
1973	10,017	13,926	19,049	0.73	1.39
1974	12,214	15,215	23,516	0.65	1.25
1975	13,996	18,916	25,720	0.74	1.35
1976	15,283	24,541	28,342	0.87	1.61
1977	14,078	18,615	25,759	0.72	1.32
1978	16,231	25,938	29,861	0.87	1.60
1979	16,927	28,280	30,682	0.92	1.67
<hr/>					
TOTALS					
(1963-79)	186,643	264,247	317,153	0.83	1.39
<hr/>					
AVERAGES					
(1963-78)	10,607	14,748	17,904	0.82	1.39

\*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 11. Sage grouse field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS				Birds/ Hunter		
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours		Total Birds	Birds/ 100 Hrs.
<b>Northern Region</b>											
Box Elder	188	536	1,975	743	38	185	526	1,940	737	38	1.40
Cache	39	93	341	25	7	39	93	341	25	7	0.27
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	7	18	55	4	7	7	18	55	4	7	0.22
Rich	179	437	1,764	254	14	179	437	1,764	254	14	0.58
Summit	15	35	106	12	11	15	35	106	12	11	0.34
Weber	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>428</b>	<b>1,119</b>	<b>4,242</b>	<b>1,038</b>	<b>24</b>	<b>425</b>	<b>1,109</b>	<b>4,206</b>	<b>1,032</b>	<b>25</b>	<b>0.93</b>
<b>Central Region</b>											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	73	203	464	79	17	68	68	158	50	32	0.73
<b>REGIONAL TOTALS</b>	<b>73</b>	<b>203</b>	<b>464</b>	<b>79</b>	<b>17</b>	<b>68</b>	<b>68</b>	<b>158</b>	<b>50</b>	<b>32</b>	<b>0.73</b>
<b>Southern Region</b>											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	47	138	401	160	40	15	43	122	79	65	1.83
Iron	14	40	117	56	48	7	20	52	38	73	1.90
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	12	36	0	0	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	81	219	1,065	212	20	56	151	835	170	20	1.12
<b>REGIONAL TOTALS</b>	<b>144</b>	<b>409</b>	<b>1,619</b>	<b>428</b>	<b>26</b>	<b>78</b>	<b>214</b>	<b>1,009</b>	<b>287</b>	<b>28</b>	<b>1.34</b>
<b>Northeastern Region</b>											
Daggett	37	115	386	136	35	26	78	252	102	40	1.31
Duchesne	15	49	119	35	29	3	9	18	13	72	1.44
Uintah	134	346	888	319	36	92	222	654	265	41	1.19
<b>REGIONAL TOTALS</b>	<b>186</b>	<b>510</b>	<b>1,393</b>	<b>490</b>	<b>35</b>	<b>121</b>	<b>309</b>	<b>924</b>	<b>380</b>	<b>41</b>	<b>1.23</b>
<b>Southeastern Region</b>											
Carbon	9	38	144	16	11	9	38	144	16	11	0.42
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	3	6	15	3	20	3	6	15	3	20	0.50
San Juan	1	5	8	0	--	0	0	0	0	--	--
<b>REGIONAL TOTALS</b>	<b>13</b>	<b>49</b>	<b>167</b>	<b>19</b>	<b>11</b>	<b>12</b>	<b>44</b>	<b>159</b>	<b>19</b>	<b>12</b>	<b>0.43</b>
<b>STATE TOTALS</b>	<b>844</b>	<b>2,290</b>	<b>7,885</b>	<b>2,054</b>	<b>26</b>	<b>704</b>	<b>1,744</b>	<b>6,456</b>	<b>1,768</b>	<b>27</b>	<b>1.01</b>

Table 12. Sage grouse hunter success trend determined by field bag checks, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ hunter
<b>Northern Region</b>												
Box Elder	12	0.57	24	0.74	20	0.90	20	0.96	31	1.36	38	1.40
Cache	9	0.42	10	0.38	14	0.49	7	0.26	11	0.45	7	0.27
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	27	0.36	28	0.64	32	0.59	--	--	7	0.22
Rich	12	0.58	10	0.45	13	0.63	4	0.22	14	0.58	14	0.58
Summit	27	0.41*	15	0.61	--	--	45	0.93	--	--	11	0.34
Weber	5	0.18	6	0.45	6	0.29	0	0.00	7	0.24	--	--
<b>REGIONAL TOTALS</b>	<b>11</b>	<b>0.51</b>	<b>12</b>	<b>0.51</b>	<b>15</b>	<b>0.64</b>	<b>12</b>	<b>0.56</b>	<b>23</b>	<b>0.98</b>	<b>25</b>	<b>0.93</b>
<b>Central Region</b>												
Juab	--	--	--	--	109	1.00	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	22	0.83	16	0.95	28	0.85	24	0.73	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	16	0.65	34	0.98	33	0.79	35	0.81	32	0.73
<b>REGIONAL TOTALS</b>	<b>22</b>	<b>0.83</b>	<b>16</b>	<b>0.79</b>	<b>33</b>	<b>0.92</b>	<b>31</b>	<b>0.77</b>	<b>35</b>	<b>0.81</b>	<b>32</b>	<b>0.73</b>
<b>Southern Region</b>												
Beaver	27	0.61	35	0.78	--	--	--	--	--	--	--	--
Garfield	21	0.88	25	0.26	17	1.54	18	0.71	26	1.09	65	1.83
Iron	--	--	30	1.74	67	1.04*	74	1.56	--	--	73	1.90
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	18	0.50	31	0.57*	80	2.00	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	20	0.98	16	0.91	24	1.38	14	0.74	21	0.99	20	1.12
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>0.92</b>	<b>19</b>	<b>0.86</b>	<b>23</b>	<b>1.40</b>	<b>15</b>	<b>0.76</b>	<b>21</b>	<b>1.00</b>	<b>28</b>	<b>1.34</b>
<b>Northeastern Region</b>												
Daggett	30	0.73	20	0.81	46	2.64	60	0.71	27	0.82	40	1.31
Duchesne	14	0.31	26	1.06	34	1.59	26	0.60	140	1.75	72	1.44
Uintah	23	0.71	32	1.21	46	1.33	21	0.78	21	1.14	41	1.19
<b>REGIONAL TOTALS</b>	<b>23</b>	<b>0.68</b>	<b>30</b>	<b>1.13</b>	<b>42</b>	<b>1.44</b>	<b>24</b>	<b>0.75</b>	<b>23</b>	<b>1.03</b>	<b>41</b>	<b>1.23</b>
<b>Southeastern Region</b>												
Carbon	--	--	17	0.31	59	1.00	36	1.14	31	1.10	11	0.42
Emery	--	--	--	--	0	0.00	--	--	0	0.00	--	--
Grand	--	--	--	--	--	--	--	--	27	1.14	20	0.50
San Juan	34	1.03	21	0.67	--	--	15	0.80	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>34</b>	<b>1.03</b>	<b>19</b>	<b>0.45</b>	<b>58</b>	<b>0.97</b>	<b>29</b>	<b>1.05</b>	<b>31</b>	<b>1.10</b>	<b>12</b>	<b>0.43</b>
<b>STATE TOTALS</b>	<b>15</b>	<b>0.64</b>	<b>17</b>	<b>0.67</b>	<b>22</b>	<b>0.90</b>	<b>15</b>	<b>0.65</b>	<b>23</b>	<b>0.98</b>	<b>27</b>	<b>1.01</b>

\*Sage grouse per hunter index based on all hunts.

Table 13. Sex and age composition of harvested sage grouse, 1979.

Region & County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
<u>Northern Region</u>									
Box Elder	622	109	193	302	156	164	320	106	166
Cache	27	5	11	16	3	8	11	68	100
Davis	---	---	---	---	---	---	---	---	---
Morgan	4	3	0	3	1	0	1	---	---
Rich	131	25	54	79	31	21	52	66	96
Summit	8	3	2	5	2	1	3	43	150
Weber	17	4	5	9	4	4	8	89	160
REGIONAL TOTALS	809	149	265	414	197	198	395	94	149
<u>Central Region</u>									
Juab	---	---	---	---	---	---	---	---	---
Salt Lake	---	---	---	---	---	---	---	---	---
Sanpete	---	---	---	---	---	---	---	---	---
Tooele	---	---	---	---	---	---	---	---	---
Utah	---	---	---	---	---	---	---	---	---
Wasatch*	60	(11)	(15)	26	(16)	(18)	34	131	227
REGIONAL TOTALS	60	11	15	26	16	18	34	131	227
<u>Southern Region</u>									
Beaver	---	---	---	---	---	---	---	---	---
Garfield	177	24	39	63	42	72	114	181	292
Iron	62	8	15	23	19	20	39	170	260
Kane	---	---	---	---	---	---	---	---	---
Millard	---	---	---	---	---	---	---	---	---
Piute	---	---	---	---	---	---	---	---	---
Sevier	---	---	---	---	---	---	---	---	---
Washington	---	---	---	---	---	---	---	---	---
Wayne	342	65	97	162	79	101	180	111	186
REGIONAL TOTALS	581	97	151	248	140	193	333	134	221
<u>Northeastern Region</u>									
Daggett	101	7	29	36	28	37	65	180	220
Duchesne	50	7	10	17	16	18	33	194	330
Uintah	355	46	83	129	99	127	226	175	272
REGIONAL TOTALS	506	60	122	182	143	181	324	178	266
<u>Southeastern Region</u>									
Carbon	---	---	---	---	---	---	---	---	---
Emery	---	---	---	---	---	---	---	---	---
Grand	---	---	---	---	---	---	---	---	---
San Juan	---	---	---	---	---	---	---	---	---
REGIONAL TOTALS	14**	---	---	---	---	---	---	---	---
STATE TOTALS	1,956	317	553	870	496	590	1,086	125	196

\*Figures in parentheses were estimated using sex ratios from all other counties.

\*\*Not included in state total.

Table 14. Sex and age composition of harvested sage grouse from 1976-79.

Region and County	1976			1977			1978			1979			Averages 1973-78												
	Sex Ratio % Young**/		n	Sex Ratio % Young**/		n	Sex Ratio % Young**/		n	Sex Ratio % Young**/		n	Sex Ratio % Young**/		n										
	Male	Female		Male	Female		Male	Female		Male	Female		Male	Female											
<b>Northern Region</b>																									
Box Elder	117	45	55	262	185	287	49	51	106	54	388	49	51	294	149	622	43	57	166	106					
Cache	118	51	49	381	211	34	62	38	150	54	66	44	56	267	154	27	30	70	100	68					
Davis																									
Morgan	3	67	33				40	48	53	325	186	13	39	100	86	4	100	0							
Rich	295	49	51	402	299	37	46	54	155	85	188	39	61	332	203	131	43	57	96	66					
Summit	6	33	67								6	17	83	150	100	8	62	38	150	43					
Weber	3	33	67								9	22	78	175	125	17	47	53	160	89					
<b>REGIONAL TOTALS</b>	<b>542</b>	<b>48</b>	<b>52</b>	<b>357</b>	<b>247</b>	<b>398</b>	<b>49</b>	<b>51</b>	<b>128</b>	<b>64</b>	<b>670</b>	<b>45</b>	<b>55</b>	<b>179</b>	<b>160</b>	<b>809</b>	<b>43</b>	<b>57</b>	<b>149</b>	<b>94</b>	<b>455</b>	<b>47</b>	<b>53</b>	<b>232</b>	<b>155</b>
<b>Central Region</b>																									
Juab						174	44	55	141	90															
Salt Lake																									
Sanpete																									
Tooele	109	37	63	377	319	68	51	49	100	45															
Utah																									
Wasatch	76	63	37	327	181						178	52	48	314	162	60	45	55	227	131					
<b>REGIONAL TOTALS</b>	<b>185</b>	<b>48</b>	<b>52</b>	<b>357</b>	<b>249</b>	<b>242</b>	<b>46</b>	<b>54</b>	<b>138</b>	<b>75</b>	<b>178</b>	<b>52</b>	<b>48</b>	<b>314</b>	<b>162</b>	<b>60</b>	<b>45</b>	<b>55</b>	<b>227</b>	<b>131</b>	<b>131</b>	<b>47</b>	<b>53</b>	<b>237</b>	<b>147</b>
<b>Southern Region</b>																									
Beaver	9	11	89			11	18	82	175	175															
Garfield	63	46	54	308	174	38	42	58	220	138	71	36	64	253	209	177	37	63	292	181					
Iron						9	44	56	600	200	13	61	39	1000	333	62	44	56	260	170					
Kane																									
Millard																									
Plute																									
Sevier																									
Washington																									
Wayne	357	36	64	247	161	192	34	66	72	49	252	35	65	217	190	342	42	58	186	111					
<b>REGIONAL TOTALS</b>	<b>429</b>	<b>37</b>	<b>63</b>	<b>260</b>	<b>166</b>	<b>250</b>	<b>35</b>	<b>65</b>	<b>95</b>	<b>64</b>	<b>336</b>	<b>37</b>	<b>63</b>	<b>232</b>	<b>197</b>	<b>581</b>	<b>41</b>	<b>59</b>	<b>221</b>	<b>134</b>	<b>339</b>	<b>35</b>	<b>65</b>	<b>201</b>	<b>150</b>
<b>Northeastern Region</b>																									
Daggett	28	46	54	300	180	52	52	48	167	93	67	40*	60*	271	219	101	35	65	220	180					
Duchesne	82	54	46	158	86	53	47	53	318	139	104	46*	54*	329	197	50	46	54	330	194					
Uintah	247	47	53	320	184	200	40	61	150	100	386	45*	55*	329	214	355	41	59	272	175					
<b>REGIONAL TOTALS</b>	<b>357</b>	<b>49</b>	<b>51</b>	<b>270</b>	<b>153</b>	<b>305</b>	<b>43</b>	<b>57</b>	<b>172</b>	<b>110</b>	<b>557</b>	<b>45*</b>	<b>55*</b>	<b>320</b>	<b>211</b>	<b>506</b>	<b>40</b>	<b>60</b>	<b>266</b>	<b>178</b>	<b>335</b>	<b>42</b>	<b>58</b>	<b>248</b>	<b>149</b>
<b>Southeastern Region</b>																									
Carbon											44	57	43	1550	238										
Emery											2	50	50												
Grand																									
San Juan																									
<b>REGIONAL TOTALS</b>	<b>1513</b>	<b>45</b>	<b>55</b>	<b>305</b>	<b>196</b>	<b>1195</b>	<b>44</b>	<b>56</b>	<b>133</b>	<b>78</b>	<b>1787</b>	<b>44</b>	<b>56</b>	<b>293</b>	<b>183</b>	<b>1956</b>	<b>42</b>	<b>58</b>	<b>196</b>	<b>125</b>	<b>1222</b>	<b>42</b>	<b>58</b>	<b>238</b>	<b>154</b>

\*Includes estimated percentage of juveniles.

\*\*Young per 100 hens (adult females) and young per 100 adults.

n = Wing sample size.

# FOREST GROUSE

## SUMMARY

Judging from harvest statistics for the fall of 1978, the 1979 breeding populations of both ruffed and blue grouse were up from 1978. Production of ruffed grouse indicated by brood counts was up from 1978 and above average. Blue grouse production was well below average during 1978. The number of ruffed grouse observed during brood surveys and the apparent density (grouse per 100 hours) suggested an increased abundance in 1979 compared to 1978. Blue grouse density and reproductive success were both lower for 1979 than during 1978 and were below average. A total of 147 forest grouse broods were observed during 1979 compared to 125 during 1978.

Harvest statistics indicated lower density of forest grouse. Total harvest decreased from 81,588 during 1978 to 59,851 in 1979, a near 28 percent decrease in harvest. Total hunters decreased from 25,318 in 1978 to 21,993 in 1979, and days afield decreased from 72,732 to 57,404.

Field bag check data confirmed the decreased success shown by the questionnaire. Hunters spent an average of six hours afield for each forest grouse bagged during 1979.



## Brood Counts

### Ruffed Grouse

Results of the annual random brood survey for 1979 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 1979 compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total ruffed grouse observed	319	+79	+19
Young per 100 adults	398	+15	+34
Mean brood size	5.06	+13	+15
Ruffed grouse observed per 100 hours	37	+28	+12
Total hours effort (forest grouse)	945	+ 4	+14

Harvest statistics for 1978 indicated a decreased breeding population for 1979.

Effort on brood surveys increased in comparison to 1978 to above average.

Total ruffed grouse observed increased from 1978 and was well above average. The density index (grouse observed per 100 hours) was above 1978 and above average.

Mean brood size, based on a sample of 50 broods (compared to 26 broods observed in 1978), increased to over 5 chicks per brood, 15 percent above the long-term average.

### Blue Grouse

Results of the annual random brood survey for 1979 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 Table 6-8. Survey results for 1979 compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total blue grouse observed	642	0	+ 9
Young per 100 adults	188	-32	-20
Mean brood size	3.69	-17	-17
Blue grouse observed per 100 hours	68	-36	- 9
Total hours effort (forest grouse)	945	+ 4	+14

Harvest statistics for 1978 indicated an increased breeding population for 1979.

All indications from the 1979 summer surveys on blue grouse were that production was below 1978 and below average. Total observations remained constant because of increased efforts. Data indicate a below average production year. The young per 100 adult ratio and the number of grouse observed per 100 hours effort both increased by 54 and 104 percent, respectively.

Casual observations from the field and the summer inventory both indicated a decreased fall blue grouse population. Wing samples collected at checking stations confirmed the lower production.

### Harvest

#### Hunter Questionnaire

Results of the 1979 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 statewide harvest statistics in Table 14. Harvest statistics for 1979 compared to 1978 and the average follow:

	1979	Percent change from	
		1978	Average
Forest grouse hunters	21,993	-13	+53
Forest grouse harvested	59,851	-26	+70
Hunter-days afield	57,404	-21	+70
Forest grouse per hunter-day	1.04	- 7	0
Forest grouse per hunter	2.61	-19	+13
Percent ruffed grouse	38.7	+ 4	- 3
Percent blue grouse	55.3	- 3	+ 4
Percent unidentified	6.0	+ 7	-14

Results from the harvest questionnaire confirmed the lower forest grouse population level indicated by summer surveys. It is not surprising that harvest was lower than the record harvest of 1978. Hunter success (grouse per hunter-day) was very near average as was the number of grouse harvested per hunter. Hunter pressure decreased significantly.

#### Field Bag Checks

A summary of field bag check data for 1979 is found in Table 15. Hunter success trends determined via this method are shown in Table 16. Results of the 1979 survey compared to 1978 and the average are as follows:

	1979	Percent change from	
		1978	Average
Total hunters checked	2,065	+13	+42
Total hours hunted	7,730	+55	+36
Forest grouse per hunter (complete hunts)	0.64	0	- 6
Forest grouse bagged per 100 hours	17	-23	- 7
Average hours per hunter-day (complete hunts)	3.8	+35	- 7
Hours hunted per grouse bagged	6.0	+33	- 6

Field bag checks indicated that hunters spent considerably more time afield to harvest their birds. It appears that poor early season success discouraged hunters and resulted in less total pressure.



Forest grouse bagged per hunter and per hunter-day.

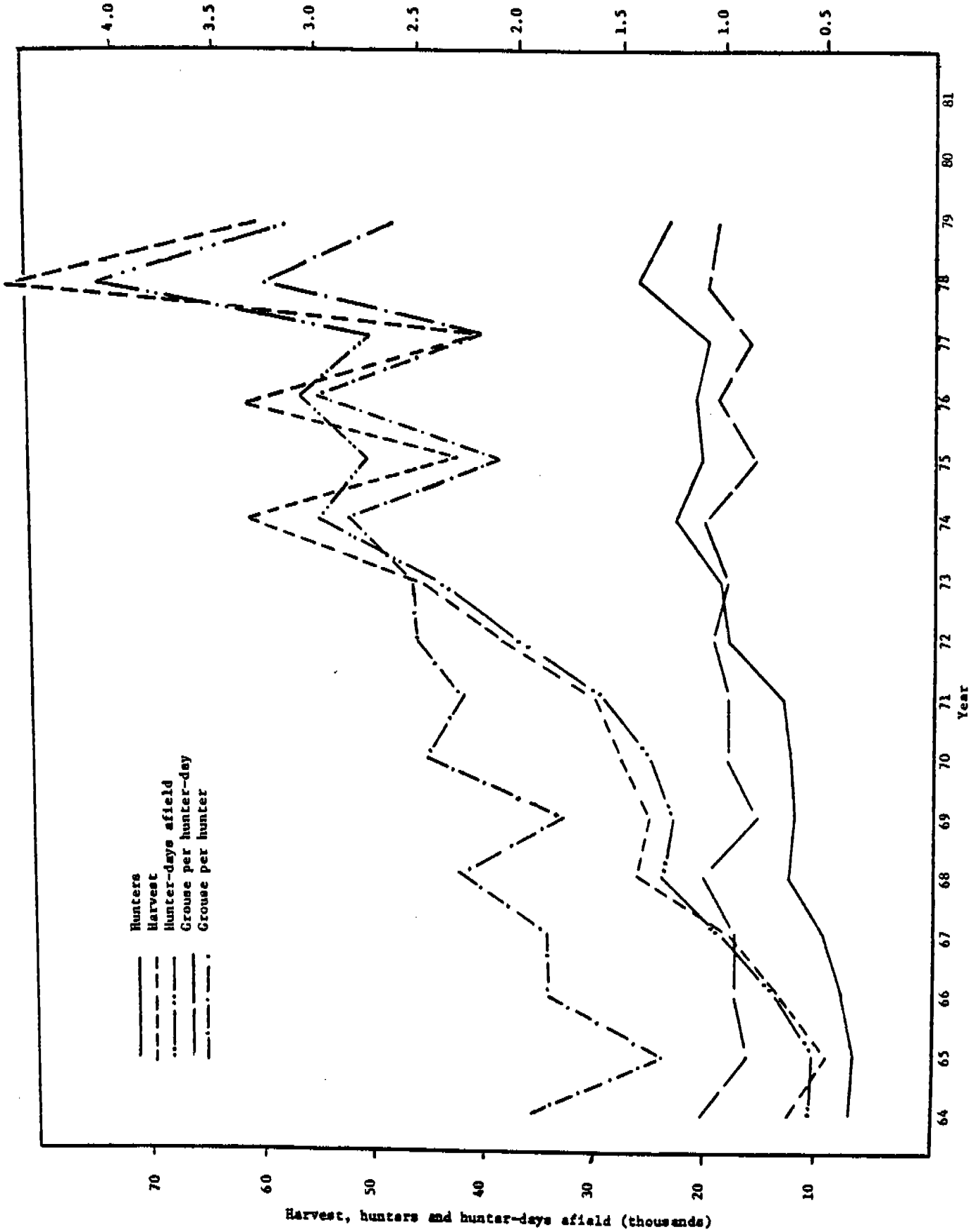


Figure 1. Statewide trends of forest grouse harvest statistics.

Table 1. Ruffed grouse summer inventory, 1979.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults	Total Yng.	Young/Vehicle		Hours Effort		Birds/100 hrs.
	No. Ad.	Yng.		Ad.	Yng.				100 Ad.	Miles Veh.	Horse	Walk	
<b>Northern Region</b>													
Box Elder	0	0	---	0	0	0	0	0	5	0.5	2.5	0	3
Cache	7	7	5.14	0	0	1	8	36	450	330	169	72	4 245
Davis	1	1	9.00	0	2	0	1	11	1,100	105	6	0	14 20
Morgan	9	9	4.89	0	0	2	11	44	400	0	0	37	0 37
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	2	2	5.00	0	0	0	2	10	500	21	2	0	0 2 600
Weber	1	1	5.00	0	0	0	1	5	500	285	37	0	0 37
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>20</b>	<b>5.20</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>23</b>	<b>106</b>	<b>460</b>	<b>746</b>	<b>214.5</b>	<b>111.5</b>	<b>18 344</b>
<b>Central Region</b>													
Juab	--	--	--	--	--	--	--	--	--	45	3	0	5 8
Salt Lake	--	--	--	--	--	1	1	0	--	333	38	0	9 47
Sanpete	14	14	5.79	0	0	2	16	81	506	262	20	10	11 41
Tooele	--	--	--	--	--	--	--	--	--	110	4	0	3 7
Utah	3	3	4.67	0	0	2	5	14	280	300	31	8	10 49
Wasatch	3	3	3.00	0	0	0	3	9	300	262	20	0	5 25
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>20</b>	<b>5.20</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>25</b>	<b>104</b>	<b>416</b>	<b>1,312</b>	<b>116</b>	<b>18</b>	<b>43 177</b>
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	5	5	4.80	--	--	1	6	24	400	15	2	202	-- 204
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>5</b>	<b>4.80</b>	<b>--</b>	<b>--</b>	<b>1</b>	<b>6</b>	<b>24</b>	<b>400</b>	<b>15</b>	<b>2</b>	<b>202</b>	<b>-- 204</b>
<b>Northeastern Region</b>													
Daggett	3	3	4.00	0	0	2	5	12	240	192	15	--	5 20
Duchesne	2	2	4.50	0	0	0	2	9	450	195	16	5	2 23
Uintah	0	0	--	0	0	0	0	0	--	342	54	6	4 64
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>5</b>	<b>4.20</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>21</b>	<b>300</b>	<b>729</b>	<b>85</b>	<b>11</b>	<b>11 107</b>
<b>Southeastern Region</b>													
Carbon	0	0	--	0	0	2	2	0	--	209	19	--	2.5 21.5
Emery	0	0	--	0	0	1	1	0	--	21	3	--	-- 3
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>--</b>	<b>230</b>	<b>22</b>	<b>--</b>	<b>2.5 24.5</b>
<b>STATE TOTALS</b>	<b>50</b>	<b>50</b>	<b>5.06</b>	<b>0</b>	<b>2</b>	<b>14</b>	<b>64</b>	<b>255</b>	<b>398</b>	<b>3,032</b>	<b>439.5</b>	<b>342.5</b>	<b>74.5 856.5</b>

Table 3. Trend of ruffed grouse mean brood size, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	5.00	2.50	--	--	--	--
Cache	4.09	4.78	5.55	9.00	--	5.00	3.83	3.00	4.00	4.33	5.14	5.00
Davis	--	--	--	4.80	--	--	--	--	--	--	9.00	--
Morgan	4.67	4.00	6.75	--	--	4.00	--	5.00	--	1.00	4.89	--
Rich	--	--	--	3.75	6.00	--	4.75	3.00	--	--	--	--
Summit	6.00	5.00	6.00	6.50	5.00	5.00	3.00	4.00	4.75	4.00	5.00	5.00
Weber	2.50	--	8.00	--	4.50	--	--	--	4.00	--	5.00	--
<b>REGIONAL TOTALS</b>	<b>4.30</b>	<b>4.79</b>	<b>6.09</b>	<b>5.08</b>	<b>5.00</b>	<b>4.54</b>	<b>4.00</b>	<b>3.08</b>	<b>4.25</b>	<b>3.88</b>	<b>5.20</b>	<b>4.50</b>
<u>Central Region</u>												
Juab	4.00	4.67	4.33	--	3.00	4.00	5.00	2.00	--	--	--	--
Salt Lake	4.00	4.67	4.00	--	--	4.00	--	5.00	--	--	--	--
Sanpete	4.67	4.64	5.50	4.67	4.60	3.00	4.50	5.36	4.44	5.11	5.79	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	3.80	7.00	3.75	4.75	5.00	4.25	4.00	2.00	3.00	4.00	4.67	--
Wasatch	--	--	--	3.00	--	--	--	--	--	--	3.00	--
<b>REGIONAL TOTALS</b>	<b>4.17</b>	<b>4.78</b>	<b>4.75</b>	<b>4.55</b>	<b>4.43</b>	<b>3.44</b>	<b>4.50</b>	<b>4.94</b>	<b>4.08</b>	<b>4.83</b>	<b>5.20</b>	<b>4.45</b>
<u>Southern Region</u>												
Beaver	6.00	--	5.00	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	2.00	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2.25	--	4.67	--	--	--	--	--	--	--	--	--
Piute	--	--	3.00	--	--	--	--	--	--	--	--	--
Sevier	4.00	--	3.83	4.29	4.00	5.00	2.33	--	5.75	3.00	4.80	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	2.00	--	--	--	5.50	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.30</b>	<b>--</b>	<b>4.08</b>	<b>4.29</b>	<b>4.33</b>	<b>4.40</b>	<b>2.33</b>	<b>--</b>	<b>5.75</b>	<b>3.00</b>	<b>4.80</b>	<b>3.94</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	5.00	--	--	4.00	--
Duchesne	8.00	3.00	--	3.67	--	3.33	6.00	3.50	2.00	4.50	4.50	--
Uintah	7.00	2.50	5.00	--	--	6.00	--	5.00	--	6.00	--	--
<b>REGIONAL TOTALS</b>	<b>7.67</b>	<b>2.80</b>	<b>5.00</b>	<b>3.67</b>	<b>--</b>	<b>4.00</b>	<b>6.00</b>	<b>4.10</b>	<b>2.00</b>	<b>4.80</b>	<b>4.20</b>	<b>4.45</b>
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	4.80	2.00	3.50	3.00	--	--	--
Emery	3.00	7.00	5.00	--	5.00	4.00	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.00</b>	<b>7.00</b>	<b>5.00</b>	<b>--</b>	<b>5.00</b>	<b>4.67</b>	<b>2.00</b>	<b>3.50</b>	<b>3.00</b>	<b>--</b>	<b>--</b>	<b>4.15</b>
<b>STATE TOTALS</b>	<b>4.24</b>	<b>4.66</b>	<b>5.16</b>	<b>4.61</b>	<b>4.58</b>	<b>4.09</b>	<b>3.87</b>	<b>4.12</b>	<b>4.26</b>	<b>4.46</b>	<b>5.06</b>	<b>4.41</b>

Table 3. Trend of ruffed grouse mean brood size, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	5.00	2.50	--	--	--	--
Cache	4.09	4.78	5.55	9.00	--	5.00	3.83	3.00	4.00	4.33	5.14	9.00
Davis	--	--	--	4.80	--	--	--	--	--	--	1.00	4.89
Morgan	4.67	4.00	6.75	--	--	4.00	--	5.00	--	--	--	--
Rich	--	--	--	3.75	6.00	--	4.75	3.00	--	--	--	--
Summit	6.00	5.00	6.00	6.50	5.00	5.00	3.00	4.00	4.75	4.00	5.00	5.00
Weber	2.50	--	8.00	--	4.50	--	--	--	4.00	--	--	--
<b>REGIONAL TOTALS</b>	<b>4.30</b>	<b>4.79</b>	<b>6.09</b>	<b>5.08</b>	<b>5.00</b>	<b>4.54</b>	<b>4.00</b>	<b>3.08</b>	<b>4.25</b>	<b>3.88</b>	<b>5.20</b>	<b>4.50</b>
<u>Central Region</u>												
Juab	4.00	4.67	4.33	--	3.00	4.00	5.00	2.00	--	--	--	--
Salt Lake	4.00	4.67	4.00	--	--	4.00	--	5.00	--	--	--	--
Sanpete	4.67	4.64	5.50	4.67	4.60	3.00	4.50	5.36	4.44	5.11	5.79	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	3.80	7.00	3.75	4.75	5.00	4.25	4.00	2.00	3.00	4.00	4.67	3.00
Wasatch	--	--	--	3.00	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>4.17</b>	<b>4.78</b>	<b>4.75</b>	<b>4.55</b>	<b>4.43</b>	<b>3.44</b>	<b>4.50</b>	<b>4.94</b>	<b>4.08</b>	<b>4.83</b>	<b>5.20</b>	<b>4.45</b>
<u>Southern Region</u>												
Beaver	6.00	--	5.00	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	2.00	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2.25	--	4.67	--	--	--	--	--	--	--	--	--
Piute	--	--	3.00	--	--	--	--	--	--	--	--	--
Sevier	4.00	--	3.83	4.29	4.00	5.00	2.33	--	5.75	3.00	4.80	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	2.00	--	--	--	5.50	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.30</b>	<b>--</b>	<b>4.08</b>	<b>4.29</b>	<b>4.33</b>	<b>4.40</b>	<b>2.33</b>	<b>--</b>	<b>5.75</b>	<b>3.00</b>	<b>4.80</b>	<b>3.94</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	5.00	--	--	4.00	--
Duchesne	8.00	3.00	--	3.67	--	3.33	6.00	3.50	2.00	4.50	4.50	--
Uintah	7.00	2.50	5.00	--	--	6.00	--	5.00	--	6.00	--	--
<b>REGIONAL TOTALS</b>	<b>7.67</b>	<b>2.80</b>	<b>5.00</b>	<b>3.67</b>	<b>--</b>	<b>4.00</b>	<b>6.00</b>	<b>4.10</b>	<b>2.00</b>	<b>4.80</b>	<b>4.20</b>	<b>4.45</b>
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	4.80	2.00	3.50	3.00	--	--	--
Emery	3.00	7.00	5.00	--	5.00	4.00	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.00</b>	<b>7.00</b>	<b>5.00</b>	<b>--</b>	<b>5.00</b>	<b>4.67</b>	<b>2.00</b>	<b>3.50</b>	<b>3.00</b>	<b>--</b>	<b>--</b>	<b>4.15</b>
<b>STATE TOTALS</b>	<b>4.24</b>	<b>4.66</b>	<b>5.16</b>	<b>4.61</b>	<b>4.58</b>	<b>4.09</b>	<b>3.87</b>	<b>4.12</b>	<b>4.26</b>	<b>4.46</b>	<b>5.06</b>	<b>4.41</b>

Table 4. Trend of ruffed grouse observed per 100 hours, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	2	54	50	--	--	--	--
Cache	83	270	67	14	--	34	45	13	50	25	18	18
Davis	3	--	--	244	--	0	0	10	--	--	60	60
Morgan	58	62	128	--	--	136	0	33	--	8	149	149
Rich	--	--	--	61	140	--	--	27	--	--	--	--
Summit	63	42	108	100	62	185	46	100	144	61	600	600
Weber	44	--	73	--	--	--	--	0	111	--	16	16
<b>REGIONAL TOTALS</b>	<b>50</b>	<b>80</b>	<b>77</b>	<b>39</b>	<b>24</b>	<b>49</b>	<b>41</b>	<b>20</b>	<b>49</b>	<b>18</b>	<b>38</b>	<b>45</b>
<b>Central Region</b>												
Juab	158	179	142	--	33	250	27	40	--	--	--	--
Salt Lake	20	47	16	--	0	30	0	20	4	--	2	2
Sanpete	158	143	167	240	129	124	69	181	125	203	270	270
Tooele	--	--	--	--	0	0	0	0	0	--	--	--
Utah	63	32	40	37	23	73	32	19	25	30	39	39
Wasatch	--	--	0	50	--	--	0	0	--	--	48	48
<b>REGIONAL TOTALS</b>	<b>78</b>	<b>81</b>	<b>85</b>	<b>84</b>	<b>50</b>	<b>71</b>	<b>23</b>	<b>64</b>	<b>56</b>	<b>99</b>	<b>73</b>	<b>69</b>
<b>Southern Region</b>												
Beaver	314	--	250	--	--	0	--	--	--	--	--	--
Garfield	--	--	--	--	0	38	0	--	0	--	--	--
Iron	--	--	--	--	--	0	0	--	0	--	--	--
Kane	--	--	--	--	0	--	0	--	0	--	--	--
Millard	--	213	317	--	0	0	--	--	0	--	--	--
Piute	--	--	267	--	--	--	0	--	0	--	--	--
Sevier	--	--	28	22	10	8	2	--	12	2	15	15
Washington	--	--	--	--	--	0	0	--	0	--	--	--
Wayne	--	--	--	--	117	0	--	--	0	--	--	--
<b>REGIONAL TOTALS</b>	<b>314</b>	<b>62</b>	<b>35</b>	<b>15</b>	<b>12</b>	<b>8</b>	<b>2</b>	<b>--</b>	<b>9</b>	<b>2</b>	<b>15</b>	<b>51</b>
<b>Northeastern Region</b>												
Daggett	--	--	0	--	0	0	0	20	0	--	85	85
Duchesne	58	29	0	28	0	30	11	47	9	46	48	48
Uintah	88	18	83	--	0	16	0	62	0	11	--	--
<b>REGIONAL TOTALS</b>	<b>65</b>	<b>23</b>	<b>83</b>	<b>10</b>	<b>0</b>	<b>20</b>	<b>5</b>	<b>44</b>	<b>4</b>	<b>21</b>	<b>26</b>	<b>28</b>
<b>Southeastern Region</b>												
Carbon	--	5	0	--	0	53	33	12	7	--	9	9
Emery	30	16	46	--	67	42	0	--	0	--	33	33
Grand	--	--	--	--	0	--	0	--	--	--	--	--
San Juan	--	--	--	--	0	0	0	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>30</b>	<b>12</b>	<b>46</b>	<b>--</b>	<b>28</b>	<b>26</b>	<b>11</b>	<b>7</b>	<b>3</b>	<b>--</b>	<b>12</b>	<b>20</b>
<b>STATE TOTALS</b>	<b>59</b>	<b>55</b>	<b>54</b>	<b>28</b>	<b>18</b>	<b>28</b>	<b>12</b>	<b>25</b>	<b>23</b>	<b>29</b>	<b>37</b>	<b>33</b>

Table 5. Blue grouse summer inventory summary, 1979

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults Yng.	Total Yng. 100 Ad.	Hours Effort			Birds/ 100 hrs.			
	No. Ad.	Yng.		Ad.	Yng.				Miles Veh.	Horse	Walk		Total		
<b>Northern Region</b>															
Box Elder	5	5	19	3.80	0	0	5	19	380	5	0.5	2.5	0	3	800
Cache	2	2	5	2.50	2	5	6	10	167	330	169	72	4	245	7
Davis	2	2	7	3.50	2	7	14	14	100	105	6	0	14	20	140
Morgan	0	0	0	--	0	0	0	0	0	0	0	37	0	37	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	3	3	13	4.33	0	0	4	13	325	21	2	0	0	2	850
Weber	4	4	14	3.50	0	0	5	14	280	285	37	0	0	37	51
<b>REGIONAL TOTALS</b>	<b>16</b>	<b>16</b>	<b>58</b>	<b>3.63</b>	<b>4</b>	<b>12</b>	<b>34</b>	<b>70</b>	<b>205</b>	<b>746</b>	<b>214.5</b>	<b>111.5</b>	<b>18</b>	<b>344</b>	<b>30</b>
<b>Central Region</b>															
Juab	1	1	2	2.00	0	0	1	2	200	45	3	0	5	8	38
Salt Lake	7	7	23	3.29	0	0	10	23	230	333	38	0	9	47	70
Sanpete	4	4	11	2.75	0	0	4	11	275	287	23	10	13	46	33
Tooele	5	5	21	4.20	2	6	12	27	225	110	4	0	3	7	557
Utah	15	15	47	3.13	2	7	32	54	169	300	31	8	10	49	176
Wasatch	1	1	5	5.00	6	10	7	15	214	262	20	0	5	25	88
<b>REGIONAL TOTALS</b>	<b>33</b>	<b>33</b>	<b>109</b>	<b>3.30</b>	<b>10</b>	<b>23</b>	<b>66</b>	<b>132</b>	<b>200</b>	<b>1,337</b>	<b>119</b>	<b>18</b>	<b>45</b>	<b>182</b>	<b>109</b>
<b>Southern Region</b>															
Beaver	2	2	10	5.00	0	0	3	10	200	184	5	--	9	14	107
Garfield	3	3	15	5.00	0	0	4	15	375	266	31	--	--	31	61
Iron	2	2	7	3.50	0	0	3	7	233	40	3	--	--	3	333
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	3	3	19	6.33	0	0	4	19	475	30	1	--	--	1	2,300
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	14	14	46	3.29	2	2	48	48	100	58	5	202	1	208	46
Washington	1	1	4	4.00	0	0	1	4	400	41	4	--	--	4	125
Wayne	0	0	0	--	0	0	0	0	--	95	13	--	--	13	--
<b>REGIONAL TOTALS</b>	<b>25</b>	<b>25</b>	<b>101</b>	<b>4.04</b>	<b>2</b>	<b>2</b>	<b>65</b>	<b>103</b>	<b>158</b>	<b>714</b>	<b>62</b>	<b>202</b>	<b>10</b>	<b>274</b>	<b>61</b>
<b>Northeastern Region</b>															
Daggett	9	9	36	4.00	16	15	33	51	154	192	15	0	5	20	420
Duchesne	8	8	24	3.00	4	9	15	33	220	195	16	5	2	23	209
Uintah	4	4	23	5.75	0	0	5	23	460	342	54	6	4	64	44
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>21</b>	<b>83</b>	<b>3.95</b>	<b>20</b>	<b>24</b>	<b>53</b>	<b>107</b>	<b>202</b>	<b>729</b>	<b>85</b>	<b>11</b>	<b>11</b>	<b>107</b>	<b>150</b>
<b>Southeastern Region</b>															
Carbon	1	1	2	2.00	0	0	2	2	100	209	19	--	2.5	21.5	19
Emery	0	0	0	--	0	0	1	0	--	21	3	--	--	3	33
Grand	0	0	0	--	0	0	0	0	--	55	4.5	--	--	4.5	--
San Juan	1	1	5	5.00	0	0	2	5	250	150	13	--	--	13	54
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>3.50</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>140</b>	<b>435</b>	<b>39.5</b>	<b>--</b>	<b>2.5</b>	<b>42</b>	<b>29</b>
<b>STATE TOTALS</b>	<b>97</b>	<b>97</b>	<b>358</b>	<b>3.69</b>	<b>36</b>	<b>61</b>	<b>223</b>	<b>419</b>	<b>188</b>	<b>3,961</b>	<b>520</b>	<b>342.5</b>	<b>86.5</b>	<b>949</b>	<b>68</b>

Table 6. Trend of blue grouse young per 100 adults, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	222	389	--	500	--	236	100	429	--	400	380	
Cache	154	316	245	288	192	357	356	331	100	322	167	
Davis	250	--	520	82	--	300	0	150	320	500	100	
Morgan	500	600	533	250	375	300	130	341	117	230	0	
Rich	--	300	--	300	--	--	167	500	--	--	--	
Summit	400	433	600	533	314	--	143	333	333	560	325	
Weber	325	--	557	68	700	625	0	400	400	425	280	
<b>REGIONAL TOTALS</b>	<b>248</b>	<b>361</b>	<b>305</b>	<b>191</b>	<b>222</b>	<b>305</b>	<b>194</b>	<b>333</b>	<b>167</b>	<b>357</b>	<b>205</b>	<b>268</b>
<b>Central Region</b>												
Juab	383	--	--	--	50	--	500	--	--	200	200	
Salt Lake	175	900	67	--	0	300	25	333	238	160	230	
Sanpete	--	283	425	156	300	--	--	325	260	89	275	
Tooele	--	--	--	--	143	179	86	227	82	108	225	
Utah	230	314	422	375	415	222	0	300	27	266	169	
Wasatch	--	550	450	600	--	333	400	400	--	800	214	
<b>REGIONAL TOTALS</b>	<b>231</b>	<b>389</b>	<b>324</b>	<b>321</b>	<b>285</b>	<b>218</b>	<b>192</b>	<b>277</b>	<b>120</b>	<b>156</b>	<b>200</b>	<b>251</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	500	--	--	--	--	200	
Garfield	--	100	600	133	--	--	400	100	300	380	375	
Iron	8	--	267	--	--	150	--	--	--	200	233	
Kane	--	150	200	240	211	--	--	--	--	400	--	
Millard	--	--	280	67	--	450	--	--	700	567	475	
Piute	--	--	--	--	--	--	--	200	--	--	--	
Sevier	--	140	136	100	100	320	233	106	86	214	100	
Washington	38	170	--	271	533	350	--	500	--	600	400	
Wayne	182	--	--	--	--	400	--	275	567	--	--	
<b>REGIONAL TOTALS</b>	<b>75</b>	<b>135</b>	<b>213</b>	<b>149</b>	<b>192</b>	<b>313</b>	<b>246</b>	<b>142</b>	<b>146</b>	<b>288</b>	<b>158</b>	<b>190</b>
<b>Northeastern Region</b>												
Daggett	350	--	--	286	286	567	--	487	367	343	154	
Duchesne	433	--	400	275	600	300	350	431	380	567	220	
Uintah	480	400	167	557	500	250	300	525	350	500	460	
<b>REGIONAL TOTALS</b>	<b>414</b>	<b>400</b>	<b>225</b>	<b>339</b>	<b>344</b>	<b>311</b>	<b>320</b>	<b>461</b>	<b>372</b>	<b>486</b>	<b>202</b>	<b>367</b>
<b>Southeastern Region</b>												
Carbon	--	0	167	92	--	243	167	321	500	225	100	
Emery	--	450	300	--	667	--	--	--	300	--	--	
Grand	--	--	--	114	0	43	200	110	300	--	--	
San Juan	456	153	386	375	--	242	200	155	100	380	250	
<b>REGIONAL TOTALS</b>	<b>456</b>	<b>139</b>	<b>310</b>	<b>216</b>	<b>333</b>	<b>188</b>	<b>189</b>	<b>209</b>	<b>269</b>	<b>255</b>	<b>140</b>	<b>256</b>
<b>STATE TOTALS</b>	<b>235</b>	<b>253</b>	<b>292</b>	<b>224</b>	<b>237</b>	<b>284</b>	<b>195</b>	<b>281</b>	<b>181</b>	<b>278</b>	<b>188</b>	<b>236</b>

Table 7. Trend of blue grouse mean brood size, 1969-79.

Region and County	Year										Average 1969-78	
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978		1979
<b>Northern Region</b>												
Box Elder	5.54	3.83	--	5.00	--	5.06	3.00	5.75	--	4.00	3.80	
Cache	3.35	4.28	5.18	5.50	4.66	4.95	5.30	4.48	3.40	4.46	2.50	
Davis	7.00	--	6.25	2.67	--	--	--	4.00	3.67	5.00	3.50	
Morgan	5.00	6.00	5.33	5.33	5.50	4.62	3.25	4.45	2.80	3.83	--	
Rich	--	3.00	--	4.50	--	--	5.00	5.00	--	--	--	
Summit	8.00	4.33	6.00	5.33	4.40	--	2.75	5.00	5.00	5.60	4.33	
Weber	4.75	--	6.50	4.75	7.00	6.25	--	6.00	4.00	4.25	3.50	
<b>REGIONAL TOTALS</b>	4.51	4.21	5.54	4.96	4.79	5.00	4.25	4.67	3.56	4.55	3.63	4.60
<b>Central Region</b>												
Juab	4.60	--	--	--	1.00	--	5.00	--	--	4.00	2.00	
Salt Lake	4.40	9.00	2.00	--	--	6.00	1.00	5.00	4.75	2.67	3.29	
Sanpete	--	2.83	4.25	2.80	3.00	--	--	3.25	4.33	4.00	2.75	
Tooele	--	--	--	--	6.00	4.40	3.50	3.45	2.50	4.40	4.20	
Utah	4.67	5.50	4.22	4.22	5.38	5.00	--	4.29	1.50	3.13	3.13	
Wasatch	--	5.50	4.50	6.00	--	5.00	4.00	4.00	--	8.00	5.00	
<b>REGIONAL TOTALS</b>	4.54	4.67	4.00	4.12	4.54	4.83	3.40	3.97	3.64	3.61	3.30	4.13
<b>Southern Region</b>												
Beaver	--	--	--	--	--	5.00	--	--	--	--	5.00	
Garfield	--	3.00	6.00	4.00	--	--	6.00	--	6.00	4.75	5.00	
Iron	--	--	8.00	--	--	3.00	--	--	--	2.00	3.50	
Kane	--	3.00	6.00	3.33	6.33	--	--	--	--	4.00	--	
Millard	--	--	4.67	2.00	--	4.50	--	--	7.00	5.67	6.33	
Piute	--	--	--	--	--	--	--	2.00	--	--	--	
Sevier	1.50	--	3.00	2.62	3.00	5.89	3.82	3.17	4.29	4.50	3.29	
Washington	4.00	3.40	--	4.00	5.33	3.50	--	5.00	--	6.00	4.00	
Wayne	--	--	--	--	--	4.00	--	5.50	6.00	--	--	
<b>REGIONAL TOTALS</b>	5.50	3.25	4.45	3.06	4.55	5.31	4.00	3.50	4.90	4.65	4.04	4.32
<b>Northeastern Region</b>												
Daggett	3.50	--	--	5.00	5.00	5.67	--	4.88	3.67	4.00	4.00	
Duchesne	4.33	--	4.00	4.71	6.00	4.22	7.00	4.60	4.22	5.30	3.00	
Uintah	6.00	5.50	2.50	6.50	5.00	5.00	4.50	5.25	3.50	5.00	5.75	
<b>REGIONAL TOTALS</b>	4.46	5.50	3.00	5.21	5.20	4.71	5.33	4.78	3.94	4.83	3.95	4.70
<b>Southeastern Region</b>												
Carbon	--	--	5.00	6.00	--	3.40	3.33	4.25	4.75	4.50	2.00	
Emery	--	4.50	3.00	--	6.67	--	--	--	3.00	--	--	
Grand	--	--	--	2.67	--	1.50	4.00	3.67	6.00	--	--	
San Juan	5.20	4.00	5.25	6.17	--	4.83	3.50	3.40	4.00	6.00	5.00	
<b>REGIONAL TOTALS</b>	5.20	4.20	4.82	5.50	6.67	3.77	3.57	3.88	4.57	5.40	3.50	4.76
<b>STATE TOTALS</b>	4.46	4.28	4.86	4.64	4.81	4.88	4.05	4.29	4.00	4.44	3.69	4.47





Table 9. Summary of effort expended on forest grouse brood counts, 1979.

Region and County	Vehicle Miles Traveled	Hours Effort Expended			
		Vehicle	Horseback	Walking	Total
<u>Northern Region</u>					
Box Elder	5	0.5	2.5	0.0	3.0
Cache	330	169.0	72.0	4.0	245.0
Davis	105	6.0	0	14.0	20.0
Morgan	0	0.0	37.0	0.0	37.0
Rich	--	--	--	--	--
Summit	21	2.0	0.0	0.0	2.0
Weber	285	37.0	0.0	0.0	37.0
<b>REGIONAL TOTALS</b>	<b>746</b>	<b>214.5</b>	<b>111.5</b>	<b>18.0</b>	<b>344.0</b>
<u>Central Region</u>					
Juab	45	3.0	0.0	5.0	8.0
Salt Lake	333	38.0	0.0	9.0	47.0
Sanpete	262	20.0	10.0	11.0	41.0
Tooele	110	4.0	0.0	3.0	7.0
Utah	300	31.0	8.0	10.0	49.0
Wasatch	262	20.0	0.0	5.0	25.0
<b>REGIONAL TOTALS</b>	<b>1,312</b>	<b>116.0</b>	<b>18.0</b>	<b>43.0</b>	<b>177.0</b>
<u>Southern Region</u>					
Beaver	184	5.0	0.0	9.0	14.0
Garfield	266	31.0	0.0	0.0	31.0
Iron	40	3.0	0.0	0.0	3.0
Kane	--	--	--	--	--
Millard	30	1.0	0.0	1.0	2.0
Piute	--	--	--	--	--
Sevier	58	5.0	202.0	1.0	208.0
Washington	41	4.0	0.0	0.0	4.0
Wayne	95	13.0	0.0	0.0	13.0
<b>REGIONAL TOTALS</b>	<b>714</b>	<b>62.0</b>	<b>202.0</b>	<b>11.0</b>	<b>275.0</b>
<u>Northeastern Region</u>					
Daggett	192	15.0	0.0	5.0	20.0
Duchesne	195	16.0	5.0	2.0	23.0
Uintah	342	54.0	6.0	4.0	64.0
<b>REGIONAL TOTALS</b>	<b>729</b>	<b>85.0</b>	<b>11.0</b>	<b>11.0</b>	<b>107.0</b>
<u>Southeastern Region</u>					
Carbon	209	19.0	0.0	2.5	21.5
Emery	21	3.0	0.0	0.0	3.0
Grand	55	4.5	0.0	0.0	4.5
San Juan	150	13.0	0.0	0.0	13.0
<b>REGIONAL TOTALS</b>	<b>435</b>	<b>39.5</b>	<b>0.0</b>	<b>2.5</b>	<b>42.0</b>
<b>STATE TOTALS</b>	<b>3,936</b>	<b>517.0</b>	<b>342.5</b>	<b>85.5</b>	<b>945.0</b>

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days		Birds Bagged			Birds/Day	% of Pressure	% of Harvest
		Afield	Ruffed	Blue	Unident.	Total			
<u>Northern Region</u>									
Box Elder	47	1,237	437	466	72	975	0.79	2.16	1.63
Cache	296	10,567	4,221	8,529	379	13,129	1.24	18.41	21.94
Davis	76	2,562	640	1,601	175	2,416	0.94	4.46	4.04
Morgan	48	1,587	888	699	131	1,718	1.08	2.76	2.87
Rich	76	2,271	917	1,106	15	2,038	0.90	3.96	3.40
Summit	100	3,697	1,688	1,587	175	3,450	0.93	6.44	5.76
Weber	166	5,691	1,980	3,930	174	6,084	1.07	9.91	10.17
REGIONAL TOTALS	809	27,612	10,771	17,918	1,121	29,810	1.08	48.10	49.81
<u>Central Region</u>									
Juab	22	509	277	495	58	830	1.63	0.89	1.39
Salt Lake	53	1,645	480	1,397	44	1,921	1.17	2.87	3.21
Sanpete	112	3,915	1,601	1,761	393	3,755	0.96	6.82	6.27
Tooele	37	873	247	422	190	859	0.98	1.52	1.43
Utah	193	6,608	3,333	3,697	335	7,365	1.11	11.51	12.31
Wasatch	113	3,551	1,819	1,339	131	3,289	0.93	6.19	5.50
REGIONAL TOTALS	530	17,101	7,757	9,111	1,151	18,019	1.05	29.79	30.11
<u>Southern Region</u>									
Beaver	6	160	29	131	102	262	1.64	0.28	0.44
Garfield	8	320	73	131	0	204	0.64	0.56	0.34
Iron	14	393	116	102	88	306	0.78	0.68	0.51
Kane	2	102	58	29	0	87	0.86	0.18	0.15
Millard	36	1,383	262	1,252	480	1,994	1.44	2.41	3.33
Piute	13	451	87	102	146	335	0.74	0.79	0.56
Sevier	86	3,420	1,325	2,300	261	3,886	1.14	5.96	6.49
Washington	5	160	73	0	0	73	0.45	0.28	0.12
Wayne	10	277	44	218	0	262	0.95	0.48	0.44
REGIONAL TOTALS	180	6,665	2,067	4,265	1,077	7,409	1.11	11.61	12.38
<u>Northeastern Region</u>									
Daggett	17	655	160	277	14	451	0.69	1.14	0.75
Duchesne	36	1,426	1,019	306	87	1,412	0.99	2.48	2.36
Uintah	41	975	291	582	29	902	0.93	1.70	1.51
REGIONAL TOTALS	94	3,056	1,470	1,165	130	2,765	0.90	5.32	4.62
<u>Southeastern Region</u>									
Carbon	36	1,252	480	335	102	917	0.73	2.18	1.53
Emery	28	975	277	189	43	509	0.52	1.70	0.85
Grand	7	539	218	87	1	306	0.57	0.94	0.51
San Juan	3	146	58	0	0	58	0.40	0.25	0.10
REGIONAL TOTALS	74	2,912	1,033	611	146	1,790	0.61	5.07	2.99
Unknown counties	4	58	58	0	0	58	1.00	0.10	0.10
Mixed counties	0	0	0	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,691	57,404	23,156	33,070	3,625	59,851	1.04	100	100

\*Total hunter-trips from questionnaire returns.

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	0.92	1.12	0.84	1.23	0.98	0.79
Cache	1.39	1.13	1.25	0.92	1.40	1.24
Davis	0.69	0.73	0.84	0.90	1.34	0.94
Morgan	1.29	0.85	0.88	1.24	1.47	1.08
Rich	0.89	0.82	0.75	0.58	1.10	0.90
Summit	1.03	0.80	1.26	0.87	1.38	0.93
Weber	1.14	0.87	1.56	1.01	1.06	1.07
REGIONAL TOTALS	1.19	0.96	1.17	0.94	1.27	1.08
<u>Central Region</u>						
Juab	1.25	0.86	1.09	0.97	0.63	1.63
Salt Lake	1.08	0.70	1.08	0.64	1.59	1.17
Sanpete	1.12	0.65	0.98	0.73	0.82	0.96
Tooele	0.66	0.89	1.02	0.86	0.89	0.98
Utah	1.03	0.71	1.22	0.85	1.13	1.11
Wasatch	0.89	1.00	1.06	0.75	0.93	0.93
REGIONAL TOTALS	1.03	0.76	1.13	0.81	1.04	1.05
<u>Southern Region</u>						
Beaver	0.25	0.53	0.88	0.40	1.65	1.64
Garfield	0.17	0.73	0.68	0.25	0.57	0.64
Iron	0.86	0.68	1.48	0.91	0.98	0.78
Kane	2.00	0.50	0.50	0.50	0.57	0.86
Millard	1.66	0.65	1.55	1.35	1.21	1.44
Piute	0.71	0.33	1.17	0.65	1.93	0.74
Sevier	1.39	0.73	0.66	1.18	1.02	1.14
Washington	--	0.79	1.00	1.50	1.22	0.45
Wayne	0.63	1.00	1.50	1.00	1.00	0.95
REGIONAL TOTALS	1.14	0.68	0.98	1.01	1.06	1.11
<u>Northeastern Region</u>						
Daggett	1.11	0.50	1.12	0.41	0.79	0.69
Duchesne	0.76	0.72	1.02	1.03	0.96	0.99
Uintah	1.49	0.97	0.87	0.75	0.82	0.93
REGIONAL TOTALS	1.14	0.76	0.96	0.70	0.87	0.90
<u>Southeastern Region</u>						
Carbon	0.79	0.57	1.20	0.64	1.32	0.73
Emery	0.87	0.42	1.50	0.79	0.89	0.52
Grand	0.50	0.83	0.00	0.67	0.67	0.57
San Juan	1.00	0.44	0.00	0.40	0.43	0.40
REGIONAL TOTALS	0.81	0.53	1.18	0.67	0.96	0.61
Unknown counties	1.35	0.89	1.06	1.74	0.74	1.00
Mixed counties	--	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	1.13	0.84	1.12	0.87	1.12	1.04

Table 12. Percentage distribution of forest grouse harvest by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	3.01	2.75	2.17	4.22	2.99	1.63
Cache	29.84	26.81	26.39	20.01	20.93	21.94
Davis	1.55	3.52	2.93	3.51	3.56	4.04
Morgan	3.29	5.43	2.71	3.48	3.58	2.87
Rich	4.05	3.25	3.03	2.13	3.66	3.40
Summit	4.65	4.82	4.72	7.10	6.90	5.76
Weber	7.85	8.37	9.66	10.57	7.93	10.17
REGIONAL TOTALS	54.24	54.95	51.59	51.03	49.55	49.81
<u>Central Region</u>						
Juab	3.38	1.41	1.53	1.21	0.61	1.39
Salt Lake	2.92	2.37	2.52	1.91	2.97	3.21
Sanpete	4.78	4.05	5.39	3.58	4.17	6.27
Tooele	0.70	1.84	1.40	2.48	2.38	1.43
Utah	12.32	11.24	16.76	13.63	16.76	12.31
Wasatch	4.05	6.08	3.38	4.44	4.66	5.50
REGIONAL TOTALS	28.14	27.00	30.98	27.25	31.56	30.11
<u>Southern Region</u>						
Beaver	0.21	0.69	1.37	0.14	0.69	0.44
Garfield	0.06	0.42	0.41	0.07	0.42	0.34
Iron	0.58	1.80	1.27	2.06	1.06	0.51
Kane	0.06	0.15	0.06	0.07	0.20	0.15
Millard	2.92	1.07	1.63	0.82	0.71	3.33
Piute	0.15	0.23	0.45	0.53	0.71	0.56
Sevier	3.01	4.55	1.59	5.71	3.58	6.49
Washington	--	0.42	0.19	0.11	0.54	0.12
Wayne	0.15	0.38	0.29	0.11	0.10	0.44
REGIONAL TOTALS	7.15	9.71	7.27	9.62	8.00	12.38
<u>Northeastern Region</u>						
Daggett	0.61	0.80	0.57	1.17	0.76	0.75
Duchesne	1.25	1.26	1.56	2.13	2.36	2.36
Uintah	2.68	2.18	1.69	1.67	2.18	1.51
REGIONAL TOTALS	4.53	4.24	3.82	4.97	5.30	4.62
<u>Southeastern Region</u>						
Carbon	1.34	1.72	1.53	2.41	2.36	1.53
Emery	0.79	0.61	0.38	1.10	1.67	0.85
Grand	0.03	0.19	0.00	0.14	0.15	0.51
San Juan	0.03	0.27	0.00	0.07	0.37	0.10
REGIONAL TOTALS	2.19	2.79	1.91	3.73	4.54	2.99
Unknown counties	3.74	1.30	4.43	3.41	1.06	0.10
Mixed counties	--	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 13. Percent distribution of forest grouse hunting pressure by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	3.71	2.05	2.90	3.00	3.44	2.16
Cache	24.24	19.97	23.79	18.99	16.79	18.41
Davis	2.54	4.04	3.91	3.40	2.97	4.46
Morgan	2.89	5.36	3.48	2.44	2.72	2.76
Rich	5.12	3.34	4.55	3.18	3.71	3.96
Summit	5.12	5.07	4.19	7.08	5.61	6.44
Weber	7.77	8.12	6.95	9.09	8.42	9.91
REGIONAL TOTALS	51.39	47.96	49.77	47.19	43.67	48.10
<u>Central Region</u>						
Juab	3.06	1.38	1.58	1.08	1.10	0.89
Salt Lake	3.06	2.83	2.62	2.60	2.09	2.87
Sanpete	4.81	5.23	6.20	4.27	5.70	6.82
Tooele	1.20	1.73	1.54	2.50	3.00	1.52
Utah	13.51	13.39	15.41	13.91	16.62	11.51
Wasatch	5.16	5.10	3.58	5.13	5.61	6.19
REGIONAL TOTALS	30.80	29.66	30.92	29.50	34.12	29.79
<u>Southern Region</u>						
Beaver	0.96	1.09	1.76	0.31	0.47	0.28
Garfield	0.41	0.48	0.68	0.25	0.83	0.56
Iron	0.76	2.22	0.97	1.98	1.21	0.68
Kane	0.03	0.26	0.14	0.12	0.39	0.18
Millard	1.99	1.38	1.18	0.53	0.66	2.41
Piute	0.24	0.58	0.43	0.71	0.41	0.79
Sevier	2.44	5.20	2.72	4.21	3.94	5.96
Washington	--	0.45	0.21	0.06	0.50	0.28
Wayne	0.28	0.32	0.21	0.09	0.11	0.48
REGIONAL TOTALS	7.12	11.97	8.31	8.26	8.50	11.61
<u>Northeastern Region</u>						
Daggett	0.62	1.35	0.57	2.47	1.07	1.14
Duchesne	1.86	1.48	1.72	1.79	2.75	2.48
Uintah	2.03	1.89	2.19	1.95	2.97	1.70
REGIONAL TOTALS	4.50	4.72	4.48	6.22	6.80	5.32
<u>Southeastern Region</u>						
Carbon	1.93	2.54	1.43	3.28	2.01	2.18
Emery	1.03	1.22	0.29	1.21	2.09	1.70
Grand	0.07	0.19	0.00	0.19	0.25	0.94
San Juan	0.03	0.51	0.11	0.15	0.96	0.25
REGIONAL TOTALS	3.06	4.46	1.83	4.82	5.31	5.07
Unknown counties	3.13	1.22	4.69	4.02	1.60	0.10
Mixed counties	--	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. Statewide summary of forest grouse harvest statistics, 1963-79.

Year	Total Hunters		Total Harvest		Unknown		Total		Hunter-days		Grouse/Hunter-day		Grouse Per Season		
	Hunters	Ruffed	%	Blue	%	Unknown	%	Total	Afield	Ruffed	Blue	Total	Ruffed	Blue	Total
1963	7,425	5,470	(40.2)	7,372	(54.2)	766	(5.6)	13,608	12,313	0.44	0.66	1.11	0.74	0.99	1.83
1964	6,487	5,354	(42.2)	6,685	(57.7)	652	(5.1)	12,691	10,566	0.51	0.63	1.20	0.82	1.03	1.96
1965	6,005	3,225	(37.2)	4,924	(56.8)	520	(6.0)	8,669	10,504	0.31	0.47	0.83	0.54	0.82	1.44
1966	6,683	6,966	(56.6)	4,659	(37.8)	696	(5.7)	12,321	12,387	0.56	0.38	0.99	1.04	0.68	1.84
1967	9,420	8,476	(48.4)	6,773	(38.6)	2,277	(13.0)	17,526	17,773	0.48	0.38	0.99	0.87	0.69	1.86
1968	13,061	17,048	(52.6)	12,604	(38.9)	2,762	(8.5)	32,414	26,537	0.64	0.47	1.22	1.30	0.96	2.48
1969	12,523	9,490	(44.1)	10,419	(48.5)	1,589	(7.4)	21,498	24,572	0.38	0.42	0.87	0.76	0.83	1.72
1970	12,775	15,590	(48.9)	13,515	(42.4)	2,793	(8.7)	31,898	26,619	0.59	0.51	1.20	1.22	1.06	2.50
1971	13,363	15,759	(49.4)	13,749	(43.1)	2,393	(7.5)	31,901	29,100	0.54	0.47	1.10	1.18	1.03	2.39
1972	16,640	20,648	(48.6)	19,221	(45.2)	2,649	(6.2)	42,518	38,940	0.53	0.49	1.09	1.24	1.16	2.56
1973	17,588	7,153	(15.8)	36,846	(81.4)	1,233	(2.7)	45,232	44,738	0.16	0.82	1.01	0.41	2.09	2.57
1974	21,920	24,561	(39.3)	32,236	(51.6)	5,642	(9.0)	62,439	55,258	0.44	0.58	1.13	1.12	1.47	2.85
1975	20,102	15,750	(37.1)	23,138	(54.5)	3,573	(8.4)	42,461	50,579	0.31	0.45	0.84	0.78	1.15	2.11
1976	21,186	23,551	(37.1)	35,660	(56.2)	4,225	(6.7)	63,436	56,422	0.42	0.63	1.12	1.11	1.68	2.99
1977	19,188	15,766	(37.1)	23,455	(55.2)	3,256	(7.7)	42,476	48,746	0.37	0.48	0.87	0.82	1.22	2.21
1978	25,318	30,340	(37.2)	46,651	(57.2)	4,567	(5.6)	81,558	72,732	0.42	0.64	1.12	1.20	1.84	3.22
1979	21,993	23,156	(38.7)	33,070	(55.3)	3,625	(6.0)	59,851	57,404	0.40	0.58	1.04	1.05	1.50	2.61
TOTALS (1963-79)	251,667	248,303	(39.9)	330,977	(53.2)	43,318	(7.0)	622,498	595,190	0.44	0.53	1.04	0.95	1.19	2.30
AVERAGES															
1963-78	14,355	14,072	(40.0)	18,623	(53.0)	2,475	(7.0)	35,165	33,611	0.44	0.53	1.04	0.95	1.17	2.15

\*Estimated.

\*\*Totals and indexes based on indiscreet data.

Table 15. Forest grouse field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS							
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Birds/Hunter	
<b>Northern Region</b>												
Box Elder	4	13	89	26	29	4	13	89	26	29	2.00	
Cache	333	782	3,224	518	16	323	765	3,183	507	16	0.66	
Davis	19	34	92	40	43	18	32	91	39	43	1.22	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	66	182	572	59	10	66	182	572	59	10	0.32	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	80	248	1,112	90	8	80	248	1,112	90	8	0.36	
<b>REGIONAL TOTALS</b>	<b>502</b>	<b>1,259</b>	<b>5,089</b>	<b>733</b>	<b>14</b>	<b>491</b>	<b>1,240</b>	<b>5,047</b>	<b>721</b>	<b>14</b>	<b>0.58</b>	
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	9	19	29	0	0	4	9	16	0	0	0.00	
Sanpete	9	30	55	15	27	8	28	53	15	28	0.53	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	210	460	1,800	286	16	191	415	1,607	267	17	0.64	
Wasatch	1	2	2	2	100	1	2	2	2	100	1.00	
<b>REGIONAL TOTALS</b>	<b>229</b>	<b>511</b>	<b>1,886</b>	<b>303</b>	<b>16</b>	<b>204</b>	<b>454</b>	<b>1,678</b>	<b>284</b>	<b>89</b>	<b>0.63</b>	
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	7	14	19	5	26	6	13	18	4	22	0.31	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	4	11	35	0	0	4	11	35	0	0	0.00	
Millard	17	49	100	59	59	5	16	40	39	97	2.43	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	11	37	119	30	25	6	25	84	26	31	1.04	
Washington	3	6	14	9	64	1	1	2	3	150	3.00	
Wayne	1	4	12	2	17	1	4	12	2	17	0.50	
<b>REGIONAL TOTALS</b>	<b>43</b>	<b>121</b>	<b>299</b>	<b>105</b>	<b>35</b>	<b>23</b>	<b>70</b>	<b>191</b>	<b>74</b>	<b>39</b>	<b>1.05</b>	
<b>Northeastern Region</b>												
Daggett	31	67	237	88	37	24	51	177	67	38	1.31	
Duchesne	21	54	138	27	19	4	11	27	8	30	0.73	
Uintah	14	47	71	44	62	12	39	54	38	70	0.97	
<b>REGIONAL TOTALS</b>	<b>66</b>	<b>168</b>	<b>446</b>	<b>159</b>	<b>36</b>	<b>40</b>	<b>101</b>	<b>258</b>	<b>113</b>	<b>44</b>	<b>1.12</b>	
<b>Southeastern Region</b>												
Carbon	1	2	6	12	200	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	1	2	2	0	0	1	2	2	0	0	0.00	
San Juan	1	2	2	0	0	1	2	2	0	0	0.00	
<b>REGIONAL TOTALS</b>	<b>3</b>	<b>6</b>	<b>10</b>	<b>12</b>	<b>120</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>STATE TOTALS</b>	<b>843</b>	<b>2,065</b>	<b>7,730</b>	<b>1,312</b>	<b>17</b>	<b>760</b>	<b>1,867</b>	<b>7,178</b>	<b>1,192</b>	<b>17</b>	<b>0.64</b>	



Table 16. Forest grouse hunter success trend determined by field bag checks, 1974-1979.

Region and County	1974		1975		1976		1977		1978		1979	
	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter	Birds/ 100 hr. Hunter
<b>Northern Region</b>												
Box Elder	24	0.96	18	0.79	17	1.36	0	0.00	41	2.33	29	2.00
Cache	12	0.62	12	0.58	18	0.72	7	0.30	31	0.59	16	0.66
Davis	--	--	2	0.05	--	--	0	0.00	--	0.00	43	1.22
Morgan	--	--	6	0.32	19	1.25	--	--	--	--	--	--
Rich	10	0.46	4	0.22	7	0.29	4	0.16	15	0.62	10	0.32
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	12	0.57	7	0.40	17	0.77	8	0.23	20	0.79	8	0.36
<b>REGIONAL TOTALS</b>	12	0.59	10	0.48	17	0.69	6	0.27	26	0.63	14	0.58
<b>Central Region</b>												
Juab	--	--	11	0.21*	22	0.88	3	0.10	33	0.80	--	--
Salt Lake	--	--	--	--	--	--	13	0.33	--	--	0	0.00
Sanpete	38	1.08*	16	0.28*	14	0.14	--	--	--	--	28	0.53
Tooele	31	1.00	--	--	34	1.00	--	--	22	0.40	--	--
Utah	27	1.80	12	0.35	14	0.53	8	0.25	17	0.65	17	0.64
Wasatch	56	1.52	71	1.17	20	0.33	--	--	7	0.00	100	1.00
<b>REGIONAL TOTALS</b>	35	1.24	15	0.38	15	0.56	8	0.24	17	0.65	89	0.63
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	50	0.33	80	0.57	78	1.00	88	1.60	22	0.31
Iron	--	--	36	1.00	--	--	--	--	35	1.66	--	--
Kane	--	--	20	--	--	--	36	0.71	16	0.33	0	0.00
Millard	--	--	24	0.80	--	--	13	0.72	27	1.04	97	2.43
Piute	--	--	100	2.00	--	--	--	--	--	--	--	--
Sevier	--	--	31	2.00	18	0.78	17	1.00	--	--	31	1.04
Washington	--	--	--	--	--	--	--	--	--	--	150	3.00
Wayne	--	--	--	--	4	0.33	--	--	--	--	17	0.50
<b>REGIONAL TOTALS</b>	--	--	26	1.13	18	0.68	20	0.81	37	1.22	39	1.05
<b>Northeastern Region</b>												
Daggett	33	0.44	90	2.25	41	4.00	11	0.33	57	0.80	38	1.31
Duchesne	25	0.50	0	--	11	1.22	10	0.39	20	0.50	30	0.73
Uintah	15	0.54	28	1.32	60	1.31	8	0.27	14	0.29	70	0.97
<b>REGIONAL TOTALS</b>	16	0.53	30	1.48	33	1.50	9	0.29	19	0.46	44	1.12
<b>Southeastern Region</b>												
Carbon	--	--	--	--	46	1.00	100	1.00	--	--	--	--
Emery	5	0.17	4	0.10*	--	--	--	--	--	--	--	--
Grand	17	0.50*	150	3.00	25	1.33	--	--	--	--	0	0.00
San Juan	17	0.30	67	0.80	--	--	--	--	--	--	0	0.00
<b>REGIONAL TOTALS</b>	11	0.25	11	0.30	39	1.08	100	1.00	--	--	0	0.00
<b>STATE TOTALS</b>	13	0.59	11	0.50	17	0.67	7	0.28	22	0.64	17	0.64

\*Forest grouse per hunter index based on all hunts.

Table 17. Sex and age composition of harvested blue grouse, 1979.

Region & County	Sample Size	Adults			Young <sup>1</sup>			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
<u>Northern Region</u>									
Box Elder	33	10	8	18	--	--	15	83	188
Cache <sup>2</sup>	413	117	83	200	--	--	213	106	241
Davis	--	--	--	--	--	--	--	--	--
Morgan <sup>2</sup>	--	--	--	--	--	--	--	--	--
Rich <sup>2</sup>	--	--	--	--	--	--	--	--	--
Summit <sup>2</sup>	--	--	--	--	--	--	--	--	--
Weber <sup>2</sup>	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	446	127	91	218	--	--	228	105	248
<u>Central Region</u>									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete <sup>3</sup>	15	--	--	5	--	--	10	200	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	270	37	36	73	84	97	197	270	547
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	270	37	36	73	84	97	197	270	547
<u>Southern Region</u>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute <sup>4</sup>	--	--	--	--	--	--	--	--	--
Sevier <sup>4</sup>	49	16	9	25	7	17	24	96	266
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	49	16	9	25	7	17	24	96	266
<u>Northeastern Region</u>									
Daggett	44	10	3	13	14	17	31	238	1,033
Duchesne	35	3	5	8	11	16	27	338	540
Uintah	42	9	9	18	14	10	24	133	267
REGIONAL TOTALS	121	22	17	39	39	43	82	210	483
<u>Southeastern Region</u>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	886	202	153	355	130	157	531	150	347

<sup>1</sup>Includes unclassified juveniles.

<sup>2</sup>Data combined applies to one population of blue grouse.

<sup>3</sup>Not included in regional or state total.

<sup>4</sup>Data combined with Wayne County.

# QUAIL

## SUMMARY

The 1979 breeding populations of California and Gambel quail were higher than during 1978 and above average.

Production of both Gambel and California quail increased from 1978 to above average. Population densities were above average in most areas of the state.

Harvest statistics were very similar to 1978. Total hunters and total harvest were slightly below average, but harvest and success increased slightly over 1978 for both species of quail.



### Brood Count

Results of the annual random brood survey for 1979 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 1979 compared to 1978 and the previous 10-year average follow:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total quail observed	1,151	+ 53	+23
Young per 100 adults	285	+ 4	+28
Mean brood size	8.08	+ 7	+16
Quail observed per 100 hours	1,193	+125	+87
Total hours effort	96.5	- 32	-25

Harvest statistics for 1978 indicated increased breeding populations of California quail statewide and of Gambel quail in Washington County.

Gambel quail call counts on the west slope of Beaver Dam Mountains showed a significant increase compared to recent years.

Production and densities of both California and Gambel's quail increased from 1978 and were well above average.

### Harvest

Results of the annual hunter questionnaire for 1979 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 statewide harvest statistics in Table 9.

Comparison of the 1979 season to 1978 and the previous 10-year average follow:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Quail hunters	5,632	- 5	-13
Quail harvested	15,821	+ 2	- 4
Hunter-days afield	13,550	- 1	-19
Quail per hunter-day	1.17	+ 4	+18
Quail per hunter	2.81	+ 8	+10

Harvest statistics for 1979 were very similar to 1978 and average.

Hunter success for Washington County (Gambel quail) declined some from 1978, but total harvest increased. About 25 percent of the statewide harvest of quail was taken in Washington County during 1979 compared to 18 percent in 1978 and nearly 25 percent in 1977.

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

Gambel Quail Studies

Annual call-count surveys and long-period waterhole counts have been conducted on the west slopes of the Beaver Dam Mountains since 1962.

Call counts showed significant increases over 1978 and were far above average.

Waterhole counts totaled 330 birds during 1979 compared to 86 during 1978 and 17 during 1977.

Vegetative studies were discontinued in 1977.

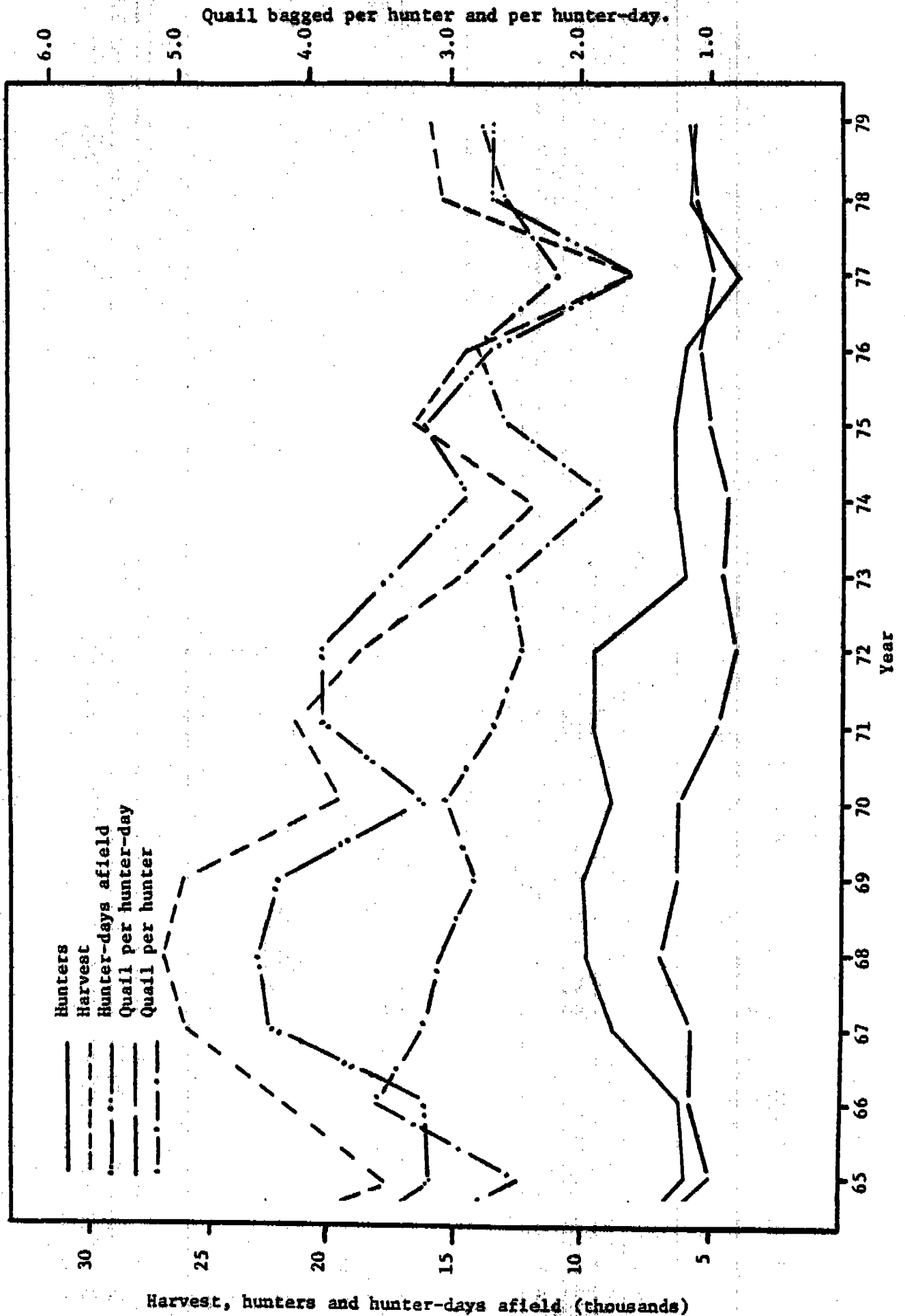


Figure 1. Statewide trend of quail harvest statistics.

Harvest, hunters and hunter-days afield (thousands)

Table 1. Quail summer inventory summary, 1979.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults	Total Yng.	Young/ 100 Ad.	Vehicle Miles	Hours Effort		Birds/ 100 hrs.		
	No. Ad.	Yng.		Ad.	Yng.						Veh.	Horse		Walk	Total
<u>Northern Region</u>															
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--		
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--		
Davis	4	8	27	9	30	12	29	57	196	68	4	0	5	9	956
Morgan	1	1	5	0	0	0	1	5	500	0	0	0	1	1	600
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	0	0	0	3	7	0	3	7	233	0	0	0	1	1	1,000
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>9</b>	<b>32</b>	<b>12</b>	<b>37</b>	<b>12</b>	<b>33</b>	<b>69</b>	<b>209</b>	<b>68</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>11</b>	<b>927</b>
<u>Central Region</u>															
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	5	5	23	0	0	4	9	23	256	55	3	0	0	3	1,067
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	2	2	8	7	40	11	20	48	240	40	4	0	0	4	1,700
Masatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>7</b>	<b>7</b>	<b>31</b>	<b>7</b>	<b>40</b>	<b>15</b>	<b>29</b>	<b>71</b>	<b>245</b>	<b>95</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1,429</b>
<u>Southern Region</u>															
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	8	16	90	11.25	--	28	44	90	204	160	10	--	--	10	1,340
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	1	1	7	7.00	--	--	1	7	700	--	1	--	--	1	800
Washington	49	93	417	8.51	31	77	164	494	301	286	16	--	8	24	2,741
Wayne	0	0	0	--	0	0	0	0	--	32	6	--	--	6	0
<b>REGIONAL TOTALS</b>	<b>58</b>	<b>110</b>	<b>514</b>	<b>8.86</b>	<b>31</b>	<b>77</b>	<b>209</b>	<b>591</b>	<b>283</b>	<b>478</b>	<b>33</b>	<b>--</b>	<b>8</b>	<b>41</b>	<b>1,951</b>
<u>Northeastern Region</u>															
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	3	18	6.00	5	16	2	34	340	337	21	--	--	21	209
Uintah	3	3	19	6.34	10	66	13	85	653	9	10	--	1	11	890
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>6</b>	<b>37</b>	<b>6.17</b>	<b>15</b>	<b>82</b>	<b>23</b>	<b>119</b>	<b>517</b>	<b>346</b>	<b>31</b>	<b>--</b>	<b>1</b>	<b>32</b>	<b>443</b>
<u>Southeastern Region</u>															
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	0	0	0	--	5	2	5	2	40	15	5.5	--	--	5.5	127
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>40</b>	<b>15</b>	<b>5.5</b>	<b>--</b>	<b>--</b>	<b>5.5</b>	<b>127</b>
<b>STATE TOTALS</b>	<b>76</b>	<b>132</b>	<b>614</b>	<b>8.08</b>	<b>70</b>	<b>238</b>	<b>97</b>	<b>852</b>	<b>285</b>	<b>1,002</b>	<b>80.5</b>	<b>0</b>	<b>16</b>	<b>96.5</b>	<b>1,193</b>

Table 2. Trend of quail young per 100 adults, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<b>Northern Region</b>												
Box Elder	--	--	--	--	250	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	400	--	314	--	--	--	--	--	--	--	196	--
Morgan	94	329	300	575	400	640	--	300	--	--	500	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	450	--	--	--	--	--	--	--	--	--	--	--
Weber	125	0	255	111	50	--	217	0	133	--	233	--
<b>REGIONAL TOTALS</b>	<b>183</b>	<b>230</b>	<b>290</b>	<b>254</b>	<b>230</b>	<b>640</b>	<b>217</b>	<b>180</b>	<b>133</b>	<b>--</b>	<b>209</b>	<b>262</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	360	173	240	114	222	175	154	97	86	77	256	--
Sanpete	327	476	440	500	174	175	300	580	230	300	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	300	228	220	275	241	250	229	64	80	44	240	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>337</b>	<b>198</b>	<b>267</b>	<b>143</b>	<b>222</b>	<b>200</b>	<b>188</b>	<b>108</b>	<b>95</b>	<b>127</b>	<b>245</b>	<b>189</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	1,075	160	--	--	--	--	--	--	--	--	--
Millard	122	--	233	117	0	113	50	146	98	47	204	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	700	--
*Washington	138	48	320	57	--	273	580	199	149	555	301	--
*Wayne	--	--	0	--	--	86	--	244	238	1,250	--	--
<b>REGIONAL TOTALS</b>	<b>260</b>	<b>98</b>	<b>270</b>	<b>75</b>	<b>0</b>	<b>171</b>	<b>429</b>	<b>190</b>	<b>146</b>	<b>317</b>	<b>283</b>	<b>196</b>
<b>Northeastern Region</b>												
Daggett	--	524	267	--	0	525	450	600	0	--	--	--
Duchesne	54	0	--	--	--	333	314	0	129	190	340	--
Uintah	138	218	217	165	700	438	475	323	383	800	653	--
<b>REGIONAL TOTALS</b>	<b>123</b>	<b>301</b>	<b>243</b>	<b>165</b>	<b>350</b>	<b>431</b>	<b>411</b>	<b>265</b>	<b>122</b>	<b>336</b>	<b>517</b>	<b>275</b>
<b>Southeastern Region</b>												
Carbon	114	283	125	--	533	--	--	450	--	650	--	--
Emery	--	--	50	438	--	109	0	--	0	19	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	41	--	40	--
<b>REGIONAL TOTALS</b>	<b>114</b>	<b>283</b>	<b>100</b>	<b>438</b>	<b>533</b>	<b>109</b>	<b>0</b>	<b>450</b>	<b>38</b>	<b>89</b>	<b>40</b>	<b>215</b>
<b>STATE TOTALS</b>	<b>229</b>	<b>200</b>	<b>255</b>	<b>171</b>	<b>216</b>	<b>248</b>	<b>360</b>	<b>163</b>	<b>112</b>	<b>272</b>	<b>285</b>	<b>223</b>

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



Table 3. Trend of quail mean brood size from 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	--	--	--	--	5.00	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	8.20	--	11.00	--	--	--	--	--	--	--	6.75	--
Morgan	4.80	7.67	12.00	11.50	8.00	9.00	--	--	--	--	5.00	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	7.00	--	--	--	--	--	--	--	--	--	--	--
Weber	4.00	--	9.33	10.00	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	5.94	7.67	10.50	11.00	7.00	9.00	--	--	--	--	6.40	8.52
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	11.42	8.61	7.00	8.00	7.50	5.00	6.80	7.00	6.40	2.00	4.60	--
Sanpete	6.00	5.67	5.70	5.40	5.60	4.00	6.00	5.80	4.33	4.75	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	8.75	7.85	7.43	7.17	7.36	6.67	7.00	2.50	4.00	4.00	4.00	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	9.67	7.98	6.50	7.18	6.95	5.29	6.56	5.64	5.78	3.44	4.43	6.50
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	8.00	--	--	--	--	--	--	--	--	--
Millard	4.00	--	8.00	7.00	--	7.00	8.00	10.20	6.67	6.25	11.25	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	7.00	--
*Washington	2.90	4.00	6.62	2.67	--	5.17	10.84	6.08	7.83	11.80	8.51	--
*Wayne	--	--	--	--	--	9.00	--	9.00	13.00	--	--	--
<b>REGIONAL TOTALS</b>	3.50	4.00	7.21	3.75	--	6.30	10.63	7.40	8.07	10.21	8.86	6.79
<u>Northeastern Region</u>												
Daggett	--	5.29	5.45	--	--	5.25	4.50	6.00	--	--	--	--
Duchesne	3.00	--	--	--	--	5.00	--	--	3.43	6.86	6.00	--
Uintah	6.00	5.43	5.33	5.92	7.00	11.00	10.00	3.55	7.67	8.00	6.34	--
<b>REGIONAL TOTALS</b>	5.50	5.32	5.41	5.92	7.00	6.73	6.86	3.67	4.70	7.53	6.17	5.86
<u>Southeastern Region</u>												
Carbon	4.67	--	--	--	8.00	--	--	9.00	--	--	--	--
Emery	--	--	2.00	9.86	--	5.00	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	4.50	--	--	--
<b>REGIONAL TOTALS</b>	4.67	--	2.00	9.86	8.00	5.00	--	9.00	4.50	--	--	6.15
<b>STATE TOTALS</b>	6.95	6.97	6.58	7.21	7.04	6.20	9.16	5.58	6.25	7.55	8.08	6.95

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

Table 4. Trend of quail observed per 100 hours, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	--	--	--	--	175	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	1,625	0	829	--	--	--	--	--	--	--	956	--
Morgan	631	1,200	400	1,350	--	925	1,200	--	--	--	600	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	1,100	--	--	--	--	--	--	--	--	--	--	--
Weber	100	86	300	271	100	--	238	22	350	--	1,000	--
<b>REGIONAL TOTALS</b>	<b>657</b>	<b>550</b>	<b>471</b>	<b>511</b>	<b>330</b>	<b>925</b>	<b>238</b>	<b>140</b>	<b>350</b>	<b>350</b>	<b>927</b>	<b>464</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	0	--	--	--	--
Salt Lake	3,684	2,637	1,133	2,706	414	550	592	2,838	2,092	575	1,067	--
Sanpete	427	817	982	771	525	138	480	262	236	400	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	2,086	959	988	1,071	1,194	400	383	512	90	217	1,700	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2,083</b>	<b>1,704</b>	<b>1,030</b>	<b>1,873</b>	<b>808</b>	<b>267</b>	<b>513</b>	<b>1,041</b>	<b>805</b>	<b>378</b>	<b>1,429</b>	<b>1,050</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	0	2,350	578	--	--	--	--	--	--	--	--	--
Millard	1,800	--	3,000	118	125	1,067	1,600	2,867	1,088	867	1,340	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	50	800	--
*Washington	322	316	600	122	--	194	1,143	632	596	750	2,741	--
*Wayne	--	--	33	--	--	300	14	517	645	333	--	--
<b>REGIONAL TOTALS</b>	<b>2,122</b>	<b>420</b>	<b>708</b>	<b>90</b>	<b>125</b>	<b>254</b>	<b>917</b>	<b>729</b>	<b>702</b>	<b>667</b>	<b>1,951</b>	<b>673</b>
<u>Northeastern Region</u>												
Daggett	--	3,017	1,900	--	18	208	157	41	--	--	--	--
Duchesne	170	29	0	--	0	325	153	43	240	310	209	--
Uintah	1,575	894	1,120	1,005	533	1,950	460	715	483	563	890	--
<b>REGIONAL TOTALS</b>	<b>794</b>	<b>628</b>	<b>769</b>	<b>303</b>	<b>47</b>	<b>739</b>	<b>226</b>	<b>241</b>	<b>350</b>	<b>398</b>	<b>443</b>	<b>450</b>
<u>Southeastern Region</u>												
Carbon	377	271	300	--	--	0	--	220	--	1,500	--	--
Emery	--	--	83	1,950	0	343	17	--	67	950	--	--
Grand	--	--	--	--	--	0	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	0	238	0	127	--
<b>REGIONAL TOTALS</b>	<b>377</b>	<b>271</b>	<b>181</b>	<b>1,950</b>	<b>112</b>	<b>343</b>	<b>17</b>	<b>110</b>	<b>206</b>	<b>425</b>	<b>127</b>	<b>399</b>
<b>STATE TOTALS</b>	<b>1,049</b>	<b>939</b>	<b>728</b>	<b>664</b>	<b>336</b>	<b>364</b>	<b>549</b>	<b>571</b>	<b>588</b>	<b>530</b>	<b>1,193</b>	<b>632</b>

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

Table 5. Summary of quail hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	13	611	262	0.43	4.51	1.66
Cache	--	--	--	--	--	--
Davis	39	1,441	1,383	0.96	10.63	8.74
Morgan	11	320	306	0.95	2.36	1.93
Rich	1	15	0	0.00	0.11	0.00
Summit	7	116	277	2.37	0.86	1.75
Weber	29	830	742	0.89	6.12	4.69
REGIONAL TOTALS	100	3,333	2,970	0.89	24.59	18.77
<u>Central Region</u>						
Juab	2	29	87	3.00	0.21	0.55
Salt Lake	35	1,237	1,834	1.48	9.13	11.59
Sanpete	4	146	131	0.90	1.08	0.83
Tooele	3	44	0	0.00	0.32	0.00
Utah	94	2,969	3,377	1.14	21.91	21.34
Wasatch	--	--	--	--	--	--
REGIONAL TOTALS	138	4,425	5,429	1.23	32.66	34.31
<u>Southern Region</u>						
Beaver	2	29	0	0.00	0.21	0.00
Garfield	1	15	29	2.00	0.11	0.18
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	--	--	--	--	--	--
Piute	1	15	0	0.00	0.11	0.00
Sevier	6	116	73	0.63	0.86	0.46
Washington	57	1,979	4,032	2.04	14.61	25.48
Wayne	5	116	306	2.62	0.86	1.93
REGIONAL TOTALS	72	2,270	4,440	1.96	16.75	28.06
<u>Northeastern Region</u>						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	23	757	582	0.77	5.59	3.68
Uintah	28	1,019	844	0.83	7.52	5.34
REGIONAL TOTALS	51	1,776	1,426	0.80	13.10	9.02
<u>Southeastern Region</u>						
Carbon	10	408	189	0.46	3.01	1.20
Emery	6	160	73	0.45	1.18	0.46
Grand	1	58	0	0.00	0.43	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	17	626	262	0.42	4.62	1.66
Unknown counties	25	1,120	1,295	1.16	8.27	8.18
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	403	13,550	15,882	1.17	100	100

\*Total hunter-trips from questionnaire returns.

Table 6. Summary of quail bagged per hunter-day by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	0.83	0.43	0.18	1.15	0.88	0.43
Cache	0.60	0.33	0.67	1.00	0.24	---
Davis	0.70	0.73	0.70	0.80	1.16	0.96
Morgan	0.31	0.70	0.80	1.20	0.80	0.95
Rich	0.00	0.00	0.00	0.00	0.00	0.00
Summit	0.79	1.75	0.17	1.00	1.67	2.37
Weber	0.62	0.64	0.52	0.63	0.78	0.89
REGIONAL TOTALS	0.62	0.68	0.62	0.77	0.92	0.89
<u>Central Region</u>						
Juab	---	0.00	0.00	0.00	3.00	3.00
Salt Lake	0.94	1.30	0.86	1.11	0.90	1.48
Sanpete	0.89	0.50	0.13	1.50	0.00	0.90
Tooele	0.75	1.25	0.00	1.50	0.00	0.00
Utah	0.75	0.66	0.88	0.84	0.91	1.14
Wasatch	---	1.25	0.00	0.00	4.00	---
REGIONAL TOTALS	0.79	0.78	0.82	0.95	0.93	1.23
<u>Southern Region</u>						
Beaver	---	0.00	0.43	0.00	0.00	0.00
Garfield	---	0.00	0.00	0.00	0.00	2.00
Iron	1.00	0.23	1.40	0.00	0.00	0.00
Kane	---	0.00	0.00	0.00	0.00	0.00
Millard	0.50	0.36	1.53	0.13	0.44	---
Piute	0.00	0.00	0.00	4.00	0.00	0.00
Sevier	0.00	0.11	0.33	0.00	0.00	0.63
Washington	1.39	2.09	2.22	1.63	2.42	2.04
Wayne	2.50	3.00	2.00	0.86	0.86	2.62
REGIONAL TOTALS	1.22	1.73	2.01	1.43	1.82	1.96
<u>Northeastern Region</u>						
Daggett	1.00	0.00	0.00	0.00	1.00	0.00
Duchesne	0.20	0.55	1.94	1.09	1.37	0.77
Uintah	0.88	0.79	0.70	0.76	1.39	0.83
REGIONAL TOTALS	0.79	0.73	1.07	0.89	1.38	0.80
<u>Southeastern Region</u>						
Carbon	0.43	0.48	0.80	0.78	0.63	0.46
Emery	0.33	0.96	0.33	0.52	1.17	0.45
Grand	---	0.25	0.00	0.00	0.00	0.00
San Juan	---	0.00	0.00	2.00	0.00	0.00
REGIONAL TOTALS	0.42	0.57	0.72	0.73	0.77	0.42
Unknown counties	0.67	0.29	0.89	1.47	1.88	1.16
Mixed counties	2.37	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.82	1.01	1.09	0.98	1.13	1.17

Table 7. Percentage distribution of quail harvest by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	2.37	0.29	0.28	2.38	2.84	1.66
Cache	0.95	0.19	0.84	0.63	0.52	--
Davis	6.65	7.30	9.93	8.10	11.11	8.74
Morgan	1.42	2.02	1.68	0.95	1.55	1.93
Rich	0.00	0.00	0.00	0.00	0.00	0.00
Summit	1.74	0.67	0.14	0.32	0.65	1.75
Weber	4.59	4.42	3.22	6.67	4.65	4.69
REGIONAL TOTALS	17.72	14.89	16.08	19.05	21.32	18.77
<u>Central Region</u>						
Juab	--	0.00	0.00	0.00	0.78	0.55
Salt Lake	9.81	7.49	3.36	10.00	4.78	11.59
Sanpete	1.27	0.10	0.14	0.48	0.00	0.83
Tooele	0.47	0.48	0.00	0.48	0.00	0.00
Utah	28.96	16.43	12.73	13.81	23.51	21.34
Wasatch	--	0.48	0.00	0.00	1.03	--
REGIONAL TOTALS	40.51	24.98	16.22	24.76	30.10	34.31
<u>Southern Region</u>						
Beaver	--	0.00	0.42	0.00	0.00	0.00
Garfield	--	0.00	0.00	0.00	0.00	0.18
Iron	0.16	0.58	0.98	0.00	0.00	0.00
Kane	--	0.00	0.00	0.00	0.00	0.00
Millard	1.42	0.48	3.64	0.16	0.52	--
Piute	0.00	0.00	0.00	1.27	0.00	0.00
Sevier	0.00	0.19	0.14	0.00	0.00	0.46
Washington	23.58	48.41	40.14	26.67	18.48	25.48
Wayne	0.79	0.29	1.68	0.95	0.78	1.93
REGIONAL TOTALS	25.95	49.95	46.99	29.05	19.77	28.06
<u>Northeastern Region</u>						
Daggett	0.32	0.00	0.00	0.00	0.13	0.00
Duchesne	0.32	0.58	4.90	7.94	6.20	3.68
Uintah	8.39	2.88	4.20	8.10	18.35	5.34
REGIONAL TOTALS	9.02	3.46	9.09	16.03	24.68	9.02
<u>Southeastern Region</u>						
Carbon	3.01	3.65	3.36	4.60	1.29	1.20
Emery	0.47	2.59	0.28	1.90	0.90	0.46
Grand	--	0.29	0.00	0.00	0.00	0.00
San Juan	--	0.00	0.00	0.63	0.00	0.00
REGIONAL TOTALS	3.48	6.53	3.64	7.14	2.20	1.66
Unknown counties	0.32	0.19	7.97	3.97	1.94	8.18
Mixed counties	3.01	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of quail hunting pressure by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	2.33	0.68	1.68	2.03	3.67	4.51
Cache	1.29	0.58	1.37	0.62	2.49	--
Davis	7.75	10.05	15.40	10.00	10.85	10.63
Morgan	3.75	2.90	2.29	0.78	2.20	2.36
Rich	0.26	0.48	0.00	0.00	0.00	0.11
Summit	1.81	0.39	0.91	0.31	0.44	0.86
Weber	6.07	6.96	6.71	10.47	6.74	6.12
<b>REGIONAL TOTALS</b>	<b>23.26</b>	<b>22.03</b>	<b>28.35</b>	<b>24.22</b>	<b>26.39</b>	<b>24.59</b>
<u>Central Region</u>						
Juab	--	0.19	0.15	0.16	0.29	0.21
Salt Lake	8.53	5.80	4.27	8.91	6.01	9.13
Sanpete	1.16	0.19	1.22	0.31	0.00	1.08
Tooele	0.52	0.39	0.15	0.31	0.59	0.32
Utah	31.65	25.12	15.85	16.09	29.47	21.91
Wasatch	--	0.39	0.00	0.00	0.29	--
<b>REGIONAL TOTALS</b>	<b>41.86</b>	<b>32.08</b>	<b>21.65</b>	<b>25.78</b>	<b>36.66</b>	<b>32.66</b>
<u>Southern Region</u>						
Beaver	--	0.00	1.07	0.00	0.00	0.21
Garfield	--	0.00	0.00	0.00	0.00	0.11
Iron	0.13	2.51	0.76	0.16	0.44	0.00
Kane	--	0.00	0.00	0.00	0.29	0.00
Millard	2.33	1.35	2.59	1.25	1.32	--
Piute	0.26	0.00	0.00	0.31	0.15	0.11
Sevier	0.52	1.74	0.46	1.09	0.44	0.86
Washington	13.82	23.29	19.66	16.09	8.65	14.61
Wayne	0.26	0.10	0.91	1.09	1.03	0.86
<b>REGIONAL TOTALS</b>	<b>17.31</b>	<b>28.99</b>	<b>25.46</b>	<b>20.00</b>	<b>12.32</b>	<b>16.75</b>
<u>Northeastern Region</u>						
Daggett	0.26	0.00	0.00	0.00	0.15	0.00
Duchesne	1.29	1.06	2.74	7.19	5.13	5.59
Uintah	7.75	3.67	6.55	10.47	14.96	7.52
<b>REGIONAL TOTALS</b>	<b>9.30</b>	<b>4.73</b>	<b>9.30</b>	<b>17.66</b>	<b>20.23</b>	<b>13.10</b>
<u>Southeastern Region</u>						
Carbon	5.68	7.63	4.57	5.78	2.35	3.01
Emery	1.16	2.71	0.91	3.59	0.88	1.18
Grand	--	1.16	0.00	0.00	0.00	0.43
San Juan	--	0.00	0.00	0.31	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>6.85</b>	<b>11.50</b>	<b>5.49</b>	<b>9.69</b>	<b>3.23</b>	<b>4.62</b>
Unknown counties	0.39	0.68	9.76	2.66	1.17	8.27
Mixed counties	1.03	0.00	0.00	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 9. Statewide summary of quail harvest statistics, 1951-1979.

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
1973	5,654	14,324	17,777	0.81	2.53
1974	6,097	12,005	14,702	0.82	1.97
1975	6,397	16,903	16,805	1.01	2.64
1976	5,215	14,454	13,261	1.09	2.77
1977	4,446	9,496	9,646	0.98	2.14
1978	5,924	15,491	13,649	1.13	2.61
1979	5,632	15,821	13,550	1.17	2.81
<b>TOTALS</b> (1959-79)	149,593	425,529	371,375	1.15	2.84
<b>AVERAGES</b> (1959-78)	7,198	20,485	17,891	1.15	2.79

Table 10. Gambel quail call-count trend on the west slope of the Beaver Dam Mountains, Washington County, 1971-79.

Index	1971	1972	1973	1974	1975	1976	1977	1978	1979
Mean calls per station	1.57	0.36	0.06	0.00	2.55	0.76	0.25	0.97	5.20
Mean quail calling per station	0.37	0.11	0.03	0.00	0.40	0.13	0.03	0.19	0.53
Mean total calls-route	23.50	5.30	1.00	0.00	38.20	11.40	3.75	14.60	78.00
Mean total quail calling-route	5.50	1.70	0.40	0.00	6.00	2.00	0.50	2.80	8.00

Table 11. Gambel quail long-period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1971-79.

Area	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total young	33	0	0	24	145	61	--	67	253
Total adults	8	0	0	6	20	53	--	29	77
Total quail	41	0	0	30	165	114	17	86	330
Young per 100 adults	412	--	--	400	725	115	--	353	329



# HUNGARIAN PARTRIDGE

## SUMMARY

Harvest data for 1978 indicated that breeding population densities were higher in 1979 than in 1978. Limited brood data indicated above average Hun densities for 1979.

The 1979 hunt showed significantly decreased hunting pressure on Huns as compared to 1978. Total hunters, days afield and harvest were well below 1978 and average. Hunter success was below 1978, but near average.



### Brood Counts

Results of the annual random brood counts for 1979 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 the survey for 1979 compared to 1978 and the previous 10-year average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total Huns observed	53	-61	-78
Young per 100 adults	780	+34	+64
Mean brood size	5.00	-57	- 5
Huns observed per 100 hours	177	+17	-17
Total hours effort	30	-72	-75

Harvest data for 1978 indicated an increased and above average breeding population for 1979.

As a result of greatly decreased efforts, only six broods were observed in 1979. One brood was observed in Juab County near Burriston Ponds.

### Harvest

#### Hunter Questionnaire

Results of the annual hunter questionnaire for 1979 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 statewide harvest statistics in Table 9. The 1979 season compared to 1978 and the previous 10-year average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Hungarian partridge hunters	3,435	-27	-17
Hungarian partridge harvest	6,200	-51	-24
Hunter-days afield	7,787	-37	-29
Huns per hunter-day	.80	-24	+ 8
Huns per hunter	1.80	-34	+ 5

Hungarian partridge hunting pressure and success decreased markedly during 1979 as compared to 1978.

### Field Bag Checks

Results of the survey for 1979 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indexes obtained for 1979 compared to 1978 and the previous 10-year average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	36	+140	- 66
Total hours hunted	255	+244	- 51
Huns per hunter (complete hunts)	0.13	- 84	- 82
Huns bagged per 100 hours	4	- 75	- 73
Average hours per hunter-day (complete hunts)	3.3	- 33	- 30
Hours hunted per Hun bagged	28.5	+351	+294

All the field bag check data was from Box Elder County. The sample was too small to be meaningful.

Hungarian partridge bagged per hunter and per hunter-day.

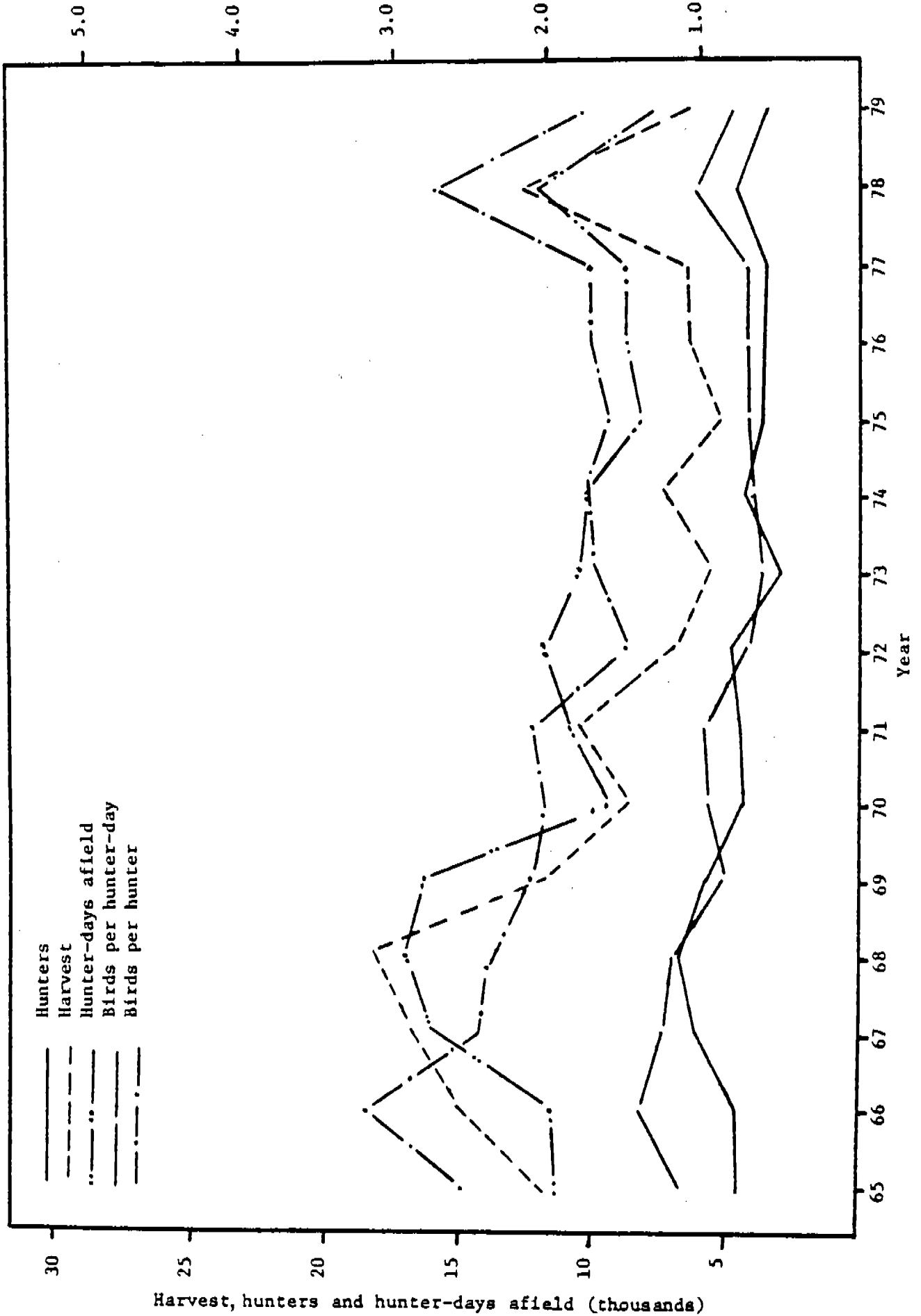


Figure 1. Statewide trend of Hungarian partridge harvest statistics.

Table 1. Hungarian partridge summer inventory summary, 1979.

Region and County	Distinct Broods		Mean Brood	Mixed Yng. & Adults		Total Adults w/o Yng.	Total Adults	Total Yng.	Young/100 Ad. Miles	Vehicle Miles	Hours Effort		Birds/100 hrs.	
	No. Ad.	Yng.		Ad.	Yng.						Veh.	Horse		Walk
<u>Northern Region</u>														
Box Elder	5	5	42	8.40	0	0	0	42	390	16	0	4	20	235
Cache	0	0	0	---	0	0	0	0	50	7	0	0	7	---
Davis	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Morgan	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rich	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Summit	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Weber	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>5</b>	<b>42</b>	<b>8.40</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>42</b>	<b>440</b>	<b>23</b>	<b>0</b>	<b>4</b>	<b>27</b>	<b>174</b>
<u>Central Region</u>														
Juab	1	1	5	5.00	0	0	1	5	500	0	0	1	1	600
Salt Lake	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sanpete	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tooele	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Utah	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Wasatch	0	0	0	---	0	0	0	0	37	1	0	1	2	0
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>5.00</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>500</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>200</b>
<u>Southern Region</u>														
Beaver	1	1	5	5.00	0	0	1	5	500	1	0	2	3	200
Garfield	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Kane	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Millard	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Piute	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sevier	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Washington	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Wayne	---	---	---	---	---	---	---	---	---	---	---	---	---	---
NOT APPLICABLE														
<b>REGIONAL TOTALS</b>														
<u>Northeastern Region</u>														
Daggett	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Duchesne	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Uintah	---	---	---	---	---	---	---	---	---	---	---	---	---	---
NOT APPLICABLE														
<b>REGIONAL TOTALS</b>														
<u>Southeastern Region</u>														
Carbon	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Emery	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Grand	---	---	---	---	---	---	---	---	---	---	---	---	---	---
San Juan	---	---	---	---	---	---	---	---	---	---	---	---	---	---
NOT APPLICABLE														
<b>REGIONAL TOTALS</b>														
<b>STATE TOTALS</b>														
	6	6	47	7.83	0	0	6	47	780	477	24	6	30	177

Table 2. Trend of Hungarian partridge young per 100 adults, 1969-79

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	325	306	524	379	575	775	600	421	467	580	840	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	1,400	--	400	675	--	533	--	--	--	
Rich	0	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	319	306	553	379	560	755	600	431	467	580	840	495
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	500	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	233	173	--	--	
Tooele	--	--	--	--	--	--	--	550	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	497	414	350	800	450	800	--	20	--	--	--	
<b>REGIONAL TOTALS</b>	497	414	350	800	450	800	--	200	173	--	500	461
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	325	319	495	424	552	757	600	328	369	580	780	475

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 3. Trend of Hungarian partridge mean brood size from 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	5.75	11.82	7.82	11.50	11.86	11.22	13.44	10.22	10.77	11.60	8.40	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	14.00	--	8.33	13.50	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.75	11.58	8.16	11.50	10.80	11.64	13.44	10.22	10.77	11.60	8.40	10.55
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	5.00	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	9.94	7.25	--	8.00	4.50	8.00	--	2.00	--	--	--	
REGIONAL TOTALS	9.94	7.25	--	8.00	4.50	8.00	--	2.00	--	--	5.00	6.62
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
REGIONAL TOTALS												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	6.87	10.50	8.16	10.33	9.75	11.33	13.44	9.40	10.77	11.60	7.83	10.22

Table 4. Trend of Hungarian partridge observed per 100 hours, 1969-79.

Region and County	Year										Average 1969-78	
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978		1979
<u>Northern Region</u>												
Box Elder	416	210	213	133	91	80	262	184	109	203	235	
Cache	0	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	428	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	1,900	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>385</b>	<b>210</b>	<b>213</b>	<b>133</b>	<b>106</b>	<b>97</b>	<b>262</b>	<b>205</b>	<b>109</b>	<b>151</b>	<b>174</b>	<b>187</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	600	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	400	820	--	--	
Tooele	--	--	--	--	--	--	--	2,600	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	1,415	720	300	450	275	450	--	120	--	--	0	
<b>REGIONAL TOTALS</b>	<b>1,415</b>	<b>720</b>	<b>300</b>	<b>171</b>	<b>275</b>	<b>450</b>	<b>--</b>	<b>371</b>	<b>820</b>	<b>--</b>	<b>200</b>	<b>565</b>
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>NOT A P P L I C A B L E</b>												
<u>REGIONAL TOTALS</u>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>NOT A P P L I C A B L E</b>												
<u>REGIONAL TOTALS</u>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>NOT A P P L I C A B L E</b>												
<u>REGIONAL TOTALS</u>												
<b>STATE TOTALS</b>	<b>508</b>	<b>249</b>	<b>243</b>	<b>139</b>	<b>110</b>	<b>101</b>	<b>262</b>	<b>238</b>	<b>131</b>	<b>151</b>	<b>177</b>	<b>213</b>



Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds Per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	132	4,134	3,871	0.94	53.08	62.44
Cache	42	1,237	1,150	0.93	15.89	18.54
Davis	8	306	233	0.76	3.93	3.76
Morgan	9	204	276	1.36	2.62	4.46
Rich	5	131	73	0.56	1.68	1.17
Summit	2	29	15	0.50	0.37	0.23
Weber	13	320	102	0.32	4.11	1.65
REGIONAL TOTALS	211	6,361	5,720	0.90	81.68	92.25
<u>Central Region</u>						
Juab	1	29	0	0.00	0.37	0.00
Salt Lake	1	15	0	0.00	0.19	0.00
Sanpete	1	87	0	0.00	1.12	0.00
Tooele	4	146	73	0.50	1.87	1.17
Utah	6	131	131	1.00	1.68	2.11
Wasatch	11	669	87	0.13	8.60	1.41
REGIONAL TOTALS	24	1,077	291	0.27	13.83	4.69
<u>Southern Region</u>						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	0	0	0	0.00	0.00	0.00
Piute	0	0	0	0.00	0.00	0.00
Sevier	0	0	0	0.00	0.00	0.00
Washington	0	0	0	0.00	0.00	0.00
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	0	0	0	0.00	0.00	0.00
<u>Northeastern Region</u>						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	1	29	0	0.00	0.37	0.00
Uintah	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	29	0	0.00	0.37	0.00
<u>Southeastern Region</u>						
Carbon	1	14	0	0.00	0.19	0.00
Emery	0	0	0	0.00	0.00	0.00
Grand	1	15	0	0.00	0.19	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	2	29	0	0.00	0.38	0.00
Unknown counties	5	291	189	0.65	3.74	3.05
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	243	7,787	6,200	0.80	100	100

\*Total hunter-trips from questionnaire returns.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	0.84	0.69	0.90	0.74	1.19	0.94
Cache	0.68	0.66	0.68	0.92	0.67	0.93
Davis	2.00	0.40	0.64	0.00	2.00	0.76
Morgan	0.50	0.88	0.29	0.44	0.27	1.36
Rich	0.33	0.43	0.09	0.22	2.80	0.56
Summit	1.25	0.20	0.00	0.88	2.00	0.50
Weber	0.25	0.22	0.46	0.97	0.91	0.32
REGIONAL TOTALS	0.76	0.68	0.75	0.76	1.07	0.90
<u>Central Region</u>						
Juab	1.00	0.33	0.00	0.33	0.67	0.00
Salt Lake	0.60	1.67	2.00	0.75	1.50	0.00
Sanpete	0.67	0.00	0.50	0.00	0.00	0.00
Tooele	0.00	0.50	0.00	0.21	0.00	0.50
Utah	0.35	0.88	0.50	0.27	0.33	1.00
Wasatch	0.42	0.44	0.00	0.55	1.64	0.13
REGIONAL TOTALS	0.36	0.71	0.31	0.36	0.33	0.27
<u>Southern Region</u>						
Beaver	0.00	0.00	0.50	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.50	0.00	0.00
Iron	0.00	0.60	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.40	0.00	0.00	0.00	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	0.33	1.00	0.00	0.00
Washington	0.00	0.00	0.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.40	0.21	0.40	0.50	0.00	0.00
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.00	1.00	0.00	0.00	0.00	0.00
Uintah	0.33	0.00	0.00	0.00	0.50	0.00
REGIONAL TOTALS	0.33	0.56	0.00	0.00	0.50	0.00
<u>Southeastern Region</u>						
Carbon	0.00	0.00	0.00	0.00	0.00	0.00
Emery	0.00	0.00	0.00	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	0.00	0.00	0.00	0.00
Unknown counties	0.84	0.40	1.17	0.64	1.00	0.65
Mixed counties	2.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.68	0.65	0.72	0.70	1.05	0.80

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	54.50	46.97	68.49	66.35	78.40	62.44
Cache	13.11	15.45	12.54	14.45	8.33	18.54
Davis	1.54	0.61	2.25	0.00	0.31	3.76
Morgan	4.11	11.52	3.54	1.66	1.39	4.46
Rich	0.51	3.03	0.32	0.47	2.16	1.17
Summit	3.86	0.30	0.00	1.66	0.62	0.23
Weber	1.80	1.52	1.93	6.87	1.54	1.65
REGIONAL TOTALS	79.43	79.39	89.07	91.47	92.75	92.25
<u>Central Region</u>						
Juab	0.26	1.52	0.00	0.47	0.31	0.00
Salt Lake	3.86	3.03	0.64	0.71	0.93	0.00
Sanpete	1.03	0.00	0.64	0.00	0.00	0.00
Tooele	0.00	0.91	0.00	0.71	0.00	1.17
Utah	2.31	9.09	2.25	1.42	0.46	2.11
Wasatch	2.83	2.42	0.00	2.61	2.78	1.41
REGIONAL TOTALS	10.28	16.97	3.54	5.92	4.48	4.69
<u>Southern Region</u>						
Beaver	0.00	0.00	0.32	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.24	0.00	0.00
Iron	0.00	0.91	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.51	0.00	0.00	0.00	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	0.32	0.24	0.00	0.00
Washington	0.00	0.00	0.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.51	0.91	0.64	0.47	0.00	0.00
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.00	1.52	0.00	0.00	0.00	0.00
Uintah	0.26	0.00	0.00	0.00	0.15	0.00
REGIONAL TOTALS	0.26	1.52	0.00	0.00	0.15	0.00
<u>Southeastern Region</u>						
Carbon	0.00	0.00	0.00	0.00	0.00	0.00
Emery	0.00	0.00	0.00	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	0.00	0.00	0.00	0.00
Unknown counties	7.97	1.21	6.75	2.13	2.62	3.05
Mixed counties	1.54	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1974-79.

Region and County	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>						
Box Elder	44.54	44.66	54.50	62.56	69.32	53.08
Cache	13.20	15.22	13.16	10.98	13.15	15.89
Davis	0.53	0.99	2.54	0.33	0.16	3.93
Morgan	5.63	8.50	8.78	2.66	5.36	2.62
Rich	1.06	1.38	2.54	1.50	0.81	1.68
Summit	2.11	0.99	0.46	1.33	0.32	0.37
Weber	4.93	4.55	3.00	4.99	1.79	4.11
REGIONAL TOTALS	72.01	76.28	84.99	84.36	90.91	81.68
<u>Central Region</u>						
Juab	0.18	2.96	0.00	1.00	0.49	0.37
Salt Lake	4.40	1.19	0.23	0.67	0.65	0.19
Sanpete	1.06	0.00	0.92	0.50	1.14	1.12
Tooele	4.58	1.19	2.31	2.33	0.16	1.87
Utah	4.58	6.72	3.23	3.66	1.46	1.68
Wasatch	4.58	3.56	1.62	3.33	1.79	8.60
REGIONAL TOTALS	19.37	15.61	8.31	11.48	5.68	13.83
<u>Southern Region</u>						
Beaver	0.00	0.00	0.46	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.33	0.00	0.00
Iron	0.00	0.99	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.88	0.00	0.00	0.00	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.16	0.00
Sevier	0.00	1.78	0.69	0.17	0.00	0.00
Washington	0.00	0.00	0.00	0.17	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.88	2.77	1.15	0.67	0.16	0.00
<u>Northeastern Region</u>						
Daggett	0.00	0.40	0.00	0.00	0.00	0.00
Duchesne	0.00	0.99	0.00	0.00	0.00	0.37
Uintah	0.53	0.40	0.69	1.00	0.32	0.00
REGIONAL TOTALS	0.53	1.78	0.69	1.00	0.32	0.37
<u>Southeastern Region</u>						
Carbon	0.18	0.99	0.69	0.00	0.00	0.19
Emery	0.00	0.59	0.00	0.17	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.16	0.19
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.18	1.58	0.69	0.17	0.16	0.38
Unknown counties	6.51	1.98	4.16	2.33	2.76	3.74
Mixed counties	0.53	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-79.

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
1973	3,566	6,014	11,516	0.52	1.69
1974	4,103	7,389	10,789	0.68	1.80
1975	3,409	5,358	8,216	0.65	1.57
1976	3,517	6,287	8,753	0.72	1.79
1977	3,557	6,360	9,058	0.70	1.79
1978	4,743	12,969	12,328	1.05	2.73
1979	3,435	6,200	7,787	0.80	1.80
<hr/>					
TOTALS (1959-79)	87,645	192,660	219,036	0.88	2.20
<hr/>					
AVERAGES (1959-78)	4,211	9,323	10,562	0.86	2.12
<hr/>					

Table 10. Hungarian partridge field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS						
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Total Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs.	Birds/Hunter
<u>Northern Region</u>											
Box Elder	36	78	255	9	4	34	68	222	9	4	0.13
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	36	78	255	9	4	34	68	222	9	4	0.13
<u>Central Region</u>											
Juab											
Salt Lake											
Sanpete											
Tooele											
Utah											
Wasatch											
<b>REGIONAL TOTALS</b>											
<u>Southern Region</u>											
Beaver											
Garfield											
Iron											
Kane											
Millard											
Piute											
Sevier											
Washington											
Wayne											
<b>REGIONAL TOTALS</b>											
<u>Northeastern Region</u>											
Daggett											
Duchesne											
Uintah											
<b>REGIONAL TOTALS</b>											
<u>Southeastern Region</u>											
Carbon											
Emery											
Grand											
San Juan											
<b>REGIONAL TOTALS</b>											
<b>STATE TOTALS</b>	36	78	255	9	4	34	68	222	9	4	0.13

N O D A T A

N O T A P P L I C A B L E

N O T A P P L I C A B L E

N O T A P P L I C A B L E

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter	Birds/ 100 hr. Hunter	Birds/ Hunter
<u>Northern Region</u>												
Box Elder	23	1.36	12	0.60	8	0.24	36	0.92	17	0.92	4	0.13
Cache	--	--	10	0.40	6	0.33	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	12	0.86	19	0.54	--	--	--	--	--	0.00	--	--
Summit	--	--	17	0.50	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	21	1.28	13	0.57	7	0.24	36	0.92	16	0.80	4	0.13
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	7	0.33	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	7	0.33	--	--	--	--
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>STATE TOTALS</b>	21	1.28	13	0.57	7	0.24	26	0.80	16	0.80	4	0.13

NOT APPLICABLE

NOT APPLICABLE

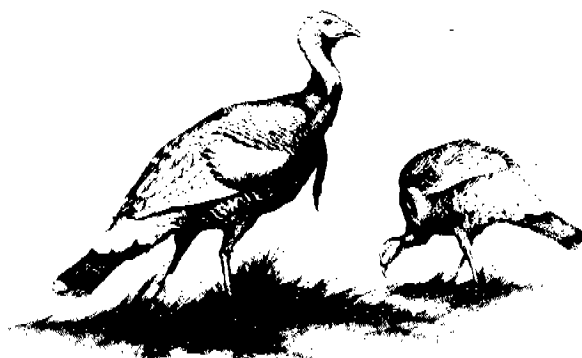
NOT APPLICABLE

# WILD TURKEY

## SUMMARY

Hunter success and turkey observational data for the 1979 spring season indicated a statewide turkey population level considerably below that of 1978 and the long-term average.

Fall hunting pressure statewide was down from 1978 with the total harvest for 1978 being the lowest on record. Both hunter success and total harvest for 1979 were considerably below the long-term average.





### 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. Harvest data for 1978 indicated a decreased breeding population for 1979. No turkey brood observations were reported in 1979.

### Harvest

#### Spring Gobbler Season

Results of the 1979 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 1979 spring season compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Permits sold	113	- 3	-32
Hunters afield	90	-11	-42
Turkeys harvested	1	-89	-93
Hunter-days afield	237	- 4	-39
Percent hunter success	1	-90	-89
Turkeys bagged per hunter-day	0.01	-75	-75
Percent of hunters who observed turkeys	8	-80	-76

Permit sales and hunters afield decreased from 1978 and remained well below average. The total harvest decreased from 12 in 1977 to 9 in 1978 to 1 in 1979. The proportion of hunters who reported having observed turkeys decreased 80 percent below the 1978 level. The East Zion and LaSal units accounted for 71 percent of the hunting pressure based on hunter-days afield. The only turkey reported harvested was taken on the East Zion unit.

The trend of spring turkey harvest statistics is shown in Figure 1.

#### Fall Season

Results of the 1979 fall season are shown in Table 3 of this section. The trend of these data since 1966 are shown in Tables 4-9. The 1979 fall season compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Permits sold	46	-55	-72
Hunters afield	36	-59	-76
Turkeys harvested	3	-57	-93
Hunter-days afield	71	-68	-80
Percent hunter success	9	0	-59
Turkeys bagged per hunter-day	0.05	+67	-50
Percent of hunters who observed turkeys	19	-50	-46

Permit sales, hunters afield and hunter-days afield all decreased considerably from 1978 and remained well below average. Harvest reached the low of 1973 which was the lowest harvest on record. The percent of hunters observing turkeys decreased by 50 percent from 1978, and was 46 percent below average.

The trend of fall harvest statistics is shown in Figure 2.

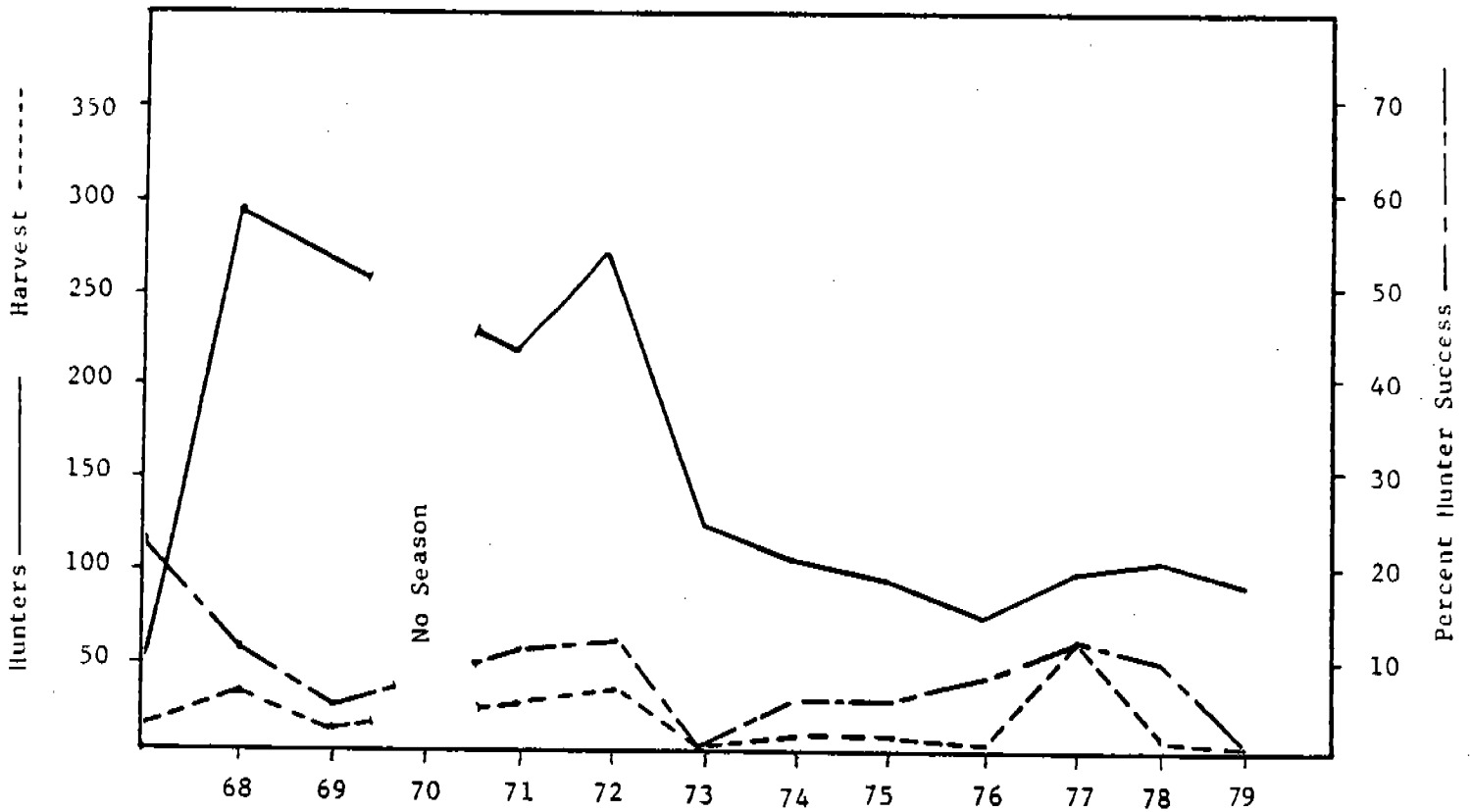


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

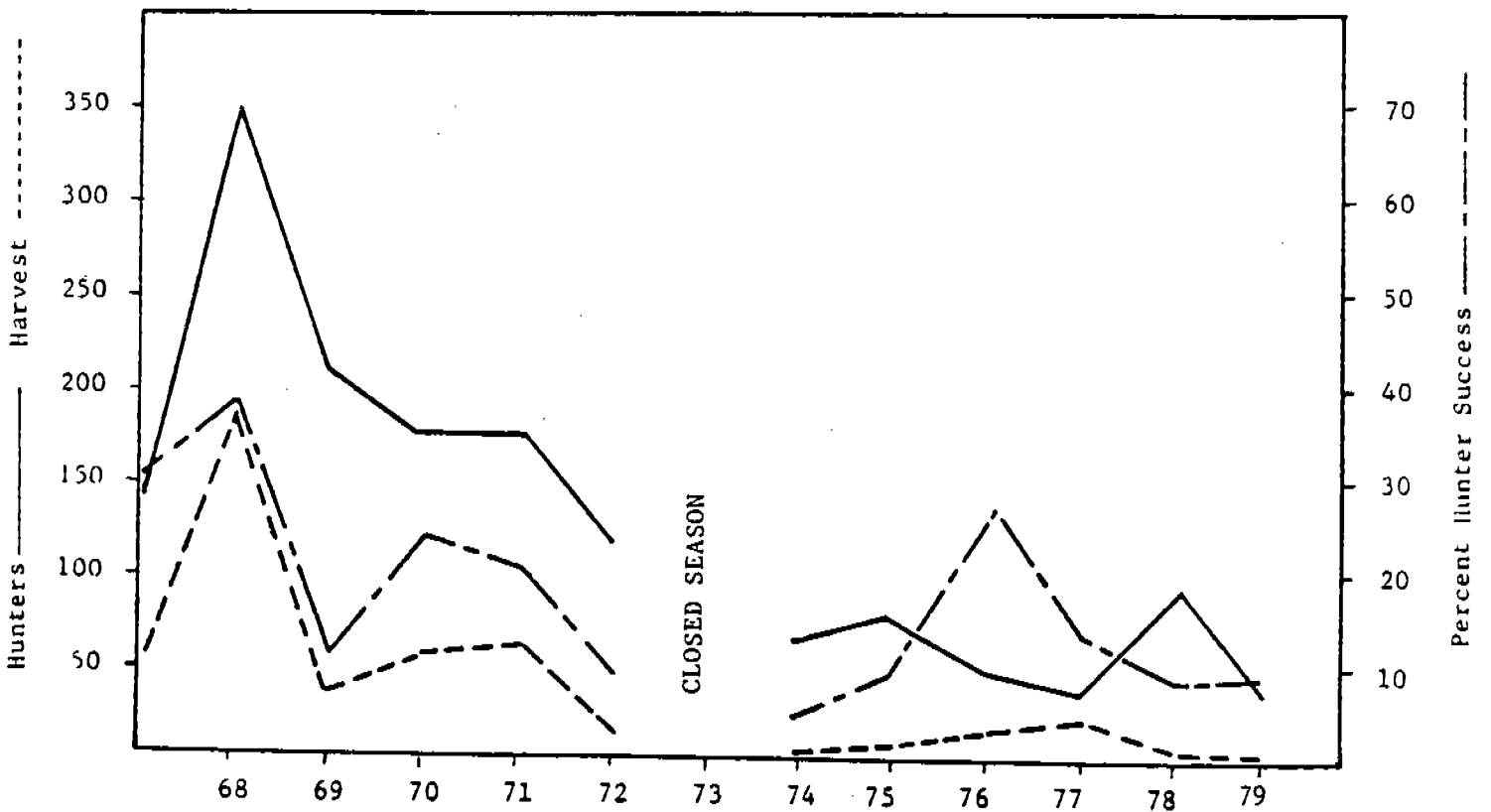


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1979 spring turkey season.

Data	Blue Mtn.-		Elk Ridge		East Zion		Boulder		Lasal		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	Rep't	Calc	Rep't	Calc
Permits sold	6	8	28	35	4	5	27	34					2	3	5	6	113	--
No hunts	13	17	76	95	8	10	59	74					12	15	21	27	18	23
Hunters afield	0	0	1	1	0	0	0	0					0	0	0	0	72	90
Hunter days	0	--	4	--	0	--	0	--					0	--	0	--	189	237
Turkeys bagged	0	--	0.01	--	0	--	0	--					0	--	0	--	1	1
Percent success	0	--	0.01	--	0	--	0	--					0	--	0	--	1	--
Turkeys bagged per hunter-day	0	--	0.01	--	0	--	0	--					0	--	0	--	--	--
Reported crippling loss (loss/100 bagged)	0	--	0	--	0	--	0	--					0	--	0	--	0	--
Turkeys observed	0	--	3	--	0	--	1	--					0	--	1	--	5	--
Gobblers	0	--	0	--	0	--	7	--					0	--	1	--	8	--
Hens	0	--	2	--	0	--	0	--					0	--	0	--	2	--
Unidentified	0	--	3	--	0	--	2	--					0	--	1	--	6	--
Number of hunters who saw turkeys	0	--	11	--	0	--	7	--					0	--	20	--	8	--
Percent of hunters who saw turkeys	0	--	11	--	0	--	7	--					0	--	20	--	8	--

Projection factor = 1.2556

Note: Weather conditions restricted hunter access for most of legal 1979 spring season.

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-79.

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
		Afield			Afield					
East Zion	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		N O S E A S O N							
	1971	106	14	272	12	0.05	38			
	1972	113	20	321	14	0.06	47			
	1973	43	0	96	0	0.00	14			
	1974	34	2	73	7	0.03	23			
	1975	29	3	42	8	0.06	33			
	1976	31	5	74	16	0.05	38			
	1977	47	6	117	13	0.05	48			
	1978	36	4	80	13	0.06	56			
	1979	35	1	95	4	0.01	11			
Boulder Mountains	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		N O S E A S O N							
	1971	27	1	64	4	0.02	13			
	1972	42	3	107	8	0.03	28			
	1973	22	0	52	0	0.00	6			
	1974	23	0	56	0	0.00	25			
	1975	16	1	34	7	0.04	8			
	1976	12	0	25	0	0.00	10			
	1977	6	0	13	0	0.00	40			
	1978	16	1	31	0	0.00	14			
	1979	5	0	10	0	0.00	0			

Table 2. Continued.

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per		Percent of Hunters Observing Turkeys	Total Permits**
		Afield	Afield		Afield	Hunter-day					
LaSal Mountains	1967	6	16	0	0	0.00	33				
	1968	17	44	0	0	0.00	62				
	1969	39	102	3	9	0.03	24				
	1970	N O S E A S O N									
	1971	17	34	1	6	0.03	20				
	1972	50	129	3	7	0.03	29				
	1973	23	53	0	0	0.00	16				
	1974	20	66	0	0	0.00	11				
	1975	11	30	0	0	0.00	33				
	1976	8	25	0	0	0.00	14				
1977	24	53	4	15	0.07	45					
1978	32	78	2	7	0.03	38					
1979	34	74	0	0	0.00	7					
Beaver Mountains	1971	27	54	2	8	0.04	39				
	1972	17	53	2	13	0.04	20				
	1973	17	34	0	0	0.00	7				
	1974	1	1	0	0	0.00	0				
	1975	5	7	0	0	0.00	0				
	1976	2	8	0	0	0.00	0				
	1977	4	14	0	0	0.00	0				
	1978	2	7	0	0	0.00	50				
	1979	N O S E A S O N									
	Pine Valley Mountains	1971	23	92	4	15	0.04	70			
1972		22	52	1	5	0.02	42				
1973		17	38	0	0	0.00	7				
1974		8	23	1	14	0.05	43				
1975		6	12	0	0	0.00	0				
1976			13	0	0	0.00	40				
1977		2	7	0	0	0.00	0				
1978		0	0	0	0	0.00	0				
1979		3	15	0	0	0.00	0				

Table 2. Continued.

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day		Percent of Hunters Observing Turkeys	Total Permits**
		Afield			Afield			Hunter-day			
Blue Mountain-Elk Ridge	1974	17		2	34		13	0.07		27	
	1975	19		1	62		6	0.02		56	
	1976	11		0	23		0	0.00		33	
	1977	7		1	14		17	0.08		17	
	1978	12		2	39		18	0.06		36	
	1979	8		0	17		0	0.00		0	
	1967	2		0			0			0	
	1968	9		12			12			12	
	1969	10		0			0			11	
Mixed Units	1970		N O								
	1971	15		4			15			61	
	1972	25		5	89		18	0.05		50	
	1973	12		0	38		0	0.00		0	
	1974	9		0	36		0	0.00		12	
	1975	11		0	32		0	0.00		22	
	1976	4		1	17		25	0.07		100	
	1977	9		1	29		13	0.04		50	
	1978	3		0	11		0	0.00		67	
	1979	6		0	27		0	0.00		20	
	STATE TOTALS	1967	49		11	118		22	0.09		59
1968		290		31	738		11	0.04		41	310
1969		267		13	612		5	0.02		22	276
1970			N O								
1971		215		26	576		11	0.04		38	223
1972		269		35	751		12	0.05		39	285
1973		135		0	311		0	0.00		10	150
1974		112		6	289		5	0.02		22	121
1975		97		5	219		5	0.03		29	103
1976		74		6	185		8	0.03		32	81
1977		99		12	248		12	0.05		39	108
1978		101		9	246		10	0.04		42	116
1979		90		1	237		1	0.01		8	113
STATE AVERAGES (1967-78)			155	14	390		9		0.04		34

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

\*\*Total permits are sold on a statewide basis and not by unit.

Table 3. Summary of the 1979 fall turkey season.

Data	Pine Valley		Blue Mtn.- Elk Ridge		Boulder Mtns.		East Zion		LaSal		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold											46	--
No hunts											9	10
Hunters afield	1	1	1	1			17	19	13	15	32	36
Hunter-days	1	1	1	1			32	36	29	33	63	71
Turkeys bagged	0	0	0	0			3	3	0	0	3	3
Percent success	0	--	0	--			18	--	0	--	9	--
Turkeys bagged per hunter-day	0	--	0	--			0.09	--	0	--	0.05	--
Reported crippling loss (loss/100 bagged)	0	--	0	--			0	--	0	--	0	--
Turkeys observed	0	--	0	--			50	--	11	--	61	--
Number of hunters who saw turkeys	0	--	0	--			5	--	1	--	6	--
Percent of hunters who saw turkeys	0	--	0	--			29	--	8	--	19	--

Projection factor = 1.12195



Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1968-79.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Hunters afield	77	45	24	20	7	C	C	13	4	2	0	C
Hunter-days	195	103	77	46	17	L	L	36	10	5	0	L
Turkeys bagged	37	0	2	0	0	O	O	0	0	0	0	O
Percent success*	32	0	8	0	0	S	S	0	0	0	0	S
Percent bagging two turkeys	13	0	0	0	0	E	E	--	--	--	--	E
Birds bagged/day	0.19	0.00	0.03	0.00	0.00	D	D	0.00	0.00	0.00	0.00	D
Reported crippling loss												
(loss/100 bagged)	18	--	0	0	0	S	S	0	0	0	0	S
Turkeys observed	436	0	16	0	0	E	E	0	0	0	0	E
No. hunters who observed turkeys	27	0	2	0	0	A	A	0	0	0	0	A
Percent of hunters who observed turkeys	38	0	10	0	0	N	N	0	0	0	0	N

\*Season bag limit from 1968-72 was 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 1968-79.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Hunters afield	218	137	87	90	59	C	C	13	31	22	47	19
Hunter-days	569	374	203	229	154	L	L	18	57	34	107	36
Turkeys bagged	127	35	43	39	10	O	O	6	13	5	6	3
Percent success*	40	16	32	27	12	S	S	46	42	25	14	18
Percent bagging two turkeys	19	10	16	16	4	E	E	--	--	--	--	--
Birds bagged/day	0.22	0.9	0.21	0.17	0.06	D	D	0.33	0.23	0.16	0.06	0.09
Reported crippling loss (loss/100 bagged)	15	19	5	6	12	S	S	0	8	0	40	0
Turkeys observed	1661	426	469	264	96	E	E	36	137	33	130	50
No. hunters who observed turkeys	122	30	30	23	11	A	A	4	13	5	12	5
Percent of hunters who observed turkeys	60	25	40	31	22	O	O	44	50	26	32	29

\*Season bag limit from 1968-72 was 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 1969-79.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Hunters afield	45	17	18	13	31	C	20	9	15	24	26	15
Hunter-days	119	51	30	27	70	L	6	33	49	78	93	33
Turkeys bagged	19	1	3	5	2	O	2	1	2	1	1	0
Percent success*	43	7	11	18	4	S	10	11	13	6	5	0
Percent bagging two turkeys	0	0	6	18	4	E	--	--	--	--	--	--
Birds bagged/day	0.16	0.02	0.10	0.18	0.02	D	0.03	0.03	0.04	0.02	0.01	0.00
Reported crippling loss (Loss/100 bagged)	11	0	0	0	0	S	100	0	0	0	0	0
Turkeys observed	214	40	15	25	63	E	61	21	45	13	201	11
No. hunters who observed turkeys	21	1	3	3	7	A	6	4	2	2	10	1
Percent of hunters who observed turkeys	50	7	20	27	27	O	38	67	15	10	50	8

\*Season bag limit from 1969-72 was 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 fall hunts from 1971-79.

Harvest Data	1970*	1971	1972	1973	1974	1975	1976	1977	1978	1979
Hunters afield	30	13	6			5	5	--		
Hunter-days	87	24	12			13	18	--		
Turkeys bagged	7	5	0			0	0	--		
Percent success**	15	18	0	C	C	0	0	--	C	C
Percent bagging two turkeys**	8	18	0	L	L	--	--	--	L	L
Birds bagged/day	0.08	0.20	0	O	O	0	0	--	O	O
Reported crippling loss (loss/100 bagged)	0	0	0	S	S	0	0	--	S	S
Turkeys observed	48	64	11	E	E	0	0	--	E	E
No. hunters who observed turkeys	8	5	2	A	A	0	0	--	A	A
Percent of hunters who observed turkeys	31	46	40	S	S	0	0	--	S	S
				O	O				O	O
				N	N				N	N

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

\*\*Season bag limit from 1969-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for fall hunts from 1970-79.

Harvest Data	1970	1971*	1972	1973	1974	1975	1976	1977	1978	1979
Hunters afield	6	32	11			0	0	1	6	1
Hunter-days	21	87	19			0	0	2	8	1
Turkeys bagged	3	11	0			0	0	0	0	0
Percent success**	50	23	0	C	C	0	0	0	0	0
Percent bagging two turkeys**	0	12	0	L	L	0	0	0	0	0
Birds bagged/day	0.14	0.13	0	O	O	0	0	0	0	0
Reported crippling loss (loss/100 bagged)	33	22	0	S	S	0	0	0	0	0
Turkeys observed	16	98	0	E	E	0	0	0	4	0
No. hunters who observed turkeys	4	9	0	A	A	0	0	0	4	0
Percent of hunters who observed turkeys	80	35	0	S	S	0	0	0	80	0
				O	O					
				N	N					

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

\*\*Season bag limit from 1969-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 9. Summary of Blue Mountain-Elk Ridge wild turkey harvest data for the fall hunt, 1974-79.

Harvest Data	1974*	1975	1976	1977	1978	1979
Hunters afield	5	6	1	5	6	1
Hunter-days	9	15	2	14	11	1
Turkeys bagged	1	0	0	1	0	0
Percent success	20	0	0	29	0	0
Birds bagged/day	0.11	0.00	0.00	0.09	0.00	0.00
Reported crippling loss (loss/100 bagged)	0	0	0	0	0	0
Turkeys observed	20	0	0	2	0	0
No. hunters who observed turkeys	1	0	0	1	0	0
Percent of hunters who observed turkeys	20	0	0	25	0	0

\*Wild turkeys were initially transplanted onto the Blue Mountains in 1957 and on Elk Ridge in 1959. Those releases failed. Additional releases were made beginning in 1970 on Blue Mountain and 1972 on Elk Ridge with successful results, particularly on Blue Mountain.

Table 10. Statewide summary of fall wild turkey harvest statistics, 1963-79.

Year	Permits Sold		Hunters		Hunter-days		Turkeys Bagged		Percent Success**		Turkeys/Hunter-day		Crippling Loss/100 Bagged		Turkeys Observed		% Hunters Observing Turkeys	
			Afield		Afield		Bagged		Success**		Turkeys/Hunter-day		100 Bagged		Turkeys Observed		Turkeys	
1963	297	248	--	75	30	--	15	--	48									
1964	229	211	362	81	38	0.22	15	1,158	60									
1965	214	207	406	50	24	0.12	8	730	29									
1966*	192	187	471	43	23	0.09	7	756	36									
1967	146	135	405	40	30	0.10	16	748	48									
1968*	368	344	883	183	38	0.21	15	2,321	54									
1969	223	210	549	36	11	0.06	19	466	17									
1970	197	174	418	58	24	0.14	6	564	31									
1971	184	174	444	60	21	0.14	8	451	28									
1972	124	118	303	12	7	0.04	10	173	21									
1973			C L O S E D															
1974	29	26	79	3	12	0.04	33	83	38									
1975	58	46	115	7	15	0.06	0	57	26									
1976	68	56	136	15	27	0.11	7	182	32									
1977	60	53	133	7	15	0.06	0	48	18									
1978*	102	88	223	7	9	0.03	33	335	38									
1979	46	36	71	3	9	0.05	0	61	19									
TOTALS	2,537	2,313	4,998	680	--	0.12	--	8,133	--									
AVERAGES	166	152	352	45	22	0.10	13	538	35									

\*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 Mountains a one-bird limit; from 1969 through 1972, all areas had a two-bird limit. Hunter success was based on the number of successful hunters rather than total turkeys bagged.

SHARP-TAILED GROUSE  
Introduction and Summary

The Columbian sharp-tailed grouse is one of four species of grouse native to Utah. Sharptails were formerly abundant in the valley and foothill areas of northern and central Utah. Sharptail grouse habitats were the most attractive areas for agricultural development and grazing in Utah. As a result, sharptail habitat was directly converted to farmland or was seriously impacted by heavy grazing.

Because of habitat loss, sharptails have been extirpated from most of their former range and are now found only in extreme northern Utah, including Box Elder, Cache, Morgan and Weber counties.

In Utah, sharp-tailed grouse were completely protected from hunting from 1925-1973. Beginning in the early 1970's, field reports from various individuals and observations by Division personnel indicated that sharptails were becoming more numerous in several areas. It was felt, at this time, that limited hunting was justified. Limited hunting was legalized in 1974, and has continued since.

The Division has done fairly extensive field work on sharptails since 1975. This work has centered on locating populations and the associated dancing grounds; evaluating habitat use; examining seasonal migration patterns; and monitoring population trends.

Current management of sharptails includes counting of known dancing grounds, searches for new dancing grounds, brood counts and collection of harvest information.

Beginning in 1979, all sharptail hunters were required to obtain a free "Sharp-tailed Grouse Hunting Permit." Questionnaires were sent to all permittees following the season and results are included as Table 3. Harvest figures are not available for the years 1974-1978, but field observations indicate that hunting pressure and harvest were fairly constant during that period and comparable to 1979.



Table 1. Summary of sharp-tailed grouse dancing ground counts, 1975-1979.

County	Dancing Ground		1975	1976	1977	1978	1979
	No.	Name					
Box Elder							
	1.	West Hills #1 (Located 1977)			21	--	12
	2.	West Hills #2 (Located 1977)			7	--	3
	3.	West Hills #3 (Located 1977)			13	--	0
	4.	Hunsaker's Field (Located 1977)			13	16	3
	5.	Whites Valley (Located 1977)			12	--	0
	6.	North Whites Valley (Located 1977)			10	15	--
	7.	Pocatello Valley #1 (Located 1978)				7	4
	8.	Pocatello Valley #2 (Located 1978)				25	3
	9.	Pocatello Valley #3 (Located 1978)				4	0
	10.	Pocatello Valley #4 (Located 1978)				6	0
Cache							
	1.	Bankhead Well (Relocated 1975)	13	6	8	7	2
	2.	Baxter Ridge (Relocated 1975)	12	0	0	--	--
	3.	Crow Mtn. #1 (Located 1979)					7
	4.	Crow Mtn. #2 (Located 1979)					6
Morgan							
	1.	Cottonwood #1 (Located 1975)	9	9	14	6	3
	2.	Cottonwood #2 (Located 1975)	18	9	6	16	25
Weber							
	1.	Monastery (Located 1969)	27	10	Active	Active	3
Total grounds counted			5	5	10	9	15
Total grouse counted			79	34	104	102	71
Average number of grouse/ground			15.8	6.8	10.4	11.3	4.7

Table 2. Sharptail grouse summer inventory, 1975-1979.

Area	1975	1976	1977	1978	1979 <sup>(3)</sup>
Box Elder					
n <sup>(1)</sup>	0	0	2	5	
Mean Brood	0	0	5.00	5.80	
Yng./100 ad.	0	0	500 <sup>(2)</sup>	686	
Grouse/100 hrs.	0	0		145	
Total hrs. effort	3	25	156	38	
Cache					
n	1	0	--	--	
Mean Brood	5.00	0	--	--	
Yng./100 ad.	500	0	--	--	
Grouse/100 hrs.	92	0	--	--	
Total hrs. effort	6.5	2	--	--	
Morgan					
n	2	2	--	3	
Mean Brood	2.50	2.50	--	3.67	
Yng/100 ad.	175	86	--	300	
Grouse/100 hrs.	34	81	--	149	
Total hrs. effort	32	16	--	11	
Weber					
n	--	0	--	0	
Mean Brood	--	0	--	0	
Yng./100 ad.	--	0	--	0	
Grouse/100 hrs.	--	4	--	0	
Total hrs. effort	--	24	--	4	
State					
n	3	2	2	8	
Mean Brood	3.33	2.50	5.00	5.00	
Yng./100 ad.	240	75	500	545	
Grouse/100 hrs.	41	21	--	135	
Total hrs. effort	41.5	67	156	53	

(1) Number of broods observed.

(2) Some of observation time involved radio-telemetry, making this index invalid.

(3) No broods observed, efforts curtailed due to limited time and mileage.

Table 3. Summary of sharp-tailed harvest, 1979.

Data	Box Elder	Cache	Davis	Morgan	Rich	Weber	Mixed	State Total
Permits Sold								268
No Hunts*								112
Hunters Afield*	76	41	3	10	7	7	12	156
Hunter Days*	94	57	4	18	8	7	32	220
Birds Bagged*	46	15	0	12	0	3	0	76
Birds/Hunter-day	0.49	0.27	0.00	0.69	0.00	0.40	0.00	0.35
% of Pressure	49	27	2	6	4	4	8	100
% of Harvest	60	20	0	16	0	4	0	100

\*Projection factor =  $\frac{268 \text{ Permits Sold}}{194 \text{ Questionnaires returned}} = 1.3814.$

Table 4. Sharptail grouse field bag check summary, 1979.

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 Region</u>											
Box Elder	6	10	22	4	18	3	6	17	1	6	0.17
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	6	10	22	4	18	3	6	17	1	6	0.17
<u>Central Region</u>											
Juab											
Salt Lake											
Sanpete											
Tooele											
Utah											
Wasatch											
<b>REGIONAL TOTALS</b>											
<u>Southern Region</u>											
Beaver											
Garfield											
Iron											
Kane											
Millard											
Piute											
Sevier											
Washington											
Wayne											
<b>REGIONAL TOTALS</b>											
<u>Northeastern Region</u>											
Daggett											
Duchesne											
Uintah											
<b>REGIONAL TOTALS</b>											
<u>Southeastern Region</u>											
Carbon											
Emery											
Grand											
San Juan											
<b>REGIONAL TOTALS</b>											
<b>STATE TOTALS</b>											

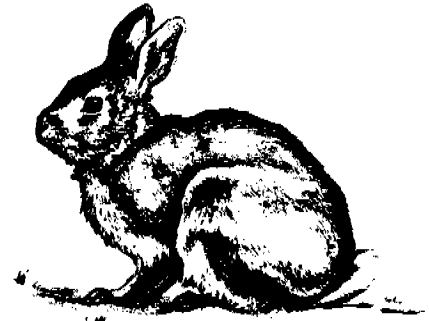
# RABBITS AND HARES

## SUMMARY

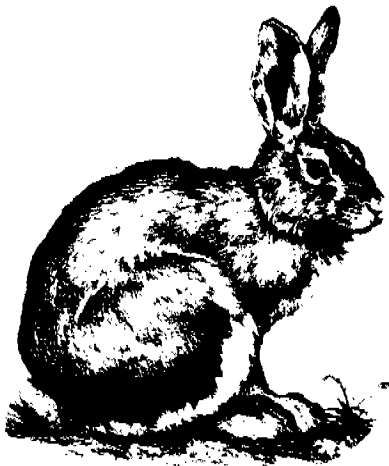
### Cottontail Rabbits

An excellent breeding population level for 1979 was indicated by the 1978 harvest statistics.

Summer roadside counts indicated an increased population density throughout the state except the Northern Region. Harvest statistics indicated a harvest of 200,223 cottontails with 33,385 hunters afield.



### Snowshoe Hares



The 1979 snowshoe hare hunting season was the fifth held since the Legislature provided protected status to this species in 1975.

Harvest statistics for 1979 indicated decreased hunter participation, hunter success and total harvest. However, this decrease may reflect more accurate identification of the snowshoe hare by hunters as a result of education efforts, rather than an actual decline in hunter participation. Nevertheless, some hunters still identify whitetail jackrabbits as snowshoe hare, causing some bias in the data.

## COTTONTAIL RABBIT

### Roadside Counts

Results of the annual roadside counts for 1979 are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1969 is shown in Table 2 and 3, respectively. Indexes for 1979 compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total miles driven	2,486	- 9	- 6
Total cottontails counted	1,094	-16	+14
Cottontails observed per mile	0.44	- 6	+26
Young observed per 100 adults	121	+ 8	+11

A good breeding population for 1979 was indicated by 1978 harvest statistics.

Indicated production was above 1978 and the average.

The cottontail per mile index was up in all regions, except the Northeastern and Southeastern regions. The index was above average statewide in all areas except the Northern and Southeastern regions.

### Harvest

#### Hunter Questionnaire

Results of the 1979 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 1973 are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figure 2. Results of the 1979 season compared to 1978 and the average follow:

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Cottontail hunters	33,385	- 6	+23
Cottontail harvest	200,223	-50	- 1
Hunter-days afield	127,497	-22	+10
Cottontails per hunter-day	1.57	-36	- 8
Cottontails per hunter	6.00	-47	-17

Total harvest and total days afield both decreased from 1978. Total hunters decreased slightly from 1978, but success decreased significantly to 8 percent below average.

### Field Bag Checks

Results of the survey for 1979 are shown in Table 9. Trends of hunter success as determined by bag checks are shown in Table 10. Following is a comparison of the 1979 field bag check data to 1978 and the average.

	<u>1979</u>	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Total hunters checked	240	-55	-48
Total hours hunted	531	-69	-59
Cottontails per hunter (complete hunts)	1.85	-52	- 9
Cottontails bagged per 100 hours	60	-44	+ 5
Hours per hunter-day (complete hunts)	2.8	-28	-18
Hours per cottontail bagged	1.7	+89	-11

Fifty-five percent fewer cottontail hunters were checked in 1979 than in 1978. Field bag check data indicated that success decreased dramatically from 1978 to about average. Hunters spent less time afield, and the time required to bag a cottontail increased 89 percent. Hunter success was generally down in all regions except the Central Region according to field bag check data.

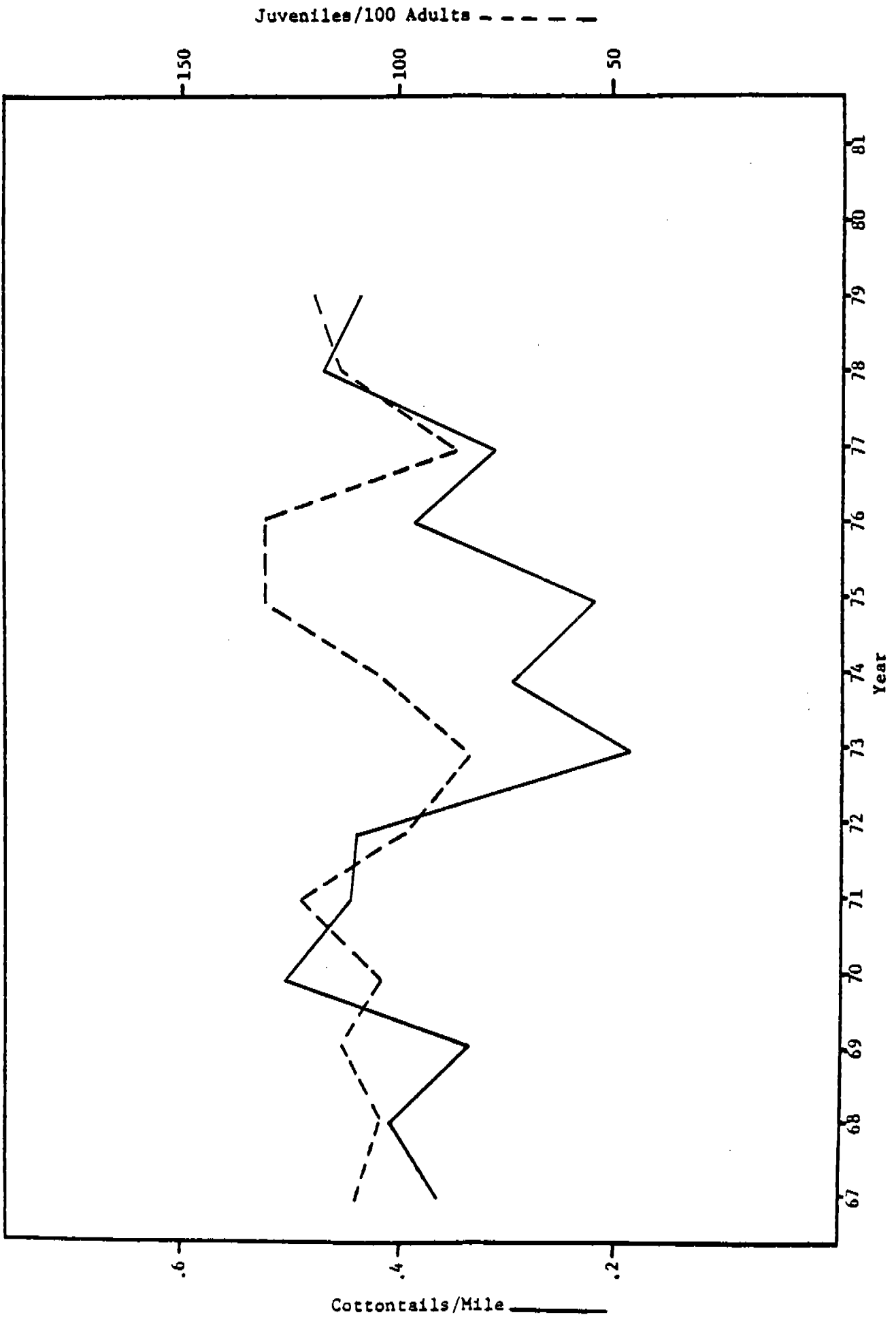


Figure 1. Cottontail Rabbit Population Indexes Trend.



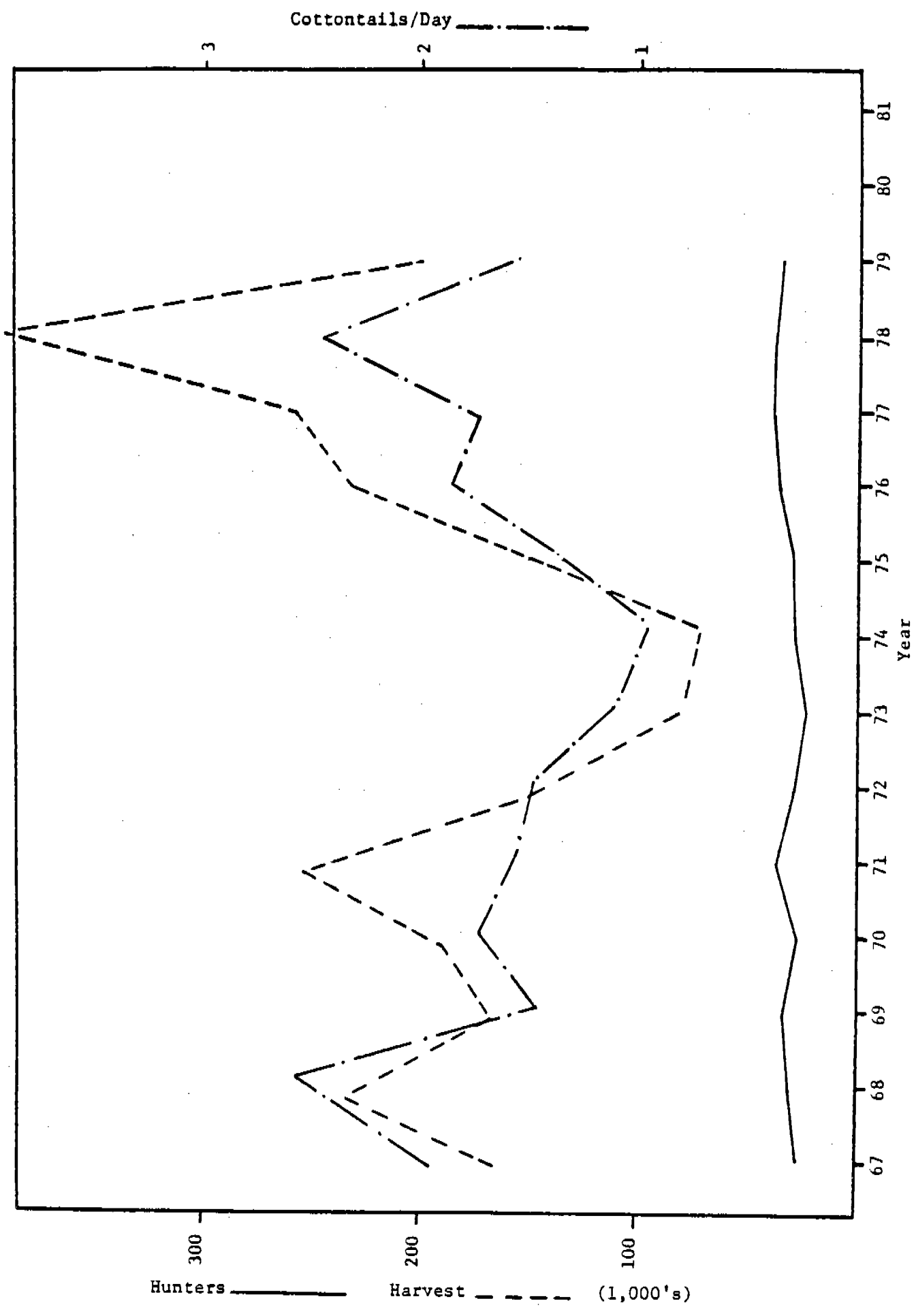


Figure 2. Cottontail Rabbit Harvest Trend

Table 1. Cottontail rabbit summer inventory summary, 1979.

Region and County	Miles Driven	Rabbits Observed				Young Per 100 Adults	Rabbits Per Mile
		Adults	Young	Unclass.	Total		
<u>Northern Region</u>							
Box Elder	180	26	26	7	59	100	0.33
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	90	15	9	3	27	60	0.30
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>270</b>	<b>41</b>	<b>35</b>	<b>10</b>	<b>86</b>	<b>85</b>	<b>0.32</b>
<u>Central Region</u>							
Juab	84	15	2	3	20	13	0.23
Salt Lake	--	--	--	--	--	--	--
Sanpete	90	25	78	1	104	312	1.15
Tooele	90	19	19	8	46	100	0.51
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>264</b>	<b>59</b>	<b>99</b>	<b>12</b>	<b>170</b>	<b>167</b>	<b>0.64</b>
<u>Southern Region</u>							
Beaver	120	16	10	0	26	63	0.22
Garfield	150	6	15	1	22	250	0.15
Iron	60	18	8	1	27	44	0.45
Kane	90	17	14	--	31	82	0.34
Millard	250	44	84	2	130	190	0.52
Piute	90	--	--	2	2	--	0.02
Sevier	144	24	41	14	79	171	0.55
Washington	180	19	18	26	63	94	0.35
Wayne	90	14	30	7	51	214	0.56
<b>REGIONAL TOTALS</b>	<b>1,174</b>	<b>158</b>	<b>220</b>	<b>53</b>	<b>431</b>	<b>139</b>	<b>0.37</b>
<u>Northeastern Region</u>							
Daggett	148	105	129	0	234	123	1.58
Duchesne	120	9	18	2	29	200	0.24
Uintah	120	33	27	4	64	82	0.53
<b>REGIONAL TOTALS</b>	<b>388</b>	<b>147</b>	<b>174</b>	<b>6</b>	<b>327</b>	<b>118</b>	<b>0.84</b>
<u>Southeastern Region</u>							
Carbon	90	3	7	1	11	230	0.12
Emery	90	20	5	0	25	25	0.28
Grand	90	12	6	1	19	50	0.21
San Juan	120	13	4	8	25	30	0.20
<b>REGIONAL TOTALS</b>	<b>390</b>	<b>48</b>	<b>22</b>	<b>10</b>	<b>80</b>	<b>46</b>	<b>0.21</b>
<b>STATE TOTALS</b>	<b>2,486</b>	<b>453</b>	<b>550</b>	<b>91</b>	<b>1,094</b>	<b>121</b>	<b>0.44</b>

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1969-79.

Region and County	Year											Average 1969-78
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
<u>Northern Region</u>												
Box Elder	0.50	0.76	0.43	0.37	0.06	1.01	0.32	0.72	0.97	0.29	0.33	
Cache	0.01	--	0.06	0.07	--	--	--	0.00	--	0.05	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	0.10	--	0.28	--	0.14	0.10	0.02	0.17	0.16	0.10	--	
Rich	0.52	0.43	0.22	0.11	0.14	0.04	0.16	0.46	0.26	0.47	0.30	
Summit	0.08	0.39	--	0.13	--	--	--	--	--	--	--	
Weber	0.16	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.23</b>	<b>0.59</b>	<b>0.31</b>	<b>0.25</b>	<b>0.09</b>	<b>0.36</b>	<b>0.19</b>	<b>0.45</b>	<b>0.59</b>	<b>0.30</b>	<b>0.32</b>	<b>0.34</b>
<u>Central Region</u>												
Juab	0.51	0.72	0.33	0.14	0.13	--	0.07	0.08	0.18	0.19	0.23	
Salt Lake	0.00	--	--	--	--	--	--	--	--	--	--	
Sanpete	0.53	0.63	0.77	0.72	0.33	0.23	0.18	0.36	0.37	0.86	1.15	
Tooele	0.28	0.28	0.22	0.14	0.02	0.06	0.04	0.16	0.19	0.21	0.51	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.32</b>	<b>0.54</b>	<b>0.46</b>	<b>0.33</b>	<b>0.18</b>	<b>0.14</b>	<b>0.09</b>	<b>0.20</b>	<b>0.25</b>	<b>0.43</b>	<b>0.64</b>	<b>0.29</b>
<u>Southern Region</u>												
Beaver	0.36	--	0.18	0.36	0.29	0.33	0.04	0.20	0.11	0.22	0.22	
Garfield	0.48	0.48	0.33	0.29	0.12	0.14	0.28	0.39	0.15	0.13	0.15	
Iron	0.40	--	0.38	0.58	0.00	0.06	0.09	0.21	0.36	0.66	0.45	
Kane	--	0.71	0.17	0.60	0.32	0.26	0.48	0.49	0.32	0.23	0.34	
Millard	0.39	0.28	0.15	0.29	0.11	0.10	0.07	0.17	0.14	0.42	0.52	
Piute	0.00	0.00	0.00	0.00	--	0.02	0.07	0.08	0.00	0.01	0.02	
Sevier	0.47	0.58	0.46	0.41	0.10	0.18	0.11	0.26	0.38	0.90	0.55	
Washington	0.61	0.17	0.46	1.16	0.57	1.30	0.56	0.32	0.21	0.16	0.35	
Wayne	0.12	--	0.08	0.07	0.04	0.06	0.03	0.17	0.09	0.48	0.56	
<b>REGIONAL TOTALS</b>	<b>0.35</b>	<b>0.35</b>	<b>0.25</b>	<b>0.48</b>	<b>0.19</b>	<b>0.32</b>	<b>0.20</b>	<b>0.27</b>	<b>0.19</b>	<b>0.35</b>	<b>0.37</b>	<b>0.30</b>
<u>Northeastern Region</u>												
Daggett	0.60	0.77	0.76	0.73	0.50	0.24	0.24	0.68	0.25	2.77	1.58	
Duchesne	0.68	0.56	0.58	0.24	0.14	0.29	0.67	1.00	1.21	1.42	0.24	
Uintah	0.84	1.56	1.39	0.97	0.14	0.19	0.32	1.36	0.68	1.22	0.53	
<b>REGIONAL TOTALS</b>	<b>0.68</b>	<b>0.93</b>	<b>0.89</b>	<b>0.60</b>	<b>0.26</b>	<b>0.24</b>	<b>0.43</b>	<b>0.98</b>	<b>0.67</b>	<b>1.75</b>	<b>0.84</b>	<b>0.74</b>
<u>Southeastern Region</u>												
Carbon	0.13	0.13	0.24	0.20	0.46	0.15	0.18	0.18	0.10	0.12	0.12	
Emery	0.17	0.20	0.04	0.30	0.06	0.08	0.04	0.27	0.26	0.21	0.28	
Grand	--	0.14	0.53	0.66	0.07	0.14	0.18	0.22	0.19	0.33	0.21	
San Juan	0.50	0.30	0.97	0.48	--	0.58	0.42	0.67	0.31	0.31	0.20	
<b>REGIONAL TOTALS</b>	<b>0.21</b>	<b>0.25</b>	<b>0.53</b>	<b>0.45</b>	<b>0.19</b>	<b>0.28</b>	<b>0.22</b>	<b>0.35</b>	<b>0.21</b>	<b>0.23</b>	<b>0.21</b>	<b>0.29</b>
<b>STATE TOTALS</b>	<b>0.32</b>	<b>0.50</b>	<b>0.44</b>	<b>0.43</b>	<b>0.18</b>	<b>0.29</b>	<b>0.22</b>	<b>0.38</b>	<b>0.31</b>	<b>0.47</b>	<b>0.44</b>	<b>0.35</b>

Table 3. Summary of cottontail rabbits young per 100 adults, 1969-79.

Region and County	Year										Average 1969-78	
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978		1979
<u>Northern Region</u>												
Box Elder	94	95	129	62	100	173	144	281	103	126	100	
Cache	0	--	0	0	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	900	--	25	--	--	0	--	200	100	--	--	
Rich	186	40	80	100	50	0	56	100	54	130	60	
Summit	33	64	--	14	--	--	--	--	--	--	--	
Weber	75	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>115</b>	<b>76</b>	<b>100</b>	<b>56</b>	<b>73</b>	<b>145</b>	<b>120</b>	<b>222</b>	<b>96</b>	<b>137</b>	<b>85</b>	<b>114</b>
<u>Central Region</u>												
Juab	239	246	171	117	100	--	67	20	100	44	13	
Salt Lake	0	--	--	--	--	--	--	--	--	--	--	
Sanpete	311	123	144	148	142	50	38	256	200	217	312	
Tooele	127	100	100	100	0	67	100	133	129	125	100	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>224</b>	<b>157</b>	<b>145</b>	<b>135</b>	<b>121</b>	<b>53</b>	<b>54</b>	<b>160</b>	<b>154</b>	<b>161</b>	<b>167</b>	<b>136</b>
<u>Southern Region</u>												
Beaver	56	--	14	61	92	11	0	--	33	70	63	
Garfield	138	103	118	86	57	56	77	103	71	64	250	
Iron	33	--	162	100	0	100	0	70	93	33	44	
Kane	--	28	50	86	44	200	160	87	65	56	82	
Millard	22	41	32	271	32	82	88	63	67	88	190	
Plute	--	--	--	--	--	0	20	75	--	--	--	
Sevier	360	350	390	450	200	183	44	67	126	147	171	
Washington	114	22	71	11	81	98	212	118	57	400	94	
Wayne	300	--	167	50	200	50	0	250	225	282	214	
<b>REGIONAL TOTALS</b>	<b>85</b>	<b>68</b>	<b>93</b>	<b>64</b>	<b>67</b>	<b>92</b>	<b>120</b>	<b>89</b>	<b>86</b>	<b>96</b>	<b>139</b>	<b>86</b>
<u>Northeastern Region</u>												
Daggett	34	57	81	121	63	87	77	152	48	98	123	
Duchesne	148	131	150	78	160	146	258	177	66	167	200	
Uintah	154	203	191	141	100	114	211	151	134	153	82	
<b>REGIONAL TOTALS</b>	<b>77</b>	<b>126</b>	<b>139</b>	<b>120</b>	<b>87</b>	<b>114</b>	<b>198</b>	<b>159</b>	<b>78</b>	<b>125</b>	<b>118</b>	<b>122</b>
<u>Southeastern Region</u>												
Carbon	122	100	53	145	250	117	227	85	112	118	230	
Emery	200	183	100	125	16	40	0	58	30	111	25	
Grand	--	160	79	297	33	62	47	54	100	77	50	
San Juan	166	228	215	111	--	140	150	179	120	35	30	
<b>REGIONAL TOTALS</b>	<b>161</b>	<b>115</b>	<b>132</b>	<b>180</b>	<b>142</b>	<b>118</b>	<b>124</b>	<b>112</b>	<b>84</b>	<b>71</b>	<b>46</b>	<b>124</b>
<b>STATE TOTALS</b>	<b>110</b>	<b>102</b>	<b>123</b>	<b>99</b>	<b>86</b>	<b>105</b>	<b>132</b>	<b>132</b>	<b>89</b>	<b>112</b>	<b>121</b>	<b>109</b>

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-Days Afield	Cottontails Bagged	Cottontails/Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	413	15,196	27,926	1.84	11.92	13.95
Cache	43	1,752	2,146	1.22	1.37	1.07
Davis	13	365	730	2.00	0.29	0.37
Morgan	69	3,445	3,795	1.10	2.70	1.90
Rich	91	2,993	5,795	1.94	2.35	2.89
Summit	73	3,255	3,898	1.20	2.55	1.95
Weber	38	1,474	1,226	0.83	1.16	0.61
<b>REGIONAL TOTALS</b>	<b>740</b>	<b>28,480</b>	<b>45,516</b>	<b>1.60</b>	<b>22.34</b>	<b>22.73</b>
<u>Central Region</u>						
Juab	164	6,978	15,590	2.23	5.47	7.79
Salt Lake	51	2,117	2,029	0.96	1.66	1.01
Sanpete	98	4,832	7,036	1.46	3.79	3.51
Tooele	419	17,430	32,991	1.89	13.67	16.48
Utah	277	14,014	14,817	1.06	10.99	7.40
Wasatch	43	2,365	2,365	1.00	1.85	1.18
<b>REGIONAL TOTALS</b>	<b>1,052</b>	<b>47,735</b>	<b>74,828</b>	<b>1.57</b>	<b>37.44</b>	<b>37.37</b>
<u>Southern Region</u>						
Beaver	15	642	934	1.45	0.50	0.47
Garfield	13	599	1,270	2.12	0.47	0.63
Iron	28	2,102	3,664	1.74	1.65	1.83
Kane	12	1,182	2,379	2.01	0.93	1.19
Millard	110	4,803	8,744	1.82	3.77	4.37
Piute	19	1,168	1,489	1.27	0.92	0.74
Sevier	57	3,066	4,292	1.40	2.40	2.14
Washington	37	2,555	3,401	1.33	2.00	1.70
Wayne	30	2,087	3,679	1.76	1.64	1.84
<b>REGIONAL TOTALS</b>	<b>321</b>	<b>18,203</b>	<b>29,852</b>	<b>1.64</b>	<b>14.28</b>	<b>14.91</b>
<u>Northeastern Region</u>						
Daggett	56	2,511	8,277	3.30	1.97	4.13
Duchesne	128	6,686	9,941	1.49	5.24	4.97
Uintah	148	7,123	11,649	1.64	5.59	5.82
<b>REGIONAL TOTALS</b>	<b>332</b>	<b>16,320</b>	<b>29,867</b>	<b>1.83</b>	<b>12.80</b>	<b>14.92</b>
<u>Southeastern Region</u>						
Carbon	108	6,540	6,919	1.06	5.13	3.46
Emery	69	5,853	7,386	1.26	4.59	3.69
Grand	21	978	1,241	1.27	0.77	0.62
San Juan	36	2,073	2,934	1.42	1.63	1.47
<b>REGIONAL TOTALS</b>	<b>234</b>	<b>15,444</b>	<b>18,481</b>	<b>1.20</b>	<b>12.11</b>	<b>9.23</b>
Unknown counties	8	190	277	1.46	0.15	0.14
Mixed counties	8	1,124	1,401	1.25	0.88	0.70
<b>STATE TOTALS</b>	<b>2,695</b>	<b>127,497</b>	<b>200,223</b>	<b>1.57</b>	<b>100</b>	<b>100</b>

\*Total hunter-trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1973-79.

Region and County	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>							
Box Elder	0.90	1.03	1.25	1.63	1.87	2.56	1.84
Cache	0.52	1.12	0.31	1.30	1.28	1.59	1.22
Davis	0.85	0.66	0.21	2.05	1.83	0.39	2.00
Morgan	0.81	0.68	0.65	0.71	1.76	1.74	1.10
Rich	0.92	1.14	1.45	1.50	2.28	3.77	1.94
Summit	0.39	0.62	0.66	0.96	0.78	2.32	1.20
Weber	1.79	0.35	0.74	0.85	0.95	1.73	0.83
<b>REGIONAL TOTALS</b>	<b>0.87</b>	<b>0.86</b>	<b>0.96</b>	<b>1.40</b>	<b>1.67</b>	<b>2.43</b>	<b>1.60</b>
<u>Central Region</u>							
Juab	0.70	0.90	0.78	1.77	1.54	2.90	2.23
Salt Lake	0.24	0.86	0.94	1.35	1.20	1.55	0.96
Sanpete	0.88	1.14	0.64	1.27	0.82	1.50	1.46
Tooele	0.84	0.79	0.75	1.56	1.75	2.40	1.89
Utah	0.69	0.81	1.11	1.26	1.33	1.86	1.06
Wasatch	0.68	0.57	1.00	0.89	1.25	1.42	1.00
<b>REGIONAL TOTALS</b>	<b>0.73</b>	<b>0.84</b>	<b>0.87</b>	<b>1.41</b>	<b>1.46</b>	<b>2.15</b>	<b>1.57</b>
<u>Southern Region</u>							
Beaver	0.84	0.89	1.44	2.09	1.78	2.25	1.45
Garfield	2.24	1.45	1.00	1.02	0.50	0.80	2.12
Iron	0.55	0.61	0.84	1.19	1.08	1.48	1.74
Kane	1.18	1.57	2.31	1.00	2.55	2.80	2.01
Millard	1.47	1.15	0.70	1.67	1.78	1.84	1.82
Piute	2.50	0.08	1.14	0.60	2.06	2.06	1.27
Sevier	1.45	1.12	1.45	1.11	1.52	1.55	1.40
Washington	1.61	1.02	1.98	1.05	0.95	0.93	1.33
Wayne	0.74	1.08	1.73	2.17	2.88	1.42	1.76
<b>REGIONAL TOTALS</b>	<b>1.19</b>	<b>1.03</b>	<b>1.53</b>	<b>1.45</b>	<b>1.79</b>	<b>1.54</b>	<b>1.64</b>
<u>Northeastern Region</u>							
Daggett	1.25	1.69	0.73	3.18	2.10	3.25	3.30
Duchesne	1.07	1.44	1.86	3.31	2.92	3.67	1.49
Uintah	1.10	0.96	1.81	3.02	2.50	4.33	1.64
<b>REGIONAL TOTALS</b>	<b>1.11</b>	<b>1.24</b>	<b>1.78</b>	<b>3.17</b>	<b>2.63</b>	<b>3.91</b>	<b>1.83</b>
<u>Southeastern Region</u>							
Carbon	1.21	0.95	1.17	1.54	1.19	2.26	1.06
Emery	1.46	0.80	1.56	1.59	1.32	1.69	1.26
Grand	1.00	1.93	3.55	2.78	1.23	2.12	1.27
San Juan	2.26	2.12	1.81	1.42	1.05	2.81	1.42
<b>REGIONAL TOTALS</b>	<b>1.43</b>	<b>1.11</b>	<b>1.70</b>	<b>1.74</b>	<b>1.24</b>	<b>2.11</b>	<b>1.20</b>
Unknown counties	0.64	2.13	0.33	1.00	1.86	0.83	1.46
Mixed counties	--	5.33	0.00	1.49	1.56	0.00	1.25
<b>STATE TOTALS</b>	<b>1.02</b>	<b>1.01</b>	<b>1.32</b>	<b>1.86</b>	<b>1.71</b>	<b>2.46</b>	<b>1.57</b>

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1973-79.

Region and County	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>							
Box Elder	7.48	11.33	8.37	7.22	11.69	11.50	13.95
Cache	0.87	1.19	0.35	1.21	0.97	0.73	1.07
Davis	0.67	0.42	0.17	0.95	0.25	0.09	0.37
Morgan	1.28	0.86	0.58	0.55	2.99	2.74	1.90
Rich	0.70	0.55	1.50	1.14	2.41	4.96	2.89
Summit	1.28	2.00	1.11	0.77	1.08	2.88	1.95
Weber	3.62	0.70	1.17	0.59	0.69	0.67	0.61
REGIONAL TOTALS	15.88	17.04	13.25	12.44	20.07	23.58	22.73
<u>Central Region</u>							
Juab	3.10	4.35	2.84	3.77	4.22	5.16	7.79
Salt Lake	0.41	2.94	1.28	0.72	0.62	1.19	1.01
Sanpete	1.94	1.98	1.57	0.97	1.37	1.06	3.51
Tooele	8.32	4.19	4.82	7.12	10.38	10.17	16.48
Utah	6.81	9.84	7.21	6.12	6.94	6.77	7.40
Wasatch	1.45	0.55	0.87	1.05	0.89	0.80	1.18
REGIONAL TOTALS	22.03	23.85	18.59	19.75	24.42	25.15	37.37
<u>Southern Region</u>							
Beaver	1.04	1.60	0.25	1.68	0.46	0.89	0.47
Garfield	1.10	0.70	0.31	0.53	0.10	0.26	0.63
Iron	2.20	0.92	1.26	1.37	0.47	1.14	1.83
Kane	0.38	0.97	1.61	0.02	1.41	0.76	1.19
Millard	4.64	4.63	1.09	2.90	2.44	1.66	4.37
Piute	0.14	0.02	0.16	0.03	0.37	0.24	0.74
Sevier	2.06	1.05	1.07	0.36	1.02	1.15	2.14
Washington	7.01	4.79	8.51	2.47	0.70	0.93	1.70
Wayne	1.07	1.25	1.11	2.33	2.40	0.61	1.84
REGIONAL TOTALS	19.65	15.94	15.37	11.70	9.37	7.63	14.91
<u>Northeastern Region</u>							
Daggett	2.00	1.82	0.47	3.12	1.42	4.71	4.13
Duchesne	6.38	8.89	9.56	18.80	11.01	9.95	4.97
Uintah	6.72	5.99	14.01	15.38	14.17	16.60	5.82
REGIONAL TOTALS	15.10	16.71	24.03	37.30	26.60	13.26	14.92
<u>Southeastern Region</u>							
Carbon	9.22	8.37	7.60	6.05	5.41	4.84	3.46
Emery	7.65	5.53	9.09	4.74	5.60	3.51	3.69
Grand	2.87	2.46	7.58	4.14	0.54	1.32	0.62
San Juan	7.33	5.20	4.47	1.40	0.75	2.13	1.47
REGIONAL TOTALS	27.07	21.56	28.74	16.33	12.31	11.79	9.23
Unknown counties	0.26	4.55	0.02	0.01	2.77	0.59	0.14
Mixed counties	--	0.35	0.00	2.08	4.47	0.00	0.70
STATE TOTALS	100	100	100	100	100	100	100

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1973-79.

Region and County	1973	1974	1975	1976	1977	1978	1979
<u>Northern Region</u>							
Box Elder	8.44	11.18	8.88	8.27	10.69	11.05	11.92
Cache	1.71	1.07	1.51	1.75	1.29	1.13	1.37
Davis	0.80	0.64	1.08	0.86	0.23	0.58	0.29
Morgan	1.59	1.27	1.18	1.47	2.91	3.87	2.70
Rich	0.77	0.49	1.36	1.42	1.81	3.24	2.35
Summit	3.30	3.27	2.23	1.51	2.37	3.06	2.55
Weber	2.07	2.04	0.08	1.29	1.23	0.95	1.16
REGIONAL TOTALS	18.68	19.95	18.33	16.57	20.53	23.89	22.34
<u>Central Region</u>							
Juab	4.51	4.91	4.80	3.99	4.70	4.37	5.47
Salt Lake	1.74	3.44	1.80	0.99	0.89	1.89	1.66
Sanpete	2.24	1.76	3.26	1.42	2.85	1.73	3.79
Tooele	10.09	5.40	8.52	8.53	10.13	10.44	13.67
Utah	10.12	12.31	8.57	9.07	8.96	8.93	10.99
Wasatch	2.18	0.98	1.16	2.20	1.21	1.39	1.85
REGIONAL TOTALS	30.89	28.79	28.11	26.20	28.74	28.76	37.44
<u>Southern Region</u>							
Beaver	1.27	1.82	0.23	1.51	0.44	0.97	0.50
Garfield	0.50	0.49	0.41	0.97	0.35	0.81	0.47
Iron	4.10	1.53	1.98	2.15	0.75	1.89	1.65
Kane	0.32	0.62	0.92	0.04	0.94	0.66	0.93
Millard	3.22	4.09	2.05	3.23	2.35	2.22	3.77
Piute	0.06	0.29	0.18	0.11	0.31	0.29	0.92
Sevier	1.45	0.96	0.98	0.60	1.16	1.83	2.40
Washington	4.43	4.75	5.67	4.40	1.25	2.44	2.00
Wayne	1.48	1.18	0.85	2.00	1.43	1.05	1.64
REGIONAL TOTALS	16.82	15.73	13.27	15.02	8.98	12.17	14.28
<u>Northeastern Region</u>							
Daggett	1.62	1.09	0.85	1.83	1.16	3.56	1.97
Duchesne	6.08	6.24	6.78	10.60	6.45	6.67	5.24
Uintah	6.20	6.29	10.24	9.50	9.69	9.44	5.59
REGIONAL TOTALS	13.90	13.62	17.86	21.93	17.30	19.66	12.80
<u>Southeastern Region</u>							
Carbon	7.73	8.93	8.57	7.35	7.76	5.26	5.13
Emery	5.34	6.98	7.70	5.55	7.26	5.11	4.59
Grand	2.92	1.29	2.82	2.78	0.75	1.54	0.77
San Juan	3.30	2.49	3.26	1.83	1.23	1.86	1.63
REGIONAL TOTALS	19.30	19.68	22.36	17.54	17.01	13.77	12.11
Unknown counties	0.41	2.16	0.08	0.02	2.54	1.75	0.15
Mixed counties	--	0.07	0.00	2.61	4.89	.00	0.88
STATE TOTALS	100	100	100	100	100	100	100



Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-79.

Year	Total Hunters	Total Harvest	Hunter Days Afield	Cottontail Per Hunter-day	Cottontails* Per Hunter
1967	23,249	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	1.86	7.97
1971	30,824	239,511	145,287	1.65	7.78
1972	22,835	155,102	105,941	1.46	6.79
1973	20,109	88,603	87,036	1.02	4.41
1974	22,737	86,506	85,499	1.01	3.80
1975	24,803	154,182	116,707	1.32	6.22
1976	28,239	235,952	126,737	1.86	8.39
1977	35,831	269,263	157,257	1.71	7.51
1978	35,590	401,071	163,019	2.46	11.27
1979	33,385	200,223	127,497	1.57	6.00
<hr/>					
TOTALS (1967-79)	358,737	2,616,957	1,524,108	1.72	7.29
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AVERAGES (1967-78)	27,113	201,395	116,384	1.69	7.21
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\*Based on county of residence.

Table 9. Cottontail rabbit field bag check summary, 1979.

Region and County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Rabbits/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Rabbits/100 Hrs.	Rabbits/Hunter	
<u>Northern Region</u>										
Box Elder	6	13	56	16	6	13	56	16	29	1.23
Cache	1	3	24	1	1	3	24	1	4	0.33
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	3	11	43	8	3	11	43	8	19	0.73
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>10</b>	<b>27</b>	<b>123</b>	<b>25</b>	<b>10</b>	<b>27</b>	<b>123</b>	<b>25</b>	<b>20</b>	<b>0.93</b>
<u>Central Region</u>										
Juab	--	--	--	--	1	1	3	2	67	2.00
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	24	74	171	52	3	14	43	13	30	0.93
Tooele	2	3	6	6	6	12	38	51	134	4.25
Utah	1	4	12	7	1	2	5	4	80	2.00
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>27</b>	<b>81</b>	<b>189</b>	<b>66</b>	<b>11</b>	<b>29</b>	<b>89</b>	<b>70</b>	<b>79</b>	<b>2.41</b>
<u>Southern Region</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<u>Northeastern Region</u>										
Daggett	45	103	171	201	28	61	143	140	98	2.29
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>45</b>	<b>103</b>	<b>171</b>	<b>201</b>	<b>28</b>	<b>61</b>	<b>143</b>	<b>140</b>	<b>98</b>	<b>2.29</b>
<u>Southeastern Region</u>										
Carbon	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--
Grand	5	11	12	6	3	8	8	4	50	0.50
San Juan	12	18	36	18	2	4	4	0	0	0.00
<b>REGIONAL TOTALS</b>	<b>17</b>	<b>29</b>	<b>48</b>	<b>24</b>	<b>5</b>	<b>12</b>	<b>12</b>	<b>4</b>	<b>33</b>	<b>0.33</b>
<b>STATE TOTALS</b>	<b>99</b>	<b>240</b>	<b>531</b>	<b>316</b>	<b>54</b>	<b>129</b>	<b>367</b>	<b>239</b>	<b>65</b>	<b>1.85</b>

Table 10. Cottontail hunter success trend determined by field bag checks, 1974-79.

Region and County	1974		1975		1976		1977		1978		1979	
	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter	Bag/ 100 hr. Hunter
<b>Northern Region</b>												
Box Elder	10	1.00	10	0.48	9	0.40	46	1.97	40	1.74	29	1.23
Cache	--	--	--	--	--	--	17	0.67	--	--	4	0.33
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	30	1.33	58	2.21	33	2.29	52	2.79	19	0.73
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	50	0.50	--	--	--	--	167	1.67	--	--
<b>REGIONAL TOTALS</b>	<b>10</b>	<b>1.00</b>	<b>15</b>	<b>0.69</b>	<b>37</b>	<b>1.59</b>	<b>41</b>	<b>1.92</b>	<b>46</b>	<b>2.14</b>	<b>20</b>	<b>0.93</b>
<b>Central Regions</b>												
Juab	--	--	0	0.00	10	2.00	--	--	--	--	67	2.00
Salt Lake	33	0.50*	--	--	400	4.00	--	--	--	--	--	--
Sanpete	--	--	--	--	11	1.00	13	0.42	33	0.88	30	0.93
Tooele	20	0.61*	0	0.00	14	0.57	38	1.65	--	--	134	4.25
Utah	--	--	--	--	7	0.23	--	--	--	--	80	2.00
Wasatch	--	--	--	--	--	--	50	2.00	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>0.60*</b>	<b>0</b>	<b>0.00</b>	<b>14</b>	<b>0.76</b>	<b>30</b>	<b>1.14</b>	<b>33</b>	<b>0.88</b>	<b>79</b>	<b>2.41</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	138	6.11	--	--	314	3.14	100	1.00	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	57	1.33	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>138</b>	<b>6.11</b>	<b>--</b>	<b>--</b>	<b>314</b>	<b>3.14</b>	<b>63</b>	<b>1.25</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>												
Daggett	36	0.40	59	0.44	81	2.59	54	1.70	180	7.62	98	2.29
Duchesne	19	1.05	39	1.72	77	4.03	66	2.68	89	3.42	--	--
Uintah	36	1.68	87	2.93	157	6.24	138	4.83	189	4.13	--	--
<b>REGIONAL TOTALS</b>	<b>30</b>	<b>1.39</b>	<b>54</b>	<b>1.91</b>	<b>98</b>	<b>4.60</b>	<b>68</b>	<b>2.49</b>	<b>162</b>	<b>6.10</b>	<b>98</b>	<b>2.29</b>
<b>Southeastern Region</b>												
Carbon	100	2.35	57	2.00	40	2.19	62	3.00	289	4.50	--	--
Emery	17	0.50	6	0.00	28	2.19	8	0.30	26	1.40	--	--
Grand	--	--	112	3.33	47	1.39	11	0.29	22	0.60	50	0.50
San Juan	44	2.00	96	2.93	63	2.00	72	0.93	160	--	0	0.00
<b>REGIONAL TOTALS</b>	<b>47</b>	<b>1.15</b>	<b>74</b>	<b>2.51</b>	<b>38</b>	<b>1.86</b>	<b>45</b>	<b>1.44</b>	<b>56</b>	<b>1.04</b>	<b>33</b>	<b>0.33</b>
<b>STATE TOTALS</b>	<b>45</b>	<b>1.91</b>	<b>43</b>	<b>1.80</b>	<b>60</b>	<b>2.85</b>	<b>49</b>	<b>1.82</b>	<b>108</b>	<b>3.88</b>	<b>65</b>	<b>1.85</b>

\*Cottontails per hunter based on all hunts.

## SNOWSHOE HARE

### Harvest

During 1979, the fourth annual snowshoe hare hunting season was held statewide. Results of the 1979 hunter questionnaire are found in Table 11. Trends of snowshoe hares bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) are found in Tables 12-14. The 1979 season compared to the season in 1978 and the average of the first four hunts as follows:

	1979	<u>Percent change from</u>	
		<u>1978</u>	<u>Average</u>
Snowshoe hare hunters	6,787	-17	-16
Snowshoe hares harvested	14,641	-58	-30
Hunter-days afield	18,115	-40	-25
Snowshoes per hunter-day	0.81	-30	- 2
Snowshoes per hunter	2.16	-49	-16

Significant misidentification of whitetail jackrabbits as snowshoe hares was anticipated prior to mailing the harvest questionnaire following the first season in 1975. This proved to be the case as a significant harvest of snowshoe hares was reported for counties outside the known range of the species. It was assumed that the problem was statewide, not just confined to those counties.

The 1976 harvest questionnaire was modified in an attempt to better inform respondents concerning the potential for misidentification and aid them in distinguishing between these two varying hares. Comparative reported harvests between 1975 and 1976 suggest that this was accomplished, at least to a significant degree, but the relatively large harvest in counties outside of the snowshoe's range suggested continued confusion. Further refinement was made in the 1977 harvest questionnaire in an effort to more clearly define the snowshoe hare harvest.

In 1978, a leaflet containing pictures and descriptions of the different species of hares found in Utah was mailed with the questionnaire. As a result of the identification leaflet, it is assumed that the data has been more accurate.

Results of the 1979 questionnaire indicate a 17 percent decrease in snowshoe hare hunters, and a 58 percent decrease in harvest compared to 1978.

It is unknown what proportion of the reported snowshoe harvest was actually whitetail jackrabbits incorrectly identified by the hunters. However, it is believed that identification has been improving as a result of efforts to educate the hunter on the differences between the various species of hares found in Utah.

Hopefully, the decrease in hunters afield and harvest reflects more accurate identification rather than a significant decline in hunter participation and harvest.

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1979.

Region and County	Sample Size*	Hunter-days Afield	Snowshoes Bagged	Snowshoes/Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	52	2,029	1,109	0.55	11.20	7.58
Cache	38	1,664	832	0.50	9.19	5.68
Davis	6	146	219	1.50	0.81	1.50
Morgan	43	1,985	1,153	0.58	10.96	7.88
Rich	32	1,022	1,431	1.40	5.64	9.77
Summit	75	2,861	2,657	0.93	15.79	18.15
Weber	22	759	394	0.52	4.19	2.69
REGIONAL TOTALS	268	10,466	7,795	0.74	57.78	53.24
<u>Central Region</u>						
Juab	7	161	336	2.09	0.89	2.29
Salt Lake	8	146	29	0.20	0.81	0.20
Sanpete	27	1,080	1,197	1.11	5.96	8.18
Tooele	12	350	131	0.38	1.93	0.90
Utah	24	613	438	0.71	3.38	2.99
Wasatch	44	1,372	1,328	0.97	7.57	9.07
REGIONAL TOTALS	122	3,722	3,459	0.93	20.55	23.63
<u>Southern Region</u>						
Beaver	1	15	15	1.00	0.08	0.10
Garfield	1	15	0	0.00	0.08	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	1	15	73	5.00	0.08	0.50
Millard	2	102	44	0.43	0.56	0.30
Piute	6	117	146	1.25	0.64	1.00
Sevier	17	759	730	0.96	4.19	4.99
Washington	1	29	116	4.00	0.16	0.80
Wayne	10	277	569	2.05	1.53	3.89
REGIONAL TOTALS	39	1,328	1,693	1.27	7.33	11.57
<u>Northeastern Region</u>						
Daggett	8	409	190	0.46	2.26	1.30
Duchesne	21	657	350	0.53	3.63	2.39
Uintah	8	248	248	1.00	1.37	1.69
REGIONAL TOTALS	37	1,314	788	0.60	7.25	5.38
<u>Southeastern Region</u>						
Carbon	16	540	379	0.70	2.98	2.59
Emery	19	642	380	0.59	3.55	2.59
Grand	0	0	0	0.00	0.00	0.00
San Juan	1	15	0	0.00	0.08	0.00
REGIONAL TOTALS	36	1,197	759	0.63	6.61	5.18
Unknown counties	1	15	0	0.00	0.08	0.00
Mixed counties	2	73	146	2.00	0.40	1.00
STATE TOTALS	505	18,115	14,641	0.81	100	100

\*Total hunter-trips from questionnaire returns.

Table 12. Summary of snowshoe hares bagged per hunter-day by region and county, 1975-79.

Region and County	1975	1976	1977	1978	1979
<u>Northern Region</u>					
Box Elder	0.79	0.43	0.78	0.45	0.55
Cache	0.49	0.82	0.70	0.65	0.50
Davis	0.07	0.40	1.00	0.23	1.50
Morgan	0.67	0.72	0.87	0.84	0.58
Rich	1.21	0.86	0.62	3.02	1.40
Summit	0.34	1.16	1.06	1.65	0.93
Weber	0.40	0.88	0.67	0.76	0.52
REGIONAL TOTALS	0.57	0.87	0.83	1.07	0.74
<u>Central Region</u>					
Juab	0.50	0.50	0.00	1.25	2.09
Salt Lake	0.85	1.25	1.69	6.27	0.20
Sanpete	0.39	0.29	0.95	1.40	1.11
Tooele	0.80	0.40	0.33	1.80	0.38
Utah	0.47	0.71	0.67	0.50	0.71
Wasatch	0.67	0.62	0.83	0.67	0.97
REGIONAL TOTALS	0.60	0.63	0.82	1.47	0.93
<u>Southern Region</u>					
Beaver	0.50	0.75	1.00	2.67	1.00
Garfield	0.00	0.33	0.00	0.13	0.00
Iron	1.00	0.00	0.00	26.00	0.00
Kane	0.00	0.00	0.00	0.00	5.00
Millard	0.00	0.00	0.50	3.20	0.43
Piute	1.00	0.00	1.00	0.00	1.25
Sevier	0.47	0.63	0.34	0.83	0.96
Washington	0.00	0.00	2.00	1.00	4.00
Wayne	1.25	1.27	2.44	0.68	2.05
REGIONAL TOTALS	0.47	0.84	0.86	0.92	1.27
<u>Northeastern Region</u>					
Daggett	1.37	0.00	2.00	0.72	0.46
Duchesne	0.69	0.51	0.74	1.26	0.53
Uintah	0.91	0.69	0.59	0.96	1.00
REGIONAL TOTALS	0.91	0.56	0.71	0.97	0.60
<u>Southeastern Region</u>					
Carbon	0.81	0.94	0.60	1.00	0.70
Emery	0.33	0.61	0.44	1.62	0.59
Grand	0.00	1.00	0.00	5.00	0.00
San Juan	0.00	1.90	0.00	0.00	0.00
REGIONAL TOTALS	0.71	1.00	0.53	1.54	0.63
Unknown counties	--	1.00	1.17	0.67	0.00
Mixed counties	--	0.40	0.76	1.00	2.00
STATE TOTALS	0.61	0.76	0.80	1.15	0.81

Table 13. Percentage distribution of showshoe hare harvested by region and county, 1975-79.

Region and County	1975	1976	1977	1978	1979
<u>Northern Region</u>					
Box Elder	15.38	2.25	5.14	2.83	7.58
Cache	9.18	10.03	5.99	4.81	5.68
Davis	0.25	0.35	0.86	0.54	1.50
Morgan	2.98	7.44	9.84	10.47	7.88
Rich	8.44	4.33	4.42	9.47	9.77
Summit	6.70	20.59	15.55	19.02	18.15
Weber	3.97	2.60	3.99	1.68	2.69
<b>REGIONAL TOTALS</b>	<b>46.90</b>	<b>47.58</b>	<b>45.79</b>	<b>48.82</b>	<b>53.24</b>
<u>Central Region</u>					
Juab	0.25	1.21	0.00	0.38	2.29
Salt Lake	2.73	1.73	3.85	14.36	0.20
Sanpete	2.98	1.04	5.99	0.54	8.13
Tooele	8.68	0.35	0.57	2.06	0.90
Utah	6.45	10.03	4.14	3.21	2.99
Wasatch	4.47	6.92	7.56	4.28	9.07
<b>REGIONAL TOTALS</b>	<b>25.56</b>	<b>21.28</b>	<b>22.11</b>	<b>24.83</b>	<b>23.63</b>
<u>Southern Region</u>					
Beaver	1.07	1.04	0.14	0.61	0.10
Garfield	0.40	0.17	0.00	0.31	0.00
Iron	0.27	0.00	0.00	1.99	0.00
Kane	0.00	0.00	0.00	0.00	0.50
Millard	0.13	0.00	0.14	1.22	0.30
Piute	0.00	0.00	0.14	0.00	1.00
Sevier	1.07	0.87	1.43	4.97	4.99
Washington	0.00	0.00	0.29	0.08	0.80
Wayne	2.00	3.29	3.14	1.91	3.89
<b>REGIONAL TOTALS</b>	<b>4.93</b>	<b>5.36</b>	<b>5.28</b>	<b>11.08</b>	<b>11.57</b>
<u>Northeastern Region</u>					
Daggett	0.67	0.00	0.86	2.22	1.30
Duchesne	8.12	5.36	5.71	3.36	2.39
Uintah	6.79	6.06	3.71	1.83	1.69
<b>REGIONAL TOTALS</b>	<b>15.58</b>	<b>11.42</b>	<b>10.27</b>	<b>7.41</b>	<b>5.38</b>
<u>Southeastern Region</u>					
Carbon	4.53	5.54	3.42	2.75	2.59
Emery	2.40	1.90	1.00	2.98	2.59
Grand	0.27	0.35	0.00	1.91	0.00
San Juan	1.33	3.29	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>8.52</b>	<b>11.07</b>	<b>4.42</b>	<b>7.64</b>	<b>5.18</b>
Unknown counties	--	0.35	3.99	0.15	0.00
Mixed counties	--	1.04	8.13	0.08	1.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1975-79.

Region and County	1975	1976	1977	1978	1979
<u>Northern Region</u>					
Box Elder	11.82	3.99	5.26	7.26	11.20
Cache	11.36	9.45	6.85	8.49	9.19
Davis	2.27	0.67	0.68	2.71	0.81
Morgan	2.73	7.99	9.02	14.35	10.96
Rich	4.24	3.86	5.71	3.59	5.64
Summit	11.97	13.72	11.76	13.21	15.79
Weber	6.06	2.26	4.79	2.54	4.19
REGIONAL TOTALS	50.45	41.94	44.06	52.14	57.78
<u>Central Region</u>					
Juab	0.30	1.86	1.03	0.35	0.89
Salt Lake	1.97	1.07	1.83	2.62	0.81
Sanpete	4.07	2.80	5.02	0.44	5.96
Tooele	6.67	0.67	1.37	1.31	1.93
Utah	8.33	10.92	4.91	7.35	3.38
Wasatch	4.09	8.66	7.31	7.26	7.57
REGIONAL TOTALS	26.06	25.97	21.46	19.34	20.55
<u>Southern Region</u>					
Beaver	0.30	1.07	0.11	0.26	0.08
Garfield	1.21	0.40	0.00	2.80	0.08
Iron	0.15	0.27	0.00	0.09	0.00
Kane	0.00	0.00	0.00	0.00	0.08
Millard	0.13	0.13	0.23	0.44	0.56
Piute	0.15	0.00	0.11	0.00	0.64
Sevier	2.88	1.07	3.31	6.82	4.19
Washington	0.15	0.00	0.11	0.09	0.16
Wayne	0.61	2.00	1.03	3.24	1.53
REGIONAL TOTALS	5.45	4.93	4.91	13.74	7.33
<u>Northeastern Region</u>					
Daggett	1.21	0.67	0.34	3.50	2.26
Duchesne	2.42	8.12	6.16	3.06	3.63
Uintah	3.48	6.79	5.02	2.19	1.37
REGIONAL TOTALS	7.12	15.58	11.53	8.75	7.25
<u>Southeastern Region</u>					
Carbon	8.64	4.53	4.57	3.15	2.98
Emery	2.27	2.40	1.83	2.10	3.55
Grand	0.00	0.27	0.34	0.44	0.00
San Juan	0.00	1.33	0.00	0.00	0.08
REGIONAL TOTALS	10.91	18.52	6.74	5.69	6.61
Unknown counties	--	0.27	2.74	0.26	0.08
Mixed counties	--	2.00	8.56	0.09	0.40
STATE TOTALS	100	100	100	100	100



Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-79.

Year	Total Hunters	Total Harvest	Hunter Days Afield	Hares Per Hunter-day	Hares* Per Hunter
1975	5,961	12,072	19,770	0.61	2.03
1976	8,502	15,500	20,367	0.76	1.82
1977	9,752	21,232	26,535	0.80	2.18
1978	8,205	34,535	30,155	1.15	4.21
1979	6,787	14,641	18,115	0.81	2.16
<hr/>					
TOTALS (1975-79)	39,207	97,980	114,942	0.85	2.50
<hr/>					
AVERAGES (1975-78)	8,105	20,834	24,206	0.83	2.56

\*Based on county of residence.

APPENDIX

Table 1. Comparison of 1979 monthly average temperatures to the normal for each weather division and statewide.

Weather Division	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No. 1 WESTERN												
Normal	25.9	31.8	38.0	47.2	56.4	64.4	74.0	72.0	62.4	50.6	37.2	28.6
1979	19.7	30.1	40.0	47.7	57.2	66.0	74.2	71.2	66.3	53.1	32.7	30.4
Departure (degrees)	-6.2	-1.7	+2.0	+0.5	+0.8	+1.6	+0.2	-0.8	+3.9	+2.5	-4.5	+1.8
No. 2 DIXIE												
Normal	39.0	44.1	49.2	57.6	66.5	75.2	82.6	80.6	73.7	62.5	48.4	40.2
1979	33.1	38.3	49.3	56.5	66.0	75.6	81.8	78.0	76.5	64.4	44.6	42.4
Departure (degrees)	-5.9	-5.8	+0.1	-1.1	-0.5	+0.4	-0.8	-2.6	+2.8	+1.9	-3.8	+2.2
No. 3 NORTH CENTRAL												
Normal	26.7	31.9	38.5	48.3	57.5	65.0	74.6	72.7	63.5	51.7	38.5	29.7
1979	18.3	29.0	39.0	47.5	57.1	66.5	74.3	71.9	67.3	53.6	32.9	30.6
Departure (degrees)	-8.4	-2.9	+0.5	-0.8	-0.4	+1.5	-0.3	-0.8	+3.8	+1.9	-5.6	+0.9
No. 4 SOUTH CENTRAL												
Normal	26.9	31.3	36.9	45.6	54.4	62.3	70.0	68.1	60.5	50.0	37.6	29.3
1979	20.9	27.8	36.9	45.0	54.0	63.3	70.3	66.6	63.9	52.4	31.7	30.8
Departure (degrees)	-6.0	-3.5	0.0	-0.6	-0.4	+1.0	+0.3	-1.5	+3.4	+2.4	-5.9	+1.5
No. 5 NORTHERN MOUNTAINS												
Normal	20.9	24.3	30.2	40.8	49.9	56.8	65.1	63.2	55.0	45.0	32.3	24.2
1979	12.5	22.7	32.1	40.4	50.0	58.4	65.3	63.0	59.2	46.9	26.6	26.4
Departure (degrees)	-8.4	-1.6	+1.9	-0.4	+0.1	+1.6	+0.2	-0.2	+4.2	+1.9	-5.7	+2.2
No. 6 UINTAH BASIN												
Normal	16.8	23.9	35.0	46.7	56.4	63.8	71.5	69.2	60.4	48.7	34.1	22.1
1979	5.2	14.7	32.0	46.5	56.2	65.2	72.0	68.7	64.4	50.1	28.4	22.5
Departure (degrees)	-11.6	-9.2	-3.0	-0.2	-0.2	+1.4	+0.5	-0.5	+4.0	+1.4	-5.7	+0.4
No. 7 SOUTHEAST												
Normal	27.3	33.6	40.6	50.6	60.1	68.7	76.1	73.7	65.6	53.7	39.3	29.8
1979	20.2	26.3	40.2	51.2	59.3	69.2	76.9	73.1	69.5	56.7	34.0	29.3
Departure (degrees)	-7.1	-7.3	-0.4	+0.6	-0.8	+0.5	+0.8	-0.6	+3.9	+3.0	-5.3	-0.5
STATE AVERAGES												
Normal	26.2	31.6	38.3	48.1	57.3	65.2	73.4	71.4	63.0	51.7	38.2	29.1
1979	18.6	27.0	38.5	47.8	57.1	66.5	73.5	70.4	66.7	53.9	33.0	30.3
Departure (degrees)	-7.6	-4.6	+0.2	-0.3	-0.2	+1.3	+0.1	-1.0	+3.7	+2.2	-5.2	+1.2

Table 2. Comparison of 1979 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>No. 1 WESTERN</b>												
Normal	0.60	0.59	0.75	0.87	0.84	0.82	0.61	0.76	0.50	0.76	0.69	0.70
1979	1.11	0.68	1.25	0.32	0.86	0.26	0.41	0.79	0.04	0.99	0.42	0.14
Departure (inches)	+0.51	+0.09	+0.50	-0.55	+0.02	-0.56	-0.20	+0.03	-0.46	+0.23	-0.27	-0.56
<b>No. 2 DIXIE</b>												
Normal	1.15	1.21	1.30	0.91	0.53	0.38	0.89	0.95	0.67	0.88	0.91	1.17
1979	2.69	1.63	3.35	0.33	0.57	0.01	0.63	1.52	0.00	0.22	0.48	0.32
Departure (inches)	+1.54	+0.42	+2.05	-0.58	+0.04	-0.37	-0.26	+0.57	-0.67	-0.66	-0.43	-0.85
<b>No. 3 NORTH CENTRAL</b>												
Normal	1.47	1.32	1.62	1.96	1.67	1.50	0.59	0.94	0.85	1.36	1.49	1.56
1979	1.77	1.66	1.49	0.75	1.15	0.46	0.72	1.06	0.05	1.86	1.11	0.39
Departure (inches)	+0.30	+0.34	-0.13	-1.21	-0.52	-1.04	+0.13	+0.12	-0.80	+0.50	-0.38	-1.17
<b>No. 4 SOUTH CENTRAL</b>												
Normal	1.03	0.98	1.18	1.13	0.88	0.76	0.96	1.39	0.88	1.03	0.93	1.08
1979	2.00	1.29	2.47	0.47	1.40	0.01	0.25	1.20	0.06	0.77	1.00	0.60
Departure (inches)	+0.97	+0.31	+1.29	-0.66	+0.52	-0.75	-0.71	-0.19	-0.82	-0.26	+0.07	-0.48
<b>No. 5 NORTHERN MOUNTAINS</b>												
Normal	2.19	1.89	2.05	1.86	1.52	1.52	0.86	1.34	1.05	1.57	1.82	2.24
1979	1.86	1.82	1.43	0.96	1.03	0.22	0.73	1.16	0.07	2.28	1.48	0.33
Departure (inches)	-0.33	-0.07	-0.62	-0.90	-0.49	-1.30	-0.13	-0.18	-0.98	+0.71	-0.34	-1.91
<b>No. 6 UINTAH BASIN</b>												
Normal	0.51	0.43	0.50	0.68	0.68	0.90	0.62	0.87	0.72	0.94	0.51	0.69
1979	0.70	0.35	1.93	0.47	0.81	0.05	0.42	1.10	0.02	1.28	0.34	0.36
Departure (inches)	+0.19	-0.08	+1.43	-0.21	+0.13	-0.85	-0.20	+0.23	-0.70	+0.34	-0.17	-0.33
<b>No. 7 SOUTHEAST</b>												
Normal	0.61	0.56	0.60	0.68	0.59	0.56	0.74	1.23	0.77	1.07	0.61	0.73
1979	1.84	0.87	1.64	0.27	1.44	0.28	0.26	0.67	0.03	0.53	0.91	0.80
Departure (inches)	+1.23	+0.31	+1.04	-0.41	+0.85	-0.28	-0.48	-0.56	-0.74	-0.54	+0.30	+0.07
<b>STATE AVERAGES</b>												
Normal	1.08	1.00	1.14	1.16	0.96	0.92	0.75	1.07	0.78	1.09	0.99	1.17
1979	1.71	1.19	1.94	0.51	1.04	0.18	0.49	1.07	0.04	1.13	0.82	0.42
Departure (inches)	+0.63	+0.19	+0.80	-0.65	+0.08	-0.74	-0.26	0.00	-0.74	+0.04	-0.17	-0.75

Table 3. Number and percent of total upland game hunters afield who reported hunting each game species during 1973-79.

Species	No. of Hunters										Percent of Total			
	1973	1974	1975	1976	1977	1978	1979	1973	1974	1975	1976	1977	1978	1979
Pheasant	75,968	85,252	77,566	74,029	67,195	83,800	87,462	82.5	85.6	79.3	81.1	75.0	79.6	83.4
Chukars	13,888	16,412	16,156	14,171	12,691	16,291	15,210	15.1	16.5	16.5	15.5	14.2	15.5	14.5
Mourning Doves	27,435	34,021	37,378	31,293	26,905	35,985	34,903	29.8	34.2	38.2	34.3	30.0	34.2	33.3
Sage Grouse	10,017	12,214	13,996	15,283	14,078	16,231	16,927	10.9	12.3	14.3	16.8	15.7	15.4	16.1
Forest Grouse	17,588	21,290	20,102	21,186	19,188	25,318	21,993	19.1	22.0	20.6	23.2	21.4	24.0	21.0
Quail	5,654	6,097	6,397	5,215	4,446	5,924	5,632	16.1	6.1	6.5	5.7	5.0	5.6	5.4
Hungarian Partridge	3,566	4,103	3,409	3,517	3,557	4,743	3,435	3.9	4.1	3.5	38.6	4.0	4.5	3.3
Wild turkey**	135	138*	143*	130*	152*	189*	126*	0.1	0.1	0.1	0.1	0.2	0.2	0.1
Sharp-tailed Grouse**	--	--	--	--	--	--	156	--	--	--	--	--	--	0.1
Band-tailed Pigeon**	--	--	--	--	--	--	62	--	--	--	--	--	--	0.1
Cottontail	20,109	22,737	24,803	28,239	35,831	35,590	33,385	21.8	22.8	25.4	31.0	40.0	33.8	31.8
Snowshoe hare	--	--	5,961	8,502	9,752	8,205	6,787	--	--	6.1	9.3	10.9	7.8	6.5
<b>TOTAL HUNTERS</b>	<b>92,098</b>	<b>99,556</b>	<b>97,808</b>	<b>91,226</b>	<b>89,593</b>	<b>105,288</b>	<b>104,834</b>							

\*Includes both spring and fall hunts.

\*\*Although wild turkey, band-tailed pigeon and sharp-tailed grouse harvest was determined by separate questionnaires, it is assumed that these hunters are derived from the same group of hunters who reported hunting other upland game bird species.

Table 4. Percent of hunter trips resulting in failure to bag at least one bird, 1961-79.

Year	Pheasants			Doves			Chukars			Sage Grouse			Forest Grouse			Quail			Huns			
	Bag	Hunt.	%	0	Bag	Hunt.	%	0	Bag	Hunt.	%	0	Bag	Hunt.	%	0	Bag	Hunt.	%	0	Bag	Hunt.
1961	714	3,204	22	51	583	9	318	539	59	--	--	--	--	--	--	109	383	28	72	123	59	
1962	500	2,685	19	39	456	9	147	362	41	--	--	--	62	201	31	62	201	31	36	108	33	
1963	795	3,317	24	53	691	8	248	550	45	220	468	47	188	281	67	71	305	23	59	177	33	
1964	911	3,115	29	60	681	9	266	568	47	45	154	29	144	229	63	94	316	30	62	150	41	
1965	1,165	4,009	29	--	--	--	486	851	57	82	168	49	225	311	72	128	371	34	93	233	40	
1966	1,242	4,297	29	136	1,067	13	423	831	48	54	131	41	133	331	40	106	315	34	63	219	29	
1967	1,353	4,833	28	153	1,319	12	477	915	52	138	266	52	194	475	41	161	424	38	116	315	37	
1968	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	665	27	171	457	37	132	347	38	
1969	1,897	5,335	36	214	1,568	14	647	1,250	52	241	648	37	273	646	42	182	465	39	148	292	51	
1970	1,546	4,686	33	193	1,274	15	466	962	48	257	603	43	209	666	31	126	314	40	101	210	48	
1971	1,783	5,049	35	210	1,333	16	464	934	50	234	625	37	223	673	33	162	385	42	87	210	41	
1972	1,743	4,617	38	270	1,421	19	457	827	55	259	593	44	271	794	34	154	339	45	120	224	54	
1973	1,659	4,699	35	209	1,596	13	414	824	50	226	553	41	329	1,019	32	128	311	41	97	196	49	
1974	2,347	5,323	44	323	1,951	17	511	955	54	292	668	44	388	1,259	31	157	333	47	108	227	48	
1975	2,472	5,604	44	329	2,554	13	607	1,105	55	374	901	42	535	1,354	40	177	406	44	121	220	55	
1976	1,739	4,294	40	273	1,709	16	408	781	52	259	783	33	371	1,131	33	105	266	39	87	184	47	
1977	1,874	5,175	36	295	1,967	15	511	943	54	397	972	41	528	1,388	38	125	299	42	106	247	43	
1978	1,507	4,858	31	279	1,986	14	343	882	39	301	853	35	419	1,419	30	103	306	34	85	246	35	
1979	2,222	6,009	37	343	2,398	14	528	1,045	51	400	1,163	34	585	1,511	39	130	387	34	119	236	50	

AVERAGES  
(1961-78)

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Table 5. Regional and statewide summary of effort expended on upland game summer inventory, 1971-79.

Species	R E G I O N												STATE TOTALS			
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours		Miles	Hours
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours		
<b>Pheasant</b>																
1971	507	--	878	--	796	--	588	--	346	--	3,115	--				
1972	469	--	963	--	752	--	535	--	297	--	3,016	--				
1973	322	--	691	--	740	--	488	--	320	--	2,561	--				
1974	479	--	819	--	848	--	508	--	317	--	2,971	--				
1975	490	--	846	--	993	--	515	--	393	--	3,237	--				
1976	476	--	822	--	773	--	434	--	400	--	2,905	--				
1977	484	--	731	--	790	--	554	--	343	--	2,902	--				
1978	479	--	642	--	654	--	512	--	588	--	2,875	--				
1979	438	--	642	--	721	--	562	--	209	--	2,572	--				
<b>Quail</b>																
1971	192	24	289	40	344	28	587	49	140	13	1,652	154				
1972	46	9	342	30	575	39	870	63	120	8	1,953	149				
1973	80	10	264	35	32	8	538	38	25	17	939	108				
1974	24	4	43	27	853	66	227	28	214	21	1,361	146				
1975	27	8	107	23	841	64	594	43	230	12	1,799	150				
1976	81	10	206	29	503	62	597	44	75	10	1,462	155				
1977	22	4	351	39	445	42	341	26	60	16	1,219	127				
1978	--	--	239	18	563	61	541	46	88	17	1,431	142				
1979	68	11	95	7	478	41	346	32	15	6	1,002	97				
<b>Chukar</b>																
1971	182	82	929	130	1,103	100	636	50	496	105	3,346	468				
1972	712	91	1,423	131	950	37	1,012	69	984	58	5,081	386				
1973	1,063	119	1,494	167	72	10	705	48	702	68	4,036	363				
1974	125	31	1,591	107	564	43	440	30	1,115	67	3,835	278				
1975	188	30	808	85	892	41	908	88	786	55	3,582	299				
1976	875	75	964	110	465	32	727	67	687	66	3,718	350				
1977	405	50	1,198	120	601	37	600	71	429	44	3,233	322				
1978	359	28	459	42	135	14	315	23	536	52	1,804	159				
1979	546	54	793	76	415	22	293	23	267	14	2,314	199				
<b>Forest Grouse</b>																
1971	1,201	240	785	173	796	249	794	77	440	89	4,016	828				
1972	1,370	212	804	103	214	260	1,346	140	351	82	4,085	797				
1973	627	127	917	105	296	429	949	147	761	72	3,550	880				
1974	967	152	924	157	157	461	1,090	99	1,574	133	4,712	1,002				
1975	1,194	199	1,287	160	775	629	1,474	136	1,476	135	6,206	1,259				

Table 5. Continued.

Species	R E G I O N												STATE TOTALS	
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
<u>Forest Grouse (Continued)</u>														
1976	1,516	351	1,503	216	427	271	1,108	140	1,127	134	5,681	1,112		
1977	737	132	1,317	162	610	286	1,040	135	1,079	128	4,783	843		
1978	1,300	297	1,171	129	432	219	1,083	147	626	114	4,612	906		
1979	746	344	1,312	177	714	275	729	107	435	42	3,936	945		
<u>Sage Grouse</u>														
1971	1,743	296	909	145	1,423	98	1,465	144	1,089	128	6,629	812		
1972	1,628	323	1,187	143	751	144	2,125	170	1,280	141	6,971	921		
1973	3,146	353	927	147	1,171	116	1,952	238	496	41	7,692	895		
1974	2,026	321	1,551	115	1,881	193	2,964	248	887	124	9,299	1,001		
1975	1,254	249	963	123	714	226	1,868	236	1,098	131	5,897	965		
1976	1,965	281	426	121	379	183	1,881	227	1,222	161	5,873	973		
1977	1,966	305	1,370	133	465	157	1,995	215	928	116	6,724	926		
1978	1,408	267	541	124	490	152	1,616	226	879	97	4,934	866		
1979	1,051	150	700	132	563	143	1,719	203	279	20	4,312	648		
<u>Hungarian Partridge</u>														
1971	676	85	104	18	--	--	--	--	--	--	780	103		
1972	1,255	119	126	21	--	--	--	--	--	--	1,381	139		
1973	1,643	156	12	4	--	--	--	--	--	--	1,655	160		
1974	1,035	176	14	2	--	--	--	--	--	--	1,049	178		
1975	344	64	0	0	--	--	--	--	--	--	344	64		
1976	940	83	113	21	--	--	--	--	--	--	1,053	104		
1977	1,145	156	125	5	--	--	--	--	--	--	1,270	161		
1978	1,065	90	197	17	--	--	--	--	--	--	1,262	107		
1979	440	27	37	3	--	--	--	--	--	--	477	30		
<u>Wild Turkey</u>														
1971	--	--	--	--	726	73	--	--	215	28	941	101		
1972	--	--	--	--	73	62	--	--	290	54	363	116		
1973	--	--	--	--	143	11	--	--	--	--	143	11		
1974	--	--	--	--	0	0	--	--	799	64	799	64		
1975	--	--	--	--	215	18	--	--	792	100	1,007	118		
1976	--	--	--	--	125	16	--	--	362	45	487	61		
1977	--	--	--	--	193	29	--	--	421	58	614	87		
1978	--	--	--	--	--	--	--	--	204	55	204	55		
1979	--	--	--	--	--	--	--	--	190	14	190	14		



Table 5. Continued.

Species	R E G I O N												STATE TOTALS	
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
<u>Cottontail</u>														
1971	338	--	330	--	1,054	--	410	--	570	--	2,702	--	--	--
1972	510	--	279	--	939	--	360	--	555	--	2,643	--	--	--
1973	337	--	242	--	849	--	270	--	270	--	1,968	--	--	--
1974	270	--	180	--	1,040	--	370	--	542	--	2,402	--	--	--
1975	330	--	231	--	1,237	--	340	--	712	--	2,850	--	--	--
1976	510	--	260	--	1,372	--	300	--	626	--	3,068	--	--	--
1977	360	--	262	--	1,329	--	400	--	556	--	2,907	--	--	--
1978	382	--	264	--	1,038	--	300	--	761	--	2,745	--	--	--
1979	270	--	264	--	1,174	--	388	--	390	--	2,486	--	--	--

Table 6. Season framework for upland game during 1979.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Pheasant	Nov. 3-11	2 cocks	4 cocks	Statewide except Daggett, Duchesne and Uintah counties.
	Nov. 3-16	2 cocks	4 cocks	Daggett, Duchesne and Uintah counties.
	Nov. 3 - Dec. 2	2 cocks	4 cocks	All state and federal lands subject to restrictions and closures imposed by administering agencies, in Box Elder, Davis, Duchesne, Uintah and Weber counties.
Mourning dove	Sept. 1-30	10	20	Statewide.
Band-tailed pigeon	Sept. 1-30	5	10	Grand, San Juan, Beaver, Garfield, Iron, Kane, Millard, Piute, Sevier, Washington and Wayne counties.
Chukar	Sept. 15, 1979 - Jan. 31, 1980	5	10	Kane, San Juan and Tooele counties, and portions of Box Elder, Davis, Juab, Millard, Salt Lake, Utah and Weber counties.
	Sept. 15 - Nov. 30	5	10	Statewide.
Sage grouse	Sept. 15-21	3	6	Beaver, Garfield, Grand (part), Iron, Kane, Millard, Piute, Sevier, Uintah (part) and Wayne counties.
	Sept. 15-21	2	4	Carbon, Daggett, Duchesne, Emery, Grand (part), San Juan, Sanpete (part), Uintah (part), Utah (part), Wasatch (part) and Box Elder (part).
	Sept. 15-21	1	2	Box Elder (part), Cache, Davis, Morgan, Rich, Summit, and Weber counties.
	Sept. 15-16	1	2	Wasatch County (part).

Table 6. Continued.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
	The following counties were closed to sage grouse hunting during 1979:			Salt Lake, Sanpete (part), Washington, Utah (part), Juab and Tooele.
Forest grouse	Sept. 15 - Nov. 30	4 aggregate	8 aggregate	Statewide.
Quail	Nov. 3-11	5	10	Statewide except Daggett, Duchesne, Grand, Uintah and Washington counties.
	Nov. 3-16	5	10	Daggett, Duchesne and Uintah counties.
	Nov. 3 - Dec. 31	8	16	Washington County.
	Grand County was closed to quail hunting in 1979.			
Hungarian partridge	Sept. 15, 1979 - Jan. 31, 1980	5	10	Kane, San Juan and Tooele counties. Parts of Box Elder, Davis, Juab, Millard, Salt Lake, Utah and Weber counties.
	Sept. 15 - Nov. 30	5	10	Statewide.
Wild turkeys	April 28 - Spring hunt May 20	Season limit	1 male turkey	Garfield, Grand, Iron, Kane, San Juan, Washington and Wayne counties.
Fall hunt	Sept. 15-30	Season limit	1 turkey of either sex	Grand, Iron, Kane, San Juan, and Washington counties.
Snowshoe hare	Sept. 15, 1979 - Jan. 31, 1980	5	10	Statewide.
Cottontail rabbit	Sept. 15, 1979 - Jan. 31, 1980	10	20	Statewide except Box Elder, Cache, Daggett, Davis, Duchesne, Morgan, Rich, Summit, Uintah and Weber counties.

Table 6. Continued.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Cottontail rabbit (continued)	Sept. 15, 1979 - Jan. 31, 1980	5	10	Box Elder, Cache, Daggett, Davis, Duchesne, Morgan, Rich, Summit, Uintah and Weber counties.