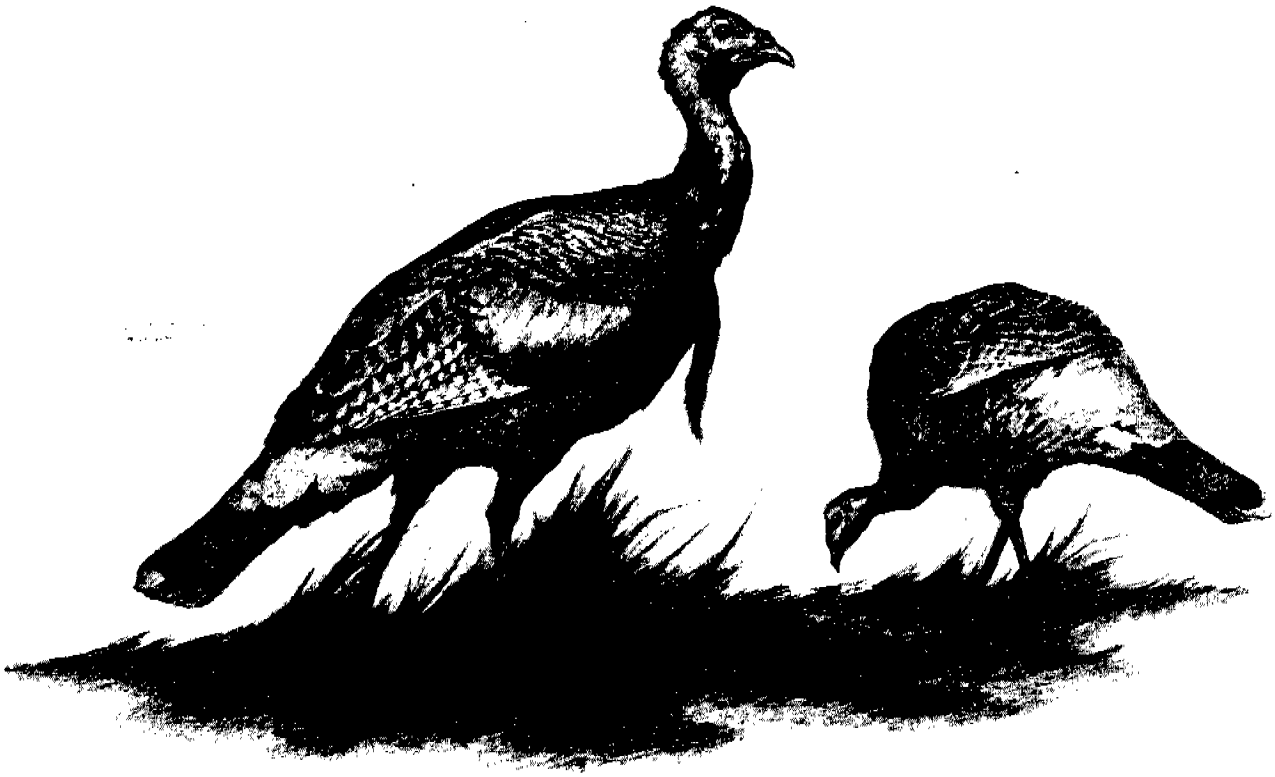
UTAH UPLAND GAME
Annual Report
1983



Utah Department of Natural Resources
Division of Wildlife Resources
84-4

U T A H

U P L A N D G A M E

Annual Report

1983

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Annual Performance Report for Federal Aid Project W-65-R-32 Job A-4

Utah Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

An Equal Opportunity Employer

William H. Geer
Acting Director

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JOB PERFORMANCE REPORT

RESEARCH PROJECT SEGMENT
(Inventory)

State: U T A H

Project Title: Statewide Wildlife Management Inventory

Project No.: W-65-R-32

Job Title: Statewide Upland Game Inventory and Management

Job No.: A-4

Period Covered: December 15, 1982 to April 30, 1984

Abstract: This report includes upland game inventory and harvest data relating to the 1983-84 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indices derived by each method are included. Data obtained in 1983 are compared to 1982 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, 1982 through February 10, 1983, as snow cover conditions allowed. Indices 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 18 on permanently established routes. Indices 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 nationwide 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 all but one 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 26. Indices derived for each species include mean brood size, young per 100 adults and birds observed per 100 hours of 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 1982 for comparable grounds were determined on a county basis.

The Gambel's quail call count route in Washington County was discontinued in 1980. Long period waterhole counts were completed in July and August.

Cottontail rabbit roadside counts were conducted over pre-established routes between July 15 and August 5. Indices 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 and wild turkey. A 20 percent sample of eligible licensees from the previous year's (1982) resident small game license file and 1983 combination license file was selected for the game bird and rabbit and hare questionnaire. Separate questionnaires were mailed to all ptarmigan and wild turkey permittees. Indices derived include total hunters, hunter-days, total harvest and hunter success per day plus success for each season.

The upland game questionnaires were analyzed by the Division of Wildlife Resources information systems services subsection. Due to accumulated rounding errors associated with transferring data from the printout, some totals (columns and percentages) may not total exactly.

Beginning in 1978, 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 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. Indices 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.

During 1983 a computerized pull apart mailer was again used to obtain harvest data. Data input and storage was entered on tape instead of cards. This method was initiated in 1981, and was found to be very satisfactory.

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 thirteenth edition of this annual Upland Game Report. It is an annual performance report of 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 species of upland game hunted in Utah. Data are 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 1983, a total of 90,592 Utah sportsmen spent 575,964 days afield in pursuit of various upland game species. The harvest of upland game totaled 772,596 animals. 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 regulations for 1983 upland game hunting seasons are shown in Appendix Table 6.

A summary of harvest statistics by species follow.

Species	Hunters Afield	Total Harvest	Hunter Days	Bag per Hunter-day	Bag/Hunter For Season
Pheasant	77,847	220,074	265,731	0.83	2.83
Mourning dove	28,258	272,964	100,554	2.71	9.66
Chukar partridge	10,418	29,649	31,904	0.93	2.85
Sage grouse	9,201	14,949	18,482	0.81	1.63
Forest grouse	13,414	30,088	34,530	0.87	2.24
Quail	4,012	11,248	10,232	1.10	2.81
Hungarian partridge	2,889	6,512	6,998	0.93	2.25
Wild turkey					
spring	69	14	161	0.09	0.20
fall	49	15	112	0.13	0.31
Band-tailed pigeon	--	--	--	--	--
Sharp-tailed grouse	0	0	0	--	--
Ptarmigan	13	14	21	0.67	1.08
Cottontail	22,467	180,767	96,151	1.88	8.05
Snowshoe	3,544	6,302	11,088	0.57	1.78
TOTAL	--	772,596	575,964	--	--

Total hunters afield for all species of upland game = 90,592

Harvest statistics were obtained from a random sample of licensed hunters by their response to a hunter questionnaire.

A total of 24,867 upland game bird questionnaires, a 19.6 percent sample, were mailed. The combined upland game bird and rabbit-hare questionnaire was again used. A total of 1,437 (5.8%) questionnaires were undeliverable. There were 827 returns from persons who did not purchase a license during 1983.

Of the 23,430 questionnaires delivered, 9,497 (40.5%) usable upland game questionnaires were returned. Of those, 2,723 purchased a license but did not hunt upland game. By dividing the total of 127,008 eligible licensees by the usable returns (9,497), a projection factor of 13.373486 is derived.

The 1983 hunter questionnaire sample size was increased to improve the precision of harvest estimates in counties where hunting pressure and harvest are limited. Extremely small samples from these counties tend to over-estimate the harvest and thus bias the results. Although harvest, number of hunters and days-afield may be over-estimated where small samples are obtained, harvest per hunter-day should be relatively precise.

The upland game questionnaire is designed to monitor statewide harvest trend from year to year. The more extensively a species is hunted, the more accurately the questionnaire measures the trend data. In an effort to improve the accuracy of indices for species which receive very little hunting pressure and harvest, and which have low densities and limited distribution, a unique questionnaire for that specie is mailed to the permit holder. This method has been used for wild turkey, band-tailed pigeon, sharp-tailed grouse and white-tailed ptarmigan.

The annual harvest report is sometimes criticized for being inaccurate and without value. However, report users must recognize that the accuracy of the questionnaire is based on some basic assumptions. These assumptions are: (1) the returned useable sample is completely random (2) respondents recorded data correctly, i.e., they clearly understood the questionnaire, (3) respondents recorded data accurately, did not guess and were truthful, and (4) respondents correctly identified species hunted. If these assumptions are not met, projections of harvest by county may be over-estimated due to nonrespondent or memory biases. Extreme caution should be used in the interpretation of estimated harvest and hunters for specific species in specific counties. Rather, the long term trend in these indices should be used in managing the populations.

Presently, the upland game annual report contains the best data available and therefore constitutes the basic facts of upland game management. Although this report has its limitations, the trend data is valuable in making professional judgements regarding upland game populations and harvest.

The annual report is used in wildlife planning. It can be used to establish relative importance among species and for developing new resources through transplants or habitat developments. It points out areas of needed research by indicating problems and possible causes. It documents population trends and it combines all this inventory information into one easily accessible publication. Thus it is used extensively by federal land management agencies in environmental impact statements and management plans. It will become increasingly more important in developing management plans, and assessing impacts on wildlife habitat.

Average temperatures in 1983 were above normal from January through March. Temperatures during April, May, June and July dropped 4.3, 2.9, 1.3 and 1.6 degrees, respectively, below normal. August through November temperatures again increased to above normal.

The average precipitation in 1983 was 0.72 inches above normal for all months except January and July. January precipitation was 0.10 inches below normal.

April, May, June and July were slightly more wet than normal, while March had 1.39 inches above normal precipitation. Temperatures were below normal.

The effects this variable weather pattern had on brood success is only speculative, but successful nesting may have been delayed.

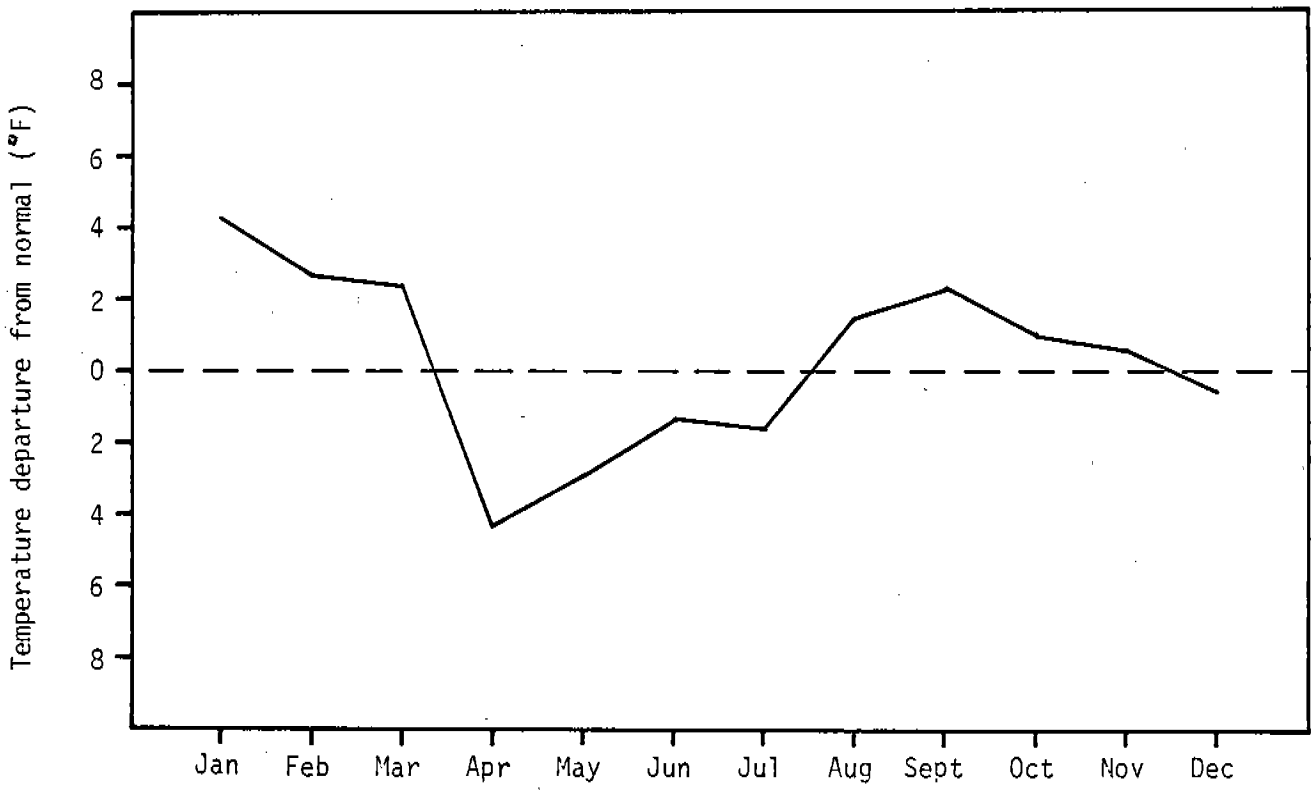


Figure 1. Monthly average temperature departure from normal, 1983.

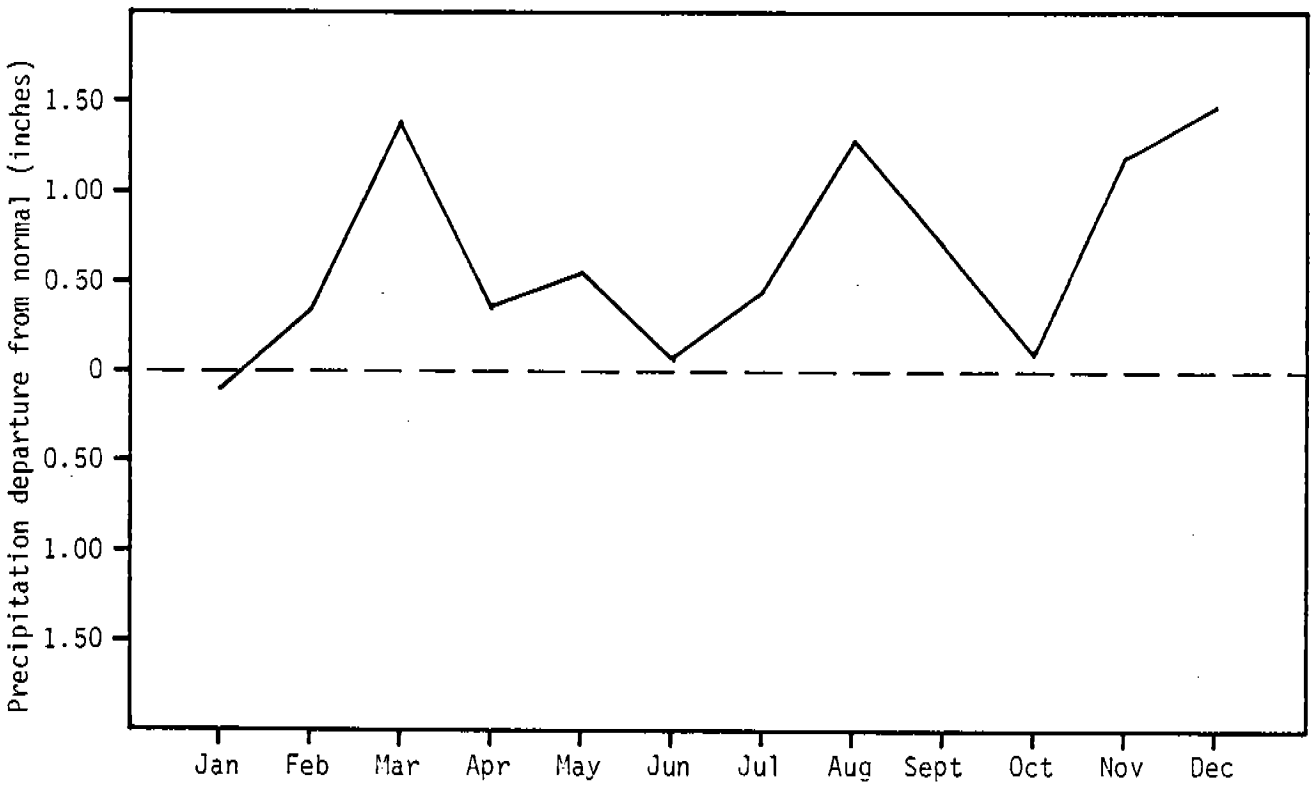


Figure 2. Monthly average precipitation departure from normal, 1983.

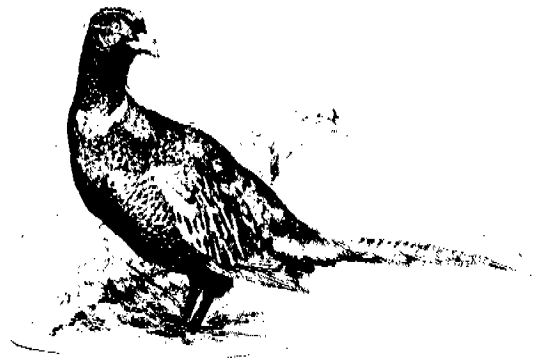
RING-NECKED PHEASANT

SUMMARY

The statewide breeding population indices, based on 1982 harvest data, were less than 1982 and below average. However, winter sex ratio indices indicated average breeding populations. Winter carry-over from 1982 was good in northern and central Utah.

Weather conditions during the nesting season were not as good as in 1982. Statewide monthly average temperatures were lower. Plant phenology was delayed and accumulated precipitation was 124 percent of normal. Production was generally below 1982 levels and below average statewide.

Harvest statistics compiled from the questionnaire indicated good success compared to 1982. Hunter pressure decreased 5 percent but total harvest increased 6 percent. Birds per hunter-day increased 12 percent from 1982. Field bag check data also showed that hunter success improved during 1983. The ratio of birds per hunter from field bag checks was comparable to the index from hunter questionnaires.



Winter Sex Ratio Counts

Results of the survey for the winter of 1982-83 and long-term trends are shown in Tables 1 and 2 of this section. Statewide comparisons to the winter of 1981-82 and the 10-year average are as follows:

	Winter of 1982-83	Percent change from 1981-82	Percent change from Average
Total pheasants counted (roadside)	7,107	-39	-15
Hens per cock	5.5	+20	+38
Pheasants observed per 100 hours	1,900	-33	+41
Total hours effort (roadside)	374	-6	-44

Winter sex ratio counts indicated a decreased breeding population in 1983, but remained above average. The hen-cock ratio increased 20 percent from 1982 and was well above average. Counting conditions were generally good, but limited snow cover during January, mileage restrictions and decreased effort in the Northern and Southeastern regions, reduced pheasant observations.

Roadside Counts

A summary of summer roadside pheasant counts for 1983 is shown in Table 3. Long-term trends of pheasants per mile, young per mile, young per hen, percent of hens with young and mean brood size are found in Tables 4-8. Summer 1983 survey results compared to 1982 and the previous 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total pheasants observed	2,378	-22	-10
Total miles driven	2,238	-9	-19
Pheasants per mile	1.06	-11	+10
Average brood size	5.03	-2	-5
Young per hen	3.85	-1	+2
Percent of hens with young	74	-1	+3

April, May, June and July temperatures averaged 2.5 degrees below normal with an average of 0.37 inches above normal precipitation.

The late spring, with cold and wet conditions in April, May, June and July, apparently delayed or reduced nesting success. Counting conditions were good over most of the state.

Pheasant production appears to have decreased from 1982 in all regions except the Northeastern. Production declines were noticeable in the Northern Region. The density index (pheasants per mile) decreased from 1.19 in 1982 to 1.06 in 1983 which is below the 21 year average (1.25).

Below average production, and a lower carry-over from 1982, coupled with spotty inclement brood weather during the early summer months of 1983, resulted in lower fall pheasant populations.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire for 1983 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. A comparison of 1983 harvest statistics to 1982 and the 35-year average follow:

	1983	Percent change from 1982	Percent change from Average
Pheasant hunters	77,847	-9	-7
Pheasants harvested	220,074	+6	-6
Hunter-days afield	265,731	-5	+20
Pheasants per hunter-day	0.83	+12	-22
Pheasants per hunter	2.83	+16	+1

Total hunters decreased from 1982 and was below the long-term average (1948-82). Hunter-days afield decreased but the total harvest increased 5 percent from 1982. Hunter success (pheasants per hunter-day) increased from 1982 but remained well below average. Pheasants per hunter also increased 16 percent to slightly above the 35-year average.

Long-term trends (1968-83) of total hunters, hunter-days, harvest and hunter success are shown in Figure 1. Generally, the trend continues toward more hunter-days with gradual declines in total pheasants harvested and hunter success.

Field Bag Checks

A summary of pheasant field bag check data for 1983 is shown in Table 14. The hunter success trend determined via bag checks since 1978 is found in Table 15. A comparison of 1983 data, on a statewide basis, to 1982 and the 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	4,532	+8	-13
Total hours hunted	15,609	+7	-9
Pheasants per hunter (complete hunts)	0.85	+20	+12
Pheasants bagged per 100 hours	20	+18	+18
Average hours per hunter-day (complete hunts)	4.3	0	0
Hours hunted per pheasant bagged	5.1	-9	-14

Checking Station Report

Weather was generally good over the state Saturday and Sunday (November 5-6, 1983). Scattered showers occurred over northern Utah between 9:00 and 10:00 a.m., but temperatures were in the high 60's and low 70's on Saturday.

Generally, hunting pressure was down substantially over the state. This is attributed to less land being accessible to hunters, particularly in Weber, Davis, Salt Lake, Utah and Millard counties.

Hunter success was up from 1982 in Box Elder, Cache, Weber and Uintah counties as predicted. Hunter success was about the same as last year in Juab and Sanpete counties. Southern Sanpete County was better around Gunnison than around Ephraim. Hunter success was better than predicted in Duchesne, Utah and Millard counties. Hunter success was worse than predicted in Carbon, Emery and Sevier counties. Hunting success was down in Salt Lake and Davis counties.

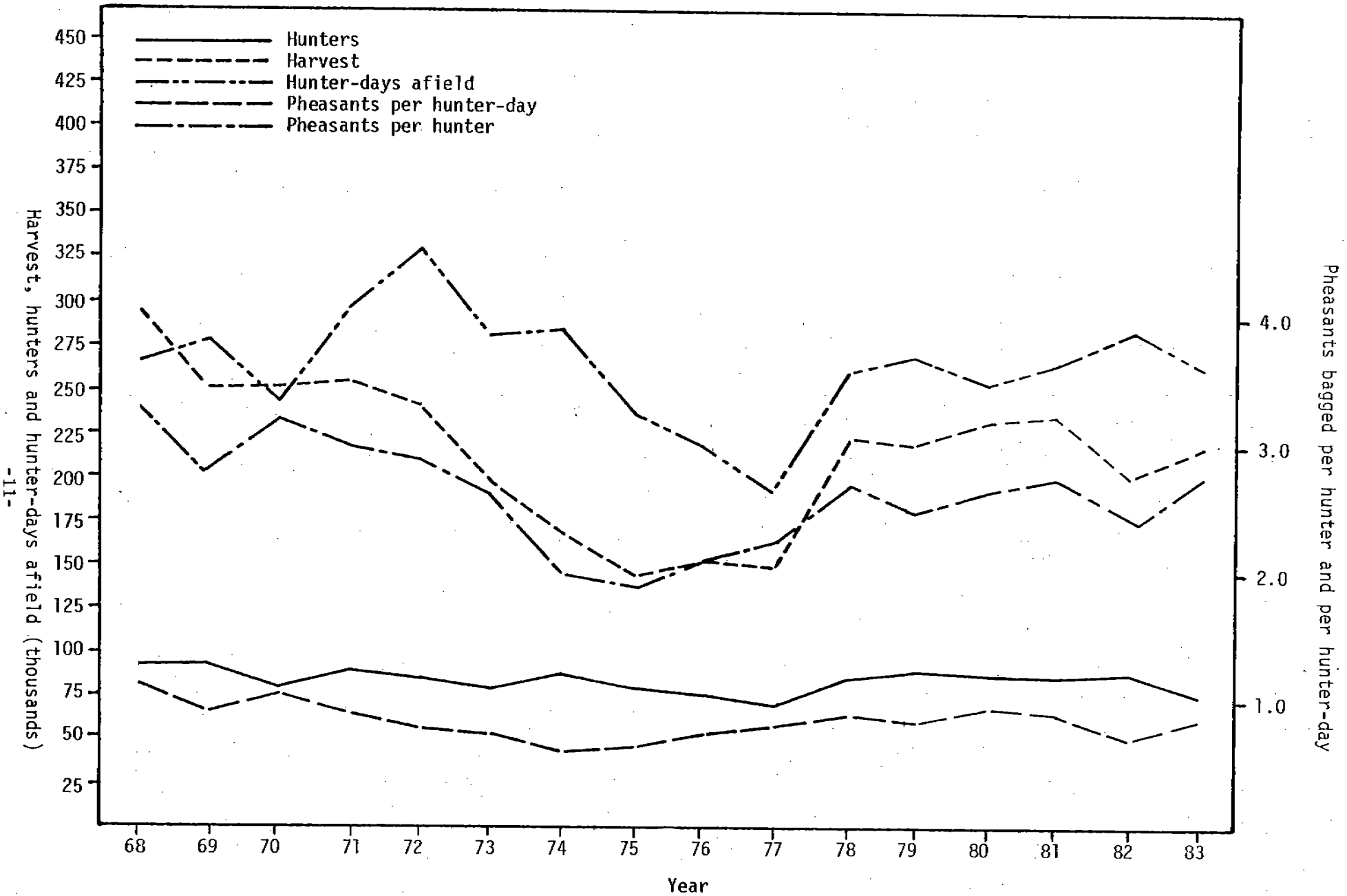


Figure 1. Statewide trend of pheasant harvest statistics

Table 1. Summary of pheasant winter sex ratio counts, 1982-83.

Region and County	Roadside Observations					Flushing Observations					Effort Expended				Pheas. Obs./ 100 Hours of Road. Obs.
												Hours of Effort			
	Cocks	Hens	Total	Hens/ Cock	Cocks/ 100 Hens	Cocks	Hens	Total	Hens/ Cock	Cocks/ 100 Hens	Vehicle Miles	Vehicle	Walk	Total	
Northern Region															
Box Elder	18	66	84	3.7	27	23	58	81	2.5	40	14	1	1	2	8,400
Cache	54	195	249	3.6	28	--	--	--	--	--	165	16	0	16	1,556
Davis	3	51	54	17.0	6	--	--	--	--	--	88	5	0	5	1,080
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	4	24	28	6.0	17	--	--	--	--	--	68	4	0	4	700
REGIONAL TOTALS	79	336	415	4.3	24	23	58	81	2.5	40	335	26	1	27	1,596
Central Region															
Juab	23	73	96	3.2	32	3	5	8	1.6	60	135	9	1	10	1,066
Salt Lake	95	119	214	1.3	80	--	--	--	--	--	223	22	0	22	973
Sanpete	524	4,020	4,544	7.7	13	--	--	--	--	--	1,488	105	0	105	4,328
Tooele	23	73	96	3.2	32	12	33	45	2.8	36	290	36	6	42	267
Utah	93	454	547	3.2	20	--	--	--	--	--	385	34	0	34	1,608
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	758	4,739	5,497	6.3	16	15	38	53	2.5	39	2,521	206	7	213	2,668
Southern Region															
Beaver	6	32	38	5.3	19	--	--	--	--	--	65	7	0	7	543
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	23	85	108	3.7	27	--	--	--	--	--	267	13	0	13	831
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	35	236	271	6.7	15	--	--	--	--	--	126	14	0	14	1,936
Washington	43	190	233	4.4	23	2	2	4	1.0	100	305	24	2	26	971
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	107	543	650	5.1	20	2	2	4	1.0	100	763	58	2	60	1,121
Northeastern Region															
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	98	151	249	1.5	65	--	--	--	--	--	794	45	3	48	553
Uintah	49	247	296	5.0	20	22	126	148	5.7	18	393	23	3	26	1,287
REGIONAL TOTALS	147	398	545	2.7	37	22	126	148	5.7	18	1,187	68	6	74	801
Southeastern Region															
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	1,091	6,016	7,107	5.5	18	62	224	286	3.6	28	4,806	358	16	374	1,900

Table 2. Trend of pheasant winter sex ratio counts, 1977-83.

Region and County	1977-78 Hens/ Cock	1977-78 Birds/ 100 Hr	1978-79 Hens/ Cock	1978-79 Birds/ 100 Hr	1979-80 Hens/ Cock	1979-80 Birds/ 100 Hr	1980-81 Hens/ Cock	1980-81 Birds/ 100 Hr	1981-82 Hens/ Cock	1981-82 Birds/ 100 Hr	1982-83 Hens/ Cock	1982-83 Birds/ 100 Hr	Averages 1973-82	
Northern Region														
Box Elder	2.1	700	5.2	2,138	6.4	1,400	3.4	1,245	6.1	1,790	3.7	8,400		
Cache	3.8	430	2.4	790	3.5	1,064	2.3	1,478	2.9	1,624	3.6	1,556		
Davis	7.3	631	5.6	1,712	2.5	509	3.9	830	6.9	2,787	17.0	1,080		
Morgan	--	--	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--	--	--		
Weber	7.8	469	8.6	9,938	14.0	1,154	6.2	1,162	10.1	6,664	6.0	700		
REGIONAL TOTALS	4.8	515	4.5	1,627	5.5	1,179	3.1	1,234	5.9	2,999	4.3	1,596	5.0	1,403
Central Region														
Juab	1.5	83	4.6	2,755	6.2	3,586	4.8	373	5.4	1,513	3.2	1,066		
Salt Lake	1.3	202	3.7	357	2.0	419	1.9	577	3.8	1,205	1.3	973		
Sanpete	6.5	762	3.0	2,305	3.1	1,451	3.8	86	8.2	5,445	7.7	4,328		
Tooele	3.0	868	3.5	1,294	3.2	1,129	5.6	348	--	--	3.2	267		
Utah	4.9	643	5.0	1,763	5.7	1,170	7.3	1,318	3.3	2,845	3.2	1,608		
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	4.6	596	3.9	1,480	4.2	1,405	4.7	891	5.6	3,641	6.3	2,668	4.9	1,497
Southern Region														
Beaver	3.0	514	--	--	0.4	150	1.2	433	2.6	2,666	5.3	543		
Garfield	--	--	--	--	--	--	--	--	--	--	--	--		
Iron	2.2	145	0.6	550	2.3	206	3.8	--	2.9	837	--	--		
Kane	--	--	--	--	--	--	--	--	--	--	--	--		
Millard	2.6	1,144	2.9	5,292	2.7	1,877	3.2	1,891	2.4	5,523	3.7	831		
Piute	--	--	--	--	--	--	--	--	--	--	--	--		
Sevier	4.0	354	4.0	1,368	5.4	1,848	5.6	2,100	--	--	6.7	1,936		
Washington	5.4	643	2.5	2,041	1.1	690	6.8	1,510	3.1	1,040	4.4	971		
Wayne	0.5	60	0.5	75	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	3.3	474	2.8	2,278	2.9	1,081	3.9	1,539	2.6	2,033	5.1	1,121	3.9	1,150
Northeastern Region														
Daggett	--	--	--	--	--	--	--	--	--	--	--	--		
Duchesne	2.6	1,477	2.1	3,060	2.2	1,072	1.6	787	1.9	600	1.5	553		
Uintah	3.4	2,581	3.0	3,117	3.3	1,825	4.0	2,360	2.8	1,065	5.0	1,287		
REGIONAL TOTALS	3.0	1,919	2.5	3,087	2.8	1,381	2.6	1,224	2.4	810	2.7	801	2.6	1,396
Southeastern Region														
Carbon	2.3	548	2.3	1,100	0.1	60	1.0	222	1.8	6,200	--	--		
Emery	2.2	642	1.5	906	1.5	587	1.9	4,283	2.5	2,670	--	--		
Grand	--	--	--	--	--	--	--	--	--	--	--	--		
San Juan	--	--	--	345	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	2.2	524	1.6	911	1.3	367	1.8	2,543	2.1	3,453	1.8	1,240	2.1	750
STATE TOTALS	3.7	711	3.3	1,748	3.6	1,191	3.4	1,151	4.6	2,838	5.5	1,900	4.0	1,343

Table 3. Pheasant summer inventory, 1983.

Region and County	No. Routes	Total Miles	Distinct Broods No.	Distinct Broods Yng	Mixed Observ. Hens	Mixed Observ. Yng	Adults w/o Young Cocks	Adults w/o Young Hens	Total Hens	Total Yng	Total Cocks	Total Pheas	Pheas/ Mile	Yng/ Mile	Mean Brood	Yng/ Ad Hens	% Hens w/Yng
Northern Region																	
Box Elder	1	60	7	28	7	10	21	13	27	38	21	86	1.43	0.63	4.00	1.41	52
Cache	2	132	0	0	0	0	2	3	3	0	2	5	0.04	0.00	0.00	0.00	0
Davis	1	68	5	27	7	26	4	4	16	53	4	73	1.07	0.78	5.40	3.31	31
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	260	12	55	14	36	27	20	46	91	27	164	0.63	0.35	4.58	1.98	57
Central Region																	
Juab	1	36	2	13	0	0	1	0	2	13	1	16	0.44	0.36	6.50	6.50	100
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	2	216	38	243	11	67	13	4	53	310	13	376	1.74	1.44	6.39	5.85	72
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	3	190	56	225	5	31	14	41	102	256	14	372	1.95	1.34	4.02	2.51	55
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	6	442	96	481	16	98	28	45	157	579	28	764	1.72	1.31	5.01	3.69	61
Southern Region																	
Beaver	1	90	2	13	0	2	0	2	4	15	0	21	0.23	0.17	6.50	3.75	50
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	1	71	3	16	0	0	3	0	3	16	3	22	0.31	0.23	5.33	5.33	100
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2	222	20	128	13	95	25	4	35	223	25	283	1.28	1.00	6.40	6.37	57
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	204	37	190	5	2	12	13	55	192	12	259	1.27	0.94	5.14	3.49	67
Washington	2	114	20	78	9	31	11	6	35	78	11	124	1.09	0.68	3.90	2.23	57
Wayne*	1	79	0	0	3	10	8	0	3	10	8	21	0.26	0.12	--	3.33	--
REGIONAL TOTALS	9	780	82	425	30	140	59	25	135	534	59	730	0.94	0.68	5.18	3.96	61
Northeastern Region																	
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	300	19	86	8	80	18	6	33	166	18	217	0.72	0.55	4.50	5.03	58
Uintah	2	126	27	138	14	146	35	14	55	284	35	374	2.97	2.25	5.11	5.16	49
REGIONAL TOTALS	5	426	46	224	22	226	53	20	88	450	53	591	1.39	1.06	4.87	5.11	52
Southeastern Region																	
Carbon	1	90	3	9	2	16	5	3	8	25	5	38	0.42	0.27	3.00	3.13	38
Emery	3	230	5	33	4	8	19	5	14	41	19	74	0.32	0.18	6.60	2.93	36
Grand	1	10	2	11	0	0	4	0	2	11	4	17	1.70	1.10	5.50	5.50	100
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5	330	10	53	6	24	28	8	24	77	28	129	0.39	0.23	5.30	3.21	42
STATE TOTALS	29	2,238	246	1,238	88	524	199	118	450	1,731	195	2,378	1.06	0.77	5.03	3.85	74

*Data collected by Southeastern Region.

Table 4. Trend of pheasants observed per mile during summer roadside counts, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1962-82
Northern Region												
Box Elder	0.38	0.87	0.21	0.46	0.60	0.78	0.41	1.03	1.40	0.74	1.43	
Cache	0.36	0.48	0.68	0.44	0.22	0.71	0.34	0.08	0.92	0.17	0.04	
Davis	--	0.32	1.55	0.54	1.67	1.59	1.47	1.77	1.38	0.83	1.07	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	2.36	1.77	1.23	2.24	1.30	1.01	1.55	2.03	3.17	1.79	--	
REGIONAL TOTALS	1.04	0.80	0.71	0.86	0.85	0.96	0.76	1.23	1.56	0.78	0.63	1.30
Central Region												
Juab	0.23	0.46	0.82	1.20	0.54	0.09	0.13	0.94	0.89	0.61	0.44	
Salt Lake	0.44	0.48	0.54	0.55	0.29	0.09	0.64	0.60	1.09	1.24	--	
Sanpete	1.78	1.60	0.08	1.37	1.23	1.28	1.85	2.18	5.25	1.78	1.74	
Tooele	0.07	0.87	0.17	1.02	0.77	1.11	3.83	1.08	0.48	0.45	--	
Utah	1.36	1.29	0.64	1.45	0.98	1.96	4.14	1.90	2.19	3.89	1.95	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.98	1.11	0.62	1.16	0.93	1.40	2.83	1.68	2.01	2.15	1.72	1.92
Southern Region												
Beaver	0.60	0.60	0.07	0.69	0.49	0.71	1.01	0.47	0.63	0.66	0.23	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.56	0.53	0.19	0.39	0.30	0.49	0.97	0.67	1.24	0.07	0.31	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.57	0.79	0.41	0.47	0.49	1.38	1.11	0.88	2.85	1.15	1.28	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	1.03	0.89	0.40	0.72	0.88	1.72	1.10	1.13	0.87	1.37	1.27	
Washington	1.12	1.34	0.47	0.47	0.57	1.40	1.36	0.70	1.41	0.62	1.09	
Wayne	--	0.48	0.09	1.33	0.03	2.10	0.21	--	1.04	0.40	0.26	
REGIONAL TOTALS	0.79	0.78	0.28	0.58	0.57	1.29	1.08	0.86	1.65	1.05	0.94	1.13
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.31	0.33	0.33	0.34	0.39	0.68	0.38	0.56	0.84	0.73	0.72	
Uintah	0.61	1.33	0.54	1.45	1.15	1.75	1.90	1.60	1.05	1.27	2.97	
REGIONAL TOTALS	0.39	0.61	0.39	0.67	0.65	1.02	0.90	0.93	0.91	0.90	1.39	0.70
Southeastern Region												
Carbon	0.01	0.00	0.02	0.39	0.23	0.22	0.40	0.37	1.22	0.28	0.42	
Emery	0.64	1.06	0.88	0.47	0.61	0.53	0.39	0.49	0.74	0.74	0.32	
Grand	--	--	--	--	--	--	--	--	--	--	1.70	
San Juan	--	5.00	3.57	0.93	0.93	0.00	0.35	--	--	--	--	
REGIONAL TOTALS	0.34	0.64	0.60	0.44	0.44	0.35	0.38	0.45	0.86	0.61	0.39	0.69
STATE TOTALS	0.74	0.83	0.49	0.78	0.71	1.02	1.37	1.10	1.46	1.19	1.06	1.25

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1962-82
Northern Region												
Box Elder	0.28	0.62	0.13	0.31	0.41	0.55	0.03	0.69	1.07	0.44	0.63	
Cache	0.32	0.35	0.43	0.30	0.17	0.47	0.20	0.07	0.70	0.11	0.00	
Davis	--	0.22	0.84	0.54	1.17	1.26	0.99	1.27	0.81	0.43	0.78	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	1.72	1.31	0.77	1.47	0.84	0.62	1.22	1.53	2.38	1.38	--	
REGIONAL TOTALS	0.77	0.59	0.43	0.58	0.58	0.68	0.55	0.88	1.15	0.52	0.35	0.95
Central Region												
Juab	0.17	0.38	0.71	1.06	0.46	0.76	0.02	0.85	0.63	0.42	0.36	
Salt Lake	0.32	0.32	0.35	0.37	0.21	0.07	0.44	0.32	0.57	0.84	--	
Sanpete	1.43	1.26	0.56	1.12	0.98	1.06	1.53	1.72	4.40	1.44	1.44	
Tooele	0.00	0.62	0.07	0.69	0.45	0.72	2.95	0.76	0.28	0.22	--	
Utah	1.02	0.95	0.33	0.99	0.60	1.43	3.00	1.30	1.68	2.52	1.34	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.73	0.83	0.38	0.84	0.63	1.06	2.11	1.21	1.51	1.63	1.31	1.46
Southern Region												
Beaver	0.39	0.47	0.03	0.54	0.33	0.58	0.87	0.37	0.54	0.48	0.17	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.51	0.46	0.08	0.31	0.17	0.38	0.74	0.53	1.07	0.04	0.23	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.48	0.57	0.27	0.34	0.34	1.12	0.89	0.69	2.27	0.83	1.00	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	0.85	0.70	0.28	0.56	0.70	1.45	0.93	0.90	0.67	1.07	0.94	
Washington	0.72	1.03	0.26	0.35	0.37	1.08	1.02	0.49	0.89	0.43	0.68	
Wayne	--	0.14	0.02	0.87	0.00	1.76	0.15	--	0.87	0.21	0.12	
REGIONAL TOTALS	0.61	0.59	0.17	0.44	0.41	1.05	0.87	0.67	1.30	0.76	0.68	0.88
Northeastern Regnio												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.18	0.21	0.23	0.21	0.25	0.53	0.27	0.37	0.52	0.54	0.55	
Uintah	0.47	1.08	0.27	1.07	0.79	1.41	1.50	1.20	0.83	0.95	2.25	
REGIONAL TOTALS	0.26	0.45	0.24	0.47	0.44	0.81	0.69	0.66	0.63	0.66	1.06	0.50
Southeastern Regnio												
Carbon	--	0.00	0.00	0.22	0.03	0.15	0.30	0.22	0.93	0.18	0.27	
Emery	0.47	0.81	0.57	0.20	0.33	0.35	0.28	0.35	0.52	0.45	0.18	
Grand	--	--	--	--	--	--	--	--	--	--	1.10	
San Juan	--	4.07	2.43	0.47	0.40	--	0.00	--	--	--	--	
REGIONAL TOTALS	0.25	0.50	0.39	0.22	0.18	0.24	0.26	0.31	0.65	0.68	0.23	0.51
STATE TOTALS	0.55	0.62	0.30	0.55	0.47	0.78	1.04	0.80	1.10	0.87	0.77	0.94

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1962-82
Northern Region												
Box Elder	3.23	3.19	2.44	4.18	3.68	3.64	3.92	2.60	4.09	3.00	1.41	
Cache	10.00	3.00	2.69	4.50	4.00	2.80	2.40	4.00	4.18	3.43	0.00	
Davis	--	3.00	1.53	3.75	3.18	4.71	2.30	2.78	1.81	1.25	3.31	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	3.72	3.66	2.07	2.35	2.12	1.81	4.13	3.97	3.38	4.70	--	
REGIONAL TOTALS	3.82	3.35	2.10	2.91	2.88	3.10	3.14	3.07	3.39	3.00	1.98	3.60
Central Region												
Juab	4.00	5.00	6.00	7.40	8.00	5.60	1.00	9.67	4.29	3.75	6.50	
Salt Lake	3.24	2.87	2.39	3.50	5.33	6.00	3.27	1.70	2.04	2.73	--	
Sanpete	5.33	4.45	2.67	5.22	5.09	6.03	5.91	4.97	6.71	5.48	5.85	
Tooele	0.00	3.36	1.33	3.06	1.93	2.69	3.93	2.88	2.43	2.17	--	
Utah	3.33	3.58	1.62	3.32	2.53	3.42	3.20	2.65	3.80	3.53	2.51	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.46	3.77	2.16	3.85	3.19	3.88	3.59	3.23	4.08	3.95	3.69	3.96
Southern Region												
Beaver	2.78	5.83	0.86	6.14	3.33	4.72	6.00	6.29	7.00	4.89	3.75	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	13.67	9.50	0.86	5.50	6.00	5.00	4.25	5.14	8.56	3.00	5.33	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	5.75	2.91	2.52	3.67	3.57	6.05	5.52	6.00	4.65	4.48	6.37	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	5.18	3.80	3.06	4.79	4.90	6.67	5.96	4.44	4.18	3.94	3.49	
Washington	2.62	3.89	1.94	5.83	2.47	4.52	4.95	5.50	2.69	3.46	2.23	
Wayne	--	0.54	0.25	2.60	--	7.57	5.00	--	8.75	1.67	3.33	
REGIONAL TOTALS	4.41	3.73	1.93	4.36	3.88	5.85	5.44	5.16	4.66	3.93	3.69	4.43
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	4.06	3.71	3.73	4.06	3.41	5.11	5.82	4.22	2.94	6.10	5.03	
Uintah	5.64	5.43	1.78	4.48	3.06	5.63	5.25	3.22	5.50	4.96	5.16	
REGIONAL TOTALS	4.70	4.69	2.73	4.34	3.18	5.39	5.39	3.52	3.73	5.54	5.11	4.29
Southeastern Region												
Carbon	--	--	0.00	2.05	0.42	3.00	4.80	5.00	7.91	5.67	3.13	
Emery	4.70	7.46	3.96	1.46	2.36	2.61	4.29	3.37	3.97	2.56	2.93	
Grand	--	--	--	--	--	--	--	--	--	--	5.50	
San Juan	--	7.62	2.55	1.75	1.20	0.00	0.00	--	--	--	--	
REGIONAL TOTALS	4.70	7.52	3.28	1.74	1.62	2.70	3.00	3.65	4.98	4.93	3.21	4.07
STATE TOTALS	3.95	3.95	2.28	3.56	3.11	4.32	4.05	3.60	4.12	3.88	3.85	3.99

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1973-1983.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1963-82
Northern Region												
Box Elder	62	78	78	73	79	80	62	68	83	73	52	
Cache	50	68	66	80	100	60	60	100	77	71	0	
Davis	--	100	97	75	58	88	80	63	71	67	31	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	82	69	34	58	44	39	70	100	91	91	--	
REGIONAL TOTALS	77	74	68	64	58	64	71	76	80	76	57	73
Central Region												
Juab	100	100	100	100	100	100	--	100	100	100	100	
Salt Lake	71	52	45	59	100	100	64	71	57	62	--	
Sanpete	93	88	64	90	85	90	100	83	97	92	72	
Tooele	0	64	33	78	57	69	96	75	71	67	--	
Utah	62	58	42	66	61	69	57	64	66	71	55	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	66	68	49	73	67	74	66	82	72	76	61	73
Southern Region												
Beaver	64	83	14	86	56	73	77	71	86	89	50	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	100	80	14	100	100	86	83	86	100	100	100	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	100	50	48	81	68	85	88	87	83	73	57	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	85	83	59	92	90	97	96	96	82	83	67	
Washington	66	78	31	50	73	87	95	33	66	77	57	
Wayne	--	8	50	40	--	100	100	--	88	78	--	
REGIONAL TOTALS	79	64	42	78	76	89	90	87	81	80	61	79
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	81	76	59	88	81	83	88	77	68	66	58	
Uintah	91	100	48	94	61	95	87	92	100	86	49	
REGIONAL TOTALS	85	90	53	91	68	90	88	87	78	75	52	77
Southeastern Region												
Carbon	--	--	0	59	17	44	100	75	100	67	38	
Emery	76	77	65	29	55	48	43	68	72	58	36	
Grand	--	--	--	--	--	--	--	--	--	--	100	
San Juan	--	100	55	50	60	0	0	--	--	--	--	
REGIONAL TOTALS	76	86	60	44	44	48	56	70	79	59	42	67
STATE TOTALS	74	71	54	71	65	76	73	77	79	75	74	74

Table 8. Trend of average brood size for pheasants, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1962-83
Northern Region												
Box Elder	4.75	4.17	3.14	5.75	4.67	5.71	6.38	3.40	4.90	4.13	4.00	
Cache	5.00	4.38	4.67	5.83	4.00	4.60	3.50	4.00	5.93	6.50	0.00	
Davis	--	3.50	2.75	4.33	5.73	4.79	4.00	5.13	3.64	2.00	5.40	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	6.55	7.27	5.78	5.05	6.57	4.80	6.00	4.37	3.70	5.66	--	
REGIONAL TOTALS	6.00	4.84	4.26	5.19	5.29	5.00	5.22	4.21	4.48	4.88	4.58	5.11
Central Region												
Juab	--	5.00	9.00	7.33	8.00	5.60	--	4.00	3.80	3.75	6.50	
Salt Lake	4.58	5.00	5.73	6.09	5.33	6.00	5.13	3.33	4.67	4.44	--	
Sanpete	5.92	4.59	4.72	5.88	4.92	6.56	5.98	5.43	7.24	5.93	6.39	
Tooele	--	6.50	4.00	4.38	3.33	4.57	8.93	3.83	3.67	3.50	--	
Utah	5.78	6.24	4.12	4.86	4.56	4.91	5.45	4.09	5.38	4.99	4.02	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.60	5.46	4.73	5.35	4.70	5.29	5.81	4.46	5.66	5.15	5.01	5.40
Southern Region												
Beaver	4.33	8.00	6.00	7.75	6.00	6.50	7.10	7.25	6.50	5.00	6.50	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	6.00	9.50	6.00	5.25	6.00	5.00	4.25	6.00	8.14	3.00	5.33	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	5.50	6.20	5.73	6.93	5.23	6.88	6.31	6.38	6.30	6.30	6.40	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	6.14	4.82	4.25	5.17	6.17	6.40	5.94	4.70	5.00	4.56	5.14	
Washington	4.33	4.42	5.80	8.00	3.57	6.33	5.00	--	5.90	4.40	3.90	
Wayne	--	7.00	--	7.00	--	10.25	5.00	--	1.00	2.00	--	
REGIONAL TOTALS	5.38	5.83	5.31	6.37	5.45	6.71	5.96	5.49	6.14	4.98	5.18	5.58
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	5.64	5.43	6.40	4.64	4.55	6.54	6.60	5.50	4.58	7.31	4.50	
Uintah	6.28	5.21	4.22	5.00	5.00	5.75	5.56	3.30	5.50	4.25	5.11	
REGIONAL TOTALS	5.89	5.29	5.37	4.85	4.80	6.12	5.93	3.90	4.89	5.84	4.87	5.55
Southeastern Region												
Carbon	--	--	--	3.00	2.50	6.75	3.33	6.67	7.67	6.00	3.00	
Emery	6.22	6.67	5.00	4.86	4.33	5.27	6.00	7.00	6.00	4.42	6.60	
Grand	--	--	--	--	--	--	--	--	--	--	5.50	
San Juan	--	6.12	--	3.50	4.00	--	--	--	--	--	--	
REGIONAL TOTALS	6.22	6.36	5.00	4.40	4.07	5.67	5.00	6.86	6.24	4.64	5.30	5.68
STATE TOTALS	5.65	5.46	4.80	5.37	4.94	5.69	5.79	4.58	5.45	5.11	5.03	5.40

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	811	30,866	30,518	0.99	11.62	13.87
Cache	505	19,391	15,887	0.82	7.30	7.22
Davis	687	28,579	16,663	0.58	10.75	7.57
Morgan	23	508	294	0.58	0.19	0.13
Rich	(6)+	(6)+	(4)+	(0.67)+	(0.03)+	(0.02)+
Summit	(9)+	(26)+	(25)+	(0.96)+	(0.13)+	(0.15)+
Weber	774	32,417	23,470	0.72	12.20	10.66
REGIONAL TOTALS	2,800	111,763	86,834	0.78	42.06	39.46
Central Region						
Juab	163	4,119	4,119	1.00	1.55	1.87
Salt Lake	574	19,431	892	0.66	7.31	5.86
Sanpete	439	14,323	17,251	1.20	5.39	7.84
Tooele	220	7,569	4,573	0.60	2.85	2.08
Utah	1,154	42,514	34,623	0.81	16.00	15.73
Wasatch	(9)+	(14)+	(3)+	(0.21)+	(0.07)+	(0.02)+
REGIONAL TOTALS	2,550	87,956	73,460	0.83	33.10	33.38
Southern Region						
Beaver	38	1,230	882	0.72	0.46	0.40
Garfield	10	294	120	0.41	0.11	0.05
Iron	87	2,982	1,818	0.61	1.12	0.83
Kane	(1)+	(1)+	(1)+	(1.00)+	(0.01)+	(0.01)+
Millard	279	8,358	9,174	1.10	3.15	4.17
Piute	9	267	213	0.80	0.10	0.09
Sevier	340	11,541	11,086	0.96	4.34	5.04
Washington	78	2,527	1,096	0.43	0.95	0.50
Wayne	6	133	66	0.50	0.05	0.03
REGIONAL TOTALS	847	27,335	24,460	0.89	10.28	11.11
Northeastern Region						
Daggett	(1)+	(3)+	(2)+	(0.67)+	(0.02)+	(0.01)+
Duchesne	308	11,835	13,587	1.15	4.45	6.17
Uintah	306	13,507	13,279	0.98	5.08	6.03
REGIONAL TOTALS	614	25,342	26,868	1.06	9.53	12.20
Southeastern Region						
Carbon	139	5,229	3,089	0.59	1.97	1.40
Emery	154	6,659	3,971	0.60	2.51	1.80
Grand	7	120	294	2.44	0.04	0.13
San Juan	7	280	213	0.76	0.10	0.10
REGIONAL TOTALS	307	12,290	7,569	0.62	4.62	3.44
Unknown Counties	35	856	883	1.03	0.32	0.40
STATE TOTALS	7,153	265,731	220,074	0.83	100	100

*Total hunter trips from questionnaire returns.

+Included in unknown counties because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1976-83.

Region and County	Year							
	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	0.76	0.96	1.01	0.94	1.11	1.03	0.86	0.99
Cache	0.82	0.88	0.99	0.81	0.97	0.88	0.74	0.82
Davis	0.54	0.68	0.69	0.63	0.65	0.65	0.63	0.58
Morgan	0.87	0.73	0.78	0.60	0.56	0.57	0.64	0.58
Rich	0.00	0.33	1.86	0.00	0.00	0.00	0.00	(0.67)+
Summit	0.00	0.00	0.40	0.00	0.00	0.00	0.00	(0.96)+
Weber	0.66	0.76	0.70	0.71	0.77	0.72	0.63	0.72
REGIONAL TOTALS	0.68	0.81	0.83	0.77	0.86	0.84	0.71	0.78
Central Region								
Juab	0.59	0.68	0.79	0.87	1.00	0.89	0.76	1.00
Salt Lake	0.56	0.60	0.72	0.62	0.70	0.68	0.57	0.66
Sanpete	0.78	0.79	0.91	1.07	1.18	1.18	1.00	1.20
Tooele	0.71	0.55	0.81	0.58	0.73	0.65	0.43	0.60
Utah	0.73	0.78	0.83	0.82	0.92	0.91	0.73	0.81
Wasatch	0.54	0.50	2.00	0.00	0.00	0.00	0.00	(0.21)+
REGIONAL TOTALS	0.68	0.71	0.81	0.79	0.90	0.89	0.71	0.83
Southern Region								
Beaver	0.70	0.74	0.97	0.56	0.86	1.06	0.77	0.72
Garfield	0.27	0.88	0.97	0.48	0.69	0.53	0.81	0.41
Iron	0.38	0.59	0.83	0.66	0.83	0.74	0.69	0.61
Kane	1.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.00)+
Millard	0.71	0.79	1.06	1.04	1.24	1.02	0.97	1.10
Piute	0.73	0.56	0.97	0.95	0.88	0.85	1.00	0.80
Sevier	0.73	0.76	0.82	1.01	1.01	1.03	0.89	0.96
Washington	0.97	0.46	0.70	0.60	0.63	0.45	0.39	0.43
Wayne	0.71	0.40	1.00	1.17	1.43	0.67	0.88	0.50
REGIONAL TOTALS	0.72	0.72	0.91	0.93	1.03	0.95	0.85	0.89
Northeastern Region								
Daggett	1.40	0.00	1.00	0.00	0.00	0.00	0.00	(0.67)+
Duchesne	1.08	1.09	1.41	1.13	1.13	1.09	1.05	1.15
Uintah	1.12	1.11	1.05	0.95	1.09	0.98	0.93	0.98
REGIONAL TOTALS	1.10	1.10	1.20	1.03	1.11	1.04	0.99	1.06
Southeastern Region								
Carbon	0.54	0.50	0.86	0.66	0.94	0.70	0.54	0.59
Emery	0.67	0.55	0.65	0.71	0.85	0.85	0.57	0.60
Grand	0.42	0.75	0.73	0.45	0.33	0.63	0.94	2.44
San Juan	0.56	0.33	0.57	0.33	0.29	0.68	0.50	0.76
REGIONAL TOTALS	0.61	0.54	0.72	0.68	0.87	0.78	0.56	0.62
Unknown Counties	0.74	0.70	0.85	0.84	1.17	0.77	0.48	1.03
STATE TOTALS	0.71	0.78	0.86	0.81	0.91	0.88	0.74	0.83

+Included in unknown counties because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 11. Percentage distribution of pheasant harvest by region and county, 1976-83.

Region and County	Year 1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	10.10	11.45	11.06	12.04	12.35	12.94	12.40	13.87
Cache	9.13	8.28	8.55	6.93	7.94	8.66	7.07	7.22
Davis	7.99	8.97	8.47	8.15	7.61	5.33	8.27	7.57
Morgan	0.27	0.24	0.25	0.35	0.20	0.23	0.20	0.13
Rich	0.00	0.01	0.24	0.00	0.00	0.00	0.00	(0.02)+
Summit	0.00	0.00	0.04	0.00	0.00	0.00	0.00	(0.15)+
Weber	13.40	12.17	10.11	10.84	10.03	7.79	10.18	10.66
REGIONAL TOTALS	40.89	41.12	38.71	38.31	38.13	34.95	38.12	39.46
Central Region								
Juab	1.25	1.03	1.24	1.61	1.75	3.19	2.10	1.87
Salt Lake	7.65	7.51	8.19	7.14	6.29	4.88	5.96	5.86
Sanpete	5.59	4.68	4.44	6.87	7.17	7.28	7.47	7.84
Tooele	3.00	1.77	2.22	1.70	1.52	2.05	1.83	2.08
Utah	14.35	17.08	18.83	17.67	17.65	17.89	16.54	15.73
Wasatch	0.09	0.01	0.07	0.00	0.00	0.00	--	(0.020+
REGIONAL TOTALS	31.94	32.08	35.00	34.99	34.38	35.29	33.90	33.38
Southern Region								
Beaver	1.23	0.65	0.51	0.28	0.51	0.91	0.68	0.40
Garfield	0.04	0.07	0.26	0.09	0.07	0.08	0.32	0.05
Iron	0.55	0.48	0.92	0.52	0.88	1.08	1.00	0.83
Kane	0.01	0.00	0.00	0.00	0.00	0.00	--	(0.01)+
Millard	3.71	4.02	4.69	5.46	5.76	7.77	5.37	4.17
Piute	0.25	0.10	0.30	0.13	0.22	0.30	0.13	0.09
Sevier	4.47	4.24	3.99	5.72	5.04	5.37	5.86	5.04
Washington	2.28	0.73	0.78	0.99	0.86	0.58	0.48	0.50
Wayne	0.13	0.04	0.09	0.14	0.07	0.09	0.11	0.03
REGIONAL TOTALS	12.68	10.34	11.53	13.33	13.43	16.17	13.95	11.11
Northeastern Region								
Daggett	0.09	0.00	0.07	0.00	0.00	0.00	--	(0.01)+
Duchesne	4.00	5.85	5.61	5.25	4.69	4.60	5.51	6.17
Uintah	4.39	5.27	5.63	5.24	5.00	3.99	5.13	6.03
REGIONAL TOTALS	8.49	11.12	11.31	10.49	9.69	8.58	10.64	12.20
Southeastern Region								
Carbon	0.95	0.79	1.04	0.85	1.60	1.73	1.51	1.40
Emery	2.34	1.80	1.43	1.66	2.50	2.84	1.46	1.80
Grand	0.11	0.06	0.10	0.03	0.01	0.11	0.13	0.13
San Juan	0.07	0.02	0.04	0.03	0.01	0.12	0.11	0.10
REGIONAL TOTALS	3.46	2.68	2.61	2.57	4.13	4.80	3.20	3.44
Unknown Counties	2.55	2.68	0.84	0.31	0.24	0.21	0.19	0.40
STATE TOTALS	100	100	100	100	100	100	100	100

+Included in unknown counties because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 12. Percentage distribution of pheasant hunting pressure by county hunted, 1976-83.

Region and County	Year 1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	9.39	9.22	9.37	10.37	10.20	11.07	10.77	11.62
Cache	7.90	7.25	7.42	6.95	7.51	8.65	7.11	7.30
Davis	10.54	10.24	10.52	10.48	10.71	7.24	9.83	10.75
Morgan	0.22	0.26	0.28	0.48	0.33	0.33	0.23	0.19
Rich	0.02	0.02	0.11	0.00	0.00	0.00	--	--
Summit	0.01	0.01	0.08	0.00	0.00	0.00	--	--
Weber	14.28	12.35	12.30	12.42	11.91	9.62	11.92	12.20
REGIONAL TOTALS	42.35	39.35	40.07	40.70	40.66	36.93	39.86	42.06
Central Region								
Juab	1.49	1.17	1.35	1.50	1.60	3.16	2.05	1.55
Salt Lake	9.70	9.70	9.71	9.40	8.21	6.34	7.74	7.31
Sanpete	5.08	4.60	4.18	5.23	5.57	5.46	5.55	5.39
Tooele	2.98	2.50	2.34	2.38	1.89	2.77	3.18	2.85
Utah	13.95	16.95	19.43	17.48	17.64	17.30	16.94	16.00
Wasatch	0.12	0.02	0.03	0.00	0.00	0.00	--	--
REGIONAL TOTALS	33.32	34.93	37.03	35.99	34.91	35.03	35.46	33.10
Southern Region								
Beaver	1.25	0.68	0.45	0.40	0.54	0.74	0.66	0.46
Garfield	0.10	0.06	0.23	0.15	0.09	0.14	0.29	0.11
Iron	1.01	0.62	0.95	0.65	0.97	1.28	1.07	1.12
Kane	0.01	0.00	0.00	0.00	0.00	0.00	--	--
Millard	3.67	3.95	3.80	4.29	4.24	6.74	4.12	3.15
Piute	0.25	0.14	0.26	0.11	0.23	0.31	0.10	0.10
Sevier	4.35	4.31	4.15	4.62	4.57	4.60	4.90	4.34
Washington	1.66	1.24	0.96	1.33	1.24	1.14	0.91	0.95
Wayne	0.13	0.08	0.08	0.10	0.05	0.12	0.09	0.05
REGIONAL TOTALS	12.44	11.08	10.89	11.65	11.93	15.07	12.14	10.28
Northeastern Region								
Daggett	0.05	0.00	0.06	0.00	0.00	0.00	--	--
Duchesne	2.63	4.15	3.41	3.79	3.78	3.71	3.91	4.45
Uintah	2.78	3.67	4.58	4.48	4.20	3.59	4.10	5.08
REGIONAL TOTALS	5.45	7.82	8.05	8.28	7.98	7.30	8.01	9.53
Southeastern Region								
Carbon	1.25	1.22	1.03	1.05	1.57	2.18	2.08	1.97
Emery	2.47	2.52	1.90	1.91	2.67	2.95	1.89	2.51
Grand	0.18	0.06	0.12	0.06	0.04	0.15	0.10	0.04
San Juan	0.09	0.05	0.05	0.07	0.05	0.15	0.16	0.10
REGIONAL TOTALS	3.99	3.86	3.10	3.09	4.33	5.43	4.23	4.62
Unknown Counties	2.45	2.95	0.84	0.32	0.19	0.24	0.31	0.32
Mixed Counties	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 13. Statewide summary of pheasant harvest statistics, 1948-1983.

Year	Total Hunters	Total Harvest	Hunters-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	0.73	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
1980	84,868	228,442	249,770	0.91	2.69
1981	83,408	234,217	265,381	0.88	2.81
1982	85,368	208,437	280,624	0.74	2.44
1983	77,847	220,074	265,731	0.83	2.83
TOTALS (1948-83)	2,996,194	8,411,866	7,990,599	1.05	2.81
AVERAGES (1948-82)	83,381	234,051	220,710	1.06	2.81

Table 14. Pheasant field bag check summary, 1983.

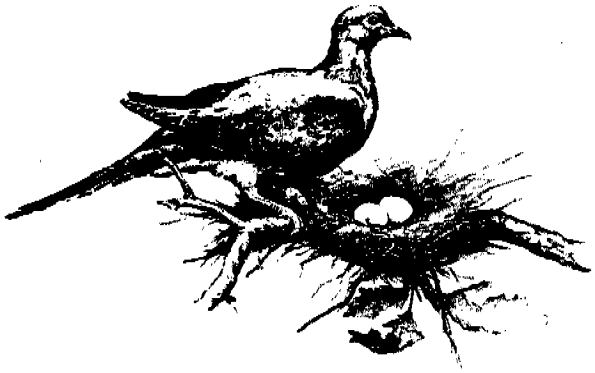
Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	281	548	1,232	273	22	281	548	1,232	273	22	0.50
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	146	305	790	91	12	71	141	408	49	12	0.35
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	98	253	602	105	17	12	37	92	22	24	0.59
REGIONAL TOTALS	525	1,106	2,624	469	18	364	726	1,732	344	20	0.47
Central Region											
Juab	26	74	48	26	54	26	74	48	26	54	0.35
Salt Lake	82	196	311	33	11	22	50	67	3	4	0.06
Sanpete	138	473	1,071	325	30	38	93	265	91	34	0.97
Tooele	43	119	294	58	20	6	11	30	24	80	2.18
Utah	136	322	1,064	248	23	57	116	380	100	26	0.86
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	425	1,184	2,788	690	25	149	344	790	244	31	0.31
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	227	792	3,439	469	13	104	326	1,864	234	12	0.71
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	133	449	1,557	334	21	52	173	805	175	22	1.01
Washington	22	44	110	11	10	6	10	45	7	21	0.70
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	382	1,285	5,106	814	16	162	509	2,714	416	15	0.82
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	170	413	2,194	494	23	88	192	1,610	359	22	1.87
Uintah	152	386	2,476	463	19	107	259	1,996	381	19	1.47
REGIONAL TOTALS	322	799	4,670	957	21	195	451	3,606	740	21	1.64
Southeastern Region											
Carbon	33	120	339	42	12	10	36	94	20	21	0.55
Emery	14	38	82	12	15	6	14	24	4	17	0.29
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	47	158	421	54	13	16	50	118	24	20	0.48
STATE TOTALS	1,701	4,532	15,609	2,984	19	886	2,080	8,960	1,768	20	0.85

Table 15. Pheasant hunter success trend as determined by field bag check, 1978-83.

Region and County	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter	1981 Birds/ 100 Hr	1981 Birds/ Hunter	1982 Birds/ 100 Hr	1982 Birds/ Hunter	1983 Birds/ 100 Hr	1983 Birds/ Hunter
Northern Region												
Box Elder	24	0.62	27	0.68	26	0.62	23	0.57	16	0.44	22	0.50
Cache	17	0.62	--	--	27	0.97	--	--	10	0.36	--	--
Davis	19	0.54	19	0.75	13	0.33	4	0.24	14	0.34	12	0.35
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	16	1.25	--	--	22	0.89	21	0.72	19	0.39	24	0.59
REGIONAL TOTALS	21	0.61	25	0.69	24	0.62	18	0.56	16	0.41	20	0.47
Central Region												
Juab	82	0.75	24	0.61	22	0.44	16	0.44	21	0.32	54	0.35
Salt Lake	3	0.05	0	0.00	--	--	10	0.45	28	1.66	4	0.06
Sanpete	17	0.71	55	1.40	19	0.95	25	1.15	25	1.12	34	0.97
Tooele	167	2.00	160	2.00	120	2.00	67	1.75	118	1.86	80	2.18
Utah	27	0.80	34	0.91	27	0.80	32	0.94	21	0.58	26	0.86
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	24	0.73	38	0.99	25	0.83	28	0.99	24	0.75	31	0.31
Southern Region												
Beaver	12	0.33	24	0.95	--	--	25	0.86	20	1.08	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	43	1.25	37	1.13	25	0.75	26	1.08	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	19	0.62	21	0.83	28	0.90	20	0.75	12	0.40	12	0.71
Piute	25	0.50	--	--	--	--	--	--	--	--	--	--
Sevier	23	1.04	31	0.99	29	1.17	32	1.33	22	0.92	22	1.01
Washington	32	0.59	60	1.00	25	0.64	--	--	--	--	21	0.70
Wayne	--	--	--	--	--	--	5	0.98	--	--	--	--
REGIONAL TOTALS	21	0.75	23	0.87	28	0.98	23	0.91	17	0.64	15	0.82
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	18	1.37	15	0.97	18	1.21	20	1.48	15	1.48	22	1.87
Uintah	20	1.48	19	0.26	19	0.61	15	0.98	16	1.21	19	1.47
REGIONAL TOTALS	19	1.41	17	1.07	19	1.04	18	1.29	15	1.36	21	1.64
Southeastern Region												
Carbon	18	0.41	27	0.74	18	0.47	--	--	--	--	21	0.55
Emery	10	0.72	29	0.83	22	0.83	11	0.31	19	0.63	17	0.29
Grand	--	--	--	--	--	--	17	0.33	--	--	--	--
San Juan	40	1.00	0	0.00	--	0.00	--	--	--	--	--	--
REGIONAL TOTALS	12	0.58	28	0.79	21	0.75	12	0.31	19	0.63	20	0.48
STATE TOTALS	20	0.88	22	0.89	22	0.84	20	0.90	17	0.71	20	0.85

MIGRATORY UPLAND GAME BIRDS

SUMMARY



Mourning Doves

The breeding density index increased slightly in 1983 but remained well below average.

Harvest statistics derived from the questionnaire showed decreased hunter pressure and harvest compared to 1982. However, hunter success increased 3 percent.

Field bag checks also indicated a significant increase in hunter success supporting the results of the questionnaire survey.

Division personnel collected 2,877 wings for aging during 1983. Aging of wings indicated juvenile per 100 adult ratio increased to 106 compared to 91 in 1982, and the 17-year average of 117. More of the juvenile birds harvested were hatched earlier than in 1982, and the long-term average.

Band-tailed Pigeons

No band-tailed pigeons were banded in Utah in 1983. Banding of band-tailed pigeons was discontinued in 1979, as a result of recommendations by the Four-Corners Band-tailed Pigeon Study Committee.

Hunter participation and harvest during the 1983 season is unknown because data is unavailable.

MOURNING DOVE

Call Count Survey

Results of the 1983 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. Indices 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 1983 survey to 1982 and the average for the period 1964-1982:

	1983	Percent change from 1982	Percent change from Average
Average doves heard per route	9.9	+1	-28
Average calls heard per route	43.2	+3	-26
Average doves seen per route	9.5	+44	-33

Coo count data indicated increased breeding activity in late May compared to 1982 but continued to be well below the long-term average.

Harvest

Hunter Questionnaire

Information obtained from the hunter questionnaire for 1983 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 1983 compared to 1982 and the 10-year (1973-82) average:

	1983	Percent change from 1982	Percent change from Average
Mourning dove hunters	28,258	-11	-12
Mourning dove harvest	272,979	-3	-17
Hunter-days afield	100,568	-7	-8
Mourning doves per hunter-day	2.71	+3	-10
Mourning doves hunter	9.66	+7	-5

Although hunter success increased three percent, total harvest decreased slightly compared to 1982. Numbers of dove hunters, hunter-days afield and doves per hunter-day remained below the 10 year average.

Long-term harvest trends are depicted in Figure 2.

Field Bag Checks

A summary of field bag check data for 1983 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1983 survey compared to 1982 and the average (1967-82) follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	1,181	-30	-37
Total hours hunted	4,656	-25	-28
Doves per hunter (complete hunts)	5.76	+45	+64
Doves bagged per 100 hours	108	+30	+17
Average hours per hunter-day (complete hunts)	4.9	+53	+32
Hours hunted per dove bagged	0.9	+6	-18

Field bag checks indicated a significant increase in hunter success. This confirms the questionnaire results which also indicated improved hunter success. The total number of hunters checked was down 30 percent from 1982. Dove hunters spent more time afield per hunter-day than in 1982, 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 1974 through 1983 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region since 1974 are shown in Table 11. Hatching dates for immature doves harvested in Utah in 1983 are shown in Table 12.

Following is a comparison of data collected in 1983 to 1982 and long-term averages (1966-82):

	1983	Percent change from 1982	Percent change from Average
Sample size	2,877	-8	-13
Immatures/100 adults	106	+16	-9
Percent of immatures hatched on:	(N. Region)		
August 3 or later	22.8	-30	-42
July 25 or later	65.1	-18	-19
Before July 25	34.7	+67	+80

Fewer wings were collected for aging during the 1983 season compared to 1982. However, the 106 immatures per 100 adults ratio indicated a more successful hatch than 1982, but remained below average. Wing analysis indicated significantly earlier hatching for 1983 compared with 1982 and the long-term average.

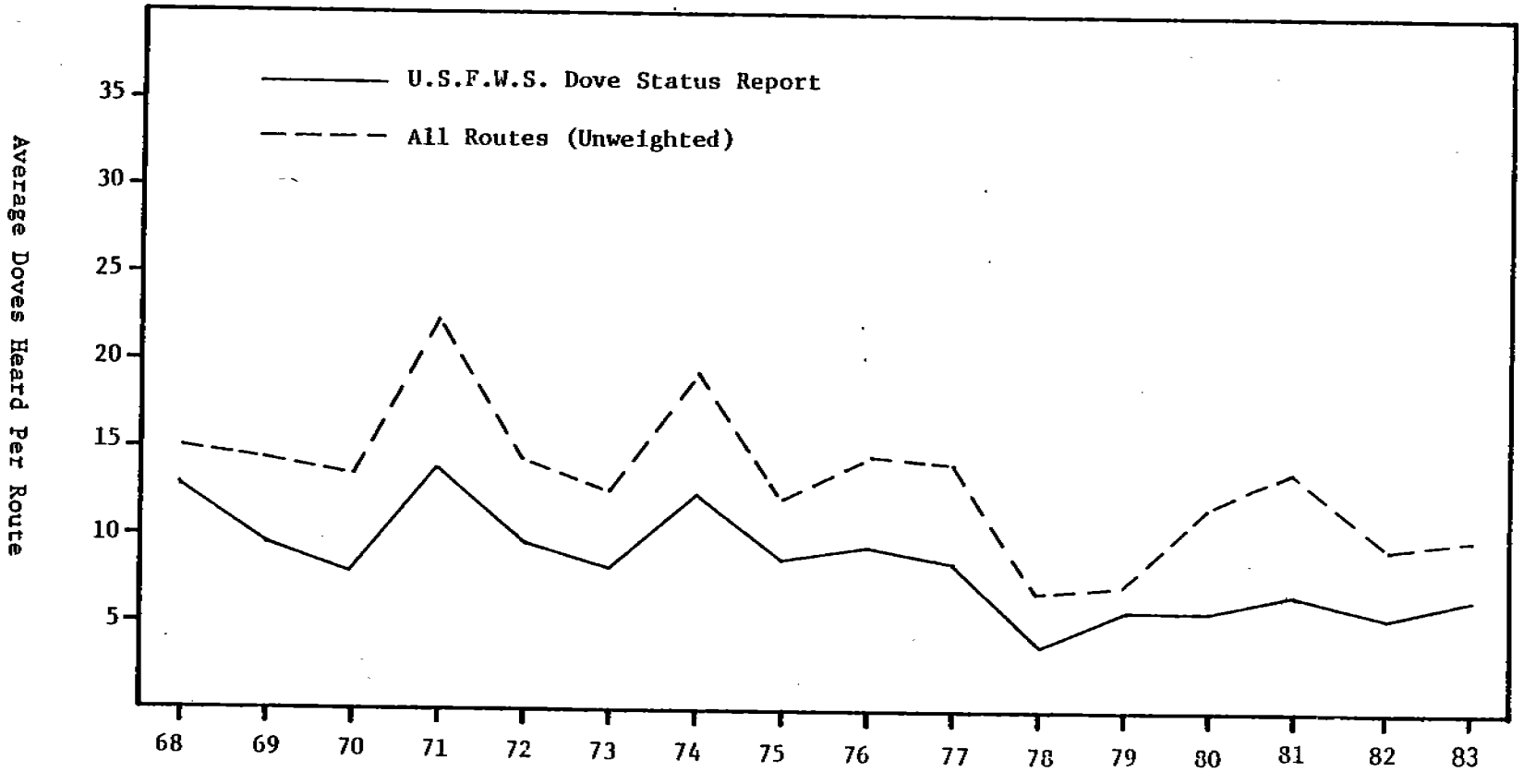


Figure 1. Mourning dove breeding density index trend.

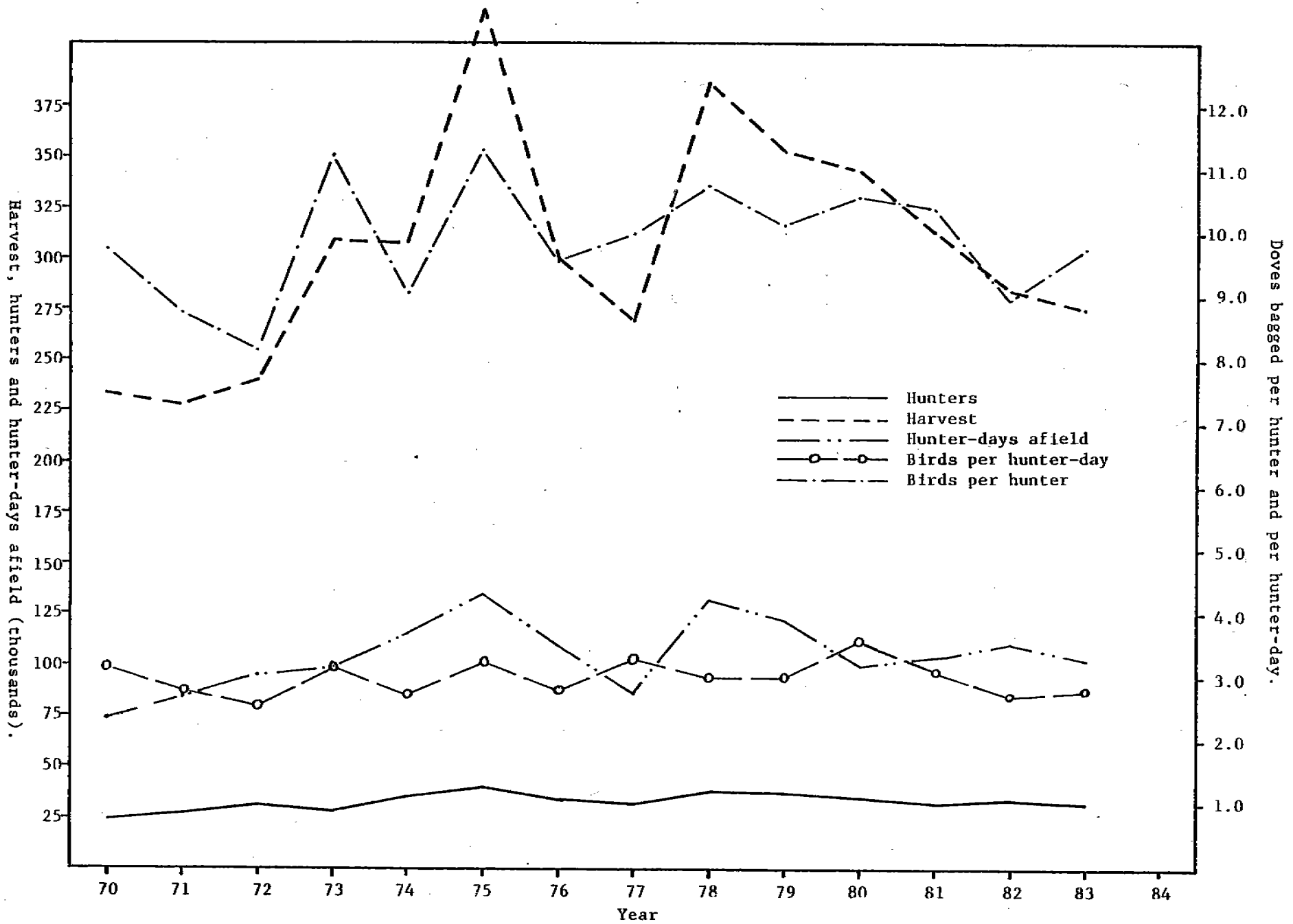


Figure 2. Statewide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call-count survey for 1983.

Region and County	Route Number	Total Doves Heard Per Route	Total Calls Heard Per Route	Total Doves Seen Per Route
Northern Region				
Summit	R1020	--	--	--
Box Elder	R1500	1	2	4
REGIONAL TOTALS		1	2	4
Central Region				
Juab	R2830	25	106	7
REGIONAL TOTALS		25	106	7
Southern Region				
Sevier-Sanpete	R0370	3	10	9
Wayne-Sevier	R0660	Inaccessible	--	--
Garfield	R1090	3	8	0
Millard	R3640	5	11	3
Beaver	R3820	3	12	13
Iron	R4000	19	126	22
Washington	R4310	14	55	2
REGIONAL TOTALS		47	222	49
Northeastern Region				
Duchesne	R0080	0	0	0
Uintah	* R0220	9	26	1
REGIONAL TOTALS		9	26	1
Southeastern Region				
Emery	R0540	11	36	0
San Juan	R1171	30	161	63
San Juan	* R1450	5	9	0
REGIONAL TOTALS		46	206	63
STATE TOTALS		128	562	124
STATE AVERAGE		9.85	43.2	9.5
PERCENT CHANGE (from previous year)		0.0	+2.7	+44.2

*New route location

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, 1971-83.

Region and County	Route Number	Number of Doves Heard Per Route											
		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region													
Summit	R1020	7	3	3	3	11	10	5	6	5	4	5	--
Box Elder	R1500	2	5	3	5	1	4	2	9	4	8	--	1
REGIONAL TOTALS		9	8	6	8	12	14	7	15	9	12	5	1
Central Region													
Juab	R2830	6	17	16	13	28	25	31	15	31	22	9	25
REGIONAL TOTALS		6	17	16	13	28	25	31	15	31	22	9	25
Southern Region													
Sevier-Sanpete	R0370	0	0	0	0	0	2	0	0	3	0	0	3
Wayne-Sevier	R0660	20	11	16	7	5	8	1	2	5	14	4	--
Garfield	R1090	29	0	0	0	3	1	0	0	0	9	2	3
Millard	R3640	19	24	22	21	6	29	8	4	2	10	9	5
Beaver	R3820	13	6	24	0	0	0	0	5	9	7	13	3
Iron	R4000	20	35	103	42	45	27	12	14	40	36	21	19
Washington	R4310	61	26	32	37	19	15	1	4	3	6	0	14
REGIONAL TOTALS		162	102	197	107	78	82	22	29	62	82	49	47
Northeastern Region													
Duchesne	R0080	8	3	14	9	11	14	2	2	1	13	7	0
Uintah	R0220	4	18	12	7	27	7	4	--	49	19	1	9
REGIONAL TOTALS		12	21	26	16	38	21	6	2	50	32	8	9
Southeastern Region													
Emery	R0540	1	27	4	6	14	4	10	9	7	22	7	11
San Juan	R1170	24	17	41	32	51	67	24	28	14	38	26	30
San Juan	R1450	*	*	*	*	2	1	3	1	3	0	24	5
REGIONAL TOTALS		25	44	45	38	67	72	37	38	24	60	57	46
STATE TOTALS		214	192	290	182	223	214	103	99	176	208	128	128
STATE AVERAGES		14.3	12.8	19.3	12.1	14.9	14.3	6.9	7.1	11.7	13.9	9.8	9.9
PERCENT CHANGE (from previous year)		-37	-10	+51	-37	+23	-4	-52	+3	+65	+18	-38	0

*Automatic zero.

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	248	8,893	31,106	3.50	8.84	11.40
Cache	104	5,322	13,226	2.48	5.29	4.85
Davis	110	5,603	7,408	1.32	5.57	2.71
Morgan	23	655	1,738	2.65	0.65	0.64
Rich	14	481	1,484	3.08	0.48	0.54
Summit	8	160	334	2.08	0.16	0.12
Weber	129	6,489	11,755	1.81	6.45	4.31
REGIONAL TOTALS	636	27,602	67,054	2.43	2.43	27.45
Central Region						
Juab	162	4,560	24,379	5.35	4.53	8.93
Salt Lake	199	9,348	20,046	2.14	9.30	7.34
Sanpete	74	2,581	9,388	3.64	2.57	3.44
Tooele	225	9,441	25,837	2.74	9.39	9.46
Utah	445	18,388	38,595	2.10	18.28	14.14
Wasatch	13	789	655	0.83	0.78	0.24
REGIONAL TOTALS	1,118	45,108	118,903	2.64	44.85	43.56
Southern Region						
Beaver	26	802	4,506	5.62	0.80	1.65
Garfield	17	802	2,460	3.07	0.80	0.90
Iron	51	2,059	7,408	3.60	2.05	2.71
Kane	12	521	2,286	4.38	0.52	0.84
Millard	100	3,637	16,837	4.63	3.62	6.17
Piute	5	682	1,123	1.65	0.68	0.41
Sevier	72	3,223	8,813	2.73	3.20	3.23
Washington	56	2,326	10,110	4.34	2.31	3.70
Wayne	4	133	334	2.50	0.13	0.12
REGIONAL TOTALS	343	14,189	53,881	3.80	14.11	19.74
Northeastern Region						
Daggett	5	427	575	1.34	0.42	0.21
Duchesne	41	1,497	4,185	2.79	1.49	1.53
Uintah	75	2,915	6,807	2.33	2.90	2.49
REGIONAL TOTALS	121	4,841	11,568	2.39	4.81	4.24
Southeastern Region						
Carbon	61	3,022	6,218	2.06	3.00	2.28
Emery	54	3,249	6,486	2.00	3.23	2.37
Grand	19	949	2,701	2.85	0.94	0.99
San Juan	26	1,537	5,683	3.70	0.53	2.08
REGIONAL TOTALS	160	8,759	21,089	2.41	8.71	7.73
Unknown Counties	3	66	481	7.20	0.07	0.18
STATE TOTALS	2,381	100,568	272,979	2.71	100	100

*Total hunter trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1976-83.

Region and County	Year 1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	3.55	3.92	3.60	3.76	4.97	3.04	3.74	3.50
Cache	2.26	2.84	1.98	2.47	2.77	2.83	2.16	2.48
Davis	1.54	1.81	1.49	1.34	1.79	1.59	1.52	1.32
Morgan	2.58	3.87	2.10	3.14	2.91	2.73	4.78	2.65
Rich	1.53	0.82	4.19	1.71	2.00	3.00	1.57	3.08
Summit	1.52	5.69	1.86	3.36	4.71	3.19	2.34	2.08
Weber	1.67	1.97	1.66	1.91	2.29	2.18	1.93	1.81
REGIONAL TOTALS	2.39	2.91	2.38	2.53	3.31	2.57	2.50	2.43
Central Region								
Juab	4.11	5.07	4.46	4.38	4.70	3.82	3.64	5.35
Salt Lake	2.16	2.58	2.13	2.28	2.33	2.65	1.89	2.14
Sanpete	3.15	4.16	2.73	2.61	3.64	3.23	2.48	3.64
Tooele	3.53	3.26	3.19	2.53	3.43	2.30	2.54	2.74
Utah	2.30	2.92	2.39	2.22	3.08	2.96	2.10	2.10
Wasatch	1.83	2.50	2.89	2.59	3.45	1.46	1.39	0.83
REGIONAL TOTALS	2.71	3.20	2.73	2.62	3.23	2.86	2.33	2.64
Southern Region								
Beaver	2.87	5.27	5.67	4.94	5.03	4.86	4.78	5.62
Garfield	2.44	1.04	1.70	4.56	5.17	4.02	4.15	3.07
Iron	4.45	4.00	4.48	4.52	5.02	4.42	3.24	3.60
Kane	3.52	3.05	5.08	4.17	5.86	4.71	2.50	4.38
Millard	3.78	4.62	5.13	4.92	5.43	4.11	4.49	4.63
Piute	2.59	3.10	2.60	2.18	3.90	4.05	0.63	1.65
Sevier	2.47	3.66	2.52	2.91	3.63	2.30	2.51	2.73
Washington	2.70	4.84	3.90	3.25	3.73	4.19	2.92	4.34
Wayne	4.93	6.40	3.64	6.04	2.93	3.76	2.56	2.50
REGIONAL TOTALS	3.26	4.23	3.88	4.05	4.58	3.85	3.49	3.80
Northeastern Region								
Daggett	5.00	3.44	3.40	2.79	1.50	1.00	2.33	1.34
Duchesne	4.76	2.65	3.43	3.13	3.07	3.76	3.09	2.79
Uintah	2.27	3.10	2.70	2.96	3.44	1.81	2.51	2.33
REGIONAL TOTALS	3.01	2.94	3.01	3.01	3.22	2.43	2.74	2.39
Southeastern Region								
Carbon	2.31	2.25	2.85	3.14	3.88	3.42	3.13	2.06
Emery	2.86	2.88	3.00	2.54	3.04	3.62	2.37	2.00
Grand	1.94	1.26	4.00	3.68	4.66	4.12	2.99	2.85
San Juan	2.24	3.88	4.09	3.97	3.80	3.75	3.68	3.70
REGIONAL TOTALS	2.41	2.61	3.40	3.09	3.69	3.75	2.99	2.41
Unknown counties	3.45	2.13	3.46	5.09	5.00	0.64	1.56	7.20
Mixed counties	--	10.00	2.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	2.74	3.21	2.95	2.92	3.52	3.05	2.62	2.71

Table 5. Percentage distribution of mourning dove harvest by region and county, 1976-83.

Region and County	Year							
	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	9.82	8.44	8.10	10.01	10.46	8.89	10.36	11.40
Cache	4.19	2.64	2.71	3.00	2.12	2.77	2.85	4.85
Davis	2.16	1.81	1.61	2.39	1.38	1.90	2.73	2.71
Morgan	0.96	1.55	0.65	1.03	0.96	1.05	1.27	0.64
Rich	0.33	0.08	0.59	0.22	0.27	0.23	0.26	0.54
Summit	0.41	1.16	0.36	0.19	0.16	0.46	0.48	0.12
Weber	3.39	3.72	3.07	3.78	3.72	3.37	5.67	4.31
REGIONAL TOTALS	21.26	19.40	17.08	20.63	19.07	18.66	23.62	24.56
Central Region								
Juab	6.98	7.62	8.88	9.55	9.25	6.99	7.97	8.93
Salt Lake	7.67	8.49	7.16	9.39	7.89	7.09	7.12	7.34
Sanpete	5.31	3.31	3.87	4.34	3.94	2.59	2.65	3.44
Tooele	8.39	7.15	6.18	5.57	7.55	5.31	8.27	9.46
Utah	16.70	16.40	16.20	12.73	14.92	17.37	15.20	14.14
Wasatch	0.37	0.56	0.66	0.63	0.80	0.78	0.58	0.24
REGIONAL TOTALS	45.42	43.54	42.95	42.22	44.35	40.13	41.79	43.56
Southern Region								
Beaver	2.00	2.55	1.68	1.62	1.69	1.70	2.60	1.65
Garfield	0.30	0.15	0.65	1.11	1.07	1.54	1.17	0.90
Iron	4.40	3.97	4.20	2.60	2.60	4.20	2.64	2.71
Kane	1.10	0.38	0.98	0.80	0.40	1.36	0.11	0.84
Millard	5.92	7.27	9.28	10.84	8.55	7.73	6.80	6.17
Piute	1.10	0.37	0.81	0.45	0.60	1.03	0.03	0.41
Sevier	4.01	4.83	4.26	5.23	3.63	2.91	3.37	3.23
Washington	2.38	3.82	2.91	2.45	3.39	3.16	3.25	3.70
Wayne	1.00	0.36	0.86	1.25	0.22	0.64	0.35	0.12
REGIONAL TOTALS	22.21	23.70	25.63	26.36	22.15	24.26	20.42	19.74
Northeastern Region								
Daggett	0.03	0.35	0.09	0.22	0.04	0.12	0.15	0.21
Duchesne	1.58	1.51	2.31	1.66	2.07	2.40	2.30	1.53
Uintah	1.81	2.18	2.61	2.79	2.29	1.99	2.52	2.49
REGIONAL TOTALS	3.43	4.04	5.01	4.67	4.41	4.50	4.97	4.24
Southeastern Region								
Carbon	1.50	2.03	1.75	1.96	2.82	2.44	3.94	2.28
Emery	1.74	1.84	2.38	1.92	2.85	3.32	2.00	2.37
Grand	0.62	0.33	2.32	0.90	1.98	3.90	1.20	0.99
San Juan	0.74	1.51	1.90	1.10	2.30	2.75	1.90	2.08
REGIONAL TOTALS	4.61	5.70	8.35	5.89	9.95	12.40	9.04	7.73
Unknown counties	3.08	3.51	0.94	0.23	0.07	0.05	0.15	0.18
Mixed counties	--	0.11	0.05	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1976-83.

Region and County	Year 1976	1977	1978	1979	1980	1981	1982	1983
Northern Region								
Box Elder	7.58	6.92	6.63	7.76	7.40	8.91	7.25	8.84
Cache	5.09	2.99	4.03	3.54	2.69	2.98	3.46	5.29
Davis	3.85	3.22	3.18	5.21	2.71	3.65	4.69	5.57
Morgan	1.02	1.29	0.91	0.95	1.16	1.17	0.70	0.65
Rich	0.59	0.31	0.42	0.37	0.49	0.23	0.43	0.48
Summit	0.74	0.65	0.57	0.17	0.12	0.44	0.54	0.16
Weber	5.58	6.07	5.44	5.76	5.72	4.72	7.71	6.45
REGIONAL TOTALS	24.46	21.45	21.17	23.77	20.30	22.10	24.78	27.45
Central Region								
Juab	4.66	4.84	5.87	6.36	6.93	5.57	5.73	4.53
Salt Lake	9.76	10.58	9.92	12.00	11.94	8.16	9.90	9.30
Sanpete	4.63	2.55	4.18	4.86	3.81	2.44	2.80	2.57
Tooele	6.52	7.05	5.70	6.42	7.75	7.05	8.52	9.39
Utah	19.88	18.02	20.00	16.70	17.05	17.90	18.92	18.28
Wasatch	0.56	0.72	0.68	0.71	0.82	1.63	1.08	0.78
REGIONAL TOTALS	46.01	43.76	46.36	47.04	48.29	42.76	46.95	44.85
Southern Region								
Beaver	1.91	1.56	0.88	0.95	1.18	1.06	1.48	0.80
Garfield	0.33	0.47	1.12	0.71	0.73	1.17	0.74	0.80
Iron	2.71	3.19	2.77	1.68	1.82	2.90	2.13	2.05
Kane	0.85	0.40	0.57	0.56	0.24	0.88	0.11	0.52
Millard	4.29	5.05	5.34	6.43	5.54	5.74	3.97	3.62
Piute	1.17	0.38	0.92	0.60	0.54	0.77	0.11	0.68
Sevier	4.46	4.24	4.98	5.24	3.53	3.86	3.51	3.20
Washington	2.42	2.54	2.20	2.20	3.20	2.30	2.92	2.31
Wayne	0.56	0.18	0.69	0.60	0.26	0.52	0.35	0.13
REGIONAL TOTALS	18.71	18.00	19.46	18.98	17.05	19.20	15.34	14.11
Northeastern Region								
Daggett	0.02	0.33	0.08	0.23	0.1	0.35	0.17	0.42
Duchesne	0.91	1.83	1.98	1.55	2.38	1.94	1.95	1.49
Uintah	2.19	2.26	2.84	2.74	2.35	3.34	2.63	2.90
REGIONAL TOTALS	3.12	4.22	4.90	4.52	4.83	5.63	4.75	4.81
Southeastern Region								
Carbon	1.78	2.90	1.81	1.82	2.56	2.17	3.30	3.00
Emery	1.67	2.05	2.34	2.21	3.30	2.80	2.21	3.23
Grand	0.87	0.83	1.71	0.71	1.50	2.88	1.05	0.94
San Juan	0.91	1.25	1.37	0.81	2.14	2.23	1.35	0.53
REGIOANL TOTALS	5.24	7.03	7.23	5.56	9.49	10.08	7.91	8.71
Unknown counties	2.45	5.31	0.80	0.13	0.05	0.23	0.26	0.07
Mixed counties	--	0.04	0.08	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 7. Statewide summary of mourning dove harvest statistics, 1951-83.

Year	Total Hunters	Total Harvest	Hunters-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
1980	32,627	343,851	97,644	3.52	10.54
1981	30,060	310,068	101,728	3.05	10.31
1982**	31,756	282,188	107,728	2.62	8.89
1983	28,258	272,979	100,568	2.71	9.66
TOTALS (1951-83)	713,922	6,786,680	2,129,648	3.19	9.51
AVERAGES (1951-82)	21,427	203,553	63,409	3.21	9.50

*Estimated.

**Bag Limit increased to 15.

Table 8. Mourning dove field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	62	137	601	769	128	62	137	601	769	128	5.61
Cache	6	16	39	9	23	1	3	15	5	33	1.67
Davis	9	18	37	26	70	4	9	24	18	75	2.00
Morgan	8	17	26	46	180	2	2	2	2	100	1.00
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	9	16	28	49	175	6	10	14	30	214	3.00
REGIONAL TOTALS	94	204	731	899	123	75	161	656	824	126	5.12
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	16	28	53	44	83	4	5	11	7	61	1.40
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	5	13	47	42	89	2	6	15	20	133	3.33
Utah	28	59	145	130	90	2	7	32	55	172	7.86
Wasatch	2	3	9	0	--	2	3	9	0	--	--
REGIONAL TOTALS	51	103	254	216	85	10	21	67	82	122	3.90
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	10	20	34	107	31	8	15	26	92	35	6.13
Millard	49	109	493	589	119	11	32	227	257	113	8.03
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	13	18	33	33	100	0	0	0	0	--	1.83
Washington	12	37	98	116	118	5	14	28	66	236	4.71
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	84	184	658	845	128	24	61	281	415	148	6.80
Northeastern Region											
Daggett	1	2	2	0	0	0	0	0	0	--	--
Duchesne	9	18	61	49	80	4	5	12	8	67	1.60
Uintah	10	27	48	33	69	4	9	13	19	146	2.11
REGIONAL TOTALS	20	47	111	82	74	8	14	25	27	108	1.93
Southeastern Region											
Carbon	8	19	27	84	311	2	5	6	11	183	2.20
Emery	12	26	109	134	122	8	15	45	87	193	5.80
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	10	20	30	61	203	1	3	6	34	566	11.33
REGIONAL TOTALS	30	65	166	279	168	11	23	57	132	231	5.74
LEHI CHECK STATION	190	381	1,753	1,342	77	157	245	1,520	1,259	83	5.14
NEPHI CHECK STATION*	80	197	983	1,387	141	59	173	828	1,280	155	7.40
STATE TOTALS	549	1,181	4,656	5,050	108	344	698	3,434	4,019	117	5.76

*Includes Millard and Juab counties.

Table 9. Mourning dove hunter success trend determined by field bag checks, 1978-83.

Region and County	1978 Doves/ 100 Hr	1978 Doves/ Hunter	1979 Doves/ 100 Hr	1979 Doves/ Hunter	1980 Doves/ 100 Hr	1980 Doves/ Hunter	1981 Doves/ 100 Hr	1981 Doves/ Hunter	1982 Doves/ 100 Hr	1982 Doves/ Hunter	1983 Doves/ 100 Hr	1983 Doves/ Hunter
Northern Region												
Box Elder	74	2.76	98	3.74	131	5.98	135	5.52	109	4.80	128	5.61
Cache	--	--	--	--	163	5.33	--	--	--	--	33	1.67
Davis	--	--	80	1.78	81	2.74	59	1.70	122	3.30	75	2.00
Morgan	--	--	--	--	--	--	--	--	--	--	100	1.00
Rich	--	--	80	2.15	--	--	--	--	406	14.60	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	67	3.00	--	--	--	--	317	9.50	214	3.00
REGIONAL TOTALS	74	2.76	96	3.51	129	5.72	128	4.99	120	4.99	126	5.12
Central Region												
Juab	80	4.00	421	9.83	68	4.30	--	--	--	--	--	--
Salt Lake	76	2.00	23	0.38	333	3.33	--	--	--	--	61	1.40
Sanpete	0	0.00	81	2.23	20	0.56	200	1.00	37	0.92	--	--
Tooele	80	3.00	233	7.00	241	8.09	139	0.93	--	2.77*	133	3.33
Utah	70	2.08	47	1.84	53	1.80	--	--	--	--	172	7.86
Wasatch	--	--	--	--	--	--	--	--	--	--	0	0.00
REGIONAL TOTALS	72	2.29	49	1.85	75	3.84	63	0.96	37	0.92	122	3.90
Southern Region												
Beaver	--	--	158	4.75	224	9.25	78	2.89	113	5.42	--	--
Garfield	250	6.67	196	5.36	--	--	--	--	--	--	--	--
Iron	165	5.06	321	6.77	500	10.00	--	--	--	--	--	--
Kane	393	7.66	331	9.53	180	5.65	--	--	--	--	35	6.13
Millard	213	7.62	98	5.60	172	6.20	152	5.96	--	3.75*	113	8.03
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	1.88*	--	1.83*
Washington	137	4.11	500	10.00	343	6.86	--	--	--	--	236	4.71
Wayne	--	--	--	--	--	--	150	2.77	30	1.13	--	--
REGIONAL TOTALS	236	6.52	141	6.34	203	6.41	125	4.45	97	4.41	148	6.80
Northeastern Region												
Daggett	0	0.00	225	2.12	59	1.11	226	5.20	--	--	--	--
Duchesne	380	4.75	--	--	100	1.00	--	--	66	2.00	67	1.60
Uintah	97	2.00	87	1.75	124	2.38	166	2.92	400	4.00	146	2.11
REGIONAL TOTALS	146	2.77	156	2.00	87	1.61	198	3.95	200	3.33	108	1.93
Southeastern Region												
Carbon	100	2.17	61	1.75	177	3.65	1,000	10.00	230	6.68	183	2.20
Emery	50	0.50	--	--	233	3.50	664	9.13	205	4.79	193	5.80
Grand	--	--	50	0.50	--	--	--	--	32	10.50	--	--
San Juan	400	10.00	217	4.19	261	5.64	115	2.50	--	--	566	11.33
REGIONAL TOTALS	196	4.00	133	3.00	215	4.43	415	6.75	153	5.90	231	5.74
NEPHI CHECK STATION	--	--	86	4.65	37	1.68	116	5.62	91	3.94	155	7.40
LEHI CHECK STATION	--	--	--	--	50	2.39	95	3.97	185	3.16	83	5.14
STATE TOTALS	82	2.65	69	2.86	64	2.94	107	4.34	125	3.98	117	5.76

*Doves per hunter index based on all hunts.

Table 10. Age composition (Immatures/100 Adults) of mourning doves harvested, 1974-83.

Region and County	1974 I/100A (n)	1975 I/100A (n)	1976 I/100A (n)	1977 I/100A (n)	1978 I/100A (n)	1979 I/100A (n)	1980 I/100A (n)	1981 I/100A (n)	1982 I/100A (n)	1983 I/100A (n)	1974-82 Avg. I/100A (n)
Northern Region											
Box Elder	129 (1430)	123 (2830)	103 (1870)	216 (1296)	88 (999)	84 (1271)	121 (1454)	107 (700)	124 (716)	143 (515)	
Cache	--	66 (128)	114 (15)	0 (2)	--	106 (33)	151 (113)	--	--	67 (5)	
Davis	--	100 (4)	--	150 (10)	--	71 (65)	169 (43)	--	107 (56)	55 (17)	
Morgan	250 (7)	84 (116)	--	--	--	--	--	--	--	188 (46)	
Rich	--	--	--	--	--	92 (25)	--	--	4,200 (43)	--	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	213 (119)	100 (26)	117 (13)	233 (20)	--	190 (29)	--	--	--	183 (34)	
REGIONAL TOTALS	134 (1556)	118 (3104)	103 (1898)	216 (1328)	88 (999)	86 (1423)	124 (1610)	107 (700)	135 (815)	143 (617)	123 (1492)
Central Region											
Juab	105 (88)	228 (220)	240 (136)	283 (199)	63 (75)	--	--	--	--	--	
Salt Lake	50 (9)	109 (338)	147 (42)	275 (120)	--	--	--	--	--	--	
Sanpete	185 (111)	650 (30)	222 (87)	139 (74)	--	--	--	--	--	--	
Tooele	99 (219)	76 (202)	156 (115)	195 (177)	60 (262)	84 (103)	118 (96)	78 (71)	80 (137)	--	
Utah	123 (261)	128 (392)	170 (278)	113 (286)	61 (1814)	80 (1823)	45 (29)	--	100 (32)	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	118 (688)	128 (1182)	184 (658)	177 (856)	61 (2151)	81 (1926)	95 (125)	78 (71)	89 (169)	--	112 (870)
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	
Garfield	--	176 (47)	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	176 (47)	320 (30)	--	--	--	--	-- --	--	--	--
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region											
Carbon	--	--	--	--	--	67 (167)	--	--	160 (138)	--	
Emery	--	233 (30)	--	--	--	--	--	260 (18)	76 (88)	--	
Grand	--	300 (84)	--	--	--	--	--	--	--	--	
San Juan	--	189 (214)	97 (274)	--	--	--	--	50 (84)	--	--	--
REGIONAL TOTALS	263 (196)	215 (328)	97 (274)	--	--	67 (167)	281 (80)	65 (102)	119 (226)	--	158 (196)
NEPHI CHECK STATION	--	--	--	--	87 (2013)	114 (1814)	100 (862)	105 (1067)	62 (754)	108 (1239)	94 (1302)
LEHI CHECK STATION	--	--	--	--	--	--	98 (1204)	75 (2075)	83 (1075)	84 (1021)	85 (1451)
STATE TOTALS	136 (2440)	126 (4661)	118 (2860)	200 (2184)	75 (5163)	91 (5330)	111 (3881)	87 (4015)	91 (3143)	106 (2877)	115 (3742)

Table 11. Percent of harvest by hatching date of immature mourning doves in northern Utah, 1974-83.

Date Hatched	Age* (Days)	P	PERCENT OF HARVEST BY HATCH DATE										SAMPLE SIZE									
			1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Aug 3	29	none	48.3	11.1	42.5	36.4	52.8	45.6	35.6	46.1	32.6	22.8	428	177	409	329	246	265	316	166	152	77
Jul 31	32	1	28.6	24.3	22.9	27.9	25.3	22.7	26.9	33.6	24.9	21.3	253	389	220	252	118	132	239	121	116	72
Jul 25	38	2	14.3	32.3	17.9	17.3	12.0	14.3	16.4	14.2	21.7	21.0	127	517	172	156	56	83	146	51	101	71
Jul 18	45	3	3.7	18.4	7.2	6.7	5.8	8.1	11.6	5.0	7.7	14.8	33	295	69	60	27	47	103	18	36	50
Jul 9	54	4	2.3	8.6	4.0	4.3	3.0	5.0	5.1	0.6	4.7	9.2	20	137	38	39	14	29	45	2	22	31
Jun 30	63	5	1.1	5.3	2.0	2.4	0.4	1.5	2.4	--	4.1	6.2	10	85	19	22	2	9	21	0	19	21
Jun 21	72	6	1.2	--	1.0	2.9	0.2	1.7	1.5	--	2.8	2.1	11	--	10	26	1	10	13	0	13	7
Jun 8	85	7	0.4	--	0.9	2.2	--	--	0.3	--	1.3	2.4	4	--	9	20	0	0	3	0	6	8
May 22	102	8	--	--	1.7	--	0.2	0.2	--	0.3	0.2	0.0	--	--	16	--	1	1	0	1	1	1
Apr 27	127	9	--	--	--	--	0.2	0.9	0.2	0.3	--	--	--	--	--	--	1	5	2	1	0	0
Apr 21	133	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0
			100	100	100	100	100	100	100	100	100	100	886	1600	962	904	466	581	888	360	466	338

*Allen, J. M., 1963.

P = Last primary molted.

Table 12. Percent of harvest by hatching date of immature mourning doves from the various regions and check stations in Utah, 1983.

Date Hatched	Age* (Days)	P	PERCENT OF HARVEST BY HATCH DATE						SAMPLE SIZE					
			N Region	Nephi CS	Lehi CS	C Region Other	C Region Total	SE Region	N Region	Nephi CS	Lehi CS	C Region Other	C Region Total	SE Region
Aug 3	29	none	22.8	43.4	37.2	41.7	39.8	34.1	77	128	182	50	360	42
Jul 31	32	1	21.3	32.5	38.1	37.5	36.2	26.8	72	96	186	45	327	33
Jul 25	38	2	21.0	14.6	14.9	13.3	14.6	23.6	71	43	73	16	132	29
Jul 18	45	3	14.8	6.8	8.0	4.1	7.1	10.6	50	20	39	5	64	13
Jul 9	54	4	9.2	2.7	1.6	1.7	2.0	3.3	31	8	8	2	18	4
Jun 30	63	5	6.2	--	0.2	1.7	0.3	0.8	21	0	1	2	3	1
Jun 21	72	6	2.1	--	--	--	--	0.8	7	0	0	0	0	1
Jun 8	85	7	2.4	--	--	--	--	--	8	0	0	0	0	0
May 22	102	8	0.0	--	--	--	--	--	1	0	0	0	0	0
Apr 27	127	9	--	--	--	--	--	--	0	0	0	0	0	0
Apr 21	133	10	--	--	--	--	--	--	0	0	0	0	0	0
			100	100	100	100	100	100	338	295	489	120	904	123

*Allen, J. M., 1963.

P = Last primary molted.

BAND-TAILED PIGEON

Banding

Between 1969 and 1978, 2,649 total pigeons were 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 1983 band-tailed pigeon harvest are unknown, because permits were not required. Therefore, a questionnaire could not be sent to participants. Harvest trends since 1970 are shown in Table 14.

		Percent change from	
	1983	1982	Average
Band-tailed pigeon hunters	--	--	--
Band-tailed pigeon harvest	--	--	--
Hunter-days afield	--	--	--
Pigeons per hunter-day	--	--	--
Pigeons per hunter	--	--	--

Total hunters, hunter-days afield and total harvest are unknown for 1983. It is assumed that a majority of the 1983 harvest again occurred in Iron and Washington counties.

Table 13. Band-tailed pigeon harvest statistics, 1983.

Area Hunted	Participating Hunters		Hunter-days		Harvest		Pigeons/ Hunter-day	Percent of Pressure*	Percent of Harvest
	Reported	Calc.	Reported	Calc.	Reported	Calc.			
Beaver County	--	--	--	--	--	--	--	--	--
Blue Mountain-Elk Ridge	--	--	--	--	--	--	--	--	--
Carbon County	--	--	--	--	--	--	--	--	--
Garfield County	--	--	--	--	--	--	--	--	--
Iron County	--	--	--	--	--	--	--	--	--
Kane County	--	--	--	--	--	--	--	--	--
LaSal Mountain	--	--	--	--	--	--	--	--	--
Millard County	--	--	--	--	--	--	--	--	--
Piute County	--	--	--	--	--	--	--	--	--
Utah County	--	--	--	--	--	--	--	--	--
Washington County	--	--	--	--	--	--	--	--	--
Wayne County	--	--	--	--	--	--	--	--	--
Mixed counties (Washington & Iron)	--	--	--	--	--	--	--	--	--
TOTALS	--	--	--	--	--	--	--	--	--

*Based on hunter-days.

Table 14. Band-tailed pigeon harvest trend, 1970-83.

Year	Total Hunters Afield	Total Harvest	Hunter-Days Afield	Pigeons Per Hunter-day	Pigeons Per 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
1980	62	182	175	1.0	2.9
1981	67	101	142	0.7	1.5
1982	51	113	125	0.9	2.2
1983	Unknown	Unknown	Unknown	Unknown	Unknown
TOTALS (1970-83)	746	2,036	1,787	1.1	2.7
AVERAGES (1970-82)	57	157	137	1.1	2.8

CHUKAR PARTRIDGE

SUMMARY

The statewide breeding population of chukars decreased in 1983 following the low production rate of 1982. Overwinter survival appeared less than normal. Late winter and early spring precipitation, critical to successful chukar production, was above average, indicating good reproductive potential.

Results of the brood survey indicated that brood production was above average. Favorable nesting conditions and adequate forage were available as a result of the above normal temperatures and above average precipitation during January, February and March. However, April, May, June and July were colder than normal with above normal precipitation which may have reduced brood survival. The indicated chukar density decreased significantly during 1983, although, chukars observed per 100 hours of effort remained about average.

Harvest statistics reflected a significant increase in harvest. Likewise, hunter success (chukars per hunter-day) increased 24 percent from 1982. Chukar hunters decreased 8 percent and spent 2 percent less time afield than in 1982.

Brood Counts

Results of the annual random brood survey for 1983 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and chukars observed per 100 hours are found in Tables 2-4. Following are the survey results for 1983 compared to 1982 and the 10-year (1973-82) average:

	1983	Percent change from 1982	Percent change from Average
Total chukars observed	336	-60	-60
Young per 100 adults	586	+325	+76
Mean brood size	8.00	-10	-7
Chukars observed per 100 hours	398	-20	+4
Total hours effort	84.5	-50	-66

Harvest data for 1982 indicated decreased breeding populations for 1983 in all regions except the Northeastern. Late winter and early spring precipitation (December-April) was above average over the entire state (Figure 2) producing favorable conditions for good production. Above average temperatures were recorded through March, but April, May, June and July were cooler than normal. Above normal precipitation continued through April, May, June and July.

Effort on chukar brood counts decreased significantly from 1982 and remained far below average.

Brood count sample sizes were again extremely small for all regions due to reduced effort. The Northern Region counted 3 and the Southeastern Region counted 4 of the state total of 8 broods. Chukar density was 4 percent above the 10-year average and production was up considerably from 1982.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire survey for 1983 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 1983 harvest statistics to 1982 and the 25-year average:

	1983	Percent change from 1982	Percent change from Average
Chukar hunters	10,418	-8	-32
Chukars harvested	29,649	+21	-32
Hunter-days afield	31,904	-2	-29
Chukars per hunter-day	0.93	+24	-2
Chukars per hunter	2.85	+32	+3

Chukar hunters spent less time afield but harvested about 21 percent more birds than in 1982. Chukars per hunter-day was above the 1982 level but slightly below the statewide average. The Central Region again had the highest percentage of the harvest in 1983, and also had the highest percentage of hunter pressure.

Field Bag Check

A summary of field bag check data for 1983 is shown in Table 10. The hunter success trend determined by field bag checks since 1978 is shown in Table 11. Data for the 1983 season compared to 1982 and the (1966-82) average follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	242	-37	-55
Total hours hunted	889	-45	-63
Chukars per hunter (complete hunts)	0.98	+1.45	-11
Chukars bagged per 100 hours	26	+189	+8
Average hours per hunter-day (complete hunts)	4.4	-4	-2
Hours hunted per chukar bagged (complete hunts)	4.5	-61	-10

Field bag checks indicate hunter success was up, although fewer hunters pursued chukars in 1983 and spent fewer days afield. The hours required to bag a chukar was 10 percent less than average.

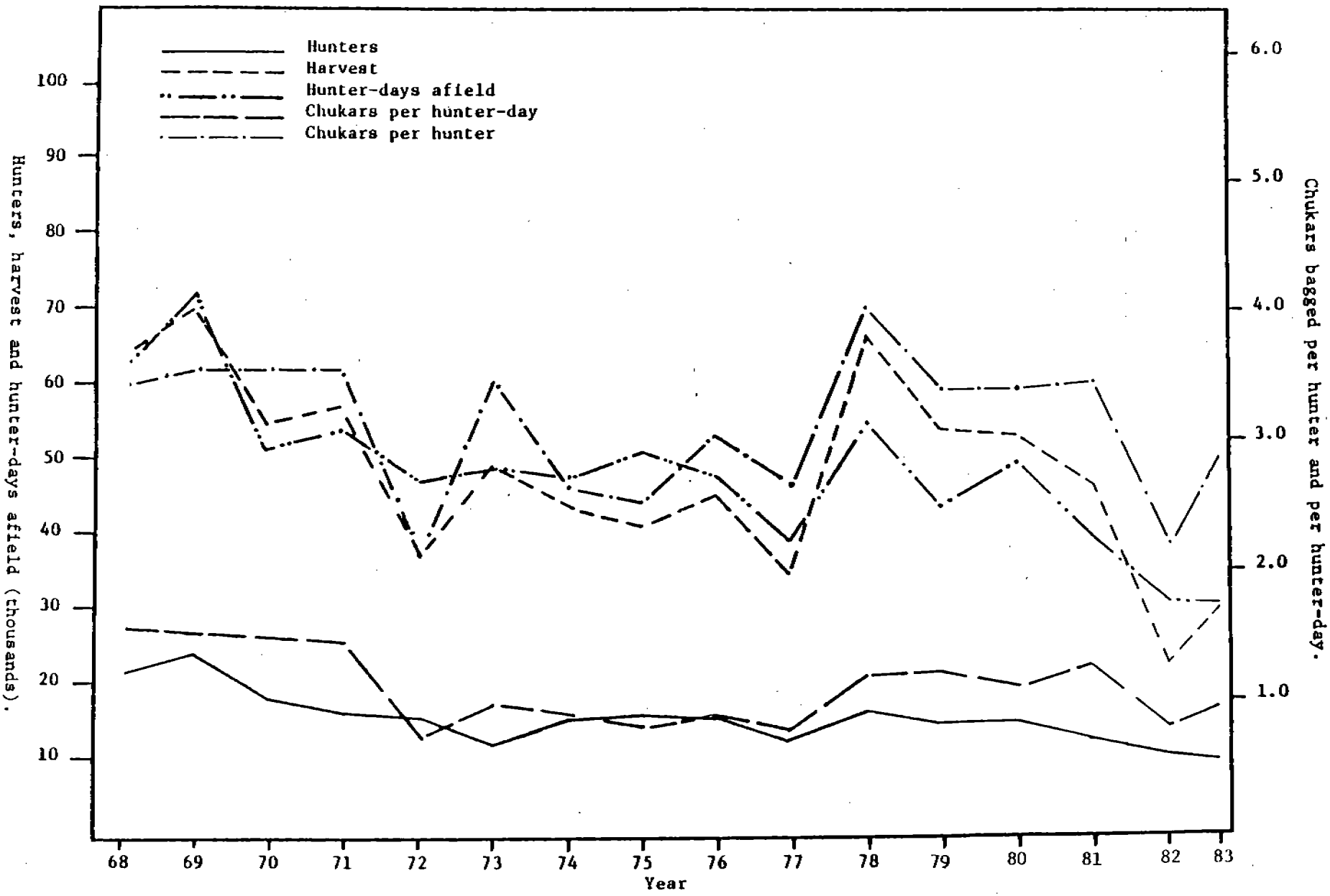


Figure 1. Statewide trends of chukar partridge harvest statistics.

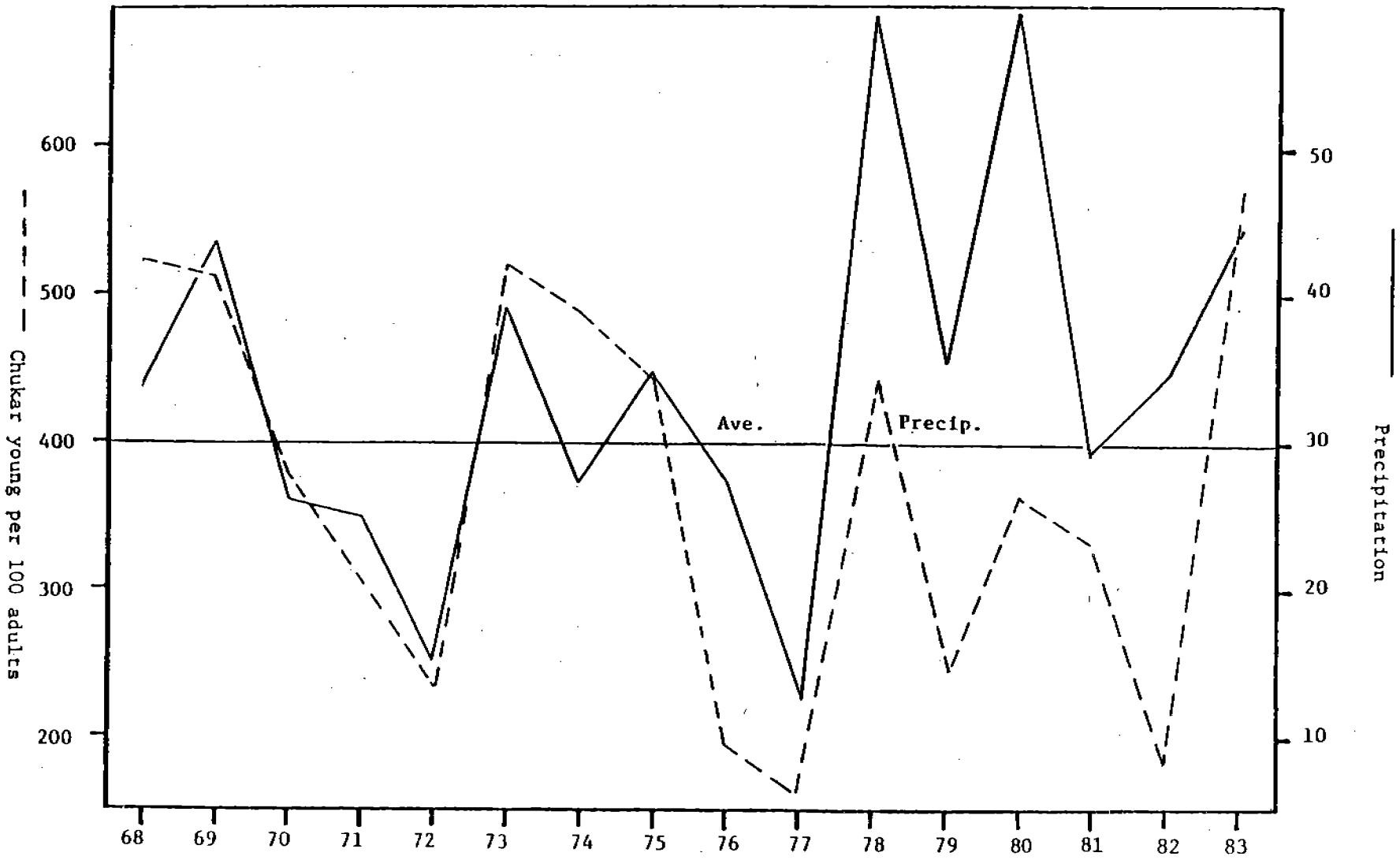


Figure 2. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production.

Table 1. Chukar summer inventory summary, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cache	1	1	6	6.00	0	0	0	1	6	600	0	0	1	0	1	700
Davis	0	0	0	--	0	0	5	5	0	--	0	0	0	5	5	100
Morgan	2	2	15	7.50	0	0	0	2	15	750	2	2	0	0	2	850
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	0	0	0	--	0	0	0	0	0	--	15	3	4	0	7	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	3	21	7.00	0	0	5	8	21	262	17	5	5	5	15	227
Central Region																
Juab	0	0	0	--	0	0	0	0	0	--	70	3	0	0	3	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	0	0	0	--	0	0	0	0	0	--	85	6	2	0	8	--
Wasatch	0	0	0	--	3	24	0	3	24	800	35	3.5	2	0	5.5	491
REGIONAL TOTALS	0	0	0	--	3	24	0	3	24	800	190	12.5	4	0	16.5	164
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne*	0	0	0	--	8	59	0	8	59	737	20	2	0	0	2	3,350
REGIONAL TOTALS	0	0	0	--	8	59	0	8	59	737	20	2	0	0	2	3,350
Northeastern Region																
Daggett	0	0	0	--	0	0	0	0	0	--	140	13	0	1	14	--
Duchesne	0	0	0	--	0	0	0	0	0	--	240	15	0	1	16	--
Uintah	1	1	10	10.00	0	0	1	2	10	500	108	8	0	6	14	86
REGIONAL TOTALS	1	1	10	10.00	0	0	1	2	10	500	488	36	0	8	44	27
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	4	4	33	8.25	20	140	4	28	173	617	70	7	0	0	7	2,871
San Juan	0	0	0	--	0	0	0	0	0	--	33	--	--	--	--	--
REGIONAL TOTALS	4	4	33	8.25	20	140	4	28	173	617	103	7	0	0	7	2,871
STATE TOTALS	8	8	64	8.00	31	223	10	49	287	586	818	62.5	9	13	84.5	398

*Data collected by Southeastern Region.

Table 2. Trend of chukar young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	760	663	842	733	300	562	198	111	326	120	--	
Cache	488	750	550	1,900	--	--	300	--	--	--	600	
Davis	--	--	--	--	--	--	3	43	65	7	--	
Morgan	--	--	--	--	--	--	--	--	--	--	750	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	750	--	
Weber	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	639	684	814	722	300	562	81	53	193	27	262	408
Central Region												
Juab	725	350	500	352	356	1,100	--	557	315	600	--	
Salt Lake	0	--	0	--	380	--	283	--	400	50	--	
Sanpete	0	--	--	488	331	440	500	767	--	400	--	
Tooele	410	356	264	417	96	686	771	697	359	585	--	
Utah	335	96	--	800	150	0	205	243	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	800	
REGIONAL TOTALS	364	300	308	411	230	386	518	572	348	512	800	395
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	450	--	--	350	--	--	122	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	340	--	--	--	
Millard	--	--	50	264	95	150	450	550	200	--	--	
Piute	--	--	500	--	--	0	500	--	938	642	--	
Sevier	--	--	--	--	--	--	--	600	800	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	900	--	--	--	600	737	
REGIONAL TOTALS	--	--	114	294	95	233	420	425	410	389	737	298
Northeastern Region												
Daggett	--	--	--	--	--	--	575	--			--	
Duchesne	--	--	--	800	375	0	--	--	163	--	--	
Uintah	--	733	--	766	--	--	--	--	--	--	500	
REGIONAL TOTALS	--	733	--	755	375	--	--	--	78	--	500	485
Southeastern Region												
Carbon	650	794	633	--	125	--	--	700	--	--	--	
Emery	725	842	367	200	--	500	--	--	--	220	--	
Grand	871	656	377	98	0	980	416	--	577	518	617	
San Juan	500	650	552	40	58	220	--	--	533	--	--	
REGIONAL TOTALS	712	717	437	97	59	591	416	700	575	426	617	473
STATE TOTALS	519	487	443	196	170	444	245	358	326	138	586	333

Table 3. Trend of chukar mean brood size from 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	13.00	11.00	11.00	10.50	6.00	14.60	9.57	--	8.33	12.00	--	
Cache	13.00	7.00	--	19.00	--	--	3.00	--	--	--	6.00	
Davis	--	--	--	--	--	--	2.00	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	7.50	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	7.50	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	13.00	8.00	11.00	13.33	6.00	14.60	8.00	--	8.33	3.00	7.00	9.47
Central Region												
Juab	9.67	11.00	8.67	7.75	9.00	11.00	--	7.70	5.45	6.00	--	
Salt Lake	--	--	--	--	--	--	5.67	--	4.00	--	--	
Sanpete	--	--	--	11.00	6.50	5.00	6.33	--	--	--	--	
Tooele	15.00	11.89	9.00	7.20	6.00	6.50	14.07	9.91	8.92	10.60	--	
Utah	8.40	8.00	--	8.00	3.00	0.00	6.00	4.00	--	--	--	
Wasatch	--	--	--	--	--	--	--	6.00	--	--	--	
REGIONAL TOTALS	10.10	11.35	8.83	7.68	6.64	6.50	11.38	8.16	7.13	10.14	--	8.79
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	9.50	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	3.00	6.71	3.50	0.00	6.00	10.00	--	--	--	
Piute	--	--	5.00	--	--	0.00	10.00	--	10.50	3.00	--	
Sevier	--	--	--	--	--	--	--	--	8.00	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	9.00	--	--	--	9.00	--	
REGIONAL TOTALS	--	--	4.00	7.33	3.50	9.00	8.00	10.00	9.67	7.00	--	7.31
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	9.00	--	--	
Duchesne	--	--	--	8.00	3.75	0.00	--	--	--	--	--	
Uintah	--	6.00	--	7.67	--	--	--	--	--		10.00	
REGIONAL TOTALS	--	6.00	--	7.75	3.75	--	--	--	9.00	--	10.00	6.63
Southeastern Region												
Carbon	9.29	9.00	9.50	9.00	--	--	--	--	--	--	--	
Emery	--	12.00	9.80	12.00	6.17	--	5.00	--	--	--	--	
Grand	7.20	1.00	6.25	4.00	6.00	--	0.00	12.50	--	11.90	8.25	
San Juan	9.00	--	10.00	4.33	3.00	--	1.00	--	--	5.33	--	
REGIONAL TOTALS	8.50	8.50	9.05	6.00	5.58	--	3.00	12.50	--	11.30	8.25	7.95
STATE TOTALS	10.08	10.65	10.00	7.12	7.10	5.77	8.75	10.35	8.23	9.48	8.00	8.63

Table 4. Trend of chukars observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1972-81
Northern Region												
Box Elder	77	468	895	208	32	307	438	43	645	90	--	
Cache	--	--	130	167	--	--	57	--	--	--	700	
Davis	--	--	--	--	--	--	608	760	810	1,127	100	
Morgan	--	--	--	100	--	--	--	--	--	--	850	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	119	632	640	197	32	307	430	140	502	479	227	348
Central Region												
Juab	174	338	229	413	152	109	1,500	206	692	363	--	
Salt Lake	60	--	25	0	400	--	209	--	500	43	--	
Sanpete	7	0	0	157	192	142	200	248	--	857	--	
Tooele	198	730	291	452	136	917	1,038	1,468	985	1,013	--	
Utah	336	140	0	129	33	133	1,220	533	--	38	--	
Wasatch	--	--	--	--	--	--	--	350	--	--	491	
REGIONAL TOTALS	167	437	178	302	157	243	623	440	722	578	164	385
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	0	0	0	440	--	--	1,200	--	--	500	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	0	--	--	--	--	--	--	--	--	--	
Millard	--	291	36	1,020	216	182	220	236	1,467	--	--	
Piute	--	--	150	0	--	0	120	--	1,660	433	--	
Sevier	--	100	--	--	--	--	--	1,400	900	17	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	0	--	10	83	--	--	--	700	3,350	
REGIONAL TOTALS	0	79	37	616	114	115	242	525	1,436	266	3,350	381
Northeastern Regio												
Daggett	0	0	0	--	0	--	--	--	--	--	--	
Duchesne	0	0	0	22	73	0	0	--	300	790	--	
Uintah	0	227	0	96	0	--	0	--	614	454	86	
REGIONAL TOTALS	0	83	0	52	27	0	0	--	533	348	27	209
Southeastern Region												
Carbon	375	947	1,100	--	450	--	0	1,600	--	--	--	
Emery	194	1,130	233	370	0	200	--	--	--	--	--	
Grand	358	900	2,277	2,950	40	379	1,020	--	2,891	1,167	2,871	
San Juan	800	789	721	492	136	67	0	--	1,120	--	--	
REGIONAL TOTALS	298	915	996	883	98	185	230	160	2,338	1,578	2,871	768
STATE TOTALS	150	469	303	370	96	213	396	336	978	496	398	381

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	180	7,021	6,994	1.00	22.01	23.59
Cache	36	1,043	441	0.42	3.27	1.49
Davis	6	160	26	0.17	0.50	0.09
Morgan	25	628	641	1.02	1.97	2.16
Rich	5	80	66	0.83	0.25	0.22
Summit	11	280	387	1.38	0.88	1.31
Weber	29	682	414	0.61	2.14	1.40
REGIONAL TOTALS	292	9,894	8,963	0.91	31.01	30.25
Central Region						
Juab	35	936	936	1.00	2.93	3.16
Salt Lake	42	1,297	1,230	0.95	4.07	4.15
Sanpete	27	1,377	1,056	0.77	4.32	3.56
Tooele	170	6,432	6,031	0.94	20.16	20.34
Utah	100	4,426	3,784	0.85	13.87	12.76
Wasatch	11	307	187	0.61	0.96	0.63
REGIONAL TOTALS	385	14,775	13,224	0.90	46.31	44.60
Southern Region						
Beaver	4	66	120	1.80	0.21	0.40
Garfield	4	106	40	0.38	0.33	0.13
Iron	3	26	--	--	0.08	0.00
Kane	3	213	80	0.38	0.67	0.27
Millard	39	1,056	1,350	1.28	3.31	4.55
Piute	10	414	280	0.68	1.30	0.94
Sevier	36	1,738	695	0.40	5.45	2.34
Washington	--	--	--	--	0.00	0.00
Wayne	4	53	26	0.50	0.17	0.09
REGIONAL TOTALS	103	3,672	2,591	0.71	11.51	8.73
Northeastern Region						
Daggett	** 1	26	0	--	0.08	0.00
Duchesne	** 7	133	66	0.50	0.42	0.22
Uintah	** 4	93	93	1.00	0.29	0.31
REGIONAL TOTALS	12	252	159	0.63	0.79	0.53
Southeastern Region						
Carbon	17	655	575	0.88	2.05	1.94
Emery	45	1,564	2,407	1.54	4.90	8.12
Grand	20	789	1,270	1.61	2.47	4.28
San Juan	3	147	267	1.82	0.46	0.90
REGIONAL TOTALS	85	3,155	4,519	1.43	9.89	15.24
Unknown Counties	3	147	187	1.27	0.46	0.63
STATE TOTALS	880	31,904	29,649	0.93	100	100

*Total hunter trips from questionnaire returns.

**Closed to hunting in 1983.

Table 6. Summary of chukars bagged per hunter-day by region and county, 1975-83.

Region and County	Year								
	1975	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region									
Box Elder	1.20	1.31	1.23	1.80	1.34	1.41	1.55	0.75	1.00
Cache	0.64	0.70	1.11	0.89	0.60	0.74	0.42	0.38	0.42
Davis	0.31	0.89	1.29	2.20	2.19	0.75	0.33	0.47	0.17
Morgan	0.69	0.31	0.88	1.08	1.38	0.75	0.75	1.21	1.02
Rich	0.20	0.81	0.13	1.22	0.38	0.60	0.50	0.67	0.83
Summit	1.47	1.43	1.00	0.75	1.02	0.78	0.73	0.00	1.38
Weber	0.46	0.60	0.75	0.77	0.67	0.48	1.25	0.91	0.61
REGIONAL TOTALS	0.97	1.07	1.15	1.57	1.25	1.25	1.28	0.74	0.91
Central Region									
Juab	0.55	0.46	0.73	0.63	1.13	0.86	0.66	0.57	1.00
Salt Lake	0.76	0.54	1.41	0.89	1.20	0.89	1.32	0.96	0.95
Sanpete	0.72	0.35	0.90	0.70	1.15	0.90	1.72	0.57	0.77
Tooele	0.67	0.86	0.86	1.06	1.37	0.89	0.97	0.73	0.94
Utah	0.42	0.90	0.56	0.66	0.83	1.01	0.81	0.74	0.85
Wasatch	0.18	0.56	0.56	1.29	0.44	0.58	0.33	0.94	0.61
REGIONAL TOTALS	0.58	0.77	0.80	0.91	1.15	0.92	0.98	0.73	0.90
Southern Region									
Beaver	0.00	0.59	0.20	0.00	0.00	0.86	2.33	0.61	1.80
Garfield	5.00	0.50	0.00	2.00	1.71	2.55	1.11	1.00	0.38
Iron	0.00	0.76	--	0.00	0.00	0.00	1.00	0.17	--
Kane	0.00	0.00	--	0.00	3.00	4.00	0.00	0.00	0.38
Millard	0.48	0.87	0.66	0.98	1.29	1.04	1.92	1.57	1.28
Piute	0.69	0.24	0.67	1.35	0.78	0.56	1.78	0.59	0.68
Sevier	0.40	0.57	0.53	0.76	0.67	0.39	1.48	0.41	0.40
Washington	0.33	0.80	0.33	0.00	1.67	0.00	0.00	0.00	--
Wayne	2.43	2.74	3.94	1.10	3.00	2.85	2.29	0.83	0.50
REGIONAL TOTALS	0.64	0.79	0.80	0.95	0.89	0.85	1.71	0.68	0.71
Northeastern Region									
Daggett	0.00	2.00	--	0.00	2.25	0.00	0.00	0.00	--
Duchesne	0.34	0.77	0.19	1.78	1.20	1.28	1.30	0.43	0.50
Uintah	1.32	0.40	0.33	1.88	1.38	0.27	1.20	2.06	1.00
REGIONAL TOTALS	0.67	0.74	0.25	1.56	1.38	1.00	1.25	1.15	0.63
Southeastern Region									
Carbon	0.72	0.69	0.19	0.58	1.88	1.01	1.24	0.76	0.88
Emery	1.44	1.37	0.39	0.18	1.27	1.37	1.06	0.83	1.54
Grand	1.85	1.42	0.26	0.33	3.39	1.80	1.89	1.02	1.61
San Juan	0.50	0.43	0.00	1.56	4.00	1.67	0.67	2.20	1.82
REGIONAL TOTALS	1.31	1.05	0.27	0.40	2.14	1.44	1.42	0.90	1.43
Unknown Counties	0.59	1.18	0.77	1.48	1.00	0.17	1.83	1.00	1.27
STATE TOTALS	0.81	0.93	0.88	1.21	1.23	1.08	1.23	0.75	0.93

Table 7. Percentage distribution of chukar harvest by region and county, 1975-83.

Region and County	Year 1975	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region									
Box Elder	30.32	32.64	37.25	49.32	27.64	38.93	26.85	25.31	23.59
Cache	3.56	5.04	6.97	4.51	1.29	1.84	1.27	1.25	1.49
Davis	0.39	2.31	1.77	2.95	2.58	0.49	0.09	0.56	0.09
Morgan	3.71	0.79	2.21	2.74	2.75	2.24	1.98	3.20	2.16
Rich	0.08	0.60	0.09	0.33	0.34	0.10	0.05	0.13	0.22
Summit	2.31	0.46	0.66	0.27	1.15	0.23	0.52	0.00	1.31
Weber	2.03	1.16	1.19	2.19	0.87	0.49	0.94	1.94	1.40
REGIONAL TOTALS	42.40	43.00	50.13	62.31	36.61	44.33	31.71	32.39	30.25
Central Region									
Juab	2.23	1.85	2.12	0.88	2.94	3.33	2.31	2.07	3.16
Salt Lake	3.79	2.36	5.78	3.65	4.12	2.90	6.94	4.51	4.15
Sanpete	2.62	0.69	2.07	1.43	4.63	2.14	2.93	3.01	3.56
Tooele	13.09	12.71	17.08	16.74	20.44	14.56	14.11	18.23	20.34
Utah	6.57	13.96	8.52	5.18	8.05	12.71	7.69	13.97	12.76
Wasatch	0.23	0.42	0.44	1.10	0.20	0.46	0.05	1.07	0.63
REGIONAL TOTALS	28.53	31.99	36.01	28.98	40.37	36.10	34.03	42.86	44.60
Southern Region									
Beaver	0.00	0.46	0.04	0.00	0.00	0.40	0.99	1.07	0.40
Garfield	0.39	0.23	0.00	0.55	0.34	1.84	0.47	0.38	0.13
Iron	0.00	0.14	--	0.00	0.00	0.00	0.05	0.06	0.00
Kane	0.00	0.00	--	0.00	0.50	0.13	0.00	0.00	0.27
Millard	1.25	2.54	2.52	1.49	2.47	1.65	3.63	5.33	4.55
Piute	0.70	0.37	0.71	0.70	1.57	0.92	6.13	0.63	0.94
Sevier	2.34	1.57	2.56	1.83	3.59	1.68	5.10	4.07	2.34
Washington	0.04	0.18	0.04	0.00	0.14	0.00	0.00	0.00	0.00
Wayne	2.19	2.40	2.78	0.33	0.17	1.22	0.76	0.31	0.09
REGIONAL TOTALS	6.92	7.91	8.65	4.90	8.77	7.84	17.13	11.84	8.73
Northeastern Region									
Daggett	0.00	0.18	--	0.00	0.25	0.00	0.00	0.00	0.00
Duchesne	0.59	0.79	0.40	0.49	0.67	1.35	0.61	0.63	0.22
Uintah	1.29	0.18	0.62	0.27	0.50	0.10	0.57	2.32	0.31
REGIONAL TOTALS	1.88	1.16	1.02	0.76	1.43	1.45	1.18	2.94	0.53
Southeastern Region									
Carbon	3.17	2.22	0.26	0.33	5.21	2.34	2.64	2.82	1.94
Emery	7.93	1.90	0.88	0.21	1.99	2.34	4.29	3.38	8.12
Grand	7.89	5.50	0.93	0.76	5.33	5.20	8.31	3.01	4.28
San Juan	0.27	0.46	0.00	0.43	0.22	0.33	0.19	0.69	0.90
REGIONAL TOTALS	19.27	10.08	2.07	1.74	12.76	10.21	15.43	9.90	15.24
Unknown Counties	1.02	5.87	2.12	1.31	0.06	0.07	0.52	0.06	0.63
STATE TOTALS	100	100	100	100	100	100	100	100	100

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1975-83.

Region and County	Year								
	1975	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region									
Box Elder	20.53	23.07	26.68	33.14	25.32	29.87	21.19	25.13	22.01
Cache	4.55	6.65	5.51	6.13	2.65	2.70	3.71	2.44	3.27
Davis	1.02	2.40	1.20	1.62	1.45	0.71	0.35	0.89	0.50
Morgan	4.39	2.36	2.21	3.06	2.45	3.23	3.24	1.97	1.97
Rich	0.32	0.69	0.58	0.33	1.10	0.18	0.12	0.14	0.25
Summit	1.27	0.30	0.58	0.44	1.38	0.32	0.87	0.70	0.88
Weber	3.56	1.80	1.40	3.43	1.58	1.10	0.93	1.59	2.14
REGIONAL TOTALS	35.63	37.26	38.15	48.15	35.93	39.10	30.40	32.86	31.01
Central Region									
Juab	3.31	3.73	2.56	1.70	3.20	4.19	4.28	2.72	2.93
Salt Lake	4.07	4.03	3.61	4.98	4.24	3.52	6.43	3.52	4.07
Sanpete	2.96	1.84	2.02	2.47	4.96	2.56	2.08	3.94	4.32
Tooele	15.80	13.77	17.49	19.08	18.39	17.54	17.83	18.71	20.16
Utah	12.71	14.45	13.38	9.45	11.95	13.64	11.70	14.16	13.87
Wasatch	1.05	0.69	0.70	1.03	0.55	0.85	0.17	0.84	0.96
REGIONAL TOTALS	39.89	38.51	39.74	38.71	43.30	42.29	42.50	43.88	46.31
Southern Region									
Beaver	0.00	0.73	0.19	0.07	0.00	0.50	0.52	1.31	0.21
Garfield	0.06	0.43	0.04	0.33	0.24	0.78	0.52	0.28	0.33
Iron	0.25	0.17	--	0.07	0.07	0.04	0.06	0.28	0.08
Kane	0.00	0.21	--	0.00	0.21	0.04	0.00	0.14	0.67
Millard	2.10	2.70	3.33	1.85	2.34	1.70	2.32	2.53	3.31
Piute	0.83	1.42	0.93	0.63	2.48	1.78	4.23	0.80	1.30
Sevier	4.74	2.57	4.23	2.92	6.58	4.65	4.23	7.36	5.45
Washington	0.10	0.21	0.12	0.00	0.10	0.00	0.00	0.05	0.00
Wayne	0.73	0.81	0.62	0.37	0.07	0.46	0.41	0.28	0.17
REGIONAL TOTALS	8.80	9.26	9.46	6.24	12.09	9.94	12.28	13.03	11.51
Northeastern Region									
Daggett	0.10	0.09	--	0.07	0.14	0.04	0.00	0.00	0.08
Duchesne	1.40	0.94	1.86	0.33	0.69	1.14	0.58	1.08	0.42
Uintah	0.79	0.43	1.67	0.18	0.45	0.39	0.58	0.84	0.29
REGIONAL TOTALS	2.29	1.46	3.53	0.59	1.27	1.56	1.16	1.92	0.79
Southeastern Region									
Carbon	3.59	3.00	1.20	0.70	3.41	2.49	2.61	2.77	2.05
Emery	4.48	1.29	1.98	1.44	1.93	1.85	4.98	3.05	4.90
Grand	3.46	3.60	3.10	2.77	1.93	3.13	5.39	2.20	2.47
San Juan	0.45	0.99	0.39	0.33	0.07	0.21	0.35	0.23	0.46
REGIONAL TOTALS	11.98	8.88	6.67	5.24	7.34	7.67	13.32	8.25	9.89
Unknown Counties	1.40	4.63	2.40	1.07	0.07	0.43	0.35	0.05	0.46
Mixed Counties	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100	100

Table 9. Statewide summary of chukar partridge harvest statistics, 1958-83.

Year	Total Hunters	Total Harvest	Hunters-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
1980	15,100	51,511	47,778	1.08	3.41
1981	12,907	44,983	36,662	1.23	3.49
1982	11,326	24,460	32,691	0.75	2.16
1983	10,418	29,649	31,904	0.93	2.85
TOTALS (1958-83)	393,343	1,124,080	1,105,767	1.02	2.86
AVERAGES (1958-82)	15,317	43,777	44,755	0.95	2.78

Table 10. Chukar field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	24	58	269	29	11	24	58	269	29	11	0.50
Cache	1	3	6	0	--	1	3	6	0	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	2	4	14	4	29	2	4	14	4	29	1.00
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	27	65	298	33	11	27	65	289	33	11	0.51
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	43	138	504	136	27	5	18	94	15	16	0.83
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	43	138	504	136	27	5	18	94	15	16	0.83
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	1	4	2	11	550	1	4	2	11	530	2.75
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1	4	2	11	550	1	4	2	11	530	0.75
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region											
Carbon	2	7	13	2	16	0	0	0	0	--	--
Emery	4	11	33	16	49	2	5	19	15	79	3.00
Grand	9	17	48	34	71	4	7	28	23	83	3.29
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	15	35	94	52	56	6	12	47	38	81	3.17
STATE TOTALS	86	242	889	232	26	39	93	432	97	22	0.98

*Includes data from Southeastern Region.

Table 11. Chukar hunter success trend as determined by field bag checks, 1978-83.

Region and County	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter	1981 Birds/ 100 Hr	1981 Birds/ Hunter	1982 Birds/ 100 Hr	1982 Birds/ Hunter	1983 Birds/ 100 Hr	1983 Birds/ Hunter
Northern Region												
Box Elder	40	1.77	19	0.74	15	0.64	47	1.90	5	0.28	11	0.50
Cache	1	--	7	6.29	14	0.50	9	0.33	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	29	1.00
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	34	1.48	18	0.71	15	0.63	46	1.83	5	0.28	11	0.51
Central Region												
Juab	7	0.75	0	0.00	--	--	62	2.10	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	33	2.08	89	3.88	--	--	44	1.60	10	0.50	16	0.83
Utah	75	2.50	15	0.52	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	40	2.15	28	1.02	--	--	50	1.77	10	0.50	16	0.83
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	76	1.46	--	--	--	--	25	0.74	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	550	2.75
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	33	0.67	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	25	0.96	--	--	--	--
REGIONAL TOTALS	--	--	76	1.46	--	--	26	0.92	25	0.74	550	2.75
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	44	1.71	33	0.67	26	0.81	79	3.00
Grand	--	--	108	3.83	73	2.54	60	2.00	--	--	83	3.29
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	108	3.83	57	2.11	54	1.56	20	0.67	81	3.17
STATE TOTALS	36	1.60	29	1.07	21	0.89	44	1.69	9	0.40	22	0.98

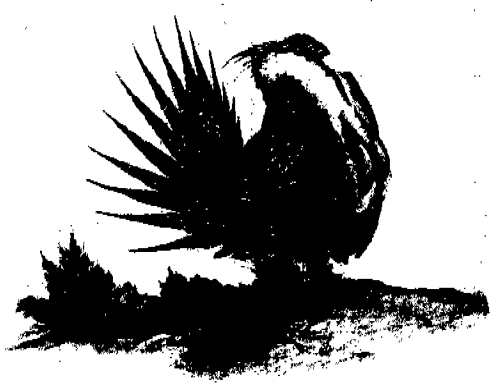
SAGE GROUSE

SUMMARY

Harvest data for 1982 indicated a below average breeding population of sage grouse for 1983. Strutting ground surveys also indicated a 12 percent drop in male attendance from 1982.

Brood surveys showed increased production throughout the state except the Southern region during 1983. However, birds observed per 100 hours decreased 36 percent compared to 1982, and was significantly below average.

The higher production in 1983 was apparent in harvest statistics collected from questionnaires and from field bag checks. Total statewide harvest increased 20 percent and was 2 percent below the 20-year average. Total hunters and hunter-days afield both increased 2 and 18 percent, respectively, from 1982. Sage grouse bagged per hunter and sage grouse bagged per hunter-day both increased from the previous year.



Strutting Ground Counts

The status of the sage grouse breeding population for 1983, as indicated by strutting ground counts, is shown in Table 1 of this section. Results of this survey for 1983 compared to 1982 and the 1967-82 average follow:

	1983	Percent change from 1982	Percent change from Average
Number of grounds counted	113	-7	+3
Total male grouse counted	1,711	-18	-23
Average male grouse per ground	15	-12	-25
Percent change from previous year (comparable grounds)	-8	--	--

Access for spring 1983 strutting ground counts was generally good in all regions of the state. Although the central and southeastern regions showed an increase in sage grouse counted, the numbers of grouse observed were down in all other regions. The statewide index for comparable grounds was down 8 percent. Harvest data for 1982 indicated below average populations going into the winter of 1982-83, but the numbers of juvenile birds indicated poor production during 1983. Declines in breeding populations appeared to be the trend in most areas of the state.

Brood Counts

Results of the survey for 1983 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. Indices for 1983 are compared to 1982 and the previous 10-year (1973-82) average as follows:

	1983	Percent change from 1982	Percent change from Average
Total sage grouse counted	1,312	-29	-57
Young per 100 adults	202	+13	+29
Mean brood size	4.58	-6	+1
Sage grouse observed per 100 hours	258	-36	-35
Total hours effort	508	+10	-36

The effort devoted to sage grouse brood counts was 36 percent below average, and the total number of grouse counted was 57 percent below average.

Sage grouse density decreased 36 percent from 1982, but production showed a 13 percent increase. Fewer adults and fewer young were observed, with average brood size 1 percent above the 10-year average.

Harvest

Hunter Questionnaire

Results of the 1983 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 1983 hunting season compared to 1982 and the 1963-82 average follow:

	1983	Percent change from 1982	Percent change from Average
Sage grouse hunters	9,201	+2	-17
Sage grouse harvested	14,949	+20	-2
Hunter-days afield	18,467	+18	+3
Sage grouse per hunter-day	0.81	+3	-5
Sage grouse per hunter	1.63	+18	+16

Production increased slightly in 1983 and was reflected in the harvest. Total statewide harvest increased 20 percent. Total sage grouse hunters and hunter-days afield also increased. Hunter success increased 4 percent in the Northern Region where 32 percent of the harvest and 44 percent of the hunting pressure occurred.

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

Field Bag Checks

A summary of field bag check data for 1983 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12. Results of the 1983 survey compared to 1982 and the 1973-82 average follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	1,132	-20	-47
Total hours hunted	5,615	-21	-32
Sage grouse per hunter (complete hunts)	0.99	+34	+20
Sage grouse bagged per 100 hours	19	+36	0
Average hours per hunter-day (complete hunts)	5.5	+4	+31
Hours hunted per grouse bagged	5.6	-21	+4

Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1983 is found in Table 13 and the trend from 1980-83 in Table 14.

Following are data derived from wing surveys in 1983 compared to 1982 and the 1978-82 averages:

	1983	Percent change from 1982	Percent change from Average
Sample size	1,000	-16	-37
Percent males	43	+10	+5
Percent females	57	-7	-3
Young per 100 adults	152	+22	+19
Young per 100 hens (adult)	228	+27	+16

Analysis of wings collected at checking stations during the 1983 season indicates that statewide production was up compared to 1982, and above the previous 5-year average. However, production remained down for the northern portion of the state and specifically Box Elder County.

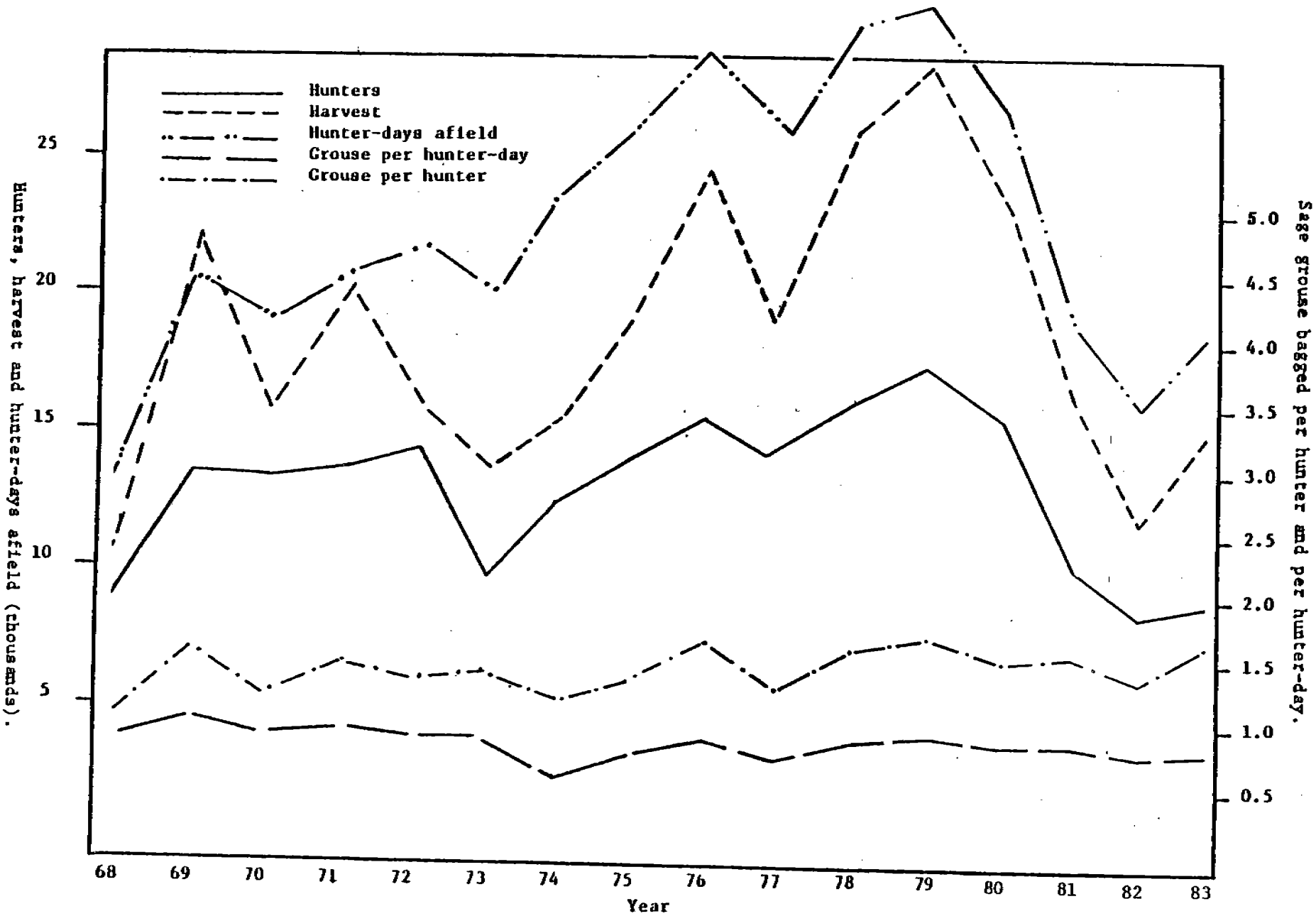


Figure 1. Statewide trend of sage grouse harvest statistics.

Table 1. Summary of sage grouse strutting ground counts by region and county, 1973-83.

Region and County	Year										
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Northern Region											
BOX ELDER											
No. strutting grounds counted	21	25	19	15	22	18	24	28	35	15	17
Total male grouse counted	325	306	346	239	621	452	763	899	711	384	322
County average (all strutting grounds)	16	12	18	16	28	25	32	32	20	26	19
% change from previous year - comparable grounds	-30	-19	+29	0	+53	+3	+69	+9	-35	-24	-29
CACHE											
No. strutting grounds counted	2	3	3	3	3	1	3	1	3	1	0
Total male grouse counted	50	44	100	35	45	15	32	18	18	19	0
County average (all strutting grounds)	25	15	33	12	15	15	11	18	6	19	--
% change from previous year - comparable grounds	+6	-14	+133	-68	+29	-40	0	+20	-33	+58	--
MORGAN											
No. strutting grounds counted	3	3	3	3	3	3	3	3	3	3	3
Total male grouse counted	61	63	41	52	43	111	75	131	57	65	31
County average (all strutting grounds)	20	21	14	17	14	37	25	44	19	22	10
% change from previous year - comparable grounds	+15	+3	-35	+27	-17	+158	-32	+76	-57	+16	-31
RICH											
No. strutting grounds counted	12	14	10	8	13	15	11	11	13	7	9
Total male grouse counted	299	389	268	326	321	417	382	236	259	153	188
County average (all strutting grounds)	25	28	27	41	25	28	35	21	20	22	21
% change from previous year - comparable grounds	-13	+31	-32	+57	-13	+17	+11	-40	+5	-21	+2

Table 1 (continued)

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
SUMMIT											
No. strutting grounds counted	5	5	4	6	6	6	8	1	7	2	7
Total male grouse counted	13	113	88	107	169	91	116	15	60	11	46
County average (all strutting grounds)	28	23	22	18	28	15	15	15	9	6	7
% change from previous year - comparable grounds	-18	-18	-30	-10	+52	-29	+5	+15	+13	-50	-9
REGIONAL TOTALS											
No. strutting grounds counted	43	50	39	35	47	43	49	44	61	28	36
Total male grouse counted	873	915	843	759	1,199	1,086	1,368	1,299	1,105	632	587
Average grouse per ground (all strutting grounds)	20	18	22	23	26	25	28	30	18	23	16
% change from previous year - comparable grounds	-20	-1	-1	+8	+19	+10	+29	-2	-27	-20	-22
Southern Region											
GARFIELD											
No. strutting grounds counted	14	14	14	14	10	11	9	8	11	9	8
Total male grouse counted	166	327	233	201	192	224	211	97	298	359	197
County average (all strutting grounds)	12	23	17	14	19	20	23	12	27	39	25
% change from previous year - comparable grounds	-50	+114	-35	-14	+2	+24	0	-48	+114	+78	-12
WAYNE											
No. strutting grounds counted	10	11	11	13	12	12	9	8	14	14	1*
Total male grouse counted	231	237	160	260	256	166	221	32	284	300	123
County average (all strutting grounds)	23	22	15	20	21	14	25	4	20	21	123
% change from previous year - comparable grounds	-21	+3	-33	+3	+19	-31	-59	--	--	--	--

Table 1 (continued)

Region and County	Year										
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
BEAVER											
No. strutting grounds counted	5	5	6	8	7	7	6	5	7	7	7
Total male grouse counted	82	110	122	108	90	66	134	113	140	131	117
County average (all strutting grounds)	16	22	20	14	13	9	22	23	20	19	17
% change from previous year - comparable grounds	-47	+34	+1	-32	+8	-27	+137	+1	+6	-6	-11
IRON											
No. strutting grounds counted	0	9	9	9	5	10	5	6	7	9	4
Total male grouse counted	0	86	51	26	54	87	83	84	101	111	105
County average (all strutting grounds)	--	10	6	3	11	9	17	14	14	12	26
% change from previous year - comparable grounds	--	--	-41	-50	+108	+11	+48	+1	+20	-3	+27
SEVIER											
No. strutting grounds counted	1	1	--	2	3	4	4	--*	2	4	--
Total male grouse counted	0	9	--	2	26	23	9	--	0	5	--
County average (all strutting grounds)	--	9	--	1	9	6	2	--	0	1	--
% change from previous year - comparable grounds	--	--	--	--	+200	-11	60	--	--	--	--

Table 1 (continued)

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
MILLARD											
No. strutting grounds counted	--	--	--	1	1	1	--	--*	1	1	--
Total male grouse counted	--	--	--	11	3	14	--	--	22	22	--
County average (all strutting grounds)	--	--	--	11	3	14	--	--	22	22	--
% change from previous year - comparable grounds	--	--	--	--	-73	+367	--	--	--	0	--
REGIONAL TOTALS											
No. strutting grounds counted	31	40	40	47	37	45	33	27	42	44	23
Total male grouse counted	479	769	566	608	618	580	691	326	845	928	563
Average grouse per ground (all strutting grounds)	15	19	14	13	17	13	21	12	20	21	24
% change from previous year - comparable grounds	-40	+49	-30	-13	+14	-13	-22	-32	+46	+33	-9
Central Region											
SANPETE											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total male grouse counted	0	0	5	10	4	7	6	9	9	11	8
County average (all strutting grounds)	--	--	3	5	2	4	3	5	5	6	4
% change from previous year - comparable grounds	--	--	--	+100	-60	+75	-14	+17	0	+22	-27
TOOELE											
No. strutting grounds counted	5	5	5	5	5	5	5	5	5	5	6
Total male grouse counted	60	95	59	80	77	37	116	131	46	28	28
County average (all strutting grounds)	12	19	12	16	15	7	23	26	9	6	5
% change from previous year - comparable grounds	-35	+43	-30	+15	-4	-52	-38	+13	-64	-64	0

Table 1 (continued)

Region and County	Year										
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
WASATCH											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total male grouse counted	52	99	201	216	206	184	119	45	45	18	54
County average (all strutting grounds)	26	50	101	108	103	92	60	23	23	9	27
% change from previous year - comparable grounds	-49	+90	+103	+7	-5	-11	-35	-62	0	-60	+200
REGIONAL TOTALS											
No. strutting grounds counted	9	9	9	9	9	9	9	9	9	9	10
Total male grouse counted	112	194	265	306	287	228	197	185	100	57	90
Average grouse per ground (all strutting grounds)	12	22	29	34	32	25	22	21	11	6	9
% change from previous year - comparable grounds	-42	+65	+45	+12	-6	-21	-35	-24	-51	-43	+58
Northeastern Region											
DAGGETT											
No. strutting grounds counted	5	4	3	3	3	3	3	5	6	6	6
Total male grouse counted	41	53	30	40	55	78	47	51	68	18	45
County average (all strutting grounds)	8	13	10	13	18	26	16	10	11	3	7
% change from previous year - comparable grounds	+31	-5	-19	+33	+38	+42	-40	-19	+20	-57	+56
DUCHESNE											
No. strutting grounds counted	5	11	11	15	14	14	10	16	16	15	15
Total male grouse counted	43	172	172	245	161	227	93	120	112	156	178
County average (all strutting grounds)	9	16	16	16	12	16	9	8	7	10	12
% change from previous year - comparable grounds	-41	+44	-5	-14	-20	+37	-35	+5	0	+15	+17

Table 1 (continued)

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
UINTAH											
No. strutting grounds counted	11	11	9	10	11	13	11	12	10	12	16
Total male grouse counted	156	163	240	257	245	454	338	126	174	242	273
County average (all strutting grounds)	14	15	27	26	22	35	31	11	17	20	17
% change from previous year - comparable grounds	-25	+8	+29	0	-16	+63	-18	-67	+56	+40	-21
REGIONAL TOTALS											
No. strutting grounds counted	21	26	23	28	28	30	24	33	32	33	37
Total male grouse counted	240	388	442	542	461	759	478	297	354	416	396
Average grouse per ground (all strutting grounds)	11	15	19	19	17	25	20	9	11	13	13
% change from previous year - comparable grounds	-25	+13	+12	-3	-13	+51	-25	-48	+27	+17	-3
Southeastern Region											
CARBON											
No. strutting grounds counted	0	8	2	5	9	5	--	--	6	1	1
Total male grouse counted	0	77	65	134	140	41	--	--	2	0	16
County average (all strutting grounds)	--	10	33	27	16	8	--	--	3	--	16
% change from previous year - comparable grounds	--	--	+48	+83	-10	-64	--	--	--	--	+100
EMERY											
No. strutting grounds counted	0	3	--	1	2	1	--	--	--	2	--*
Total male grouse counted	0	2	--	13	33	12	--	--	--	9	--
County average (all strutting grounds)	--	1	--	13	17	12	--	--	--	5	--
% change from previous year - comparable grounds	--	--	--	--	+23	-25	--	--	--	--	--

Table 1 (continued)

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
SAN JUAN											
No. strutting grounds counted	4	6	6	6	4	5	4	5	4	4	6
Total male grouse counted	105	137	115	98	117	96	67	41	63	47	59
County average (all strutting grounds)	26	23	19	16	29	18	17	8	16	12	10
%change from previous year - comparable grounds	+42	-19	-9	-14	+22	-17	+1	-33	+65	-25	+52
REGIONAL TOTALS											
No. strutting grounds counted	4	17	8	12	15	11	4	5	10	7	7
Total male grouse counted	105	216	180	245	290	149	67	41	65	56	75
Average grouse per ground (all strutting grounds)	26	13	23	20	19	14	17	8	7	8	11
%change from previous year - comparable grounds	+42	-19	+21	+20	+4	-37	+1	-33	+58	-28	+34
STATE TOTALS											
No. strutting grounds counted	108	142	119	131	136	138	120	116	154	121	113
Total male grouse counted	1,809	2,482	2,296	2,460	2,855	2,802	2,808	2,148	2,469	2,089	1,711
Average grouse per ground (all strutting grounds)	17	18	19	19	21	20	23	19	16	17	15
%change from previous year - comparable grounds	-26	+17	-4	+2	+6	-15	-13	-20	-9	-1	-8

*No counts because of snow conditions.

Table 2. Sage grouse summer inventory summary, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	4	4	20	5.00	4	11	15	23	31	135	0	0	60	0	60	90
Cache	0	0	0	--	0	0	0	0	0	--	245	8	4	0	12	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	5	5	21	4.20	4	15	6	15	36	240	350	18	21	16	55	93
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	3	3	10	3.33	0	0	12	15	10	67	15	3	28	0	31	81
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	12	12	51	4.25	8	26	33	53	77	145	610	29	113	16	158	82
Central Region																
Juab	0	0	0	--	0	0	0	0	0	--	140	7	0	2	9	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	6	6	35	5.83	4	23	9	19	58	305	195	0	36	0	36	214
Tooele	6	6	26	4.33	9	18	10	25	44	176	223	23	0	11	34	203
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	7	7	22	3.14	0	0	7	14	22	157	162	39	35	13	87	41
REGIONAL TOTALS	19	19	83	4.37	13	41	26	58	124	214	720	69	71	24	164	111
Southern Region																
Beaver	0	0	0	--	0	0	23	23	0	--	65	0	0	3	3	767
Garfield	7	7	24	3.43	4	12	16	27	36	133	99	12	8	1	21	300
Iron	1	1	3	3.00	--	--	1	2	3	150	--	0	7	0	7	71
Kane	1	1	5	5.00	--	5	0	1	10	1,000	80	4	0	0	4	275
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	12	12	44	3.67	2	6	34	48	50	104	40	4	12	0	16	612
REGIONAL TOTALS	21	21	76	3.62	6	23	74	101	99	98	284	20	27	4	51	392
Northeastern Region																
Daggett	5	5	29	5.80	4	17	43	52	46	88	166	21	0	0	21	467
Duchesne	22	22	101	4.59	34	55	9	65	156	240	473	36	8	7	51	433
Uintah	40	40	205	5.13	42	166	17	99	371	374	353	36	0	17	53	886
REGIONAL TOTALS	67	67	335	5.00	80	238	69	216	573	265	992	93	8	24	125	631
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	1	1	4	4.00	0	0	6	7	4	57	108	8	0	2	10	50
REGIONAL TOTALS	1	1	4	4.00	0	0	6	7	4	57	108	8	0	2	10	50
STATE TOTALS	120	120	549	4.58	107	328	208	435	877	202	2,714	219	219	70	508	258

Table 3. Trend of sage grouse young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	225	119	106	250	75	125	81	84	68	127	135	
Cache	80	161	329	486	450	--	0	300	122	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	245	131	64	71	35	414	66	89	120	--	240	
Rich	132	153	94	106	81	273	101	33	85	85	--	
Summit	146	275	52	247	106	316	221	74	114	80	67	
Weber	500	--	--	200	0	--	--	--	--	--	--	
REGIONAL TOTALS	167	131	102	170	77	194	99	67	82	91	145	118
Central Region												
Juab	500	--	--	--	76	46	262	204	245	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	138	89	280	414	257	224	154	267	348	314	305	
Tooele	318	314	168	286	123	283	449	143	101	107	176	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	68	101	118	123	54	93	163	170	236	166	157	
REGIONAL TOTALS	106	141	138	187	77	112	204	171	171	209	214	152
Southern Region												
Beaver	329	219	205	181	69	156	100	142	104	32	--	
Garfield	121	143	277	174	174	176	272	383	84	128	133	
Iron	350	46	--	--	80	313	229	269	113	148	150	
Kane	450	--	--	0	--	--	57	--	--	--	1,000	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	317	67	0	--	--	--	--	--	--	--	
Sevier	500	400	0	533	0	625	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	394	166	545	286	115	308	288	291	263	193	104	
REGIONAL TOTALS	311	157	287	194	103	224	230	235	154	130	98	203
Northeastern Region												
Daggett	150	266	51	190	169	198	169	200	230	369	88	
Duchesne	--	161	120	161	53	199	127	248	235	305	240	
Uintah	312	446	107	249	235	269	279	401	253	183	375	
REGIONAL TOTALS	234	321	97	206	154	226	191	297	242	237	265	220
Southeastern Region												
Carbon	328	185	116	214	46	164	400	--	64	--	--	
Emery	--	0	--	--	--	--	--	--	--	--	--	
Grand	0	--	400	25	3	--	71	--	--	--	--	
San Juan	375	82	47	22	24	94	--	400	350	--	57	
REGIONAL TOTALS	340	100	63	68	25	142	223	450	83	--	57	166
STATE TOTALS	195	160	120	171	87	181	175	163	142	179	202	157

Table 4. Trend of sage grouse mean brood size, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	4.69	4.07	3.81	5.59	4.36	4.76	4.32	3.36	3.97	3.92	5.00	
Cache	4.00	4.62	5.00	6.25	4.50	--	--	1.00	3.50	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	4.40	4.75	3.80	4.25	3.50	6.44	4.00	5.60	5.14	--	4.20	
Rich	4.48	3.91	4.00	6.04	3.83	5.24	4.58	3.36	3.67	4.45	--	
Summit	4.56	5.00	3.75	5.00	4.50	5.77	5.00	3.78	3.67	2.67	3.33	
Weber	5.00	--	--	2.00	--	--	--	--	--	--	--	
REGIONAL TOTALS	4.55	4.17	4.03	5.45	4.17	5.20	4.52	3.61	3.94	4.00	4.25	4.36
Central Region												
Juab	5.00	--	--	--	4.50	3.33	4.25	5.00	2.00	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	4.75	4.00	4.00	5.67	3.20	4.57	6.44	5.58	4.80	6.36	5.83	
Tooele	4.90	5.25	5.50	5.07	4.17	5.13	5.64	4.09	3.00	3.33	4.33	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	4.00	4.24	3.86	4.70	3.27	4.90	4.90	4.09	3.83	4.81	3.14	
REGIONAL TOTALS	4.38	4.49	4.22	4.98	3.44	4.82	5.18	4.41	3.44	5.32	4.37	4.47
Southern Region												
Beaver	4.31	3.64	3.90	4.95	3.57	4.29	4.00	4.14	5.50	4.00	--	
Garfield	3.50	5.41	4.18	3.50	4.00	4.00	4.39	5.00	4.50	3.43	3.43	
Iron	5.33	6.33	--	--	3.00	5.50	4.68	4.12	3.57	6.40	3.00	
Kane	4.50	--	--	--	--	--	--	--	--	--	5.00	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	5.67	1.00	--	--	--	--	--	--	--	--	
Sevier	5.00	4.00	--	5.33	--	6.25	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	5.17	4.70	5.45	3.95	4.40	4.56	4.74	4.60	3.96	4.43	3.67	
REGIONAL TOTALS	4.72	4.54	4.27	4.18	4.00	4.55	4.61	4.48	3.93	4.52	3.62	4.38
Northeastern Region												
Daggett	4.65	4.93	3.25	4.55	4.80	5.05	5.10	4.75	4.11	5.13	5.80	
Duchesne	--	3.82	3.60	4.11	3.56	4.00	4.73	4.42	3.91	5.32	4.59	
Uintah	4.60	5.06	4.69	5.21	4.48	4.87	4.67	5.55	5.27	4.95	5.13	
REGIONAL TOTALS	4.62	4.82	4.24	4.70	4.30	4.94	4.79	5.05	4.50	5.10	5.00	4.71
Southeastern Region												
Carbon	3.50	3.92	2.67	5.05	4.14	5.17	4.67	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	4.00	3.00	--	--	5.00	--	--	--	--	
San Juan	5.67	6.65	3.50	--	3.29	--	--	--	3.50	--	4.00	
REGIONAL TOTALS	4.43	5.47	3.17	4.77	3.71	5.17	3.25	--	3.50	--	4.00	4.18
STATE TOTALS	4.58	4.57	4.15	4.89	3.99	4.97	4.77	4.51	4.05	4.85	4.58	4.53

Table 5. Trend of sage grouse observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	166	459	187	457	670	452	1,835	575	571	238	90	
Cache	150	250	261	410	29	--	0	154	232	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	345	514	140	433	218	160	412	427	471	77	93	
Rich	298	428	452	724	580	838	952	393	648	188	--	
Summit	119	188	109	268	361	369	226	111	135	100	81	
Weber	40	--	--	12	--	--	--	--	--	--	--	
REGIONAL TOTALS	188	398	204	429	461	400	545	315	440	144	82	352
Central Region												
Juab	30	--	0	0	580	255	588	206	380	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	135	85	86	263	255	594	743	319	303	426	214	
Tooele	161	665	257	781	311	265	776	710	627	207	203	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	666	529	520	1,353	1,253	767	652	360	147	362	41	
REGIONAL TOTALS	244	402	329	740	618	556	695	410	347	342	111	468
Southern Region												
Beaver	277	460	188	555	428	242	89	920	613	62	767	
Garfield	258	603	112	226	211	545	468	229	480	291	300	
Iron	200	241	--	--	771	220	1,315	342	1,085	315	71	
Kane	550	--	--	233	0	--	588	--	--	--	275	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	833	62	100	--	--	--	--	--	--	--	
Sevier	--	500	0	950	83	207	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	742	335	209	491	240	444	494	338	538	783	612	
REGIONAL TOTALS	393	413	134	348	265	380	617	346	653	429	392	398
Northeastern Region												
Daggett	308	381	132	352	575	637	1,274	489	800	300	467	
Duchesne	0	196	84	347	446	392	258	446	574	845	433	
Uintah	310	459	386	716	513	397	705	474	398	1,036	866	
REGIONAL TOTALS	233	358	217	473	509	427	673	483	507	800	631	468
Southeastern Region												
Carbon	500	146	49	147	283	295	200	5	219	--	--	
Emery	--	11	0	--	0	0	--	--	--	--	--	
Grand	25	--	500	1,125	550	71	240	--	--	--	--	
San Juan	300	856	321	304	341	194	--	100	50	--	50	
REGIONAL TOTALS	215	360	128	220	332	237	210	36	141	--	50	209
STATE TOTALS	237	387	196	428	445	407	621	374	444	401	258	394

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunter pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	119	2,647	2,326	0.88	14.33	15.56
Cache	56	1,457	682	0.47	7.89	4.56
Davis	19+	949	427	0.45	5.14	2.86
Morgan	19	441	66	0.15	2.39	0.44
Rich	51	1,190	521	0.44	6.44	3.48
Summit	42	936	468	0.50	5.07	3.13
Weber	27	481	227	0.47	2.60	1.52
REGIONAL TOTALS	333	8,101	4,717	0.58	43.87	31.55
Central Region						
Juab	7+	147	53	0.36	0.79	0.35
Salt Lake	9+	213	106	0.50	1.15	0.71
Sanpete	16+	655	213	0.33	3.55	1.42
Tooele	13+	307	93	0.30	1.66	0.62
Utah	33+	789	855	1.08	4.27	5.72
Wasatch	14	307	200	0.65	1.66	1.34
REGIONAL TOTALS	92	2,418	1,520	0.63	13.09	10.17
Southern Region						
Beaver	12	294	280	0.95	1.59	1.87
Garfield	41	1,176	1,564	1.33	6.37	10.46
Iron	18	347	468	1.35	1.88	3.13
Kane	3	120	0	--	0.65	0.00
Millard	6+	213	401	1.88	1.15	2.68
Piute	12	267	347	1.30	1.45	2.32
Sevier	25	641	427	0.67	3.47	2.86
Washington	2+	26	0	--	0.14	0.00
Wayne	44	1,096	1,377	1.26	5.93	9.21
REGIONAL TOTALS	163	4,185	4,864	1.16	22.64	32.54
Northeastern Region						
Daggett	15	307	320	1.04	1.66	2.14
Duchesne	26	655	855	1.31	3.54	5.72
Uintah	84	2,206	2,540	1.15	11.95	16.99
REGIONAL TOTALS	125	3,168	3,715	1.17	17.15	24.85
Southeastern Region						
Carbon	10+	294	80	0.27	1.59	0.53
Emery	2+	173	13	0.08	0.94	0.09
Grand	--	--	--	--	--	--
San Juan	1+	40	40	1.00	0.22	0.27
REGIONAL TOTALS	13	507	133	0.26	2.75	0.89
Unknown Counties	3	93	0	--	0.50	0.00
STATE TOTALS	729	18,467	14,949	0.81	100	100

*Total hunter trips from questionniare returns.

+Closed season - Counties hunted were either reported incorrectly, or hunters were hunting illegally.

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1977-83.

Region and County	Year 1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	0.70	1.12	1.27	1.41	1.26	0.78	0.88
Cache	0.51	0.43	0.74	0.61	0.40	0.50	0.47
Davis	0.45	0.53	0.00	0.27	0.22*	0.36*	0.45*
Morgan	0.57	0.69	0.68	0.57	0.74	0.30	0.15
Rich	0.59	0.87	0.76	0.53	0.53	0.51	0.44
Summit	0.61	0.80	0.77	0.48	0.38	0.32	0.50
Weber	0.79	0.84	0.58	0.85	0.16	0.39	0.47
REGIONAL TOTALS	0.61	0.80	0.87	0.94	0.76	0.56	0.58
Central Region							
Juab	0.64	0.86	1.24	0.94	1.14*	0.17	0.36*
Salt Lake	*	0.38*	0.87*	0.64*	0.75*	2.08*	0.50*
Sanpete	0.61	0.55	0.59	0.56	1.40*	0.31*	0.33*
Tooele	0.60	0.54*	0.69*	0.86	0.54	0.86*	0.30*
Utah	1.10	0.74	0.90	0.57	0.64	0.50*	1.08*
Wasatch	0.71	0.71	0.67	0.58	0.50	0.54	0.65
REGIONAL TOTALS	0.73	0.69	0.76	0.64	0.68	0.62	0.63
Southern Region							
Beaver	0.83	1.12	1.06	0.86	1.06	1.24	0.95
Garfield	0.71	1.09	1.24	1.20	1.34	1.12	1.33
Iron	0.84	0.71	0.50	0.82	0.92	0.92	1.35
Kane	2.00	3.00	0.00	0.00	0.71	0.00	--
Millard	0.50	0.50	0.00	0.70	0.00	1.00*	1.88*
Piute	0.57	0.46	0.92	0.79	2.00	0.93	1.30
Sevier	0.48	1.07	0.55	0.58	0.45	0.85	0.67
Washington	*	2.00*	2.00*	1.75	0.00	5.50*	--
Wayne	0.69	0.94	1.49	1.19	1.42	1.22	1.26
REGIONAL TOTALS	0.69	0.99	1.11	0.96	1.17	1.21	0.16
Northeastern Region							
Daggett	1.50	1.15	1.28	0.77	0.84	1.00	1.04
Duchesne	0.84	1.14	1.26	0.70	1.00	0.85	1.31
Uintah	1.22	1.21	1.21	0.94	1.01	1.16	1.15
REGIONAL TOTALS	1.14	1.18	1.23	0.82	0.97	1.04	1.17
Southeastern Region							
Carbon	0.85	0.93	0.82	0.53	0.19*	0.44*	0.27*
Emery	0.33	1.14	0.92	1.26	1.00*	0.00*	0.08*
Grand	0.00	1.33	0.00	1.50	0.38	0.25	--
San Juan	2.00	1.37	0.25	0.17	0.00	1.50*	1.00*
REGIONAL TOTALS	0.79	1.03	0.77	0.69	0.28	0.47	0.26
Unknown counties	0.46	0.55	1.95	1.25	0.22	2.00	--
Mixed counties	2.00	2.40	0.00	0.00	0.00	0.00	--
Illegal areas (Total)	0.51	0.75	0.00	0.00	0.00	(0.62)*	(0.60)*
STATE TOTALS	0.72	0.87	0.92	0.85	0.85	0.79	0.81

*Closed season.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1977-83.

Region and County	Year 1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	7.04	14.04	15.08	31.07	23.29	18.19	15.56
Cache	5.75	4.71	6.59	3.06	1.87	3.84	4.56
Davis	0.81	0.62	0.00	0.60	0.27*	0.50*	2.86*
Morgan	2.19	2.39	2.37	1.19	2.68	1.36	0.44
Rich	6.56	7.41	10.91	5.74	4.95	4.33	3.48
Summit	7.85	4.94	6.33	3.50	2.95	2.35	3.13
Weber	3.89	4.55	1.80	1.64	0.40	1.86	1.52
REGIONAL TOTALS	34.09	38.66	43.13	46.80	36.41	32.43	31.55
Central Region							
Juab	1.46	0.93*	1.34*	1.12*	2.14*	0.12*	0.35*
Salt Lake	*	0.23*	1.34*	0.67*	1.61*	3.09*	0.71*
Sanpete	2.02	1.39	1.80	1.34	0.94*	1.11*	1.42*
Tooele	5.59	1.00*	0.57	3.28	2.54	1.49*	0.62*
Utah	7.21	5.48	4.84	3.80	4.55*	2.85*	5.72*
Wasatch	8.26	8.64	6.18	5.96	1.74	3.22	1.34
REGIONAL TOTALS	25.75	17.67	16.06	16.17	13.52	11.88	10.17
Southern Region							
Beaver	1.54	1.39	0.87	2.38	4.55	2.60	1.87
Garfield	3.32	5.40	4.32	5.29	14.86	9.28	10.46
Iron	1.30	1.16	0.26	1.04	1.61	2.85	3.13
Kane	0.16	0.23	0.00	0.00	0.67	0.00	0.00
Millard	0.40	0.15	0.00	0.52	0.00	0.62*	2.68*
Piute	0.32	0.46	1.13	1.64	0.80	1.73	2.32
Sevier	1.21	2.24	1.03	2.09	1.34	2.72	2.86
Washington	*	0.77*	0.10*	0.52*	0.00	4.08*	0.00*
Wayne	3.97	3.55	6.07	5.07	6.29	9.53	9.21
REGIONAL TOTALS	12.39	15.35	13.79	18.55	30.12	33.42	32.54
Northeastern Region							
Daggett	2.67	2.39	3.29	1.27	4.28	1.36	2.14
Duchesne	3.97	5.56	6.28	4.92	4.15	5.69	5.72
Uintah	12.63	10.73	9.68	7.60	10.31	13.49	16.99
REGIONAL TOTALS	19.27	18.67	19.25	13.79	18.74	20.55	24.85
Southeastern Region							
Carbon	4.86	4.40	4.27	2.24	0.40*	0.50*	0.53*
Emery	0.32	1.93	1.24	1.79	0.13*	0.00*	0.09*
Grand	0.00	0.31	0.00	0.22	0.40	0.12	--
San Juan	0.32	0.85	0.15	0.07	0.00	0.37*	0.27*
REGIONAL TOTALS	5.51	7.48	5.66	4.32	0.94	0.99	0.89
Unknown counties	2.41	1.23	2.11	0.37	0.27	0.74	0.00
Mixed counties	0.49	0.93	0.00	0.00	0.00	0.00	0.00
Illegal areas	(1.37)	(2.93)	(2.78)	(2.31)	(10.04)*	(17.95)*	(15.25)*
STATE TOTALS	100	100	100	100	100	100	100

*Closed season.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1977-83.

Region and County	Year 1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	7.31	10.92	10.96	17.48	15.74	18.40	14.33
Cache	8.13	9.58	8.16	4.23	3.99	6.07	7.89
Davis	1.29	1.01	0.00	1.89	1.03*	1.08*	5.14*
Morgan	2.75	3.02	3.23	1.77	3.08	3.62	2.39
Rich	8.02	7.37	13.19	9.15	7.98	6.75	6.44
Summit	9.25	5.36	7.64	6.18	6.61	5.77	5.07
Weber	3.57	4.69	2.85	1.64	2.17	3.72	2.60
REGIONAL TOTALS	40.32	41.96	46.03	42.33	40.59	45.40	43.87
Central Region							
Juab	1.64	0.94*	1.00*	1.01*	1.60*	0.59*	0.79*
Salt Lake	*	0.54*	1.42*	0.88*	1.82*	1.17*	1.15*
Sanpete	2.40	2.21	2.80	2.02	0.57*	2.84*	3.55*
Tooele	6.73	1.61*	0.76*	3.22	3.99	1.37*	1.66*
Utah	4.39	6.43	4.98	5.62	6.04*	4.50*	4.27*
Wasatch	8.43	10.59	8.49	8.77	2.96	4.70	1.66
REGIONAL TOTALS	25.34	22.32	19.45	21.51	16.99	15.17	13.09
Southern Region							
Beaver	1.35	1.07	0.76	2.33	3.65	1.66	1.59
Garfield	3.39	4.29	3.23	3.72	9.46	6.56	6.37
Iron	1.11	1.41	0.47	1.07	1.48	2.45	1.88
Kane	0.06	0.07	0.00	0.00	0.80	0.00	0.65
Millard	0.59	0.27	0.28	0.63	0.00	0.49*	1.15*
Piute	0.41	0.87	1.14	1.77	0.34	1.47	1.45
Sevier	1.81	1.81	1.80	3.03	2.51	2.54	3.47
Washington	*	0.34*	0.05*	0.25*	0.00	0.59*	0.14*
Wayne	3.78	4.15	3.28	3.75	3.76	6.16	5.93
REGIONAL TOTALS	13.05	13.40	11.48	16.40	22.01	21.92	22.64
Northeastern Region							
Daggett	1.29	1.81	2.37	1.39	4.33	1.08	1.66
Duchesne	3.39	4.22	4.60	5.93	3.53	5.28	3.54
Uintah	7.49	7.71	7.40	6.88	3.67	9.20	11.95
REGIONAL TOTALS	12.17	13.74	14.37	14.20	16.53	15.56	17.15
Southeastern Region							
Carbon	4.15	4.09	4.79	3.60	1.82*	0.88*	1.59*
Emery	0.70	1.47	1.23	1.20	0.11*	0.20*	0.94*
Grand	0.06	0.20	0.14	0.12	0.91	0.39	0.00
San Juan	0.12	0.54	0.57	0.38	0.00	0.20*	0.22*
REGIONAL TOTALS	5.03	6.30	6.74	5.30	2.85	1.66	2.75
Unknown counties	3.92	1.94	1.93	0.25	1.03	0.29	0.50
Mixed counties	0.18	0.34	0.00	0.00	0.00	0.00	0.00
Illegal areas	1.94	3.42	0.00	0.00	(12.99)*	(13.91)*	(20.60)*
STATE TOTALS	100	100	100	100	100	100	100

*Closed season.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-83.

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	3,793	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	1,509	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
1980	15,219	22,770	26,893	0.85	1.50
1981	10,083	15,857	18,617	0.85	1.57
1982	8,997	12,383	15,663	0.79	1.38
1983	9,201	14,949	18,467	0.81	1.63
TOTALS (1963-1983)	230,143	320,206	376,793	0.85	1.39
AVERAGES (1963-1982)	11,047	15,262	17,916	0.85	1.40

*The number of sage grouse hunters and consequently harvest was limited by permits available from 1951 through 1962.

**Estimated.

***Totals and indices based on indiscrete data.

Table 11. Sage grouse field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	202	590	3,858	618	16	202	590	3,858	618	16	1.05
Cache	14	31	91	4	4	14	31	91	4	4	0.13
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	4	8	17	0	--	2	4	12	0	--	--
Rich	33	77	312	41	13	33	77	312	41	13	0.53
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	253	706	4,278	663	15	251	702	4,273	663	15	0.94
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	7	19	51	10	20	0	0	0	0	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	4	15	49	18	37	0	0	0	0	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	37	103	558	139	25	37	103	558	139	25	1.35
REGIONAL TOTALS	48	137	658	167	25	37	103	558	139	25	1.35
Northeastern Region											
Daggett	7	17	26	5	19	4	4	12	4	33	1.00
Duchesne	13	34	70	29	41	6	12	25	15	60	1.25
Uintah	88	238	583	216	37	52	134	357	120	34	0.89
REGIONAL TOTALS	108	289	679	250	37	62	150	394	139	35	0.93
Southeastern Region											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	409	1,132	5,615	1,080	19	350	955	5,225	941	18	0.99

Table 12. Sage grouse hunter success trend determined by field bag checks, 1978-83.

Region and County	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter	1981 Birds/ 100 Hr	1981 Birds/ Hunter	1982 Birds/ 100 Hr	1982 Birds/ Hunter	1983 Birds/ 100 Hr	1983 Birds/ Hunter
Northern Region												
Box Elder	31	1.36	38	1.40	29	1.22	22	1.05	13	0.78	16	1.05
Cache	11	0.45	7	0.27	3	0.13	4	0.15	2	0.05	4	0.13
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	7	0.22	--	--	--	--	--	--	--	--
Rich	14	0.58	14	0.58	7	0.33	5	0.24	7	0.28	13	0.53
Summit	--	--	11	0.34	6	0.20	21	0.43	--	--	--	--
Weber	7	0.24	--	--	6	0.27	--	--	--	--	--	--
REGIONAL TOTALS	23	0.98	25	0.93	18	0.82	19	0.86	12	0.66	15	0.94
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	68	1.00	58	0.95	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	35	0.81	32	0.73	41	0.85	--	--	--	--	--	--
REGIONAL TOTALS	35	0.81	32	0.73	58	0.95	58	0.95	--	--	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	26	1.09	65	1.83	--	--	41	2.00	72	1.88	--	--
Iron	--	--	73	1.90	36	0.84	18	0.18	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	21	0.99	20	1.12	39	2.11	30	1.76	15	0.90	25	1.35
REGIONAL TOTALS	21	1.00	28	1.34	36	1.78	30	1.71	20	1.06	25	1.35
Northeastern Region												
Daggett	27	0.82	40	1.31	28	1.04	41	0.93	30	0.97	33	1.00
Duchesne	140	1.75	72	1.44	--	--	--	--	22	0.50	60	1.25
Uintah	21	1.14	41	1.19	28	1.49	23	0.73	34	1.20	34	0.89
REGIONAL TOTALS	23	1.03	41	1.23	28	1.23	25	0.75	33	1.13	35	0.93
Southeastern Region												
Carbon	31	1.10	11	0.42	--	--	--	--	--	--	--	--
Emery	0	0.00	--	--	--	--	--	--	--	--	--	--
Grand	27	1.14	20	0.50	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	31	1.10	12	0.43	--	--	--	--	--	--	--	--
STATE TOTALS	23	0.98	27	1.01	21	0.92	21	0.91	14	0.74	18	0.99

Table 13. Sex and age composition of harvested sage grouse, 1983.

Region and County	Sample Size	Adults M	Adults F	Adults Total	Young M	Young F	Young Total	Young/ 100 Adults	Young/ 100 Hens
Northern Region									
Box Elder	358	58	126	184	88	86	174	95	138
Cache	6	1	1	2	3	1	4	200	400
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	29	8	8	16	8	5	13	81	163
Summit	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	393	67	135	202	99	92	191	95	141
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	179	21	42	63	48	68	116	184	276
Iron	11	2	1	3	1	7	8	267	800
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	243	23	48	71	76*	96*	172	242	358
REGIONAL TOTALS	433	46	91	137	125	171	296	216	325
Northeastern Region									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	174	19	39	58	70	46	116	200	297
REGIONAL TOTALS	174	19	39	58	70	46	116	200	297
Southeastern Region									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	1,000	132	265	397	294	309	603	152	228

*Estimated (using same ratio as 1982)

Table 14. Sex and age composition of harvested sage grouse from 1980-83.

Region and County	1980 n	1980 Sex Ratio % M	1980 Sex Ratio % F	1980 Young/ 100H	1980 Young/ 100A	1981 n	1981 Sex Ratio % M	1981 Sex Ratio % F	1981 Young/ 100H	1981 Young/ 100A	1982 n	1982 Sex Ratio % M	1982 Sex Ratio % F	1982 Young/ 100H	1982 Young/ 100A	1983 n	1983 Sex Ratio % M	1983 Sex Ratio % F	1983 Young/ 100H	1983 Young/ 100A	Averages 1978-82 n	Averages 1978-82 Sex Ratio % M	Averages 1978-82 Sex Ratio % F	Averages 1978-82 Young/ 100H	Averages 1978-82 Young/ 100A
Northern Region																									
Box Elder	611	42	58	91	55	574	31	69	76	53	385	38	62	73	45	358	41	59	138	95					
Cache	14	36	64	140	100	12	42	58	175	140	4	100	0	--	--	6	67	33	400	200					
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Rich	01	45	55	85	53	40	35	65	89	67	34	29	71	183	183	29	55	45	163	81					
Summit	7	29	71	25	17	6	17	83	--	--	--	--	--	--	--	--	--	--	--	--					
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
REGIONAL TOTALS	733	42	58	90	55	632	32	68	76	54	423	38	62	256	228	393	42	58	141	95	653	40	60	150	118
Central Region																									
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Tooele	67	39	61	79	52	30	27	73	80	67	--	--	--	--	--	--	--	--	--	--					
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Wasatch	17	47	53	400	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
REGIONAL TOTALS	84	41	59	109	71	30	27	73	80	67	--	--	--	--	--	--	--	--	--	--	88	41	59	183	108
Southern Region																									
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Garfield	19	43	57	278	170	207	44	56	291	184	193	31	69	214	172	179	39	61	276	184					
Iron	45	47	53	157	96	18	67	33	233	64	21	38	62	82	75	11	27	73	800	267					
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Wayne	377	41	59	291	204	299	47	53	364	215	268	40	60	328	231	243	41	59	358	242					
REGIONAL TOTALS	541	46	54	273	183	524	47	53	329	193	482	36	64	254	194	433	39	61	325	216	493	41	59	262	180
Northeastern Region																									
Daggett	25	40	60	267	178	23	48	52	113	64	38	34	66	157	138	--	--	--	--	--					
Duchesne	--	--	--	--	--	6	17	83	200	200	--	--	--	--	--	--	--	--	--	--					
Uintah	218	35	65	227	183	227	42	58	275	199	254	47	53	327	243	174	44	56	297	200					
REGIONAL TOTALS	243	35	65	231	183	256	42	58	252	178	292	46	54	293	224	174	44	56	297	200	371	42	58	272	195
Southeastern Region																									
Carbon	19	42	58	200	111	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
REGIONAL TOTALS	19	42	58	200	111	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33	50	50	925	183
STATE TOTALS	1580	41	59	153	101	1442	39	61	157	106	1197	39	61	179	125	1000	43	57	228	152	1592	41	59	197	128

n = wing sample size.

FOREST GROUSE

SUMMARY

Judging from harvest statistics for the fall of 1982, the 1983 breeding populations of both ruffed and blue grouse were lower than in 1982, making the fourth consecutive year of declining breeding populations. Production of ruffed grouse indicated by brood counts was down from 1982 but remained above average. The number of ruffed grouse observed during brood surveys and the apparent density (grouse per 100 hours) suggested a significant decrease in abundance in 1983 compared to 1982. However, harvest data contradicted this conclusion.

Production of blue grouse was down slightly from 1982 but exceeded the 10-year average. Blue grouse observed per 100 hours of effort remained 8 percent above average. A total of 69 forest grouse broods were observed during 1983 compared with 116 in 1982 and 132 in 1981.

Harvest statistics indicated higher density of forest grouse. Total harvest increased from 21,778 during 1982 to 30,088 in 1983, a 38 percent increase. Total hunters also increased from 12,384 in 1982 to 13,414 in 1983, and days afield increased from 28,767 to 34,530.

Field bag check data confirmed the increased success shown by the questionnaire. Limited blue grouse wing data, however, indicated an increase in both young per 100 adults and young per 100 hens, in the Central and Northeastern regions.

Brood Counts

Ruffed Grouse

Results of the annual random brood survey for 1983 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 1983 compared to 1982 and the previous 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total ruffed grouse observed	86	-62	-59
Young per 100 adults	353	-13	+14
Mean brood size	5.15	0	+15
Ruffed grouse observed per 100 hours	19	-44	-34
Total hours effort	504	-28	-45

Harvest statistics for 1982 indicated a below average breeding population for 1983.

Effort on brood surveys decreased significantly in comparison to 1982 and was 45 percent below average.

Total ruffed grouse observed decreased from 1982 to 59 percent below average. Grouse observed per 100 hours was 44 percent less than 1982.

Mean brood size, based on a sample of 13 broods (compared to 22 broods observed in 1982), remained slightly above the long-term average.

Blue Grouse

Results of the annual random brood survey for 1983 are shown in Table 5 of this section. Long-term trends of young-adult ratios, mean brood size and blue grouse observed per 100 hours are found in Tables 6-8. Survey results for 1983 compared to 1982 and the 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total blue grouse observed	417	-34	-34
Young per 100 adults	272	-8	+12
Mean brood size	4.29	+6	+1
Blue grouse observed per 100 hours	83	-9	+8
Total hours effort (forest grouse)	504	-28	-45

Harvest statistics for 1982 indicated the blue grouse breeding population for 1983 was below average.

All indications from the 1983 summer surveys on blue grouse were that production was slightly below 1982, but 12 percent above the average.

Total observations declined 34 percent, probably a result of decreased effort. The number of grouse observed per 100 hours of effort decreased from 1982 but was 8 percent above average.

Wing samples collected at checking stations were limited, but indicated slightly increased production in the Central and Northeastern regions.

Harvest

Hunter Questionnaire

Results of the 1983 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 1983 compared to 1982 and the 20-year (1963-82) average follow:

	1983	Percent change from 1982	Percent change from Average
Forest grouse hunters	13,414	+8	-11
Forest grouse harvested	30,088	+38	-16
Hunter-days afield	34,530	+20	-2
Forest grouse per hunter-day	0.87	+14	-14
Forest grouse per hunter	2.24	+27	-1
Percent ruffed grouse	37.8	+10	-3
Percent blue grouse	56.4	+1	+4
Percent unidentified	5.9	-40	-14

Results from the harvest questionnaire indicated significantly higher forest grouse population levels than implied by summer surveys. Total harvest continued to drop from the record harvest of 1978. Hunter success (grouse per hunter-day) was 14 percent below average, although the number of grouse harvested per hunter was about average. Hunter pressure increased slightly but was still 11 percent below the 20-year average.

Field Bag Checks

A summary of field bag check data for 1983 is found in Table 15. Hunter success trends determined via this method are shown in Table 16. Results of the 1983 survey compared to 1982 and the 10-year (1973-82) average follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	851	+21	-54
Total hours hunted	3,190	+11	-56
Forest grouse per hunter (complete hunts)	0.55	+12	0
Forest grouse bagged per 100 hours	14	+17	-13
Average hours per hunter-day (complete hunts)	4.01	-4	-2
Hours hunted per grouse bagged (complete hunts)	7.3	-14	-12

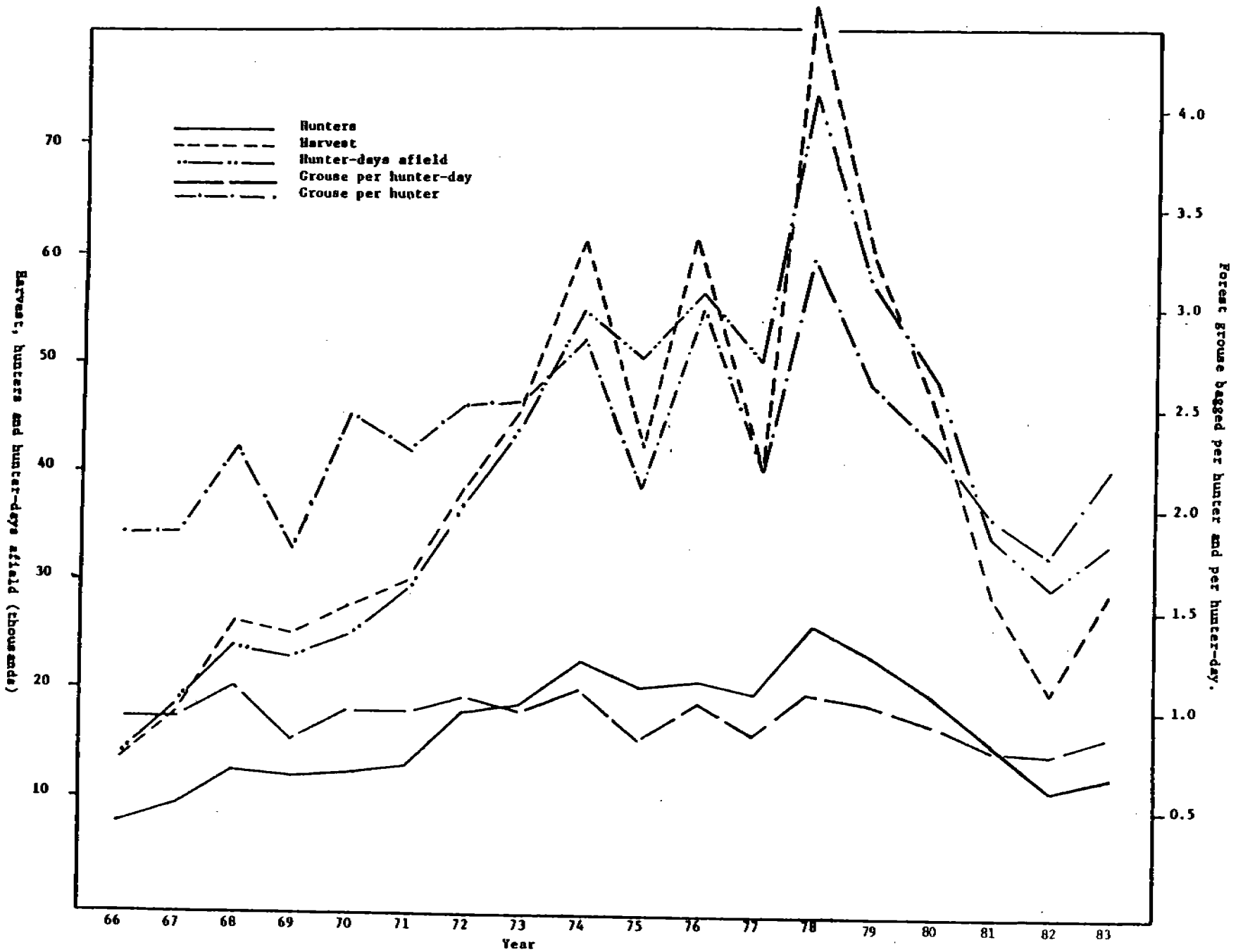


Figure 1. Statewide trends of forest grouse harvest statistics.

Table 1. Ruffed grouse summer inventory, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	1	1	3	3.00	0	0	0	1	3	300	80	3	0	11	14	29
Cache	1	1	7	7.00	0	0	0	1	7	700	615	46	65	13	124	6
Davis	0	0	0	--	0	0	0	0	0	--	65	4	0	8	12	--
Morgan	2	2	10	5.00	0	0	3	5	10	200	60	12	14	0	26	57
Rich	0	0	0	--	0	0	0	0	0	--	50	3	6	0	9	--
Summit	0	0	0	--	0	0	0	0	0	--	15	3	4	0	7	--
Weber	0	0	0	--	0	0	0	0	0	--	164	11	10	5	26	--
REGIONAL TOTALS	4	4	20	5.00	0	0	3	7	20	286	1,049	82	99	37	218	12
Central Region																
Juab	0	0	0	--	0	0	0	0	0	--	295	15	0	2	17	--
Salt Lake	0	0	0	--	0	0	0	0	0	--	60	1	0	6	7	--
Sanpete	8	8	38	4.75	0	0	0	8	38	475	112	2	13	2	17	271
Tooele	0	0	0	--	0	0	0	0	0	--	70	0	13	5	18	--
Utah	0	0	0	--	0	0	1	1	0	--	473	34	2	1	37	3
Wasatch	1	1	9	9.00	0	0	2	3	9	300	170	11	2	1	14	86
REGIONAL TOTALS	9	9	47	5.22	0	0	3	12	47	392	1,180	63	30	17	110	63
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	0	0	0	--	0	0	0	0	0	--	0	0	40	0	40	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	0	--	0	0	0	0	0	--	0	0	40	0	40	--
Northeastern Region																
Daggett	0	0	0	--	0	0	0	0	0	--	136	17	0	2	19	--
Duchesne	0	0	0	--	0	0	0	0	0	--	405	37	0	6	43	--
Uintah	0	0	0	--	0	0	0	0	0	--	95	6	12	13	31	--
REGIONAL TOTALS	0	0	0	--	0	0	0	0	0	--	636	60	12	21	93	--
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	13	13	67	5.15	0	0	6	19	67	353	2,865	205	181	75	461	19

Table 2. Trend of ruffed grouse young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	--	0	250	250	--	--	--	--	--	--	300	
Cache	--	300	329	300	300	262	450	138	--	--	700	
Davis	--	--	--	--	--	--	1,100	--	--	--	--	
Morgan	--	400	--	500	--	100	400	600	--	--	200	
Rich	600	--	317	300	--	--	--	--	--	--	--	
Summit	333	500	217	250	475	400	500	200	200	--	--	
Weber	450	--	--	--	400	--	500	500	267	--	--	
REGIONAL TOTALS	417	369	286	245	364	260	460	217	250	--	286	319
Central Region												
Juab	300	400	500	100	--	--	--	--	--	--	--	
Salt Lake	--	125	--	167	0	--	--	200	92	--	--	
Sanpete	264	195	233	387	289	462	506	373	390	476	475	
Tooele	--	--	--	--	--	--	--	--	--	300	--	
Utah	125	313	57	56	150	300	280	217	300	275	--	
Wasatch	300	--	--	--	--	--	300	--	--	--	300	
REGIONAL TOTALS	231	221	164	273	246	424	416	295	282	414	392	297
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	200	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	311	500	233	--	575	300	400	600	500	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	367	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	325	147	233	--	575	300	400	600	500	--	--	385
Northeastern Region												
Daggett	--	--	--	500	--	--	240	--	475	--	--	
Duchesne	--	333	600	124	67	300	450	--	700	--	--	
Uintah	--	600	--	500	--	600	--	300	--	--	--	
REGIONAL TOTALS	--	400	600	195	67	343	300	300	520	--	--	341
Southeastern Region												
Carbon	--	480	200	350	300	--	--	--	--	--	--	
Emery	300	400	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	300	467	200	350	300	--	--	--	--	--	--	323
STATE TOTALS	297	267	241	244	298	345	398	294	311	404	353	310

Table 3. Trend of ruffed grouse mean brood size, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	--	--	5.00	2.50	--	--	--	--	--	--	3.00	
Cache	--	5.00	3.83	3.00	4.00	4.33	5.14	3.67	--	--	7.00	
Davis	--	--	--	--	--	--	9.00	--	--	--	--	
Morgan	--	4.00	--	5.00	--	1.00	4.89	6.00	--	--	5.00	
Rich	6.00	--	4.75	3.00	--	--	--	--	--	--	--	
Summit	5.00	5.00	3.00	4.00	4.75	4.00	5.00	4.00	2.00	--	--	
Weber	4.50	--	--	--	4.00	--	5.00	5.00	4.00	--	--	
REGIONAL TOTALS	5.00	4.54	4.00	3.08	4.25	3.88	5.20	4.33	3.33	--	5.00	4.18
Central Region												
Juab	3.00	4.00	5.00	2.00	--	--	--	--	--	--	--	
Salt Lake	--	4.00	--	5.00	--	--	--	2.00	2.20	--	--	
Sanpete	4.60	3.00	4.50	5.36	4.44	5.11	5.79	5.14	5.47	5.47	4.75	
Tooele	--	--	--	--	--	--	--	--	--	4.00	--	
Utah	5.00	4.25	4.00	2.00	3.00	4.00	4.67	3.25	3.00	--	--	
Wasatch	--	--	--	--	--	--	3.00	--	--	--	9.00	
REGIONAL TOTALS	4.43	3.44	4.50	4.94	4.08	4.83	5.20	4.25	4.57	5.13	5.22	4.54
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	2.00	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	4.00	5.00	2.33	--	5.75	3.00	4.80	6.00	5.00	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	5.50	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	4.33	4.40	2.33	--	5.75	3.00	4.80	6.00	5.00	--	--	4.43
Northeastern Region												
Daggett	--	--	--	5.00	--	--	4.00	--	4.75	--	--	
Duchesne	--	3.33	6.00	3.50	2.00	4.50	4.50	--	7.00	--	--	
Uintah	--	6.00	--	5.00	--	6.00	--	6.00	--	--	--	
REGIONAL TOTALS	--	4.00	6.00	4.10	2.00	4.80	4.20	6.00	5.20	--	--	4.44
Southeastern Region												
Carbon	--	4.80	2.00	3.50	3.00	--	--	--	--	--	--	
Emery	5.00	4.00	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.00	4.67	2.00	3.50	3.00	--	--	--	--	--	--	3.63
STATE TOTALS	4.58	4.09	3.87	4.12	4.26	4.46	5.06	4.52	4.57	5.13	5.15	4.47

Table 4. Trend of ruffed grouse observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	--	2	54	50	--	--	--	--	--	--	29	
Cache	--	34	45	13	50	25	18	25	--	3	6	
Davis	--	0	0	10	--	--	60	--	--	--	--	
Morgan	--	136	0	33	--	8	149	20	--	--	57	
Rich	140	--	--	27	--	--	--	--	--	--	--	
Summit	62	185	46	100	144	61	600	21	--	--	--	
Weber	--	--	--	0	111	--	16	17	31	--	--	
REGIONAL TOTALS	24	49	41	20	49	18	38	19	10	1	12	27
Central Region												
Juab	33	250	27	40	--	--	--	--	--	--	--	
Salt Lake	0	30	0	20	4	--	2	150	70	--	--	
Sanpete	129	124	69	181	125	203	270	200	515	293	271	
Tooele	0	0	0	0	0	--	--	--	--	880	--	
Utah	23	73	32	19	25	30	39	37	14	38	3	
Wasatch	--	--	0	0	--	--	48	3	--	--	86	
REGIONAL TOTALS	50	71	23	64	56	99	73	47	98	144	63	73
Southern Region												
Beaver	--	0	--	--	--	--	--	--	--	--	--	
Garfield	0	38	0	--	0	--	--	--	--	--	--	
Iron	--	0	0	--	0	--	--	--	--	--	--	
Kane	0	--	0	--	0	--	--	--	--	--	--	
Millard	0	0	--	--	0	--	--	--	--	--	--	
Piute	--	--	0	--	0	--	--	--	--	--	--	
Sevier	10	8	2	--	12	2	15	3	2	--	--	
Washington	--	0	0	--	0	--	--	--	--	--	--	
Wayne	117	0	--	--	0	--	--	--	--	--	--	
REGIONAL TOTALS	12	8	2	--	9	2	15	3	2	--	--	7
Northeastern Region												
Daggett	0	0	0	20	0	--	85	--	164	--	--	
Duchesne	0	30	11	47	9	46	48	--	12	--	--	
Uintah	0	16	0	62	0	11	--	350	--	--	--	
REGIONAL TOTALS	0	20	5	44	4	21	26	350	26	--	--	55
Southeastern Region												
Carbon	0	53	33	12	7	--	9	--	--	--	--	
Emery	67	42	0	--	0	--	33	--	--	--	--	
Grand	0	--	0	--	--	--	--	--	--	--	--	
San Juan	0	0	0	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	28	26	11	7	3	--	12	--	--	--	--	15
STATE TOTALS	18	28	12	25	23	29	37	20	27	66	19	29

Table 5. Blue grouse summer inventory summary, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	1	1	5	5.00	0	0	3	4	5	125	80	3	0	11	14	64
Cache	3	3	13	4.33	0	1	0	3	14	467	615	46	65	13	124	14
Davis	1	1	3	3.00	0	0	0	1	3	300	65	4	0	8	12	33
Morgan	0	0	0	--	0	0	1	1	0	--	60	12	14	0	26	4
Rich	0	0	0	--	0	0	0	0	0	--	50	3	6	0	9	--
Summit	0	0	0	--	0	0	0	0	0	--	15	3	4	0	7	--
Weber	0	0	0	--	0	0	1	1	0	--	164	11	10	5	26	4
REGIONAL TOTALS	5	5	21	4.20	0	1	5	10	22	220	1,049	82	99	37	218	15
Central Region																
Juab	1	1	4	4.00	0	0	0	1	4	400	295	15	0	2	17	29
Salt Lake	0	0	0	--	0	0	1	1	0	--	60	1	0	6	7	14
Sanpete	0	0	0	--	0	0	0	0	0	--	112	2	13	2	17	--
Tooele	6	6	23	3.83	4	13	16	26	36	138	70	0	13	5	18	344
Utah	2	2	8	4.00	0	0	2	4	8	200	473	34	2	1	37	32
Wasatch	1	1	5	5.00	0	0	1	2	5	250	170	11	2	1	14	50
REGIONAL TOTALS	10	10	40	4.00	4	13	20	34	53	156	1,180	63	30	17	93	94
Southern Region																
Beaver	1	1	7	7.00	0	0	0	1	7	700	105	6	0	0	6	133
Garfield	1	1	3	3.00	0	0	0	1	3	300	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	2	2	8	4.00	0	0	1	3	8	267	154	9	0	0	9	122
Millard	0	0	0	--	0	2	0	0	2	--	120	8	5	0	13	15
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	4	4	10	2.50	0	0	6	10	10	100	0	0	40	0	40	50
Washington	3	3	11	3.67	0	0	0	3	11	367	80	9	0	3	12	117
Wayne	1	1	4	4.00	0	0	0	1	4	400	--	--	--	--	--	--
REGIONAL TOTALS	12	12	43	3.58	0	2	7	19	45	237	459	32	45	3	80	80
Northeastern Region																
Daggett	12	12	52	4.33	7	48	1	20	100	500	136	17	0	2	19	632
Duchesne	5	5	17	3.40	0	0	0	5	17	340	405	37	0	6	43	51
Uintah	10	10	56	5.60	0	0	8	18	56	311	95	6	12	13	31	239
REGIONAL TOTALS	27	27	125	4.63	7	48	9	43	173	402	636	60	12	21	93	232
Southeastern Region																
Carbon	1	1	7	7.00	0	0	0	1	7	700	--	10*	--	--	10*	80
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	1	1	4	4.00	0	1	4	5	5	100	--	10*	--	--	10*	100
REGIONAL TOTALS	2	2	11	5.50	0	1	4	6	12	200	--	20*	--	--	20*	90
STATE TOTALS	56	56	240	4.29	11	65	45	112	305	272	3,324	257	186	78	504	83

*Estimated

Table 6. Trend of blue grouse young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	--	236	100	429	--	400	380	600	360	--	125	
Cache	192	357	356	331	100	322	167	83	254	--	467	
Davis	--	300	0	150	320	500	100	600	--	--	300	
Morgan	375	300	130	341	117	230	0	233	200	--	--	
Rich	--	--	167	500	--	--	--	300	--	--	--	
Summit	314	--	143	333	333	560	325	400	389	--	--	
Weber	700	625	0	400	400	425	280	425	221	400	--	
REGIONAL TOTALS	222	305	194	333	167	357	205	217	271	400	220	267
Central Region												
Juab	50	--	500	--	--	200	200	124	300	--	400	
Salt Lake	0	300	25	333	238	160	230	350	200	38	--	
Sanpete	300	--	--	325	260	89	275	--	--	471	--	
Tooele	143	179	86	227	82	108	225	141	138	--	138	
Utah	415	222	0	300	27	266	169	279	88	100	200	
Wasatch	--	333	400	400	--	800	214	--	--	200	250	
REGIONAL TOTALS	285	218	192	277	120	156	200	167	153	317	156	209
Southern Region												
Beaver	--	500	--	--	--	--	200	--	200	214	700	
Garfield	--	--	400	100	300	380	375	--	--	340	300	
Iron	--	150	--	--	--	200	233	340	--	--	--	
Kane	211	--	--	--	--	400	--	--	--	--	267	
Millard	--	450	--	--	700	567	475	--	--	235	--	
Piute	--	--	--	200	--	--	--	--	387	350	--	
Sevier	100	320	233	106	86	214	100	179	155	238	100	
Washington	533	350	--	500	--	600	400	--	500	--	367	
Wayne	--	400	--	275	567	--	--	--	--	--	400	
REGIONAL TOTALS	192	313	246	142	146	288	158	193	253	245	237	218
Northeastern Region												
Daggett	286	567	--	487	367	343	154	336	442	469	500	
Duchesne	600	300	350	431	380	567	220	409	257	382	340	
Uintah	500	250	300	525	350	500	460	354	380	238	311	
REGIONAL TOTALS	344	311	320	461	372	486	202	366	371	381	402	361
Southeastern Region												
Carbon	--	243	167	321	500	225	100	350	200	--	700	
Emery	667	--	--	--	300	--	--	--	--	--	--	
Grand	0	43	200	110	300	--	--	--	100	--	--	
San Juan	--	242	200	155	100	380	250	200	300	--	100	
REGIONAL TOTALS	333	188	189	209	269	255	140	275	208	--	200	230
STATE TOTALS	237	284	195	281	181	278	188	219	274	297	272	243

Table 7. Trend of blue grouse mean brood size, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	--	5.06	3.00	5.75	--	4.00	3.80	6.00	3.60	--	5.00	
Cache	4.66	4.95	5.30	4.48	3.40	4.46	2.50	3.75	3.67	--	4.33	
Davis	--	--	--	4.00	3.67	5.00	3.50	6.00	--	--	3.00	
Morgan	5.50	4.62	3.25	4.45	2.80	3.83	--	3.00	2.00	--	--	
Rich	--	--	5.00	5.00	--	--	--	3.00	--	--	--	
Summit	4.40	--	2.75	5.00	5.00	5.60	4.33	4.00	3.89	--	--	
Weber	7.00	6.25	--	6.00	4.00	4.25	3.50	4.25	3.57	4.00	--	
REGIONAL TOTALS	4.79	5.00	4.25	4.67	3.56	4.55	3.63	3.90	3.65	4.00	4.20	4.20
Central Region												
Juab	1.00	--	5.00	--	--	4.00	2.00	3.67	4.00	--	4.00	
Salt Lake	--	6.00	1.00	5.00	4.75	2.67	3.29	3.50	--	--	--	
Sanpete	3.00	--	--	3.25	4.33	4.00	2.75	--	--	5.44	--	
Tooele	6.00	4.40	3.50	3.45	2.50	4.40	4.20	3.58	3.20	--	3.83	
Utah	5.38	5.00	--	4.29	1.50	3.13	3.13	3.00	7.00	3.00	4.00	
Wasatch	--	5.00	4.00	4.00	--	8.00	5.00	--	--	3.00	5.00	
REGIONAL TOTALS	4.54	4.83	3.40	3.97	3.64	3.61	3.30	3.37	3.89	5.05	4.00	3.96
Southern Region												
Beaver	--	5.00	--	--	--	--	5.00	--	4.00	2.60	7.00	
Garfield	--	--	6.00	--	6.00	4.75	5.00	--	--	3.40	3.00	
Iron	--	3.00	--	--	--	2.00	3.50	4.25	--	--	--	
Kane	6.33	--	--	--	--	4.00	--	--	--	--	4.00	
Millard	--	4.50	--	--	7.00	5.67	6.33	--	--	3.64	--	
Piute	--	--	--	2.00	--	--	--	--	4.67	3.50	--	
Sevier	3.00	5.89	3.82	3.17	4.29	4.50	3.29	4.95	3.44	4.04	2.50	
Washington	5.33	3.50	--	5.00	--	6.00	4.00	--	5.00	--	3.67	
Wayne	--	4.00	--	5.50	6.00	--	--	--	--	--	4.00	
REGIONAL TOTALS	4.55	5.31	4.00	3.50	4.90	4.65	4.04	4.82	4.15	3.70	3.58	4.36
Northeastern Region												
Daggett	5.00	5.67	--	4.88	3.67	4.00	4.00	7.20	4.45	4.91	4.33	
Duchesne	6.00	4.22	7.00	4.60	4.22	5.30	3.00	5.00	3.60	3.88	3.40	
Uintah	5.00	5.00	4.50	5.25	3.50	5.00	5.75	3.70	4.75	2.71	5.60	
REGIONAL TOTALS	5.20	4.71	5.33	4.78	3.94	4.83	3.95	4.90	4.35	4.00	4.63	4.60
Southeastern Region												
Carbon	--	3.40	3.33	4.25	4.75	4.50	2.00	3.50	2.00	--	7.00	
Emery	6.67	--	--	--	3.00	--	--	--	--	--	--	
Grand	--	1.50	4.00	3.67	6.00	--	--	--	2.50	--	--	
San Juan	--	4.83	3.50	3.40	4.00	6.00	5.00	4.00	3.00	--	4.00	
REGIONAL TOTALS	6.67	3.77	3.57	3.88	4.57	5.40	3.50	3.67	2.60	--	5.50	4.18
STATE TOTALS	4.81	4.88	4.05	4.29	4.00	4.44	3.69	4.20	3.97	4.06	4.29	4.24

Table 8. Trend of blue grouse observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	0	273	46	132	--	39	800	58	230	--	64	
Cache	409	271	124	75	62	41	7	44	74	--	14	
Davis	--	80	10	52	84	188	140	92	7	--	33	
Morgan	173	400	35	417	173	127	--	86	30	--	4	
Rich	0	--	--	40	--	--	--	--	--	--	--	
Summit	138	8	83	93	81	400	850	18	293	--	--	
Weber	--	--	125	62	167	42	51	58	174	71	4	
REGIONAL TOTALS	266	274	80	94	87	65	30	57	121	20	15	109
Central Region												
Juab	25	0	27	0	--	86	38	336	73	--	29	
Salt Lake	20	27	14	98	112	111	70	450	36	48	14	
Sanpete	39	0	0	27	31	65	33	--	--	281	--	
Tooele	94	144	108	354	172	1,080	557	248	271	--	344	
Utah	172	64	118	54	23	96	176	104	52	36	32	
Wasatch	--	433	36	250	--	46	88	3	--	53	50	
REGIONAL TOTALS	95	57	29	91	56	113	109	122	55	127	94	85
Southern Region												
Beaver	--	300	--	--	--	--	107	--	46	220	133	
Garfield	0	25	56	16	53	86	61	--	--	--	--	
Iron	--	167	--	--	0	150	333	275	--	--	--	
Kane	76	--	0	--	0	250	--	--	--	--	122	
Millard	0	122	--	--	133	250	2,300	--	--	248	15	
Piute	--	--	0	75	0	--	--	--	557	225	--	
Sevier	7	40	21	34	28	38	46	68	20	48	50	
Washington	--	129	0	55	0	--	125	--	800	--	117	
Wayne	8	--	--	375	2,000	0	--	--	--	--	--	
REGIONAL TOTALS	18	47	21	40	35	56	61	74	41	74	80	47
Northeastern Region												
Daggett	45	182	0	157	88	100	420	600	736	389	632	
Duchesne	13	130	14	105	84	148	209	130	75	126	51	
Uintah	19	78	27	86	20	19	44	256	308	54	239	
REGIONAL TOTALS	27	112	15	112	63	83	150	220	228	138	232	115
Southeastern Region												
Carbon	0	44	35	77	44	46	19	35	17	--	80	
Emery	77	0	0	--	40	--	33	--	--	--	--	
Grand	19	25	33	68	62	6	--	--	--	--	--	
San Juan	0	158	53	108	24	99	54	46	218	--	100	
REGIONAL TOTALS	36	56	39	81	38	46	29	38	128	--	90	55
STATE TOTALS	66	91	33	81	52	106	68	93	93	91	83	77

Table 9. Summary of effort expended on forest grouse brood counts, 1983.

Region and County	Vehicle Miles Traveled	Hours Effort Expended			
		Vehicle	Horseback	Walking	Total
Northern Region					
Box Elder	80	3	0	11	14
Cache	615	46	65	13	124
Davis	65	4	0	8	12
Morgan	60	12	14	0	26
Rich	50	3	6	0	9
Summit	15	3	4	0	7
Weber	164	11	10	5	26
REGIONAL TOTALS	1,049	82	99	37	218
Central Region					
Juab	295	15	0	2	17
Salt Lake	60	1	0	6	7
Sanpete	112	2	13	2	17
Tooele	70	0	13	5	18
Utah	473	34	2	1	37
Wasatch	170	11	2	1	14
REGIONAL TOTALS	1,180	63	30	17	93
Southern Region					
Beaver	105	6	0	0	6
Garfield	--	--	--	--	--
Iron	--	--	--	--	--
Kane	154	9	0	0	9
Millard	120	8	5	0	13
Piute	--	--	--	--	--
Sevier	0	0	40	0	40
Washington	80	9	0	3	12
Wayne	--	--	--	--	--
REGIONAL TOTALS	459	32	45	3	80
Northeastern Region					
Daggett	136	17	0	2	19
Duchesne	405	37	0	6	43
Uintah	95	6	12	13	31
REGIONAL TOTALS	636	60	12	21	93
Southeastern Region					
Carbon	--	10	--	--	10
Emery	--	--	--	--	--
Grand	--	--	--	--	--
San Juan	--	10	--	--	10
REGIONAL TOTALS	--	20	--	--	20
STATE TOTALS	3,324	257	186	78	504

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged Ruffed	Blue	Unident.	Total	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region									
Box Elder	53	1,484	695	601	1	1,297	0.87	4.30	4.31
Cache	207	6,512	2,915	3,731	147	6,793	1.04	18.86	22.58
Davis	61	1,765	534	1,096	95	1,725	0.98	5.11	5.73
Morgan	38	1,016	307	695	27	1,029	1.01	2.94	3.42
Rich	27	1,283	601	227	1	829	0.65	3.72	2.76
Summit	61	1,524	722	414	0	1,136	0.75	4.41	3.78
Weber	93	3,062	1,069	1,243	269	2,581	0.84	8.87	8.58
REGIONAL TOTALS	540	16,649	6,843	8,007	540	15,390	0.92	48.22	51.16
Central Region									
Juab	23	628	147	280	54	481	0.77	1.82	1.60
Salt Lake	35	1,003	106	668	68	842	0.84	2.90	2.80
Sanpete	63	2,447	561	869	41	1,471	0.60	7.09	4.89
Tooele	37	949	173+	575	174	922	1.97	2.75	3.06
Utah	107	3,784	1,310	1,644	255	3,209	0.85	10.96	10.67
Wasatch	58	1,457	628	427	54	1,109	0.76	4.22	3.69
REGIONAL TOTALS	323	10,270	2,925	4,463	646	8,034	0.78	29.74	26.71
Southern Region									
Beaver	8	213	26+	200	14	240	1.13	0.62	0.80
Garfield	17	454	120+	320	54	494	1.09	1.31	1.64
Iron	21	481	66+	401	27	494	1.03	1.39	1.64
Kane	5	294	0+	0	13	13	0.05	0.85	0.04
Millard	6	173	26+	66	1	93	0.54	0.50	0.31
Piute	8	254	80	133	81	294	1.16	0.74	0.98
Sevier	50	1,377	254	1,123	40	1,417	1.03	3.99	4.71
Washington	7	160	40+	13	13	66	0.42	0.46	0.22
Wayne	9	173	40+	40	0	80	0.46	0.50	0.27
REGIONAL TOTALS	131	3,584	652	2,296	243	3,191	0.89	10.38	10.61
Northeastern Region									
Daggett	10	254	66	173	15	254	1.00	0.74	0.84
Duchesne	41	1,150	575	441	120	1,136	0.99	3.33	3.78
Uintah	37	1,150	133	789	201	1,123	0.98	3.33	3.73
REGIONAL TOTALS	88	2,554	774	1,403	336	2,513	0.98	7.40	8.35
Southeastern Region									
Carbon	13	414	40	173	0	213	0.48	1.20	0.71
Emery	12	588	106	307	1	414	0.70	1.70	1.38
Grand	2	106	0+	26	0	26	0.25	0.31	0.09
San Juan	4	160	0+	40	0	40	0.25	0.46	0.13
REGIONAL TOTALS	31	1,270	146	546	1	693	0.54	3.67	2.30
Unknown Counties	5	200	26	240	1	267	1.33	0.57	0.89
Mixed Counties	0	0	0	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,118	34,530	11,366	16,955	1,767	30,088	0.87	100	100

*Total hunter trips from questionnaire returns.

+Outside of known distributional limits; probable incorrect identification of blue grouse.

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	0.98	0.79	1.20	1.35	0.68	0.87
Cache	1.40	1.24	0.96	0.87	0.78	1.04
Davis	1.34	0.94	0.74	0.66	0.55	0.98
Morgan	1.47	1.08	0.50	0.59	0.73	1.01
Rich	1.10	0.90	0.73	0.17	0.66	0.65
Summit	1.38	0.93	0.72	0.73	0.81	0.75
Weber	1.06	1.07	0.90	0.75	0.81	0.84
REGIONAL TOTALS	1.27	1.08	0.86	0.77	0.74	0.92
Central Region						
Juab	0.63	1.63	1.21	1.07	0.71	0.77
Salt Lake	1.59	1.17	1.12	0.32	0.86	0.84
Sanpete	0.82	0.96	0.73	0.86	0.70	0.60
Tooele	0.89	0.98	1.03	0.89	1.07	0.97
Utah	1.13	1.11	1.09	0.85	0.77	0.85
Wasatch	0.93	0.93	0.65	0.81	0.55	0.76
REGIONAL TOTALS	1.04	1.05	0.95	0.82	0.75	0.78
Southern Region						
Beaver	1.65	1.64	0.89	0.61	1.00	1.13
Garfield	0.57	0.64	0.91	1.08	0.50	1.09
Iron	0.98	0.78	0.73	0.94	0.73	1.03
Kane	0.57	0.86	1.00	0.79	0.53	0.05
Millard	1.21	1.44	1.56	1.04	0.78	0.54
Piute	1.93	0.74	1.10	1.40	0.70	1.16
Sevier	1.02	1.14	1.26	0.61	0.82	1.03
Washington	1.22	0.45	0.00	0.50	0.00	0.42
Wayne	1.00	0.95	0.67	0.40	0.56	0.46
REGIONAL TOTALS	1.06	1.11	1.16	0.80	0.75	0.89
Northeastern Region						
Daggett	0.79	0.69	0.55	0.92	1.15	1.00
Duchesne	0.96	0.99	0.71	1.25	0.75	0.99
Uintah	0.82	0.93	0.87	1.20	0.93	0.98
REGIONAL TOTALS	0.87	0.90	0.76	1.07	0.91	0.98
Southeastern Region						
Carbon	1.32	0.73	0.88	0.72	0.50	0.48
Emery	0.89	0.52	0.83	0.93	0.79	0.70
Grand	0.67	0.57	0.00	1.53	0.50	0.25
San Juan	0.43	0.40	1.00	1.00	1.00	0.25
REGIONAL TOTALS	0.96	0.61	0.87	0.98	0.69	0.54
Unknown Counties	0.74	1.00	0.00	1.67	0.67	1.33
STATE TOTALS	1.12	1.04	0.91	0.81	0.76	0.87

Table 12. Percentage distribution of forest grouse harvest by region and county, 1978-83.

Region and County	Year 1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	2.99	1.63	4.73	4.41	4.79	4.31
Cache	20.93	21.94	18.23	19.25	18.02	22.58
Davis	3.56	4.04	3.47	2.51	3.03	5.73
Morgan	3.58	2.87	2.01	5.10	3.17	3.42
Rich	3.66	3.40	3.13	0.53	3.73	2.76
Summit	6.90	5.76	5.59	6.47	4.15	3.78
Weber	7.93	10.17	5.67	6.54	9.71	8.58
REGIONAL TOTALS	49.55	49.81	42.83	44.82	46.59	51.16
Central Region						
Juab	0.61	1.39	1.71	2.21	1.06	1.60
Salt Lake	2.97	3.21	3.43	0.91	2.53	2.80
Sanpete	4.17	6.27	3.80	3.35	4.57	4.89
Tooele	2.38	1.43	2.42	2.51	4.15	3.06
Utah	16.76	12.31	16.70	17.43	12.03	10.67
Wasatch	4.66	5.50	4.81	4.11	3.80	3.69
REGIONAL TOTALS	31.56	30.11	32.87	30.52	28.15	26.71
Southern Region						
Beaver	0.69	0.44	0.63	1.75	0.42	0.80
Garfield	0.42	0.34	0.37	1.07	0.21	1.64
Iron	1.06	0.51	1.12	1.29	1.69	1.64
Kane	0.20	0.15	0.37	0.84	0.70	0.04
Millard	0.71	3.33	2.91	2.05	0.99	0.31
Piute	0.71	0.56	0.82	1.60	2.18	0.98
Sevier	3.58	6.49	7.98	2.89	6.26	4.71
Washington	0.54	0.12	0.00	0.08	0.00	0.22
Wayne	0.10	0.44	0.15	0.15	0.35	0.27
REGIONAL TOTALS	8.00	12.38	14.35	11.72	12.81	10.61
Northeastern Region						
Daggett	0.76	0.75	0.86	2.74	2.67	0.84
Duchesne	2.36	2.36	2.16	1.14	3.24	3.78
Uintah	2.18	1.51	3.58	2.28	3.80	3.73
REGIONAL TOTALS	5.30	4.62	6.60	6.16	9.71	8.35
Southeastern Region						
Carbon	2.36	1.53	1.68	1.60	0.70	0.71
Emery	1.67	0.85	1.49	1.98	0.77	1.38
Grand	0.15	0.51	0.00	1.75	0.28	0.09
San Juan	0.37	0.10	0.19	1.07	0.84	0.13
REGIONAL TOTALS	4.54	2.99	3.35	6.39	2.60	2.30
Unknown Counties	1.06	0.10	0.00	0.38	0.14	0.89
STATE TOTALS	100	100	100	100	100	100

Table 13. Percentage distribution of forest grouse hunting pressure by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	3.44	2.16	3.60	2.66	5.33	4.30
Cache	16.79	18.41	17.24	17.95	17.58	18.86
Davis	2.97	4.46	4.28	3.09	4.16	5.11
Morgan	2.72	2.76	3.67	7.05	3.30	2.94
Rich	3.71	3.96	3.91	2.54	4.26	3.72
Summit	5.61	6.44	7.04	7.18	3.89	4.41
Weber	8.42	9.91	5.71	7.12	9.11	8.87
REGIONAL TOTALS	43.67	48.10	45.46	47.59	47.63	48.22
Central Region						
Juab	1.10	0.89	1.29	1.67	1.12	1.82
Salt Lake	2.09	2.87	2.79	2.29	2.24	2.90
Sanpete	5.70	6.82	4.76	3.16	4.95	7.09
Tooele	3.00	1.52	2.14	2.29	2.93	2.75
Utah	16.62	11.51	13.97	16.71	11.77	10.96
Wasatch	5.61	6.19	6.73	4.15	5.22	4.22
REGIONAL TOTALS	34.12	29.79	13.69	30.26	28.24	29.74
Southern Region						
Beaver	0.47	0.28	0.65	2.35	0.32	0.62
Garfield	0.83	0.56	0.37	0.80	0.32	1.31
Iron	1.21	0.68	1.39	1.11	1.76	1.39
Kane	0.39	0.18	0.34	0.87	1.01	0.85
Millard	0.66	2.41	1.70	1.61	0.96	0.50
Piute	0.41	0.79	0.68	0.93	2.34	0.74
Sevier	3.94	5.96	5.78	3.84	5.75	3.99
Washington	0.50	0.28	0.20	0.12	0.05	0.46
Wayne	0.11	0.48	0.20	0.31	0.48	0.50
REGIONAL TOTALS	8.50	11.61	11.32	11.94	13.00	10.38
Northeastern Region						
Daggett	1.07	1.14	1.43	2.41	1.76	0.74
Duchesne	2.75	2.48	2.79	0.74	3.25	3.33
Uintah	2.97	1.70	3.74	1.55	3.09	3.33
REGIONAL TOTALS	6.80	5.32	7.96	4.70	8.10	7.40
Southeastern Region						
Carbon	2.01	2.18	1.73	1.79	1.07	1.20
Emery	2.09	1.70	1.63	1.73	0.75	1.70
Grand	0.25	0.94	0.00	0.93	0.43	0.31
San Juan	0.96	0.25	0.17	0.87	0.64	0.46
REGIONAL TOTALS	5.31	5.07	3.54	5.32	2.88	3.67
Unknown Counties	1.60	0.10	0.03	0.19	0.16	0.57
STATE TOTALS	100	100	100	100	100	100

Table 14. Statewide summary of forest grouse harvest statistics, 1963-83.

Year	Total Hunters	Total Harvest							Hunter-days Afield	Grouse/Hunter-day			Grouse Per Hunter		
		Ruffed	Percent	Blue	Percent	Unknown	Percent	Total		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)	42,477	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
1980	19,511	15,457	(34.0)	27,588	(60.6)	2,477	(5.4)	45,522	49,899	0.31	0.55	0.91	0.79	1.41	2.33
1981	14,329	8,557	(30.7)	17,852	(64.0)	1,485	(5.3)	27,894	34,305	0.25	0.52	0.81	0.60	1.25	1.95
1982	12,384	7,509	(34.5)	12,138	(55.7)	2,131	(9.8)	21,778	28,767	0.26	0.42	0.76	0.60	0.98	1.76
1983	13,414	11,366	(37.8)	16,955	(56.4)	1,767	(5.9)	30,088	34,530	0.33	0.49	0.87	0.84	1.26	2.24
TOTALS (1963-83)	315,315	291,192	(38.9)	405,510	(54.2)	51,078	(6.9)	747,780	742,691	0.39	0.55	1.01	0.92	1.29	2.37
AVERAGES (1963-82)	15,095	13,991	(39.0)	19,428	(54.1)	2,466	(6.9)	35,884	35,408	0.42	0.53	1.01	0.91	1.19	2.26

Table 15. Forest grouse field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	15	43	171	14	8	7	30	95	12	13	0.40
Cache	127	268	1,062	108	10	127	268	1,062	108	10	0.41
Davis	35	72	290	60	21	35	72	290	60	21	0.83
Morgan	1	2	14	4	29	1	2	14	4	29	2.00
Rich	16	33	128	3	2	16	33	128	3	2	0.09
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	19	36	141	10	7	19	36	141	10	7	0.28
REGIONAL TOTALS	213	454	1,806	199	11	205	441	1,730	197	11	0.45
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete*	2	6	5	3	60	--	--	--	--	--	--
Tooele	11	25	68	27	40	0	--	--	--	--	--
Utah	87	192	724	99	13	73	157	673	98	15	0.62
Wasatch	10	17	81	12	15	10	17	81	12	15	0.70
REGIONAL TOTALS	110	240	878	141	16	83	174	754	110	15	0.63
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	4	17	91	11	12	2	3	11	1	9	0.33
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	3	7	30	1	3	3	7	30	1	3	0.14
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	7	24	121	12	10	5	10	41	2	5	0.20
Northeastern Region											
Daggett	11	30	81	44	54	9	24	76	42	55	1.75
Duchesne	1	2	12	0	--	0	0	0	0	--	--
Uintah	37	124	411	61	15	17	61	251	36	14	0.59
REGIONAL TOTALS	49	156	504	105	21	26	85	327	78	24	0.92
Southeastern Region											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	1	1	2	2	100	1	1	2	2	100	2.00
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1	1	2	2	100	1	1	2	2	100	2.00
STATE TOTALS	380	875	3,311	459	14	320	711	2,854	389	14	0.55

*Includes data from Southeastern Region.

Table 16. Forest grouse hunter success trend determined by field bag checks, 1978-83.

Region and County	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter	1981 Birds/ 100 Hr	1981 Birds/ Hunter	1982 Birds/ 100 Hr	1982 Birds/ Hunter	1983 Birds/ 100 Hr	1983 Birds/ Hunter
Northern Region												
Box Elder	41	2.33	29	2.00	--	--	4	0.25	12	0.40	13	0.40
Cache	31	0.59	16	0.66	6	0.27	11	0.52	8	0.32	10	0.41
Davis	--	0.00	43	1.22	42	1.00	12	0.33	13	0.44	21	0.83
Morgan	--	--	--	--	--	--	--	--	33	1.00	29	2.00
Rich	15	0.62	10	0.32	2	0.07	8	0.30	2	0.10	2	0.09
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	20	0.79	8	0.36	6	0.24	7	0.27	1	0.04	7	0.28
REGIONAL TOTALS	26	0.63	14	0.58	6	0.25	10	0.43	7	0.28	11	0.45
Central Region												
Juab	33	0.80	--	--	81	1.86	--	--	59	1.63	--	--
Salt Lake	--	--	0	0.00	--	--	--	--	--	--	--	--
Sanpete	--	--	28	0.53	20	1.25	50	1.00	--	--	--	--
Tooele	22	0.40	--	--	--	--	--	--	--	--	--	--
Utah	17	0.65	17	0.64	11	0.51	12	0.55	14	0.70	15	0.62
Wasatch	7	0.00	100	1.00	--	--	--	--	18	0.31	15	0.70
REGIONAL TOTALS	17	0.65	89	0.63	12	0.56	12	0.55	15	0.71	15	0.63
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	88	1.60	22	0.31	--	--	--	--	--	--	9	0.33
Iron	35	1.66	--	--	--	--	--	--	--	--	--	--
Kane	16	0.33	0	0.00	--	--	16	0.40	--	--	--	--
Millard	27	1.04	97	2.43	--	--	--	--	7	0.25	3	0.14
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	31	1.04	--	--	9	0.64	88	3.00	--	--
Washington	--	--	150	3.00	--	--	--	--	--	--	--	--
Wayne	--	--	17	0.50	--	--	--	--	--	--	--	--
REGIONAL TOTALS	37	1.22	39	1.05	--	--	10	0.56	58	2.00	5	0.20
Northeastern Region												
Daggett	57	0.80	38	1.31	54	1.60	--	--	56	1.25	55	1.75
Duchesne	20	0.50	30	0.73	0	0.00	17	0.50	20	0.50	--	--
Uintah	14	0.29	70	0.97	--	--	34	1.69	19	0.61	14	0.59
REGIONAL TOTALS	19	0.46	44	1.12	39	1.26	32	1.49	21	0.65	24	0.92
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	0	0.00	--	--	100	1.00	--	--	100	2.00
San Juan	--	--	0	0.00	--	--	50	1.00	--	--	--	--
REGIONAL TOTALS	--	--	0	0.00	--	--	83	1.00	--	--	100	2.00
STATE TOTALS	22	0.64	17	0.64	8	0.35	11	0.51	12	0.49	14	0.55

Table 17. Sex and age composition of harvested blue grouse, 1983.

Region and County	Sample Size	Adults M	Adults F	Adults Total	Young M	Young F	Young Total[1]	Young/ 100 Adults	Young/ 100 Hens
Northern Region									
Box Elder	--	--	--	--	--	--	--	--	--
Cache[2]	--	--	--	--	--	--	--	--	--
Davis	55	6	9	15	--	--	40	267	444
Morgan	--	--	--	--	--	--	--	--	--
Rich[2]	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber[2]	50	7	8	15	--	--	35	233	438
REGIONAL TOTALS	105	13	17	30	--	--	75	250	441
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	75	16	19	35	12	28	40	114	211
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	75	16	19	35	12	28	40	114	211
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Northeastern Region									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	60	11	11	22	23	15	38	173	345
REGIONAL TOTALS	60	11	11	22	23	15	38	173	345
Southeastern Region									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	240	40	47	87	--	--	153	176	326

[1]Includes unclassified juveniles.

[2]Combined data from Cache, Rich and Weber counties considered as one population of blue grouse.

QUAIL

SUMMARY

The 1983 breeding populations of California and Gambel's quail were considerably less than 1982 and average.

However, production of both California and Gambel's quail increased from 1982 to well above average. Nevertheless, quail observation trends were still below average in most areas of the state.

Harvest statistics, when compared to 1982, showed a decrease in total hunters but total harvest increased. Hunter success (birds per hunter-day) remained below average statewide. An increase in hunter days afield and total harvest of Gambel's quail was reported in Washington County.

Brood Counts

Results of the annual random brood counts for 1983 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 1983 compared to 1982 and the previous 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total quail observed	430	+3	-38
Young per 100 adults	412	+207	+82
Mean brood size	9.71	+60	+42
Quail observed per 100 hours	411	+1	-29
Total hours effort	104.5	+2	-15

Harvest statistics for 1982 indicated a poor breeding population of quail statewide; however, breeding populations of California quail increased in the Northern, Northeastern and Southeastern regions. Gambel's quail in Washington County showed a slight decrease in breeding population.

Gambel's quail call counts on the west slope of Beaver Dam Mountains were discontinued in 1980.

Brood counts indicated excellent production of both California and Gambel's quail. Production increased significantly from 1982 and was well above average.

Harvest

Results of the annual hunter questionnaire for 1983 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 1983 season to 1982 and the previous 24-year average follow:

	1983	Percent change from 1982	Percent change from Average
Quail hunters	4,012	-8	-41
Quail harvested	11,248	+14	-41
Hunter-days afield	10,232	-3	-39
Quail per hunter-day	1.10	+18	-4
Quail per hunter	2.81	+24	-1

Harvest for 1983 increased 14 percent from 1982 but was still 41 percent below average.

Hunter success and total harvest for Washington County (Gambel's quail) increased 29 percent and 34 percent, respectively from 1982. Hunter-days afield also increased 4 percent. Only 24 percent of the statewide harvest of quail was taken in Washington County during 1982 compared to 21 percent in 1982 and nearly 41 percent in 1981.

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

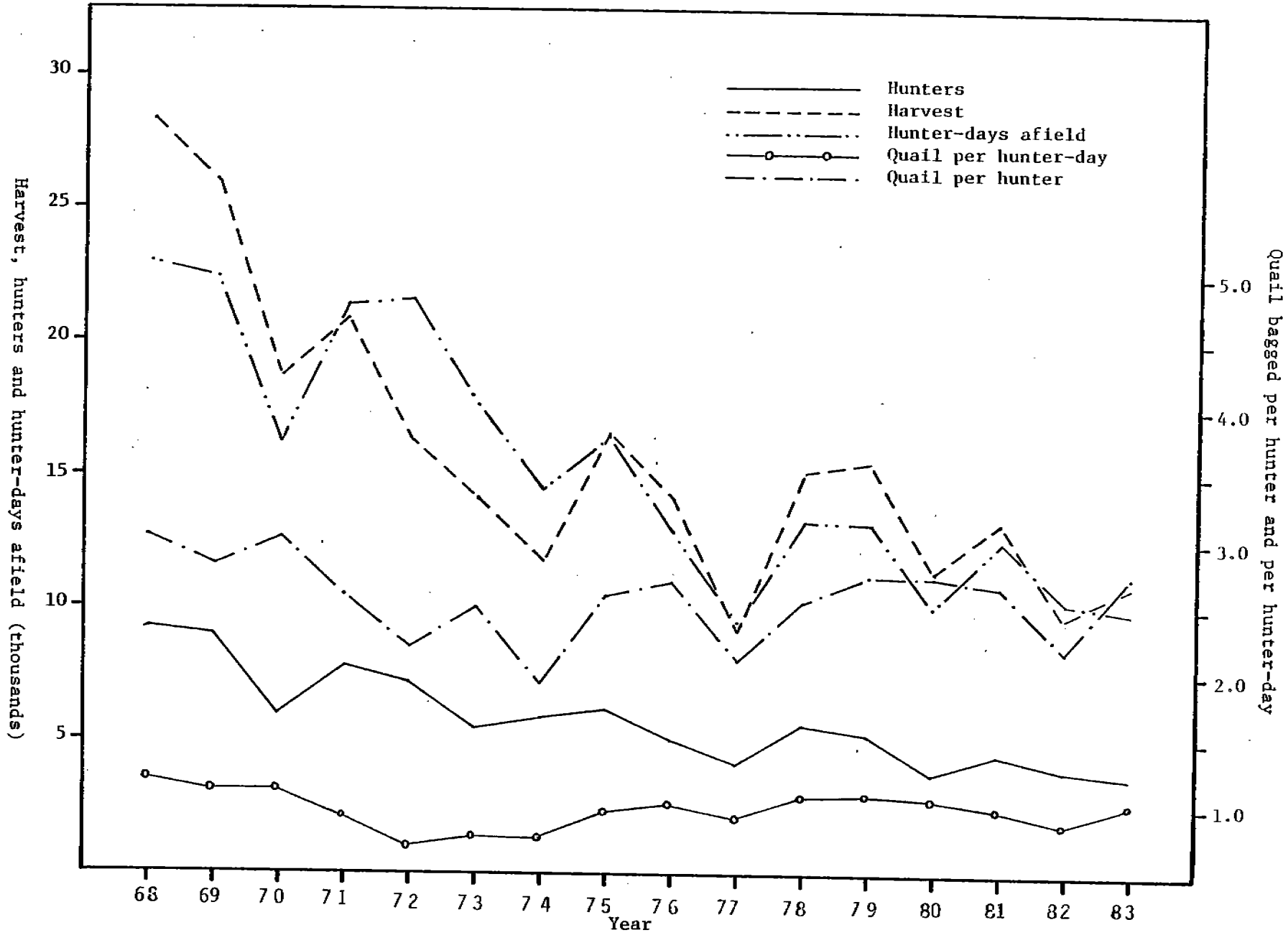


Figure 1. Statewide trend of quail harvest statistics.

Table 1. Quail summer inventory summary, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	1	2	11	11.00	0	0	0	2	11	550	5	5	0	0	5	222
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	4	6	15	3.75	0	0	6	12	15	125	0	0	2	2	4	825
REGIONAL TOTALS	5	8	26	5.20	0	0	6	14	26	130	5	5	2	2	9	511
Central Region																
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	1	2	6	3.00	0	0	13	15	6	40	21	1.5	0	0	1.5	1,400
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	0	0	0	--	0	0	0	0	0	--	72	7	0	0	7	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1	2	6	3.00	0	0	13	15	6	40	93	8.5	0	0	8.5	247
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	4	4	12	3.00	0	0	5	9	12	133	132	6	0	0	6	350
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	14	22	189	13.50	16	98	8	46	287	624	430	30	25	0	55	605
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	18	26	201	11.17	16	98	13	55	299	544	562	36	25	0	61	580
Northeastern Region																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0	0	0	--	0	8	0	0	8	--	230	19	0	0	19	42
Uintah	0	0	0	--	0	7	0	0	7	--	65	6	1	0	7	100
REGIONAL TOTALS	0	0	0	--	0	15	0	0	15	--	295	25	1	0	26	58
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	24	36	233	9.71	16	113	32	84	346	412	955	74.5	28	2	104.5	411

Table 2. Trend of quail young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	250	--	--	--	--	--	--	--	440	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	196	94	35	--	--	
Morgan	400	640	--	300	--	--	500	--	--	--	550	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	50	--	217	0	133	--	233	--	--	--	125	
REGIONAL TOTALS	230	640	217	180	133	--	209	94	128	--	130	203
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	222	175	154	97	86	77	256	400	67	40	40	
Sanpete	174	175	300	580	230	300	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	241	250	229	64	80	44	240	714	100	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	222	200	188	108	95	127	245	656	72	40	40	195
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0	113	50	146	98	47	204	156	540	300	133	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	700	--	--	250	--	
Washington	--	273	580	199	149	555	301	93	226	152	624	
Wayne	--	86	--	244	238	1,250	--	--	550	--	--	
REGIONAL TOTALS	0	171	429	190	146	317	283	114	439	162	544	225
Northeastern Region												
Daggett	0	525	450	600	0	--	--	--	--	--	--	
Duchesne	--	333	314	0	129	190	340	114	583	600	--	
Uintah	700	438	475	323	383	800	653	338	305	411	--	
REGIONAL TOTALS	350	431	411	265	122	336	517	282	367	286	--	337
Southeastern Region												
Carbon	533	--	--	450	--	650	--	--	--	--	--	
Emery	--	109	0	--	0	19	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	300	--	--	
San Juan	--	--	--	--	41	--	40	--	--	--	--	
REGIONAL TOTALS	533	109	0	450	38	89	40	--	300	--	--	195
STATE TOTALS	216	248	360	163	112	272	285	155	311	134	412	226

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

Table 3. Trend of quail mean brood size from 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	5.00	--	--	--	--	--	--	--	11.00	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	6.75	5.00	1.33	--	--	
Morgan	8.00	9.00	--	--	--	--	5.00	--	--	--	11.00	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	3.75	
REGIONAL TOTALS	7.00	9.00	--	--	--	--	6.40	5.00	6.85	--	5.20	6.85
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	7.50	5.00	6.80	7.00	6.40	2.00	4.60	4.00	--	--	3.00	
Sanpete	5.60	4.00	6.00	5.80	4.33	4.75	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	7.36	6.67	7.00	2.50	4.00	4.00	4.00	5.00	3.00	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	6.95	5.29	6.56	5.64	5.78	3.44	4.43	4.50	3.00	--	3.00	5.07
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	7.00	8.00	10.20	6.67	6.25	11.25	5.63	8.54	--	3.00	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	7.00	--	--	--	--	
*Washington	--	5.17	10.84	6.08	7.83	11.80	8.51	5.22	6.42	6.00	13.50	
*Wayne	--	9.00	--	9.00	13.00	--	--	--	5.50	--	--	
REGIONAL TOTALS	--	6.30	10.63	7.40	8.07	10.21	8.86	5.45	7.97	6.00	11.17	7.88
Northeastern Region												
Daggett	--	5.25	4.50	6.00	--	--	--	--	--	--	--	
Duchesne	--	5.00	--	--	3.43	6.86	6.00	4.00	9.00	--	--	
Uintah	7.00	11.00	10.00	3.55	7.67	8.00	6.34	3.55	12.80	6.17	--	
REGIONAL TOTALS	7.00	6.73	6.86	3.67	4.70	7.53	6.17	3.59	11.71	6.17	--	6.41
Southeastern Region												
Carbon	8.00	--	--	9.00	--	--	--	--	--	--	--	
Emery	--	5.00	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	4.50	--	--	
San Juan	--	--	--	--	4.50	--	--	--	--	--	--	
REGIONAL TOTALS	8.00	5.00	--	9.00	4.50	--	--	--	4.50	--	--	6.20
STATE TOTALS	7.04	6.20	9.16	5.58	6.25	7.55	8.08	4.52	8.09	6.05	9.71	6.85

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

Table 4. Trend of quail observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	175	--	--	--	--	--	--	--	1,800	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	956	729	525	--	--	
Morgan	--	925	--	1,200	--	--	600	--	--	--	222	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	100	--	238	22	350	--	1,000	--	--	--	825	
REGIONAL TOTALS	330	925	238	140	350	--	927	729	891	--	511	566
Central Region												
Juab	--	--	--	0	--	--	--	--	--	--	--	
Salt Lake	414	550	592	2,838	2,092	575	1,067	167	63	527	1,400	
Sanpete	525	138	480	262	236	400	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	1,194	400	383	512	90	217	1,700	900	75	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	808	267	513	1,041	805	378	1,429	296	258	414	247	621
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	125	1,067	1,600	2,867	1,088	867	1,340	1,536	3,911	800	350	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	50	800	--	--	1,400	--	
*Washington	--	194	1,143	632	596	750	2,741	675	275	771	605	
*Wayne	--	300	14	517	645	333	--	--	650	--	--	
REGIONAL TOTALS	125	254	917	729	702	667	1,951	867	1,053	691	580	796
Northeastern Region												
Daggett	18	208	157	41	--	--	--	--	--	--	--	
Duchesne	0	325	153	43	240	310	209	79	205	27	42	
Uintah	533	1,950	460	715	483	563	890	613	708	328	100	
REGIONAL TOTALS	47	739	226	241	350	398	443	314	406	123	58	329
Southeastern Region												
Carbon	--	0	--	220	--	1,500	--	--	--	--	--	
Emery	0	343	17	--	67	950	--	--	--	--	--	
Grand	--	0	--	--	--	--	--	--	400	--	--	
San Juan	--	--	--	0	238	0	127	--	--	--	--	
REGIONAL TOTALS	112	343	17	110	206	425	127	--	400	--	--	218
STATE TOTALS	336	364	549	571	588	530	1,193	541	720	408	411	580

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

Table 5. Summary of quail hunter success and distribution of harvest and hunting pressure by region and county, 1983.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
Northern Region						
Box Elder	15	347	173	0.50	3.39	1.54
Cache	3	66	93	1.40	0.64	0.83
Davis	27	1,016	1,016	1.00	9.93	9.03
Morgan	2	26	66	2.50	0.25	0.59
Rich	0	0	0	0.00	0.00	0.00
Summit	2	93	26	0.29	0.91	0.23
Weber	19	508	548	1.08	4.96	4.87
REGIONAL TOTALS	68	2,056	1,922	0.94	20.08	17.09
Central Region						
Juab	1	13	26	2.00	0.13	0.23
Salt Lake	17	468	468	1.00	4.57	4.16
Sanpete	3	106	80	0.75	1.04	0.71
Tooele	3	80	160	2.00	0.78	1.42
Utah	67	1,778	1,537	0.86	13.37	13.66
Wasatch	2	40	106	2.67	0.39	0.94
REGIONAL TOTALS	93	2,485	2,377	0.96	24.28	21.12
Southern Region						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	1	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	7	160	213	1.33	1.56	1.89
Piute	0	0	0	0.00	0.00	0.00
Sevier	2	40	0	0.00	0.39	0.00
Washignton	48	1,792	2,741	1.53	17.51	24.37
Wayne	2	26	80	3.00	0.25	0.71
REGIONAL TOTALS	60	2,018	3,034	1.50	19.72	26.97
Northeastern Region						
Daggett	2	160	481	4.50	1.56	4.28
Duchesne	34	1,243	1,818	1.46	12.14	16.16
Uintah	42	1,965	1,377	0.70	19.20	12.24
REGIONAL TOTALS	78	3,314	3,676	1.11	32.90	32.68
Southeastern Region						
Carbon	4	66	26	0.40	0.64	0.23
Emery	6	280	213	0.76	2.74	1.89
Grand	1	13	0	0.00	0.13	0.00
San Juan	0	0	0	0.00	0.00	1.08
REGIONAL TOTALS	11	359	239	0.67	3.51	2.10
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	310	10,232	11,248	1.10	100	100

*Total hunter-trips from questionnaire returns.

Table 6. Summary of quail bagged per hunter-day by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	0.88	0.43	0.60	0.07	0.25	0.50
Cache	0.24	--	0.50	0.00	1.67	1.40
Davis	1.16	0.96	0.80	0.97	0.53	1.00
Morgan	0.80	0.95	0.00	0.40	0.00	2.50
Rich	0.00	0.00	0.00	0.00	0.67	0.00
Summit	1.67	2.37	2.50	0.00	0.00	0.29
Weber	0.78	0.89	0.88	0.67	1.11	1.08
REGIONAL TOTALS	0.92	0.89	0.77	0.59	0.79	0.94
Central Region						
Juab	3.00	3.00	2.75	0.00	1.60	2.00
Salt Lake	0.90	1.48	1.54	0.88	1.13	1.00
Sanpete	0.00	0.90	0.00	0.00	0.00	0.75
Tooele	0.00	0.00	0.00	0.30	0.00	2.00
Utah	0.91	1.14	1.31	0.84	0.81	0.86
Wasatch	4.00	--	0.00	1.67	0.00	2.67
REGIONAL TOTALS	0.93	1.23	1.37	0.79	0.86	0.96
Southern Region						
Beaver	0.00	0.00	0.00	2.00	0.00	0.00
Garfield	0.00	2.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	1.16	0.00	0.00
Millard	0.44	--	1.08	1.16	1.97	1.33
Piute	0.00	0.00	0.00	2.00	0.00	0.00
Sevier	0.00	0.63	0.00	2.00	0.14	0.00
Washington	2.42	2.04	1.45	1.99	1.19	1.53
Wayne	0.86	2.62	0.00	1.20	1.00	3.00
REGIONAL TOTALS	1.82	1.96	1.43	1.77	1.27	1.50
Northeastern Region						
Daggett	1.00	0.00	0.00	0.00	0.00	4.50
Duchesne	1.37	0.77	0.74	1.07	1.05	1.46
Uintah	1.39	0.83	0.84	0.74	0.64	0.70
REGIONAL TOTALS	1.38	0.80	0.81	0.84	0.83	1.11
Southeastern Region						
Carbon	0.63	0.46	0.82	0.69	0.89	0.40
Emery	1.17	0.45	0.55	0.75	0.67	0.76
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	3.00	1.33	0.00
REGIONAL TOTALS	0.77	0.42	0.60	0.76	0.85	0.67
Unknown counties	1.88	1.16	0.00	0.00	0.00	0.00
STATE TOTALS	1.13	1.17	1.12	1.06	0.93	1.10

Table 7. Percentage distribution of quail harvest by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	2.84	1.66	1.74	0.31	0.62	1.54
Cache	0.52	--	0.15	0.00	1.55	0.83
Davis	11.11	8.74	7.98	5.47	2.95	9.03
Morgan	1.55	1.93	0.00	0.31	0.00	0.59
Rich	0.00	0.00	0.00	0.00	0.31	0.00
Summit	0.65	1.75	0.73	0.00	0.00	0.23
Weber	4.65	4.69	6.10	2.50	9.47	4.87
REGIONAL TOTALS	21.32	18.77	16.69	8.59	14.91	17.09
Central Region						
Juab	0.78	0.55	1.60	0.00	1.24	0.23
Salt Lake	4.78	11.59	5.37	3.59	5.59	4.16
Sanpete	0.00	0.83	0.00	0.00	0.00	0.71
Tooele	0.00	0.00	0.00	0.47	0.00	1.42
Utah	23.51	21.34	17.85	20.16	22.98	13.66
Wasatch	1.03	--	0.00	0.78	0.00	0.94
REGIONAL TOTALS	30.10	34.31	24.82	25.00	29.81	21.12
Southern Region						
Beaver	0.00	0.00	0.00	0.31	0.00	0.00
Garfield	0.00	0.18	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.52	--	1.89	7.81	9.16	1.89
Piute	0.00	0.00	0.00	0.31	0.00	0.00
Sevier	0.00	0.46	0.00	0.16	0.16	0.00
Washington	18.48	25.48	43.83	40.78	20.81	24.37
Wayne	0.78	1.93	0.00	0.94	0.47	0.71
REGIONAL TOTALS	19.77	28.06	45.72	50.31	30.59	26.97
Northeastern Region						
Daggett	0.13	0.00	0.00	0.00	0.00	4.28
Duchesne	6.20	3.68	2.90	4.53	10.09	16.16
Uintah	18.35	5.34	6.82	7.03	7.30	12.24
REGIONAL TOTALS	24.68	9.02	9.72	11.56	17.39	32.68
Southeastern Region						
Carbon	1.29	1.20	1.31	3.13	3.88	0.23
Emery	0.90	0.46	1.74	0.94	2.17	1.89
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.47	1.24	1.08
REGIONAL TOTALS	2.20	1.66	3.05	4.53	7.30	2.10
Unknown counties	1.94	8.18	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, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	3.67	4.51	3.26	4.46	2.32	3.39
Cache	2.49	--	0.33	0.17	0.87	0.64
Davis	10.85	10.63	11.26	5.95	5.22	9.93
Morgan	2.20	2.36	1.47	0.83	0.29	0.25
Rich	0.00	0.11	0.00	0.00	0.43	0.00
Summit	0.44	0.86	0.33	0.00	0.43	0.91
Weber	6.74	6.12	7.83	3.97	7.97	4.96
REGIONAL TOTALS	26.39	24.59	24.47	15.37	17.54	20.08
Central Region						
Juab	0.29	0.21	0.65	1.65	0.72	0.13
Salt Lake	6.01	9.13	3.92	4.30	4.64	4.57
Sanpete	0.00	1.08	0.00	0.00	0.00	1.04
Tooele	0.59	0.32	0.16	1.65	0.58	0.78
Utah	29.47	21.91	15.33	25.45	26.52	13.37
Wasatch	0.29	--	0.33	0.50	0.00	0.39
REGIONAL TOTALS	36.66	32.66	20.39	33.55	32.46	24.28
Southern Region						
Beaver	0.00	0.21	0.00	0.17	0.14	0.00
Garfield	0.00	0.11	0.00	0.00	0.00	0.00
Iron	0.44	0.00	0.00	0.00	0.14	0.00
Kane	0.29	0.00	0.00	0.00	0.00	0.00
Millard	1.32	--	1.96	7.11	4.35	1.56
Piute	0.15	0.11	0.00	0.17	0.00	0.00
Sevier	0.44	0.86	0.00	0.17	1.01	0.39
Washington	8.65	14.61	33.93	21.65	16.38	17.51
Wayne	1.03	0.86	0.00	0.83	0.43	0.25
REGIONAL TOTALS	12.32	16.75	35.89	30.08	22.46	19.72
Northeastern Region						
Daggett	0.15	0.00	0.00	0.00	0.00	1.56
Duchesne	5.13	5.59	4.40	4.46	8.99	12.14
Uintah	14.96	7.52	9.14	10.08	10.58	19.20
REGIONAL TOTALS	20.23	13.10	13.54	14.55	19.57	32.90
Southeastern Region						
Carbon	2.35	3.01	1.79	4.79	4.06	0.64
Emery	0.88	1.18	3.59	1.32	3.04	2.74
Grand	0.00	0.43	0.00	0.00	0.00	0.13
San Juan	0.00	0.00	0.33	0.17	0.87	0.00
REGIONAL TOTALS	3.23	4.62	5.71	6.28	7.97	3.51
Unknown counties	1.17	8.27	0.00	0.17	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of quail harvest statistics, 1951-1983.

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	--	--	--	0.17	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
1980	4,156	11,690	10,400	1.12	2.81
1981	4,946	13,586	12,843	1.06	2.75
1982	4,368	9,870	10,575	0.93	2.26
1983	4,012	11,248	10,232	1.10	2.81
TOTALS (1959-83)	167,075	471,907	415,425	1.14	2.83
AVERAGES (1959-82)	6,794	19,195	16,883	1.14	2.83

Table 10. Gambel's quail call count trend on the west slope of the Beaver Dam Mountains, Washington County, 1971-80. Annual call count surveys were conducted from 1962-79. Vegetative studies were discontinued in 1977.

Index	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980*
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	--*

*Discontinued.

Table 11. Gambel's quail long period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1972-83. These counts have been conducted since 1962.

Index	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Total young	0	0	24	145	61	--	67	253	72	37	85	114
Total adults	0	0	6	20	53	--	29	77	52	25	33	14
Total quail	0	0	30	165	114	17	86	330	124	62	118	128
Young per 100 adults	--	--	400	725	115	--	353	329	138	148	258	814

HUNGARIAN PARTRIDGE

SUMMARY

Harvest data for 1982 indicated that 1983 breeding population densities were less than 1982. Very limited brood data indicated below average Hun densities for 1983.

The 1983 hunt indicated increased hunting pressure on Huns when compared to 1982. The number of hunters afield and Huns harvested increased in 1983. The hunter-days afield increased 30 percent. Total hunters, days afield and harvest remained below the long-term average. Hunter success, however, was slightly higher than the long-term average.

Brood Counts

Results of the annual random brood counts for 1983 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 1983 compared to 1982 and the previous 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total Huns observed	40	-29	-73
Young per 100 adults	400	-2	-29
Mean brood size	10.67	-5	+1
Huns observed per 100 hours	67	-53	-67
Total hours effort	60	+54	-35

Harvest data for 1982 indicated a below average breeding population for 1983.

The hours of effort increased 54 percent from 1982, but still remained 35 percent below average. The number of Huns observed decreased 29 percent. Only three broods were observed in 1983, so that any trends based on this small sample is fairly unreliable. Mean brood size remained slightly above average.

Harvest

Hunter Questionnaire

Results of the annual hunter questionnaire for 1983 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 1983 season compared to 1982 and the previous 24-year average follow:

	1983	Percent change from 1982	Percent change from Average
Hungarian partridge hunters	2,889	+12	-29
Hungarian partridge harvest	6,506	+45	-27
Hunter-days afield	6,998	+30	-31
Huns per hunter-day	0.93	+12	+6
Huns per hunter	2.25	+30	+2

Hungarian partridge hunting pressure increased slightly, while success also increased during 1983 as compared to 1982. Nevertheless, harvest was 27 percent below the long-term average.

Field Bag Checks

Results of the survey for 1983 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indices obtained for 1983 compared to 1982 and the previous 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	8	-56	-83
Total hours hunted	30	-59	-85
Huns per hunter (complete hunts)	0.62	-53	-16
Huns bagged per 100 hours	17	-47	0
Average hours per hunter-day (complete hunts)	3.8	-7	-5
Hours hunted per Hun bagged (complete hunts)	6.0	+94	-26

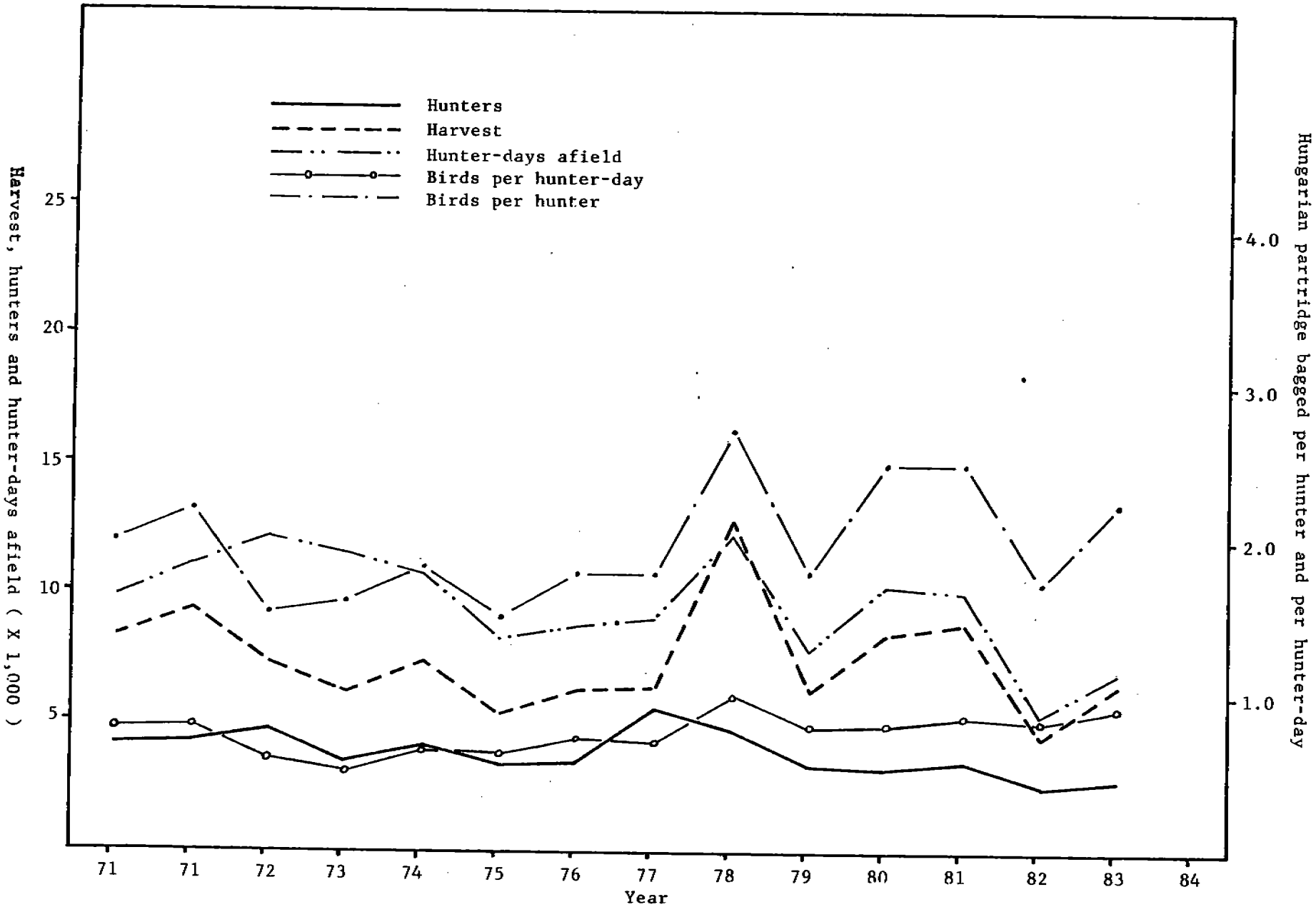


Figure 1. Statewide trend of Hungarian partridge harvest statistics.

Table 1. Hungarian partridge summer inventory summary, 1983.

Region and County	Distinct Broods #	Distinct Broods Ad	Distinct Broods Yng	Mean Brood	Mixed Yng & Adults Ad	Mixed Yng & Adults Yng	Adults w/o Yng	Total Adults	Total Yng	Young/ 100 Ad	Veh. Miles	Hours of Effort Veh.	Hours of Effort Horse	Hours of Effort Walk	Hours of Effort Total	Birds/ 100 Hr
Northern Region																
Box Elder	3	6	32	10.67	0	0	2	8	32	400	0	0	60	0	60	67
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	6	32	10.67	0	0	2	8	32	400	0	0	60	0	60	67
Central Region																
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southern Region																
Beaver																
Garfield																
Iron																
Kane																
Millard							N O T	A P P L I C A B L E								
Piute																
Sevier																
Washington																
Wayne																
REGIONAL TOTALS																
Northeastern Region																
Daggett																
Duchesne							N O T	A P P L I C A B L E								
Uintah																
REGIONAL TOTALS																
Southeastern Region																
Carbon																
Emery							N O T	A P P L I C A B L E								
Grand																
San Juan																
REGIONAL TOTALS																
STATE TOTALS	3	6	32	10.67	0	0	2	8	32	400	0	0	60	0	60	67

Table 2. Trend of Hungarian partridge young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	575	775	600	421	467	580	840	688	671	409	400	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	400	675	--	533	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	700	300	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	560	755	600	431	467	580	840	691	600	409	400	593
Central Region												
Juab	--	--	--	--	--	--	500	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	233	173	--	--	--	--	--	--	
Tooele	--	--	--	550	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	0	--	--	--	
Wasatch	450	800	--	20	--	--	--	--	--	--	--	
REGIONAL TOTALS	450	800	--	200	173	--	500	--	--	--	--	425
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard			N O T	A P P L I C A B L E								
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne			N O T	A P P L I C A B L E								
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery			N O T	A P P L I C A B L E								
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	552	757	600	328	369	580	780	633	600	409	400	561

Table 3. Trend of Hungarian partridge mean brood size from 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	11.86	11.22	13.44	10.22	10.77	11.60	8.40	11.00	12.00	11.25	10.67	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	8.33	13.50	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	7.00	6.00	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	10.80	11.64	13.44	10.22	10.77	11.60	8.40	9.50	10.80	11.25	10.67	10.84
Central Region												
Juab	--	--	--	--	--	--	5.00	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	4.50	8.00	--	2.00	--	--	--	--	--	--	--	
REGIONAL TOTALS	4.50	8.00	--	2.00	--	--	5.00	--	--	--	--	4.88
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard			N O T	A P P L I C A B L E								
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne			N O T	A P P L I C A B L E								
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery			N O T	A P P L I C A B L E								
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	9.75	11.33	13.44	9.40	10.77	11.60	7.83	9.50	10.80	11.25	10.67	10.57

Table 4. Trend of Hungarian partridge observed per 100 hours, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	91	80	262	184	109	203	235	154	570	144	67	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	428	--	--	1,900	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	106	97	262	205	109	151	174	158	639	144	67	205
Central Region												
Juab	--	--	--	--	--	--	600	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	400	820	--	--	--	--	--	--	
Tooele	--	--	--	2,600	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	275	450	--	120	--	--	0	33	--	--	--	
REGIONAL TOTALS	275	450	--	371	820	--	200	17	--	--	--	356
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard				N O T	A P P L I C A B L E							
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne				N O T	A P P L I C A B L E							
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery				N O T	A P P L I C A B L E							
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	110	101	262	238	131	151	177	144	565	144	67	202

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	134	4,439	4,399	0.99	63.43	67.61
Cache	40	1,176	936	0.80	16.80	14.39
Davis	4	93	26	0.29	1.33	0.40
Morgan	6	106	80	0.75	1.51	1.23
Rich	5	227	213	0.94	3.24	3.27
Summit	3	80	0	0.00	1.14	0.00
Weber	5	147	200	1.36	2.10	3.07
REGIONAL TOTALS	164	6,268	5,854	0.93	89.56	89.97
Central Region						
Juab	2	80	0	0.00	1.14	0.00
Salt Lake	0	0	0	0.00	0.00	0.00
Sanpete	1	26	0	0.00	0.37	0.00
Tooele	7	147	280	1.91	2.10	4.30
Utah	4	213	26	0.13	3.04	0.40
Wasatch	7	173	307	1.77	2.47	4.72
REGIONAL TOTALS	21	639	613	0.96	9.13	9.42
Southern Region						
Beaver	1	13	0	0.00	0.19	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	1	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	2	26	26	1.00	0.37	0.40
Piute	0	0	0	0.00	0.00	0.00
Sevier	1	26	13	0.50	0.37	0.20
Washington	0	0	0	0.00	0.00	0.00
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	5	65	39	0.60	0.93	0.60
Northeastern Region						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	0	0	0	0.00	0.00	0.00
Uintah	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	0	0	0	0.00	0.00	0.00
Southeastern Region						
Carbon	1	13	0	0.00	0.19	0.00
Emery	0	0	0	0.00	0.00	0.00
Grand	0	0	0	0.00	0.00	0.00
San Jaun	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	13	0	0.00	0.19	0.00
Unknown Counties	1	13	0	0.00	0.19	0.00
STATE TOTALS	225	6,998	6,506	0.93	100	100

*Total hunter-trips from questionnaire returns.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1978-83.

Region and County	Year 1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	1.19	0.94	0.88	1.31	0.83	0.99
Cache	0.67	0.93	0.77	0.60	1.03	0.80
Davis	2.00	0.76	1.50	0.00	5.00	0.29
Morgan	0.27	1.36	2.25	0.50	1.40	0.75
Rich	2.80	0.56	1.00	0.50	2.00	0.94
Summit	2.00	0.50	1.00	1.50	0.00	0.00
Weber	0.91	0.32	1.00	0.00	1.00	1.36
REGIONAL TOTALS	1.07	0.90	0.88	1.10	0.89	0.93
Central Region						
Juab	0.67	0.00	0.00	1.20	0.00	0.00
Salt Lake	1.50	0.00	1.00	0.06	0.00	0.00
Sanpete	0.00	0.00	0.00	0.00	0.00	0.00
Tooele	0.00	0.50	0.60	0.09	0.00	1.91
Utah	0.33	1.00	0.28	0.25	0.00	0.13
Wasatch	1.64	0.13	0.68	0.40	0.00	1.77
REGIONAL TOTALS	0.83	0.27	0.48	0.18	0.00	0.96
Southern Region						
Beaver	0.00	0.00	2.50	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	1.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.00	0.00	0.00	1.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	0.00	0.00	0.00	0.50
Washington	0.00	0.00	2.50	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	1.00	0.00	1.00	0.60
Northeastern Region						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.00	0.00	1.20	1.00	0.00	0.00
Uintah	0.50	0.00	0.00	1.00	2.00	0.00
REGIONAL TOTALS	0.50	0.00	1.20	1.00	1.33	0.00
Southeastern Region						
Carbon	0.00	0.00	1.00	0.00	0.00	0.00
Emery	0.00	0.00	0.00	1.00	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	1.00	1.00	0.00	0.00
Unknown counties	1.00	0.65	0.00	0.00	0.00	0.00
STATE TOTALS	1.05	0.80	0.82	0.88	0.83	0.93

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	78.40	62.44	73.75	78.81	74.66	67.61
Cache	8.33	18.54	9.82	13.81	11.64	14.39
Davis	0.31	3.76	0.60	0.00	1.71	0.40
Morgan	1.39	4.46	1.80	0.71	7.19	1.23
Rich	2.16	1.17	0.20	0.48	1.37	3.27
Summit	0.62	0.23	0.40	0.71	0.00	0.00
Weber	1.54	1.65	0.20	0.00	1.71	3.07
REGIONAL TOTALS	92.75	92.25	86.77	94.52	98.29	89.97
Central Region						
Juab	0.31	0.00	0.00	1.43	0.00	0.00
Salt Lake	0.93	0.00	0.20	0.24	0.00	0.00
Sanpete	0.00	0.00	0.00	0.00	0.00	0.00
Tooele	0.00	1.17	2.40	1.43	0.00	4.30
Utah	0.46	2.11	2.61	1.19	0.00	0.40
Wasatch	2.78	1.41	4.61	0.48	0.00	4.72
REGIONAL TOTALS	4.48	4.69	9.82	4.76	0.00	9.42
Southern Region						
Beaver	0.00	0.00	1.00	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	0.34	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.00	0.00	0.00	0.40
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	0.00	0.00	0.00	0.20
Washington	0.00	0.00	1.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	2.00	0.00	0.34	0.60
Northeastern Region						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.00	0.00	1.20	0.24	0.00	0.00
Uintah	0.15	0.00	0.00	0.24	1.37	0.00
REGIONAL TOTALS	0.15	0.00	1.20	0.48	1.37	0.00
Southeastern Region						
Carbon	0.00	0.00	0.20	0.00	0.00	0.00
Emery	0.00	0.00	0.00	0.24	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	0.20	0.24	0.00	0.00
Unknown counties	2.62	3.05	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, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	69.32	53.08	68.58	52.72	74.65	63.43
Cache	13.15	15.89	10.47	20.08	9.40	16.80
Davis	0.16	3.93	0.33	0.21	0.28	1.33
Morgan	5.36	2.62	0.65	1.26	4.27	1.51
Rich	0.81	1.68	0.16	0.84	0.57	3.24
Summit	0.32	0.37	0.33	0.42	1.14	1.14
Weber	1.79	4.11	0.16	0.21	1.42	2.10
REGIONAL TOTALS	90.91	81.68	80.69	75.73	91.75	89.56
Central Region						
Juab	0.49	0.37	0.16	1.05	0.00	1.14
Salt Lake	0.65	0.19	0.16	3.35	0.28	0.00
Sanpete	1.14	1.12	0.00	0.00	0.00	0.37
Tooele	0.16	1.87	3.27	13.60	3.99	2.10
Utah	1.46	1.68	7.53	4.18	1.99	3.04
Wasatch	1.79	8.60	5.56	1.05	0.85	2.47
REGIONAL TOTALS	5.68	13.83	16.69	23.22	7.12	9.13
Southern Region						
Beaver	0.00	0.00	0.33	0.00	0.00	0.19
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	0.28	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.33	0.00	0.00	0.37
Piute	0.16	0.00	0.65	0.00	0.00	0.00
Sevier	0.00	0.00	0.00	0.00	0.00	0.37
Washington	0.00	0.00	0.33	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.16	0.00	1.64	0.00	0.28	0.93
Northeastern Region						
Daggett	0.00	0.00	0.00	0.00	0.28	0.00
Duchesne	0.00	0.37	0.82	0.21	0.00	0.00
Uintah	0.32	0.00	0.00	0.21	0.57	0.00
REGIONAL TOTALS	0.32	0.37	0.82	0.42	0.85	0.00
Southeastern Region						
Carbon	0.00	0.19	0.16	0.00	0.00	0.19
Emery	0.00	0.00	0.00	0.21	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	0.16	0.38	0.16	0.21	0.00	0.19
Unknown counties	2.76	3.74	0.00	0.42	0.00	0.19
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-83.

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	5,557	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
1980	3,359	8,466	10,366	0.82	2.52
1981	3,545	8,916	10,147	0.88	2.52
1982	2,590	4,475	5,379	0.83	1.73
1983	2,889	6,506	6,998	0.93	2.25
TOTAL (1959-83)	100,028	221,023	251,926	0.88	2.21
AVERAGES (1959-82)	4,047	8,938	10,205	0.88	2.21

Table 10. Hungarian partridge field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	4	8	30	5	17	4	8	30	5	17	0.62
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	8	30	5	17	4	8	30	5	17	0.62
Central Region											
Juab											
Salt Lake											
Sanpete				N O	D A T A						
Tooele											
Utah											
Wasatch											
REGIONAL TOTALS											
Southern Region											
Beaver											
Garfield											
Iron											
Kane											
Millard				N O T	A P P L I C A B L E						
Piute											
Sevier											
Washington											
Wayne											
REGIONAL TOTALS											
Northeastern Region											
Daggett											
Duchesne				N O T	A P P L I C A B L E						
Uintah											
REGIONAL TOTALS											
Southeastern Region											
Carbon											
Emery											
Grand				N O T	A P P L I C A B L E						
San Juan											
REGIONAL TOTALS											
STATE TOTALS	4	8	30	5	17	4	8	30	5	17	0.62

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1978-83.

Region and County	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter	1981 Birds/ 100 Hr	1981 Birds/ Hunter	1982 Birds/ 100 Hr	1982 Birds/ Hunter	1983 Birds/ 100 Hr	1983 Birds/ Hunter
Northern Region												
Box Elder	17	0.92	4	0.13	13	0.36	30	1.11	32	1.33	17	0.62
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	0.00	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	16	0.80	4	0.13	13	0.36	30	1.11	32	1.33	17	0.62
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard			N O T	A P P L I C A B L E								
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne			N O T	A P P L I C A B L E								
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery			N O T	A P P L I C A B L E								
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	16	0.80	4	0.13	13	0.36	30	1.11	32	1.33	17	0.62

WILD TURKEY

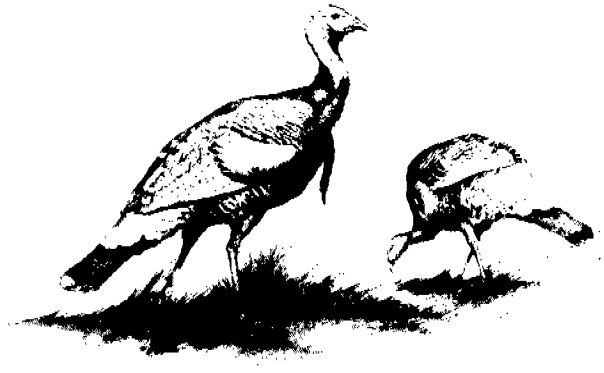
SUMMARY

Turkey populations remain very low, with the exception of the East Zion unit, where the turkeys appear to be slowly increasing in numbers. Previous year's droughts and severe winters are believed to be the major factors in the general decline of wild turkeys.

Hunter success and turkey observation data for the 1983 spring and fall seasons indicated that the East Zion area had another year of stable or increasing turkey population. However, the remaining units of the state were either closed to hunting or have declining populations of turkeys.

Spring hunting pressure was down from 1982 but hunter success was up 31 percent. Similarly, fall hunting pressure was down 2 percent and hunter success was up 22 percent. A total of 29 turkeys were harvested in 1983 compared to 23 taken in 1982. Observations of turkey increased in 1983, with most observations made on the East Zion area.

Precipitation in south-central Utah was slightly above normal from May through August, while temperatures were slightly below normal, which was similar to 1982. The effect on production has not been determined because of limited data.



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. Spring harvest data for 1983 indicated an improved breeding population on the East Zion unit. Harvest increased slightly from 1982. Fair reproductive success was also evident from the 1982 fall harvest statistics. No turkey brood observations were reported in 1983.

Harvest

Spring Gobbler Season

Results of the 1983 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 1983 spring season compared to 1982 and the previous 16-year average follow:

	1983	Percent change from 1982	Percent change from Average
Permits sold	92	+1	-36
Hunters afield	69	-14	-48
Turkeys harvested	14	+17	+17
Hunter-days afield	161	-13	-51
Percent hunter success	21	+31	+133
Turkeys bagged per hunter-day	0.09	+29	+125
Percent of hunters who observed turkeys	55	-11	+62

Permit sales and hunters afield increased from 1982 but still remained below average. The total harvest has increased from 12 in 1982 to 14 in 1983, 17 percent above the 16 year average. The proportion of hunters who reported having observed turkeys decreased 11 percent below the 1982 level but still 62 percent above average. The East Zion unit again accounted for 75 percent of the hunting pressure based on hunter-days afield.

Approximately 26 percent of the turkey hunters used rifles during the spring turkey season, and 42 percent of the turkeys harvested were taken with a rifle.

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

Fall Season

Results of the 1983 fall season are shown in Table 3 of this section. The trend of these data since 1970 are shown in Tables 4-9. The 1983 fall season compared to 1982 and the previous 19-year average follow:

	1983	Percent change from 1982	Percent change from Average
Permits sold	61	+9	-56
Hunters afield	49	-2	-61
Turkeys harvested	15	+36	-59
Hunter-days afield	112	-18	-61
Percent hunter success	28	+22	+27
Turkeys bagged per hunter-day	0.13	+63	0
Percent of hunters who observed turkeys	49	+4	+40

Approximately 14 percent of the turkey hunters used rifles during the fall hunt and 27 percent of the turkeys killed during the fall hunt were killed by rifle. A few hunters hunted with bow and arrow and muzzle loading rifles, but shotguns were still the most popular weapon for turkey hunters.

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

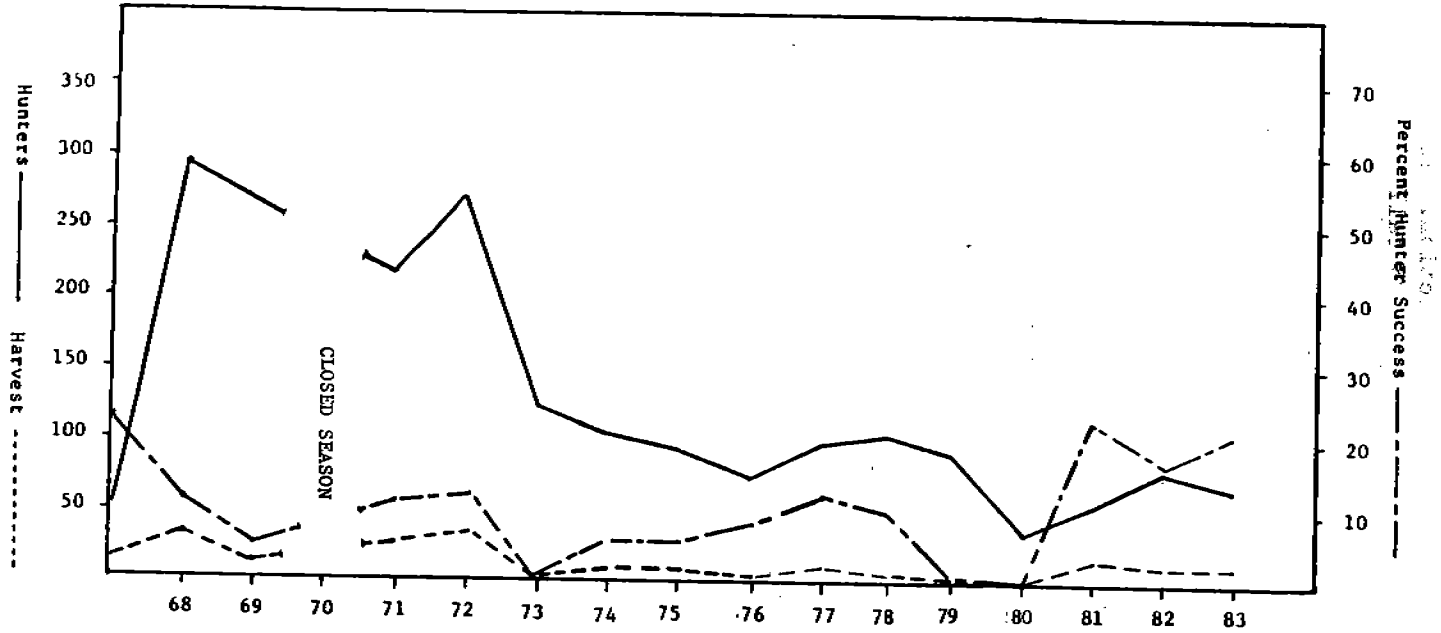


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

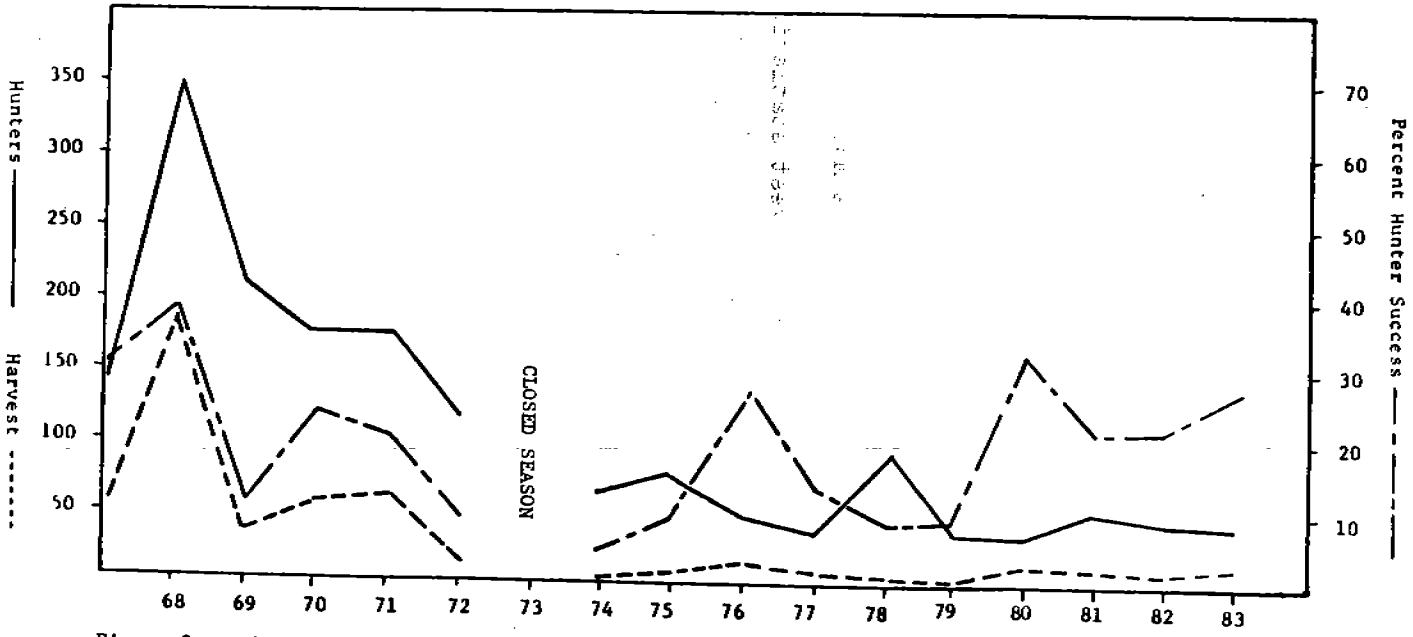


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1983 spring turkey season.

Data	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
Permits sold															92	--
No hunts															19	23
Hunters afield	C		40	48	5	6	10	12	C		3	3	--	--	58	69
Hunter-days	L		102	122	6	7	23	27	L		5	5	--	--	136	161
Turkeys bagged	O		10	12	1	1	1	1	O		0	0	--	--	12	14
Percent success	S		25	--	20	--	10	--	S		--	--	--	--	21	--
Turkeys bagged per hunter-day	E D		0.10	--	0.17	--	0.10	--	E D		--	--	--	--	0.09	--
Reported crippling loss (loss/100 bagged)	S		10	--	100	--	0	--	S		--	--	--	--	17	--
Turkeys observed	E		197	--	2	--	43	--	E		0	--	--	--	242	--
Gobblers	A		60	--	1	--	18	--	A		0	--	--	--	79	--
Hens	S		111	--	1	--	25	--	S		0	--	--	--	137	--
Unidentified	O		26	--	0	--	0	--	O		0	--	--	--	26	--
Number of hunters who saw turkeys	N		27	--	2	--	3	--	N		0	--	--	--	32	--
Percent of hunters who saw turkeys			68	--	40	--	30	--			--	--	--	--	55	--

Projection factor = 1.1948

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-83.

Hunting Unit	Year	Hunters Afield	Total Harvest	Hunter-days Afield	Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
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			NO SEASON				
	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	
	1980	35	0	84	0	0.00	17	
	1981	39	13	94	32	0.14	68	
	1982	62	11	134	18	0.08	70	
	1983	48	12	122	25	0.10	68	
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			NO SEASON				
	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	
	1980			NO SEASON				
	1981			NO SEASON				
	1982			NO SEASON				
	1983	6	1	7	20	0.17	40	

Table 2 (continued)

Hunting Unit	Year	Hunters Afield	Total Harvest	Hunter-days Afield	Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
LASAL MOUNTAINS	1967	6	0	16	0	0.00	33	
	1968	17	0	44	0	0.00	62	
	1969	39	3	102	9	0.03	24	
	1970			N O	S E A S O N			
	1971	17	1	34	6	0.03	20	
	1972	50	3	129	7	0.03	29	
	1973	23	0	53	0	0.00	16	
	1974	20	0	66	0	0.00	11	
	1975	11	0	30	0	0.00	33	
	1976	8	0	25	0	0.00	14	
	1977	24	4	53	15	0.07	45	
	1978	32	2	78	7	0.03	38	
	1979	34	0	74	0	0.00	7	
	1980			N O	S E A S O N			
	1981	18	1	31	6	0.03	24	
	1982	18	1	50	6	0.02	35	
	1983	12	1	27	10	0.10	30	
BEAVER MOUNTAINS	1971	27	2	54	8	0.04	39	
	1972	17	2	53	13	0.04	20	
	1973	17	0	34	0	0.00	7	
	1974	1	0	1	0	0.00	0	
	1975	5	0	7	0	0.00	0	
	1976	2	0	8	0	0.00	0	
	1977	4	0	14	0	0.00	0	
	1978	2	0	7	0	0.00	50	
	1979			N O	S E A S O N			
	1980			N O	S E A S O N			
	1981			N O	S E A S O N			
	1982			N O	S E A S O N			
	1983			N O	S E A S O N			

Table 2 (continued)

Hunting Unit	Year	Hunters Afield	Total Harvest	Hunter-days Afield	Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
PINE VALLEY MOUNTAINS	1971	23	4	92	15	0.04	70	
	1972	22	1	52	5	0.02	42	
	1973	17	0	38	0	0.00	7	
	1974	8	1	23	14	0.05	43	
	1975	6	0	12	0	0.00	0	
	1976		0	13	0	0.00	40	
	1977	2	0	7	0	0.00	0	
	1978	0	0	0	0	0.00	0	
	1979	3	0	15	0	0.00	0	
	1980	0	0	0	0	0.00	0	
	1981	2	0	2	0	0.00	0	
	1982	0	0	0	0	0.00	0	
	1983	3	0	5	0	0.00	0	
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	
	1980			NO SEASON				
	1981			NO SEASON				
	1982			NO SEASON				
	1983			NO SEASON				
MIXED UNITS	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	
	1980	0	0	0	0	0.00	0	
	1981	1	0	2	0	0.00	100	
	1982	0	0	0	0	0.00	0	
	1983	0	0	0	0	0.00	0	

Table 2 (continued)

Hunting Unit	Year	Hunters Afield	Total Harvest	Hunter-days Afield	Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
STATE TOTALS	1967	49	11	118	22	0.09	59	52
	1968	290	31	738	11	0.04	41	310
	1969	267	13	612	5	0.02	22	276
	1970			N O	S E A S O N			
	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
	1980	35	0	84	0	0.00	17	40
	1981	60	14	129	23	0.11	53	83
	1982	80	12	184	16	0.07	62	91
	1983	69	14	161	21	0.09	55	92
STATE AVERAGES (1967-82)		132	12	328	9	0.04	34	144

*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 1983 fall turkey season.

Data	Pine Valley		Blue Mtn.-Elk Ridge		Boulder Mtns.		East Zion		LaSal		Unknown		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold													61	--
No hunts			C		C				C				9	12
Hunters afield	1*	1	L		L		36*	48	L		1	1	37	49
Hunter-days	2	2	0		0		80	106	0		4	4	86	112
Turkeys bagged	0	0	S		S		11	15	S		0	0	11	15
Percent success	0	--	E		E		31	--	E		0	--	28	--
Turkeys bagged per			D		D				D					
hunter-day	0	--					0.14	--			0	--	0.13	--
Reported crippling loss			S		S				S					
(loss/100 bagged)	0	--	E		E		0	--	E		0	--	0	--
Turkeys observed	0	--	A		A		303	--	A		0	--	303	--
Number of hunters			S		S				S					
who saw turkeys	0	--	0		0		18	--	0		0	--	18	--
Percent of hunters			N		N				N					
who saw turkeys	0	--					50	--			0	--	49	--

Projection factor = 1.326

*1 hunter reported hunting both units (36 total individual hunters afield reported).

Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1969-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging 2 Turkeys	Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1969	45	103	0	0	0	0.00	0	0	0
1970	24	77	2	8	0	0.03	0	16	10
1971	20	46	0	0	0	0.00	0	0	0
1972	7	17	0	0	0	0.00	0	0	0
1973**	--	--	--	--	--	--	--	--	--
1974**	--	--	--	--	--	--	--	--	--
1975	13	36	0	0	0	0.00	0	0	0
1976	4	10	0	0	0	0.00	0	0	0
1977	2	5	0	0	0	0.00	0	0	0
1978	0	0	0	0	0	0.00	0	0	0
1979	--	--	--	--	--	--	--	--	--
1980	3	6	0	0	0	0.00	0	0	0
1981	0	0	0	0	0	0.00	0	0	0
1982**	--	--	--	--	--	--	--	--	--
1983**	--	--	--	--	--	--	--	--	--

*Season bag limit from 1968-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

**Closed Season.

Table 5. Summary of East Zion wild turkey harvest data for fall hunts from 1969-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging 2 Turkeys	Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1969	137	374	35	16	10	0.09	19	426	25
1970	87	203	43	32	16	0.21	5	469	40
1971	90	229	39	27	16	0.17	6	264	31
1972	59	154	10	12	4	0.06	12	96	22
1973**	--	--	--	--	--	--	--	--	--
1974**	--	--	--	--	--	--	--	--	--
1975	13	18	6	46	--	0.33	0	36	44
1976	31	57	13	42	--	0.23	8	137	50
1977	22	34	5	25	--	0.16	0	33	26
1978	47	107	6	14	--	0.06	40	130	32
1979	19	36	3	18	--	0.09	0	50	29
1980	19	31	10	50	--	0.32	43	97	50
1981	34	62	12	36	--	0.20	56	136	48
1982	49	131	11	23	--	0.09	10	185	47
1983	48	106	15	31	--	0.14	0	303	50

*Season bag limit from 1968-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

**Closed Season.

Table 6. Summary of LaSal Mountain wild turkey harvest data for fall hunts from 1969-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging 2 Turkeys	Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1969	17	51	1	7	0	0.02	0	40	7
1970	18	30	3	11	6	0.10	0	15	20
1971	13	27	5	18	18	0.18	0	25	27
1972	31	70	2	4	4	0.02	0	63	27
1973**	--	--	--	--	--	--	--	--	--
1974	20	6	2	10	--	0.03	100	61	38
1975	9	33	1	11	--	0.03	0	21	67
1976	15	49	2	13	--	0.04	0	45	15
1977	24	78	1	6	--	0.02	0	13	10
1978	26	93	1	5	--	0.01	0	201	50
1979	15	33	0	0	--	0.00	0	11	8
1980	12	33	1	11	--	0.04	0	30	44
1981	20	48	0	0	--	0.00	0	0	0
1982**	--	--	--	--	--	--	--	--	--
1983**	--	--	--	--	--	--	--	--	--

*Season bag limit from 1968-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

**Closed Season.

Table 7. Summary of Beaver Mountain wild turkey harvest data for fall hunts from 1970-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging 2 Turkeys	Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1970	30	87	7	15	8	0.08	0	48	31
1971	13	24	5	18	18	0.20	0	64	46
1972	6	12	0	0	0	0.00	0	11	40
1973**	--	--	--	--	--	--	--	--	--
1974**	--	--	--	--	--	--	--	--	--
1975	5	13	0	0	--	0.00	0	0	0
1976	5	18	0	0	--	0.00	0	0	0
1977	--	--	--	--	--	--	--	--	--
1978**	--	--	--	--	--	--	--	--	--
1979**	--	--	--	--	--	--	--	--	--
1980**	--	--	--	--	--	--	--	--	--
1981**	--	--	--	--	--	--	--	--	--
1982**	--	--	--	--	--	--	--	--	--
1983**	--	--	--	--	--	--	--	--	--

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 1968-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

**Closed Season.

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for fall hunts from 1970-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging 2 Turkeys	Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1970	6	21	3	50	0	0.14	33	16	80
1971	32	87	11	23	12	0.13	22	98	35
1972	11	19	0	0	0	0.00	0	0	0
1973**	--	--	--	--	--	--	--	--	--
1974**	--	--	--	--	--	--	--	--	--
1975	0	0	0	0	--	0.00	0	0	0
1976	0	0	0	0	--	0.00	0	0	0
1977	1	2	0	0	--	0.00	0	0	0
1978	6	8	0	0	--	0.00	0	4	80
1979	1	1	0	0	--	0.00	0	0	0
1980	0	0	0	0	--	0.00	0	0	0
1981	1	4	0	0	--	0.00	0	5	100
1982	2	5	0	0	--	0.00	0	0	0
1983	1	2	0	0	--	0.00	0	0	0

*Season bag limit from 1968-72 was two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

**Closed Season.

Table 9. Summary of Blue Mountain-Elk Ridge* wild turkey harvest data for the fall hunt, 1974-83.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success	Turkeys/ Hunter Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1974	5	9	1	20	0.11	0	20	20
1975	6	15	0	0	0.00	0	0	0
1976	1	2	0	0	0.00	0	0	0
1977	5	14	1	29	0.09	0	2	25
1978	6	11	0	0	0.00	0	0	0
1979	1	1	0	0	0.00	0	0	0
1980**	--	--	--	--	--	--	--	--
1981**	--	--	--	--	--	--	--	--
1982**	--	--	--	--	--	--	--	--
1983**	--	--	--	--	--	--	--	--

*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 in 1972 on Elk Ridge with successful results, particularly on Blue Mountain.

**Closed Season.

Table 10. Statewide summary of fall wild turkey harvest statistics, 1963-83.

Year	Permits Sold	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success**	Turkeys/ Hunter-Day	Crippling Loss/ 100 Bagged	Turkeys Observed	% Hunters Observing 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***	--	--	--	--	--	--	--	--	--
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
1980	43	35	69	11	32	0.16	38	127	44
1981	63	55	114	12	22	0.11	56	141	32
1982	56	50	136	11	23	0.08	10	185	47
1983	61	49	112	15	28	0.13	0	303	49
TOTALS (1963-83)	2,704	2,452	5,293	718	(438)	0.14	(296)	8,704	(715)
AVERAGES (1963-82)	139	126	288	37	22	0.13	16	467	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.

***Closed Season.

SHARP-TAILED GROUSE

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. Sharp-tailed grouse habitats were the most attractive areas for agricultural development and grazing. As a result, 'sharp-tail' 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 continued through 1979. However, due to a decline in observations during the 1980 spring and summer inventory period, the entire state was closed to hunting sharptails, and remained closed through 1983.

The Division has done fairly extensive fieldwork 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 were obtained. 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.

There was no legal harvest of sharp-tailed grouse from 1980 through 1983. Populations have remained down since 1978. Severe winters the last two years have severely reduced sharp-tailed grouse numbers in northern Utah.

Table 1. Summary of sharp-tailed grouse dancing ground counts, 1975-84.

County	Dancing Ground No.	Dancing Ground Name	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Box Elder	1.	West Hills #1 (located 1977)			21	--	12	3	12	0	12	0
	2.	West Hills #2 (located 1977)			7	--	3	1	0	0	2	0
	3.	West Hills #3 (located 1977)			13	--	0	0	0	0	0	0
	4.	Hunsaker's Field (located 1977)			13	16	3	0	0	0	0	0
	5.	Whites Valley (located 1977)			12	--	0	0	0	6	0	0
	6.	North Whites Valley (located 1977)			10	15	--	0	0	0	0	0
	7.	Pocatello Valley #1 (located 1978)				7	4	1	9	19*	6	2
	8.	Pocatello Valley #2 (located 1978)				25	3	6	10	0	8	3
	9.	Pocatello Valley #3 (located 1978)				4	0	0	0	0	0	0
	10.	Pocatello Valley #4 (located 1978)				6	0	0	0	--	0	0
	11.	Ag. Station							3	0	0	0
Cache	1.	Bankhead Well (relocated 1975)	13	6	8	7	2	2	0	0	--	--
	2.	Baxter Ridge (relocated 1975)	12	0	0	--	--	3	5	3	--	--
	3.	Crow Mtn. #1 (located 1979)				0	7	4	6	3	--	--
	4.	Crow Mtn. #2 (located 1979)					6	0	5	0	--	--
	5.	High Creek (located 1981)							7	--	--	--
Morgan	1.	Cottonwood #1 (located 1975)	9	9	14	6	3	--	--	--	--	--
	2.	Cottonwood #2 (located 1975)	18	9	6	16	25	--	--	--	--	--
	3.	Deep Creek #2						4	--	--	--	--
Weber	1.	Monastery (located 1969)	27	10	Active	Active	3	0	0	0	--	--
Total grounds counted			5	5	10	9	15	16	17	15	11	2
Total grouse counted			79	34	104	102	71	24	57	31	28	5
Average number of grouse/ground			15.8	6.8	10.4	11.3	4.7	1.5	3.4	2.1	2.5	2.5

*Counts for Pocatello Valley #1 and #2 were combined.

WHITE-TAILED PTARMIGAN

SUMMARY

The white-tailed ptarmigan (Lagopus leucurus) was introduced into the Uinta Mountains of northern Utah in 1976 with the release of birds captured in Colorado. The initial transplant consisted of 22 paired birds released in June 1976. A second release of 35 mixed young and adults was accomplished in September of that same year.

This successful transplant was the result of a cooperative effort of the Utah Division of Wildlife Resources, the Ashley and Wasatch National Forests of the U. S. Forest Service, and the Colorado Division of Wildlife.

The original two releases of white-tailed ptarmigan were made at a point about one-half mile southeast of Gunsight Pass and one mile east of Kings Peak in Painter Basin of the Uinta River drainage. Subsequent studies have shown that the population in Painter Basin has increased to the point that birds may be at carrying capacity. Breeding territory surveys in 1977 indicated reproduction from transplanted birds and the transplanted birds themselves had survived their first year. Presently, birds are known to exist in Henry's Fork, Yellowstone Basin, Gilbert Basin, Atwood Basin, Beaver Basin, Lake Blanchard, Smith's Fork, and Rainbow Basin. Evidence for existence of birds has been found in Rock Creek, Black's Fork, Garfield Basin, and Lake Fork. Presently, ptarmigan are believed to be distributed from Holiday Park (Weber River drainage) on the west to Greendale (Flaming Gorge) on the east. Both sightings were made in winter at unusually low elevations (7,800 ft. & 7,000 ft.).

Surveys on the ptarmigan population will continue with emphasis on documenting habitat expansion. Areas of emphasis will include Samuels Lake in the Uinta River drainage to Deadman Lake in the Dry Fork drainage. Two survey techniques will be used. A breeding territory survey will be conducted from mid- to late June. The brood survey will be conducted from mid- to late August. The technique consists of returning to areas where birds were located in the June survey and searching intensively in likely brood habitat with trained hunting dogs. Chicks will be captured, weighed, banded, and primary molt will determine approximate hatching date. Results of the last 6 years of survey data are located in Tables 1 and 2.

The ptarmigan population has now been subjected to a wide range of weather extremes. The winter of 1976-77 was extremely dry, cold and snowfree, whereas the 1978-79 winter had above average snowfall and a late spring thaw. This was followed (1979-80) by a near record late snow pack and extraordinarily dry summer. Accummulated snowfall was considerably less than normal during the winter of 1980-81 with abundant breeding territories available during the June survey. The winter snowpack of 1981-82 was extremely heavy and the 1982-83 snowpack was above average. This past 1983-84 snowpack appears below average.

The 1983 spring survey was cancelled because of excessive snow conditions. Snowpack remained until July, with heavy winter snow and accumulation continuing into late May. (Grandison-unpublished 1983 Annual Report).

The 1983 breeding season was worse than 1982. As in 1982, reproductive success was extremely poor due to record late snowpack on breeding areas. Again, indications were that survival of adults remained good. (Table 2).

Hunter Success

Thirty-one hunters obtained permits to hunt ptarmigan in Utah for the second season. An estimated 18 actually hunted with 13 birds reported killed. This was the first year ptarmigan were taken by Utah sportsmen. Thirty percent of the hunters afield saw ptarmigan and killed birds. Hunter success or birds bagged per hunter-day was as high (0.67) as other upland game.

Table 1. Summary of white-tailed ptarmigan breeding territories (pairs), 1977-83.

County	Location	(6/20-23) 1977	(6/12-19) 1978	(6/18-24) 1979	(6/12-17) 1980	(6/12-14) 1981	(6/16-17) 1982	1983
Summit	Lake Blanchard					2		
Duchesne	Painter Basin	7[1]	10[2]					
Duchesne	Gilbert Basin		2					C[4]
Duchesne	Atwood Basin							A
Summit	Henry's Fork			4				N
Summit	Beaver Creek			3	0		0	C
Summit	Smith's Fork				1			E
Duchesne	Yellowstone River				2			L
Uintah	Leidy Peak				0[3]			L
								E
								D

[1]Three territorial males were yearling birds, the result of successful reproduction by released birds in 1976. Two were spring-released birds and two were fall-released.

[2]An additional 4 males and 1 female were located. Birds from the June 1976 transplant are well represented in the population while only two September released birds have been located. Recruitment from the 1976 and 1977 nesting seasons was evident in the 1978 population.

[3]A sighting of ptarmigan was reported by a hunter in October 1979. Division Biologists reported droppings at the base of Leidy in the willow on June 25, 1981.

[4]Excessive snow cover precluded access to trail-heads during the June breeding period.

Table 2. Ptarmigan summer inventory, 1977-83.

Area: Statistics	DATE 8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	8/18-31/81	8/17-30/82	8/23-30/83
Painter Basin							
n	7	7	7	7	12	0[3]	2[4]
mean brood	4.00	4.71	3.29	4.71	3.67		4.50
young/100 adult hens	400	413	329	471	314		450
hens w/o broods	0	1	0	0	2		0
adult males	3	5	5	0	14		0
Henry's Fork							
n		0	1	0	4	0	0
mean brood			4.00		4.50		
young/100 adult hens			400		450		
hens w/o broods			0		0		
adult males			1		0		
Yellowstone							
n		0	0	0	4	4	
mean brood					4.50	4.25	
young/100 adult hens					450	--	
hens w/o broods					0	--	
adult males					0	--	
Smith's Fork							
n		0	0	0	0	0	2[5]
mean brood			0				3.50
young/100 adult hens			0				350
hens w/o broods			0				0
adult males			2				0
Atwood Basin							
n			1	1			
mean brood			4.00	5.00			
young/100 adult hens			400	500			
hens w/o broods			0	0			
adult males			3	0			

Table 2. (continued)

Area: Statistics	DATE 8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	3/18-31/81	8/17-30/82	8/23-30/83
Little E. Fork - Black's Fork							
n			0				
Mean brood							
yound/100 adult hens							
hens w/o broods							
adult males							
Rainbow Basin							
n				1			
mean brood				4.0			
young/100 adult hens				400			
hens w/o brood				0			
adult males				0			
Gilbert Basin							
n			3	2			
mean brood			5.00	5.00			
young/100 adult hens			500	500			
hens w/o broods			0	0			
adult males			3	0			
Samuel's Draw							
n						1	
mean brood						4.00	
young/100 adult hens						400	
hens w/o broods						0	
adult males						0	
East F. Black's Fork							
n				0			
mean brood							
young/100 adult hens							
hens w/o broods							
adult males							
Lake Fork River							
n				0			

Table 2. (continued)

Area: Statistics	DATE 8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	3/18-31/81	8/17-30/82	8/23-30/83
TOTAL							
n	7	7	12[1]	11[2]	20	5	4
mean brood	4.00	4.71	4.50	4.73	4.00	4.20	4.00
young/100 adult hens	400	413	450	473	364		400
hens w/o brood	0	1	0	0	2		0
adult males	3	5	18	0	14		0
Total birds observed	38	46	84	63	116		20

[1]Not included is observation of 2 hens with brood from Leidy Peak, some 43 miles distant from release site.

[2]Considerably more time spent this year than in previous years.

[3]After 4 days of searching.

[4]Only 3 days of searching, suspect a minimum of 5 broods present on Trail Rider Pass this year.

[5]Flat Top Mountain between Henry's Fork and Smith's Fork.

Table 3. Ptarmigan hatching chronology by year, 1978-83.

Year	Sample Size	Mean Hatching Date
1978	39	7-25
1979	21	7-13
1980	24	7-20
1981	27	7-10
1982	10	7-12 to 24
1983	4	7-20

Table 4. Summary of the 1983 ptarmigan season.

Data	Henry's Fork	Black's Fork	Smith's Fork	Uinta River	Painter Basin	Atwood Basin	Gunsight Pass	Weber River	W. Beaver Creek	Gilbert Basin	Other	STATE TOTALS Rep't	STATE TOTALS Calc
Permits issued												31	--
No hunts												17	18
Hunters afield	(3)	0	1[1]	1	5	(2)	1	1[2]	1	1	1	12	13
Hunter-days	3	0	1	1	5	2	1	1	2	2	2	20	21
Ptarmigan bagged	0	0	3	0	8	0	0	0	0	2	0	13	14
Percent success	--	--	100	--	40	--	--	--	--	100	--	30	30
Ptarmigan bagged per hunter-day	0.00	0.00	3.00	0.00	1.60	0.00	0.00	0.00	0.00	1.00	0.00	0.65	0.67
Reported crippling loss (loss/100 bagged)	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptarmigan observed	0	0	4	0	15	0	0	0	0	4	0	23	25
Number of hunters who saw ptarmigan	0	0	1	0	2	0	0	0	0	1	0	4	4
Percent of hunters who saw ptarmigan	--	--	100	--	40	--	--	--	--	100	--	30	30

Projection factor = 1.069

( )Hunted Painter Basin also - not added to total.

*Sighting not verified reliable.

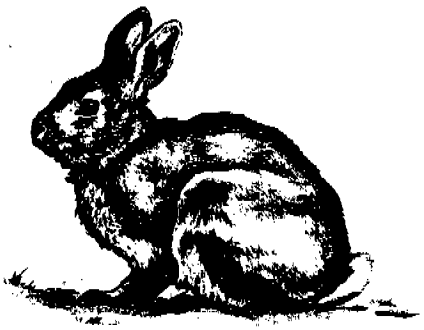
[1]Flat Top Mountain between Henry's Fork and Smith's Fork

[2]Mirror Lake Area

RABBITS AND HARES

SUMMARY

Cottontail Rabbits



A slightly below average but improved breeding population level for 1983 was indicated by the 1982 harvest statistics.

Summer roadside counts also indicated a decreased population density, although the northern and central regions showed a slight increase. Harvest statistics indicated 70 percent of the harvest was from the Northeastern and Southeastern regions, with a total harvest of 180,767 cottontails by 22,467 hunters afield.

Snowshoe Hares

The 1983 snowshoe hare hunting season was the ninth held since the Legislature provided protected status to this species in 1975.

Harvest statistics for 1983 indicated decreased hunter participation and hunter success. This decrease may reflect an actual trend or it could be the result of improving identification of whitetailed jackrabbits. Although efforts have been made to educate hunters in the identification of the snowshoe hare and the whitetailed jackrabbit, it is still a potential problem which could bias the snowshoe data.

COTTONTAIL RABBIT

Roadside Counts

Results of the annual roadside counts for 1983 are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1973 is shown in Tables 2 and 3, respectively. Indices for 1983 compared to 1982 and the 10-year average follow:

	1983	Percent change from 1982	Percent change from Average
Total miles driven	1,932	-8	-22
Total cottontails counted	787	-29	-14
Cottontails observed per mile	41	-23	+17
Young observed per 100 adults	72	-8	-33

An increased, but yet, below average breeding population for 1983 was indicated by 1982 harvest statistics. Indicated production, likewise, was 8 percent below 1982 and 37 percent below the average.

The cottontail per mile index was down in all regions except the Northern and Central but was 17 percent above the average.

Harvest

Hunter Questionnaire

Results of the 1983 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 1977 are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figure 2. Results of the 1983 season compared to 1982 and the 16-year average follow:

	1983	Percent change from 1982	Percent change from Average
Cottontail hunters	22,467	-16	-18
Cottontail harvest	180,767	+15	-5
Hunter-days afield	96,151	-9	-16
Cottontails per hunter-day	1.88	+27	+21
Cottontails per hunter	8.05	+37	+25

Total harvest, increased from 1982, however, there was a decrease in hunters and hunter-days afield. Total harvest however, remains (5 percent) below average. Success increased 21 percent above average, indicating an increased population of cottontails.

Field Bag Checks

Results of the survey for 1983 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 1983 field bag check data to 1982 and the average.

	1983	Percent change from 1982	Percent change from Average
Total hunters checked	136	-13	-65
Total hours hunted	344	+14	-68
Cottontails per hunter (complete hunts)	3.07	+54	+62
Cottontails bagged per 100 hours	119	+47	+109
Hours per hunter-day (complete hunts)	2.0	-13	-40
Hours per cottontail bagged	0.9	-25	-55

Field bag check data was limited to the Northern, Northeastern and Southeastern regions. Data from other regions was not obtained.

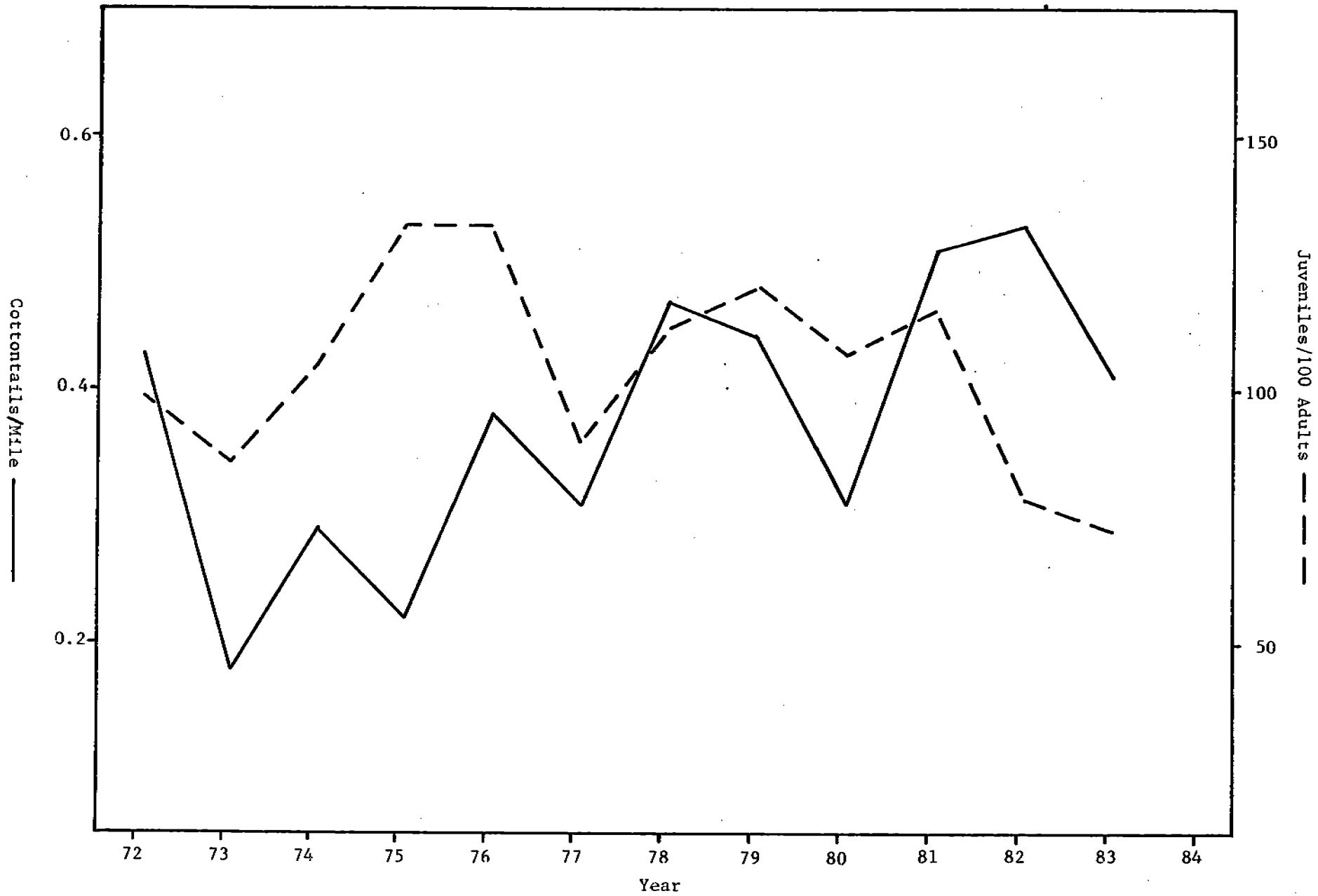


Figure 1. Cottontail Rabbit Population Indexes Trend.

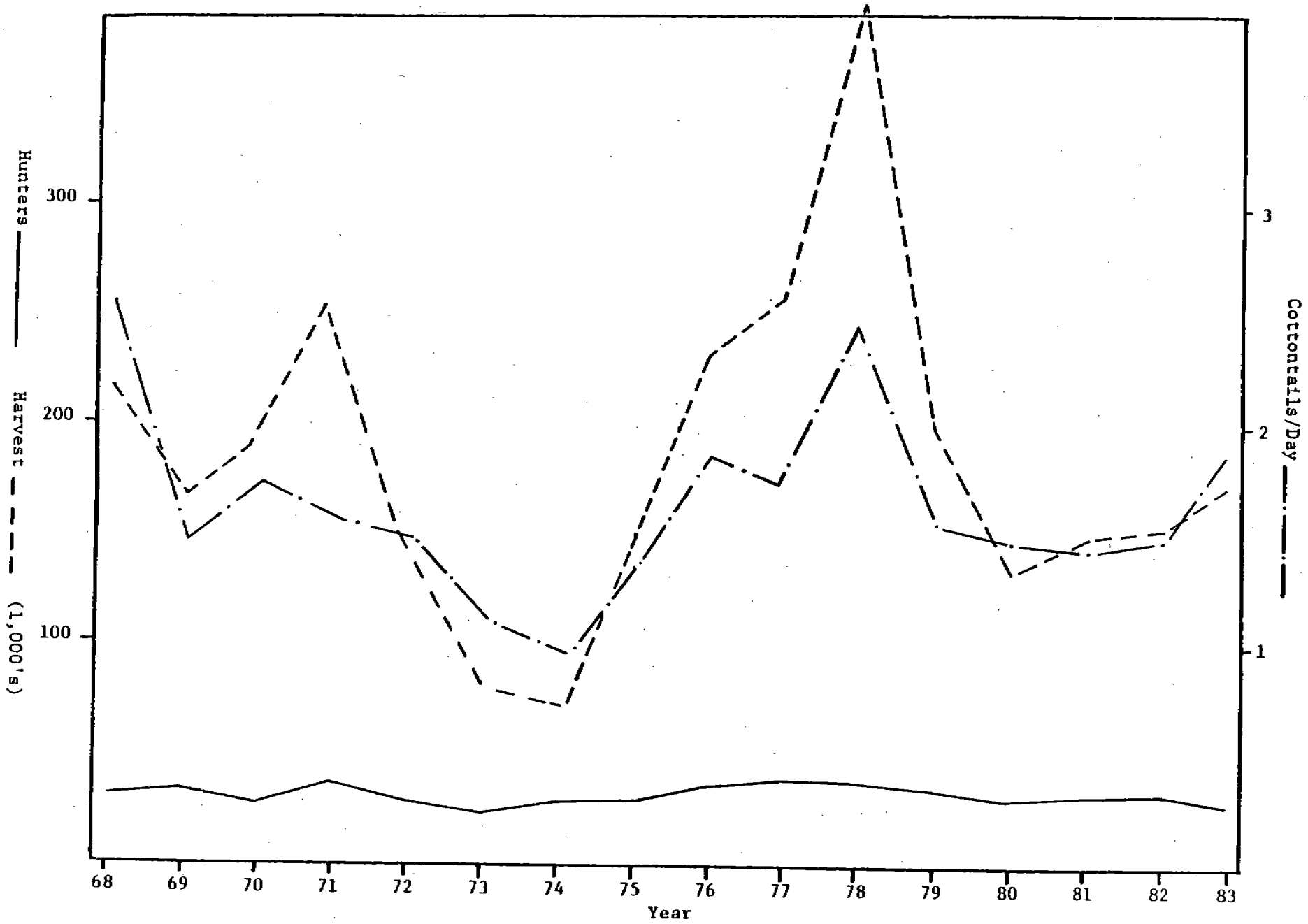


Figure 2. Cottontail Rabbit Harvest Trend

Table 1. Cottontail rabbit summer inventory summary, 1983.

Region and County	Miles Driven	Rabbits Observed				Young Per 100 Adults	Rabbits Per Mile
		Adults	Young	Unclass.	Total		
Northern Region							
Box Elder	0	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	90	9	6	1	16	67	0.18
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	90	9	6	1	16	67	0.18
Central Region							
Juab	0	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--
Sanpete	90	16	36	0	52	225	0.57
Tooele	0	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	90	16	36	0	52	225	0.57
Southern Region							
Beaver	90	3	1	0	4	33	0.04
Garfield*	90	10	12	1	23	120	0.25
Iron	60	17	6	0	23	35	0.38
Kane	--	--	--	--	--	--	--
Millard	222	16	20	0	36	125	0.16
Piute	90	1	2	0	3	200	0.03
Sevier	90	13	8	0	21	61	0.23
Washington	180	16	13	18	47	81	0.38
Wayne	--	--	--	--	--	--	--
REGIONAL TOTALS	822	76	62	19	157	82	0.19
Northeastern Region							
Daggett	160	42	28	23	93	66	0.58
Duchesne	90	43	7	2	52	16	0.58
Uintah	90	147	112	8	267	76	2.97
REGIONAL TOTALS	340	232	147	33	412	63	1.21
Southeastern Region							
Carbon	90	5	2	3	10	40	0.11
Emery	230	12	9	32	53	75	0.23
Grand	90	4	6	4	14	150	0.15
San Juan	180	47	20	6	73	43	0.40
REGIONAL TOTALS	590	68	37	45	150	54	0.25
STATE TOTALS	1,932	401	288	98	787	72	0.41

*Includes data from Southeastern Region.

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	0.06	1.01	0.32	0.72	0.97	0.29	0.33	--	0.37	0.01	--	
Cache	--	--	--	0.00	--	0.05	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	0.14	0.10	0.02	0.17	0.16	0.10	--	--	--	--	--	
Rich	0.14	0.04	0.16	0.46	0.26	0.47	0.30	0.11	0.13	0.16	--	
Summit	--	--	--	--	--	--	--	--	--	--	0.18	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.09	0.36	0.19	0.45	0.59	0.30	0.32	0.11	0.26	0.06	0.18	0.27
Central Region												
Juab	0.13	--	0.07	0.08	0.18	0.19	0.23	0.29	1.12	0.38	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	0.33	0.23	0.18	0.36	0.37	0.86	1.15	1.06	1.29	0.78	0.57	
Tooele	0.02	0.06	0.04	0.16	0.19	0.21	0.51	0.26	0.13	0.10	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.18	0.14	0.09	0.20	0.25	0.43	0.64	0.54	0.85	0.43	0.57	0.38
Southern Region												
Beaver	0.29	0.33	0.04	0.20	0.11	0.22	0.22	0.06	0.19	0.12	0.04	
Garfield	0.12	0.14	0.28	0.39	0.15	0.13	0.15	--	--	0.27	0.25	
Iron	0.00	0.06	0.09	0.21	0.36	0.66	0.45	0.45	--	0.18	0.38	
Kane	0.32	0.26	0.48	0.49	0.32	0.23	0.34	--	0.69	--	--	
Millard	0.11	0.10	0.07	0.17	0.14	0.42	0.52	0.18	0.56	0.28	0.16	
Piute	--	0.02	0.07	0.08	0.00	0.01	0.02	--	0.10	0.13	0.03	
Sevier	0.10	0.18	0.11	0.26	0.38	0.90	0.55	0.27	0.83	0.27	0.23	
Washington	0.57	1.30	0.56	0.32	0.21	0.16	0.35	0.10	0.24	0.32	0.38	
Wayne	0.04	0.06	0.03	0.17	0.09	0.48	0.56	0.54	0.49	0.69	--	
REGIONAL TOTALS	0.19	0.32	0.20	0.27	0.19	0.35	0.37	0.22	0.45	0.29	0.19	0.29
Northeastern Region												
Daggett	0.50	0.24	0.24	0.68	0.25	2.77	1.58	0.40	0.32	0.45	0.58	
Duceshne	0.14	0.29	0.67	1.00	1.21	1.42	0.24	0.42	1.78	2.28	0.58	
Uintah	0.14	0.19	0.32	1.36	0.68	1.22	0.53	0.27	0.48	1.97	2.97	
REGIONAL TOTALS	0.26	0.24	0.43	0.98	0.67	1.75	0.84	0.36	0.81	1.46	1.21	0.78
Southeastern Region												
Carbon	0.46	0.15	0.18	0.18	0.10	0.12	0.12	0.15	0.12	0.10	0.11	
Emery	0.06	0.08	0.04	0.27	0.26	0.21	0.28	0.16	0.41	0.18	0.23	
Grand	0.07	0.14	0.18	0.22	0.19	0.33	0.21	0.11	0.32	0.67	0.15	
San Juan	--	0.58	0.42	0.67	0.31	0.31	0.20	0.60	0.42	1.26	0.40	
REGIONAL TOTALS	0.19	0.28	0.22	0.35	0.21	0.23	0.21	0.30	0.36	0.58	0.25	0.29
STATE TOTALS	0.18	0.29	0.22	0.38	0.31	0.47	0.44	0.31	0.51	0.53	0.41	0.36

Table 3. Summary of cottontail rabbits young per 100 adults, 1973-83.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1973-82
Northern Region												
Box Elder	100	173	144	281	103	126	100	--	77	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	0	--	200	100	--	--	--	--	--	--	
Rich	50	0	56	100	54	130	60	67	43	63	67	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	73	145	120	222	96	137	85	67	71	63	67	108
Central Region												
Juab	100	--	67	20	100	44	13	78	102	53	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	142	50	38	256	200	217	312	352	197	209	225	
Tooele	0	67	100	133	129	125	100	71	200	80	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	121	53	54	160	154	161	167	194	147	140	225	135
Southern Region												
Beaver	92	11	0	--	33	70	63	40	55	83	33	
Garfield	57	56	77	103	71	64	250	--	--	38	120	
Iron	0	100	0	70	93	33	44	23	--	57	35	
Kane	44	200	160	87	65	56	82	--	106	--	--	
Millard	32	82	88	63	67	88	190	96	170	94	125	
Piute	--	0	20	75	--	--	--	--	--	--	200	
Sevier	200	183	44	67	126	147	171	350	--	33	61	
Washington	81	98	212	118	57	400	94	--	123	150	81	
Wayne	200	50	0	250	225	282	214	308	287	343	--	
REGIONAL TOTALS	67	92	120	89	86	96	139	114	184	145	82	113
Northeastern Region												
Daggett	63	87	77	152	48	98	123	58	104	140	66	
Duchesne	160	146	258	177	66	167	200	61	42	37	16	
Uintah	100	114	211	151	134	153	82	160	176	44	76	
REGIONAL TOTALS	87	114	198	159	78	125	118	73	67	48	63	107
Southeastern Region												
Carbon	250	117	227	85	112	118	230	133	83	66	40	
Emery	16	40	0	58	30	111	25	70	97	43	75	
Grand	33	62	47	54	100	77	50	250	137	148	150	
San Juan	--	140	150	179	120	35	30	68	105	72	43	
REGIONAL TOTALS	142	118	124	112	84	71	46	79	103	82	54	96
STATE TOTALS	86	105	132	132	89	112	121	107	116	78	72	108

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Cottontails Bagged	Cottontails/ Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	203	7,435	10,712	1.44	7.73	5.93
Cache	16	762	588	0.77	0.79	0.33
Davis	7	280	294	1.05	0.29	0.16
Morgan	23	695	1,150	1.65	0.72	0.64
Rich	24	762	1,738	2.28	0.79	0.96
Summit	33	1,043	1,497	1.44	1.08	0.83
Weber	13	361	200	0.56	0.38	0.11
REGIONAL TOTALS	319	11,338	16,179	1.43	11.79	8.95
Central Region						
Juab	76	2,928	3,530	1.21	3.05	1.95
Salt Lake	34	1,203	2,099	1.74	1.25	1.16
Sanpete	35	1,952	2,193	1.12	2.03	1.21
Tooele	234	9,735	11,808	1.21	10.12	6.53
Utah	179	6,018	6,165	1.02	6.26	3.41
Wasatch	18	628	307	0.49	0.65	0.17
REGIONAL TOTALS	576	22,464	26,102	1.16	23.36	14.44
Southern Region						
Beaver	10	427	534	1.25	0.44	0.30
Garfield	10	588	575	0.98	0.61	0.32
Iron	24	1,176	936	0.80	1.22	0.52
Kane	6	896	521	0.58	0.93	0.29
Millard	61	2,621	2,714	1.04	2.73	1.50
Piute	5	133	106	0.80	0.14	0.06
Sevier	34	1,323	869	0.66	1.38	0.48
Washington	37	2,928	2,701	0.92	3.05	1.49
Wayne	19	722	1,096	1.52	0.75	0.61
REGIONAL TOTALS	206	10,814	10,052	0.93	11.25	5.56
Northeastern Region						
Daggett	28	1,390	2,460	1.77	1.45	1.36
Duchesne	200	8,585	29,274	3.41	8.93	16.19
Uintah	259	17,184	53,092	3.09	17.87	29.37
REGIONAL TOTALS	487	27,159	84,826	3.12	28.25	46.93
Southeastern Region						
Carbon	125	10,016	17,358	1.73	10.42	9.60
Emery	91	7,863	12,624	1.61	8.18	6.98
Grand	25	1,711	3,878	2.27	1.78	2.15
San Juan	50	3,931	8,224	2.09	4.09	4.55
REGIONAL TOTALS	291	23,521	42,084	1.79	24.46	23.28
Unknown Counties	11	855	1,524	1.78	0.89	0.84
STATE TOTALS	1,890	96,151	180,767	1.88	100	100

*Total hunter trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1977-83.

Region and County	Year 1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	1.87	2.56	1.84	1.92	1.99	1.12	1.44
Cache	1.28	1.59	1.22	1.35	0.68	0.61	0.77
Davis	1.83	0.39	2.00	0.90	0.07	0.00	1.05
Morgan	1.76	1.74	1.10	1.09	1.46	0.95	1.65
Rich	2.28	3.77	1.94	1.79	1.87	1.03	2.28
Summit	0.78	2.32	1.20	0.56	1.21	0.87	1.44
Weber	0.95	1.73	0.83	0.58	1.10	0.70	0.56
REGIONAL TOTALS	1.67	2.43	1.60	1.61	1.65	1.00	1.43
Central Region							
Juab	1.54	2.90	2.23	2.15	1.73	1.43	1.21
Salt Lake	1.20	1.55	0.96	0.56	0.71	1.07	1.74
Sanpete	0.82	1.50	1.46	0.99	1.44	0.86	1.12
Tooele	1.75	2.40	1.89	1.69	1.29	1.12	1.21
Utah	1.33	1.86	1.06	1.12	0.99	0.74	1.02
Wasatch	1.25	1.42	1.00	0.80	0.82	0.80	0.49
REGIONAL TOTALS	1.46	2.15	1.57	1.51	1.26	1.06	1.16
Southern Region							
Beaver	1.78	2.25	1.45	0.93	1.79	2.00	1.25
Garfield	0.50	0.80	2.12	1.86	1.05	1.86	0.98
Iron	1.08	1.48	1.74	1.27	1.03	0.77	0.80
Kane	2.55	2.80	2.01	1.39	0.81	1.84	0.58
Millard	1.78	1.84	1.82	1.70	1.57	1.58	1.04
Piute	2.06	2.06	1.27	1.53	1.52	0.38	0.80
Sevier	1.52	1.55	1.40	1.22	0.97	0.87	0.66
Washington	0.95	0.93	1.33	0.95	1.03	1.53	0.92
Wayne	2.88	1.42	1.76	1.48	2.69	1.41	1.52
REGIONAL TOTALS	1.79	1.54	1.64	1.35	1.32	1.39	0.93
Northeastern Region							
Daggett	2.10	3.25	3.30	1.50	1.12	1.38	1.77
Duchesne	2.92	3.67	1.49	1.39	1.80	2.17	3.41
Uintah	2.50	4.33	1.64	1.16	1.41	2.18	3.09
REGIONAL TOTALS	1.24	2.11	1.20	1.30	1.53	2.13	3.12
Southeastern Region							
Carbon	1.19	2.26	1.06	1.05	1.42	1.61	1.73
Emery	1.32	1.69	1.26	1.36	1.30	1.38	1.61
Grand	1.23	2.12	1.27	1.62	1.56	2.44	2.27
San Juan	1.05	2.81	1.42	1.90	1.87	2.93	2.09
REGIONAL TOTALS	1.24	2.11	1.20	1.30	1.53	1.81	1.79
Unknown counties	1.86	0.83	1.46	1.00	2.60	1.35	1.78
Mixed counties	1.56	0.00	1.25	5.00	1.11	0.00	0.00
STATE TOTALS	1.71	2.46	1.57	1.47	1.44	1.48	1.88

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1977-83.

Region and County	Year						
	1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	11.69	11.50	13.95	20.87	14.87	6.05	5.93
Cache	0.97	0.73	1.07	0.83	0.72	0.36	0.33
Davis	0.25	0.09	0.37	0.12	0.03	0.00	0.16
Morgan	2.99	2.74	1.90	0.84	0.82	0.38	0.64
Rich	2.41	4.96	2.89	1.75	0.80	0.36	0.96
Summit	1.08	2.88	1.95	1.16	1.66	0.65	0.83
Weber	0.69	0.67	0.61	0.40	0.62	0.38	0.11
REGIONAL TOTALS	20.07	23.58	22.73	25.96	19.50	8.19	8.95
Central Region							
Juab	4.22	5.16	7.79	9.35	6.79	5.76	1.95
Salt Lake	0.62	1.19	1.01	0.37	0.41	1.09	1.16
Sanpete	1.37	1.06	3.51	2.76	1.31	0.94	1.21
Tooele	10.38	10.17	16.48	21.32	10.58	10.04	6.53
Utah	6.94	6.77	7.40	6.01	5.63	3.55	3.44
Wasatch	0.89	0.80	1.18	0.88	0.59	0.73	0.17
REGIONAL TOTALS	24.42	25.15	37.37	40.69	25.32	22.10	14.44
Southern Region							
Beaver	0.46	0.89	0.47	1.43	0.72	0.76	0.30
Garfield	0.10	0.26	0.63	0.35	1.14	0.64	0.32
Iron	0.47	1.14	1.83	1.01	1.79	0.81	0.52
Kane	1.41	0.76	1.19	0.85	0.66	0.34	0.29
Millard	2.44	1.66	4.37	5.00	5.50	4.94	1.50
Piute	0.37	0.24	0.74	0.61	0.46	0.08	0.06
Sevier	1.02	1.15	2.14	1.84	1.94	0.79	0.48
Washington	0.70	0.93	1.70	1.12	2.06	2.99	1.49
Wayne	2.40	0.61	1.84	1.19	2.77	0.98	0.61
REGIONAL TOTALS	9.37	7.63	14.91	13.39	17.04	12.33	5.56
Northeastern Region							
Daggett	1.42	4.71	4.13	0.84	0.53	1.28	1.36
Duchesne	11.01	9.95	4.97	3.86	7.92	15.10	16.19
Uintah	14.17	16.60	5.82	3.40	7.13	14.70	29.37
REGIONAL TOTALS	26.60	13.26	14.92	8.10	15.58	31.08	46.93
Southeastern Region							
Carbon	5.41	4.84	3.46	4.22	6.96	9.98	9.60
Emery	5.60	3.51	3.69	4.05	4.68	5.47	6.98
Grand	0.54	1.32	0.62	1.68	2.96	2.79	2.15
San Juan	0.75	2.13	1.47	1.75	6.93	5.78	4.55
REGIONAL TOTALS	12.31	11.79	9.23	11.70	21.53	24.01	23.28
Unknown counties	2.77	0.59	0.14	0.03	0.19	2.28	0.84
Mixed counties	4.47	0.00	0.70	0.13	0.84	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1977-83.

Region and County	Year						
	1977	1978	1979	1980	1981	1982	1983
Northern Region							
Box Elder	10.69	11.05	11.92	15.90	10.75	8.04	7.73
Cache	1.29	1.13	1.37	0.90	1.50	0.88	0.79
Davis	0.23	0.58	0.29	0.20	0.55	0.15	0.29
Morgan	2.91	3.87	2.70	1.13	0.80	0.59	0.72
Rich	1.81	3.24	2.35	1.43	0.62	0.52	0.79
Summit	2.37	3.06	2.55	3.01	1.97	1.10	1.08
Weber	1.23	0.95	1.16	1.02	0.80	0.81	0.38
REGIONAL TOTALS	20.53	23.89	22.34	23.58	17.00	12.10	11.79
Central Region							
Juab	4.70	4.37	5.47	6.39	5.65	5.98	3.05
Salt Lake	0.89	1.89	1.66	0.98	0.84	1.51	1.25
Sanpete	2.85	1.73	3.79	4.10	1.32	1.61	2.03
Tooele	10.13	10.44	13.67	18.48	11.80	13.25	10.12
Utah	8.96	8.93	10.99	7.87	8.14	7.15	6.26
Wasatch	1.21	1.39	1.85	1.60	1.03	1.36	0.65
REGIONAL TOTALS	28.74	28.76	37.44	39.43	28.77	30.86	23.36
Southern Region							
Beaver	0.44	0.97	0.50	2.25	0.58	0.57	0.44
Garfield	0.35	0.81	0.47	0.27	1.56	0.51	0.61
Iron	0.75	1.89	1.65	1.17	2.49	1.57	1.22
Kane	0.94	0.66	0.93	0.90	1.17	0.28	0.93
Millard	2.35	2.22	3.77	4.30	5.06	4.64	2.73
Piute	0.31	0.29	0.92	0.59	0.43	0.30	0.14
Sevier	1.16	1.83	2.40	2.21	2.88	1.35	1.38
Washington	1.25	2.44	2.00	1.72	2.88	2.90	3.05
Wayne	1.43	1.05	1.64	1.17	1.48	1.03	0.75
REGIONAL TOTALS	8.98	12.17	14.28	14.58	18.52	13.14	11.25
Northeastern Region							
Daggett	1.16	3.56	1.97	0.82	0.68	1.38	1.45
Duchesne	6.45	6.67	5.24	4.08	6.31	10.33	8.93
Uintah	9.69	9.44	5.59	4.28	7.25	9.98	17.87
REGIONAL TOTALS	17.30	19.66	12.80	9.18	14.24	21.69	28.25
Southeastern Region							
Carbon	7.76	5.26	5.13	5.90	7.03	9.20	10.42
Emery	7.26	5.11	4.59	4.38	5.18	5.88	8.18
Grand	0.75	1.54	0.77	1.52	2.73	1.70	1.78
San Juan	1.23	1.86	1.63	1.35	5.34	2.93	4.09
REGIONAL TOTALS	17.01	13.77	12.11	13.16	20.28	19.70	24.46
Unknown counties	2.54	1.75	0.15	0.04	0.10	2.51	0.89
Mixed counties	4.89	0.00	0.88	0.04	1.09	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100

Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-83.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Cottontails 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
1980	25,156	127,652	87,051	1.47	5.07
1981	25,906	149,765	104,183	1.44	5.78
1982	26,714	156,696	105,644	1.48	5.87
1983	22,467	180,767	96,151	1.88	8.05
TOTALS (1967-83)	458,980	3,231,837	1,917,137	(26.62)	(111.39)
AVERAGES (1967-82)	27,282	190,692	113,811	1.55	6.46

Table 9. Cottontail rabbit field bag check summary, 1983.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Rabbits	Rabbits/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Rabbits	Rabbits/ 100 Hr	Rabbits/ Hunter
Northern Region											
Box Elder	2	5	18	3	17	2	5	18	3	17	0.60
Cache	2	3	8	0	--	2	3	8	0	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	5	15	69	20	29	5	15	69	20	29	1.33
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	9	23	95	23	24	9	23	95	23	24	1.00
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Northeastern Region											
Daggett	9	16	44	71	161	8	14	36	62	172	4.43
Duchesne	19	32	95	61	64	7	10	25	37	148	3.70
Uintah	18	42	66	180	272	2	4	12	27	225	6.75
REGIONAL TOTALS	46	90	205	312	152	17	28	73	126	173	4.50
Southeastern Region											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	1	1	1	0	--	0	0	0	0	--	--
San Juan	9	22	43	75	58	8	21	41	72	57	3.43
REGIONAL TOTALS	10	23	44	75	58	8	21	41	72	57	3.43
STATE TOTALS	65	136	344	410	119	34	72	209	221	106	3.07

Table 10. Cottontail hunter success trend determined by field bag checks, 1978-83.

Region and County	1978 Bag/ 100 Hr	1978 Bag/ Hunter	1979 Bag/ 100 Hr	1979 Bag/ Hunter	1980 Bag/ 100 Hr	1980 Bag/ Hunter	1981 Bag/ 100 Hr	1981 Bag/ Hunter	1982 Bag/ 100 Hr	1982 Bag/ Hunter	1983 Bag/ 100 Hr	1983 Bag/ Hunter
Northern Region												
Box Elder	40	1.74	29	1.23	34	1.09	26	1.00	--	--	17	0.60
Cache	--	--	4	0.33	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	52	2.79	19	0.73	--	--	--	--	--	--	29	1.33
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	167	1.67	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	46	2.14	20	0.93	34	1.09	26	1.00	--	--	24	1.00
Central Region												
Juab	--	--	67	2.00	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	33	0.88	30	0.93	--	--	--	--	--	--	--	--
Tooele	--	--	134	4.25	--	--	--	--	--	--	--	--
Utah	--	--	80	2.00	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	33	0.88	79	2.41	--	--	--	--	--	--	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	386	3.86*	--	--	--	--	--	--
Northeastern Region												
Daggett	180	7.62	98	2.29	0	0.00	26	0.50	104	2.88	172	4.43
Duchesne	89	3.42	--	--	53	1.67	59	2.14	75	2.00	148	3.70
Uintah	189	4.13	--	--	--	--	53	1.00	101	2.22	225	6.75
REGIONAL TOTALS	162	6.10	98	2.29	29	0.55	49	1.58	98	2.30	173	4.50
Southeastern Region												
Carbon	289	4.50	--	--	36	1.00	--	--	94	1.78	--	--
Emery	26	1.40	--	--	25	0.25	114	3.60	33	0.88	--	--
Grand	22	0.60	50	0.50	--	--	44	--	--	--	--	--
San Juan	160	--	0	0.00	0	0.00	114	3.00	225	4.50	57	3.43
REGIONAL TOTALS	56	1.04	33	0.33	26	0.38	106	3.50	62	1.44	57	3.43
STATE TOTALS	108	3.88	65	1.85	33	0.66	49	1.52	85	1.99	106	3.07

*Cottontails per hunter based on all hunts.

SNOWSHOE HARE

Harvest

The ninth annual snowshoe hare hunting season was held statewide in 1983. Results of the 1983 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 1983 season compared to the season in 1982 and the average of the first eight hunts follow:

	1983	Percent change from 1982	Percent change from Average
Snowshoe hare hunters	3,544	-17	-44
Snowshoe hares harvested	6,302	-32	-59
Hunter-days afield	11,088	-15	-42
Snowshoes per hunter-day	0.57	-20	-26
Snowshoes per hunter	1.78	-18	-24

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 have been more accurate.

Results of the 1983 questionnaire indicate a 19 percent increase in snowshoe hare hunters and comparable harvest to 1981.

It is unknown what proportion of the reported snowshoe harvest is 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 1983 increase in hunters afield and harvest does not reflect inaccurate identification of the snowshoe, but rather an actual increase in hunter participation and harvest.

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1983.

Region and County	Sample Size*	Hunter-days Afield	Snowshoes Bagged	Snowshoe/ Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	29	1,243	334	0.27	11.21	5.30
Cache	14	575	307	0.53	5.19	4.87
Davis	0	0	0	0.00	0.00	0.00
Morgan	14	387	173	0.45	3.49	2.75
Rich	7	200	133	0.67	1.80	2.11
Summit	24	468	441	0.94	4.22	7.00
Weber	9	307	120	0.39	2.77	1.90
REGIONAL TOTALS	97	3,180	1,508	0.47	28.68	23.93
Central Region						
Juab	4	66	80	1.20	0.60	1.27
Salt Lake	3	40	0	0.00	0.36	0.00
Sanpete	8	334	160	0.48	3.01	2.54
Tooele	22	682	641**	0.94	6.15	10.17
Utah	26	1,069	401	0.38	9.64	6.36
Wasatch	16	454	294	0.65	4.10	4.67
REGIONAL TOTALS	79	2,645	1,576	0.60	23.86	25.01
Southern Region						
Beaver	1	13	0	0.00	0.12	0.00
Garfield	1	13	0	0.00	0.12	0.00
Iron	2	80	13	0.17	0.72	0.21
Kane	0	0	0	0.00	0.00	0.00
Millard	3	53	0	0.00	0.48	0.00
Piute	4	147	213	1.45	1.33	3.38
Sevier	10	294	106	0.36	2.65	1.68
Washington	2	53	53	1.00	0.48	0.84
Wayne	11	361	294	0.81	3.26	4.67
REGIONAL TOTALS	34	1,014	679	0.67	9.15	10.78
Northeastern Region						
Daggett	3	66	40	0.60	0.60	0.63
Duchesne	22	829	735	0.89	7.48	11.66
Uintah	26	1,965	1,203	0.61	17.72	19.09
REGIONAL TOTALS	51	2,860	1,978	0.69	25.80	31.39
Southeastern Region						
Carbon	12	534	53	0.10	4.82	0.84
Emery	10	615	361	0.59	5.55	5.73
Grand	0	0	0	0.00	0.00	0.00
San Juan	1	13	0	0.00	0.12	0.00
REGIONAL TOTALS	23	1,162	414	0.36	10.48	6.57
Unknown Counties	5	227	147	0.65	2.05	2.33
STATE TOTALS	289	11,088	6,302	0.57	100	100

*Total hunter trips from questionnaire returns.

**Probable misidentification as snowshoe are not known to exist in this county.

Table 12. Summary of snowshoe hares bagged per hunter-day by region and county, 1978-83.

Region and County	Year 1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	0.45	0.55	0.82	0.43	0.31	0.27
Cache	0.65	0.50	0.32	0.46	0.62	0.53
Davis	0.23	1.50	0.00	0.25	0.00	0.00
Morgan	0.84	0.58	0.41	0.25	0.50	0.45
Rich	3.02	1.40	1.79	2.17	0.53	0.67
Summit	1.65	0.93	0.86	0.91	0.77	0.94
Weber	0.76	0.52	0.58	1.00	0.32	0.39
REGIONAL TOTALS	1.07	0.74	0.83	0.72	0.46	0.47
Central Region						
Juab	1.25	2.09	0.25	0.83	1.83	1.20
Salt Lake	6.27	0.20	0.67	1.00	0.20	0.00
Sanpete	1.40	1.11	0.87	0.84	0.97	0.48
Tooele	1.80	0.38	0.40	0.08	1.01	0.94
Utah	0.50	0.71	0.48	0.26	0.39	0.38
Wasatch	0.67	0.97	0.69	0.97	0.84	0.65
REGIONAL TOTALS	1.47	0.93	0.61	0.53	0.88	0.60
Southern Region						
Beaver	2.67	1.00	0.00	0.00	1.00	0.00
Garfield	0.13	0.00	0.00	0.00	0.00	0.00
Iron	26.00	0.00	0.00	0.75	0.00	0.17
Kane	0.00	5.00	0.00	0.00	0.00	0.00
Millard	3.20	0.43	1.00	0.00	1.00	0.00
Piute	0.00	1.25	0.00	0.00	0.50	1.45
Sevier	0.83	0.96	0.41	0.29	0.75	0.36
Washington	1.00	4.00	0.00	0.00	0.00	1.00
Wayne	0.68	2.05	1.17	2.00	0.58	0.81
REGIONAL TOTALS	0.92	1.27	0.45	0.62	0.65	0.67
Northeastern Region						
Daggett	0.72	0.46	0.25	0.00	0.47	0.60
Duchesne	1.26	0.53	0.14	0.67	0.79	0.89
Uintah	0.96	1.00	0.63	0.34	0.58	0.61
REGIONAL TOTALS	0.97	0.60	0.33	0.51	0.67	0.69
Southeastern Region						
Carbon	1.00	0.70	1.22	0.34	1.32	0.10
Emery	1.62	0.59	0.70	0.71	1.28	0.59
Grand	5.00	0.00	0.00	1.00	3.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	1.54	0.63	0.83	0.43	1.30	0.36
Unknown counties	0.67	0.00	0.00	2.33	0.81	0.65
Mixed counties	1.00	2.00	0.20	0.78	0.00	0.00
STATE TOTALS	1.15	0.81	0.68	0.61	0.71	0.57

Table 13. Percentage distribution of snowshoe hare harvested by region and county, 1978-83.

Region and County	Year					
	1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	2.83	7.58	11.86	5.80	5.63	5.30
Cache	4.81	5.68	3.80	6.63	2.15	4.87
Davis	0.54	1.50	0.00	0.55	0.00	0.00
Morgan	10.47	7.88	4.03	0.55	2.32	2.75
Rich	9.47	9.77	20.81	7.18	2.98	2.11
Summit	19.02	18.15	15.66	17.40	5.96	7.00
Weber	1.68	2.69	1.57	3.59	1.49	1.90
REGIONAL TOTALS	48.82	53.24	57.72	41.70	20.53	23.93
Central Region						
Juab	0.38	2.29	0.44	1.38	7.28	1.27
Salt Lake	14.36	0.20	2.24	1.93	0.33	0.00
Sanpete	0.54	8.13	7.38	4.42	4.64	2.54
Tooele	2.06	0.90	2.69	0.28	13.74	10.17
Utah	3.21	2.99	4.70	4.97	3.48	6.36
Wasatch	4.28	9.07	9.40	7.74	7.62	4.67
REGIONAL TOTALS	24.83	23.63	26.85	20.72	37.09	25.01
Southern Region						
Beaver	0.61	0.10	0.00	0.00	0.33	0.00
Garfield	0.31	0.00	0.00	0.00	0.00	0.00
Iron	1.99	0.00	0.00	0.83	0.00	0.21
Kane	0.00	0.50	0.00	0.00	0.00	0.00
Millard	1.22	0.30	0.22	0.00	0.17	0.00
Piute	0.00	1.00	0.00	0.00	0.33	3.38
Sevier	4.97	4.99	2.46	1.38	0.50	1.68
Washington	0.08	0.80	0.00	0.00	0.00	0.84
Wayne	1.91	3.89	1.57	2.21	1.16	4.67
REGIONAL TOTALS	11.08	11.57	4.25	4.42	2.48	10.78
Northeastern Region						
Daggett	2.22	1.30	0.67	0.00	1.32	0.63
Duchesne	3.36	2.39	0.67	14.09	13.91	11.66
Uintah	1.83	1.69	2.24	5.80	10.43	19.09
REGIONAL TOTALS	7.41	5.38	3.58	19.89	25.66	31.39
Southeastern Region						
Carbon	2.75	2.59	2.46	3.59	5.46	0.84
Emery	2.98	2.59	4.25	1.38	6.13	5.73
Grand	1.91	0.00	0.00	0.55	0.50	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	7.64	5.18	6.71	5.52	12.09	6.57
Unknown counties	0.15	0.00	0.00	1.93	2.15	2.33
Mixed counties	0.08	1.00	0.90	5.80	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1978-83.

Region and County	Year 1978	1979	1980	1981	1982	1983
Northern Region						
Box Elder	7.26	11.20	9.92	8.21	12.66	11.21
Cache	8.49	9.19	8.09	8.71	2.46	5.19
Davis	2.71	0.81	0.76	1.34	0.59	0.00
Morgan	14.35	10.96	6.72	1.34	3.28	3.49
Rich	3.59	5.64	7.94	2.01	3.99	1.80
Summit	13.21	15.79	12.37	11.56	5.51	4.22
Weber	2.54	4.19	1.83	2.18	3.28	2.77
REGIONAL TOTALS	52.14	57.78	47.63	35.34	31.77	28.68
Central Region						
Juab	0.35	0.89	1.22	1.01	2.81	0.60
Salt Lake	2.62	0.81	2.29	1.17	1.17	0.36
Sanpete	0.44	5.96	5.80	3.18	3.40	3.01
Tooele	1.31	1.93	4.58	2.01	9.61	6.15
Utah	7.35	3.38	6.72	11.56	6.33	9.64
Wasatch	7.26	7.57	9.31	4.86	6.45	4.10
REGIONAL TOTALS	19.34	20.55	29.92	23.79	29.78	23.86
Southern Region						
Beaver	0.26	0.08	1.22	0.00	0.23	0.12
Garfield	2.80	0.08	0.00	0.00	0.00	0.12
Iron	0.09	0.00	0.00	0.67	0.00	0.72
Kane	0.00	0.08	0.00	0.00	0.00	0.00
Millard	0.44	0.56	0.15	0.17	0.12	0.48
Piute	0.00	0.64	0.00	0.00	0.47	1.33
Sevier	6.82	4.19	4.12	2.85	0.47	2.65
Washington	0.09	0.16	0.00	0.00	0.00	0.48
Wayne	3.24	1.53	0.92	0.67	1.41	3.26
REGIONAL TOTALS	13.74	7.33	6.41	4.36	2.70	9.15
Northeastern Region						
Daggett	3.50	2.26	1.83	0.50	1.99	0.60
Duchesne	3.06	3.63	3.21	12.73	12.54	7.48
Uintah	2.19	1.37	2.44	10.39	12.78	17.72
REGIONAL TOTALS	8.75	7.25	7.48	23.62	27.32	25.80
Southeastern Region						
Carbon	3.15	2.98	1.37	6.37	2.93	4.82
Emery	2.10	3.55	4.12	1.17	3.40	5.55
Grand	0.44	0.00	0.00	0.34	0.12	0.00
San Juan	0.00	0.08	0.00	0.00	0.12	0.12
REGIONAL TOTALS	5.69	6.61	5.50	7.87	6.57	10.48
Unknown counties	0.26	0.08	0.00	0.50	1.88	2.05
Mixed counties	0.09	0.40	3.05	4.52	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-83.

Year	Total Hunters	Total Harvest	Hunters-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
1980	4,048	7,603	11,140	0.68	1.88
1981	3,554	7,750	12,782	0.61	2.18
1982	4,245	9,257	13,073	0.71	2.18
1983	3,544	6,302	11,088	0.57	1.78
TOTALS (1975-83)	54,598	128,892	163,025	(6.70) 0.79	(20.42) 2.36
AVERAGES (1975-82)	6,382	15,324	18,992	0.77	2.33

A P P E N D I X

Table 1. Comparison of 1983 monthly average temperatures to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. 1 WESTERN												
Normal	26.9	32.7	38.7	47.0	56.5	65.7	74.4	72.0	62.4	50.5	37.2	28.4
1983	31.1	35.9	41.6	42.7	53.1	64.2	71.8	72.2	64.1	51.4	38.3	29.0
Departure (degrees)	+4.2	+3.2	+2.9	-4.3	-3.4	-1.5	-2.6	+0.2	+1.7	-0.9	+1.1	+0.6
No. 2 DIXIE												
Normal	38.7	43.9	48.8	56.4	65.4	75.2	82.0	79.7	72.6	61.5	47.8	39.8
1983	41.5	45.3	48.8	51.8	63.7	74.4	80.6	79.0	74.9	61.4	48.1	41.3
Departure (degrees)	+2.8	+1.4	0	-4.6	-1.7	-0.8	-1.4	-0.7	+2.3	-0.1	+0.3	+1.5
No. 3 NORTH CENTRAL												
Normal	27.0	31.9	38.6	47.4	57.1	65.9	74.6	72.2	63.1	51.3	38.0	28.9
1983	32.3	35.2	41.4	43.2	53.1	64.5	72.5	73.6	64.1	52.6	38.9	27.2
Departure (degrees)	+5.3	+3.3	+2.8	-4.2	-4.0	-1.4	-2.1	+1.4	+1.0	+1.3	+0.9	-1.7
No. 4 SOUTH CENTRAL												
Normal	27.1	31.6	37.0	44.9	54.0	63.1	70.4	68.0	60.2	49.8	37.1	28.8
1983	30.2	34.0	38.9	40.4	51.5	62.2	69.3	68.6	63.0	50.5	38.0	30.0
Departure (degrees)	+3.1	+2.4	+1.9	-4.5	-2.5	-0.9	-1.1	+0.6	+2.8	+0.7	+0.9	+1.2
No. 5 NORTHERN MOUNTAINS												
Normal	21.2	24.7	30.6	40.0	47.6	57.6	65.3	63.1	55.0	44.9	32.0	23.6
1983	26.6	26.5	33.9	35.6	46.0	57.0	64.1	66.1	56.9	46.7	32.0	21.2
Departure (degrees)	+5.4	+1.8	+3.3	-4.4	-3.6	-0.6	-1.2	+3.0	+1.9	+1.8	0	-2.4
No. 6 UINTAH BASIN												
Normal	17.2	24.1	35.5	46.2	56.2	64.9	72.1	69.3	60.3	48.5	33.5	21.2
1983	22.3	27.5	39.8	42.1	52.4	63.4	70.6	73.2	63.5	50.3	33.7	17.0
Departure (degrees)	+5.1	+3.4	+4.3	-4.1	-3.8	-1.5	-1.5	+3.9	+3.2	+1.8	+0.2	-4.2
No. 7 SOUTHEAST												
Normal	27.0	33.8	41.0	50.2	59.8	69.7	76.6	73.8	65.4	53.7	39.5	29.3
1983	31.1	37.2	42.7	45.9	57.0	67.3	75.3	75.9	68.3	54.7	40.4	30.2
Departure (degrees)	+4.1	+3.4	+1.7	-4.3	-2.8	-2.4	-1.3	+2.1	+2.9	+1.0	+0.9	+0.9
STATE AVERAGES												
Normal	26.4	31.8	38.6	47.4	56.7	66.0	73.6	71.2	62.7	51.5	37.9	28.6
1983	30.7	34.5	41.0	43.1	53.8	64.7	72.0	72.7	65.0	52.5	38.5	28.0
Departure (degrees)	+4.3	+2.7	+2.4	-4.3	-2.9	-1.3	-1.6	+1.5	+2.3	+1.0	+0.6	-0.6

Table 2. Comparison of 1983 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. 1 WESTERN												
Normal	0.59	0.57	0.74	0.81	0.91	0.67	0.63	0.72	0.55	0.65	0.62	0.54
1983	0.64	0.73	1.26	1.24	0.81	0.78	0.49	2.38	1.19	0.89	1.29	1.42
Departure (inches)	+0.05	+0.16	+0.52	+0.43	-0.10	+0.11	-0.14	+1.66	+0.64	+0.24	+0.67	+0.88
No. 2 DIXIE												
Normal	1.35	1.36	1.42	0.82	0.66	0.36	0.78	1.01	0.76	0.78	0.99	0.96
1983	1.55	1.61	4.74	1.67	0.28	0.03	1.21	2.67	1.42	0.99	1.96	1.39
Departure (inches)	+0.20	+0.25	+3.32	+0.85	-0.38	-0.33	+0.43	+1.66	+0.66	+0.21	+0.97	+0.43
No. 3 NORTH CENTRAL												
Normal	1.56	1.39	1.60	1.96	1.60	1.19	0.65	0.95	0.99	1.31	1.34	1.41
1983	1.26	2.12	3.22	2.35	3.15	1.17	1.52	3.61	2.22	1.91	3.12	5.11
Departure (inches)	-0.30	+0.73	+1.62	+0.39	+1.55	-0.02	+0.87	+2.66	+1.23	+0.60	+1.78	+3.70
No. 4 SOUTH CENTRAL												
Normal	1.09	1.06	1.15	1.04	0.94	0.54	0.96	1.31	1.00	0.92	0.98	0.97
1983	1.24	1.15	2.81	1.18	1.31	0.52	1.09	2.27	1.62	0.66	2.14	1.93
Departure (inches)	+0.15	+0.09	+1.66	+0.14	+0.37	-0.02	+0.13	+0.96	+0.62	-0.26	+1.16	+0.96
No. 5 NORTHERN MOUNTAINS												
Normal	2.16	1.92	1.89	1.88	1.54	1.17	0.88	1.23	1.15	1.45	1.62	1.98
1983	1.31	2.32	3.19	2.20	2.94	1.57	1.67	2.77	2.21	1.83	3.93	5.70
Departure (inches)	-0.85	+0.40	+1.30	+0.32	+1.40	+0.40	+0.79	+1.54	+1.06	+0.38	+2.31	+3.72
No. 6 UINTAH BASIN												
Normal	0.51	0.45	0.57	0.68	0.78	0.72	0.58	0.81	0.71	0.87	0.54	0.61
1983	0.45	0.91	0.73	1.06	1.74	0.82	0.93	1.15	1.01	0.70	1.29	1.08
Departure (inches)	-0.06	+0.46	+0.16	+0.38	+0.96	+0.10	+0.35	+0.34	+0.30	-0.17	+0.75	+0.47
No. 7 SOUTHEAST												
Normal	0.72	0.61	0.64	0.61	0.67	0.40	0.77	1.05	0.78	1.09	0.73	0.74
1983	0.81	0.82	1.75	0.60	0.69	0.79	1.62	1.14	1.28	0.77	1.46	1.04
Departure (inches)	+0.09	+0.21	+1.11	-0.01	+0.02	+0.39	+0.85	+0.09	+0.50	-0.32	+0.73	+0.30
STATE AVERAGES												
Normal	1.14	1.05	1.14	1.11	1.01	0.72	0.75	1.01	0.85	1.01	0.97	1.03
1983	1.04	1.38	2.53	1.47	1.56	0.81	1.22	2.28	1.56	1.11	2.17	2.52
Departure (inches)	-0.10	+0.33	+1.39	+0.36	+0.55	+0.09	+0.47	+1.27	+0.71	+0.10	+1.20	+1.49

Table 3. Number and percent of total upland game hunters afield who reported hunting each game species during 1978-83.

Species	Number of Hunters						Percent of Total					
	1978	1979	1980	1981	1982	1983	1978	1979	1980	1981	1982	1983
Pheasant	83,800	87,462	84,868	83,408	85,368	77,847	79.6	83.4	84.7	86.7	87.4	85.9
Chukar	16,291	15,210	15,100	12,907	11,326	10,418	15.5	14.5	15.1	13.4	11.6	11.5
Mourning dove	35,985	34,903	32,627	30,060	31,756	28,258	34.2	33.3	32.6	31.2	32.5	31.2
Sage grouse	16,231	16,927	15,219	10,083	8,997	9,201	15.4	16.1	15.2	10.5	9.2	10.2
Forest grouse	25,318	21,993	19,511	14,329	12,384	13,414	24.0	21.0	19.5	14.9	12.7	14.8
Quail	5,924	5,632	4,156	4,946	4,368	4,012	5.6	5.4	4.1	5.1	4.5	4.4
Hungarian partridge	4,743	3,435	3,359	3,545	2,590	2,889	4.5	3.3	3.4	3.7	2.7	3.2
Wild turkey**	189*	126*	70*	115*	23	118*	0.2	0.1	0.1	0.1	0.02	0.1
Sharp-tailed grouse**	--	156	--	--	--	--	--	0.1	--	--	--	--
Band-tailed pigeon**	--	62	62	67	51	--	--	0.1	0.1	0.1	0.1	--
Ptarmigan	--	--	--	--	19	13	--	--	--	--	0.02	0.01
Cottontail rabbit	35,590	33,385	25,156	25,906	26,714	22,467	33.8	31.8	25.1	26.9	27.3	24.8
Snowshoe hare	8,205	6,787	4,048	3,554	4,245	3,544	7.8	6.5	4.0	3.7	4.3	3.9
TOTAL HUNTERS***	105,288	104,834	100,164	96,196	97,705	90,592						

*Includes both spring and fall hunts.

**Although wild turkey, band-tailed pigeon, ptarmigan 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.

***Note: the columns do not total. This is due to the fact that many upland game hunters hunted more than one species.

Table 4. Percent of hunter trips resulting in failure to bag at least one bird, 1961-83.

	Pheasant			Dove			Chukar			Sage Grouse			Forest Grouse			Quail			Huns		
Year	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%
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	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	881	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	7,024	32	343	2,671	13	528	1,150	46	400	1,215	33	585	1,691	35	130	403	32	119	243	49
1980	1,684	5,867	29	258	2,145	12	458	1,008	45	392	944	42	501	1,283	39	87	254	34	75	206	36
1981	1,305	4,637	28	239	1,558	15	302	669	45	184	493	37	297	741	40	97	241	40	57	172	33
1982	1,768	6,725	26	363	2,338	16	406	824	49	269	620	43	325	919	35	128	292	44	89	176	51
1983	1,645	7,153	23	348	2,381	15	362	880	41	294	729	40	300	1,118	27	105	310	34	82	225	36
AVERAGES (1961-82)			32			13			50			41			41			37			43

Table 5. Regional and statewide summary of effort expended on upland game summer inventory, 1971-83.

	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
Species	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Pheasant												
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	--
1980	358	--	672	--	750	--	546	--	270	--	2,596	--
1981	459	--	525	--	801	--	535	--	330	--	2,650	--
1982	437	--	639	--	583	--	477	--	332	--	2,468	--
1983	260	--	442	--	780	--	426	--	330	--	2,238	--
Quail												
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
1980	36	9	265	23	240	36	410	34	0	0	951	102
1981	58	11	180	12	329	43	366	31	0	3	933	100
1982	0	0	151	14	304	44	475	44	0	0	930	102
1983	5	9	93	9	562	61	295	26	0	0	955	105

Table 5 (continued)

Species	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Chukar												
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
1980	283	68	1,668	124	235	12	0	0	53	10	2,239	214
1981	330	56	591	49	147	11	245	21	260	32	1,573	169
1982	473	34	571	56	475	35	260	37	101	9	1,880	171
1983	17	15	190	17	20	2	488	44	103	7	818	85
Forest Grouse												
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
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
1980	577	201	1,260	158	160	230	502	74	266	39	2,765	702
1981	688	147	958	147	575	295	835	120	184	29	3,240	738
1982	506	74	1,488	157	--	354	742	111	--	--	2,736	696
1983	1,049	218	1,180	93	459	80	636	93	--	20	3,324	504

Table 5 (continued)

Species	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Sage Grouse												
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
1980	1,003	218	806	150	518	94	1,471	184	278	30	4,076	676
1981	619	194	691	99	285	57	771	163	377	39	2,743	552
1982	1,669	169	762	92	454	83	862	116	--	--	3,747	460
1983	610	158	720	164	284	51	992	125	108	10	2,714	508
Hungarian Partridge												
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
1980	250	55	50	6	--	--	--	--	--	--	300	61
1981	270	23	65	3	--	--	--	--	--	--	330	26
1982	324	39	--	--	--	--	--	--	--	--	324	39
1983	0	60	--	--	--	--	--	--	--	--	0	60

Table 5 (continued)

Species	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Wild Turkey												
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
1980	--	--	--	--	--	--	--	--	--	--	--	--
1981	--	--	--	--	--	--	--	--	--	--	--	--
1982	--	--	--	--	--	--	--	--	--	--	--	--
1983	--	--	--	--	--	--	--	--	--	--	--	--
Cottontail												
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	--
1980	90	--	265	--	655	--	359	--	540	--	1,909	--
1981	270	--	270	--	903	--	400	--	580	--	2,423	--
1982	240	--	240	--	722	--	298	--	602	--	2,102	--
1983	90	--	90	--	822	--	340	--	590	--	1,932	--

Table 6. Season framework for upland game during 1983.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Pheasant	Nov. 5-13	2 cocks	4 cocks	Statewide
	Nov. 5-18	2 cocks	4 cocks	Box Elder, Cache, Davis and Weber counties.
	Nov. 5-20	2 cocks	4 cocks	Duchesne and Uintah counties.
	Nov. 5-Dec. 4	2 cocks	4 cocks	All state and federal lands (subject to restrictions and closures imposed by administering agencies) in Carbon, Duchesne, Emery, Grand, Juab, San Juan, Sanpete, Tooele, and Uintah counties; and that portion of Wayne County east of Capitol Reef National Park; and Bear River National Wildlife Refuge.
Mourning dove	Sept. 1-30	15	30	Statewide.
Band-tailed pigeon	Sept. 1-30	5	10	Beaver, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sevier, Washington and Wayne counties.
Chukar	Sept. 17, 1983-Jan. 31, 1984	5	10	Statewide except as noted below.
	Sept. 17-Nov. 30	5	10	Cache, Morgan, Rich, Sanpete, Summit, Wasatch and Weber counties, Davis County except Antelope Island and those portions of the following counties lying east of Interstate 15: Box Elder, Juab, Salt Lake and Utah counties.

Daggett, Duchesne and Uintah counties were closed to chukar hunting during 1983.

Table 6 (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Sage grouse	Sept. 17-25	3	6	Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties.
	Sept. 17-23	2	4	Box Elder (part), Daggett, Duchesne (part), Grand (part), Uintah, and Wasatch (part).
	Sept. 17-23	1	2	Box Elder (part), Cache, Morgan, Rich, Summit, Wasatch (part) and Weber counties.
The following counties were closed to sage grouse hunting during 1983:				
				Carbon, Davis, Emery, Grand (part), Juab, Millard, Salt Lake, San Juan, Sanpete, Tooele, Utah, Wasatch (part), and Washington.
Forest grouse	Sept. 17-Nov. 30	4 (aggregate)	8 (aggregate)	Statewide.
Quail	Nov. 5-13	5	10	Statewide except Duchesne, Morgan, Summit, Uintah and Washington counties.
	Nov. 5-20	5	10	Duchesne and Uintah counties.
	Nov. 5-Dec. 31	8	16	Washington County.
Morgan and Summit counties were closed to quail hunting in 1983.				
Hungarian partridge	Sept. 17, 1983-Jan. 31, 1984	5	10	Part of Box Elder County.
	Sept. 17-Nov. 30	5	10	Cache, Davis, Juab, Morgan, Rich, Summit, Tooele and Weber counties. Parts of Box Elder and Salt Lake counties.

Table 6 (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Wild turkey				
Spring hunt	Apr. 30-May 15	Season limit 1 male turkey		Garfield, Grand, Iron, Kane, Washington, Wayne and San Juan (part) counties.
Fall hunt	Sept. 17-Oct. 2	Season limit 1 turkey of either sex		Iron, Kane, Wayne, Washington and Garfield (part) counties.
Ptarmigan	Sept. 10-Oct. 18	Season limit 4 ptarmigan		Summit (part) and Duchesne (part) counties.
Snowshoe hare	Sept. 17, 1983-Jan. 31, 1984	5	10	Statewide.
Cottontail rabbit	Sept. 17, 1983-Jan. 31, 1984	10	20	Statewide except Box Elder (part), Cache, Davis, Morgan, Rich, Summit and Weber counties.
	Sept. 17, 1983-Jan. 31, 1984	5	10	Box Elder (part), Cache, Davis, Morgan, Rich, Summit and Weber counties.

Table 7. Summary of Upland game harvest questionnaire returns - 1962-83

Year	Questionnaires Mailed	Total Returns	Percent	Useable Returns	Percent	Percent of Licensees who did not hunt
1962	10,068	4,122	41.0	3,433	34.0	22.0
1963	11,058	5,062	46.0	4,325	39.0	21.0
1964	10,718	4,840	45.0	4,180	39.0	23.0
1965	11,917	6,232	53.0	--	--	34.0
1966	13,131	5,734	43.7	5,734	43.7	34.6
1967	12,012	5,764	48.0	5,764	48.0	25.1
1968	14,068	6,138	43.6	6,138	43.6	25.6
1969	15,036	6,429	42.8	6,429	42.8	28.0
1970	14,730	6,639	45.1	6,639	45.1	38.8
1971	15,149	--	43.2	--	--	--
1972	15,272	--	--	6,399	41.9	--
1973	17,572	--	--	7,999	45.5	--
1974	27,379	9,157	38.6	8,027	29.3	--
1975	26,657	10,880	40.8	9,132	34.3	--
1976	21,250	7,889	37.1	6,226	29.3	--
1977	20,984	9,329	44.5	8,099	38.6	--
1978	24,733	7,575	30.6	6,529	26.4	--
1979	27,616	10,498	38.0	9,274	33.6	26.4
1980	27,952	9,857	35.3	8,496	30.4	10.1
1981	13,925	7,941	57.0	6,367	45.4	31.4
1982	22,609	10,167	45.0	8,734	38.6	27.0
1983	23,430	10,324	44.1	9,497	40.5	11.6

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