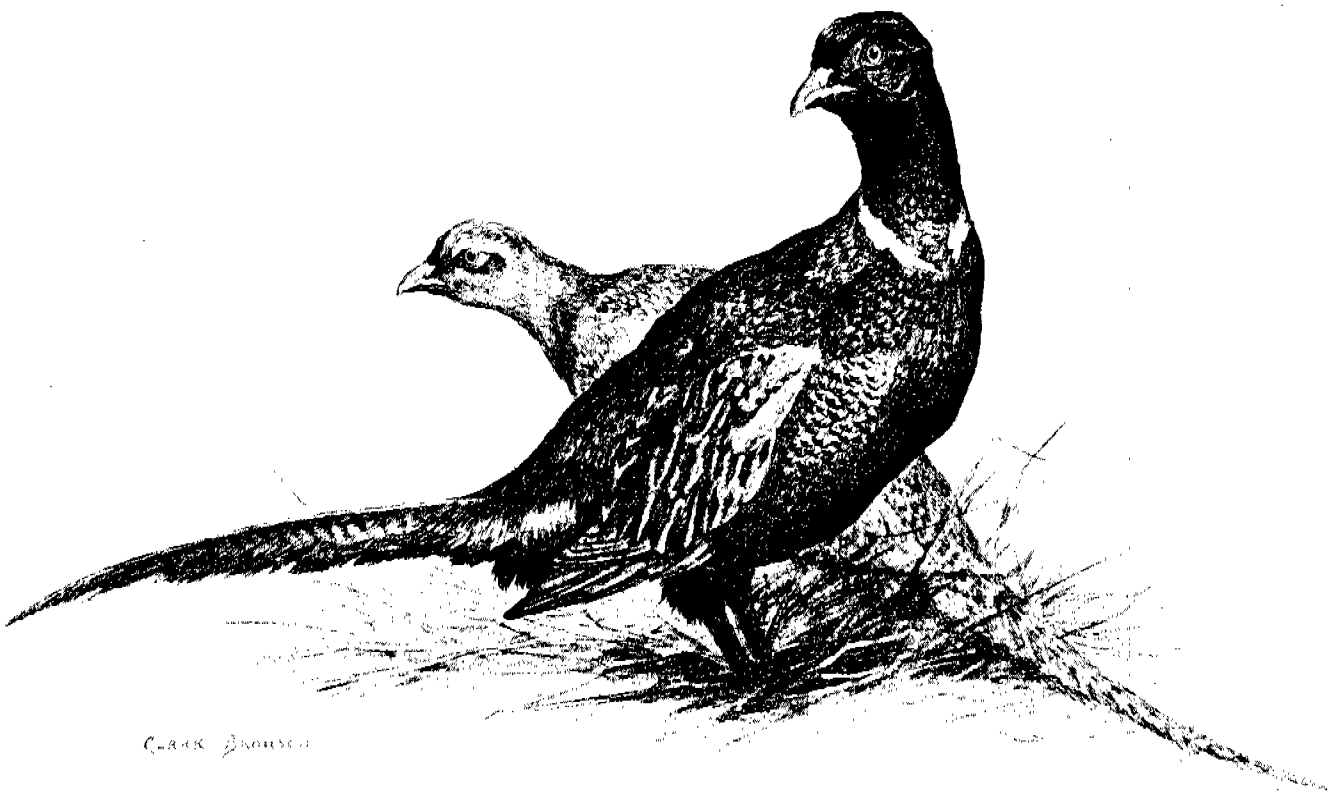
UTAH UPLAND GAME

Annual Report 1980



Utah Division of Wildlife Resources
Publication Number 81-5

U T A H

U P L A N D G A M E

Annual Report

1980

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PUBLICATION NO. 81-5

Annual Performance Report for Federal Aid Project W-65-R-29 Job A-4

Utah State Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

An Equal Opportunity Employer

Douglas F. Day
Director

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JOB PERFORMANCE REPORT

RESEARCH PROJECT SEGMENT
(Inventory)

State: U T A H

Project No.: W-65-R-28

Job No.: A-4

Project Title: Statewide Wildlife Management Inventory

Job Title: Statewide Upland Game Inventory and Management

Period Covered: December 15, 1979 to April 30, 1981

Abstract: This report includes upland game inventory and harvest data relating to the 1980-81 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indices derived by each method are included. Data obtained in 1980 are compared to 1979 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, 1979 through February 10, 1980, 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 each route between May 20-30.

Random brood counts were conducted on chukar and Hungarian partridge, forest grouse (ruffed and blue), sage grouse, sharp-tailed grouse, wild turkey and quail from June 15-August 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 1979 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. An approximate 22 percent sample of eligible licensees from the previous year's (1979) license file was selected for the game bird and rabbit and hare questionnaire. Questionnaires were mailed to all band-tailed pigeon and wild turkey permittees. Indices derived include total hunters, hunter-days, total harvest and hunter success per day plus success for each season.

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

Beginning in 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.

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

1980

1969 Survey combined.
86.61% fishing
90.57% B.G. hunters
79.69% S. Game
33.26% waterfowl
31.67 co Hunting
27.32 Dove Hunting
27.03 other bird Hu
phrasing 71.37

Jan 1 2 0 4 2
Sep 30 0 8 6
Comb 100,141

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

This report serves as a handbook of inventory and harvest data. It is designed primarily for the use of those concerned with the management of upland game in Utah. A separate section is devoted to each form of upland game hunted in Utah. Data 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 1980, a total of 100,164 Utah sportsmen spent 591,269 days afield in pursuit of various upland game species. The harvest of upland game totaled 847,730. The proportion of the total upland game hunters which pursued each species is shown in Appendix Table 3 and the percentage failing to bag at least one bird of each species in Appendix Table 4. The framework for 1980 upland game hunting seasons is shown in Appendix Table 6. Harvest statistics by species follow.

Species	Hunters Afield	Total Harvest	Hunter Days	Bag per Hunter-day	Bag/Hunter For Season
Pheasant	84,868	228,442	249,770	0.91	2.69
Mourning dove	32,627	343,851	97,644	3.52	10.54
Chukar partridge	15,100	51,511	47,778	1.08	3.41
Sage grouse	15,219	22,770	26,893	0.85	1.50
Forest grouse	19,511	45,552	49,899	0.91	2.33
Quail	4,156	11,690	10,400	1.12	2.81
Hungarian partridge	3,359	8,466	10,366	0.82	2.52
Wild turkey					
spring	35	0	84	0.00	0.00
fall	35	11	69	0.16	0.31
Band-tailed pigeon	62	182	175	1.00	2.94
Sharp-tailed grouse	0	0	0	--	--
Cottontail	25,156	127,652	87,051	1.47	5.07
Snowshoe	4,048	7,603	11,140	0.68	1.88
TOTAL	204,176	847,730	591,269	--	--

Total separate hunters afield for all species of upland game = 100,164

A total of 31,787 upland game bird questionnaires were mailed, an approximate 22 percent sample. The combined upland game bird and rabbit-hare questionnaire was again used. However, the questionnaires were analyzed separately, employing the same techniques as in past years. A total of 3,835 (12%) questionnaires was undeliverable. There were 1,361 returns from persons who did not purchase a license during 1980.

Of the 27,952 questionnaires delivered, 8,496 (30.4%) usable game bird questionnaires were returned. Of those, 2,811 did not hunt game birds leaving a total of 5,685 hunters sampled. This combined with a total of 144,151 eligible licensees to produce a projection factor of 16.966925.

A total of 8,475 usable rabbit and hare questionnaires was returned. Of these, 5,820 did not hunt game rabbits. There were 2,655 hunters who reported hunting cottontails and/or snowshoes. The ratio of 144,151 eligible licensees to 8,475 usable returns resulted in a projection factor of 17.008967.

The annual weather summary for 1980, prepared by State Climatologist E. Arlo Richardson, was not available for analysis. However, monthly temperature and precipitation patterns are shown by Figures 1 and 2.

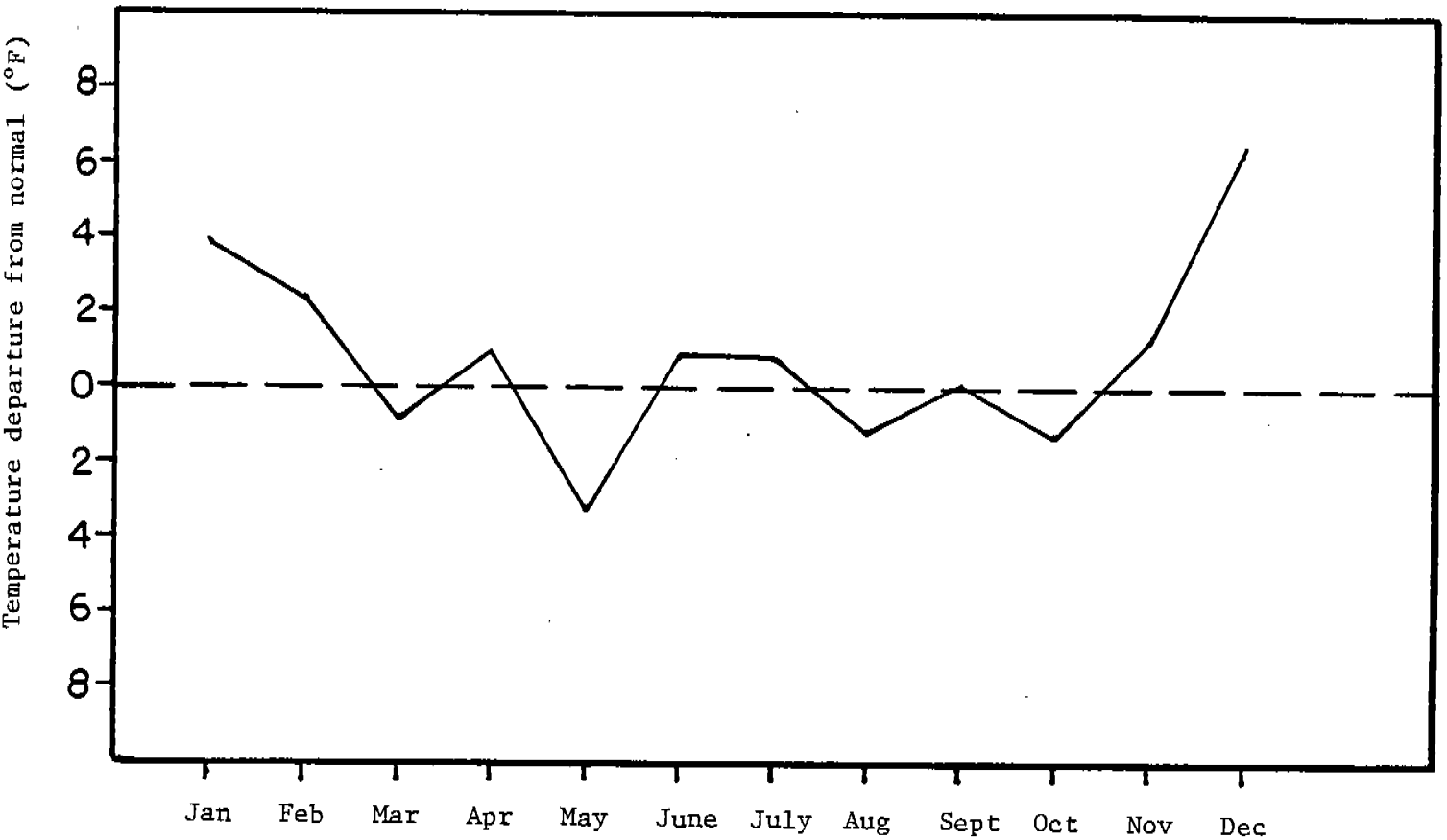


Figure 1. Monthly average temperature departure from normal, 1980.

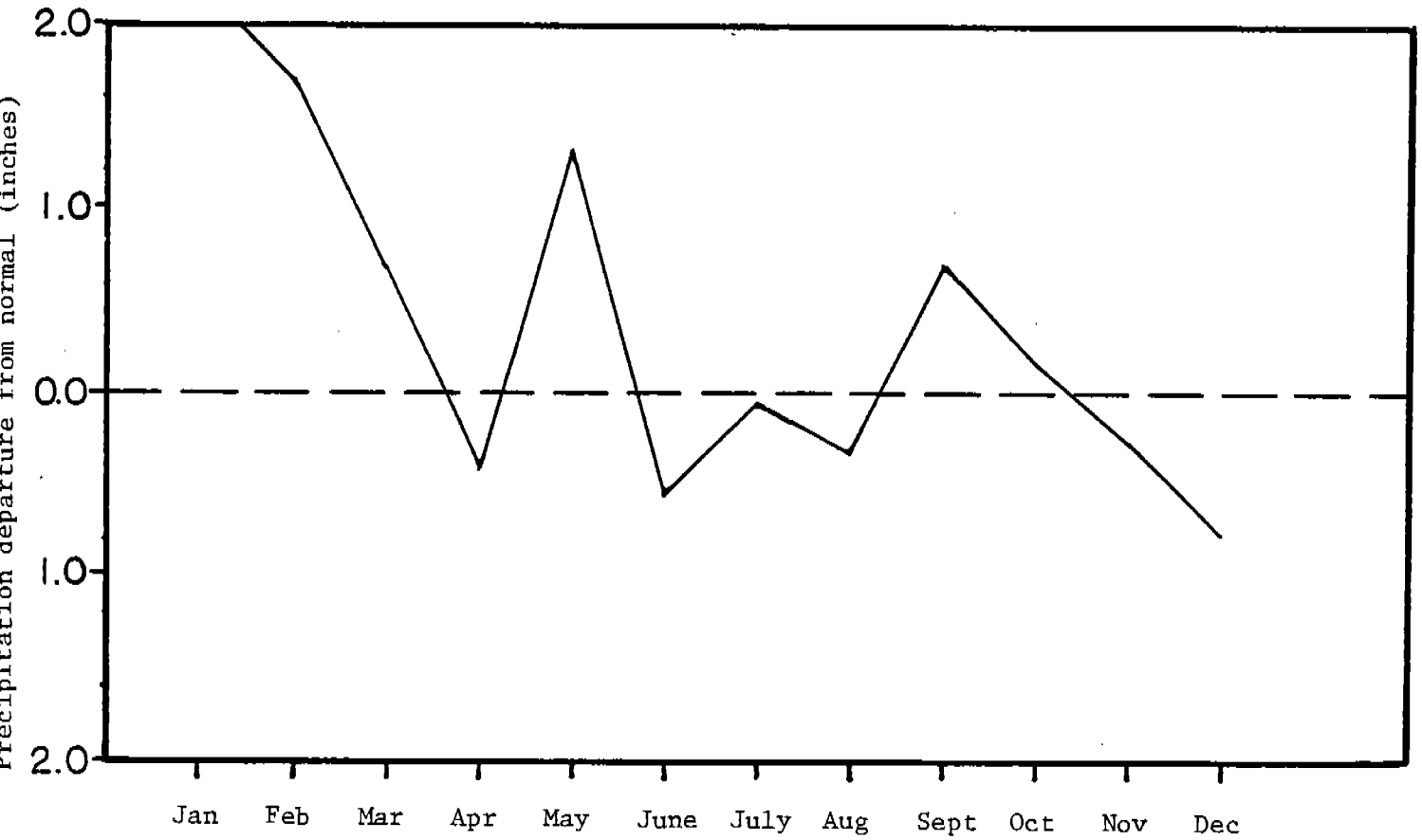


Figure 2. Monthly average precipitation departure from normal, 1980.

RING-NECKED PHEASANT

SUMMARY

The statewide breeding population indices, based on 1979 harvest data, were below the 1979 level and below average. Winter sex ratio indices indicated decreased breeding populations as well. However, winter carry-over from 1979 appeared good despite above average precipitation statewide.

Weather conditions during the nesting season were generally unfavorable in May but improved in June and July. Production was generally below 1979 levels and below average statewide.

Harvest statistics compiled from the questionnaire indicated a better hunt than in 1979. This may have been due to a higher percentage of hens undertaking second and third nesting attempts with more late broods and smaller clutch sizes. The harvest was second highest since 1972 and was 5 percent greater than in 1979. Hunter numbers decreased 3 percent over 1979; and likewise, hunter-days afield decreased 6 percent. However, birds per hunter-day increased 12 percent from 1979. Field bag check data showed that hunters spent about the same time afield per hunter-day as in 1979. The ratio of birds per hunter from field bag checks was comparable to the index from hunter questionnaires.

While the total acreage of farmlands has not declined significantly during the 1970's, there was a clear trend toward fewer and larger farms (Utah Agricultural Statistics 1980). This is the result of full-time operators' attempts to get more efficiency from their machinery and labor invested. Since the 1950's, less than 10 percent of the state's agricultural land has been lost to urbanization. These trends, plus clean farming practices, are expected to escalate during the 1980's. This will adversely affect pheasant production in the major pheasant producing counties in north-central Utah--Box Elder, Cache, Davis, Salt Lake, Utah and Weber counties. These counties presently have 10 to 25 percent of their land area in cropland; all other counties had less than 10 percent.

Winter Sex Ratio Counts

Results of the survey for the winter of 1979-80 and long-term trends are shown in Tables 1 and 2 of this section. Statewide comparisons to the winter of 1978-79 and the 10-year average are as follows:

	Winter of 1979-80	Percent change from 1978-79	Percent change from Average
Total pheasants counted (roadside)	5,978	-44	-47
Hens per cock	3.6	+9	-14
Pheasants observed per 100 hours	1,191	-32	-10
Total hours effort (roadside)	485	-20	-36

Winter sex ratio counts indicated a decreased breeding population in 1980 from 1979 and much below average. Counting conditions were generally good with adequate snow cover of short duration. Winter carry-over was good. The hen-cock ratio increased from 1979 but remained below average.

Roadside Counts

A summary of summer roadside pheasant counts for 1980 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 1980 survey results compared to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total pheasants observed	2,846	-19	0
Total miles driven	2,596	-1	-10
Pheasants per mile	1.10	-20	-11
Average brood size	4.58	-21	-16
Young per hen	3.60	-11	-10
Percent of hens with young	77	+5	+5

April temperatures were slightly above normal with below normal precipitation. May temperatures were three degrees below normal and precipitation was 1.31 in above normal. June was warm and dry. Counting conditions were good over most of the state.

Production decreased from 1979 and was considerably below 1979 levels in the Northern, Northeastern and Central regions. The density index (pheasants per mile) decreased from 1.37 in 1979 to 1.10 in 1980 and was below the average of 1.24 pheasants per mile.

Despite below average production, a good carry-over from 1979, coupled with good brood weather during the summer months of 1980, resulted in a good fall pheasant population.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire for 1980 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 1980 harvest statistics to 1979 and the 32-year average follow:

	1980	Percent change from 1979	Percent change from Average
Pheasant hunters	84,868	-3	+2
Pheasants harvested	228,442	+5	-3
Hunter-days afield	249,770	-6	+12
Pheasants per hunter-day	0.91	+12	-13
Pheasants per hunter	1.69	+8	-5

Total hunters decreased slightly from 1979 but remained above the long-term average (1948-79). Hunter-days afield also decreased; however, the total harvest increased 5 percent from 1979. Hunter success (pheasants per hunter-day) increased from 1979 but remained below average. Pheasants per hunter remained below average by 5 percent.

Long-term trends (1964-79) of total hunters, hunter-days, harvest and hunter success are shown in Figure 1. Generally, the trend continues toward more hunters and hunter-days with gradual declines in total pheasants harvested.

Field Bag Checks

A summary of pheasant field bag check data for 1980 is shown in Table 14. The hunter success trend determined via bag checks since 1975 is found in Table 15. A comparison of 1980 data, on a statewide basis, to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Pheasants per hunter (complete hunts)	INCOMPLETE INFORMATION		
Pheasants bagged per 100 hours			
Average hours per hunter-day (complete hunts)			
Hours hunted per pheasant bagged			

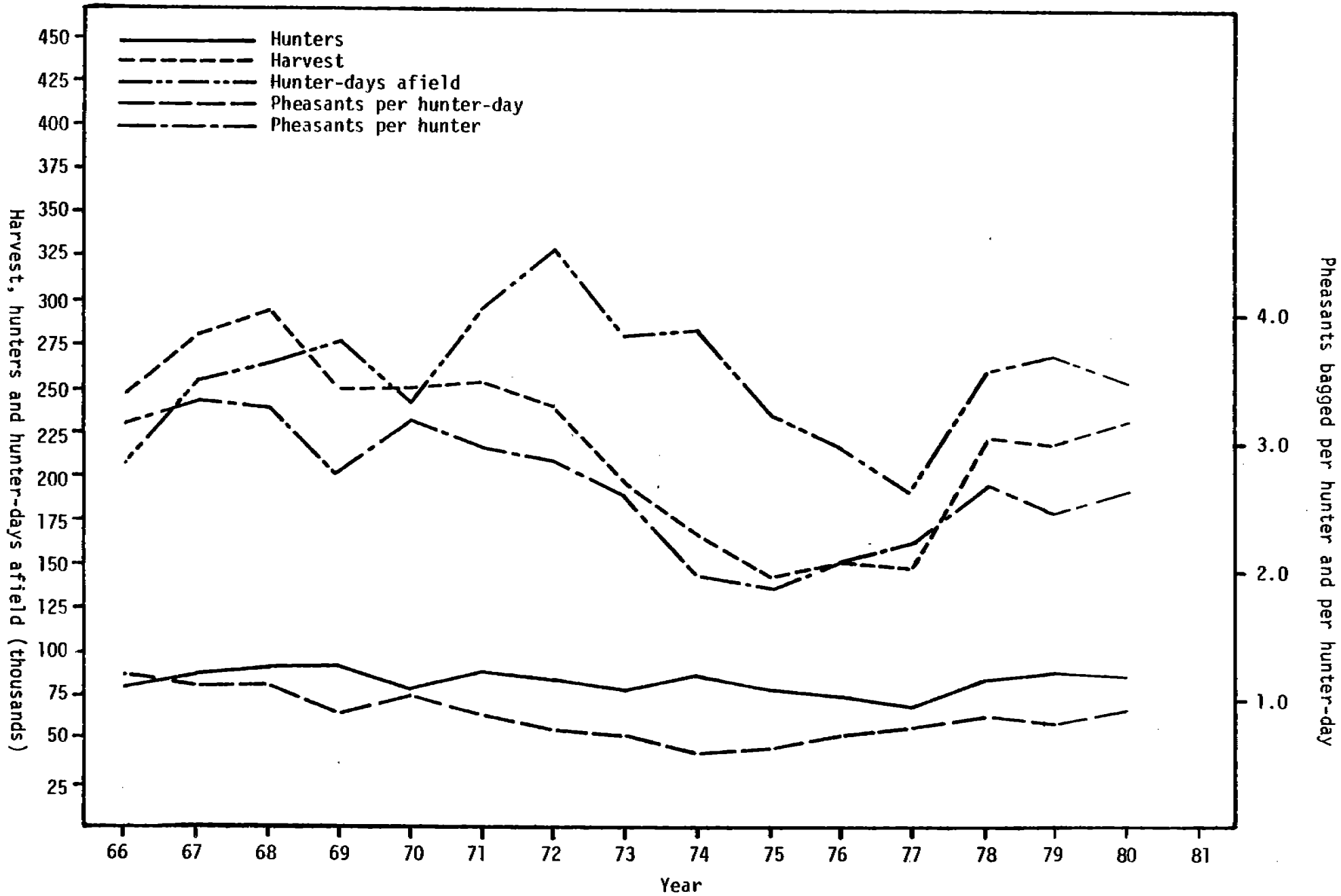


Figure 1. Statewide trend of pheasant harvest statistics

Table 1. Summary of pheasant winter sex ratio counts, 1979-80.

Region and County	Roadside Observations					Flushing Observations					Effort Expended				Pheas. Obs./ 100 Hours of Road. Obs.
	Cocks	Hens	Total	Hens/ Cock	Cocks/ 100 Hens	Cocks	Hens	Total	Hens/ Cock	Cocks/ 100 Hens	Vehicle Miles	Hours of Effort Vehicle	Hours of Effort Walk	Hours of Effort Total	
Northern Region															
Box Elder	57	363	420	6.4	16	--	--	--	--	--	395	30	--	30	1,400
Cache	33	116	149	3.5	28	--	--	--	--	--	255	14	1	15	1,064
Davis	8	20	28	2.5	40	--	--	--	--	--	105	5.5	--	5.5	509
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	5	70	75	14.0	7	--	--	--	--	--	79	6.5	--	6.5	1,154
REGIONAL TOTALS	103	569	672	5.5	18	--	--	--	--	--	834	56	1	57	1,179
Central Region															
Juab	109	680	789	6.2	16	8	26	34	3.3	31	348	22	1	23	3,586
Salt Lake	43	87	130	2.0	49	--	--	--	--	--	390	31	--	31	419
Sanpete	272	845	1,117	3.1	32	--	--	--	--	--	654	77	--	77	1,451
Tooele	38	120	158	3.2	32	22	133	155	6.0	17	235	14	5	19	1,129
Utah	128	726	854	5.7	18	--	--	--	--	--	764	73	--	73	1,170
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	590	2,458	3,048	4.2	24	30	159	189	5.3	19	2,391	217	6	223	1,405
Southern Region															
Beaver	17	7	24	0.4	242	4	0	4	--	--	167	16	4	20	150
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	10	23	33	2.3	43	--	--	--	--	--	238	16	--	16	206
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	113	300	413	2.7	38	50	196	246	3.9	26	618	22	4	26	1,877
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	72	390	462	5.4	18	--	--	--	--	--	278	25	--	25	1,848
Washington	66	72	138	1.1	92	--	--	--	--	--	160	20	--	20	690
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	278	792	1,070	2.9	35	54	196	250	3.6	28	1,461	99	8	107	1,081
Northeastern Region															
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	147	330	447	2.2	45	41	91	132	2.2	45	595	44	0.5	44.5	1,072
Uintah	131	435	566	3.3	30	37	189	226	5.1	20	346	31	--	31	1,825
REGIONAL TOTALS	278	765	1,043	2.8	36	78	280	358	3.6	28	941	75	0.5	75.5	1,381
Southeastern Region															
Carbon	9	1	10	0.1	900	--	--	--	--	--	230	16.5	--	16.5	60
Emery	55	80	135	1.5	68	2	14	16	7.0	14	238	21.5	1.5	23.0	587
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	64	81	145	1.3	79	2	14	16	7.0	14	468	38.0	1.5	39.5	367
STATE TOTALS	1,313	4,665	5,978	3.6	28	164	649	813	4.0	25	6,095	485.0	17.0	502.0	1,191

Table 2. Trend in pheasant winter sex ratio counts, 1975-80.

Region and County	1975-76 Hens/ Cock	1975-76 Birds/ 100 Hr	1976-77 Hens/ Cock	1976-77 Birds/ 100 Hr	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	Averages 1970-79	
Northern Region												
Box Elder	4.4	1,954	2.6	738	2.1	700	5.2	2,138	6.4	1,400		
Cache	3.4	839	4.2	747	3.8	430	2.4	790	3.5	1,064		
Davis	11.7	3,817	6.5	1,464	7.3	631	5.6	1,712	2.5	509		
Morgan	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--		
Weber	4.5	1,326	6.7	1,283	7.8	469	8.6	9,938	14.0	1,154		
REGIONAL TOTALS	4.7	1,481	4.7	982	4.8	515	4.5	1,627	5.5	1,179	5.1	1,417
Central Region												
Juab	2.7	110	7.0	400	1.5	83	4.6	2,755	6.2	3,586		
Salt Lake	2.2	1,300	3.1	433	1.3	202	3.7	357	2.0	419		
Sanpete	5.3	2,018	7.4	891	6.5	762	3.0	2,305	3.1	1,451		
Tooele	3.8	569	1.7	616	3.0	868	3.5	1,294	3.2	1,129		
Utah	2.9	1,790	4.1	1,291	4.9	643	5.0	1,763	5.7	1,170		
Wasatch	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	3.1	1,574	4.3	924	4.6	596	3.9	1,480	4.2	1,405	4.9	1,517
Southern Region												
Beaver	1.4	277	8.0	300	3.0	514	--	--	0.4	150		
Garfield	--	--	--	--	--	--	--	--	--	--		
Iron	5.9	1,200	3.8	580	2.2	145	0.6	550	2.3	206		
Kane	--	--	--	--	--	--	--	--	--	--		
Millard	4.0	909	2.5	402	2.6	1,144	2.9	5,292	2.7	1,877		
Piute	--	--	--	--	--	--	--	--	--	--		
Sevier	5.3	1,024	2.5	567	4.0	354	4.0	1,368	5.4	1,848		
Washington	4.2	595	5.4	1,768	5.4	643	2.5	2,041	1.1	690		
Wayne	2.0	447	1.6	388	0.5	60	0.5	75	--	--		
REGIONAL TOTALS	3.9	712	3.5	653	3.3	474	2.8	2,278	2.9	1,081	4.4	1,010
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--		
Duchesne	2.6	664	1.6	1,830	2.6	1,477	2.1	3,060	2.2	1,072		
Uintah	2.6	1,065	2.5	1,760	3.4	2,581	3.0	3,117	3.3	1,825		
REGIONAL TOTALS	2.6	833	2.0	1,797	3.0	1,919	2.5	3,087	2.8	1,381	2.6	1,410
Southeastern Region												
Carbon	2.8	870	1.3	800	2.3	548	2.3	1,100	0.1	60		
Emery	1.6	214	2.0	1,571	2.2	642	1.5	906	1.5	587		
Grand	--	--	--	--	--	--	--	--	--	--		
San Juan	--	--	--	--	--	--	--	345	--	--		
REGIONAL TOTALS	1.9	287	1.8	1,240	2.2	524	1.6	911	1.3	367	2.5	827
STATE TOTALS	3.2	1,156	3.3	1,014	3.7	711	3.3	1,748	3.6	1,191	4.2	1,320

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	2	150	20	68	7	36	11	13	40	104	11	155	1.03	0.69	3.40	2.60	68
Cache	1	60	1	4	0	0	0	0	1	4	0	5	0.08	0.07	4.00	4.00	100
Davis	1	70	15*	77	5	12	3	13	32	89	3	124	1.77	1.27	5.13	2.78	63
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	1	78	16	70	14	49	9	0	30	119	9	158	2.03	1.53	4.37	3.97	100
REGIONAL TOTALS	5	358	52	219	26	97	23	26	103	316	23	442	1.23	0.88	4.21	3.07	76
Central Region																	
Juab	1	34	1	4	2	25	0	0	3	29	0	32	0.94	0.85	4.00	9.67	100
Salt Lake	1	91	6	20	6	9	9	5	17	29	9	55	0.60	0.32	3.33	1.70	71
Sanpete	2	170	42	228	7	65	19	10	59	293	19	371	2.18	1.72	5.43	4.97	83
Tooele	1	60	6	23	6	23	3	4	16	46	3	65	1.08	0.76	3.83	2.88	75
Utah	4	317	80	327	20	87	35	56	156	414	35	605	1.90	1.30	4.09	2.65	64
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	9	672	135	602	41	209	66	75	251	811	66	1,128	1.68	1.21	4.46	3.23	82
Southern Region																	
Beaver	1	120	4	29	1	15	5	2	7	44	5	56	0.47	0.37	7.25	6.29	71
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	1	67	6	36	0	0	2	1	7	36	2	45	0.67	0.53	6.00	5.14	86
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2	260	24	153	2	27	19	4	30	180	19	229	0.88	0.69	6.38	6.00	87
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	236	40	188	6	25	6	2	48	213	6	267	1.13	0.90	4.70	4.44	96
Washington	2	67	0	0	2	33	8	4	6	33	8	47	0.70	0.49	--	5.50	33
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	8	750	74	406	11	100	40	13	98	506	40	644	0.86	0.67	5.49	5.16	87
Northeastern Region																	
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	349	22	122	2	9	36	7	31	131	36	198	0.56	0.37	5.50	4.22	77
Uintah	2	197	53	173	13	59	8	6	72	232	8	312	1.60	1.20	3.30	3.22	92
REGIONAL TOTALS	5	546	75	295	15	68	44	13	103	363	44	510	0.93	0.66	3.90	3.52	87
Southeastern Region																	
Carbon	1	90	3	20	0	0	9	1	4	20	9	33	0.37	0.22	6.67	5.00	75
Emery	3	180	4	28	9	36	6	6	19	64	6	89	0.49	0.35	7.00	3.37	68
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	270	7	48	9	36	15	7	23	84	15	122	0.45	0.31	6.86	3.65	70
STATE TOTALS	31	2,596	343	1,570	102	510	188	134	578	2,840	188	2,840	1.10	0.80	4.58	3.60	77

*Includes one brood without hen.

Table 4. Trend of pheasants observed per mile during summer roadside counts, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1962-79
Northern Region												
Box Elder	0.57	1.75	1.10	0.38	0.87	0.21	0.46	0.60	0.78	0.41	1.03	
Cache	1.90	1.98	1.10	0.36	0.48	0.68	0.44	0.22	0.71	0.34	0.08	
Davis	0.70	2.75	1.77	--	0.32	1.55	0.54	1.67	1.59	1.47	1.77	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0.71	1.82	2.44	2.36	1.77	1.23	2.24	1.30	1.01	1.55	2.03	
REGIONAL TOTALS	1.20	2.04	1.45	1.04	0.80	0.71	0.86	0.85	0.96	0.76	1.23	1.32
Central Region												
Juab	1.20	0.32	0.64	0.23	0.46	0.82	1.20	0.54	0.09	0.13	0.94	
Salt Lake	0.88	1.74	1.29	0.44	0.48	0.54	0.55	0.29	0.09	0.64	0.60	
Sanpete	3.34	2.22	3.27	1.78	1.60	0.08	1.37	1.23	1.28	1.85	2.18	
Tooele	3.18	1.69	2.52	0.07	0.87	0.17	1.02	0.77	1.11	3.83	1.08	
Utah	1.84	2.31	2.02	1.36	1.29	0.64	1.45	0.98	1.96	4.14	1.90	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	1.97	2.00	2.06	0.98	1.11	0.62	1.16	0.93	1.40	2.83	1.68	1.91
Southern Region												
Beaver	0.96	0.69	0.75	0.60	0.60	0.07	0.69	0.49	0.71	1.01	0.47	
Garfield	0.36	0.03	--	--	--	--	--	--	--	--	--	
Iron	0.87	0.77	0.51	0.56	0.53	0.19	0.39	0.30	0.49	0.97	0.67	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	1.01	1.15	1.09	0.57	0.79	0.41	0.47	0.49	1.38	1.11	0.88	
Piute	0.53	0.35	--	--	--	--	--	--	--	--	--	
Sevier	1.99	4.13	2.37	1.03	0.89	0.40	0.72	0.88	1.72	1.10	1.13	
Washington	0.29	1.32	0.92	1.12	1.34	0.47	0.47	0.57	1.40	1.36	0.70	
Wayne	--	--	--	--	0.48	0.09	1.33	0.03	2.10	0.21	--	
REGIONAL TOTALS	0.92	1.48	1.19	0.79	0.78	0.28	0.58	0.57	1.29	1.08	0.86	1.13
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.45	0.32	0.27	0.31	0.33	0.33	0.34	0.39	0.68	0.38	0.56	
Uintah	0.66	0.82	0.74	0.61	1.33	0.54	1.45	1.15	1.75	1.90	1.60	
REGIONAL TOTALS	0.51	0.51	0.42	0.39	0.61	0.39	0.67	0.65	1.02	0.90	0.93	0.66
Southeastern Region												
Carbon	0.20	0.05	0.15	0.01	0.00	0.02	0.39	0.23	0.22	0.40	0.37	
Emery	0.83	0.55	1.32	0.64	1.06	0.88	0.47	0.61	0.53	0.39	0.49	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	5.00	3.57	0.93	0.93	0.00	0.35	--	
REGIONAL TOTALS	0.57	0.31	0.76	0.34	0.64	0.60	0.44	0.44	0.35	0.38	0.45	0.73
STATE TOTALS	1.18	1.40	1.33	0.74	0.83	0.49	0.78	0.71	1.02	1.37	1.10	1.24

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1962-79
Northern Region												
Box Elder	0.35	1.32	0.76	0.28	0.62	0.13	0.31	0.41	0.55	0.03	0.69	
Cache	1.39	1.62	0.81	0.32	0.35	0.43	0.30	0.17	0.47	0.20	0.07	
Davis	0.54	2.25	1.28	--	0.22	0.84	0.54	1.17	1.26	0.99	1.27	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0.58	1.35	1.74	1.72	1.31	0.77	1.47	0.84	0.62	1.22	1.53	
REGIONAL TOTALS	0.86	1.62	1.04	0.77	0.59	0.43	0.58	0.58	0.68	0.55	0.88	0.97
Central Region												
Juab	0.95	0.18	0.50	0.17	0.38	0.71	1.06	0.46	0.76	0.02	0.85	
Salt Lake	0.61	1.31	1.04	0.32	0.32	0.35	0.37	0.21	0.07	0.44	0.32	
Sanpete	2.54	1.74	2.64	1.43	1.26	0.56	1.12	0.98	1.06	1.53	1.72	
Tooele	2.74	1.41	2.09	0.00	0.62	0.07	0.69	0.45	0.72	2.95	0.76	
Utah	1.30	1.68	1.35	1.02	0.95	0.33	0.99	0.60	1.43	3.00	1.30	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	1.46	1.50	1.53	0.73	0.83	0.38	0.84	0.63	1.06	2.11	1.21	1.46
Southern Region												
Beaver	0.64	0.48	0.57	0.39	0.47	0.03	0.54	0.33	0.58	0.87	0.37	
Garfield	0.19	0.00	--	--	--	--	--	--	--	--	--	
Iron	0.55	0.62	0.39	0.51	0.46	0.08	0.31	0.17	0.38	0.74	0.53	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.84	0.90	0.87	0.48	0.57	0.27	0.34	0.34	1.12	0.89	0.69	
Piute	0.31	0.25	--	--	--	--	--	--	--	--	--	
Sevier	1.58	3.21	1.93	0.85	0.70	0.28	0.56	0.70	1.45	0.93	0.90	
Washington	0.17	0.95	0.65	0.72	1.03	0.26	0.35	0.37	1.08	1.02	0.49	
Wayne	--	--	--	--	0.14	0.02	0.87	0.00	1.76	0.15	--	
REGIONAL TOTALS	0.69	1.14	0.95	0.61	0.59	0.17	0.44	0.41	1.05	0.87	0.67	0.87
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.27	0.21	0.15	0.18	0.21	0.23	0.21	0.25	0.53	0.27	0.37	
Uintah	0.40	0.55	0.55	0.47	1.08	0.27	1.07	0.79	1.41	1.50	1.20	
REGIONAL TOTALS	0.31	0.34	0.28	0.26	0.45	0.24	0.47	0.44	0.81	0.69	0.66	0.48
Southeastern Region												
Carbon	0.17	0.03	0.10	--	0.00	0.00	0.22	0.03	0.15	0.30	0.22	
Emery	0.56	0.30	0.96	0.47	0.81	0.57	0.20	0.33	0.35	0.28	0.35	
Grand	--	--	0.67	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	4.07	2.43	0.47	0.40	--	0.00	--	
REGIONAL TOTALS	0.39	0.17	0.54	0.25	0.50	0.39	0.22	0.18	0.24	0.26	0.31	0.51
STATE TOTALS	0.86	1.06	0.99	0.55	0.62	0.30	0.55	0.47	0.78	1.04	0.80	0.94

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1962-79
Northern Region												
Box Elder	2.19	4.02	3.26	3.23	3.19	2.44	4.18	3.68	3.64	3.92	2.60	
Cache	3.65	6.64	3.88	10.00	3.00	2.69	4.50	4.00	2.80	2.40	4.00	
Davis	4.00	5.45	3.42	--	3.00	1.53	3.75	3.18	4.71	2.30	2.78	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	4.22	3.40	3.49	3.72	3.66	2.07	2.35	2.12	1.81	4.13	3.97	
REGIONAL TOTALS	3.32	5.02	3.50	3.82	3.35	2.10	2.91	2.88	3.10	3.14	3.07	3.67
Central Region												
Juab	4.22	2.33	4.50	4.00	5.00	6.00	7.40	8.00	5.60	1.00	9.67	
Salt Lake	2.96	4.08	4.74	3.24	2.87	2.39	3.50	5.33	6.00	3.27	1.70	
Sanpete	4.02	4.73	5.52	5.33	4.45	2.67	5.22	5.09	6.03	5.91	4.97	
Tooele	6.78	5.95	5.95	0.00	3.36	1.33	3.06	1.93	2.69	3.93	2.88	
Utah	3.69	3.28	2.71	3.33	3.58	1.62	3.32	2.53	3.42	3.20	2.65	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.94	3.86	3.78	3.46	3.77	2.16	3.85	3.19	3.88	3.59	3.23	3.99
Southern Region												
Beaver	5.33	3.27	5.38	2.78	5.83	0.86	6.14	3.33	4.72	6.00	6.29	
Garfield	2.00	--	--	--	--	--	--	--	--	--	--	
Iron	2.53	4.43	4.54	13.67	9.50	0.86	5.50	6.00	5.00	4.25	5.14	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	5.89	4.62	5.65	5.75	2.91	2.52	3.67	3.57	6.05	5.52	6.00	
Piute	1.75	5.00	--	--	--	--	--	--	--	--	--	
Sevier	4.30	4.34	4.94	5.18	3.80	3.06	4.79	4.90	6.67	5.96	4.44	
Washington	1.50	3.45	3.50	2.62	3.89	1.94	5.83	2.47	4.52	4.95	5.50	
Wayne	--	--	--	--	0.54	0.25	2.60	--	7.57	5.00	--	
REGIONAL TOTALS	3.92	4.19	4.98	4.41	3.73	1.93	4.36	3.88	5.85	5.44	5.16	4.40
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	2.51	3.50	3.00	4.06	3.71	3.73	4.06	3.41	5.11	5.82	4.22	
Uintah	2.62	3.08	4.84	5.64	5.43	1.78	4.48	3.06	5.63	5.25	3.22	
REGIONAL TOTALS	2.56	3.23	3.92	4.70	4.69	2.73	4.34	3.18	5.39	5.39	3.52	4.29
Southeastern Region												
Carbon	5.00	5.00	4.33	--	--	0.00	2.05	0.42	3.00	4.80	5.00	
Emery	3.55	2.25	3.34	4.70	7.46	3.96	1.46	2.36	2.61	4.29	3.37	
Grand	--	--	2.22	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	7.62	2.55	1.75	1.20	0.00	0.00	--	
REGIONAL TOTALS	3.74	2.36	3.20	4.70	7.52	3.28	1.74	1.62	2.70	3.00	3.65	4.00
STATE TOTALS	3.68	4.09	3.93	3.95	3.95	2.28	3.56	3.11	4.32	4.05	3.60	4.01

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1970-1980.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1963-79
Northern Region												
Box Elder	59	75	69	62	78	78	73	79	80	62	68	
Cache	66	86	78	50	68	66	80	100	60	60	100	
Davis	82	87	85	--	100	97	75	58	88	80	63	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	100	77	54	82	69	34	58	44	39	70	100	
REGIONAL TOTALS	68	82	70	77	74	68	64	58	64	71	76	72
Central Region												
Juab	100	67	100	100	100	100	100	100	100	--	100	
Salt Lake	62	66	78	71	52	45	59	100	100	64	71	
Sanpete	78	95	91	93	88	64	90	85	90	100	83	
Tooele	100	84	74	0	64	33	78	57	69	96	75	
Utah	60	69	57	62	58	42	66	61	69	57	64	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	71	74	69	66	68	49	73	67	74	66	82	72
Southern Region												
Beaver	100	82	88	64	83	14	86	56	73	77	71	
Garfield	50	--	--	--	--	--	--	--	--	--	--	
Iron	59	62	54	100	80	14	100	100	86	83	86	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	94	81	88	100	50	48	81	68	85	88	87	
Piute	50	100	--	--	--	--	--	--	--	--	--	
Sevier	88	85	90	85	83	59	92	90	97	96	96	
Washington	67	74	62	66	78	31	50	73	87	95	33	
Wayne	--	--	--	--	8	50	40	--	100	100	--	
REGIONAL TOTALS	77	80	83	79	64	42	78	76	89	90	87	78
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	44	68	68	81	76	59	88	81	83	88	77	
Uintah	42	55	84	91	100	48	94	61	95	87	92	
REGIONAL TOTALS	43	60	76	85	90	53	91	68	90	88	87	77
Southeastern Region												
Carbon	75	100	67	--	--	0	59	17	44	100	75	
Emery	70	42	66	76	77	65	29	55	48	43	68	
Grand	--	--	56	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	100	55	50	60	0	0	--	
REGIONAL TOTALS	71	44	64	76	86	60	44	44	48	56	70	66
STATE TOTALS	69	75	72	74	71	54	71	65	76	73	77	73

Table 8. Trend of average brood size for pheasants, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1962-79
Northern Region												
Box Elder	3.68	4.96	4.81	4.75	4.17	3.14	5.75	4.67	5.71	6.38	3.40	
Cache	7.12	8.34	5.47	5.00	4.38	4.67	5.83	4.00	4.60	3.50	4.00	
Davis	5.14	6.52	4.50	--	3.50	2.75	4.33	5.73	4.79	4.00	5.13	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	3.43	4.80	6.07	6.55	7.27	5.78	5.05	6.57	4.80	6.00	4.37	
REGIONAL TOTALS	5.28	6.33	5.13	6.00	4.84	4.26	5.19	5.29	5.00	5.22	4.21	5.00
Central Region												
Juab	4.22	7.00	4.50	--	5.00	9.00	7.33	8.00	5.60	--	4.00	
Salt Lake	4.95	5.76	6.93	4.58	5.00	5.73	6.09	5.33	6.00	5.13	3.33	
Sanpete	5.52	4.94	6.11	5.92	4.59	4.72	5.88	4.92	6.56	5.98	5.43	
Tooele	6.78	6.81	8.07	--	6.50	4.00	4.38	3.33	4.57	8.93	3.83	
Utah	5.13	5.89	5.31	5.78	6.24	4.12	4.86	4.56	4.91	5.45	4.09	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.41	5.70	5.92	5.60	5.46	4.73	5.35	4.70	5.29	5.81	4.46	5.46
Southern Region												
Beaver	--	5.75	6.17	4.33	8.00	6.00	7.75	6.00	6.50	7.10	7.25	
Garfield	3.00	--	--	--	--	--	--	--	--	--	--	
Iron	4.50	7.17	5.67	6.00	9.50	6.00	5.25	6.00	5.00	4.25	6.00	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	6.24	4.44	5.31	5.50	6.20	5.73	6.93	5.23	6.88	6.31	6.38	
Piute	3.50	5.00	--	--	--	--	--	--	--	--	--	
Sevier	5.00	5.24	5.67	6.14	4.82	4.25	5.17	6.17	6.40	5.94	4.70	
Washington	--	5.25	6.33	4.33	4.42	5.80	8.00	3.57	6.33	5.00	--	
Wayne	--	--	--	--	7.00	--	7.00	--	10.25	5.00	--	
REGIONAL TOTALS	5.30	5.13	5.60	5.38	5.83	5.31	6.37	5.45	6.71	5.96	5.49	5.59
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	4.82	6.50	4.45	5.64	5.43	6.40	4.64	4.55	6.54	6.60	5.50	
Uintah	6.14	6.05	5.75	6.28	5.21	4.22	5.00	5.00	5.75	5.56	3.30	
REGIONAL TOTALS	5.33	6.21	5.13	5.89	5.29	5.37	4.85	4.80	6.12	5.93	3.90	5.66
Southeastern Region												
Carbon	4.00	5.00	6.50	--	--	--	3.00	2.50	6.75	3.33	6.67	
Emery	5.64	6.00	5.08	6.22	6.67	5.00	4.86	4.33	5.27	6.00	7.00	
Grand	--	--	4.00	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	6.12	--	3.50	4.00	--	--	--	
REGIONAL TOTALS	5.29	5.89	5.00	6.22	6.36	5.00	4.40	4.07	5.67	5.00	6.86	5.64
STATE TOTALS	5.36	5.73	5.62	5.65	5.46	4.80	5.37	4.94	5.69	5.79	4.58	5.46

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	643	25,467	28,216	1.11	10.20	12.35
Cache	425	18,748	18,138	0.97	7.51	7.94
Davis	577	26,757	17,374	0.65	10.71	7.61
Morgan	22	814	458	0.56	0.33	0.20
Rich	0	0	0	0.00	0.00	0.00
Summit	0	0	0	0.00	0.00	0.00
Weber	602	29,760	22,905	0.77	11.91	10.03
REGIONAL TOTALS	2,269	101,546	87,091	0.86	40.66	38.13
Central Region						
Juab	127	3,987	3,987	1.00	1.60	1.75
Salt Lake	497	20,496	14,371	0.70	8.21	6.29
Sanpete	356	13,913	16,390	1.18	5.57	7.17
Tooele	143	4,717	3,461	0.73	1.89	1.52
Utah	1,068	44,063	40,330	0.92	17.64	17.65
Wasatch	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	2,191	87,176	78,539	0.90	34.91	34.38
Southern Region						
Beaver	35	1,357	1,171	0.86	0.54	0.51
Garfield	7	221	153	0.69	0.09	0.07
Iron	56	2,426	2,019	0.83	0.97	0.88
Kane	0	0	0	0.00	0.00	0.00
Millard	264	10,587	13,166	1.24	4.24	5.76
Piute	15	577	509	0.88	0.23	0.22
Sevier	263	11,419	11,521	1.01	4.57	5.04
Washington	66	3,105	1,968	0.63	1.24	0.86
Wayne	4	119	170	1.43	0.05	0.07
REGIONAL TOTALS	710	29,811	30,676	1.03	11.93	13.43
Northeastern Region						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	218	9,451	10,706	1.13	3.78	4.69
Uintah	224	10,486	11,419	1.09	4.20	5.00
REGIONAL TOTALS	442	19,937	22,125	1.11	7.98	9.69
Southeastern Region						
Carbon	90	3,919	3,665	0.94	1.57	1.60
Emery	143	6,668	5,701	0.85	2.67	2.50
Grand	4	102	34	0.33	0.04	0.01
San Juan	4	119	34	0.29	0.05	0.01
REGIONAL TOTALS	241	10,808	9,434	0.87	4.38	4.13
Unknown counties	14	492	577	1.17	0.19	0.24
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	5,867	249,770	228,442	0.91	100	100

*Total hunter trips from questionnaire returns.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1973-80.

Region and County	Year							
	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	0.85	0.69	0.83	0.76	0.96	1.01	0.94	1.11
Cache	0.87	0.70	0.79	0.82	0.88	0.99	0.81	0.97
Davis	0.50	0.47	0.52	0.54	0.68	0.69	0.63	0.65
Morgan	0.63	0.30	0.24	0.87	0.73	0.78	0.60	0.56
Rich	0.00	1.00	0.56	0.00	0.33	1.86	0.00	0.00
Summit	0.33	0.69	0.50	0.00	0.00	0.40	0.00	0.00
Weber	0.63	0.52	0.59	0.66	0.76	0.70	0.71	0.77
REGIONAL TOTALS	0.72	0.59	0.66	0.68	0.81	0.83	0.77	0.86
Central Region								
Juab	0.43	0.39	0.38	0.59	0.68	0.79	0.87	1.00
Salt Lake	0.61	0.44	0.47	0.56	0.60	0.72	0.62	0.70
Sanpete	0.81	0.89	0.80	0.78	0.79	0.91	1.07	1.18
Tooele	0.48	0.37	0.47	0.71	0.55	0.81	0.58	0.73
Utah	0.67	0.61	0.58	0.73	0.78	0.83	0.82	0.92
Wasatch	0.00	0.00	0.22	0.54	0.50	2.00	0.00	0.00
REGIONAL TOTALS	0.65	0.56	0.56	0.68	0.71	0.81	0.79	0.90
Southern Region								
Beaver	0.53	0.58	0.58	0.70	0.74	0.97	0.56	0.86
Garfield	0.88	0.44	0.21	0.27	0.88	0.97	0.48	0.69
Iron	0.45	0.55	0.43	0.38	0.59	0.83	0.66	0.83
Kane	--	--	0.33	1.00	0.00	0.00	0.00	0.00
Millard	0.86	0.65	0.73	0.71	0.79	1.06	1.04	1.24
Piute	0.77	0.88	0.40	0.73	0.56	0.97	0.95	0.88
Sevier	0.73	0.70	0.56	0.73	0.76	0.82	1.01	1.01
Washington	0.36	0.38	0.39	0.97	0.46	0.70	0.60	0.63
Wayne	1.57	1.09	0.00	0.71	0.40	1.00	1.17	1.43
REGIONAL TOTALS	0.70	0.63	0.58	0.72	0.72	0.91	0.93	1.03
Northeastern Region								
Daggett	0.50	0.50	2.25	1.40	0.00	1.00	0.00	0.00
Duchesne	1.15	0.83	0.76	1.08	1.09	1.41	1.13	1.13
Uintah	0.92	0.70	0.74	1.12	1.11	1.05	0.95	1.09
REGIONAL TOTALS	1.03	0.76	0.76	1.10	1.10	1.20	1.03	1.11
Southeastern Region								
Carbon	0.52	0.25	0.34	0.54	0.50	0.86	0.66	0.94
Emery	0.60	0.46	0.53	0.67	0.55	0.65	0.71	0.85
Grand	0.30	0.00	0.31	0.42	0.75	0.73	0.45	0.33
San Juan	1.08	0.94	0.31	0.56	0.33	0.57	0.33	0.29
REGIONAL TOTALS	0.57	0.42	0.46	0.61	0.54	0.72	0.68	0.87
Unknown Counties	0.75	0.63	0.83	0.74	0.70	0.85	0.84	1.17
Mixed Counties	0.75	1.95	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.70	0.59	0.61	0.71	0.78	0.86	0.81	0.91

Table 11. Percentage distribution of pheasant harvest by region and county, 1973-80.

Region and County	Year							
	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	12.86	11.64	13.05	10.10	11.45	11.06	12.04	12.35
Cache	11.31	11.76	8.75	9.13	8.28	8.55	6.93	7.94
Davis	5.70	8.27	8.73	7.99	8.97	8.47	8.15	7.61
Morgan	0.38	0.24	0.09	0.27	0.24	0.25	0.35	0.20
Rich	0.00	0.05	0.06	0.00	0.01	0.24	0.00	0.00
Summit	0.04	0.10	0.01	0.00	0.00	0.04	0.00	0.00
Weber	8.31	10.26	13.21	13.40	12.17	10.11	10.84	10.03
REGIONAL TOTALS	38.60	42.31	43.91	40.89	41.12	38.71	38.31	38.13
Central Region								
Juab	0.87	0.96	0.69	1.25	1.03	1.24	1.61	1.75
Salt Lake	7.80	8.12	8.73	7.65	7.51	8.19	7.14	6.29
Sanpete	6.88	6.56	6.03	5.59	4.68	4.44	6.87	7.17
Tooele	1.87	1.72	1.80	3.00	1.77	2.22	1.70	1.52
Utah	15.84	14.27	14.70	14.35	17.08	18.83	17.67	17.65
Wasatch	0.00	0.00	0.02	0.09	0.01	0.07	0.00	0.00
REGIONAL TOTALS	33.26	31.65	31.97	31.94	32.08	35.00	34.99	34.38
Southern Region								
Beaver	0.82	0.64	0.34	1.23	0.65	0.51	0.28	0.51
Garfield	0.07	0.05	0.05	0.04	0.07	0.26	0.09	0.07
Iron	1.06	0.77	0.98	0.55	0.48	0.92	0.52	0.88
Kane	--	--	0.03	0.01	0.00	0.00	0.00	0.00
Millard	6.01	5.32	5.23	3.71	4.02	4.69	5.46	5.76
Piute	0.35	0.17	0.07	0.25	0.10	0.30	0.13	0.22
Sevier	4.06	5.39	4.62	4.47	4.24	3.99	5.72	5.04
Washington	0.74	0.89	1.06	2.28	0.73	0.78	0.99	0.86
Wayne	0.32	0.14	0.00	0.13	0.04	0.09	0.14	0.07
REGIONAL TOTALS	13.42	13.36	12.38	12.68	10.34	11.53	13.33	13.43
Northeastern Region								
Daggett	0.02	0.02	0.10	0.09	0.00	0.07	0.00	0.00
Duchesne	4.45	3.97	2.86	4.00	5.85	5.61	5.25	4.69
Uintah	4.24	4.24	4.24	4.39	5.27	5.63	5.24	5.00
REGIONAL TOTALS	8.71	8.24	8.24	8.49	11.12	11.31	10.49	9.69
Southeastern Region								
Carbon	1.51	0.36	0.87	0.95	0.79	1.04	0.85	1.60
Emery	2.32	1.86	2.69	2.34	1.80	1.43	1.66	2.50
Grand	0.03	0.00	0.05	0.11	0.06	0.10	0.03	0.01
San Juan	0.13	0.17	0.05	0.07	0.02	0.04	0.03	0.01
REGIONAL TOTALS	3.99	2.39	3.65	3.46	2.68	2.61	2.57	4.13
Unknown Counties	1.99	1.59	1.04	2.55	2.68	0.84	0.31	0.24
Mixed Counties	0.03	0.47	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 12. Percentage distribution of pheasant hunting pressure by county hunted, 1973-80.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	10.71	9.95	9.61	9.39	9.22	9.37	10.37	10.20
Cache	9.21	9.92	6.75	7.90	7.25	7.42	6.95	7.51
Davis	8.05	10.34	10.24	10.54	10.24	10.52	10.48	10.71
Morgan	0.42	0.46	0.23	0.22	0.26	0.28	0.48	0.33
Rich	0.01	0.03	0.06	0.02	0.02	0.11	0.00	0.00
Summit	0.08	0.09	0.01	0.01	0.01	0.08	0.00	0.00
Weber	9.24	11.64	13.70	14.28	12.35	12.30	12.42	11.91
REGIONAL TOTALS	37.72	42.43	40.60	42.35	39.35	40.07	40.70	40.66
Central Region								
Juab	1.44	1.48	1.12	1.49	1.17	1.35	1.50	1.60
Salt Lake	8.99	11.06	11.37	9.70	9.70	9.71	9.40	8.21
Sanpete	6.00	4.39	4.62	5.08	4.60	4.18	5.23	5.57
Tooele	2.72	2.74	2.33	2.98	2.50	2.34	2.38	1.89
Utah	16.68	13.87	15.42	13.95	16.95	19.43	17.48	17.64
Wasatch	0.03	0.01	0.06	0.12	0.02	0.03	0.00	0.00
REGIONAL TOTALS	35.85	33.54	34.92	33.32	34.93	37.03	35.99	34.91
Southern Region								
Beaver	1.10	0.65	0.36	1.25	0.68	0.45	0.40	0.54
Garfield	0.05	0.06	0.13	0.10	0.06	0.23	0.15	0.09
Iron	1.66	0.83	1.40	1.01	0.62	0.95	0.65	0.97
Kane	--	--	0.06	0.01	0.00	0.00	0.00	0.00
Millard	4.95	4.89	4.42	3.67	3.95	3.80	4.29	4.24
Piute	0.32	0.11	0.10	0.25	0.14	0.26	0.11	0.23
Sevier	3.93	4.55	5.04	4.35	4.31	4.15	4.62	4.57
Washington	1.44	1.39	1.65	1.66	1.24	0.96	1.33	1.24
Wayne	0.14	0.07	0.01	0.13	0.08	0.08	0.10	0.05
REGIONAL TOTALS	13.59	12.55	13.18	12.44	11.08	10.89	11.65	11.93
Northeastern Region								
Daggett	0.03	0.03	0.03	0.05	0.00	0.06	0.00	0.00
Duchesne	2.72	2.83	2.29	2.63	4.15	3.41	3.79	3.78
Uintah	3.23	3.58	3.38	2.78	3.67	4.58	4.48	4.20
REGIONAL TOTALS	5.98	6.43	5.70	5.45	7.82	8.05	8.28	7.98
Southeastern Region								
Carbon	2.05	0.85	1.56	1.25	1.22	1.03	1.05	1.57
Emery	2.73	2.40	3.09	2.47	2.52	1.90	1.91	2.67
Grand	0.07	0.03	0.09	0.18	0.06	0.12	0.06	0.04
San Juan	0.08	0.11	0.09	0.09	0.05	0.05	0.07	0.05
REGIONAL TOTALS	4.93	3.40	4.82	3.99	3.86	3.10	3.09	4.33
Unknown Counties	1.88	1.50	0.77	2.45	2.95	0.84	0.32	0.19
Mixed Counties	0.03	0.14	0.00	0.00	0.01	0.01	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 13. Statewide summary of pheasant harvest statistics, 1948-1980.

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
TOTALS (1948-80)	2,749,571	7,749,138	7,178,863	1.08	2.82
AVERAGES (1948-79)	83,272	235,022	223,519	1.05	2.82

Table 14. Pheasant field bag check summary, 1980.

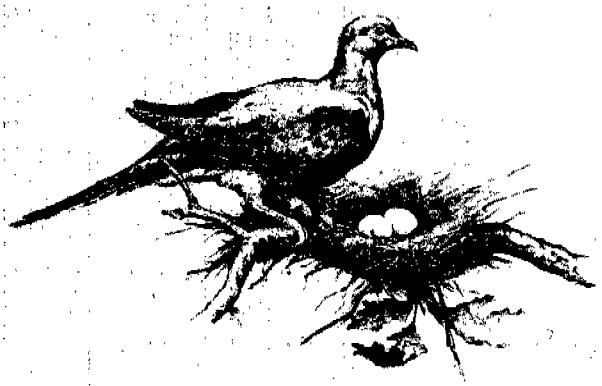
Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder											
Cache											
Davis											
Morgan					N O D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
Central Region											
Juab	25	73	117	29	25	4	9	18	4	22	0.44
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	122	391	992	208	21	20	61	311	58	19	0.95
Tooele	31	69	135	46	34	2	3	5	6	120	2.00
Utah	233	594	1,289	310	24	89	201	585	160	27	0.80
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	411	1,127	2,533	593	23	115	274	919	228	25	0.83
Southern Region											
Beaver	27	79	155	40	26	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	24	66	241	47	20	2	4	12	3	25	0.75
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	232	696	2,174	448	21	54	134	435	120	28	0.90
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	118	347	1,088	224	21	28	81	323	95	29	1.17
Washington	21	47	101	13	13	5	11	28	7	25	0.64
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	422	1,235	3,759	772	21	89	230	798	225	28	0.98
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	214	597	3,316	630	19	177	452	2,966	545	18	1.21
Uintah	82	196	755	146	19	63	176	563	107	19	0.61
REGIONAL TOTALS	296	793	4,071	776	19	240	628	3,529	652	19	1.04
Southeastern Region											
Carbon	30	87	239	31	13	7	17	44	8	18	0.47
Emery	60	165	456	88	19	20	65	244	54	22	0.83
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	2	3	7	0	--	1	1	2	0	--	0.00
REGIONAL TOTALS	92	255	702	119	17	28	83	290	62	21	0.75
STATE TOTALS											

Table 15. Pheasant hunter success trend as determined by field bag check, 1975-80.

Region and County	1975 Birds/ 100 Hr	1975 Birds/ Hunter	1976 Birds/ 100 Hr	1976 Birds/ Hunter	1977 Birds/ 100 Hr	1977 Birds/ Hunter	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter
Northern Region												
Box Elder	18	0.52	24	0.74	18	0.54	24	0.62	27	0.68		
Cache	15	0.61	13	0.46	17	0.63	17	0.62	--	--		
Davis	8	0.28	14	0.51	9	0.25	19	0.54	19	0.75	NO	
Morgan	--	--	--	--	--	--	--	--	--	--	DATA	
Rich	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--		
Weber	8	0.38	10	0.35	13	0.75	16	1.25	--	--		
REGIONAL TOTALS	12	0.48	17	0.60	16	0.51	21	0.61	25	0.69		
Central Region												
Juab	16	0.28	7	0.11	27	0.67	82	0.75	24	0.61	22	0.44
Salt Lake	15	0.47	11	0.12	4	0.07	3	0.05	0	0.00	--	--
Sanpete	14	0.73	15	1.09	27	0.73	17	0.71	55	1.40	19	0.95
Tooele	13	0.34	27	0.53*	67	2.00	167	2.00	160	2.00	120	2.00
Utah	11	0.42	14	1.05	25	0.66	27	0.80	34	0.91	27	0.80
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	0.58	15	0.89	23	0.59	24	0.73	38	0.99	25	0.83
Southern Region												
Beaver	14	0.56	14	0.16*	43	0.67	12	0.33	24	0.95	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	39	0.37	--	--	17	0.67	43	1.25	37	1.13	25	0.75
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	12	0.70	13	0.44	10	0.37	19	0.62	21	0.83	28	0.90
Piute	--	--	--	--	--	--	25	0.50	--	--	--	--
Sevier	15	0.66	17	0.63	20	1.00	23	1.04	31	0.99	29	1.17
Washington	15	0.29	21	0.33	12	0.29	32	0.59	60	1.00	25	0.64
Wayne	--	--	17	0.35*	--	--	--	--	--	--	--	--
REGIONAL TOTALS	14	0.65	15	0.50	13	0.50	21	0.75	23	0.87	28	0.98
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	12	0.89	15	1.41	16	1.14	18	1.37	15	0.97	18	1.21
Uintah	13	0.71	18	1.27	15	1.01	20	1.48	19	0.26	19	0.61
REGIONAL TOTALS	12	0.81	16	1.34	16	1.10	19	1.41	17	1.07	19	1.04
Southeastern Region												
Carbon	14	0.54	9	0.24	11	0.25	18	0.41	27	0.74	18	0.47
Emery	10	0.41	18	0.44	21	0.75	10	0.72	29	0.83	22	0.83
Grand	--	--	19	1.00	--	--	--	--	--	--	--	--
San Juan	11	0.38	8	0.23	0	0.00	40	1.00	0	0.00	--	0.00
REGIONAL TOTALS	12	0.47	16	0.42	18	0.58	12	0.58	28	0.79	21	0.75
STATE TOTALS	13	0.63	16	0.85	16	0.66	20	0.88	22	0.89		

MIGRATORY UPLAND GAME BIRDS

SUMMARY



Mourning Doves

The breeding density index increased significantly in 1980 but was still below average.

Harvest statistics derived from the questionnaire showed decreased hunter pressure and harvest compared to 1979. The total harvest was the fourth highest ever recorded and was 13 percent above the 1970-79 average. Hunter success increased 21 percent.

Field bag checks indicated a slight increase in hunter success as did the questionnaire survey. The 1980 hunt was very good and comparable to the 1979 hunt.

Considerably fewer wings were collected for aging during 1980 than in 1979. Aging of wings indicated juvenile per 100 adult ratio increased to 111 compared to 91 in 1979, and the 14-year average of 121.

Band-tailed Pigeons

No band-tailed pigeons were banded in Utah in 1980. 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 during the 1980 season remained at a low level with only 62 hunters afield. Total hunter-days and harvest increased from 1979 and the average. Total harvest was 182 pigeons, compared to 117 in 1979.

MOURNING DOVE

Call Count Survey

Results of the 1980 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 1980 survey to 1979 and the average for the period 1964-1979:

	1980	Percent change from 1979	Percent change from Average
Total doves heard per route	11.7	+65	-18
Total calls heard per route	49.6	+77	-17
Total doves seen per route	8.1	+40	-45

Coo count data indicated increased breeding activity in late May compared to 1979, but continued to be below the long-term average.

Harvest

Hunter Questionnaire

Information obtained from the hunter questionnaire for 1980 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 1980 compared to 1979 and the 10-year (1970-79) average:

	1980	Percent change from 1979	Percent change from Average
Mourning dove hunters	32,627	-7	+6
Mourning dove harvest	343,851	-2	+13
Hunter-days afield	97,644	-19	-6
Mourning doves per hunter-day	3.52	+21	+20
Mourning doves hunter	10.54	+5	+7

Hunting pressure and harvest decreased from 1979 but remained above average. Hunter success, however, increased slightly. The harvest was fourth highest on record, which indicated a very good hunt.

Long-term harvest trends are depicted in Figure 2.

Field Bag Checks

A summary of field bag check data for 1980 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1980 survey compared to 1979 and the average (1967-79) follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked	3,842	-13	+128
Total hours hunted	15,125	-10	+172
Doves per hunter (complete hunts)	2.94	+3	-16
Doves bagged per 100 hours	75	+7	-21
Average hours per hunter-day (complete hunts)	4.6	+12	+28
Hours hunted per dove bagged	1.3	-7	+18

Field bag checks indicated a 3 percent increase in hunter success. This corresponds with the questionnaire results which also indicate an increase in hunter success. The total number of hunters checked was down 13 percent from 1979. Dove hunters spent a greater amount of time afield per hunter-day than in 1979, but less 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 1971 through 1980 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region are shown in Table 11.

Following is a comparison of data collected in 1980 to 1979 and long-term averages (1966-79):

	1980	Percent change from 1979	Percent change from Average
Sample size	3,881	-27	+21
Immatures/100 adults	111	+22	-8
Percent of immatures hatched on:			
August 3 or later	35.6	-22	-9
July 25 or later	78.9	-4	-1
Before July 25	21.1	+21	+6

Fewer wings were collected for aging during the 1980 season compared to 1979 and 1978. The 111 immatures per 100 adults ratio indicated a better hatch than 1979 but was about average. Wing analysis substantiated earlier hatching for 1980 compared with 1979.

Banding

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

A summary of banding accomplished by county and region through 1975 is contained in Table 12.

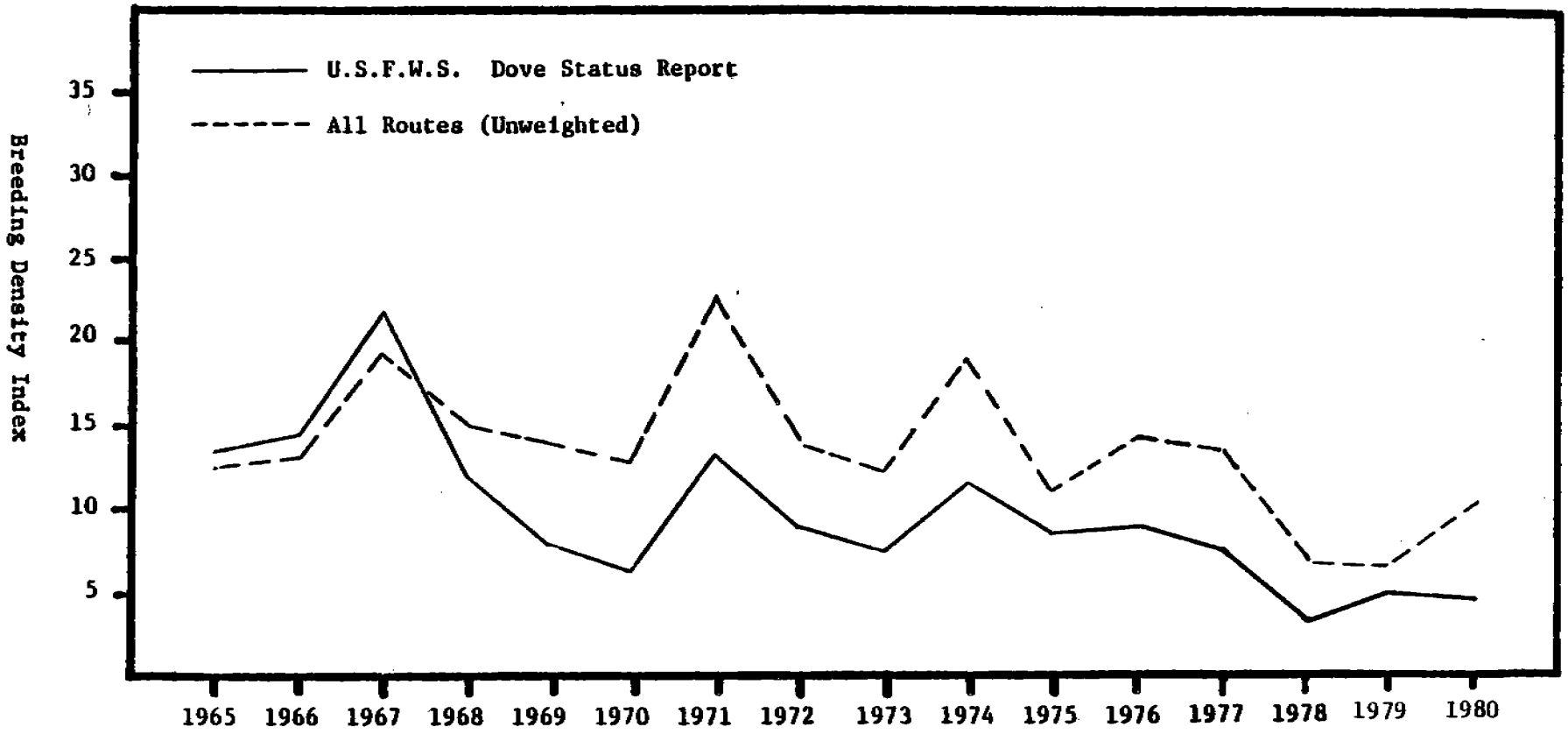


Figure 1. Mourning dove breeding density index trend, 1965-80

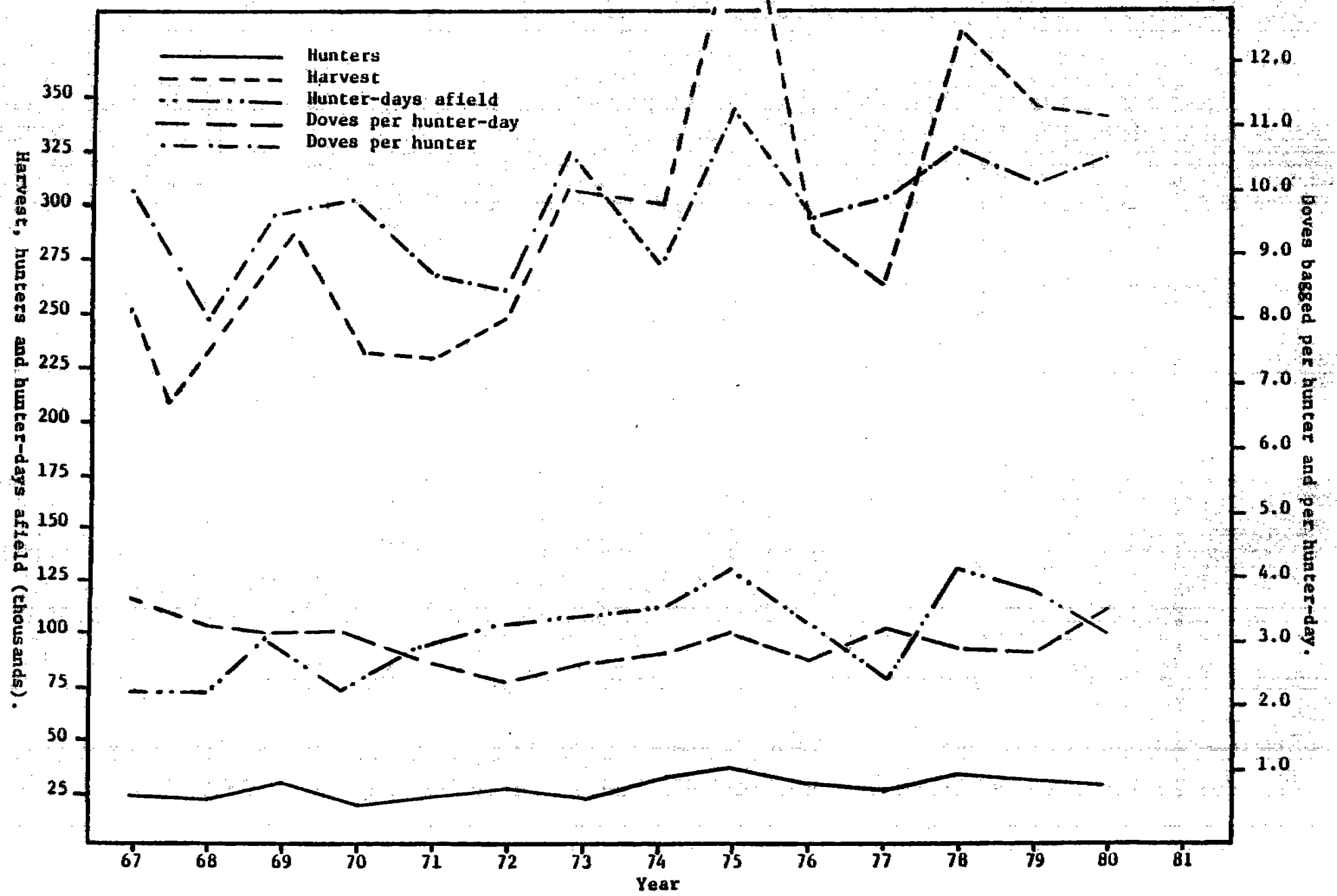


Figure 2. Statewide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call count survey for 1980.

Region and County	Route Number	Total Doves Heard Per Route	Total Calls Heard Per Route	Total Doves Seen Per Route
Northern Region				
Summit	R1020	5	14	4
Box Elder	R1500	4	20	17
REGIONAL TOTALS		9	34	21
Central Region				
Juab	R2830	31	124	5
REGIONAL TOTALS		31	124	5
Southern Region				
Sevier-Sanpete	R0370	3	12	0
Wayne-Sevier	R0660	5	17	7
Garfield	R1090	0	0	1
Millard	R3640	2	8	6
Beaver	R3820	9	39	8
Iron	R4000	40	266	7
Washington	R4310	3	7	14
REGIONAL TOTALS		62	349	43
Northeastern Region				
Duchesne	R0080	1	1	1
Uintah	R0220	49	143	12
REGIONAL TOTALS		50	144	13
Southeastern Region				
Emery	R0540	7	46	4
San Juan	R1170	14	32	35
San Juan	R1450	3	15	0
REGIONAL TOTALS		24	93	39
STATE TOTALS		176	744	121
STATE AVERAGE		11.7	49.6	8.1
PERCENT CHANGE (from previous year)		+64.8	+76.5	+39.7

Table 2. Regional and county summary of mourning dove breeding population trend as indicated by the number of doves heard per route during random call count surveys, 1969-80.

Region and County	Route Number	Number of Doves Heard Per Route											
		1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region													
Summit	R1020	7	11	10	7	3	3	3	11	10	5	6	5
Box Elder	R1500	3	7	4	2	5	3	5	1	4	2	9	4
REGIONAL TOTALS		10	18	14	9	8	6	8	12	14	7	15	9
Central Region													
Juab	R2830	8	15	32	6	17	16	13	28	25	31	15	31
REGIONAL TOTALS		8	15	32	6	17	16	13	28	25	31	15	31
Southern Region													
Sevier-Sanpete	R0370	0	1	1	0	0	0	0	0	2	0	0	3
Wayne-Sevier	R0660	2	8	11	20	11	16	7	5	8	1	2	5
Garfield	R1090	18	6	14	29	0	0	0	3	1	0	0	0
Millard	R3640	26	7	17	19	24	22	21	6	29	8	4	2
Beaver	R3820	9	17	12	13	6	24	0	0	0	0	5	9
Iron	R4000	26	15	24	20	35	103	42	45	27	12	14	40
Washington	R4310	38	54	64	61	26	32	37	19	15	1	4	3
REGIONAL TOTALS		119	108	143	162	102	197	107	78	82	22	29	62
Northeastern Region													
Duchesne	R0080	10	3	16	8	3	14	9	11	14	2	2	1
Uintah	R0220	38	15	66	4	18	12	7	27	7	4	--	49
REGIONAL TOTALS		48	18	82	12	21	26	16	38	21	6	2	50
Southeastern Region													
Emery	R0540	11	9	10	1	27	4	6	14	4	10	9	7
San Juan	R1170	18	33	60	24	17	41	32	51	67	24	28	14
San Juan	R1450	*	*	*	*	*	*	*	2	1	3	1	3
REGIONAL TOTALS		29	42	70	25	44	45	38	67	72	37	38	24
STATE TOTALS		214	201	341	214	192	290	182	223	214	103	99	176
STATE AVERAGES		14.3	13.4	22.7	14.3	12.8	19.3	12.1	14.9	14.3	6.9	7.1	11.7
PERCENT CHANGE (from previous year)		-6	-6	+69	-37	-10	+51	-37	+23	-4	-52	+3	+65

*Automatic zero.

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	210	7,228	35,953	4.97	7.40	10.46
Cache	68	2,630	7,279	2.77	2.69	2.12
Davis	66	2,647	4,734	1.79	2.71	1.38
Morgan	25	1,137	3,309	2.91	1.16	0.96
Rich	9	475	950	2.00	0.49	0.27
Summit	3	118	559	4.71	0.12	0.16
Weber	106	5,582	12,776	2.29	5.72	3.72
REGIONAL TOTALS	487	19,817	65,560	3.31	20.30	19.07
Central Region						
Juab	204	6,770	31,813	4.70	6.93	9.25
Salt Lake	200	11,656	27,130	2.33	11.94	7.89
Sanpete	87	3,716	13,540	3.64	3.81	3.94
Tooele	189	7,567	25,976	3.43	7.75	7.55
Utah	405	16,644	51,291	3.08	17.05	14.92
Wasatch	13	797	2,748	3.45	0.82	0.80
REGIONAL TOTALS	1,098	47,151	152,498	3.23	48.29	44.35
Southern Region						
Beaver	25	1,154	5,803	5.03	1.18	1.69
Garfield	14	713	3,682	5.17	0.73	1.07
Iron	36	1,782	8,941	5.02	1.82	2.60
Kane	10	238	1,391	5.86	0.24	0.40
Millard	126	5,412	29,404	5.43	5.54	8.55
Piute	9	526	2,053	3.90	0.54	0.60
Sevier	57	3,444	12,488	3.63	3.53	3.63
Washington	43	3,122	11,656	3.73	3.20	3.39
Wayne	8	254	746	2.93	0.26	0.22
REGIONAL TOTALS	328	16,645	76,165	4.58	17.05	22.15
Northeastern Region						
Daggett	3	102	152	1.50	0.10	0.04
Duchesne	39	2,324	7,126	3.07	2.38	2.07
Uintah	37	2,291	7,890	3.44	2.35	2.29
REGIONAL TOTALS	79	4,717	15,168	3.22	4.83	4.41
Southeastern Region						
Carbon	48	2,494	9,688	3.88	2.56	2.82
Emery	48	3,224	9,790	3.04	3.30	2.85
Grand	24	1,459	6,804	4.66	1.50	1.98
San Juan	33	2,087	7,923	3.80	2.14	2.30
REGIONAL TOTALS	153	9,264	34,205	3.69	9.49	9.95
Unknown counties	2	51	255	5.00	0.05	0.07
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	2,147	97,644	343,851	3.52	100	100

*Total hunter trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1973-80.

Region and County	Year							
	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	4.25	3.34	4.74	3.55	3.92	3.60	3.76	4.97
Cache	2.29	1.92	2.62	2.26	2.84	1.98	2.47	2.77
Davis	1.43	1.30	1.70	1.54	1.81	1.49	1.34	1.79
Morgan	3.42	3.09	3.14	2.58	3.87	2.10	3.14	2.91
Rich	1.30	1.97	2.89	1.53	0.82	4.19	1.71	2.00
Summit	2.65	2.21	2.73	1.52	5.69	1.86	3.36	4.71
Weber	1.36	1.53	1.78	1.67	1.97	1.66	1.91	2.29
REGIONAL TOTALS	2.53	2.14	2.89	2.39	2.91	2.38	2.53	3.31
Central Region								
Juab	5.38	3.62	5.30	4.11	5.07	4.46	4.38	4.70
Salt Lake	2.36	1.88	2.35	2.16	2.58	2.13	2.28	2.33
Sanpete	2.50	3.65	2.65	3.15	4.16	2.73	2.61	3.64
Tooele	2.58	2.80	3.70	3.53	3.26	3.19	2.53	3.43
Utah	2.78	2.66	2.50	2.30	2.92	2.39	2.22	3.08
Wasatch	2.12	2.00	3.12	1.83	2.50	2.89	2.59	3.45
REGIONAL TOTALS	2.90	2.70	2.98	2.71	3.20	2.73	2.62	3.23
Southern Region								
Beaver	4.31	2.94	5.37	2.87	5.27	5.67	4.94	5.03
Garfield	6.03	1.79	5.35	2.44	1.04	1.70	4.56	5.17
Iron	3.96	4.65	4.09	4.45	4.00	4.48	4.52	5.02
Kane	4.98	2.83	4.92	3.52	3.05	5.08	4.17	5.86
Millard	4.63	5.14	4.73	3.78	4.62	5.13	4.92	5.43
Piute	2.00	2.00	3.30	2.59	3.10	2.60	2.18	3.90
Sevier	3.22	2.83	3.67	2.47	3.66	2.52	2.91	3.63
Washington	3.92	3.85	5.05	2.70	4.84	3.90	3.25	3.73
Wayne	6.74	2.83	4.10	4.93	6.40	3.64	6.04	2.93
REGIONAL TOTALS	4.15	3.82	4.36	3.26	4.23	3.88	4.05	4.58
Northeastern Region								
Daggett	0.82	2.12	4.63	5.00	3.44	3.40	2.79	1.50
Duchesne	4.73	2.80	3.55	4.76	2.65	3.43	3.13	3.07
Uintah	2.97	1.78	3.03	2.27	3.10	2.70	2.96	3.44
REGIONAL TOTALS	3.04	2.05	3.21	3.01	2.94	3.01	3.01	3.22
Southeastern Region								
Carbon	3.65	2.55	2.87	2.31	2.25	2.85	3.14	3.88
Emery	2.66	1.86	1.93	2.86	2.88	3.00	2.54	3.04
Grand	3.84	3.62	3.68	1.94	1.26	4.00	3.68	4.66
San Juan	4.36	4.22	3.21	2.24	3.88	4.09	3.97	3.80
REGIONAL TOTALS	3.61	2.49	2.73	2.41	2.61	3.40	3.09	3.69
Unknown counties	2.58	3.55	4.18	3.45	2.13	3.46	5.09	5.00
Mixed counties	0.00	3.00	--	--	10.00	2.00	0.00	0.00
STATE TOTALS	3.14	2.71	3.20	2.74	3.21	2.95	2.92	3.52

Table 5. Percentage distribution of mourning dove harvest by region and county, 1973-80.

Region and County	Year 1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	7.85	9.09	9.86	9.82	8.44	8.10	10.01	10.46
Cache	3.29	3.68	3.50	4.19	2.64	2.71	3.00	2.12
Davis	1.80	2.62	1.68	2.16	1.81	1.61	2.39	1.38
Morgan	1.27	1.57	1.02	0.96	1.55	0.65	1.03	0.96
Rich	0.08	0.47	0.30	0.33	0.08	0.59	0.22	0.27
Summit	0.61	0.40	0.35	0.41	1.16	0.36	0.19	0.16
Weber	2.03	4.00	3.74	3.39	3.72	3.07	3.78	3.72
REGIONAL TOTALS	16.93	21.83	20.43	21.26	19.40	17.08	20.63	19.07
Central Region								
Juab	8.58	8.30	9.64	6.98	7.62	8.88	9.55	9.25
Salt Lake	7.95	6.51	8.02	7.67	8.49	7.16	9.39	7.89
Sanpete	2.51	3.61	2.10	5.31	3.31	3.87	4.34	3.94
Tooele	6.07	5.06	6.83	8.39	7.15	6.18	5.57	7.55
Utah	14.30	19.26	16.31	16.70	16.40	16.20	12.73	14.92
Wasatch	1.11	0.53	0.83	0.37	0.56	0.66	0.63	0.80
REGIONAL TOTALS	40.52	43.26	43.73	45.42	43.54	42.95	42.22	44.35
Southern Region								
Beaver	2.26	1.15	2.03	2.00	2.55	1.68	1.62	1.69
Garfield	1.08	0.52	0.64	0.30	0.15	0.65	1.11	1.07
Iron	5.63	3.87	3.96	4.40	3.97	4.20	2.60	2.60
Kane	1.35	0.51	0.49	1.10	0.38	0.98	0.80	0.40
Millard	8.04	8.68	5.30	5.92	7.27	9.28	10.84	8.55
Piute	0.31	0.22	0.42	1.10	0.37	0.81	0.45	0.60
Sevier	3.26	4.57	6.07	4.01	4.83	4.26	5.23	3.63
Washington	3.63	3.87	4.31	2.38	3.82	2.91	2.45	3.39
Wayne	0.79	0.11	0.66	1.00	0.36	0.86	1.25	0.22
REGIONAL TOTALS	26.37	23.48	23.89	22.21	23.70	25.63	26.36	22.15
Northeastern Region								
Daggett	0.20	0.11	0.34	0.03	0.35	0.09	0.22	0.04
Duchesne	1.61	1.06	1.00	1.58	1.51	2.31	1.66	2.07
Uintah	1.85	1.87	3.35	1.81	2.18	2.61	2.79	2.29
REGIONAL TOTALS	3.66	3.03	4.69	3.43	4.04	5.01	4.67	4.41
Southeastern Region								
Carbon	3.47	1.56	2.22	1.50	2.03	1.75	1.96	2.82
Emery	2.02	2.12	1.60	1.74	1.84	2.38	1.92	2.85
Grand	2.51	0.65	1.12	0.62	0.33	2.32	0.90	1.98
San Juan	3.18	1.20	1.70	0.74	1.51	1.90	1.10	2.30
REGIONAL TOTALS	11.18	5.54	6.64	4.61	5.70	8.35	5.89	9.95
Unknown counties	1.34	2.66	0.61	3.08	3.51	0.94	0.23	0.07
Mixed counties	0.00	0.19	--	--	0.11	0.05	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, 1973-80.

Region and County	Year							
	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region								
Box Elder	5.80	7.37	6.65	7.58	6.92	6.63	7.76	7.40
Cache	4.50	5.20	4.28	5.09	2.99	4.03	3.54	2.69
Davis	3.96	5.46	3.17	3.85	3.22	3.18	5.21	2.71
Morgan	1.16	1.38	1.04	1.02	1.29	0.91	0.95	1.16
Rich	0.19	0.64	0.33	0.59	0.31	0.42	0.37	0.49
Summit	0.72	0.49	0.41	0.74	0.65	0.57	0.17	0.12
Weber	4.70	7.10	6.73	5.58	6.07	5.44	5.76	5.72
REGIONAL TOTALS	21.03	27.63	22.60	24.46	21.45	21.17	23.77	20.30
Central Region								
Juab	5.01	6.20	5.82	4.66	4.84	5.87	6.36	6.93
Salt Lake	10.59	9.38	10.91	9.76	10.58	9.92	12.00	11.94
Sanpete	3.16	2.67	2.53	4.63	2.55	4.18	4.86	3.81
Tooele	7.37	4.89	5.90	6.52	7.05	5.70	6.42	7.75
Utah	16.12	19.61	20.89	19.88	18.02	20.00	16.70	17.05
Wasatch	1.65	0.72	0.85	0.56	0.72	0.68	0.71	0.82
REGIONAL TOTALS	43.91	43.48	46.90	46.01	43.76	46.36	47.04	48.29
Southern Region								
Beaver	1.65	1.06	1.21	1.91	1.56	0.88	0.95	1.18
Garfield	0.56	0.79	0.38	0.33	0.47	1.12	0.71	0.73
Iron	4.46	2.25	3.10	2.71	3.19	2.77	1.68	1.82
Kane	0.85	0.49	0.32	0.85	0.40	0.57	0.56	0.24
Millard	5.45	4.57	3.59	4.29	5.05	5.34	6.43	5.54
Piute	0.49	0.30	0.41	1.17	0.38	0.92	0.60	0.54
Sevier	3.18	4.37	5.29	4.46	4.24	4.98	5.24	3.53
Washington	2.91	2.72	2.73	2.42	2.54	2.20	2.20	3.20
Wayne	0.37	0.10	0.52	0.56	0.18	0.69	0.60	0.26
REGIONAL TOTALS	19.93	16.66	17.56	18.71	18.00	19.46	18.98	17.05
Northeastern Region								
Daggett	0.76	0.13	0.23	0.02	0.33	0.08	0.23	0.10
Duchesne	1.07	1.03	0.90	0.91	1.83	1.98	1.55	2.38
Uintah	1.96	2.84	3.54	2.19	2.26	2.84	2.74	2.35
REGIONAL TOTALS	3.78	4.00	4.67	3.12	4.22	4.90	4.52	4.83
Southeastern Region								
Carbon	2.99	1.66	2.47	1.78	2.90	1.81	1.82	2.56
Emery	2.39	3.09	2.65	1.67	2.05	2.34	2.21	3.30
Grand	2.06	0.49	0.98	0.87	0.83	1.71	0.71	1.50
San Juan	2.29	0.77	1.69	0.91	1.25	1.37	0.81	2.14
REGIONAL TOTALS	9.72	6.02	7.79	5.24	7.03	7.23	5.56	9.49
Unknown counties	1.63	2.03	0.47	2.45	5.31	0.80	0.13	0.05
Mixed counties	0.00	0.17	--	--	0.04	0.08	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 7. Statewide summary of mourning dove harvest statistics, 1951-80.

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
TOTALS (1951-80)	623,848	5,921,445	1,819,624	3.25	9.49
AVERAGES (1951-79)	20,387	192,331	62,743	3.07	9.43

*Estimated.

Table 8. Mourning dove field bag check summary, 1980.

Region and County	ALL HUNTS Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	COMPLETE HUNTS Total Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	Birds/ Hunter
Northern Region											
Box Elder	133	337	1,413	1,853	131	117	291	1,330	1,740	131	5.98
Cache	11	31	83	92	111	6	15	49	80	163	5.33
Davis	22	49	185	113	61	11	23	78	63	81	2.74
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	166	417	1,681	2,058	122	134	329	1,457	1,883	129	5.72
Central Region											
Juab	37	112	585	377	64	27	76	483	327	68	4.30
Salt Lake	23	55	106	136	128	1	3	3	10	333	3.33
Sanpete	27	89	176	133	76	3	9	25	5	20	0.56
Tooele	40	117	277	416	150	5	11	37	89	241	8.09
Utah	30	61	209	104	50	12	25	85	45	53	1.80
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	157	434	1,353	1,166	86	48	124	633	476	75	3.84
Southern Region											
Beaver	14	38	87	168	193	3	8	33	74	224	9.25
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	14	25	36	78	217	1	1	2	10	500	10.00
Kane	20	53	148	256	173	13	37	116	209	180	5.65
Millard	46	84	242	307	127	2	5	18	31	172	6.20
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	29	66	179	246	137	--	--	--	--	--	--
Washington	8	14	50	83	166	5	7	14	48	343	6.86
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	131	280	742	1,138	153	24	58	183	372	203	6.41
Northeastern Region											
Daggett	10	18	34	20	59	10	18	34	20	59	1.11
Duchesne	3	7	18	3	17	1	2	2	2	100	1.00
Uintah	10	19	29	39	134	6	13	25	31	124	2.38
REGIONAL TOTALS	23	44	81	62	76	17	33	61	53	87	1.61
Southeastern Region											
Carbon	30	72	197	211	107	13	34	70	124	177	3.65
Emery	18	45	73	163	223	3	4	6	14	233	3.50
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	25	60	120	179	149	11	25	54	141	261	5.64
REGIONAL TOTALS	73	177	390	553	142	27	63	130	279	215	4.43
LEHI CHECKING STATION	836	1,864	8,074	4,131	51	682	1,551	7,417	3,713	50	2.39
NEPHI CHECKING STATION*	183	626	2,804	2,300	82	134	348	1,564	584	37	1.68
STATE TOTALS	1,569	3,842	15,125	11,408	75	1,066	2,506	11,445	7,360	64	2.94

*Includes Millard and Juab counties.

Table 9. Mourning dove hunter success from determined by wing bag checks, 1975-80.

Region and County	1975 Doves/ 100 Hr	1975 Doves/ Hunter	1976 Doves/ 100 Hr	1976 Doves/ Hunter	1977 Doves/ 100 Hr	1977 Doves/ Hunter	1978 Doves/ 100 Hr	1978 Doves/ Hunter	1979 Doves/ 100 Hr	1979 Doves/ Hunter	1980 Doves/ 100 Hr	1980 Doves/ Hunter
Northern Region												
Box Elder	120	5.34	114	4.35	82	2.96	74	2.76	98	3.74	131	5.98
Cache	76	1.69*	--	--	177	2.88	--	--	--	--	163	5.33
Davis	92	2.01	--	--	31	0.36	--	--	80	1.78	81	2.74
Morgan	169	5.30	--	--	38	0.56	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	80	2.15	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	34	0.67*	20	0.38	--	--	--	--	67	3.00	--	--
REGIONAL TOTALS	114	4.85	107	3.94	81	2.82	74	2.76	96	3.51	129	5.72
Central Region												
Juab	178	7.53	100	8.36	81	4.49	80	4.00	421	9.83	68	4.30
Salt Lake	78	1.61	50	0.98	91	1.80	76	2.00	23	0.38	333	3.33
Sanpete	--	--	64	1.28*	38	0.69	0	0.00	81	2.23	20	0.56
Tooele	109	6.82	40	1.08*	93	4.00	80	3.00	233	7.00	241	8.09
Utah	85	3.47	67	2.63	73	2.61	70	2.08	47	1.84	53	1.80
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	104	3.35	66	2.50	77	2.53	72	2.29	49	1.85	75	3.84
Southern Region												
Beaver	181	4.40*	179	9.86	--	--	--	--	158	4.75	224	9.25
Garfield	164	4.00	98	2.32	--	--	250	6.67	196	5.36	--	--
Iron	204	4.95*	238	7.47	666	10.00	165	5.06	321	6.77	500	10.00
Kane	--	--	--	--	--	--	393	7.66	331	9.53	180	5.65
Millard	142	6.70	150	3.90*	136	6.80	213	7.62	98	5.60	172	6.20
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	121	5.30	64	0.64*	--	--	--	--	--	--	--	--
Washington	--	--	--	--	231	3.92	137	4.11	500	10.00	343	6.86
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	148	6.05	158	5.29	150	6.08	236	6.52	141	6.34	203	6.41
Northeastern Region												
Daggett	12	0.00	--	--	--	--	0	0.00	225	2.12	59	1.11
Duchesne	265	5.48	115	2.07	--	--	380	4.75	--	--	100	1.00
Uintah	167	7.60	108	2.59	121	2.66	97	2.00	87	1.75	124	2.38
REGIONAL TOTALS	181	5.77	110	2.35	121	2.66	146	2.77	156	2.00	87	1.61
Southeastern Region												
Carbon	256	7.00	0	0.00	127	3.12	100	2.17	61	1.75	177	3.65
Emery	162	4.05	50	1.50	33	2.00	50	0.50	--	--	233	3.50
Grand	188	5.75	47	1.06*	50	1.50	--	--	50	0.50	--	--
San Juan	187	5.08	203	5.69	250	6.33	400	10.00	217	4.19	261	5.64
REGIONAL TOTALS	181	5.05	155	5.21	168	4.27	196	4.00	133	3.00	215	4.43
NEPHI CHECKING STATION	--	--	--	--	--	--	--	--	86	4.65	37	1.68
LEHI CHECKING STATION	--	--	--	--	--	--	--	--	--	--	50	2.39
STATE TOTALS	124	4.81	97	3.81	93	3.14	82	2.65	69	2.86	64	2.94

*Doves per hunter index based on all hunts.

Table 10. Age composition (Immatures/100 Adults) of mourning doves harvested, 1971-80.

Region and County	1971 I/100A (n)	1972 I/100A (n)	1973 I/100A (n)	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)	1971-79 Avg. I/100A (n)
Northern Region											
Box Elder	145 (963)	112 (1380)	102 (1324)	129 (1430)	123 (2830)	103 (1870)	216 (1296)	88 (999)	84 (1271)	121 (1454)	
Cache	100 (58)	155 (28)	100 (2)	--	66 (128)	114 (15)	0 (2)	--	106 (33)	151 (113)	
Davis	--	--	450 (11)	--	100 (4)	--	150 (10)	--	71 (65)	169 (43)	
Morgan	151 (93)	41 (24)	--	250 (7)	84 (116)	--	--	--	--	--	
Rich	--	125 (9)	100 (10)	--	--	--	--	--	92 (25)	--	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	--	70 (136)	71 (24)	213 (119)	100 (26)	117 (13)	233 (20)	--	190 (29)	--	
REGIONAL TOTALS	106 (1114)	106 (1577)	103 (1371)	134 (1556)	118 (3104)	103 (1898)	216 (1328)	88 (999)	86 (1423)	124 (1610)	118 (1597)
Central Region											
Juab	77 (39)	79 (86)	29 (66)	105 (88)	228 (220)	240 (136)	283 (199)	63 (75)	--	--	
Salt Lake	204 (164)	57 (74)	136 (33)	50 (9)	109 (338)	147 (42)	275 (120)	--	--	--	
Sanpete	--	227 (85)	46 (114)	185 (111)	650 (30)	222 (87)	139 (74)	--	--	--	
Tooele	129 (16)	211 (28)	290 (82)	99 (219)	76 (202)	156 (115)	195 (177)	60 (262)	84 (103)	118 (96)	
Utah	170 (189)	178 (153)	132 (267)	123 (261)	128 (392)	170 (278)	113 (286)	61 (1814)	80 (1823)	45 (29)	
Wasatch	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	167 (408)	130 (426)	101 (562)	118 (688)	128 (1182)	184 (658)	177 (856)	61 (2151)	81 (1926)	95 (125)	127 (984)
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)	--	
Emery	--	--	--	--	233 (30)	--	--	--	--	--	
Grand	--	--	--	--	300 (84)	--	--	--	--	--	
San Juan	--	--	--	--	189 (214)	97 (274)	--	--	--	--	
REGIONAL TOTALS	--	--	--	263 (196)	215 (328)	97 (274)	--	--	67 (167)	281 (80)	161 (241)
NEPHI CHECKING STATION	--	--	--	--	--	--	--	87 (2013)	114 (1814)	100 (862)	101 (1914)
LEHI CHECKING STATION	--	--	--	--	--	--	--	--	--	98 (1204)	--
STATE TOTALS	149 (1522)	111 (2003)	102 (1933)	136 (2440)	126 (4661)	118 (2860)	200 (2184)	75 (5163)	91 (5330)	111 (3881)	123 (3122)

Table 11. Percent of harvest by hatching date of immature mourning doves in northern Utah, 1971-80.

Date Hatched	Age* (Days)	P	Percent of Harvest by Hatch Date										Sample Size									
			1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Aug 3	29	none	36.2	40.8	22.2	48.3	11.1	42.5	36.4	52.8	45.6	35.6	236	322	154	428	177	409	329	246	265	316
Jul 31	32	1	23.0	27.2	21.4	28.6	24.3	22.9	27.9	25.3	22.7	26.9	150	215	149	253	389	220	252	118	132	239
Jul 25	38	2	17.2	15.7	18.8	14.3	32.3	17.9	17.3	12.0	14.3	16.4	112	124	131	127	517	172	156	56	83	146
Jul 18	45	3	10.3	9.6	15.4	3.7	18.4	7.2	6.7	5.8	8.1	11.6	67	76	107	33	295	69	60	27	47	103
Jul 9	54	4	7.8	3.9	9.9	2.3	8.6	4.0	4.3	3.0	5.0	5.1	51	31	69	20	137	38	39	14	29	45
Jun 30	63	5	2.9	2.3	6.8	1.1	5.3	2.0	2.4	0.4	1.5	2.4	19	18	47	10	85	19	22	2	9	21
Jun 21	72	6	1.8	0.2	3.7	1.2	--	1.0	2.9	0.2	1.7	1.5	12	2	26	11	--	10	26	1	10	13
Jun 8	85	7	0.5	0.1	1.6	0.4	--	0.9	2.2	--	--	0.3	3	1	11	4	--	9	20	0	0	3
May 22	102	8	0.2	--	0.1	--	--	1.7	--	0.2	0.2	--	1	--	1	--	--	16	--	1	1	0
Apr 27	127	9	--	--	--	--	--	--	--	0.2	0.9	0.2	--	--	--	--	--	--	--	1	5	2
Apr 21	133	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0
			100	100	100	100	100	100	100	100	100	100	651	789	695	886	1600	962	904	466	581	888

*Allen, J. M., 1963.

P = Last primary molted.

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

Region and County	1971			1972			1973			1974			1975			Totals 1961-75		
	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total	Imm.	Adult	Total
Northern Region																		
Box Elder	--	--	--	2	5	7	--	--	--	16	22	38	--	--	--	1011	2444	3455
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	39	69
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	22	20	45*	--	--	--	--	--	--	59	12	71	28	37	65	109	69	178*
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	22	20	45*	2	5	7	--	--	--	75	34	109	28	37	65	1150	2552	3702
Central Region																		
Juab	64	53	117	71	151	229*	--	--	--	91	297	388	137	153	290	1815	3009	4887
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	47	214	261
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	85	370	455	60	158	218	27	57	84	158	329	487	138	113	251	1538	2550	4113
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61	155	216
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	149	423	572	131	309	447*	27	57	84	249	626	875	275	266	541	3461	5928	9477*
Southern Region																		
Beaver	--	--	--	--	--	--	6	4	10	22	62	84	--	--	--	34	92	126
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	5	41	46	5	41	46
Iron	113	1	114	125	124	249	4	--	4	13	36	49	70	47	117	504	257	761
Kane	--	--	--	--	--	--	206	17	223	--	--	--	115	66	181	407	151	558
Millard	38	13	51	15	12	27	1	56	57	88	128	216	197	125	322	589	766	1356*
Piute	166	211	377	75	15	90	--	--	--	--	--	--	3	3	6	548	668	1216
Sevier	2	0	2	--	--	--	--	--	--	--	--	--	30	199	299	34	225	329
Washington	41	2	43	37	17	55*	136	84	220	112	188	300	87	158	245	452	1408	1862*
Wayne	--	--	--	--	--	--	--	--	--	28	54	82	5	13	18	37	75	112
REGIONAL TOTALS	360	227	587	252	168	421*	353	161	514	303	428	731	512	652	1164	2650	3643	6296*
Northeastern Region																		
Daggett	7	28	35	39	60	99	0	137	137	0	159	159	0	68	68	54	457	511
Duchesne	7	64	71	15	128	143	1	2	3	37	71	108	34	80	114	98	371	469
Uintah	49	123	172	9	85	94	--	--	--	48	247	295	0	95	95	416	1509	1925
REGIONAL TOTALS	63	215	278	63	273	336	1	139	140	85	477	562	34	243	277	568	2337	2905
Southeastern Region																		
Carbon	--	--	--	--	--	--	--	--	--	58	42	100	--	--	--	66	46	112
Emery	--	--	--	--	--	--	--	--	--	153	76	229	118	107	225	310	197	507
Grand	--	--	--	--	--	--	--	--	--	--	--	--	0	1	1	52	18	70
San Juan	37	52	89	73	129	202	7	10	17	289	94	383	45	370	415	780	693	1473
REGIONAL TOTALS	37	52	89	73	129	202	7	10	17	500	212	712	163	478	641	1208	954	2162
STATE TOTALS	631	937	1571	521	884	1413	388	367	755	1212	1777	2989	1012	1676	2688	9037	15414	24542

*Includes some unclassified birds.

BAND-TAILED PIGEON

Banding

During 1980, no pigeons were banded in Utah (Table 13). Banding efforts were discontinued in 1979 as a result of recommendations of the Four-Corners Band-tailed Pigeon Study Committee. The Committee concluded that, from 1979, banding should be limited to specific research needs.

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 1980 harvest questionnaire are shown in Table 14 and harvest trends since 1970 in Table 15. A comparison of the 1980 season to 1979 and the average follow:

	1980	Percent change from 1979	Percent change from Average
Band-tailed pigeon hunters	62	0	+9
Band-tailed pigeon harvest	182	+56	+11
Hunter-days afield	175	+32	+30
Pigeons per hunter-day	1.0	+11	-17
Pigeons per hunter	2.9	+53	0

Total hunters remained the same as 1979, but hunter-days afield increased 33 percent. Total harvest also increased dramatically from 1979. Most of the 1980 harvest occurred in Grand, San Juan and Washington counties.

Table 13. Band-tailed pigeon banding trend for Utah, 1969-80.

Year	Adults Males	Adults Females	Adults Total	Immatures	Total Pigeons	Immatures/ 100 Adults	Total Recaptures*
1969	147	51	198	39	237	20	7
1970	254	94	348	54	402	16	43
1971	110	52	162	79	241	49	72
1972	284	117	401	4	405	1	235
1973	263	54	317	14	331	4	162
1974	87	12	99	11	110	11	78
1975	202	70	272	13	285	5	118
1976	180	33	213	4	217	2	131
1977	286	25	311	8	319	3	64
1978	67	35	102	0	102	--	65
1979	BANDING DISCONTINUED						
1980	--	--	--	--	--	--	--
TOTALS	1,880	543	2,423	226	2,649	9	975

*Includes repeats and returns.

Table 14. Band-tailed pigeon harvest statistics, 1980.

Area Hunted	Participating Hunters		Hunter-days		Harvest		Pigeons/ Hunter-day	Percent of Pressure*	Percent of Harvest
	Reported	Calc.	Reported	Calc.	Reported	Calc.			
Beaver County	3	4	8	11	5	7	0.6	6	4
Blue Mountain-Elk Ridge	8	11	21	29	37	52	1.8	17	28
Carbon County	1	1	5	7	6	8	1.2	4	5
Garfield County	--	--	--	--	--	--	--	--	--
Iron County	12	17	40	56	14	20	0.4	32	11
Kane County	2	3	6	8	0	0	0.0	5	0
LaSal Mountain	12	17	25	35	29	41	1.2	20	22
Millard County	1	1	2	3	0	0	0.0	2	0
Piute County	--	--	--	--	--	--	--	--	--
Utah County	2	3	6	8	6	8	1.0	5	5
Washington County	5	7	12	17	33	46	2.8	10	25
Wayne County	--	--	--	--	--	--	--	--	--
TOTALS	46**	65	125	175	130	182	1.0	100	100

*Based on hunter-days.

**The number of hunters afield who reported was 44; 2 hunters report hunting more than one area, and are included as participating hunters. Calculated number of hunters afield is 62.

Projection factor = 1.4026 (108 permits issued; 77 questionnaires returned).

Table 15. Band-tailed pigeon harvest trend, 1970-80.

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
TOTALS (1970-80)	628	1,822	1,520	1.2	2.9
AVERAGES (1970-79)	57	164	135	1.2	2.9

CHUKAR PARTRIDGE

SUMMARY

The statewide breeding population of chukars decreased in 1980 following lower production during 1979. Overwinter survival was near normal. Late winter and early spring precipitation, critical to successful chukar production, was again above average, indicating good reproductive potential.

Results of the brood survey confirmed the normal reproduction expected due to slightly decreased breeding population and above average precipitation and below average temperatures in May. The indicated chukar density decreased 15 percent from 1979. Chukars observed per 100 hours of effort remained above average but 15 percent below 1979.

Harvest statistics reflected the slightly lower production with harvest success still above average but dropping 12 percent from 1979. Chukar hunters spent more time afield to harvest about the same number of birds as in 1979.

Brood Counts

Results of the annual random brood survey for 1980 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 1980 compared to 1979 and the 10-year average:

	1980	Percent change from 1979	Percent change from Average
Total chukars observed	719	-1	-33
Young per 100 adults	358	+46	+4
Mean brood size	8.23	-20	-4
Chukars observed per 100 hours	336	-15	+1
Total hours effort	214	+8	-33

Harvest data for 1979 indicated decreased breeding populations for 1980 in all regions except the Central and Southeastern. 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 for the same period should have helped winter survival.

Effort on chukar brood counts increased from 1979 but remained far below average.

Brood count sample sizes were again extremely small for all regions. The Central Region counted 25 of the state total of 26 broods. Chukar density decreased to the 10-year average as a result of lower production during 1980.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire survey for 1980 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 1980 harvest statistics to 1979 and the 22-year average:

	1980	Percent change from 1979	Percent change from Average
Chukar hunters	15,100	-1	-3
Chukars harvested	51,511	-1	+16
Hunter-days afield	47,778	+13	+5
Chukars per hunter-day	1.08	-12	+11
Chukars per hunter	3.41	0	+20

Chukar hunters spent more time afield to harvest about the same number of birds as in 1979. Chukars per hunter-day was below the 1979 level but was still above average statewide; however, it dropped considerably in the Southeastern Region. The Northern Region had a significantly higher percentage of the harvest in 1980, but it also had more hunter pressure.

Field Bag Check

A summary of field bag check data for 1980 is shown in Table 10. The hunter success trend determined by field bag checks since 1974 is shown in Table 11. Data for the 1980 season compared to 1979 and the average follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Chukars per hunter (complete hunts)		INCOMPLETE	
Chukars bagged per 100 hours		INFORMATION	
Average hours per hunter-day (complete hunts)			
Hours hunted per chukar bagged			

Field bag checks reflected nothing. Not enough were taken to mean anything.

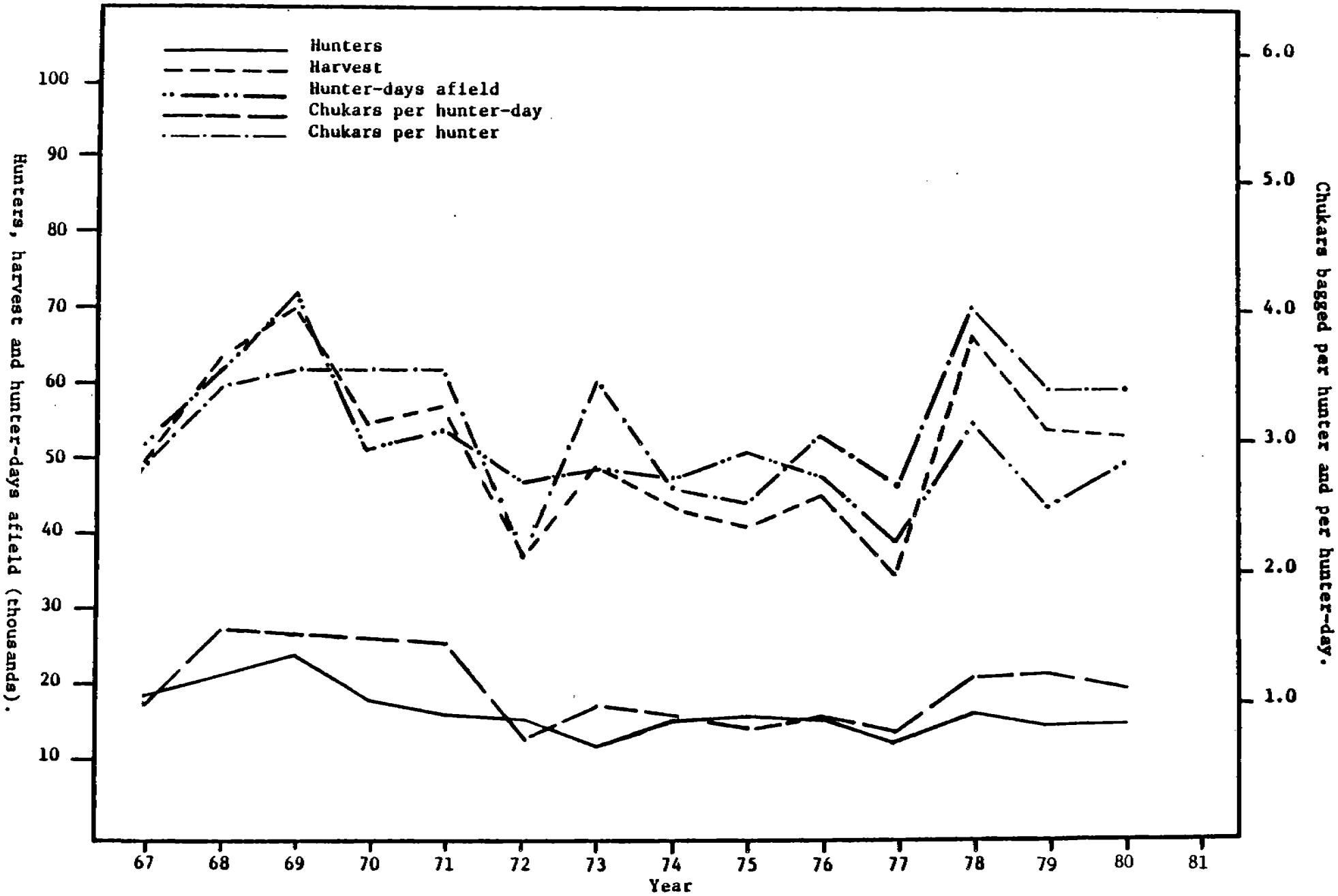


Figure 1. Statewide trends of chukar partridge harvest statistics.

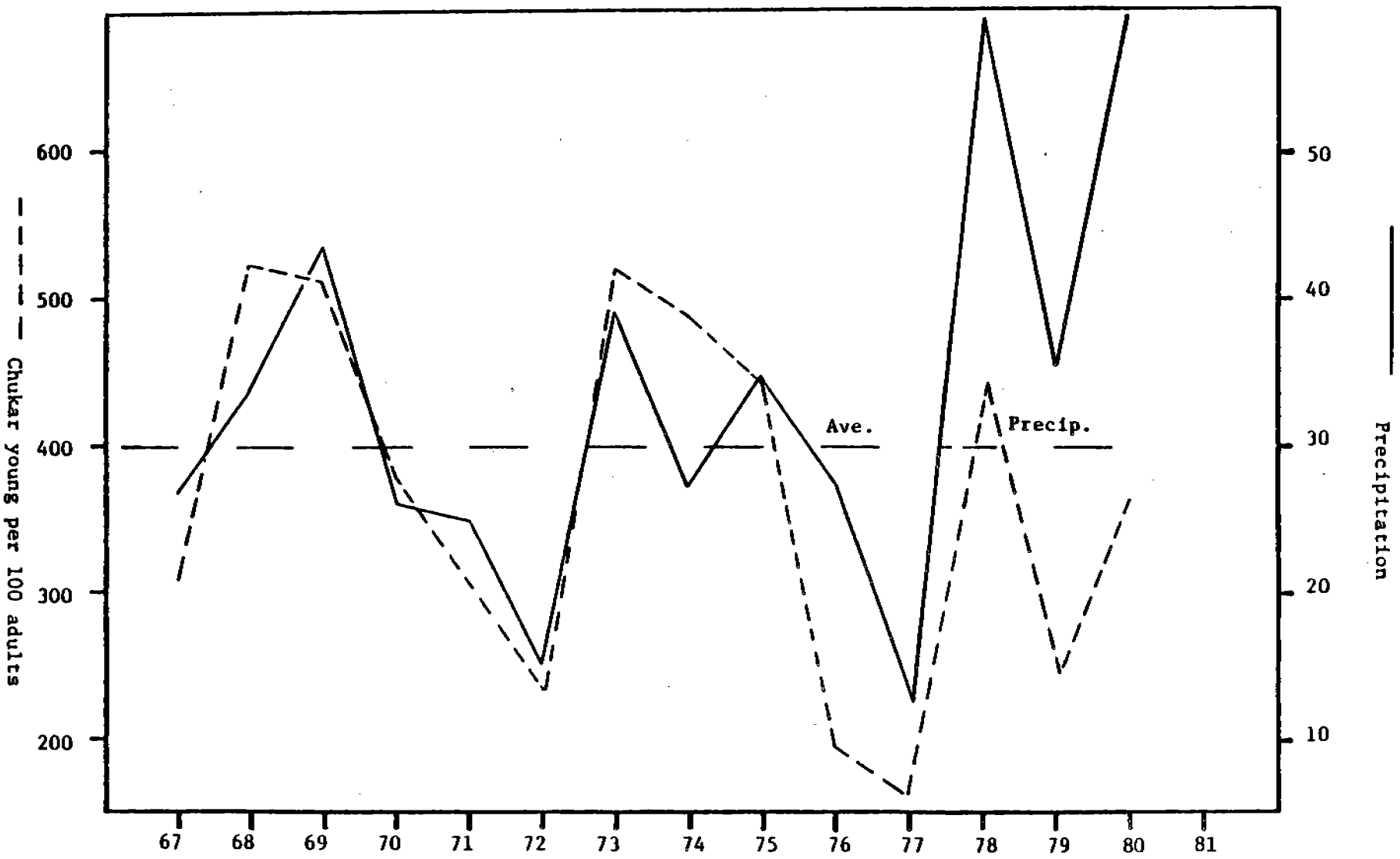


Figure 2. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production.

Table 1. Chukar summer inventory summary, 1980.

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	0	0	0	--	2	10	7	9	10	111	100	20	18	6	44	43
Cache	0	0	0	--	0	0	0	0	0	--	150	11	3	0	14	--
Davis	0	0	0	--	21	23	32	53	23	43	33	4	0	6	10	760
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	0	--	23	33	39	62	33	53	283	35	21	12	68	140
Central Region																
Juab	10	10	77	7.70	11	55	2	21	117	557	1,000	65	0	2	67	206
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	0	0	0	--	4	46	2	6	46	767	206	10	0	11	21	248
Tooele	11	11	109	9.91	12	135	12	35	244	697	272	14	0	5	19	1,468
Utah	3	3	12	4.00	5	22	6	14	34	243	170	9	0	0	9	533
Wasatch	1	1	6	6.00	4	17	0	5	23	460	20	4	3	1	8	350
REGIONAL TOTALS	25	25	204	8.16	36	275	22	81	464	572	1,668	102	3	19	124	440
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	0	0	0	--	5	17	0	5	17	340	--	--	--	--	--	--
Millard	1	1	10	10.00	3	12	1	4	22	550	235	11	0	0	11	236
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	0	0	0	--	2	12	0	2	12	600	--	1	0	0	1	1,400
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1	1	10	10.00	10	41	1	11	51	425	235	12	0	0	12	525
Northeastern Region																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region																
Carbon	0	0	0	--	2	14	0	2	14	700	10	1	0	0	1	1,600
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	0	0	0	--	0	0	0	0	0	--	43	7	0	2	9	--
REGIONAL TOTALS	0	0	0	--	2	14	0	2	14	700	53	8	0	2	10	160
STATE TOTALS	26	26	214	8.23	71	363	62	157	562	358	2,239	157	24	33	214	336

Table 2. Trend of chukar young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	247	529	492	760	663	842	733	300	562	198	111	
Cache	250	258	--	488	750	550	1,900	--	--	300	--	
Davis	--	--	--	--	--	--	--	--	--	3	43	
Morgan	178	950	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	525	--	--	--	--	--	--	--	--	--	--	
Weber	--	286	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	267	382	475	639	684	814	722	300	562	81	53	493
Central Region												
Juab	421	594	420	725	350	500	352	356	1,100	--	557	
Salt Lake	0	367	--	0	--	0	--	380	--	283	--	
Sanpete	256	171	216	0	--	--	488	331	440	500	767	
Tooele	922	372	154	410	356	264	417	96	686	771	697	
Utah	360	352	552	335	96	--	800	150	0	205	243	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	471	386	208	364	300	308	411	230	386	518	572	358
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	495	275	--	--	--	--	450	--	--	350	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	340	
Millard	700	255	66	--	--	50	264	95	150	450	550	
Piute	--	550	500	--	--	500	--	--	0	500	--	
Sevier	--	--	800	--	--	--	--	--	--	--	600	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	67	--	--	--	--	--	--	900	--	--	
REGIONAL TOTALS	581	245	131	--	--	114	294	95	233	420	425	264
Northeastern Region												
Daggett	150	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	120	--	--	--	--	800	375	0	--	--	
Uintah	450	678	--	--	733	--	766	--	--	--	--	
REGIONAL TOTALS	279	479	--	--	733	--	755	375	--	--	--	528
Southeastern Region												
Carbon	383	474	372	650	794	633	--	125	--	--	700	
Emery	900	--	--	725	842	367	200	--	500	--	--	
Grand	446	205	274	871	656	377	98	0	980	416	--	
San Juan	234	161	317	500	650	552	40	58	220	--	--	
REGIONAL TOTALS	338	226	324	712	717	437	97	59	591	416	700	391
STATE TOTALS	382	311	235	519	487	443	196	170	444	245	358	343

Table 3. Trend of chukar mean brood size from 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	10.59	6.17	13.23	13.00	11.00	11.00	10.50	6.00	14.60	9.57	--	
Cache	10.00	3.43	--	13.00	7.00	--	19.00	--	--	3.00	--	
Davis	--	--	--	--	--	--	--	--	--	2.00	--	
Morgan	8.00	9.50	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	7.33	--	--	--	--	--	--	--	--	--	--	
Weber	--	20.00	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	9.91	6.25	13.23	13.00	8.00	11.00	13.33	6.00	14.60	8.00	--	10.33
Central Region												
Juab	5.25	9.33	9.53	9.67	11.00	8.67	7.75	9.00	11.00	--	7.70	
Salt Lake	--	--	--	--	--	--	--	--	--	5.67	--	
Sanpete	6.67	7.00	6.00	--	--	--	11.00	6.50	5.00	6.33	--	
Tooele	12.14	11.29	10.83	15.00	11.89	9.00	7.20	6.00	6.50	14.07	9.91	
Utah	9.00	8.14	7.50	8.40	8.00	--	8.00	3.00	0.00	6.00	4.00	
Wasatch	--	--	--	--	--	--	--	--	--	--	6.00	
REGIONAL TOTALS	9.00	9.88	9.98	10.10	11.35	8.83	7.68	6.64	6.50	11.38	8.16	9.13
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	8.20	5.00	--	--	--	--	9.50	--	--	--	--	
Iron	--	0	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	11.50	10.00	--	--	3.00	6.71	3.50	0.00	6.00	10.00	
Piute	--	5.50	5.67	--	--	5.00	--	--	0.00	10.00	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	6.00	--	--	--	--	--	--	9.00	--	--	
REGIONAL TOTALS	8.20	7.80	6.75	--	--	4.00	7.33	3.50	9.00	8.00	10.00	6.82
Northeastern Region												
Daggett	4.00	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	6.00	--	--	--	--	8.00	3.75	0.00	--	--	
Uintah	4.50	7.00	10.00	--	6.00	--	7.67	--	--	--	--	
REGIONAL TOTALS	4.33	6.86	10.00	--	6.00	--	7.75	3.75	--	--	--	6.45
Southeastern Region												
Carbon	7.67	7.29	9.29	9.00	9.50	9.00	--	--	--	--	--	
Emery	9.00	--	--	12.00	9.80	12.00	6.17	--	5.00	--	--	
Grand	7.20	8.33	7.20	1.00	6.25	4.00	6.00	--	0.00	12.50	--	
San Juan	6.50	5.82	9.00	--	10.00	4.33	3.00	--	1.00	--	--	
REGIONAL TOTALS	7.36	6.88	8.50	8.50	9.05	6.00	5.58	--	3.00	12.50	--	7.48
STATE TOTALS	8.34	7.81	10.08	10.65	10.00	7.12	7.10	5.77	8.75	10.35	8.23	8.60

Table 4. Trend of chukars observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	386	71	374	77	468	895	208	32	307	438	43	
Cache	175	358	--	--	--	130	167	--	--	57	--	
Davis	--	--	--	--	--	--	--	--	--	608	760	
Morgan	500	262	--	--	--	--	100	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	445	132	374	119	632	640	197	32	307	430	140	331
Central Region												
Juab	197	1,724	613	174	338	229	413	152	109	1,500	206	
Salt Lake	15	108	--	60	--	25	0	400	--	209	--	
Sanpete	371	475	527	7	0	0	157	192	142	200	248	
Tooele	1,022	592	2,044	198	730	291	452	136	917	1,038	1,468	
Utah	177	210	833	336	140	0	129	33	133	1,220	533	
Wasatch	0	--	--	--	--	--	--	--	--	--	350	
REGIONAL TOTALS	320	510	997	167	437	178	302	157	243	623	440	393
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	761	123	--	0	0	0	440	--	--	1,200	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	0	--	--	--	--	--	--	
Millard	--	529	573	--	291	36	1,020	216	182	220	236	
Piute	0	650	2,400	--	--	150	0	--	0	120	--	
Sevier	--	--	900	--	100	--	--	--	--	--	1,400	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	600	--	--	--	0	--	10	83	--	--	
REGIONAL TOTALS	1,448	259	543	0	79	37	616	114	115	242	525	384
Northeastern Region												
Daggett	1,333	0	--	0	0	0	--	0	--	--	--	
Duchesne	0	41	--	0	0	0	22	73	0	0	--	
Uintah	110	350	48	0	227	0	96	0	--	0	--	
REGIONAL TOTALS	82	162	16	0	83	0	52	27	0	0	--	70
Southeastern Region												
Carbon	--	1,282	621	375	947	1,100	--	450	--	0	1,600	
Emery	--	--	--	194	1,130	233	370	0	200	--	--	
Grand	693	643	710	358	900	2,277	2,950	40	379	1,020	--	
San Juan	731	321	431	800	789	721	492	136	67	0	--	
REGIONAL TOTALS	816	364	541	298	915	996	883	98	185	230	160	533
STATE TOTALS	459	325	556	150	469	303	370	96	213	396	336	334

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	278	14,269	20,055	1.41	29.87	38.93
Cache	31	1,289	950	0.74	2.70	1.84
Davis	11	339	254	0.75	0.71	0.49
Morgan	18	1,544	1,154	0.75	3.23	2.24
Rich	4	85	51	0.60	0.18	0.10
Summit	4	153	119	0.78	0.32	0.23
Weber	18	526	254	0.48	1.10	0.49
REGIONAL TOTALS	364	18,205	22,837	1.25	38.10	44.30
Central Region						
Juab	41	2,002	1,714	0.86	4.19	3.33
Salt Lake	44	1,680	1,493	0.89	3.52	2.90
Sanpete	28	1,222	1,103	0.90	2.56	2.14
Tooele	209	8,382	7,499	0.89	17.54	14.56
Utah	127	6,515	6,549	1.01	13.64	12.71
Wasatch	5	407	238	0.58	0.85	0.46
REGIONAL TOTALS	454	20,207	18,596	0.92	42.29	36.10
Southern Region						
Beaver	8	238	204	0.86	0.50	0.40
Garfield	9	373	950	2.55	0.78	1.84
Iron	1	17	0	0.00	0.04	0.00
Kane	1	17	68	4.00	0.04	0.13
Millard	19	814	848	1.04	1.70	1.65
Piute	7	848	475	0.56	1.78	0.92
Sevier	40	2,223	865	0.39	4.65	1.68
Washington	0	0	0	0.00	0.00	0.00
Wayne	8	221	628	2.85	0.46	1.22
REGIONAL TOTALS	93	4,751	4,038	0.85	9.94	7.84
Northeastern Region						
Daggett	1	17	0	0.00	0.04	0.00
Duchesne	10	543	696	1.28	1.14	1.35
Uintah	4	187	51	0.27	0.39	0.10
REGIONAL TOTALS	15	747	747	1.00	1.56	1.45
Southeastern Region						
Carbon	17	1,188	1,205	1.01	2.49	2.34
Emery	22	882	1,205	1.37	1.85	2.34
Grand	35	1,493	2,681	1.80	3.13	5.20
San Juan	5	102	169	1.67	0.21	0.33
REGIONAL TOTALS	79	3,665	5,260	1.44	7.67	10.21
Unknown Counties	3	204	34	0.17	0.43	0.07
Mixed Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,008	47,778	51,511	1.08	100	100

*Total hunter trips from questionnaire returns.

Table 6. Summary of chukars bagged per hunter-day by region and county, 1972-80.

Region and County	Year								
	1972	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region									
Box Elder	0.88	1.41	1.47	1.20	1.31	1.23	1.80	1.34	1.41
Cache	0.75	0.68	0.92	0.64	0.70	1.11	0.89	0.60	0.74
Davis	0.89	1.12	1.61	0.31	0.89	1.29	2.20	2.19	0.75
Morgan	0.85	1.64	0.48	0.69	0.31	0.88	1.08	1.38	0.75
Rich	0.67	0.80	1.33	0.20	0.81	0.13	1.22	0.38	0.60
Summit	1.28	1.00	0.43	1.47	1.43	1.00	0.75	1.02	0.78
Weber	1.10	0.35	0.54	0.46	0.60	0.75	0.77	0.67	0.48
REGIONAL TOTALS	0.90	1.17	1.19	0.97	1.07	1.15	1.57	1.25	1.25
Central Region									
Juab	0.87	0.81	0.79	0.55	0.46	0.73	0.63	1.13	0.86
Salt Lake	0.64	1.01	0.55	0.76	0.54	1.41	0.89	1.20	0.89
Sanpete	0.63	1.12	0.96	0.72	0.35	0.90	0.70	1.15	0.90
Tooele	0.77	0.88	0.79	0.67	0.86	0.86	1.06	1.37	0.89
Utah	0.67	0.85	0.71	0.42	0.90	0.56	0.66	0.83	1.01
Wasatch	0.23	1.46	0.88	0.18	0.56	0.56	1.29	0.44	0.58
REGIONAL TOTALS	0.72	0.90	0.74	0.58	0.77	0.80	0.91	1.15	0.92
Southern Region									
Beaver	0.00	--	0.00	0.00	0.59	0.20	0.00	0.00	0.86
Garfield	0.50	0.00	1.00	5.00	0.50	0.00	2.00	1.71	2.55
Iron	1.74	0.33	0.00	0.00	0.76	--	0.00	0.00	0.00
Kane	0.00	--	0.00	0.00	0.00	--	0.00	3.00	4.00
Millard	1.33	0.96	0.52	0.48	0.87	0.66	0.98	1.29	1.04
Piute	1.29	0.58	0.29	0.69	0.24	0.67	1.35	0.78	0.56
Sevier	0.29	0.41	0.54	0.40	0.57	0.53	0.76	0.67	0.39
Washington	1.50	--	0.00	0.33	0.80	0.33	0.00	1.67	0.00
Wayne	0.87	0.00	0.73	2.43	2.74	3.94	1.10	3.00	2.85
REGIONAL TOTALS	0.90	0.62	0.51	0.64	0.79	0.80	0.95	0.89	0.85
Northeastern Region									
Daggett	0.00	0.00	0.00	0.00	2.00	--	0.00	2.25	0.00
Duchesne	0.59	0.71	0.50	0.34	0.77	0.19	1.78	1.20	1.28
Uintah	0.69	0.22	0.12	1.32	0.40	0.33	1.88	1.38	0.27
REGIONAL TOTALS	0.60	0.40	0.30	0.67	0.74	0.25	1.56	1.38	1.00
Southeastern Region									
Carbon	0.62	0.35	0.61	0.72	0.69	0.19	0.58	1.88	1.01
Emery	0.04	0.67	0.65	1.44	1.37	0.39	0.18	1.27	1.37
Grand	0.42	0.79	2.84	1.85	1.42	0.26	0.33	3.39	1.80
San Juan	0.25	1.46	1.33	0.50	0.43	0.00	1.56	4.00	1.67
REGIONAL TOTALS	0.40	0.64	1.22	1.31	1.05	0.27	0.40	2.14	1.44
Unknown Counties	0.43	0.35	0.60	0.59	1.18	0.77	1.48	1.00	0.17
Mixed Counties	0.00	--	3.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.79	0.95	0.91	0.81	0.93	0.88	1.21	1.23	1.08

Table 7. Percentage distribution of chukar harvest by region and county, 1972-80.

Region and County	Year								
	1972	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region									
Box Elder	30.59	27.24	40.28	30.32	32.64	37.25	49.32	27.64	38.93
Cache	6.44	5.44	5.70	3.56	5.04	6.97	4.51	1.29	1.84
Davis	1.96	3.00	1.57	0.39	2.31	1.77	2.95	2.58	0.49
Morgan	3.13	7.17	2.00	3.71	0.79	2.21	2.74	2.75	2.24
Rich	0.37	0.16	0.34	0.08	0.60	0.09	0.33	0.34	0.10
Summit	4.23	1.69	0.55	2.31	0.46	0.66	0.27	1.15	0.23
Weber	5.33	1.02	2.08	2.03	1.16	1.19	2.19	0.87	0.49
REGIONAL TOTALS	52.05	45.72	52.53	42.40	43.00	50.13	62.31	36.61	44.33
Central Region									
Juab	3.19	3.23	2.85	2.23	1.85	2.12	0.88	2.94	3.33
Salt Lake	5.52	6.23	3.66	3.79	2.36	5.78	3.65	4.12	2.90
Sanpete	0.74	1.14	2.21	2.62	0.69	2.07	1.43	4.63	2.14
Tooele	17.17	15.33	14.16	13.09	12.71	17.08	16.74	20.44	14.56
Utah	6.87	16.24	11.23	6.57	13.96	8.52	5.18	8.05	12.71
Wasatch	0.18	2.64	0.64	0.23	0.42	0.44	1.10	0.20	0.46
REGIONAL TOTALS	33.66	44.82	34.75	28.53	31.99	36.01	28.98	40.37	36.10
Southern Region									
Beaver	0.00	--	0.00	0.00	0.46	0.04	0.00	0.00	0.40
Garfield	0.06	0.00	0.30	0.39	0.23	0.00	0.55	0.34	1.84
Iron	2.02	0.08	0.00	0.00	0.14	--	0.00	0.00	0.00
Kane	0.00	--	0.00	0.00	0.00	--	0.00	0.50	0.13
Millard	3.43	2.84	1.53	1.25	2.54	2.52	1.49	2.47	1.65
Piute	0.55	0.59	0.43	0.70	0.37	0.71	0.70	1.57	0.92
Sevier	0.98	1.69	1.62	2.34	1.57	2.56	1.83	3.59	1.68
Washington	0.18	--	0.00	0.04	0.18	0.04	0.00	0.14	0.00
Wayne	1.23	0.00	0.34	2.19	2.40	2.78	0.33	0.17	1.22
REGIONAL TOTALS	8.46	5.20	4.21	6.92	7.91	8.65	4.90	8.77	7.84
Northeastern Region									
Daggett	0.00	0.00	0.00	0.00	0.18	--	0.00	0.25	0.00
Duchesne	1.41	0.39	0.68	0.59	0.79	0.40	0.49	0.67	1.35
Uintah	1.47	0.16	0.17	1.29	0.18	0.62	0.27	0.50	0.10
REGIONAL TOTALS	2.88	0.55	0.85	1.88	1.16	1.02	0.76	1.43	1.45
Southeastern Region									
Carbon	1.59	0.79	1.40	3.17	2.22	0.26	0.33	5.21	2.34
Emery	0.06	0.39	0.85	7.93	1.90	0.88	0.21	1.99	2.34
Grand	0.67	1.02	3.74	7.89	5.50	0.93	0.76	5.33	5.20
San Juan	0.06	0.75	0.34	0.27	0.46	0.00	0.43	0.22	0.33
REGIONAL TOTALS	2.39	2.96	6.34	19.27	10.08	2.07	1.74	12.76	10.21
Unknown Counties	0.55	0.75	1.19	1.02	5.87	2.12	1.31	0.06	0.07
Mixed Counties	0.00	--	0.13	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100	

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1972-80.

Region and County	Year 1972	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region									
Box Elder	27.51	18.38	25.08	20.53	23.07	26.68	33.14	25.32	29.87
Cache	6.82	7.56	5.68	4.55	6.65	5.51	6.13	2.65	2.70
Davis	1.75	2.55	0.89	1.02	2.40	1.20	1.62	1.45	0.71
Morgan	2.92	4.16	3.77	4.39	2.36	2.21	3.06	2.45	3.23
Rich	0.44	0.19	0.23	0.32	0.69	0.58	0.33	1.10	0.18
Summit	2.63	1.61	1.17	1.27	0.30	0.58	0.44	1.38	0.32
Weber	3.85	2.77	3.54	3.56	1.80	1.40	3.43	1.58	1.10
REGIONAL TOTALS	45.91	37.21	40.36	35.63	37.26	38.15	48.15	35.93	39.10
Central Region									
Juab	2.92	3.78	3.30	3.31	3.73	2.56	1.70	3.20	4.19
Salt Lake	6.82	5.84	6.03	4.07	4.03	3.61	4.98	4.24	3.52
Sanpete	0.93	0.97	2.10	2.96	1.84	2.02	2.47	4.96	2.56
Tooele	17.67	16.51	16.41	15.80	13.77	17.49	19.08	18.39	17.54
Utah	8.08	18.23	14.42	12.71	14.45	13.38	9.45	11.95	13.64
Wasatch	0.63	1.72	0.66	1.05	0.69	0.70	1.03	0.55	0.85
REGIONAL TOTALS	37.05	47.06	42.92	39.89	38.51	39.74	38.71	43.30	42.29
Southern Region									
Beaver	0.10	--	0.00	0.00	0.73	0.19	0.07	0.00	0.50
Garfield	0.10	0.04	0.27	0.06	0.43	0.04	0.33	0.24	0.78
Iron	0.93	0.22	0.00	0.25	0.17	--	0.07	0.07	0.04
Kane	0.00	--	0.00	0.00	0.21	--	0.00	0.21	0.04
Millard	2.04	2.81	2.68	2.10	2.70	3.33	1.85	2.34	1.70
Piute	0.34	0.97	1.36	0.83	1.42	0.93	0.63	2.48	1.78
Sevier	2.73	3.89	2.76	4.74	2.57	4.23	2.92	6.58	4.65
Washington	0.10	--	0.00	0.10	0.21	0.12	0.00	0.10	0.00
Wayne	1.12	0.04	0.43	0.73	0.81	0.62	0.37	0.07	0.46
REGIONAL TOTALS	7.45	7.97	7.50	8.80	9.26	9.46	6.24	12.09	9.94
Northeastern Region									
Daggett	0.18	0.11	0.08	0.10	0.09	--	0.07	0.14	0.04
Duchesne	1.90	0.52	1.24	1.40	0.94	1.86	0.33	0.69	1.14
Uintah	1.70	0.67	1.28	0.79	0.43	1.67	0.18	0.45	0.39
REGIONAL TOTALS	3.80	1.31	2.60	2.29	1.46	3.53	0.59	1.27	1.56
Southeastern Region									
Carbon	2.04	2.13	2.10	3.59	3.00	1.20	0.70	3.41	2.49
Emery	1.22	0.56	1.21	4.48	1.29	1.98	1.44	1.93	1.85
Grand	1.27	1.24	1.21	3.46	3.60	3.10	2.77	1.93	3.13
San Juan	0.19	0.49	0.23	0.45	0.99	0.39	0.33	0.07	0.21
REGIONAL TOTALS	4.72	4.42	4.74	11.98	8.88	6.67	5.24	7.34	7.67
Unknown Counties	1.02	2.02	1.83	1.40	4.63	2.40	1.07	0.07	0.43
Mixed Counties	0.05	--	0.04	0.00	0.00	0.04	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, 1958-80.

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
TOTALS (1958-80)	358,692	1,024,988	1,049,510	0.98	2.86
AVERAGES (1958-79)	15,618	44,249	45,553	0.97	2.83

Table 10. Chukar field bag check summary, 1980.

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											
Cache											
Davis											
Morgan				N O	D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
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	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region											
Carbon	1	3	6	8	133	--	--	--	--	--	--
Emery	12	30	94	30	32	7	14	55	24	44	1.71
Grand	21	45	143	34	24	6	13	45	33	73	2.54
San Juan	1	1	1	0	--	--	--	--	--	--	--
REGIONAL TOTALS	35	79	244	72	30	13	27	100	57	57	2.11
STATE TOTALS											

Table 11. Chukar hunter success trend as determined by field bag checks, 1975-80.

Region and County	1975 Birds/ 100 Hr	1975 Birds/ Hunter	1976 Birds/ 100 Hr	1976 Birds/ Hunter	1977 Birds/ 100 Hr	1977 Birds/ Hunter	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter
Northern Region												
Box Elder	17	1.05	27	1.10	16	0.75	40	1.77	19	0.74	--	--
Cache	53	1.00	18	0.56	2	0.12	1	--	7	6.29	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	25	0.50	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	18	1.04	25	0.98	10	0.47	34	1.48	18	0.71	--	--
Central Region												
Juab	4	0.33	11	1.00	8	0.36	7	0.75	0	0.00	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	21	0.84	21	1.39	10	0.18	33	2.08	89	3.88	--	--
Utah	7	0.29*	11	0.50	33	0.00	75	2.50	15	0.52	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	17	0.78	16	1.13	10	0.27	40	2.15	28	1.02	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	233	1.75	--	--	--	--	76	1.46	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	22	0.72	37	1.54	1	--	--	--	--	--	--	--
Piute	100	0.50	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	22	0.70	40	1.60	1	--	--	--	76	1.46	--	--
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	33	0.50	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	33	0.50	--	--	--	--	--	--
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	47	1.75	9	1.00	--	--	--	--	--	--	44	1.71
Grand	53	2.73	20	2.08	10	0.20	--	--	108	3.83	73	2.54
San Juan	34	1.14	56	2.00	--	--	--	--	--	--	--	--
REGIONAL TOTALS	48	1.68	22	1.95	10	0.20	--	--	108	3.83	57	2.11
STATE TOTALS	24	0.95	24	1.11	10	0.44	36	1.60	29	1.07	--	--

*Chukars per hunter index based on all hunts.

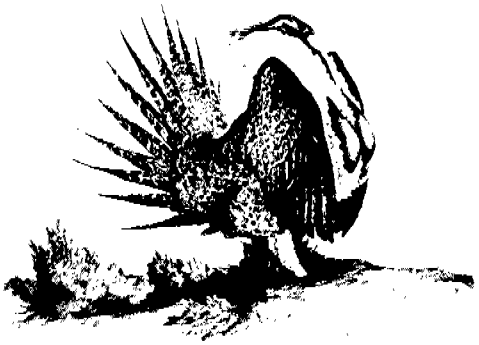
SAGE GROUSE

SUMMARY

Harvest data for 1979 indicated a good breeding population of sage grouse for 1980. Strutting ground surveys were hampered by poor access but did indicate a drop in male attendance from 1979.

Brood surveys showed decreased populations throughout the state during 1980. Birds observed per 100 hours decreased 40 percent compared to 1979 but still remained about average.

The lower production in 1980 was apparent in harvest statistics collected from questionnaires and from field bag checks. Total statewide harvest decreased by 19 percent but still remained 46 percent above the 17-year average. Total hunters and hunter-days afield both decreased but remained well above average. Sage grouse bagged per hunter and per hunter-day likewise showed a decrease over 1979.



Strutting Ground Counts

The status of the sage grouse breeding population for 1980, as indicated by strutting ground counts, is shown in Table 1 of this section. Results of this survey for 1980 compared to 1979 and the 1967-79 average follow:

	1980	Percent change from 1979	Percent change from Average
Number of grounds counted	116	-3	+10
Total grouse counted	2,148	-24	-3
Average male grouse per ground	19	-17	-14
Percent change from previous year (comparable grounds)	-20	--	--

Access for spring 1980 strutting ground counts was poor in eastern areas of the state, but access was not as bad as in 1979. A late spring, due to above average precipitation and below normal temperatures in May, contributed to below average counts in all regions except the Northern. Counts were down 32 percent in the Southern Region, 24 percent in the Central Region, 48 percent in the Northeastern Region and 33 percent in the Southeastern region. The statewide index for comparable grounds was down 20 percent. Harvest data for 1979 indicated above average populations going into the 1979-80 winter. Declines in breeding populations appeared to be the case for most areas of the state, except the northern portion, in 1980.

Brood Counts

Results of the survey for 1980 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 1980 are compared to 1979 and the previous 10-year average as follows:

	1980	Percent change from 1979	Percent change from Average
Total sage grouse counted	2,526	-37	-23
Young per 100 adults	163	-7	+13
Mean brood size	4.51	-5	0
Sage grouse observed per 100 hours	374	-40	-2
Total hours effort	676	+5	-23

The effort devoted to sage grouse brood counts was 23 percent below average, and the total number of grouse counted was 23 percent below average.

Good production occurred considering the decreased breeding population. Sage grouse density decreased from 1979, and sage grouse numbers were lower statewide.

Harvest

Hunter Questionnaire

Results of the 1980 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 1980 hunting season compared to 1979 and the 1963-79 average follow:

	1980	Percent change from 1979	Percent change from Average
Sage grouse hunters	15,219	-10	+39
Sage grouse harvested	22,770	-19	+46
Hunter-days afield	26,893	-12	+44
Sage grouse per hunter-day	0.85	-8	+2
Sage grouse per hunter	1.50	-10	+6

The lower production in 1980 was quite apparent in the harvest. Total statewide harvest decreased 19 percent. Total sage grouse hunters and hunter-days afield both decreased, probably in response to reduced success. Hunter success decreased in every region except the Northern Region in Box Elder County, where harvest and hunting pressure increased substantially.

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

Field Bag Checks

A summary of field bag check data for 1980 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12. Results of the 1980 survey compared to 1979 and the 1969-79 average follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Sage grouse per hunter (complete hunts)		INCOMPLETE INFORMATION	
Sage grouse bagged per 100 hours			
Average hours per hunter-day (complete hunts)			
Hours hunted per grouse bagged			

Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1980 is found in Table 13 and the trend from 1976-80 in Table 14.

Following are data derived from wing surveys in 1980 compared to 1979 and the 1975-79 averages:

	1980	Percent change from 1979	Percent change from Average
Sample size	1,580	-19	+2
Percent males	41	-2	-7
Percent females	59	+2	+5
Young per 100 adults	101	-19	-36
Young per 100 hens (adult)	153	-22	-58

Analysis of wings collected at checking stations during the 1980 season also indicates that production was down compared to 1979. This was particularly true for northern and central portions of the state and specifically Box Elder, Rich and Summit counties.

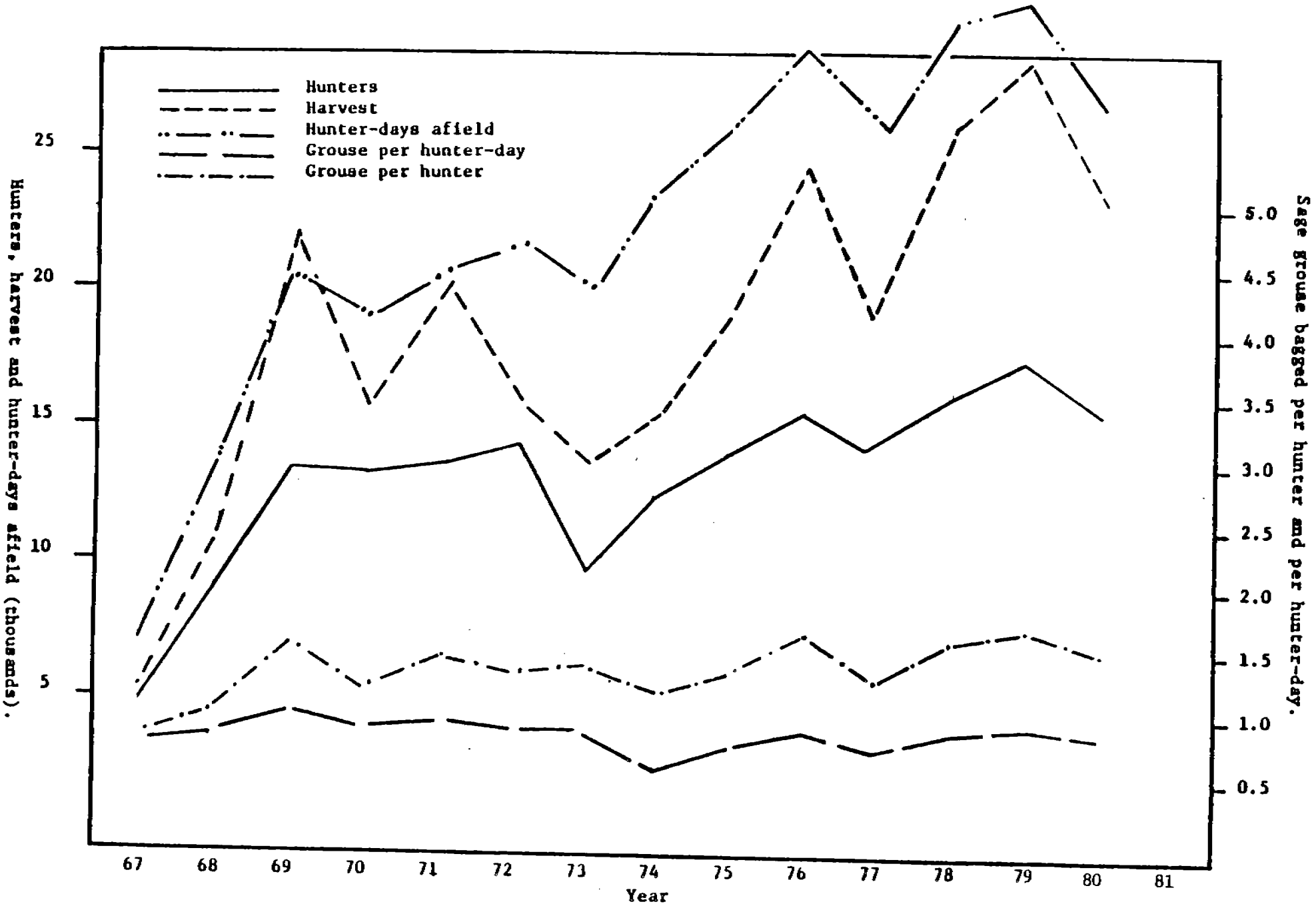


Figure 1. Statewide trend of sage grouse harvest statistics.

Table 1. Summary of sage grouse strutting counts by region and county, 1979-80.

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Northern Region											
BOX ELDER											
No. strutting grounds counted	21	21	20	21	25	19	15	22	18	24	28
Total grouse counted	556	479	422	325	306	346	239	621	452	763	899
County average (all strutting grounds)	27	23	21	16	12	18	16	28	25	32	32
% change from previous year - comparable grounds	8	14	-10	-30	-19	+29	0	+53	+3	+69	+9
CACHE											
No. strutting grounds counted	2	3	3	2	3	3	3	3	1	3	1
Total grouse counted	59	58	57	50	44	100	35	45	15	32	18
County average (all strutting grounds)	30	23	19	25	15	33	12	15	15	11	18
% change from previous year - comparable grounds	+31	+7	-16	+6	-14	+133	-68	+29	-40	0	+20
MORGAN											
No. strutting grounds counted	2	2	3	3	3	3	3	3	3	3	3
Total grouse counted	45	35	53	61	63	41	52	43	111	75	131
County average (all strutting grounds)	23	18	18	20	21	14	17	14	37	25	44
% change from previous year - comparable grounds	-47	-22	+29	+15	+3	-35	+27	-17	+158	-32	+76
RICH											
No. strutting grounds counted	8	7	9	12	14	10	8	13	15	11	11
Total grouse counted	324	240	254	299	389	268	326	321	417	382	236
County average (all strutting grounds)	41	34	28	25	28	27	41	25	28	35	21
% change from previous year - comparable grounds	-20	-12	-18	-13	+31	-32	+57	-13	+17	+11	-40

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
SUMMIT											
No. strutting grounds counted	5	5	5	5	5	4	6	6	6	8	1
Total grouse counted	185	223	152	13	113	88	107	169	91	116	15
County average (all strutting grounds)	37	45	30	28	23	22	18	28	15	15	15
% change from previous year - comparable grounds	+10	+21	-32	-18	-18	-30	-10	+52	-29	+5	+15
REGIONAL TOTALS											
No. strutting grounds counted	37	38	40	43	50	39	35	47	43	49	44
Total grouse counted	1,147	1,045	938	873	915	843	759	1,199	1,086	1,368	1,299
County average (all strutting grounds)	31	28	23	20	18	22	23	26	25	28	30
% change from previous year - comparable grounds	-9	-16	-16	-20	-1	-1	+8	+19	+10	+29	-2
Southern Region											
GARFIELD											
No. strutting grounds counted	13	14	14	14	14	14	14	10	11	9	8
Total grouse counted	322	351	330	166	327	233	201	192	224	211	97
County average (all strutting grounds)	25	25	24	12	23	17	14	19	20	23	12
% change from previous year - comparable grounds	+31	0	-7	-50	+114	-35	-14	+2	+24	0	-48
WAYNE											
No. strutting grounds counted	11	11	12	10	11	11	13	12	12	9	8
Total grouse counted	458	248	311	231	237	160	260	256	166	221	32
County average (all strutting grounds)	42	23	26	23	22	15	20	21	14	25	4
% change from previous year - comparable grounds	-15	-46	+18	-21	+3	-33	+3	+19	-31	-59	--

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
BEAVER											
No. strutting grounds counted	2	5	5	5	5	6	8	7	7	6	5
Total grouse counted	47	141	153	82	110	122	108	90	66	134	113
County average (all strutting grounds)	24	28	31	16	22	20	14	13	9	22	23
% change from previous year - comparable grounds	-41	-49	+9	-47	+34	+1	-32	+8	-27	+137	+5
PIUTE											
No. strutting grounds counted	1	1	1	1	--	--	--	--	--	--	--
Total grouse counted	7	7	5	0	--	--	--	--	--	--	--
County average (all strutting grounds)	7	7	5	--	--	--	--	--	--	--	--
% change from previous year - comparable grounds	+17	0	-29	--	--	--	--	--	--	--	--
IRON											
No. strutting grounds counted	4	6	7	0	9	9	9	5	10	5	6
Total grouse counted	64	47	66	0	86	51	26	54	87	83	84
County average (all strutting grounds)	16	8	9	--	10	6	3	11	9	17	14
% change from previous year - comparable grounds	-9	-50	+42	--	--	-41	-50	+108	+11	+48	+1
SEVIER											
No. strutting grounds counted	1	1	1	1	1	--	2	3	4	4	--*
Total grouse counted	0	0	0	0	9	--	2	26	23	9	--
County average (all strutting grounds)	0	0	0	--	9	--	1	9	6	2	--
% change from previous year - comparable grounds	--	--	--	--	--	--	--	+200	-11	60	--

*Poor counting conditions due to snow.

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
MILLARD											
No. strutting grounds counted	--	--	--	--	--	--	1	1	1	--	--*
Total grouse counted	--	--	--	--	--	--	11	3	14	--	--
County average (all strutting grounds)	--	--	--	--	--	--	11	3	14	--	--
% change from previous year - comparable grounds	--	--	--	--	--	--	---	-73	+367	--	--
REGIONAL TOTALS											
No. strutting grounds counted	33	38	40	31	40	40	47	37	45	33	25
Total grouse counted	928	794	865	479	769	566	608	618	580	691	326
County average (all strutting grounds)	28	21	22	15	19	14	13	17	13	21	13
% change from previous year - comparable grounds	-5	-30	+7	-40	+49	-30	-13	+14	-13	-22	-32
Central Region											
SANPETE											
No. strutting grounds counted	0	2	1	2	2	2	2	2	2	2	2
Total grouse counted	0	13	2	0	0	5	10	4	7	6	9
County average (all strutting grounds)	0	7	2	--	--	3	5	2	4	3	5
% change from previous year - comparable grounds	0	--	-75	--	--	--	+100	-60	+75	-14	+17
TOOELE											
No. strutting grounds counted	3	4	5	5	5	5	5	5	5	5	5
Total grouse counted	74	92	128	60	95	59	80	77	37	116	131
County average (all strutting grounds)	25	23	26	12	19	12	16	15	7	23	26
% change from previous year - comparable grounds	-23	-16	0	-35	+43	-30	+15	-4	-52	-38	+13

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
WASATCH											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total grouse counted	100	70	102	52	99	201	216	206	184	119	45
County average (all strutting grounds)	50	35	51	26	50	101	108	103	92	60	23
% change from previous year - comparable grounds	--	-30	+46	-49	+90	+103	+7	-5	-11	-35	-62
REGIONAL TOTALS											
No. strutting grounds counted	5	8	8	9	9	9	9	9	9	9	9
Total grouse counted	174	175	232	112	194	265	306	287	228	197	185
County average (all strutting grounds)	35	22	29	12	22	29	34	32	25	22	21
% change from previous year - comparable grounds	-23	-24	+15	-42	+65	+45	+12	-6	-21	-35	-24
Northeastern Region											
DAGGETT											
No. strutting grounds counted	1	4	4	5	4	3	3	3	3	3	5
Total grouse counted	26	37	26	41	53	30	40	55	78	47	51
County average (all strutting grounds)	26	9	7	8	13	10	13	18	26	16	10
% change from previous year - comparable grounds	--	-39	28	+31	-5	-19	+33	+38	+42	-40	-19
DUCHESNE											
No. strutting grounds counted	2	3	5	5	11	11	15	14	14	10	16
Total grouse counted	27	27	74	43	172	172	245	161	227	93	120
County average (all strutting grounds)	14	9	15	9	16	16	16	12	16	9	8
% change from previous year - comparable grounds	--	-26	0	-41	+44	-5	-14	-20	+37	-35	+5

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
UINTAH											
No. strutting grounds counted	4	5	6	11	11	9	10	11	13	11	12
Total grouse counted	105	63	118	156	163	240	257	245	454	338	126
County average (all strutting grounds)	26	13	20	14	15	27	26	22	35	31	11
% change from previous year - comparable grounds	-32	-42	+77	-25	+8	+29	0	-16	+63	-18	-67
REGIONAL TOTALS											
No. strutting grounds counted	7	12	15	21	26	23	28	28	30	24	33
Total grouse counted	158	127	218	240	388	442	542	461	759	478	297
County average (all strutting grounds)	23	11	15	11	15	19	19	17	25	20	9
% change from previous year - comparable grounds	-32	-39	+32	-25	+13	+12	-3	-13	+51	-25	-48
Southeastern Region											
CARBON											
No. strutting grounds counted	1	3	1	0	8	2	5	9	5	--	--
Total grouse counted	39	58	40	0	77	65	134	140	41	--	--
County average (all strutting grounds)	39	19	40	--	10	33	27	16	8	--	--
% change from previous year - comparable grounds	--	0	+2	--	--	+48	+83	-10	-64	--	--
EMERY											
No. strutting grounds counted	3	3	3	0	3	--	1	2	1	--	--
Total grouse counted	8	3	11	0	2	--	13	33	12	--	--
County average (all strutting grounds)	3	1	4	--	1	--	13	17	12	--	--
% change from previous year - comparable grounds	-82	-63	+270	--	--	--	--	+23	-25	--	--

Table 1 (continued)

Region and County	Year										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
SAN JUAN											
No. strutting grounds counted	6	6	6	4	6	6	6	4	5	4	5
Total grouse counted	115	152	168	105	137	115	98	117	96	67	41
County average (all strutting grounds)	19	25	28	26	23	19	16	29	18	17	8
% change from previous year - comparable grounds	+38	+32	+11	+42	-19	-9	-14	+22	-17	+1	-33
REGIONAL TOTALS											
No. strutting grounds counted	10	12	10	4	17	8	12	15	11	4	5
Total grouse counted	121	213	219	105	216	180	245	290	149	67	41
County average (all strutting grounds)	12	18	22	26	13	23	20	19	14	17	8
% change from previous year - comparable grounds	+3	+20	+13	+42	-19	+21	+20	+4	-37	+1	-33
STATE TOTALS											
No. strutting grounds counted	92	108	113	108	142	119	131	136	138	120	116
Total grouse counted	2,528	2,354	2,472	1,809	2,482	2,296	2,460	2,855	2,802	2,808	2,148
County average (all strutting grounds)	28	22	22	17	18	19	19	21	20	23	19
% change from previous year - comparable grounds	-8	-17	-1	-26	+17	-4	+2	+6	-15	-13	-20

Table 2. Sage grouse summer inventory summary, 1980.

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	22	22	74	3.36	18	49	107	147	123	84	71	9	38	0	47	575
Cache	1	1	1	1.00	9	29	0	10	30	300	0	13	13	0	26	154
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	5	5	28	5.60	3	4	28	36	32	89	0	1	14	0	15	427
Rich	14	14	47	3.36	8	9	150	172	56	33	417	22	6	30	58	393
Summit	9	9	34	3.78	0	0	37	46	34	74	515	24	41	7	72	111
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	51	51	184	3.61	38	91	322	411	275	67	1,003	69	112	37	218	315
Central Region																
Juab	5	5	25	5.00	8	22	10	23	47	204	128	9	25	0	34	206
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	12	12	67	5.58	2	5	13	27	72	267	248	5	21	5	31	319
Tooele	32	32	131	4.09	14	36	71	117	167	143	172	23	9	8	40	710
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	22	22	90	4.09	11	12	27	60	102	170	258	24	11	10	45	360
REGIONAL TOTALS	71	71	313	4.41	35	75	121	227	388	171	806	61	66	23	150	410
Southern Region																
Beaver	7	7	29	4.14	15	25	16	38	54	142	150	6	0	4	10	920
Garfield	7	7	35	5.00	11	34	0	18	69	383	111	33	5	0	38	229
Iron	8	8	33	4.12	3	2	2	13	35	269	0	0	14	0	14	342
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	13	13	60	4.60	4	10	11	28	70	291	257	29	0	3	32	338
REGIONAL TOTALS	35	35	157	4.48	33	71	29	97	228	235	518	68	19	7	94	346
Northeastern Region																
Daggett	16	16	76	4.70	18	38	23	57	114	200	299	16	6	7	29	489
Duchesne	33	33	146	4.40	20	48	25	78	194	248	419	33	18	10	61	446
Uintah	51	51	283	5.50	26	74	12	89	357	401	753	84	8	2	94	474
REGIONAL TOTALS	100	100	505	5.00	64	160	60	224	665	297	1,471	133	32	19	184	483
Southeastern Region																
Carbon	0	0	0	--	0	1	0	0	1	--	134	19	0	1	20	5
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	0	0	0	--	2	8	0	2	8	400	144	8	0	2	10	100
REGIONAL TOTALS	0	0	0	--	2	9	0	2	9	450	278	27	0	3	30	36
STATE TOTALS	257	257	1159	4.51	172	406	532	961	1,565	163	4,076	358	229	89	676	374

Table 3. Trend of sage grouse young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	62	75	83	225	119	106	250	75	125	81	84	
Cache	10	168	171	80	161	329	486	450	--	0	300	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	400	58	600	245	131	64	71	35	414	66	89	
Rich	133	137	55	132	153	94	106	81	273	101	33	
Summit	211	158	173	146	275	52	247	106	316	221	74	
Weber	--	325	144	500	--	--	200	0	--	--	--	
REGIONAL TOTALS	94	135	99	167	131	102	170	77	194	99	67	127
Central Region												
Juab	117	--	1800	500	--	--	--	76	46	262	204	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	84	288	177	138	89	280	414	257	224	154	267	
Tooele	215	188	322	318	314	168	286	123	283	449	143	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	205	212	145	68	101	118	123	54	93	163	170	
REGIONAL TOTALS	170	208	216	106	141	138	187	77	112	204	171	156
Southern Region												
Beaver	--	250	467	329	219	205	181	69	156	100	142	
Garfield	107	93	93	121	143	277	174	174	176	272	383	
Iron	214	183	37	350	46	--	--	80	313	229	269	
Kane	300	--	336	450	--	--	0	--	--	57	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	317	67	0	--	--	--	--	
Sevier	--	--	--	500	400	0	533	0	625	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	347	63	62	394	166	545	286	115	308	288	291	
REGIONAL TOTALS	186	85	76	311	157	287	194	103	224	230	235	185
Northeastern Region												
Daggett	344	168	273	150	266	51	190	169	198	169	200	
Duchesne	77	230	219	--	161	120	161	53	199	127	248	
Uintah	419	339	105	312	446	107	249	235	269	279	401	
REGIONAL TOTALS	305	278	134	234	321	97	206	154	226	191	297	215
Southeastern Region												
Carbon	167	145	125	328	185	116	214	46	164	400	--	
Emery	100	--	--	--	0	--	--	--	--	--	--	
Grand	--	275	--	0	--	400	25	3	--	71	--	
San Juan	28	70	26	375	82	47	22	24	94	--	400	
REGIONAL TOTALS	30	81	56	340	100	63	68	25	142	223	450	113
STATE TOTALS	117	138	100	195	160	120	171	87	181	175	163	144

Table 4. Trend of sage grouse mean brood size, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	4.13	4.25	3.93	4.69	4.07	3.81	5.59	4.36	4.76	4.32	3.36	
Cache	5.00	4.50	4.88	4.00	4.62	5.00	6.25	4.50	--	--	1.00	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	4.00	5.50	6.00	4.40	4.75	3.80	4.25	3.50	6.44	4.00	5.60	
Rich	4.68	4.44	4.69	4.48	3.91	4.00	6.04	3.83	5.24	4.58	3.36	
Summit	5.00	5.58	4.73	4.56	5.00	3.75	5.00	4.50	5.77	5.00	3.78	
Weber	--	4.33	6.50	5.00	--	--	2.00	--	--	--	--	
REGIONAL TOTALS	4.55	4.98	4.58	4.55	4.17	4.03	5.45	4.17	5.20	4.52	3.61	4.62
Central Region												
Juab	3.50	--	7.50	5.00	--	--	--	4.50	3.33	4.25	5.00	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	4.50	6.00	5.33	4.75	4.00	4.00	5.67	3.20	4.57	6.44	5.58	
Tooele	4.44	4.19	4.81	4.90	5.25	5.50	5.07	4.17	5.13	5.64	4.09	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	4.52	2.94	3.06	4.00	4.24	3.86	4.70	3.27	4.90	4.90	4.09	
REGIONAL TOTALS	4.45	3.94	3.90	4.38	4.49	4.22	4.98	3.44	4.82	5.18	4.41	4.38
Southern Region												
Beaver	--	5.00	3.83	4.31	3.64	3.90	4.95	3.57	4.29	4.00	4.14	
Garfield	3.67	3.73	3.25	3.50	5.41	4.18	3.50	4.00	4.00	4.39	5.00	
Iron	3.67	4.33	3.71	5.33	6.33	--	--	3.00	5.50	4.68	4.12	
Kane	3.00	--	4.00	4.50	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	5.67	1.00	--	--	--	--	--	
Sevier	--	--	--	5.00	4.00	--	5.33	--	6.25	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	3.55	4.02	3.36	5.17	4.70	5.45	3.95	4.40	4.56	4.74	4.60	
REGIONAL TOTALS	3.60	4.10	3.53	4.72	4.54	4.27	4.18	4.00	4.55	4.61	4.48	4.21
Northeastern Region												
Daggett	4.37	4.00	3.80	4.65	4.93	3.25	4.55	4.80	5.05	5.10	4.75	
Duchesne	5.00	5.17	5.40	--	3.82	3.60	4.11	3.56	5.00	4.73	4.42	
Uintah	4.44	5.19	4.60	4.60	5.06	4.69	5.21	4.48	4.87	4.67	5.55	
REGIONAL TOTALS	4.46	5.04	4.60	4.62	4.82	4.24	4.70	4.30	4.94	4.79	5.05	4.65
Southeastern Region												
Carbon	5.00	4.67	4.14	3.50	3.92	2.67	5.05	4.14	5.17	2.67	--	
Emery	1.00	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	4.00	3.00	--	--	5.00	--	
San Juan	4.29	5.10	3.93	5.67	6.65	3.50	--	3.29	--	--	--	
REGIONAL TOTALS	4.00	5.00	4.05	4.43	5.47	3.17	4.77	3.71	5.17	3.25	--	4.30
STATE TOTALS	4.28	4.62	4.16	4.58	4.57	4.15	4.89	3.99	4.97	4.77	4.51	4.50

Table 5. Trend of sage grouse observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	365	253	467	166	459	187	457	670	452	1,835	575	
Cache	431	229	183	150	250	261	410	29	--	0	154	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	333	176	111	345	514	140	433	218	160	412	427	
Rich	987	228	348	298	428	452	724	580	838	952	393	
Summit	161	420	349	119	188	109	268	361	369	226	111	
Weber	--	155	92	40	--	--	12	--	--	--	--	
REGIONAL TOTALS	387	288	319	188	398	204	429	461	400	545	315	362
Central Region												
Juab	217	0	181	30	--	0	0	580	255	588	206	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	123	107	106	135	85	86	263	255	594	743	319	
Tooele	194	342	786	161	665	257	781	311	265	776	710	
Utah	0	--	--	--	--	--	--	--	--	--	--	
Wasatch	321	377	364	666	529	520	1,353	1,253	767	652	360	
REGIONAL TOTALS	208	230	341	244	402	329	740	618	556	695	410	436
Southern Region												
Beaver	--	420	486	277	460	188	555	428	242	89	920	
Garfield	409	604	358	258	603	112	226	211	545	468	229	
Iron	346	426	1,133	200	241	--	--	771	220	1,315	342	
Kane	80	--	253	550	--	--	233	0	--	588	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	833	62	100	--	--	--	--	
Sevier	--	--	--	--	500	0	950	83	207	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	447	2,061	555	742	335	209	491	240	444	494	338	
REGIONAL TOTALS	338	911	494	393	413	134	348	265	380	617	346	434
Northeastern Region												
Daggett	414	835	346	308	381	132	352	575	637	1,274	489	
Duchesne	100	159	118	0	196	84	347	446	392	458	446	
Uintah	474	735	594	310	459	386	716	513	397	705	474	
REGIONAL TOTALS	319	523	349	233	358	217	473	509	427	673	483	408
Southeastern Region												
Carbon	59	45	309	500	146	49	147	283	295	200	5	
Emery	33	0	--	--	11	0	--	0	0	--	--	
Grand	0	133	25	25	--	500	1,125	550	71	240	--	
San Juan	653	560	775	300	856	321	304	341	194	--	100	
REGIONAL TOTALS	451	218	432	215	360	128	220	332	237	210	36	280
STATE TOTALS	346	383	373	237	387	196	428	445	407	621	374	382

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	160	4,699	7,075	1.51	17.48	31.07
Cache	43	1,137	696	0.61	4.23	3.06
Davis	8	509	136	0.27	1.89	0.60
Morgan	18	475	271	0.57	1.77	1.19
Rich	93	2,460	1,306	0.53	9.15	5.74
Summit	64	1,663	797	0.48	6.18	3.50
Weber	18	441	373	0.85	1.64	1.64
REGIONAL TOTALS	404	11,384	10,655	0.94	42.33	46.80
Central Region						
Juab[1]	9	271	255	0.94	1.01	1.12
Salt Lake[1]	8	238	153	0.64	0.88	0.67
Sanpete	15	543	305	0.56	2.02	1.34
Tooele	32	865	747	0.86	3.22	3.28
Utah	45	1,510	865	0.57	5.62	3.80
Wasatch	101	2,358	1,357	0.58	8.77	5.96
REGIONAL TOTALS	210	5,786	3,682	0.64	21.51	16.17
Southern Region						
Beaver	22	628	543	0.86	2.33	2.38
Garfield	36	1,001	1,205	1.20	3.72	5.29
Iron	12	288	238	0.82	1.07	1.04
Kane	0	0	0	0.00	0.00	0.00
Millard	3	170	118	0.70	0.63	0.52
Piute	12	475	373	0.79	1.77	1.64
Sevier	24	814	475	0.58	3.03	2.09
Washington[1]	3	68	119	1.75	0.25	0.52
Wayne	34	967	1,154	1.19	3.60	5.07
REGIONAL TOTALS	146	4,411	4,225	0.96	16.40	18.55
Northeastern Region						
Daggett	12	373	288	0.77	1.39	1.27
Duchesne	44	1,595	1,120	0.70	5.93	4.92
Uintah	63	1,849	1,731	0.94	6.88	7.60
REGIONAL TOTALS	119	3,817	3,139	0.82	14.20	13.79
Southeastern Region						
Carbon	44	967	509	0.53	3.60	2.24
Emery	9	322	407	1.26	1.20	1.79
Grand	2	34	51	1.50	0.12	0.22
San Juan	5	102	17	0.17	0.38	0.07
REGIONAL TOTALS	60	1,425	984	0.69	5.30	4.32
Unknown counties	3	68	85	1.25	0.35	0.37
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	942	26,893	22,770	0.85	100	100

*Total hunter trips from questionnaire returns.

[1]Closed to sage grouse hunting.

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1974-80.

Region and County	Year						
	1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	0.68	0.85	1.02	0.70	1.12	1.27	1.51
Cache	0.52	0.78	0.78	0.51	0.43	0.74	0.61
Davis	0.25	0.60	0.43	0.45	0.53	0.00	0.27
Morgan	0.34	0.63	0.50	0.57	0.69	0.68	0.57
Rich	0.52	0.47	0.77	0.59	0.87	0.76	0.53
Summit	0.63	0.63	0.80	0.61	0.80	0.77	0.48
Weber	0.70	0.75	0.79	0.79	0.84	0.58	0.85
REGIONAL TOTALS	0.56	0.70	0.77	0.61	0.80	0.87	0.94
Central Region							
Juab	0.73	0.50	1.11	0.64	0.86	1.24	0.94
Salt Lake	*	*	*	*	0.38*	0.87*	0.64*
Sanpete	0.50	*	1.37	0.61	0.55	0.59	0.56
Tooele	0.72	0.45	0.54	0.60	0.54*	0.69*	0.86
Utah	0.53	0.56	0.47	1.19	0.74	0.90	0.57
Wasatch	0.91	0.91	0.80	0.71	0.71	0.67	0.58
REGIONAL TOTALS	0.55	0.66	0.71	0.73	0.69	0.76	0.64
Southern Region							
Beaver	0.58	0.37	0.98	0.83	1.12	1.06	0.86
Garfield	0.81	1.16	0.90	0.71	1.09	1.24	1.20
Iron	1.89	0.57	1.20	0.84	0.71	0.50	0.82
Kane	0.67	0.00	0.00	2.00	3.00	0.00	0.00
Millard	2.50	0.00	0.33	0.50	0.50	0.00	0.70
Piute	0.55	0.94	1.50	0.57	0.46	0.92	0.79
Sevier	0.92	0.74	0.77	0.48	1.07	0.55	0.58
Washington	*	*	*	*	2.00*	2.00*	1.75
Wayne	1.00	0.91	1.26	0.69	0.94	1.49	1.19
REGIONAL TOTALS	0.92	0.85	0.96	0.69	0.99	1.11	0.96
Northeastern Region							
Daggett	1.07	0.68	1.19	1.50	1.15	1.28	0.77
Duchesne	0.64	0.94	1.05	0.84	1.14	1.26	0.70
Uintah	1.12	0.95	1.36	1.22	1.21	1.21	0.94
REGIONAL TOTALS	0.92	0.90	1.29	1.14	1.18	1.23	0.82
Southeastern Region							
Carbon	0.76	0.95	1.26	0.85	0.93	0.82	0.53
Emery	1.00	0.18	0.50	0.33	1.14	0.92	1.26
Grand	*	--	2.00	0.00	1.33	0.00	1.50
San Juan	0.75	0.67	0.00	2.00	1.37	0.25	0.17
REGIONAL TOTALS	0.77	0.82	1.24	0.79	1.03	0.77	0.69
Unknown counties	0.36	0.43	0.87	0.46	0.55	1.95	1.25
Mixed counties	--	--	3.00	2.00	2.40	0.00	0.00
Illegal areas	1.50	1.68	0.36	0.51	0.75	0.00	0.00
STATE TOTALS	0.65	0.74	0.87	0.72	0.87	0.92	0.85

*Closed season.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1974-80.

Region and County	Year 1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	6.74	8.58	8.32	7.04	14.04	15.08	31.07
Cache	9.99	10.73	11.53	5.75	4.71	6.59	3.06
Davis	0.25	0.77	1.89	0.81	0.62	0.00	0.60
Morgan	2.00	2.06	1.57	2.19	2.39	2.37	1.19
Rich	6.87	4.03	10.22	6.56	7.41	10.91	5.74
Summit	6.37	7.04	4.28	7.85	4.94	6.33	3.50
Weber	5.37	6.18	4.45	3.89	4.55	1.80	1.64
REGIONAL TOTALS	37.58	39.40	42.26	34.09	38.66	43.13	46.80
Central Region							
Juab	1.00	0.26	1.73	1.46	0.93*	1.34*	1.12*
Salt Lake	*	*	*	*	0.23*	1.34*	0.67*
Sanpete	0.62	*	3.95	2.02	1.39	1.80	1.34
Tooele	5.24	1.89	3.54	5.59	1.00*	0.57	3.28
Utah	5.74	8.93	2.64	7.21	5.48	4.84	3.80
Wasatch	3.62	6.09	3.95	8.26	8.64	6.18	5.96
REGIONAL TOTALS	17.85	21.46	16.47	25.75	17.67	16.06	16.17
Southern Region							
Beaver	1.37	0.60	3.79	1.54	1.39	0.87	2.38
Garfield	4.87	6.87	3.79	3.32	5.40	4.32	5.29
Iron	2.12	1.12	0.49	1.30	1.16	0.26	1.04
Kane	0.25	0.00	0.00	0.16	0.23	0.00	0.00
Millard	0.62	0.00	0.25	0.40	0.15	0.00	0.52
Piute	0.75	1.29	0.49	0.32	0.46	1.13	1.64
Sevier	2.75	3.86	1.98	1.21	2.24	1.03	2.09
Washington	*	*	*	*	0.77*	0.10*	0.52*
Wayne	6.99	7.47	5.52	3.97	3.55	6.07	5.07
REGIONAL TOTALS	19.98	21.37	16.31	12.39	15.35	13.79	18.55
Northeastern Region							
Daggett	1.87	1.29	1.57	2.67	2.39	3.29	1.27
Duchesne	4.00	2.75	1.89	3.97	5.56	6.28	4.92
Uintah	8.36	6.44	9.88	12.63	10.73	9.68	7.60
REGIONAL TOTALS	14.23	10.47	13.34	19.27	18.67	19.25	13.79
Southeastern Region							
Carbon	3.12	5.32	4.04	4.86	4.40	4.27	2.24
Emery	0.37	0.17	0.08	0.32	1.93	1.24	1.79
Grand	*	--	0.16	0.00	0.31	0.00	0.22
San Juan	0.75	0.69	0.00	0.32	0.85	0.15	0.07
REGIONAL TOTALS	4.24	6.18	4.28	5.51	7.48	5.66	4.32
Unknown counties	4.24	1.12	5.60	2.51	1.23	2.11	0.37
Mixed counties	1.87	--	1.73	0.49	0.93	0.00	0.00
Illegal areas	1.87	4.46	0.66	1.37	2.93	2.78	2.31
STATE TOTALS	100	100	100	100	100	100	100

*Closed season.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1974-80.

Region and County	Year 1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	6.38	7.45	7.06	7.31	10.92	10.96	17.48
Cache	12.44	10.16	12.77	8.13	9.58	8.16	4.23
Davis	0.65	0.95	3.78	1.29	1.01	0.00	1.89
Morgan	3.80	2.40	2.71	2.75	3.02	3.23	1.77
Rich	8.48	6.25	11.41	8.02	7.37	13.19	9.15
Summit	6.54	8.27	4.64	9.25	5.36	7.64	6.18
Weber	4.93	6.06	4.85	3.57	4.69	2.85	1.64
REGIONAL TOTALS	43.21	41.54	47.22	40.32	41.96	46.03	42.33
Central Region							
Juab	0.89	0.38	1.36	1.64	0.94*	1.00*	1.01*
Salt Lake	*	*	*	*	0.54*	1.42*	0.88*
Sanpete	0.81	*	2.50	2.40	2.21	2.80	2.02
Tooele	4.68	3.09	5.71	6.73	1.61*	0.76*	3.22
Utah	6.95	11.81	4.85	4.39	6.43	4.98	5.62
Wasatch	2.58	4.92	4.28	8.43	10.59	8.49	8.77
REGIONAL TOTALS	20.84	23.99	19.97	25.34	22.32	19.45	21.51
Southern Region							
Beaver	1.53	1.20	3.35	1.35	1.07	0.76	2.33
Garfield	3.88	4.36	3.64	3.39	4.29	3.23	3.72
Iron	0.73	1.45	0.36	1.11	1.41	0.47	1.07
Kane	0.24	0.25	0.21	0.06	0.07	0.00	0.00
Millard	0.16	0.25	0.64	0.59	0.27	0.28	0.63
Piute	0.89	1.01	0.29	0.41	0.87	1.14	1.77
Sevier	1.94	3.85	2.21	1.81	1.81	1.80	3.03
Washington	*	*	*	*	0.34*	0.05*	0.25*
Wayne	4.52	6.06	3.78	4.15	3.28	3.75	3.60
REGIONAL TOTALS	13.97	18.50	14.76	13.05	13.40	11.48	16.40
Northeastern Region							
Daggett	1.13	1.39	1.14	1.29	1.81	2.37	1.39
Duchesne	4.04	2.15	1.57	3.39	4.22	4.60	5.93
Uintah	4.85	4.99	6.28	7.49	7.71	7.40	6.88
REGIONAL TOTALS	10.02	8.52	8.99	12.17	13.74	14.37	14.20
Southeastern Region							
Carbon	2.67	4.10	2.78	4.15	4.09	4.79	3.60
Emery	0.24	0.69	0.14	0.70	1.47	1.23	1.20
Grand	*	0.00	0.07	0.06	0.20	0.14	0.12
San Juan	0.65	0.76	0.00	0.12	0.54	0.57	0.38
REGIONAL TOTALS	3.55	5.56	3.00	5.03	6.30	6.74	5.30
Unknown counties	7.59	1.89	5.56	3.92	1.94	1.93	0.25
Mixed counties	0.81	--	0.50	0.18	0.34	0.00	0.00
Illegal areas	5.01	3.85	1.57	1.94	3.42	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100

*Closed season.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-80.

Year	Total* Hunters	Total* Harvest	Hunters-days Afield	Sage Grouse 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
TOTALS (1963-80)	201,862	287,017	344,046	0.83	1.42
AVERAGES (1963-79)	10,979	15,544	18,656	0.83	1.42

*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, 1980.

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											
Cache											
Davis											
Morgan				N O	D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	17	37	55	32	58	14	30	44	30	68	1.00
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	12	39	65	13	20	4	13	27	11	41	0.85
REGIONAL TOTALS	29	76	120	45	38	18	43	71	41	58	0.95
Southern Region											
Beaver	11	31	124	30	97	5	14	74	15	20	1.07
Garfield	19	64	207	43	21	0	0	0	0	--	--
Iron	23	61	137	35	26	8	19	45	16	36	0.84
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	62	184	743	251	34	32	85	458	179	39	2.11
REGIONAL TOTALS	115	340	1,211	359	30	45	118	577	210	36	1.78
Northeastern Region											
Daggett	19	46	114	28	25	11	23	64	24	38	1.04
Duchesne	2	5	24	0	--	2	5	24	0	--	--
Uintah	57	147	391	108	28	26	41	217	61	28	1.49
REGIONAL TOTALS	78	198	529	136	26	39	69	305	85	28	1.23
Southeastern Region											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS											

Table 12. Sage grouse hunter success trend determined by field bag checks, 1974-80.

Region and County	1975 Birds/ 100 Hr	1975 Birds/ Hunter	1976 Birds/ 100 Hr	1976 Birds/ Hunter	1977 Birds/ 100 Hr	1977 Birds/ Hunter	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter
Northern Region												
Box Elder	24	0.74	20	0.90	20	0.96	31	1.36	38	1.40		
Cache	10	0.38	14	0.49	7	0.26	11	0.45	7	0.27		
Davis	--	--	--	--	--	--	--	--	--	--		
Morgan	27	0.36	28	0.64	32	0.59	--	--	7	0.22		
Rich	10	0.45	13	0.63	4	0.22	14	0.58	14	0.58		
Summit	15	0.61	--	--	45	0.93	--	--	11	0.34		
Weber	6	0.45	6	0.29	0	0.00	7	0.24	--	--		
REGIONAL TOTALS	12	0.51	15	0.64	12	0.56	23	0.98	25	0.93		
Central Region												
Juab	--	--	109	1.00	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	16	0.95	28	0.85	24	0.73	--	--	--	--	68	1.00
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	16	0.65	34	0.98	33	0.79	35	0.81	32	0.73	41	0.85
REGIONAL TOTALS	16	0.79	33	0.92	31	0.77	35	0.81	32	0.73	58	0.95
Southern Region												
Beaver	35	0.78	--	--	--	--	--	--	--	--	20	1.07
Garfield	25	0.26	17	1.54	18	0.71	26	1.09	65	1.83	--	--
Iron	30	1.74	67	1.04*	74	1.56	--	--	73	1.90	36	0.84
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	18	0.50	31	0.57*	80	2.00	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	16	0.91	24	1.38	14	0.74	21	0.99	20	1.12	39	2.11
REGIONAL TOTALS	19	0.86	23	1.40	15	0.76	21	1.00	28	1.34	36	1.78
Northeastern Region												
Daggett	20	0.81	46	2.64	60	0.71	27	0.82	40	1.31	38	1.04
Duchesne	26	1.06	34	1.59	26	0.60	140	1.75	72	1.44	--	--
Uintah	32	1.21	46	1.33	21	0.78	21	1.14	41	1.19	28	1.49
REGIONAL TOTALS	30	1.13	42	1.44	24	0.75	23	1.03	41	1.23	28	1.23
Southeastern Region												
Carbon	17	0.31	59	1.00	36	1.14	31	1.10	11	0.42	--	--
Emery	--	--	0	0.00	--	--	0	0.00	--	--	--	--
Grand	--	--	--	--	--	--	27	1.14	20	0.50	--	--
San Juan	21	0.67	--	--	15	0.80	--	--	--	--	--	--
REGIONAL TOTALS	19	0.45	58	0.97	29	1.05	31	1.10	12	0.43	--	--
STATE TOTALS	17	0.67	22	0.90	15	0.65	23	0.98	27	1.01		

*Sage grouse per hunter index based on all hunts.

Table 13. Sex and age composition of harvested sage grouse, 1980.

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	611	154	240	394	101	117	218	55	91
Cache	14	2	5	7	3	4	7	100	140
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	101	25	41	66	20	15	35	53	85
Summit	7	2	4	6	0	1	1	17	25
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	733	183	290	473	124	137	261	55	90
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	67	(15)*	(29)	44	(11)	(12)	23	52	79
Utah	--	--	--	--	--	--	--	--	--
Wasatch	17	(2)	(3)	5	(6)	(6)	12	240	400
REGIONAL TOTALS	84	(17)	(32)	49	(17)	(18)	35	71	109
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	119	17	27	44	34	41	75	170	278
Iron	45	9	14	23	12	10	22	96	157
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	377	37	87	124	119	134	253	204	291
REGIONAL TOTALS	501	63	128	191	165	185	350	183	273
Northeastern Region									
Daggett	25	3	6	9	7	9	16	178	267
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	218	15	62	77	61	80	141	183	227
REGIONAL TOTALS	243	18	68	86	68	89	157	183	231
Southeastern Region									
Carbon	19	4	5	9	4	6	10	111	200
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	19	4	5	9	4	6	10	111	200
STATE TOTALS	1,580	285	523	808	378	435	813	101	153

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

Table 14. Sex and age composition of harvested sage grouse from 1977-80.

Region and County	1977 n	1977 Sex Ratio % M	1977 Sex Ratio % F	1977 Young/ 100H	1977 Young/ 100A	1978 n	1978 Sex Ratio % M	1978 Sex Ratio % F	1978 Young/ 100H	1978 Young/ 100A	1979 n	1979 Sex Ratio % M	1979 Sex Ratio % F	1979 Young/ 100H	1979 Young/ 100A	1980 n	1980 Sex Ratio % M	1980 Sex Ratio % F	1980 Young/ 100H	1980 Young/ 100A	Averages 1975-79 n	Averages 1975-79 Sex Ratio % M	Averages 1975-79 Sex Ratio % F	Averages 1975-79 Young/ 100H	Averages 1975-79 Young/ 100A
Northern Region																									
Box Elder	287	49	51	106	54	388	49	51	294	149	622	43	57	166	106	611	42	58	91	55					
Cache	34	62	38	150	54	66	44	56	267	154	27	30	70	100	68	14	36	64	140	100					
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Morgan	40	48	53	325	186	13	39	61	100	86	4	100	0	--	--	--	--	--	--	--					
Rich	37	46	54	155	85	188	39	61	332	203	131	43	57	96	66	101	45	55	85	53					
Summit	--	--	--	--	--	6	17	83	150	100	8	62	38	150	43	7	29	71	25	17					
Weber	--	--	--	--	--	9	22	78	175	125	17	47	53	160	89	--	--	--	--	--					
REGIONAL TOTALS	398	49	51	128	64	670	45	55	179	160	809	43	57	149	94	733	42	58	90	55	561	46	54	204	143
Central Region																									
Juab	174	44	55	141	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Tooele	68	51	49	100	45	--	--	--	--	--	--	--	--	--	--	67	39	61	79	52					
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Wasatch	--	--	--	--	--	178	52	48	314	162	60	45	55	227	131	17	47	53	400	240					
REGIONAL TOTALS	242	46	54	138	75	178	52	48	314	162	60	45	55	227	131	84	41	59	109	71	154	47	53	250	151
Southern Region																									
Beaver	11	18	82	175	175	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Garfield	68	42	58	220	138	71	36	64	253	209	177	37	63	292	181	119	43	57	278	170					
Iron	9	44	56	600	200	13	61	39	1,000	333	62	44	56	260	170	45	47	53	157	96					
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
Wayne	192	34	66	72	49	252	35	65	217	190	342	42	58	186	111	377	41	59	291	204					
REGIONAL TOTALS	250	35	65	95	64	336	37	63	232	197	581	41	59	221	134	541	46	54	273	183	384	37	63	195	139
Northeastern Region																									
Daggett	52	52	48	167	93	67	40*	60*	271	219	101	35	65	220	180	25	40	60	267	178					
Duchesne	53	47	53	318	139	104	46*	54*	329	197	50	46	54	330	194	--	--	--	--	--					
Uintah	200	40	61	150	100	386	45*	55*	329	214	355	41	59	272	175	218	35	65	227	183					
REGIONAL TOTALS	305	43	57	172	110	557	45*	55*	320	211	506	40	60	266	178	243	35	65	231	183	415	41	59	267	168
Southeastern Region																									
Carbon	--	--	--	--	--	44	57	43	1,550	238	14	--	--	--	--	19	42	58	200	111					
Emery	--	--	--	--	--	2	50	50	--	--	--	--	--	--	--	--	--	--	--	--					
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
REGIONAL TOTALS	--	--	--	--	--	46	57	43	1,650	254	--	--	--	--	--	19	42	58	200	111	33	50	50	925	183
STATE TOTALS	1,195	44	56	133	78	1787	44	56	293	183	1956	42	58	196	125	1580	41	59	153	101	1547	44	56	368	157

*Includes estimated percentage of juveniles.

n = wing sample size.

FOREST GROUSE

SUMMARY

Judging from harvest statistics for the fall of 1979, the 1980 breeding populations of both ruffed and blue grouse were slightly lower than in 1979. Production of ruffed grouse indicated by brood counts was down from 1979 and below average. The number of ruffed grouse observed during brood surveys and the apparent density (grouse per 100 hours) suggested a considerable decrease in abundance in 1980 compared to 1979.

Production of blue grouse was considerably better than in 1979 but remained below the 10-year average. However, a significant increase occurred in blue grouse observed per 100 hours of effort. This was probably due to improved observer efficiency rather than real increases in density. A total of 115 forest grouse broods was observed during 1980 compared with 147 in 1979 and 125 in 1978.

However, harvest statistics indicated lower density of forest grouse. Total harvest decreased from 59,851 during 1979 to 45,522 in 1980, another 24 percent decrease in harvest. Total hunters again decreased from 21,993 in 1979 to 19,511 in 1980, and days afield decreased from 57,404 to 49,899.

Field bag check data confirmed the decreased success shown by the questionnaire. Blue grouse wing data indicated a 40 percent decrease in young per 100 adults and young per 100 hens.

Brood Counts

Ruffed Grouse

Results of the annual random brood survey for 1980 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 1980 compared to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total ruffed grouse observed	134	-56	-47
Young per 100 adults	294	-26	-7
Mean brood size	4.52	-11	+1
Ruffed grouse observed per 100 hours	20	-46	-35
Total hours effort (forest grouse)	702	-26	-24

Harvest statistics for 1979 indicated an average breeding population for 1979.

Effort on brood surveys decreased in comparison to 1979 to below average.

Total ruffed grouse observed decreased from 1979 and was well below average. Grouse observed per 100 hours was below 1979 and below average.

Mean brood size, based on a sample of 21 broods (compared to 50 broods observed in 1979), decreased to less than 5 chicks per brood but remained above the long-term average.

Blue Grouse

Results of the annual random brood survey for 1980 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 1980 compared to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total blue grouse observed	654	+2	+4
Young per 100 adults	219	+16	-9
Mean brood size	4.20	+14	-4
Blue grouse observed per 100 hours	93	+37	+27
Total hours effort (forest grouse)	702	-26	-24

Harvest statistics for 1979 indicated an average breeding population for 1980.

All indications from the 1980 summer surveys on blue grouse were that production was above 1979, yet slightly below average. Total observations

remained constant despite decreased efforts. Data indicate a below average production year, yet the number of grouse observed per 100 hours of effort increased by 37 percent and was 27 percent above average.

The summer inventory indicated an increased fall blue grouse population, but wing samples collected at checking stations indicated significantly lower production.

Harvest

Hunter Questionnaire

Results of the 1980 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 1980 compared to 1979 and the 17-year average follow:

	1980	Percent change from 1979	Percent change from Average
Forest grouse hunters	19,511	-11	+32
Forest grouse harvested	45,522	-24	+24
Hunter-days afield	49,899	-15	+43
Forest grouse per hunter-day	0.91	-13	-13
Forest grouse per hunter	2.33	-11	-6
Percent ruffed grouse	34.0	-12	-15
Percent blue grouse	60.6	+9	+14
Percent unidentified	5.4	-10	-22

Results from the harvest questionnaire confirmed the lower forest grouse population level indicated by summer surveys. Total harvest continued to drop from the record harvest of 1978. Hunter success (grouse per hunter-day) was below average as was the number of grouse harvested per hunter. Hunter pressure again decreased significantly but was still well above the 17-year average.

Field Bag Checks

A summary of field bag check data for 1980 is found in Table 15. Hunter success trends determined via this method are shown in Table 16. Results of the 1980 survey compared to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Forest grouse per hunter (complete hunts)		INCOMPLETE INFORMATION	
Forest grouse bagged per 100 hours			
Average hours per hunter-day (complete hunts)			
Hours hunted per grouse bagged			

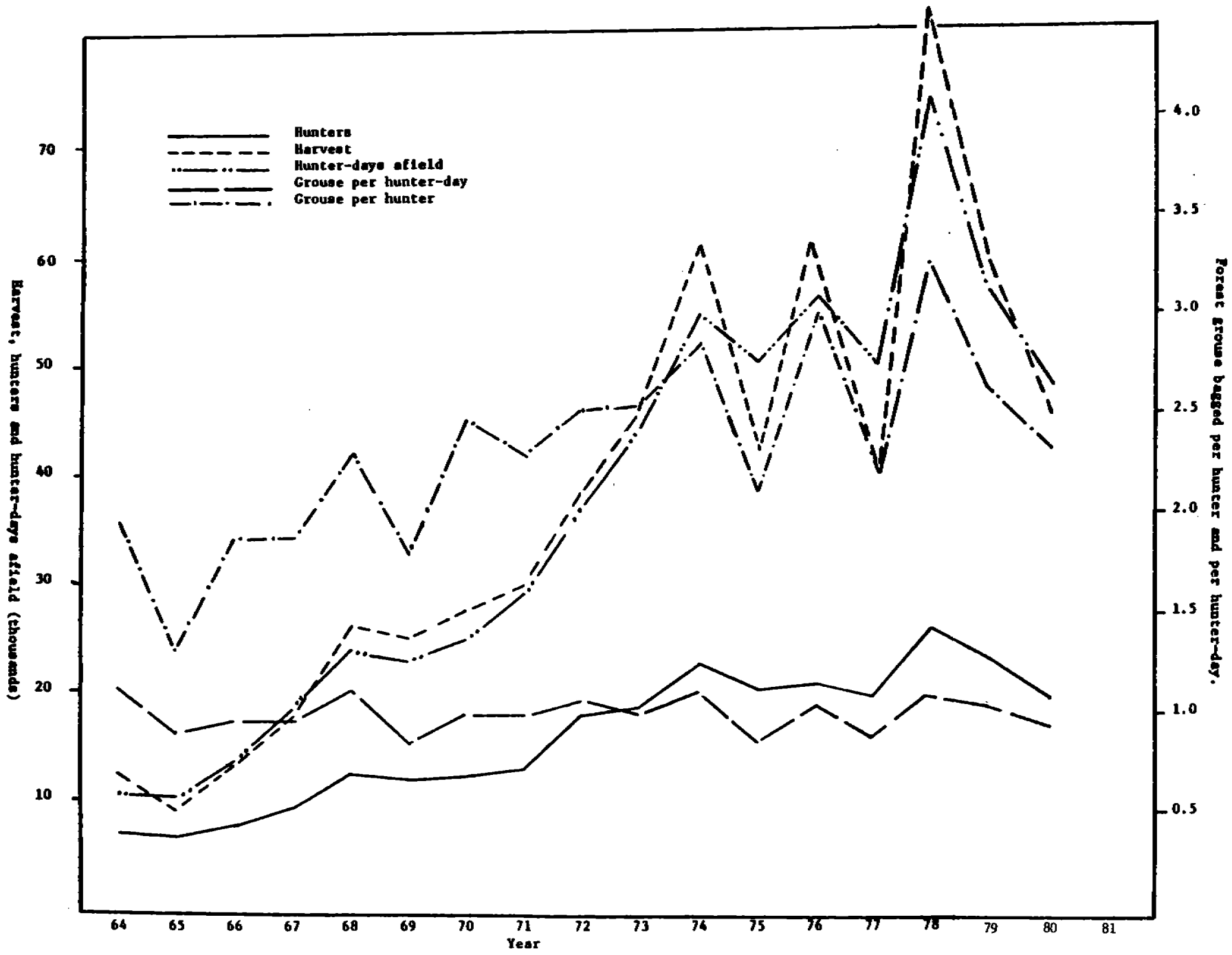


Figure 1. Statewide trends of forest grouse harvest statistics.

Table 1. Ruffed grouse summer inventory, 1980.

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	0	0	0	--	0	0	0	0	0	--	0	0	0	12	12	--
Cache	3	3	11	3.67	0	0	5	8	11	138	10	16	59	0	75	25
Davis	0	0	0	--	0	0	0	0	0	--	59	4	0	11	15	--
Morgan	1	1	6	6.00	0	0	0	1	6	600	30	6	25	4	35	20
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	1	1	4	4.00	0	0	1	2	4	200	40	6	20	2	28	21
Weber	1	1	5	5.00	0	0	0	1	5	500	438	36	0	0	36	17
REGIONAL TOTALS	6	6	26	4.33	0	0	6	12	26	217	577	68	104	29	201	19
Central Region																
Juab	0	0	0	--	0	0	0	0	0	--	157	11	0	3	14	--
Salt Lake	1	1	2	2.00	0	0	0	1	2	200	8	2	0	0	2	150
Sanpete	7	7	36	5.14	2	5	2	11	41	373	205	11	11	4	26	200
Tooele	0	0	0	--	0	0	0	0	0	--	168	26	0	7	33	--
Utah	4	4	13	3.25	0	0	2	6	13	217	477	40	8	3	51	37
Wasatch	0	0	0	--	0	0	1	1	0	--	245	23	0	9	32	3
REGIONAL TOTALS	12	12	51	4.25	2	5	5	19	56	295	1,260	113	19	26	158	47
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	1	1	6	6.00	0	0	0	1	6	600	70	15	200	1	216	3
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1	1	6	6.00	0	0	0	1	6	600	70	15	200	1	216	3
Northeastern Region																
Daggett	0	0	0	0.00	0	0	0	0	0	--	40	2	6	0	8	--
Duchesne	0	0	0	0.00	0	0	0	0	0	--	282	30	9	4	43	--
Uintah	2	2	12	6.00	0	0	0	2	12	600	180	18	4	1	23	61
REGIONAL TOTALS	2	2	12	6.00	0	0	0	2	12	600	502	50	19	5	74	19
Southeastern Region																
Carbon	0	0	0	--	0	0	0	0	0	--	211	26	0	0	26	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	--	211	26	0	0	26	--
STATE TOTALS	21	21	95	4.52	2	5	11	34	100	294	2,620	272	342	61	675	20

Table 2. Trend of ruffed grouse young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	--	0	250	250	--	--	--	--	
Cache	468	383	900	--	300	329	300	300	262	450	138	
Davis	--	--	388	--	--	--	--	--	--	1,100	--	
Morgan	400	540	--	--	400	--	500	--	100	400	600	
Rich	--	--	375	600	--	317	300	--	--	--	--	
Summit	500	514	650	333	500	217	250	475	400	500	200	
Weber	--	340	--	450	--	--	--	400	--	500	500	
REGIONAL TOTALS	471	426	453	417	369	286	245	364	260	460	217	375
Central Region												
Juab	470	325	--	300	400	500	100	--	--	--	--	
Salt Lake	470	100	--	--	125	--	167	0	--	--	200	
Sanpete	300	240	329	264	195	233	387	289	462	506	373	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	256	300	475	125	313	57	56	150	300	280	217	
Wasatch	--	--	--	300	--	--	--	--	--	300	--	
REGIONAL TOTALS	331	242	358	231	221	164	273	246	424	416	295	291
Southern Region												
Beaver	--	200	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	200	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	183	280	--	--	--	--	--	--	--	--	--	
Piute	--	300	--	--	--	--	--	--	--	--	--	
Sevier	533	221	333	311	500	233	--	575	300	400	600	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	367	--	--	--	--	--	--	--	
REGIONAL TOTALS	300	235	333	325	147	233	--	575	300	400	600	316
Northeastern Region												
Daggett	--	--	--	--	--	--	500	--	--	240	--	
Duchesne	225	--	367	--	333	600	124	67	300	450	--	
Uintah	250	375	--	--	600	--	500	--	600	--	300	
REGIONAL TOTALS	233	375	367	--	400	600	195	67	343	300	300	320
Southeastern Region												
Carbon	0	--	--	--	480	200	350	300	--	--	--	
Emery	700	500	--	300	400	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	489	500	--	300	467	200	350	300	--	--	--	372
STATE TOTALS	372	308	385	297	267	241	244	298	345	398	294	316

Table 3. Trend of ruffed grouse mean brood size, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	--	--	5.00	2.50	--	--	--	--	
Cache	4.78	5.55	9.00	--	5.00	3.83	3.00	4.00	4.33	5.14	3.67	
Davis	--	--	4.80	--	--	--	--	--	--	9.00	--	
Morgan	4.00	6.75	--	--	4.00	--	5.00	--	1.00	4.89	6.00	
Rich	--	--	3.75	6.00	--	4.75	3.00	--	--	--	--	
Summit	5.00	6.00	6.50	5.00	5.00	3.00	4.00	4.75	4.00	5.00	4.00	
Weber	--	8.00	--	4.50	--	--	--	4.00	--	5.00	5.00	
REGIONAL TOTALS	4.79	6.09	5.08	5.00	4.54	4.00	3.08	4.25	3.88	5.20	4.33	4.59
Central Region												
Juab	4.67	4.33	--	3.00	4.00	5.00	2.00	--	--	--	--	
Salt Lake	4.67	4.00	--	--	4.00	--	5.00	--	--	--	2.00	
Sanpete	4.64	5.50	4.67	4.60	3.00	4.50	5.36	4.44	5.11	5.79	5.14	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	7.00	3.75	4.75	5.00	4.25	4.00	2.00	3.00	4.00	4.67	3.25	
Wasatch	--	--	3.00	--	--	--	--	--	--	3.00	--	
REGIONAL TOTALS	4.78	4.75	4.55	4.43	3.44	4.50	4.94	4.08	4.83	5.20	4.25	4.55
Southern Region												
Beaver	--	5.00	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	2.00	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	4.67	--	--	--	--	--	--	--	--	--	
Piute	--	3.00	--	--	--	--	--	--	--	--	--	
Sevier	--	3.83	4.29	4.00	5.00	2.33	--	5.75	3.00	4.80	6.00	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	5.50	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	4.08	4.29	4.33	4.40	2.33	--	5.75	3.00	4.80	6.00	4.12
Northeastern Region												
Daggett	--	--	--	--	--	--	5.00	--	--	4.00	--	
Duchesne	3.00	--	3.67	--	3.33	6.00	3.50	2.00	4.50	4.50	--	
Uintah	2.50	5.00	--	--	6.00	--	5.00	--	6.00	--	6.00	
REGIONAL TOTALS	2.80	5.00	3.67	--	4.00	6.00	4.10	2.00	4.80	4.20	6.00	4.06
Southeastern Region												
Carbon	--	--	--	--	4.80	2.00	3.50	3.00	--	--	--	
Emery	7.00	5.00	--	5.00	4.00	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	7.00	5.00	--	5.00	4.67	2.00	3.50	3.00	--	--	--	4.31
STATE TOTALS	4.66	5.16	4.61	4.58	4.09	3.87	4.12	4.26	4.46	5.06	4.52	4.49

Table 4. Trend of ruffed grouse observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	--	2	54	50	--	--	--	--	
Cache	270	67	14	--	34	45	13	50	25	18	25	
Davis	--	--	244	--	0	0	10	--	--	60	--	
Morgan	62	128	--	--	136	0	33	--	8	149	20	
Rich	--	--	61	140	--	--	27	--	--	--	--	
Summit	42	108	100	62	185	46	100	144	61	600	21	
Weber	--	73	--	--	--	--	0	111	--	16	17	
REGIONAL TOTALS	80	77	39	24	49	41	20	49	18	38	19	44
Central Region												
Juab	179	142	--	33	250	27	40	--	--	--	--	
Salt Lake	47	16	--	0	30	0	20	4	--	2	150	
Sanpete	143	167	240	129	124	69	181	125	203	270	200	
Tooele	--	--	--	0	0	0	0	0	--	--	--	
Utah	32	40	37	23	73	32	19	25	30	39	37	
Wasatch	--	0	50	--	--	0	0	--	--	48	3	
REGIONAL TOTALS	81	85	84	50	71	23	64	56	99	73	47	69
Southern Region												
Beaver	--	250	--	--	0	--	--	--	--	--	--	
Garfield	--	--	--	0	38	0	--	0	--	--	--	
Iron	--	--	--	--	0	0	--	0	--	--	--	
Kane	--	--	--	0	--	0	--	0	--	--	--	
Millard	213	317	--	0	0	--	--	0	--	--	--	
Piute	--	267	--	--	--	0	--	0	--	--	--	
Sevier	--	28	22	10	8	2	--	12	2	15	3	
Washington	--	--	--	--	0	0	--	0	--	--	--	
Wayne	--	--	--	117	0	--	--	0	--	--	--	
REGIONAL TOTALS	62	35	15	12	8	2	--	9	2	15	3	16
Northeastern Region												
Daggett	--	0	--	0	0	0	20	0	--	85	--	
Duchesne	29	0	28	0	30	11	47	9	46	48	--	
Uintah	18	83	--	0	16	0	62	0	11	--	350	
REGIONAL TOTALS	23	83	10	0	20	5	44	4	21	26	350	26
Southeastern Region												
Carbon	5	0	--	0	53	33	12	7	--	9	--	
Emery	16	46	--	67	42	0	--	0	--	33	--	
Grand	--	--	--	0	--	0	--	--	--	--	--	
San Juan	--	--	--	0	0	0	--	--	--	--	--	
REGIONAL TOTALS	12	46	--	28	26	11	7	3	--	12	--	18
STATE TOTALS	55	54	28	18	28	12	25	23	29	37	20	31

Table 5. Blue grouse summer inventory summary, 1980.

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	6	6.00	0	0	0	1	6	600	0	0	0	12	12	58
Cache	4	4	15	3.75	0	0	14	18	15	83	10	16	59	0	75	44
Davis	2	2	12	6.00	0	0	0	2	12	600	59	4	0	11	15	92
Morgan	7	7	21	3.00	0	0	2	9	21	233	30	6	25	4	35	86
Rich	1	1	3	3.00	0	0	0	1	3	300	0	0	0	0	0	--
Summit	1	1	4	4.00	0	0	0	1	4	400	40	6	20	2	28	18
Weber	4	4	17	4.25	0	0	0	4	17	425	438	36	0	0	36	58
REGIONAL TOTALS	20	20	78	3.90	0	0	16	36	78	217	577	68	104	29	201	57
Central Region																
Juab	3	3	11	3.67	2	15	16	21	26	124	157	11	0	3	14	336
Salt Lake	2	2	7	3.50	0	0	0	2	7	350	8	2	0	0	2	450
Sanpete	0	0	0	--	0	0	0	0	0	--	205	11	11	4	26	--
Tooele	12	12	43	3.58	2	5	20	34	48	141	168	26	0	7	33	248
Utah	10	10	30	3.00	2	9	2	14	39	279	477	40	8	3	51	104
Wasatch	0	0	0	--	0	0	1	1	0	--	245	23	0	9	32	3
REGIONAL TOTALS	27	27	91	3.37	6	29	39	72	120	167	1,260	113	19	26	158	122
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	4	4	17	4.25	0	0	1	5	17	340	20	2	0	6	8	275
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	19	19	94	4.95	2	1	32	53	95	179	70	15	200	1	216	68
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	0	0	0	--	0	0	0	0	0	--	70	6	0	0	6	--
REGIONAL TOTALS	23	23	111	4.82	2	1	33	58	112	193	160	23	200	7	230	74
Northeastern Region																
Daggett	4	4	29	7.20	4	8	3	11	37	336	40	2	6	0	8	600
Duchesne	9	9	45	5.00	0	0	2	11	45	409	282	30	9	4	43	130
Uintah	8	8	30	3.70	4	16	1	13	46	354	180	18	4	1	23	256
REGIONAL TOTALS	21	21	104	4.90	8	24	6	35	128	366	502	50	19	5	74	220
Southeastern Region																
Carbon	2	2	7	3.50	0	0	0	2	7	350	211	26	0	0	26	35
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	1	1	4	4.00	0	0	1	2	4	200	55	8	0	5	13	46
REGIONAL TOTALS	3	3	11	3.67	0	0	1	4	11	275	266	34	0	5	39	38
STATE TOTALS	94	94	395	4.20	16	54	95	205	449	219	2,765	288	342	72	702	93

Table 6. Trend of blue grouse young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	389	--	500	--	236	100	429	--	400	380	600	
Cache	316	245	288	192	357	356	331	100	322	167	83	
Davis	--	520	82	--	300	0	150	320	500	100	600	
Morgan	600	533	250	375	300	130	341	117	230	0	233	
Rich	300	--	300	--	--	167	500	--	--	--	300	
Summit	433	600	533	314	--	143	333	333	560	325	400	
Weber	--	557	68	700	625	0	400	400	425	280	425	
REGIONAL TOTALS	361	305	191	222	305	194	333	167	357	205	217	264
Central Region												
Juab	--	--	--	50	--	500	--	--	200	200	124	
Salt Lake	900	67	--	0	300	25	333	238	160	230	350	
Sanpete	283	425	156	300	--	--	325	260	89	275	--	
Tooele	--	--	--	143	179	86	227	82	108	225	141	
Utah	314	422	375	415	222	0	300	27	266	169	279	
Wasatch	550	450	600	--	333	400	400	--	800	214	--	
REGIONAL TOTALS	389	324	321	285	218	192	277	120	156	200	167	248
Southern Region												
Beaver	--	--	--	--	500	--	--	--	--	200	--	
Garfield	100	600	133	--	--	400	100	300	380	375	--	
Iron	--	267	--	--	150	--	--	--	200	233	340	
Kane	150	200	240	211	--	--	--	--	400	--	--	
Millard	--	280	67	--	450	--	--	700	567	475	--	
Piute	--	--	--	--	--	--	200	--	--	--	--	
Sevier	140	136	100	100	320	233	106	86	214	100	179	
Washington	170	--	271	533	350	--	500	--	600	400	--	
Wayne	--	--	--	--	400	--	275	567	--	--	--	
REGIONAL TOTALS	135	213	149	192	313	246	142	146	288	158	193	198
Northeastern Region												
Daggett	--	--	286	286	567	--	487	367	343	154	336	
Duchesne	--	400	275	600	300	350	431	380	567	220	409	
Uintah	400	167	557	500	250	300	525	350	500	460	354	
REGIONAL TOTALS	400	225	339	344	311	320	461	372	486	202	366	346
Southeastern Region												
Carbon	0	167	92	--	243	167	321	500	225	100	350	
Emery	450	300	--	667	--	--	--	300	--	--	--	
Grand	--	--	114	0	43	200	110	300	--	--	--	
San Juan	153	386	375	--	242	200	155	100	380	250	200	
REGIONAL TOTALS	139	310	216	333	188	189	209	269	255	140	275	225
STATE TOTALS	253	292	224	237	284	195	281	181	278	188	219	241

Table 7. Trend of blue grouse mean brood size, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	3.83	--	5.00	--	5.06	3.00	5.75	--	4.00	3.80	6.00	
Cache	4.28	5.18	5.50	4.66	4.95	5.30	4.48	3.40	4.46	2.50	3.75	
Davis	--	6.25	2.67	--	--	--	4.00	3.67	5.00	3.50	6.00	
Morgan	6.00	5.33	5.33	5.50	4.62	3.25	4.45	2.80	3.83	--	3.00	
Rich	3.00	--	4.50	--	--	5.00	5.00	--	--	--	3.00	
Summit	4.33	6.00	5.33	4.40	--	2.75	5.00	5.00	5.60	4.33	4.00	
Weber	--	6.50	4.75	7.00	6.25	--	6.00	4.00	4.25	3.50	4.25	
REGIONAL TOTALS	4.21	5.54	4.96	4.79	5.00	4.25	4.67	3.56	4.55	3.63	3.90	4.52
Central Region												
Juab	--	--	--	1.00	--	5.00	--	--	4.00	2.00	3.67	
Salt Lake	9.00	2.00	--	--	6.00	1.00	5.00	4.75	2.67	3.29	3.50	
Sanpete	2.83	4.25	2.80	3.00	--	--	3.25	4.33	4.00	2.75	--	
Tooele	--	--	--	6.00	4.40	3.50	3.45	2.50	4.40	4.20	3.58	
Utah	5.50	4.22	4.22	5.38	5.00	--	4.29	1.50	3.13	3.13	3.00	
Wasatch	5.50	4.50	6.00	--	5.00	4.00	4.00	--	8.00	5.00	--	
REGIONAL TOTALS	4.67	4.00	4.12	4.54	4.83	3.40	3.97	3.64	3.61	3.30	3.37	4.01
Southern Region												
Beaver	--	--	--	--	5.00	--	--	--	--	5.00	--	
Garfield	3.00	6.00	4.00	--	--	6.00	--	6.00	4.75	5.00	--	
Iron	--	8.00	--	--	3.00	--	--	--	2.00	3.50	4.25	
Kane	3.00	6.00	3.33	6.33	--	--	--	--	4.00	--	--	
Millard	--	4.67	2.00	--	4.50	--	--	7.00	5.67	6.33	--	
Piute	--	--	--	--	--	--	2.00	--	--	--	--	
Sevier	--	3.00	2.62	3.00	5.89	3.82	3.17	4.29	4.50	3.29	4.95	
Washington	3.40	--	4.00	5.33	3.50	--	5.00	--	6.00	4.00	--	
Wayne	--	--	--	--	4.00	--	5.50	6.00	--	--	--	
REGIONAL TOTALS	3.25	4.45	3.06	4.55	5.31	4.00	3.50	4.90	4.65	4.04	4.82	4.17
Northeastern Region												
Daggett	--	--	5.00	5.00	5.67	--	4.88	3.67	4.00	4.00	7.20	
Duchesne	--	4.00	4.71	6.00	4.22	7.00	4.60	4.22	5.30	3.00	5.00	
Uintah	5.50	2.50	6.50	5.00	5.00	4.50	5.25	3.50	5.00	5.75	3.70	
REGIONAL TOTALS	5.50	3.00	5.21	5.20	4.71	5.33	4.78	3.94	4.83	3.95	4.90	4.65
Southeastern Region												
Carbon	--	5.00	6.00	--	3.40	3.33	4.25	4.75	4.50	2.00	3.50	
Emery	4.50	3.00	--	6.67	--	--	--	3.00	--	--	--	
Grand	--	--	2.67	--	1.50	4.00	3.67	6.00	--	--	--	
San Juan	4.00	5.25	6.17	--	4.83	3.50	3.40	4.00	6.00	5.00	4.00	
REGIONAL TOTALS	4.20	4.82	5.50	6.67	3.77	3.57	3.88	4.57	5.40	3.50	3.67	4.59
STATE TOTALS	4.28	4.86	4.64	4.81	4.88	4.05	4.29	4.00	4.44	3.69	4.20	4.39

Table 8. Trend of blue grouse observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	99	--	35	0	273	46	132	--	39	800	58	
Cache	198	171	133	409	271	124	75	62	41	7	44	
Davis	--	194	125	--	80	10	52	84	188	140	92	
Morgan	88	76	125	173	400	35	417	173	127	--	86	
Rich	33	--	39	0	--	--	40	--	--	--	--	
Summit	56	18	127	138	8	83	93	81	400	850	18	
Weber	--	153	147	--	--	125	62	167	42	51	58	
REGIONAL TOTALS	97	135	111	266	274	80	94	87	65	30	57	124
Central Region												
Juab	--	0	--	25	0	27	0	--	86	38	336	
Salt Lake	28	20	--	20	27	14	98	112	111	70	450	
Sanpete	43	34	92	39	0	0	27	31	65	33	--	
Tooele	--	--	--	94	144	108	354	172	1,080	557	248	
Utah	63	94	92	172	64	118	54	23	96	176	104	
Wasatch	260	1,100	262	--	433	36	250	--	46	88	3	
REGIONAL TOTALS	57	51	98	95	57	29	91	56	113	109	122	76
Southern Region												
Beaver	--	--	--	--	300	--	--	--	--	107	--	
Garfield	86	45	10	0	25	56	16	53	86	61	--	
Iron	15	42	--	--	167	--	--	0	150	333	275	
Kane	111	51	--	76	--	0	--	0	250	--	--	
Millard	--	317	83	0	122	--	--	133	250	2,300	--	
Piute	--	--	--	--	--	0	75	0	--	--	--	
Sevier	--	16	23	7	40	21	34	28	38	46	68	
Washington	174	--	260	--	129	0	55	0	--	125	--	
Wayne	--	--	--	8	--	--	375	2,000	0	--	--	
REGIONAL TOTALS	162	29	37	18	47	21	40	35	56	61	74	51
Northeastern Region												
Daggett	--	0	146	45	182	0	157	88	100	420	600	
Duchesne	--	13	90	13	130	14	105	84	148	209	130	
Uintah	41	35	87	19	78	27	86	20	19	44	256	
REGIONAL TOTALS	41	18	104	27	112	15	112	63	83	150	220	73
Southeastern Region												
Carbon	32	80	258	0	44	35	77	44	46	19	35	
Emery	12	31	--	77	0	0	--	40	--	33	--	
Grand	--	13	103	19	25	33	68	62	6	--	--	
San Juan	211	178	238	0	158	53	108	24	99	54	46	
REGIONAL TOTALS	40	97	216	36	56	39	81	38	46	29	38	68
STATE TOTALS	71	71	95	66	91	33	81	52	106	68	93	73

Table 9. Summary of effort expended on forest grouse brood counts, 1980.

Region and County	Vehicle Miles Traveled	Hours Effort Expended			
		Vehicle	Horseback	Walking	Total
Northern Region					
Box Elder	0	0	0	12	12
Cache	10	16	59	0	75
Davis	59	4	0	11	15
Morgan	30	6	25	4	35
Rich	0	0	0	0	0
Summit	40	6	20	2	28
Weber	438	36	0	0	36
REGIONAL TOTALS	577	68	104	29	201
Central Region					
Juab	157	11	0	3	14
Salt Lake	8	2	0	0	2
Sanpete	205	11	11	4	26
Tooele	168	26	0	7	33
Utah	477	40	8	3	51
Wasatch	245	23	0	9	32
REGIONAL TOTALS	1,260	113	19	26	158
Southern Region					
Beaver	--	--	--	--	--
Garfield	--	--	--	--	--
Iron	20	2	0	6	8
Kane	--	--	--	--	--
Millard	--	--	--	--	--
Piute	--	--	--	--	--
Sevier	70	15	200	1	216
Washington	--	--	--	--	--
Wayne	70	6	0	0	6
REGIONAL TOTALS	160	23	200	7	230
Northeastern Region					
Daggett	40	2	6	0	8
Duchesne	282	30	9	4	43
Uintah	180	18	4	1	23
REGIONAL TOTALS	502	50	19	5	74
Southeastern Region					
Carbon	211	26	0	0	26
Emery	--	--	--	--	--
Grand	--	--	--	--	--
San Juan	55	8	0	5	13
REGIONAL TOTALS	266	34	0	5	39
STATE TOTALS	2,765	288	342	72	702

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1980.

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	50	1,798	594	1,561	0	2,155	1.20	3.60	4.73
Cache	228	8,602	3,190	4,954	153	8,297	0.96	17.24	18.23
Davis	61	2,138	458	1,086	34	1,578	0.74	4.28	3.47
Morgan	34	1,832	322	560	34	916	0.50	3.67	2.01
Rich	60	1,951	339	1,018	68	1,425	0.73	3.91	3.13
Summit	75	3,512	1,239	1,069	237	2,545	0.72	7.04	5.59
Weber	89	2,850	916	1,578	85	2,579	0.90	5.71	5.67
REGIONAL TOTALS	597	22,684	7,058	11,826	611	19,495	0.86	45.46	42.83
Central Region									
Juab	20	645	305	458	17	780	1.21	1.29	1.71
Salt Lake	54	1,391	271	1,239	51	1,561	1.12	2.79	3.43
Sanpete	64	2,375	611	882	238	1,731	0.73	4.76	3.80
Tooele	32	1,069	339	764	0	1,103	1.03	2.14	2.42
Utah	163	6,973	2,562	4,802	238	7,602	1.09	13.97	16.70
Wasatch	83	3,359	1,188	814	187	2,189	0.65	6.73	4.81
REGIONAL TOTALS	416	15,813	5,276	8,959	730	14,965	0.95	13.69	32.87
Southern Region									
Beaver	11	322	17	271	0	288	0.89	0.65	0.63
Garfield	7	187	68	102	0	170	0.91	0.37	0.37
Iron	19	696	170	136	204	509	0.73	1.39	1.12
Kane	8	170	68	102	0	170	1.00	0.34	0.37
Millard	26	848	119	933	271	1,323	1.56	1.70	2.91
Piute	9	339	85	254	34	373	1.10	0.68	0.82
Sevier	59	2,884	1,120	2,138	373	3,631	1.26	5.78	7.98
Washington	2	102	0	0	0	0	0.00	0.20	0.00
Wayne	4	102	68	0	0	68	0.67	0.20	0.15
REGIONAL TOTALS	145	5,650	1,714	3,936	882	6,532	1.16	11.32	14.35
Northeastern Region									
Daggett	12	713	102	221	68	390	0.55	1.43	0.86
Duchesne	27	1,391	628	255	102	984	0.71	2.79	2.16
Uintah	40	1,866	170	1,459	0	1,629	0.87	3.74	3.58
REGIONAL TOTALS	79	3,970	899	1,934	170	3,003	0.76	7/96	6.60
Southeastern Region									
Carbon	25	865	373	356	34	763	0.88	1.73	1.68
Emery	16	814	136	492	51	679	0.83	1.63	1.49
Grand	0	0	0	0	0	0	0.00	0.00	0.00
San Juan	4	85	0	85	0	85	1.00	0.17	0.19
REGIONAL TOTALS	45	1,764	509	933	85	1,527	0.87	3.54	3.35
Unknown Counties	1	17	0	0	0	0	0.00	0.03	0.00
Mixed Counties	0	0	0	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,283	49,899	15,457	27,588	2,477	45,522	0.91	100	100

*Total hunter trips from questionnaire returns.

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	1.12	0.84	1.23	0.98	0.79	1.20
Cache	1.13	1.25	0.92	1.40	1.24	0.96
Davis	0.73	0.84	0.90	1.34	0.94	0.74
Morgan	0.85	0.88	1.24	1.47	1.08	0.50
Rich	0.82	0.75	0.58	1.10	0.90	0.73
Summit	0.80	1.26	0.87	1.38	0.93	0.72
Weber	0.87	1.56	1.01	1.06	1.07	0.90
REGIONAL TOTALS	0.96	1.17	0.94	1.27	1.08	0.86
Central Region						
Juab	0.86	1.09	0.97	0.63	1.63	1.21
Salt Lake	0.70	1.08	0.64	1.59	1.17	1.12
Sanpete	0.65	0.98	0.73	0.82	0.96	0.73
Tooele	0.89	1.02	0.86	0.89	0.98	1.03
Utah	0.71	1.22	0.85	1.13	1.11	1.09
Wasatch	1.00	1.06	0.75	0.93	0.93	0.65
REGIONAL TOTALS	0.76	1.13	0.81	1.04	1.05	0.95
Southern Region						
Beaver	0.53	0.88	0.40	1.65	1.64	0.89
Garfield	0.73	0.68	0.25	0.57	0.64	0.91
Iron	0.68	1.48	0.91	0.98	0.78	0.73
Kane	0.50	0.50	0.50	0.57	0.86	1.00
Millard	0.65	1.55	1.35	1.21	1.44	1.56
Piute	0.33	1.17	0.65	1.93	0.74	1.10
Sevier	0.73	0.66	1.18	1.02	1.14	1.26
Washington	0.79	1.00	1.50	1.22	0.45	0.00
Wayne	1.00	1.50	1.00	1.00	0.95	0.67
REGIONAL TOTALS	0.68	0.98	1.01	1.06	1.11	1.16
Northeastern Region						
Daggett	0.50	1.12	0.41	0.79	0.69	0.55
Duchesne	0.72	1.02	1.03	0.96	0.99	0.71
Uintah	0.97	0.87	0.75	0.82	0.93	0.87
REGIONAL TOTALS	0.76	0.96	0.70	0.87	0.90	0.76
Southeastern Region						
Carbon	0.57	1.20	0.64	1.32	0.73	0.88
Emery	0.42	1.50	0.79	0.89	0.52	0.83
Grand	0.83	0.00	0.67	0.67	0.57	0.00
San Juan	0.44	0.00	0.40	0.43	0.40	1.00
REGIONAL TOTALS	0.53	1.18	0.67	0.96	0.61	0.87
Unknown Counties	0.89	1.06	1.74	0.74	1.00	0.00
Mixed Counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.84	1.12	0.87	1.12	1.04	0.91

Table 12. Percentage distribution of forest grouse harvest by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	2.75	2.17	4.22	2.99	1.63	4.73
Cache	26.81	26.39	20.01	20.93	21.94	18.23
Davis	3.52	2.93	3.51	3.56	4.04	3.47
Morgan	5.43	2.71	3.48	3.58	2.87	2.01
Rich	3.25	3.03	2.13	3.66	3.40	3.13
Summit	4.82	4.72	7.10	6.90	5.76	5.59
Weber	8.37	9.66	10.57	7.93	10.17	5.67
REGIONAL TOTALS	54.95	51.59	51.03	49.55	49.81	42.83
Central Region						
Juab	1.41	1.53	1.21	0.61	1.39	1.71
Salt Lake	2.37	2.52	1.91	2.97	3.21	3.43
Sanpete	4.05	5.39	3.58	4.17	6.27	3.80
Tooele	1.84	1.40	2.48	2.38	1.43	2.42
Utah	11.24	16.76	13.63	16.76	12.31	16.70
Wasatch	6.08	3.38	4.44	4.66	5.50	4.81
REGIONAL TOTALS	27.00	30.98	27.25	31.56	30.11	32.87
Southern Region						
Beaver	0.69	1.37	0.14	0.69	0.44	0.63
Garfield	0.42	0.41	0.07	0.42	0.34	0.37
Iron	1.80	1.27	2.06	1.06	0.51	1.12
Kane	0.15	0.06	0.07	0.20	0.15	0.37
Millard	1.07	1.63	0.82	0.71	3.33	2.91
Piute	0.23	0.45	0.53	0.71	0.56	0.82
Sevier	4.55	1.59	5.71	3.58	6.49	7.98
Washington	0.42	0.19	0.11	0.54	0.12	0.00
Wayne	0.38	0.29	0.11	0.10	0.44	0.15
REGIONAL TOTALS	9.71	7.27	9.62	8.00	12.38	14.35
Northeastern Region						
Daggett	0.80	0.57	1.17	0.76	0.75	0.86
Duchesne	1.26	1.56	2.13	2.36	2.36	2.16
Uintah	2.18	1.69	1.67	2.18	1.51	3.58
REGIONAL TOTALS	4.24	3.82	4.97	5.30	4.62	6.60
Southeastern Region						
Carbon	1.72	1.53	2.41	2.36	1.53	1.68
Emery	0.61	0.38	1.10	1.67	0.85	1.49
Grand	0.19	0.00	0.14	0.15	0.51	0.00
San Juan	0.27	0.00	0.07	0.37	0.10	0.19
REGIONAL TOTALS	2.79	1.91	3.73	4.54	2.99	3.35
Unknown Counties	1.30	4.43	3.41	1.06	0.10	0.00
Mixed Counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 13. Percentage distribution of forest grouse hunting pressure by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	2.05	2.90	3.00	3.44	2.16	3.60
Cache	19.97	23.79	18.99	16.79	18.41	17.24
Davis	4.04	3.91	3.40	2.97	4.46	4.28
Morgan	5.36	3.48	2.44	2.72	2.76	3.67
Rich	3.34	4.55	3.18	3.71	3.96	3.91
Summit	5.07	4.19	7.08	5.61	6.44	7.04
Weber	8.12	6.95	9.09	8.42	9.91	5.71
REGIONAL TOTALS	47.96	49.77	47.19	43.67	48.10	45.46
Central Region						
Juab	1.38	1.58	1.08	1.10	0.89	1.29
Salt Lake	2.83	2.62	2.60	2.09	2.87	2.79
Sanpete	5.23	6.20	4.27	5.70	6.82	4.76
Tooele	1.73	1.54	2.50	3.00	1.52	2.14
Utah	13.39	15.41	13.91	16.62	11.51	13.97
Wasatch	5.10	3.58	5.13	5.61	6.19	6.73
REGIONAL TOTALS	29.66	30.92	29.50	34.12	29.79	13.69
Southern Region						
Beaver	1.09	1.76	0.31	0.47	0.28	0.65
Garfield	0.48	0.68	0.25	0.83	0.56	0.37
Iron	2.22	0.97	1.98	1.21	0.68	1.39
Kane	0.26	0.14	0.12	0.39	0.18	0.34
Millard	1.38	1.18	0.53	0.66	2.41	1.70
Piute	0.58	0.43	0.71	0.41	0.79	0.68
Sevier	5.20	2.72	4.21	3.94	5.96	5.78
Washington	0.45	0.21	0.06	0.50	0.28	0.20
Wayne	0.32	0.21	0.09	0.11	0.48	0.20
REGIONAL TOTALS	11.97	8.31	8.26	8.50	11.61	11.32
Northeastern Region						
Daggett	1.35	0.57	2.47	1.07	1.14	1.43
Duchesne	1.48	1.72	1.79	2.75	2.48	2.79
Uintah	1.89	2.19	1.95	2.97	1.70	3.74
REGIONAL TOTALS	4.72	4.48	6.22	6.80	5.32	7.96
Southeastern Region						
Carbon	2.54	1.43	3.28	2.01	2.18	1.73
Emery	1.22	0.29	1.21	2.09	1.70	1.63
Grand	0.19	0.00	0.19	0.25	0.94	0.00
San Juan	0.51	0.11	0.15	0.96	0.25	0.17
REGIONAL TOTALS	4.46	1.83	4.82	5.31	5.07	3.54
Unknown Counties	1.22	4.69	4.02	1.60	0.10	0.03
Mixed Counties	--	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. Statewide summary of forest grouse harvest statistics, 1963-80.

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
TOTALS (1963-80)	271,178	263,760	(39.5)	358,565	(53.7)	45,695	(6.8)	668,020	600,179	0.44	0.60	1.11	0.97	1.32	2.46
AVERAGES (1963-79)	14,804	14,606	(39.9)	19,469	(53.2)	2,542	(6.9)	36,617	35,011	0.42	0.57	1.05	0.99	1.32	2.47

Table 15. Forest grouse field bag check summary, 1980.

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											
Cache											
Davis											
Morgan				N O	D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
Central Region											
Juab	12	28	87	33	38	4	7	16	13	81	1.86
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	8	19	94	14	15	3	8	50	10	20	1.25
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	176	401	1,822	194	11	136	308	1,477	158	11	0.51
Wasatch	1	1	1	0	--	--	--	--	--	--	--
REGIONAL TOTALS	197	449	2,004	241	12	143	323	1,543	181	12	0.56
Southern Region											
Beaver	6	10	37	11	30	6	10	37	11	30	1.10
Garfield	3	5	4	11	275	3	5	4	11	275	1.20
Iron	1	1	1	0	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	11	32	118	26	22	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	3	7	9	1	11	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	24	55	169	49	29	9	15	41	22	54	1.47
Northeastern Region											
Daggett	19	43	120	60	50	14	28	81	44	54	1.60
Duchesne	5	9	39	4	10	4	7	31	0	0	0.00
Uintah	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	24	52	159	64	40	18	35	112	44	39	1.26
Southeastern Region											
Carbon	7	22	85	0	--	7	22	85	0	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	7	22	85	0	--	7	22	85	0	--	--
STATE TOTALS											

Table 16. Forest grouse hunter success trend determined by field bag checks, 1975-80.

Region and County	1975 Birds/ 100 Hr	1975 Birds/ Hunter	1976 Birds/ 100 Hr	1976 Birds/ Hunter	1977 Birds/ 100 Hr	1977 Birds/ Hunter	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter
Northern Region												
Box Elder	18	0.79	17	1.36	0	0.00	41	2.33	29	2.00		
Cache	12	0.58	18	0.72	7	0.30	31	0.59	16	0.66		
Davis	2	0.05	--	--	0	0.00	--	0.00	43	1.22		
Morgan	6	0.32	19	1.25	--	--	--	--	--	--		
Rich	4	0.22	7	0.29	4	0.16	15	0.62	10	0.32		
Summit	--	--	--	--	--	--	--	--	--	--		
Weber	7	0.40	17	0.77	8	0.23	20	0.79	8	0.36		
REGIONAL TOTALS	10	0.48	17	0.69	6	0.27	26	0.63	14	0.58		
Central Region												
Juab	11	0.21*	22	0.88	3	0.10	33	0.80	--	--	81	1.86
Salt Lake	--	--	--	--	13	0.33	--	--	0	0.00	--	--
Sanpete	16	0.28*	14	0.14	--	--	--	--	28	0.53	20	1.25
Tooele	--	--	34	1.00	--	--	22	0.40	--	--	--	--
Utah	12	0.35	14	0.53	8	0.25	17	0.65	17	0.64	11	0.51
Wasatch	71	1.17	20	0.33	--	--	7	0.00	100	1.00	--	--
REGIONAL TOTALS	15	0.38	15	0.56	8	0.24	17	0.65	89	0.63	12	0.56
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	50	0.33	80	0.57	78	1.00	88	1.60	22	0.31	--	--
Iron	36	1.00	--	--	--	--	35	1.66	--	--	--	--
Kane	20	--	--	--	36	0.71	16	0.33	0	0.00	--	--
Millard	24	0.80	--	--	13	0.72	27	1.04	97	2.43	--	--
Piute	100	2.00	--	--	--	--	--	--	--	--	--	--
Sevier	31	2.00	18	0.78	17	1.00	--	--	31	1.04	--	--
Washington	--	--	--	--	--	--	--	--	150	3.00	--	--
Wayne	--	--	4	0.33	--	--	--	--	17	0.50	--	--
REGIONAL TOTALS	26	1.13	18	0.68	20	0.81	37	1.22	39	1.05		
Northeastern Region												
Daggett	90	2.25	41	4.00	11	0.33	57	0.80	38	1.31	54	1.60
Duchesne	0	--	11	1.22	10	0.39	20	0.50	30	0.73	0	0.00
Uintah	28	1.32	60	1.31	8	0.27	14	0.29	70	0.97	--	--
REGIONAL TOTALS	30	1.48	33	1.50	9	0.29	19	0.46	44	1.12	39	1.26
Southeastern Region												
Carbon	--	--	46	1.00	100	1.00	--	--	--	--	--	--
Emery	4	0.10*	--	--	--	--	--	--	--	--	--	--
Grand	150	3.00	25	1.33	--	--	--	--	0	0.00	--	--
San Juan	67	0.80	--	--	--	--	--	--	0	0.00	--	--
REGIONAL TOTALS	11	0.30	39	1.08	100	1.00	--	--	0	0.00	--	--
STATE TOTALS	11	0.50	17	0.67	7	0.28	22	0.64	17	0.64	--	--

*Forest grouse per hunter index based on all hunts.

Table 17. Sex and age composition of harvested blue grouse, 1980.

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	13	9	2	11	1	1	2	18	100
Cache[2]	191	43	56	99	42	51	93	94	166
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich[2]	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber[2]	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	204	52	58	110	43	52	95	86	164
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	220	70	44	114	60	46	106	93	241
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	220	70	44	114	60	46	106	93	241
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Northeastern Region									
Daggett	19	5	4	9	8	2	10	111	250
Duchesne	18	0	6	6	6	6	12	200	200
Uintah	36	8	5	13	15	8	23	177	460
REGIONAL TOTALS	73	13	15	28	29	16	45	161	300
Southeastern Region									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	497	135	117	252	132	114	246	98	210

[1]Includes unclassified juveniles.

[2]Data combined apply to one population of blue grouse.

QUAIL

SUMMARY

The 1980 breeding populations of California and Gambel's quail were similar to 1979 and above average.

Production of both California and Gambel's quail decreased from 1979 to well below average. Quail observation trends were below average in most areas of the state.

Harvest statistics decreased when compared to 1979. Total hunters and total harvest were below average statewide. However, an increase of hunters and harvest of Gambel's quail was reported in Washington County.

Brood Counts

Results of the annual random brood counts for 1980 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 1980 compared to 1979 and the previous 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total quail observed	549	-52	-38
Young per 100 adults	155	-46	-32
Mean brood size	4.52	-44	-36
Quail observed per 100 hours	541	-55	-16
Total hours effort	101.5	+5	-27

Harvest statistics for 1979 indicated a slight increase in the breeding populations of quail statewide; however, breeding populations of California quail decreased in the Northern, Northeastern and Southeastern regions. Gambel's quail in Washington County also showed a slight decrease in breeding population.

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

Production of both California and Gambel's quail decreased from 1979 and was well below average.

Harvest

Results of the annual hunter questionnaire for 1980 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 1980 season to 1979 and the previous 21-year average follow:

	1980	Percent change from 1979	Percent change from Average
Quail hunters	4,156	-26	-42
Quail harvested	11,690	-26	-42
Hunter-days afield	10,400	-23	-41
Quail per hunter-day	1.12	-4	-3
Quail per hunter	2.81	0	-1

Harvest statistics for 1980 decreased from 1979 and were below average.

Hunter success for Washington County (Gambel's quail) declined from 1979, but total harvest increased. About 44 percent of the statewide harvest of quail was taken in Washington County during 1980 compared to 25 percent in 1979 and nearly 18 percent in 1978.

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

Gambel's Quail Studies

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

Call counts were discontinued in 1980.

Waterhole counts totaled 124 birds during 1980 compared to 330 during 1979 and 86 during 1978.

Vegetative studies were discontinued in 1977.

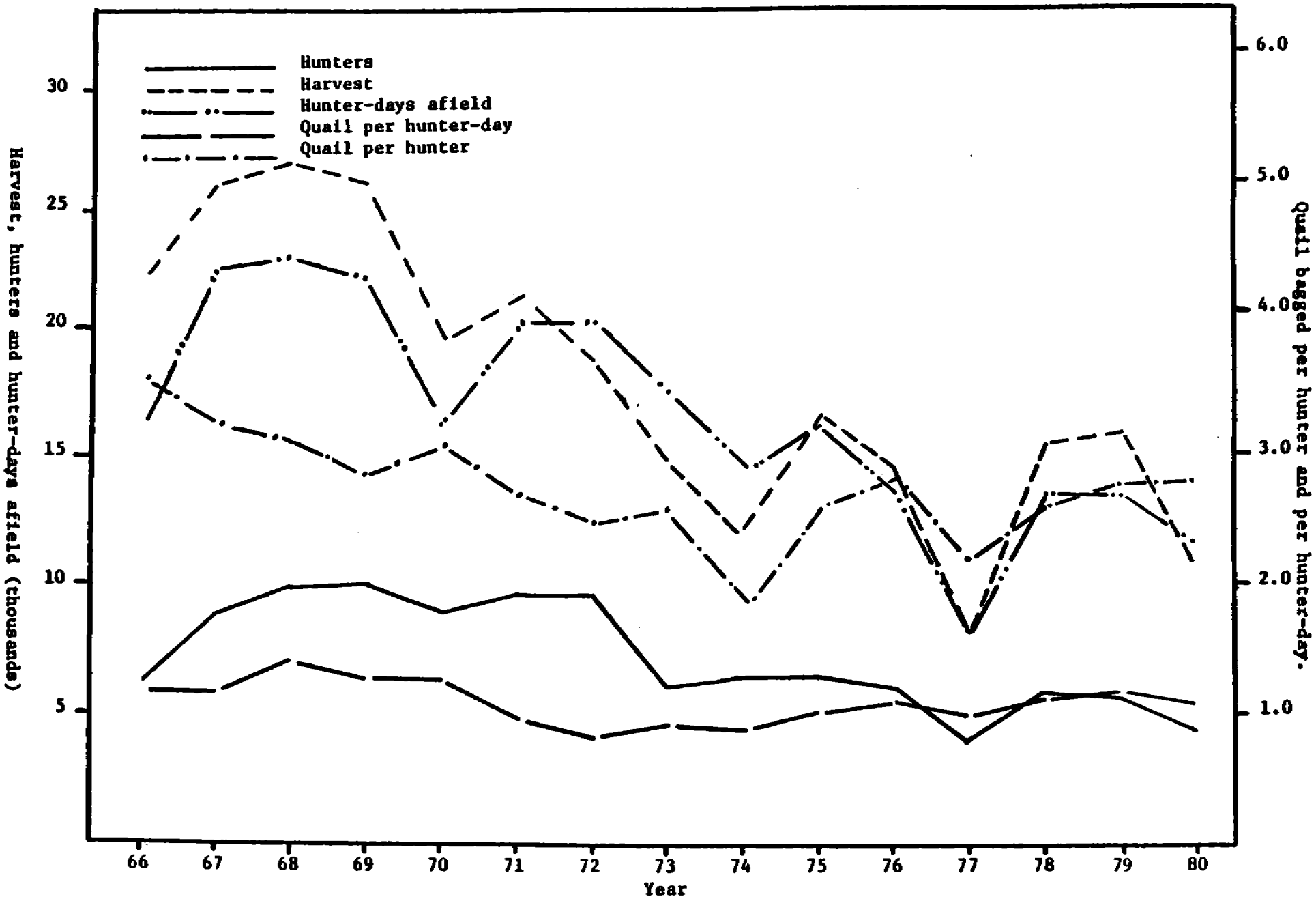


Figure 1. Statewide trend of quail harvest statistics.

Table 1. Quail summer inventory summary, 1980.

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	4	7	20	5.00	4	10	21	32	30	94	36	4.5	0	4	8.5	729
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	7	20	5.00	4	10	21	32	30	94	36	4.5	0	4	8.5	729
Central Region																
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	1	1	4	4.00	0	0	0	1	4	400	25	3	0	0	3	167
Sanpete	--	--	--	--	--	--	--	--	--	--	130	5	0	8	13	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	1	1	5	5.00	7	50	0	8	55	714	110	7	0	0	7	900
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	2	9	4.50	7	50	0	9	59	656	265	15	0	8	23	296
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	11	22	62	5.63	4	13	22	8	75	156	140	8	0	0	8	1,536
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	9	18	47	5.22	13	44	67	98	91	93	100	8	0	20	28	675
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	20	40	109	5.45	17	57	89	146	166	114	240	16	0	20	36	867
Northeastern Region																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	2	2	8	4.00	0	0	5	7	8	114	300	19	0	0	19	79
Uintah	20	20	71	3.55	0	0	1	21	71	338	110	15	0	0	15	613
REGIONAL TOTALS	22	22	79	3.59	0	0	6	28	79	282	410	34	0	0	34	314
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	48	71	217	4.52	28	117	116	215	334	155	951	69.5	0	32	101.5	541

Table 2. Trend of quail young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	250	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	314	--	--	--	--	--	--	--	196	94	
Morgan	329	300	575	400	640	--	300	--	--	500	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0	255	111	50	--	217	0	133	--	233	--	
REGIONAL TOTALS	230	290	254	230	640	217	180	133	--	209	94	265
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	173	240	114	222	175	154	97	86	77	256	400	
Sanpete	476	440	500	174	175	300	580	230	300	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	228	220	275	241	250	229	64	80	44	240	714	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	198	267	143	222	200	188	108	95	127	245	656	179
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	1,075	160	--	--	--	--	--	--	--	--	--	
Millard	--	233	117	0	113	50	146	98	47	204	156	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	700	--	
Washington	48	320	57	--	273	580	199	149	555	301	93	
Wayne	--	0	--	--	86	--	244	238	1,250	--	--	
REGIONAL TOTALS	98	270	75	0	171	429	190	146	317	283	114	220
Northeastern Region												
Daggett	524	267	--	0	525	450	600	0	--	--	--	
Duchesne	0	--	--	--	333	314	0	129	190	340	114	
Uintah	218	217	165	700	438	475	323	383	800	653	338	
REGIONAL TOTALS	301	243	165	350	431	411	265	122	336	517	282	314
Southeastern Region												
Carbon	283	125	--	533	--	--	450	--	650	--	--	
Emery	--	50	438	--	109	0	--	0	19	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	41	--	40	--	
REGIONAL TOTALS	283	100	438	533	109	0	450	38	89	40	--	208
STATE TOTALS	200	255	171	216	248	360	163	112	272	285	155	228

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

Table 3. Trend of quail mean brood size from 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	5.00	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	11.00	--	--	--	--	--	--	--	6.75	5.00	
Morgan	7.67	12.00	11.50	8.00	9.00	--	--	--	--	5.00	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	9.33	10.00	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	7.67	10.50	11.00	7.00	9.00	--	--	--	--	6.40	5.00	8.59
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	8.61	7.00	8.00	7.50	5.00	6.80	7.00	6.40	2.00	4.60	4.00	
Sanpete	5.67	5.70	5.40	5.60	4.00	6.00	5.80	4.33	4.75	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	7.85	7.43	7.17	7.36	6.67	7.00	2.50	4.00	4.00	4.00	5.00	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	7.98	6.50	7.18	6.95	5.29	6.56	5.64	5.78	3.44	4.43	4.50	5.98
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	--	8.00	--	--	--	--	--	--	--	--	--	
Millard	--	8.00	7.00	--	7.00	8.00	10.20	6.67	6.25	11.25	5.63	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	7.00	--	
*Washington	4.00	6.62	2.67	--	5.17	10.84	6.08	7.83	11.80	8.51	5.22	
*Wayne	--	--	--	--	9.00	--	9.00	13.00	--	--	--	
REGIONAL TOTALS	4.00	7.21	3.75	--	6.30	10.63	7.40	8.07	10.21	8.86	5.45	6.64
Northeastern Region												
Daggett	5.29	5.45	--	--	5.25	4.50	6.00	--	--	--	--	
Duchesne	--	--	--	--	5.00	--	--	3.43	6.86	6.00	4.00	
Uintah	5.43	5.33	5.92	7.00	11.00	10.00	3.55	7.67	8.00	6.34	3.55	
REGIONAL TOTALS	5.32	5.41	5.92	7.00	6.73	6.86	3.67	4.70	7.53	6.17	3.59	5.93
Southeastern Region												
Carbon	--	--	--	8.00	--	--	9.00	--	--	--	--	
Emery	--	2.00	9.86	--	5.00	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	4.50	--	--	--	
REGIONAL TOTALS	--	2.00	9.86	8.00	5.00	--	9.00	4.50	--	--	--	6.39
STATE TOTALS	6.97	6.58	7.21	7.04	6.20	9.16	5.58	6.25	7.55	8.08	4.52	7.06

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

Table 4. Trend of quail observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	--	--	--	175	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	0	829	--	--	--	--	--	--	--	956	729	
Morgan	1,200	400	1,350	--	925	--	1,200	--	--	600	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	86	300	271	100	--	238	22	350	--	1,000	--	
REGIONAL TOTALS	550	471	511	330	925	238	140	350	--	927	729	494
Central Region												
Juab	--	--	--	--	--	--	0	--	--	--	--	
Salt Lake	2,637	1,133	2,706	414	550	592	2,838	2,092	575	1,067	167	
Sanpete	817	982	771	525	138	480	262	236	400	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	959	988	1,071	1,194	400	383	512	90	217	1,700	900	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	1,704	1,030	1,873	808	267	513	1,041	805	378	1,429	296	985
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
*Kane	2,350	578	--	--	--	--	--	--	--	--	--	
Millard	--	3,000	118	125	1,067	1,600	2,867	1,088	867	1,340	1,536	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	50	800	--	
*Washington	316	600	122	--	194	1,143	632	596	750	2,741	675	
*Wayne	--	33	--	--	300	14	517	645	333	--	--	
REGIONAL TOTALS	420	708	90	125	254	917	729	702	667	1,951	867	656
Northeastern Region												
Daggett	3,017	1,900	--	18	208	157	41	--	--	--	--	
Duchesne	29	0	--	0	325	153	43	240	310	209	79	
Uintah	894	1,120	1,005	533	1,950	460	715	483	563	890	613	
REGIONAL TOTALS	628	769	303	47	739	226	241	350	398	443	314	414
Southeastern Region												
Carbon	271	300	--	--	0	--	220	--	1,500	--	--	
Emery	--	83	1,950	0	343	17	--	67	950	--	--	
Grand	--	--	--	--	0	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	0	238	0	127	--	
REGIONAL TOTALS	271	181	1,950	112	343	17	110	206	425	127	--	374
STATE TOTALS	939	728	664	336	364	549	571	588	530	1,193	541	646

*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, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	10	339	203	0.60	3.26	1.74
Cache	2	34	17	0.50	0.33	0.15
Davis	29	1,171	933	0.80	11.26	7.98
Morgan	2	153	0	0.00	1.47	0.00
Rich	0	0	0	0.00	0.00	0.00
Summit	1	34	85	2.50	0.33	0.73
Weber	20	814	713	0.88	7.83	6.10
REGIONAL TOTALS	64	2,545	1,951	0.77	24.47	16.69
Central Region						
Juab	1	68	186	2.75	0.65	1.60
Salt Lake	17	407	628	1.54	3.92	5.37
Sanpete	0	0	0	0.00	0.00	0.00
Tooele	1	17	0	0.00	0.16	0.00
Utah	61	1,595	2,087	1.31	15.33	17.85
Wasatch	1	34	0	0.00	0.33	0.00
REGIONAL TOTALS	81	2,121	2,901	1.37	20.39	24.82
Southern Region						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	7	203	220	1.08	1.96	1.89
Piute	0	0	0	0.00	0.00	0.00
Sevier	0	0	0	0.00	0.00	0.00
Washington	58	3,529	5,124	1.45	33.93	43.83
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	65	3,732	5,344	1.43	35.89	45.72
Northeastern Region						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	12	458	339	0.74	4.40	2.90
Uintah	19	950	797	0.84	9.14	6.82
REGIONAL TOTALS	31	1,408	1,136	0.81	13.54	9.72
Southeastern Region						
Carbon	4	187	153	0.82	1.79	1.31
Emery	8	373	204	0.55	3.59	1.74
Grand	0	0	0	0.00	0.00	0.00
San Juan	1	34	0	0.00	0.33	0.00
REGIONAL TOTALS	13	594	357	0.60	5.71	3.05
Unknown counties	0	0	0	0.00	0.00	0.00
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	254	10,400	11,690	1.12	100	100

*Total hunter trips from questionnaire returns.

Table 6. Summary of quail bagged per hunter-day by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	0.43	0.18	1.15	0.88	0.43	0.60
Cache	0.33	0.67	1.00	0.24	--	0.50
Davis	0.73	0.70	0.80	1.16	0.96	0.80
Morgan	0.70	0.80	1.20	0.80	0.95	0.00
Rich	0.00	0.00	0.00	0.00	0.00	0.00
Summit	1.75	0.17	1.00	1.67	2.37	2.50
Weber	0.64	0.52	0.63	0.78	0.89	0.88
REGIONAL TOTALS	0.68	0.62	0.77	0.92	0.89	0.77
Central Region						
Juab	0.00	0.00	0.00	3.00	3.00	2.75
Salt Lake	1.30	0.86	1.11	0.90	1.48	1.54
Sanpete	0.50	0.13	1.50	0.00	0.90	0.00
Tooele	1.25	0.00	1.50	0.00	0.00	0.00
Utah	0.66	0.88	0.84	0.91	1.14	1.31
Wasatch	1.25	0.00	0.00	4.00	--	0.00
REGIONAL TOTALS	0.78	0.82	0.95	0.93	1.23	1.37
Southern Region						
Beaver	0.00	0.43	0.00	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	2.00	0.00
Iron	0.23	1.40	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.36	1.53	0.13	0.44	--	1.08
Piute	0.00	0.00	4.00	0.00	0.00	0.00
Sevier	0.11	0.33	0.00	0.00	0.63	0.00
Washington	2.09	2.22	1.63	2.42	2.04	1.45
Wayne	3.00	2.00	0.86	0.86	2.62	0.00
REGIONAL TOTALS	1.73	2.01	1.43	1.82	1.96	1.43
Northeastern Region						
Daggett	0.00	0.00	0.00	1.00	0.00	0.00
Duchesne	0.55	1.94	1.09	1.37	0.77	0.74
Uintah	0.79	0.70	0.76	1.39	0.83	0.84
REGIONAL TOTALS	0.73	1.07	0.89	1.38	0.80	0.81
Southeastern Region						
Carbon	0.48	0.80	0.78	0.63	0.46	0.82
Emery	0.96	0.33	0.52	1.17	0.45	0.55
Grand	0.25	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	2.00	0.00	0.00	0.00
REGIONAL TOTALS	0.57	0.72	0.73	0.77	0.42	0.60
Unknown counties	0.29	0.89	1.47	1.88	1.16	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	1.01	1.09	0.98	1.13	1.17	1.12

Table 7. Percentage distribution of quail harvest by region and county, 1975-80.

Region and County	Year 1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	0.29	0.28	2.38	2.84	1.66	1.74
Cache	0.19	0.84	0.63	0.52	--	0.15
Davis	7.30	9.93	8.10	11.11	8.74	7.98
Morgan	2.02	1.68	0.95	1.55	1.93	0.00
Rich	0.00	0.00	0.00	0.00	0.00	0.00
Summit	0.67	0.14	0.32	0.65	1.75	0.73
Weber	4.42	3.22	6.67	4.65	4.69	6.10
REGIONAL TOTALS	14.89	16.08	19.05	21.32	18.77	16.69
Central Region						
Juab	0.00	0.00	0.00	0.78	0.55	1.60
Salt Lake	7.49	3.36	10.00	4.78	11.59	5.37
Sanpete	0.10	0.14	0.48	0.00	0.83	0.00
Tooele	0.48	0.00	0.48	0.00	0.00	0.00
Utah	16.43	12.73	13.81	23.51	21.34	17.85
Wasatch	0.48	0.00	0.00	1.03	--	0.00
REGIONAL TOTALS	24.98	16.22	24.76	30.10	34.31	24.82
Southern Region						
Beaver	0.00	0.42	0.00	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.18	0.00
Iron	0.58	0.98	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.48	3.64	0.16	0.52	--	1.89
Piute	0.00	0.00	1.27	0.00	0.00	0.00
Sevier	0.19	0.14	0.00	0.00	0.46	0.00
Washington	48.41	40.14	26.67	18.48	25.48	43.83
Wayne	0.29	1.68	0.95	0.78	1.93	0.00
REGIONAL TOTALS	49.95	46.99	29.05	19.77	28.06	45.72
Northeastern Region						
Daggett	0.00	0.00	0.00	0.13	0.00	0.00
Duchesne	0.58	4.90	7.94	6.20	3.68	2.90
Uintah	2.88	4.20	8.10	18.35	5.34	6.82
REGIONAL TOTALS	3.46	9.09	16.03	24.68	9.02	9.72
Southeastern Region						
Carbon	3.65	3.36	4.60	1.29	1.20	1.31
Emery	2.59	0.28	1.90	0.90	0.46	1.74
Grand	0.29	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.63	0.00	0.00	0.00
REGIONAL TOTALS	6.53	3.64	7.14	2.20	1.66	3.05
Unknown counties	0.19	7.97	3.97	1.94	8.18	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of quail hunting pressure by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	0.68	1.68	2.03	3.67	4.51	3.26
Cache	0.58	1.37	0.62	2.49	--	0.33
Davis	10.05	15.40	10.00	10.85	10.63	11.26
Morgan	2.90	2.29	0.78	2.20	2.36	1.47
Rich	0.48	0.00	0.00	0.00	0.11	0.00
Summit	0.39	0.91	0.31	0.44	0.86	0.33
Weber	6.96	6.71	10.47	6.74	6.12	7.83
REGIONAL TOTALS	22.03	28.35	24.22	26.39	24.59	24.47
Central Region						
Juab	0.19	0.15	0.16	0.29	0.21	0.65
Salt Lake	5.80	4.27	8.91	6.01	9.13	3.92
Sanpete	0.19	1.22	0.31	0.00	1.08	0.00
Tooele	0.39	0.15	0.31	0.59	0.32	0.16
Utah	25.12	15.85	16.09	29.47	21.91	15.33
Wasatch	0.39	0.00	0.00	0.29	--	0.33
REGIONAL TOTALS	32.08	21.65	25.78	36.66	32.66	20.39
Southern Region						
Beaver	0.00	1.07	0.00	0.00	0.21	0.00
Garfield	0.00	0.00	0.00	0.00	0.11	0.00
Iron	2.51	0.76	0.16	0.44	0.00	0.00
Kane	0.00	0.00	0.00	0.29	0.00	0.00
Millard	1.35	2.59	1.25	1.32	--	1.96
Piute	0.00	0.00	0.31	0.15	0.11	0.00
Sevier	1.74	0.46	1.09	0.44	0.86	0.00
Washington	23.29	19.66	16.09	8.65	14.61	33.93
Wayne	0.10	0.91	1.09	1.03	0.86	0.00
REGIONAL TOTALS	28.99	25.46	20.00	12.32	16.75	35.89
Northeastern Region						
Daggett	0.00	0.00	0.00	0.15	0.00	0.00
Duchesne	1.06	2.74	7.19	5.13	5.59	4.40
Uintah	3.67	6.55	10.47	14.96	7.52	9.14
REGIONAL TOTALS	4.73	9.30	17.66	20.23	13.10	13.54
Southeastern Region						
Carbon	7.63	4.57	5.78	2.35	3.01	1.79
Emery	2.71	0.91	3.59	0.88	1.18	3.59
Grand	1.16	0.00	0.00	0.00	0.43	0.00
San Juan	0.00	0.00	0.31	0.00	0.00	0.33
REGIONAL TOTALS	11.50	5.49	9.69	3.23	4.62	5.71
Unknown counties	0.68	9.76	2.66	1.17	8.27	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of quail harvest statistics, 1951-1980.

Year	Total Hunters	Total Harvest	Hunters-days Afield	Quail Per Hunter-day	Quail Per Hunter
1951	3,856	6,362	7,069	0.90	1.65
1652	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
TOTALS (1959-80)	153,749	437,219	381,775	1.15	2.84
AVERAGES (1959-79)	7,123	20,263	17,685	1.15	2.84

Table 10. Gambel's quail call count trend on the west slope of the Beaver Dam Mountains, Washington County, 1971-80.

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, 1971-80.

Index	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Total young	33	0	0	24	145	61	--	67	253	72
Total adults	8	0	0	6	20	53	--	29	77	52
Total quail	41	0	0	30	165	114	17	86	330	124
Young per 100 adults	412	--	--	400	725	115	--	353	329	138

HUNGARIAN PARTRIDGE

SUMMARY

Harvest data for 1979 indicated that 1980 breeding population densities were less than 1979. Limited brood data indicated above average Hun densities for 1980.

The 1980 hunt indicated similar hunting pressure on Huns when compared to 1979. While the number of hunters remained about the same as 1979, the harvest and hunter-days afield increased over 30 percent. However, total hunters, days afield and harvest were below the long-term average. Hunter success was comparable to 1979 but slightly below average.

Brood Counts

Results of the annual random brood counts for 1980 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 1980 compared to 1979 and the previous 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total Huns observed	88	+66	-53
Young per 100 adults	633	-19	+22
Mean brood size	9.50	+90	-8
Huns observed per 100 hours	144	-19	-20
Total hours effort	61	+103	-39

Harvest data for 1979 indicated a decreased and slightly below average breeding population for 1980.

Although hours of effort doubled from 1979, effort was still 39 percent below average. Only eight broods were observed in 1980.

Harvest

Hunter Questionnaire

Results of the annual hunter questionnaire for 1980 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 1980 season compared to 1979 and the previous 21-year average follow:

	1980	Percent change from 1979	Percent change from Average
Hungarian partridge hunters	3,359	-2	-20
Hungarian partridge harvest	8,466	+37	-8
Hunter-days afield	10,366	+33	-1
Huns per hunter-day	0.82	+3	-7
Huns per hunter	2.52	+40	+15

Hungarian partridge hunting pressure decreased slightly, but success improved during 1980 as compared to 1979.

Field Bag Checks

Results of the survey for 1980 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indices obtained for 1980 compared to 1979 and the previous 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Huns per hunter (complete hunts)			
Huns bagged per 100 hours		N O D A T A	
Average hours per hunter-day (complete hunts)			
Hours hunted per Hun bagged			

Data not available prior to printing.

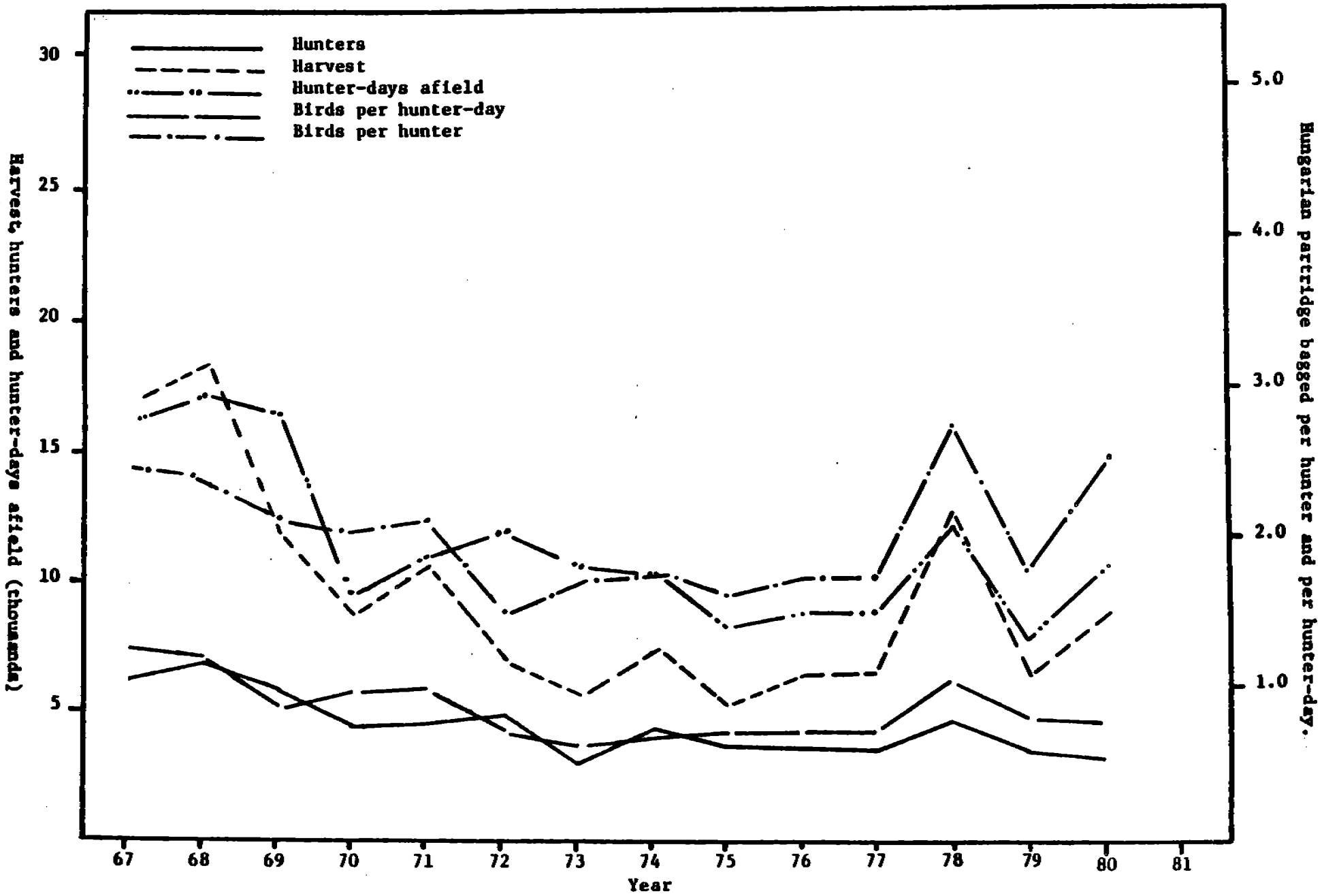


Figure 1. Statewide trend of Hungarian partridge harvest statistics.

Table 1. Hungarian partridge summer inventory summary, 1980.

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	5	8	55	11.00	0	0	0	8	55	688	100	8	33	0	41	154
Cache	0	0	0	--	0	0	--	0	0	--	150	11	3	0	14	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	3	3	21	7.00	0	0	0	3	21	700	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	8	11	76	9.50	0	0	0	11	76	691	250	19	36	0	55	158
Central Region																
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	0	0	0	--	0	0	0	0	0	0	50	3	0	0	3	--
Wasatch	0	0	0	--	0	0	1	1	0	--	0	0	3	0	3	33
REGIONAL TOTALS	0	0	0	--	0	0	1	1	0	0	50	3	3	0	6	17
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	8	11	76	9.50	0	0	1	12	76	633	300	22	39	0	61	144

Table 2. Trend of Hungarian partridge young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	306	524	379	575	775	600	421	467	580	840	688	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	1,400	--	400	675	--	533	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	700	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	306	553	379	560	755	600	431	467	580	840	691	547
Central Region												
Juab	--	--	--	--	--	--	--	--	--	500	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	233	173	--	--	--	
Tooele	--	--	--	--	--	--	550	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	0	
Wasatch	414	350	800	450	800	--	20	--	--	--	--	
REGIONAL TOTALS	414	350	800	450	800	--	200	173	--	500	--	461
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard					NOT APPLICABLE							
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne					NOT APPLICABLE							
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery					NOT APPLICABLE							
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	319	495	424	552	757	600	328	369	580	780	633	520

Table 3. Trend of Hungarian partridge mean brood size from 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	11.82	7.82	11.50	11.86	11.22	13.44	10.22	10.77	11.60	8.40	11.00	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	14.00	--	8.33	13.50	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	7.00	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	11.58	8.16	11.50	10.80	11.64	13.44	10.22	10.77	11.60	8.40	9.50	10.81
Central Region												
Juab	--	--	--	--	--	--	--	--	--	5.00	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	7.25	--	8.00	4.50	8.00	--	2.00	--	--	--	--	
REGIONAL TOTALS	7.25	--	8.00	4.50	8.00	--	2.00	--	--	5.00	--	5.79
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard					NOT APPLICABLE							
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne					NOT APPLICABLE							
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery					NOT APPLICABLE							
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	10.50	8.16	10.33	9.75	11.33	13.44	9.40	10.77	11.60	7.83	9.50	10.31

Table 4. Trend of Hungarian partridge observed per 100 hours, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	210	213	133	91	80	262	184	109	203	235	154	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	428	--	--	1,900	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	210	213	133	106	97	262	205	109	151	174	158	166
Central Region												
Juab	--	--	--	--	--	--	--	--	--	600	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	400	820	--	--	--	
Tooele	--	--	--	--	--	--	2,600	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	720	300	450	275	450		120			0	33	
REGIONAL TOTALS	720	300	171	275	450	--	371	820	--	200	17	431
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	249	243	139	110	101	262	238	131	151	177	144	180

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	138	7,109	6,243	0.88	68.58	73.75
Cache	32	1,086	831	0.77	10.47	9.82
Davis	2	34	51	1.50	0.33	0.60
Morgan	1	68	153	2.25	0.65	1.80
Rich	1	17	17	1.00	0.16	0.20
Summit	2	34	34	1.00	0.33	0.40
Weber	1	17	17	1.00	0.16	0.20
REGIONAL TOTALS	177	8,364	7,346	0.88	80.69	86.77
Central Region						
Juab	1	17	0	0.00	0.16	0.00
Salt Lake	1	17	17	1.00	0.16	0.20
Sanpete	0	0	0	0.00	0.00	0.00
Tooele	6	339	204	0.60	3.27	2.40
Utah	7	780	220	0.28	7.53	2.61
Wasatch	7	577	390	0.68	5.56	4.61
REGIONAL TOTALS	22	1,730	831	0.48	16.69	9.82
Southern Region						
Beaver	1	34	85	2.50	0.33	1.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	1	34	0	0.00	0.33	0.00
Piute	1	68	0	0.00	0.65	0.00
Sevier	0	0	0	0.00	0.00	0.00
Washington	2	34	85	2.50	0.33	1.00
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	5	170	170	1.00	1.64	2.00
Northeastern Region						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	1	85	102	1.20	0.82	1.20
Uintah	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	85	102	1.20	0.82	1.20
Southeastern Region						
Carbon	1	17	17	1.00	0.16	0.20
Emery	0	0	0	0.00	0.00	0.00
Grand	0	0	0	0.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	17	17	1.00	0.16	0.20
Unknown counties	0	0	0	0.00	0.00	0.00
Mixed counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	206	10,366	8,466	0.82	100	100

*Total hunter trips from questionnaire returns.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	0.69	0.90	0.74	1.19	0.94	0.88
Cache	0.66	0.68	0.92	0.67	0.93	0.77
Davis	0.40	0.64	0.00	2.00	0.76	1.50
Morgan	0.88	0.29	0.44	0.27	1.36	2.25
Rich	0.43	0.09	0.22	2.80	0.56	1.00
Summit	0.20	0.00	0.88	2.00	0.50	1.00
Weber	0.22	0.46	0.97	0.91	0.32	1.00
REGIONAL TOTALS	0.68	0.75	0.76	1.07	0.90	0.88
Central Region						
Juab	0.33	0.00	0.33	0.67	0.00	0.00
Salt Lake	1.67	2.00	0.75	1.50	0.00	1.00
Sanpete	0.00	0.50	0.00	0.00	0.00	0.00
Tooele	0.50	0.00	0.21	0.00	0.50	0.60
Utah	0.88	0.50	0.27	0.33	1.00	0.28
Wasatch	0.44	0.00	0.55	1.64	0.13	0.68
REGIONAL TOTALS	0.71	0.31	0.36	0.83	0.27	0.48
Southern Region						
Beaver	0.00	0.50	0.00	0.00	0.00	2.50
Garfield	0.00	0.00	0.50	0.00	0.00	0.00
Iron	0.60	0.00	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.00	0.00	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.33	1.00	0.00	0.00	0.00
Washington	0.00	0.00	0.00	0.00	0.00	2.50
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.21	0.40	0.50	0.00	0.00	1.00
Northeastern Region						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	1.00	0.00	0.00	0.00	0.00	1.20
Uintah	0.00	0.00	0.00	0.50	0.00	0.00
REGIONAL TOTALS	0.56	0.00	0.00	0.50	0.00	1.20
Southeastern Region						
Carbon	0.00	0.00	0.00	0.00	0.00	1.00
Emery	0.00	0.00	0.00	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	0.00	0.00	0.00	1.00
Unknown counties	0.40	1.17	0.64	1.00	0.65	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.65	0.72	0.70	1.05	0.80	0.82

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1975-80.

Region and County	Year 1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	46.97	68.49	66.35	78.40	62.44	73.75
Cache	15.45	12.54	14.45	8.33	18.54	9.82
Davis	0.61	2.25	0.00	0.31	3.76	0.60
Morgan	11.52	3.54	1.66	1.39	4.46	1.80
Rich	3.03	0.32	0.47	2.16	1.17	0.20
Summit	0.30	0.00	1.66	0.62	0.23	0.40
Weber	1.52	1.93	6.87	1.54	1.65	0.20
REGIONAL TOTALS	79.39	89.07	91.47	92.75	92.25	86.77
Central Region						
Juab	1.52	0.00	0.47	0.31	0.00	0.00
Salt Lake	3.03	0.64	0.71	0.93	0.00	0.20
Sanpete	0.00	0.64	0.00	0.00	0.00	0.00
Tooele	0.91	0.00	0.71	0.00	1.17	2.40
Utah	9.09	2.25	1.42	0.46	2.11	2.61
Wasatch	2.42	0.00	2.61	2.78	1.41	4.61
REGIONAL TOTALS	16.97	3.54	5.92	4.48	4.69	9.82
Southern Region						
Beaver	0.00	0.32	0.00	0.00	0.00	1.00
Garfield	0.00	0.00	0.24	0.00	0.00	0.00
Iron	0.91	0.00	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.00	0.00	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.32	0.24	0.00	0.00	0.00
Washington	0.00	0.00	0.00	0.00	0.00	1.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.91	0.64	0.47	0.00	0.00	2.00
Northeastern Region						
Daggett	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	1.52	0.00	0.00	0.00	0.00	1.20
Uintah	0.00	0.00	0.00	0.15	0.00	0.00
REGIONAL TOTALS	1.52	0.00	0.00	0.15	0.00	1.20
Southeastern Region						
Carbon	0.00	0.00	0.00	0.00	0.00	0.20
Emery	0.00	0.00	0.00	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.00	0.00	0.00	0.00	0.20
Unknown counties	1.21	6.75	2.13	2.62	3.05	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	44.66	54.50	62.56	69.32	53.08	68.58
Cache	15.22	13.16	10.98	13.15	15.89	10.47
Davis	0.99	2.54	0.33	0.16	3.93	0.33
Morgan	8.50	8.78	2.66	5.36	2.62	0.65
Rich	1.38	2.54	1.50	0.81	1.68	0.16
Summit	0.99	0.46	1.33	0.32	0.37	0.33
Weber	4.55	3.00	4.99	1.79	4.11	0.16
REGIONAL TOTALS	76.28	84.99	84.36	90.91	81.68	80.69
Central Region						
Juab	2.96	0.00	1.00	0.49	0.37	0.16
Salt Lake	1.19	0.23	0.67	0.65	0.19	0.16
Sanpete	0.00	0.92	0.50	1.14	1.12	0.00
Tooele	1.19	2.31	2.33	0.16	1.87	3.27
Utah	6.72	3.23	3.66	1.46	1.68	7.53
Wasatch	3.56	1.62	3.33	1.79	8.60	5.56
REGIONAL TOTALS	15.61	8.31	11.48	5.68	13.83	16.69
Southern Region						
Beaver	0.00	0.46	0.00	0.00	0.00	0.33
Garfield	0.00	0.00	0.33	0.00	0.00	0.00
Iron	0.99	0.00	0.00	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.00	0.00	0.00	0.00	0.00	0.33
Piute	0.00	0.00	0.00	0.16	0.00	0.65
Sevier	1.78	0.69	0.17	0.00	0.00	0.00
Washington	0.00	0.00	0.17	0.00	0.00	0.33
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	2.77	1.15	0.67	0.16	0.00	1.64
Northeastern Region						
Daggett	0.40	0.00	0.00	0.00	0.00	0.00
Duchesne	0.99	0.00	0.00	0.00	0.37	0.82
Uintah	0.40	0.69	1.00	0.32	0.00	0.00
REGIONAL TOTALS	1.78	0.69	1.00	0.32	0.37	0.82
Southeastern Region						
Carbon	0.99	0.69	0.00	0.00	0.19	0.16
Emery	0.59	0.00	0.17	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	1.58	0.69	0.17	0.16	0.38	0.16
Unknown counties	1.98	4.16	2.33	2.76	3.74	0.00
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-80.

Year	Total Hunters	Total Harvest	Hunters-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
TOTAL (1959-80)	91,004	201,126	229,402	0.88	2.21
AVERAGES (1959-79)	4,174	9,174	10,430	0.88	2.20

Table 10. Hungarian partridge field bag check summary, 1980.

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											
Cache											
Davis											
Morgan				N O	D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
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											

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1975-80.

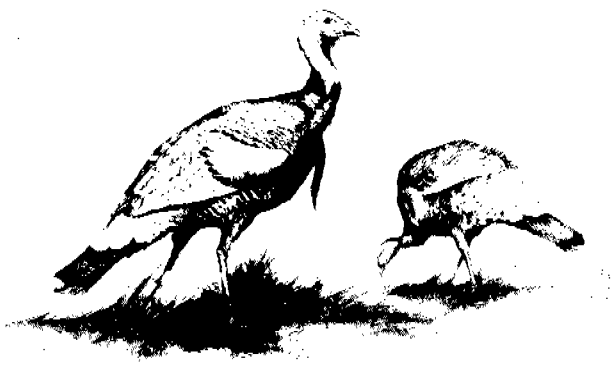
Region and County	1975 Birds/ 100 Hr	1975 Birds/ Hunter	1976 Birds/ 100 Hr	1976 Birds/ Hunter	1977 Birds/ 100 Hr	1977 Birds/ Hunter	1978 Birds/ 100 Hr	1978 Birds/ Hunter	1979 Birds/ 100 Hr	1979 Birds/ Hunter	1980 Birds/ 100 Hr	1980 Birds/ Hunter
Northern Region												
Box Elder	12	0.60	8	0.24	36	0.92	17	0.92	4	0.13	--	--
Cache	10	0.40	6	0.33	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	19	0.54	--	--	--	--	--	0.00	--	--	--	--
Summit	17	0.50	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	0.57	7	0.24	36	0.92	16	0.80	4	0.13	--	--
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--			7	0.33	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	7	0.33	--	--	--	--	--	--
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	13	0.57	7	0.24	26	0.80	16	0.80	4	0.13		

WILD TURKEY

SUMMARY

Hunter success and turkey observational data for the 1980 spring season indicated a statewide turkey population level considerably below that of 1979 and the long-term average, thus indicating a continued decline in breeding populations.

Fall hunting pressure statewide was down from 1979, but the total harvest increased from 3 in 1979 to 11 in 1980. Hunter success for 1980 was considerably above the long-term average, but total harvest remained considerably below the average 43 harvested birds per year. There was significant improvement in the percentage of hunters observing turkeys. Hopefully, this is a sign of population turnaround and recovery.



Brood Counts

Annual random brood counts have been conducted each year since the introduction of turkeys into Utah in the early 1950's; however, success in finding broods has usually been poor. Sample sizes have generally been too low to meaningfully indicate relative density or production from year to year. Harvest data for 1979 indicated a continued suppressed breeding population for 1980. No turkey brood observations were reported in 1980.

Harvest

Spring Gobbler Season

Results of the 1980 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 1980 spring season compared to 1979 and the previous 13-year average follow:

	1980	Percent change from 1979	Percent change from Average
Permits sold	40	-65	-75
Hunters afield	35	-61	-77
Turkeys harvested	0	-100	-100
Hunter-days afield	84	-65	-78
Percent hunter success	0	-100	-100
Turkeys bagged per hunter-day	0	-100	-100
Percent of hunters who observed turkeys	17	+113	-47

Permit sales and hunters afield again decreased from 1979 and remained well below average. The total harvest decreased from 12 in 1977 to 9 in 1978 to 1 in 1979 to 0 in 1980. The proportion of hunters who reported having observed turkeys increased 80 percent above the 1979 level but remained 47 percent below average. The East Zion unit accounted for 100 percent of the hunting pressure based on hunter-days afield. No turkeys were reported harvested.

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

Fall Season

Results of the 1980 fall season are shown in Table 3 of this section. The trend of these data since 1968 are shown in Tables 4-9. The 1980 fall season compared to 1979 and the previous 17-year average follow:

	1980	Percent change from 1979	Percent change from Average
Permits sold	43	-7	-73
Hunters afield	35	-3	-76
Turkeys harvested	11	+267	-74
Hunter-days afield	69	-3	-78
Percent hunter success	32	+256	+52
Turkeys bagged per hunter-day	0.16	+220	+14
Percent of hunters who observed turkeys	44	+132	+29

Permit sales, hunters afield and hunter-days afield all decreased slightly from 1979 and remained well below average. Harvest improved considerably and was the second highest in the last 8 years. The percent of hunters observing turkeys improved considerably over the 1979 figure and the 17-year average.

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

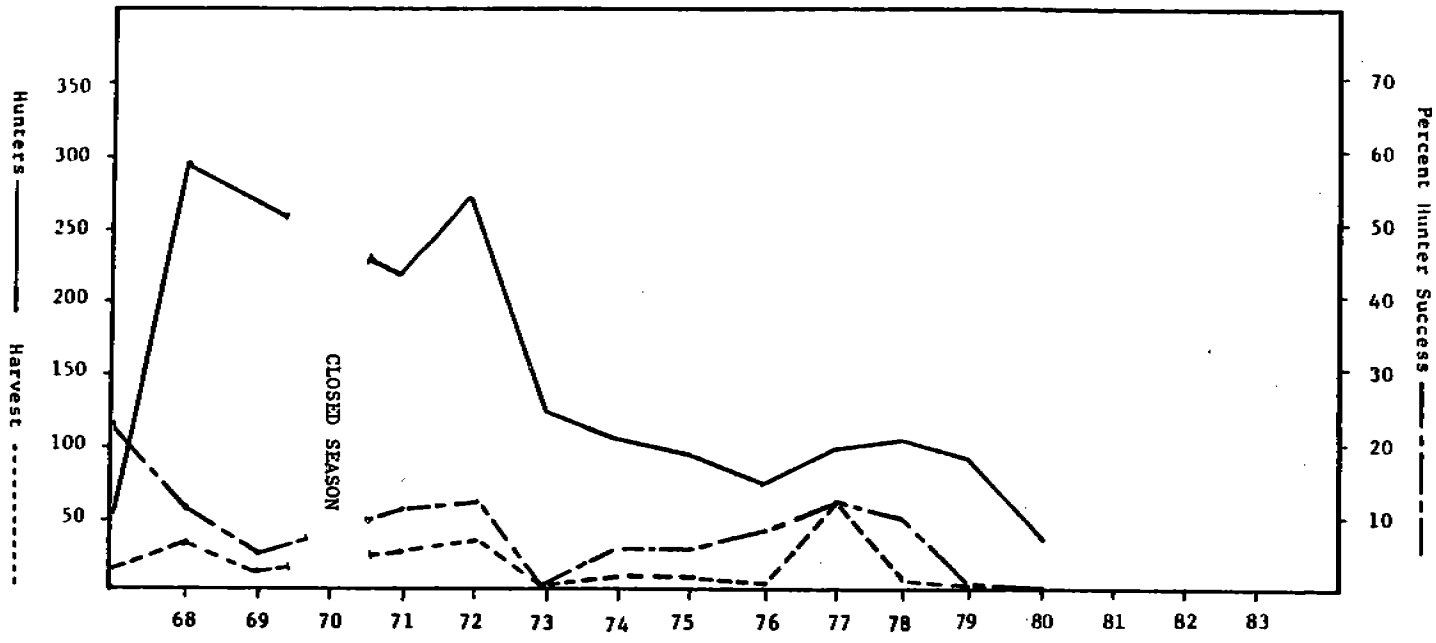


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

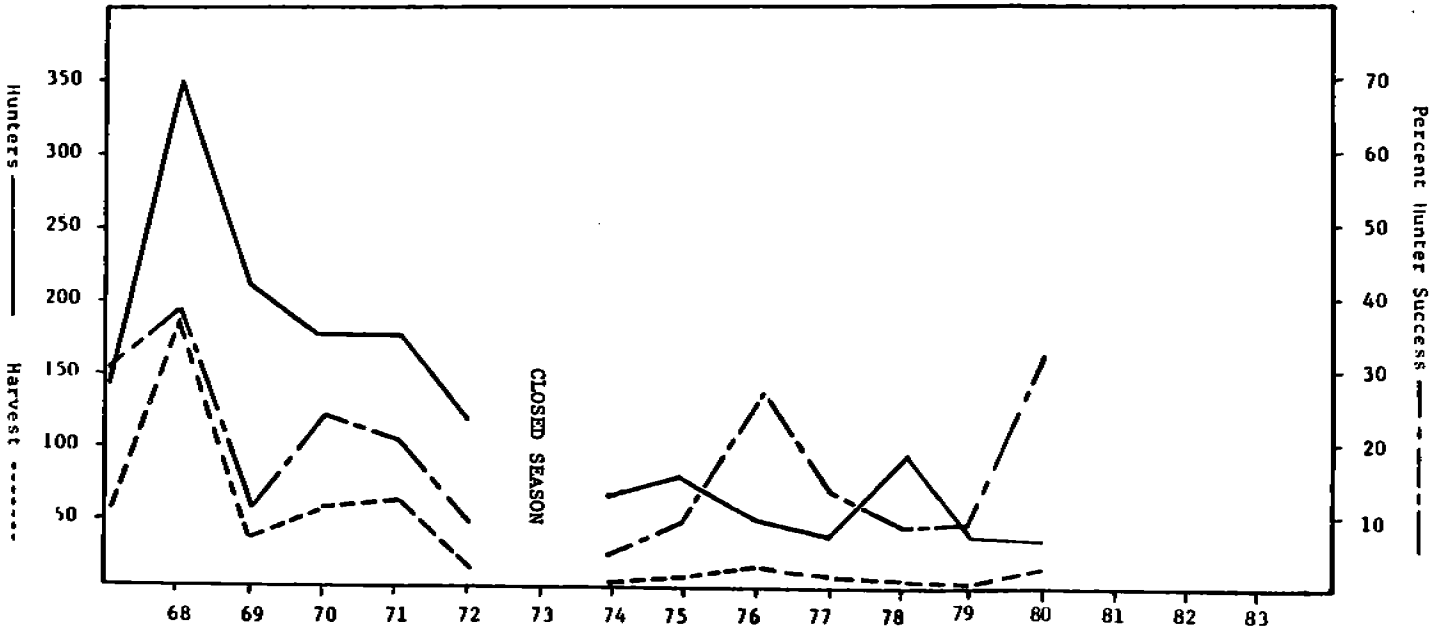


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1980 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															40	--
No hunts															4	5
Hunters afield	C		29	35	C		C		C		0	0	0	0	29	35
Hunter-days	L		69	84	L		L		L		0	0	0	0	69	84
Turkeys bagged	0		0	0	0		0		0		0	0	0	0	0	0
Percent success	S		0	--	S		S		S		0	--	0	--	0	--
Turkeys bagged per	E				E		E		E							
hunter-day	D		0	--	D		D		D		0	--	0	--	0	--
Reported crippling loss																
(loss/100 bagged)	S		0	--	S		S		S		0	--	0	--	0	--
Turkeys observed	E				E		E		E							
Gobblers	A		7	--	A		A		A		0	--	0	--	8	--
Hens	S		7	--	S		S		S		0	--	0	--	0	--
Unidentified	0		17	--	0		0		0		0	--	0	---	17	--
Number of hunters	N				N		N		N							
who saw turkeys			5	--							0	--	0	--	0	--
Percent of hunters																
who saw turkeys			17	--							0	--	0	---	0	17

Projection factor = 1.2121

Note: Weather conditions restricted hunter access for most of legal 1980 spring season.

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-80.

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	
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				

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			NO SEASON				
	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			NO SEASON				
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			NO SEASON				
	1980			NO SEASON				
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	

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**
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				
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	
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			NO SEASON				
	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
STATE AVERAGES (1967-79)		150	13	378	9	0.03	32	2

*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 1980 fall turkey season.

Data	Pine Valley		Blue Mtn.-Elk Ridge		Boulder Mtns.		East Zion		LaSal		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold			C								43	--
No hunts			L								6	8
Hunters afield	0	0	L		2	3	14	19	9	12	25	35
Hunter-days	0	0	O		4	6	22	31	24	33	50	69
Turkeys bagged	0	0	S		0	0	7	10	1	1	8	11
Percent success	0	--	E		0	--	50	--	11	--	32	--
Turkeys bagged per hunter-day	0	--	D		0	--	32	--	0.04	--	0.16	--
Reported crippling loss (loss/100 bagged)	0	--	S E		0	--	43	--	0	--	38	--
Turkeys observed	0	--	A		0	--	97	--	30	--	127	--
Number of hunters who saw turkeys	0	--	S O		0	--	7	--	4	--	11	--
Percent of hunters who saw turkeys	0	--	N		0	--	50	--	44	--	44	--

Projection factor = 1.387

Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1968-80.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Hunters afield	77	45	24	20	7	C	C	13	4	2	0	C	3
Hunter-days	195	103	77	46	17	L	L	36	10	5	0	L	6
Turkeys bagged	37	0	2	0	0	O	O	0	0	0	0	O	0
Percent success*	32	0	8	0	0	S	S	0	0	0	0	S	0
Percent bagging two turkeys	13	0	0	0	0	E	E	--	--	--	--	E	--
Turkeys bagged per hunter-day	0.19	0.00	0.03	0.00	0.00	D	D	0.00	0.00	0.00	0.00	D	0.00
Reported crippling loss (loss/100 bagged)	18	--	0	0	0	S	S	0	0	0	0	S	0
Turkeys observed	436	0	16	0	0	E	E	0	0	0	0	E	0
Number of hunters who saw turkeys	27	0	2	0	0	A S O N	A S O N	0	0	0	0	A S O N	0
Percent of hunters who saw turkeys	38	0	10	0	0			0	0	0	0		0

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

Table 5. Summary of East Zion wild turkey harvest data for fall hunts from 1968-80.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Hunters afield	218	137	87	90	59	C	C	13	31	22	47	19	19
Hunter-days	569	374	203	229	154	L	L	18	57	34	107	36	31
Turkeys bagged	127	35	43	39	10	O	O	6	13	5	6	3	10
Percent success*	40	16	32	27	12	S	S	46	42	25	14	18	50
Percent bagging two turkeys	19	10	16	16	4	E	E	--	--	--	--	--	--
Turkeys bagged per hunter-day	0.22	0.9	0.21	0.17	0.06	D	D	0.33	0.23	0.16	0.06	0.09	0.32
Reported crippling loss (loss/100 bagged)	15	19	5	6	12	S	S	0	8	0	40	0	43
Turkeys observed	1,661	426	469	264	96	E	E	36	137	33	130	50	97
Number of hunters who saw turkeys	122	30	30	23	11	A S	A S	4	13	5	12	5	7
Percent of hunters who saw turkeys	60	25	40	31	22	O N	O N	44	50	26	32	29	50

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

Table 6. Summary of LaSal Mountain wild turkey harvest data for fall hunts from 1968-80.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Hunters afield	45	17	18	13	31	C	20	9	15	24	26	15	12
Hunter-days	119	51	30	27	70	L	6	33	49	78	93	33	33
Turkeys bagged	19	1	3	5	2	O	2	1	2	1	1	0	1
Percent success*	43	7	11	18	4	S	10	11	13	6	5	0	11
Percent bagging two turkeys	0	0	6	18	4	E	--	--	--	--	--	--	--
Turkeys bagged per hunter-day	0.16	0.02	0.10	0.18	0.02	D	0.03	0.03	0.04	0.02	0.01	0.00	0.04
Reported crippling loss (loss/100 bagged)	11	0	0	0	0	S	100	0	0	0	0	0	0
Turkeys observed	214	40	15	25	63	E	61	21	45	13	201	11	30
Number of hunters who saw turkeys	21	1	3	3	7	A S	6	4	2	2	10	1	4
Percent of hunters who saw turkeys	50	7	20	27	27	O N	38	67	15	10	50	8	44

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

Table 7. Summary of Beaver Mountain wild turkey harvest data for fall hunts from 1970-80.

Harvest Data	1970*	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Hunters afield	30	13	6	C	C	5	5	--	C	C	C
Hunter-days	87	24	12	L	L	13	18	--	L	L	L
Turkeys bagged	7	5	0	0	0	0	0	--	0	0	0
Percent success*	15	18	0	S	S	0	0	--	S	S	S
Percent bagging two turkeys**	8	18	0	E	E	--	--	--	E	E	E
Turkeys bagged per hunter-day	0.08	0.20	0	D	D	0	0	--	D	D	D
Reported crippling loss (loss/100 bagged)	0	0	0	S	S	0	0	--	S	S	S
Turkeys observed	48	64	11	E	E	0	0	--	E	E	E
Number of hunters				A	A				A	A	A
who saw turkeys	8	5	2	S	S	0	0	--	S	S	S
Percent of hunters				0	0				0	0	0
who saw turkeys	31	46	40	N	N	0	0	--	N	N	N

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

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

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for fall hunts from 1970-80.

Harvest Data	1970	1971*	1972	1973	1974	1975	1976	1977	1978	1979	1980
Hunters afield	6	32	11	C	C	0	0	1	6	1	0
Hunter-days	21	87	19	L	L	0	0	2	8	1	0
Turkeys bagged	3	11	0	0	0	0	0	0	0	0	0
Percent success*	50	23	0	S	S	0	0	0	0	0	0
Percent bagging two turkeys**	0	12	0	E	E	--	--	--	--	--	--
Turkeys bagged per hunter-day	0.14	0.13	0	D	D	0	0	0	0	0	0
Reported crippling loss (loss/100 bagged)	33	22	0	S	S	0	0	0	0	0	0
Turkeys observed	16	98	0	E	E	0	0	0	4	0	0
Number of hunters who saw turkeys	4	9	0	A S	A S	0	0	0	4	0	0
Percent of hunters who saw turkeys	80	35	0	0 N	0 N	0	0	0	80	0	0

*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.

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

Harvest Data	1974	1975	1976	1977	1978	1979	1980
Hunters afield	5	6	1	5	6	1	CLOSED SEASON
Hunter-days	9	15	2	14	11	1	
Turkeys bagged	1	0	0	1	0	0	
Percent success	20	0	0	29	0	0	
Turkeys bagged per hunter-day	0.11	0.00	0.00	0.09	0.00	0.00	
Reported crippling loss (loss/100 bagged)	0	0	0	0	0	0	
Turkeys observed	20	0	0	2	0	0	
Number of hunters who saw turkeys	1	0	0	1	0	0	
Percent of hunters who saw turkeys	20	0	0	25	0	0	

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

Table 10. Statewide summary of fall wild turkey harve ..istics, 1963-80.

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					C L O S E D	S E A S O N			
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
TOTALS (1963-80)	2,580	2,348	5,067	691	--	0.14	--	8,260	--
AVERAGES (1963-79)	159	145	312	43	21	0.14	12	516	34

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

**During 1968, the Boulder Mountain and East Zion units had two-bird season limits and the LaSal Mountains a one-bird limit; from 1969 through 1972, all areas had a two-bird limit. Hunter success was based on the number of successful hunters rather than total turkeys bagged.

SHARP-TAILED GROUSE

Introduction and Summary

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

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

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

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 are included as Table 3. Harvest figures are not available for the years 1974-1978, but field observations indicate that hunting pressure and harvest were fairly constant during that period and comparable to 1979.

There was no legal harvest of sharp-tailed grouse in 1980, but the 1979 data are included with this report for reference.

Table 1. Summary of sharp-tailed grouse dancing ground counts, 1975-80.

County	Dancing Ground No.	Dancing Ground Name	1975	1976	1977	1978	1979	1980
Box Elder	1.	West Hills #1 (located 1977)			21	--	12	3
	2.	West Hills #2 (located 1977)			7	--	3	1
	3.	West Hills #3 (located 1977)			13	--	0	0
	4.	Hunsaker's Field (located 1977)			13	16	3	0
	5.	Whites Valley (located 1977)			12	--	0	0
	6.	North Whites Valley (located 1977)			10	15	--	0
	7.	Pocatello Valley #1 (located 1978)				7	4	1
	8.	Pocatello Valley #2 (located 1978)				25	3	6
	9.	Pocatello Valley #3 (located 1978)				4	0	0
	10.	Pocatello Valley #4 (located 1978)				6	0	0
Cache	1.	Bankhead Well (relocated 1975)	13	6	8	7	2	2
	2.	Baxter Ridge (relocated 1975)	12	0	0	--	--	3
	3.	Crow Mtn. #1 (located 1979)				0	7	4
	4.	Crow Mtn. #2 (located 1979)					6	0
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
Total grounds counted			5	5	10	9	15	16
Total grouse counted			79	34	104	102	71	24
Average number of grouse/ground			15.8	6.8	10.4	11.3	4.7	1.5

Table 2. Sharp-tailed grouse summer inventory, 1975-80.

Area	1975	1976	1977	1978	1979[3]	1980
Box Elder						
n[1]	0	0	2	5		
Mean brood	0	0	5.00	5.80		
Young/100 adults	0	0	500	686		
Grouse/100 hours	0	0	[2]	145		
Total hours effort	3	25	156	38		
Cache						
n	1	0	--	--		
Mean brood	5.00	0	--	--		
Young/100 adults	500	0	--	--		
Grouse/100 hours	92	0	--	--		
Total hours effort	6.5	2	--	--		
Morgan						
n	2	2	--	3		
Mean brood	2.50	2.50	--	3.67		
Young/100 adults	175	86	--	300		
Grouse/100 hours	34	81	--	149		
Total hours effort	32	16	--	11		
Weber						
n	--	0	--	0		
Mean brood	--	0	--	0		
Young/100 adults	--	0	--	0		
Grouse/100 hours	--	4	--	0		
Total hours effort	--	24	--	4		
State						
n	3	2	2	8		
Mean brood	3.33	2.50	5.00	5.00		
Young/100 adults	240	75	500	545		
Grouse/100 hours	41	21	--	135		
Total hours effort	41.5	67	156	53		

[1]Number of broods observed.

[2]Some of the observation time involved radio telemetry, making this index invalid.

[3]No broods observed; efforts curtailed due to limited time and mileage.

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

Data	Box Elder	Cache	Davis	Morgan	Rich	Weber	Mixed	State Total
Permits sold								268
No hunts*								112
Hunters afield*	76	41	3	10	7	7	12	156
Hunter-days*	94	57	4	18	8	7	32	220
Birds bagged*	46	15	0	12	0	3	0	76
Birds/hunter-day	0.49	0.27	0.00	0.69	0.00	0.40	0.00	0.35
% of pressure	49	27	2	6	4	4	8	100
% of harvest	60	20	0	16	0	4	0	100

$$\text{*Projection factor} = \frac{\text{268 permits sold}}{\text{194 questionnaires returned}} = 1.3814$$

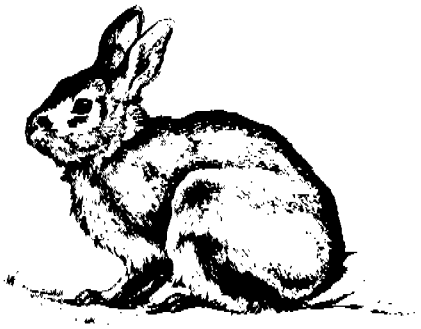
RABBITS AND HARES

SUMMARY

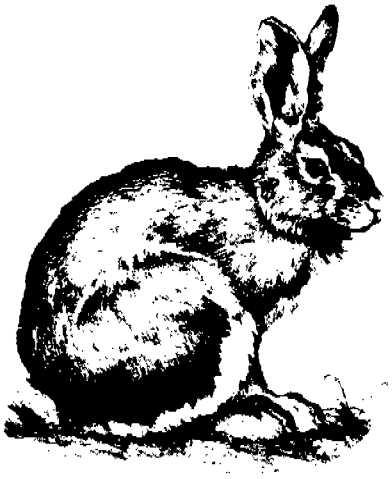
A below average breeding population level for 1980 was indicated by the 1979 harvest statistics.

Summer roadside counts indicated a decreased population density throughout the state except the Southeastern Region. Harvest statistics indicated a harvest of 127,652 cottontails with 25,156 hunters afield.

Cottontail Rabbits



Snowshoe Hares



The 1980 snowshoe hare hunting season was the sixth held since the Legislature provided protected status to this species in 1975.

Harvest statistics for 1980 again indicated decreased hunter participation, hunter success and total harvest. This decrease may reflect more accurate identification of the snowshoe hare by hunters as a result of education efforts and/or an actual decline in hunter participation. Nevertheless, some hunters still identify whitetail jackrabbits as snowshoe hare, causing some bias in the data.

COTTONTAIL RABBIT

Roadside Counts

Results of the annual roadside counts for 1980 are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1970 is shown in Tables 2 and 3, respectively. Indices for 1980 compared to 1979 and the 10-year average follow:

	1980	Percent change from 1979	Percent change from Average
Total miles driven	1,909	-23	-27
Total cottontails counted	591	-46	-39
Cottontails observed per mile	0.31	-30	-16
Young observed per 100 adults	107	-12	-3

A below average breeding population for 1980 was indicated by 1979 harvest statistics.

Indicated production was below 1979 and the average.

The cottontail per mile index was down in all regions except the Southeastern Region. The index was below average in all areas except the Central and Southeastern regions.

Harvest

Hunter Questionnaire

Results of the 1980 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 1974 are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figure 2. Results of the 1980 season compared to 1979 and the 13-year average follow:

	1980	Percent change from 1979	Percent change from Average
Cottontail hunters	25,156	-25	-9
Cottontail harvest	127,652	-36	-37
Hunter-days afield	87,051	-32	-26
Cottontails per hunter-day	1.47	-6	-15
Cottontails per hunter	5.07	-16	-30

Total harvest, total hunters and total days afield all decreased from 1979. Success again decreased significantly to 15 percent below average.

Field Bag Checks

Results of the survey for 1980 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 1980 field bag check data to 1979 and the average.

	1980	Percent change from 1979	Percent change from Average
Total hunters checked			
Total hours hunted			
Cottontails per hunter (complete hunts)		INCOMPLETE INFORMATION	
Cottontails bagged per 100 hours			
Hours per hunter-day (complete hunts)			
Hours per cottontail bagged			

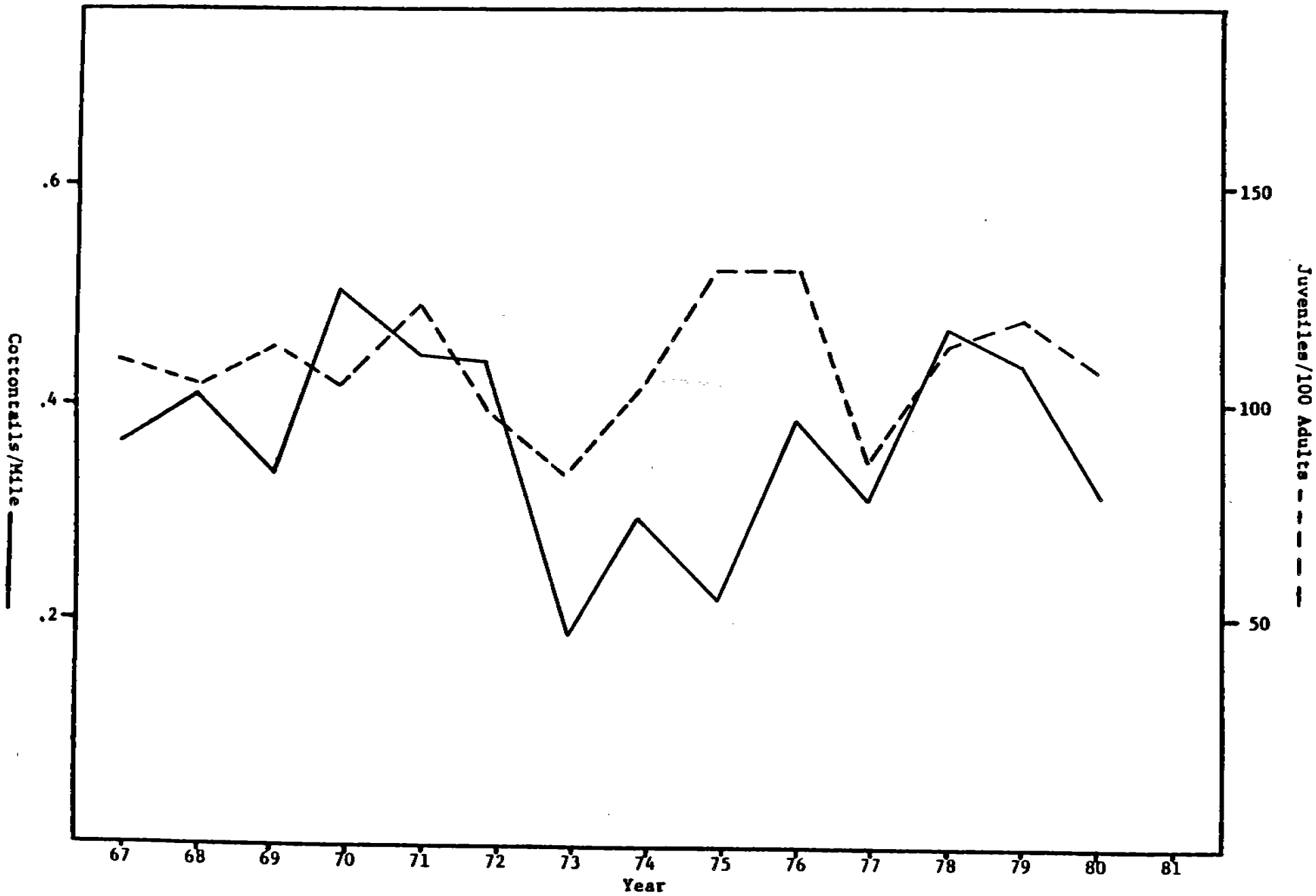


Figure 1. Cottontail Rabbit Population Indexes Trend.

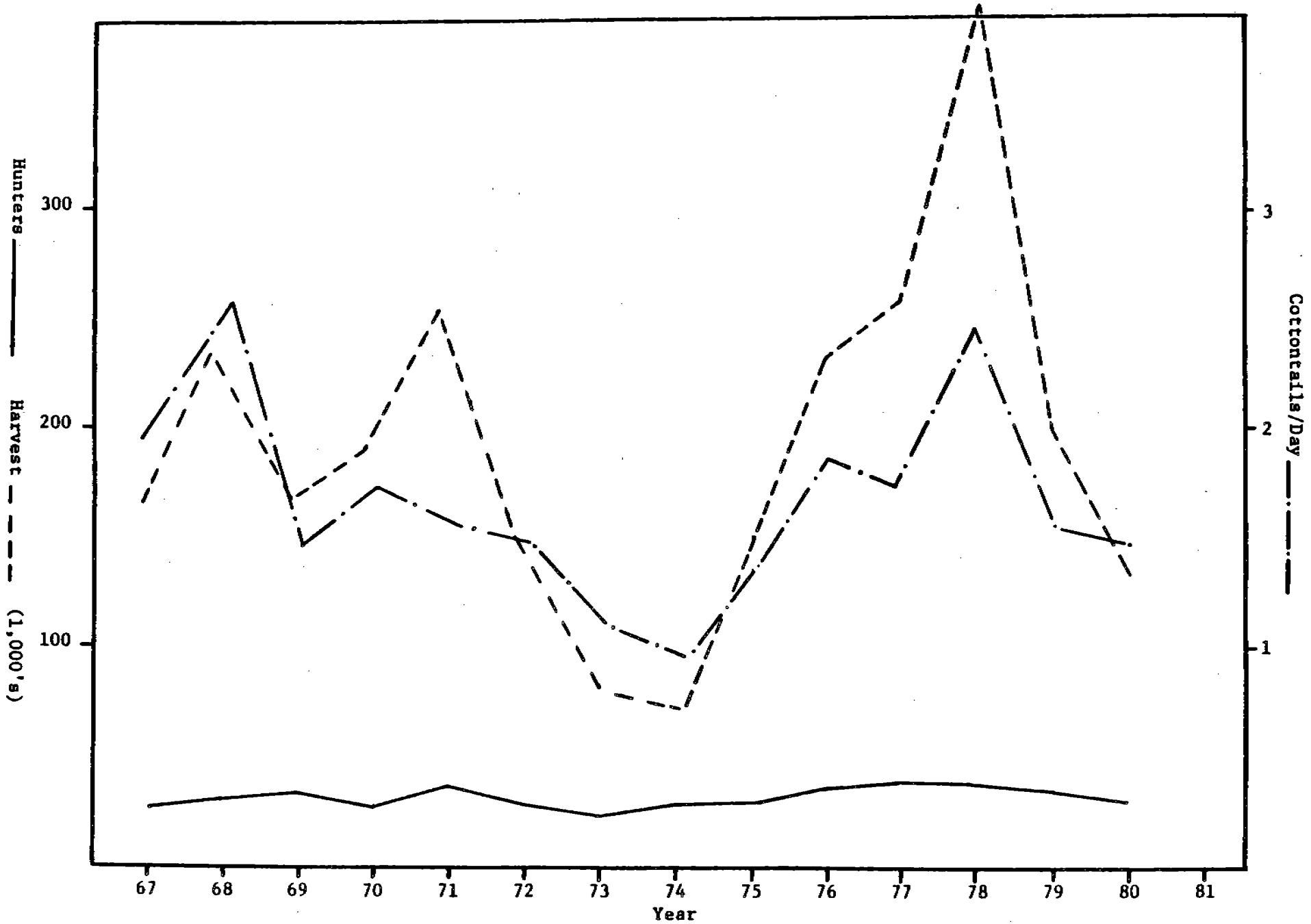


Figure 2. Cottontail Rabbit Harvest Trend

Table 1. Cottontail rabbit summer inventory summary, 1980.

Region and County	Miles Driven	Rabbits Observed				Young Per 100 Adults	Rabbits Per Mile
		Adults	Young	Unclass.	Total		
Northern Region							
Box Elder	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	90	6	4	0	10	67	0.11
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	90	6	4	0	10	67	0.11
Central Region							
Juab	85	14	11	0	25	78	0.29
Salt Lake	--	--	--	--	--	--	--
Sanpete	90	21	74	0	95	352	1.06
Tooele	90	14	10	0	24	71	0.26
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	265	49	95	0	144	194	0.54
Southern Region							
Beaver	120	5	2	0	7	40	0.06
Garfield	--	--	--	--	--	--	--
Iron	60	22	5	0	27	23	0.45
Kane	--	--	--	--	--	--	--
Millard	265	24	23	0	47	96	0.18
Piute	--	--	--	--	--	--	--
Sevier	60	2	7	0	9	350	0.27
Washington	60	0	0	6	6	--	0.10
Wayne	90	12	37	0	49	308	0.54
REGIONAL TOTALS	655	65	74	6	145	114	0.22
Northeastern Region							
Daggett	148	38	22	0	60	58	0.40
Duchesne	91	23	14	1	38	61	0.42
Uintah	120	10	16	6	32	160	0.27
REGIONAL TOTALS	359	71	52	7	130	73	0.36
Southeastern Region							
Carbon	90	6	8	0	14	133	0.15
Emery	180	17	12	0	29	70	0.16
Grand	90	2	5	3	10	250	0.11
San Juan	180	47	32	30	109	68	0.60
REGIONAL TOTALS	540	72	57	33	162	79	0.30
STATE TOTALS	1,909	263	282	46	591	107	0.31

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	0.76	0.43	0.37	0.06	1.01	0.32	0.72	0.97	0.29	0.33	--	
Cache	--	0.06	0.07	--	--	--	0.00	--	0.05	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	0.28	--	0.14	0.10	0.02	0.17	0.16	0.10	--	--	
Rich	0.43	0.22	0.11	0.14	0.04	0.16	0.46	0.26	0.47	0.30	0.11	
Summit	0.39	--	0.13	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.59	0.31	0.25	0.09	0.36	0.19	0.45	0.59	0.30	0.32	0.11	0.35
Central Region												
Juab	0.72	0.33	0.14	0.13	--	0.07	0.08	0.18	0.19	0.23	0.29	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	0.63	0.77	0.72	0.33	0.23	0.18	0.36	0.37	0.86	1.15	1.06	
Tooele	0.28	0.22	0.14	0.02	0.06	0.04	0.16	0.19	0.21	0.51	0.26	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.54	0.46	0.33	0.18	0.14	0.09	0.20	0.25	0.43	0.64	0.54	0.33
Southern Region												
Beaver	--	0.18	0.36	0.29	0.33	0.04	0.20	0.11	0.22	0.22	0.06	
Garfield	0.48	0.33	0.29	0.12	0.14	0.28	0.39	0.15	0.13	0.15	--	
Iron	--	0.38	0.58	0.00	0.06	0.09	0.21	0.36	0.66	0.45	0.45	
Kane	0.71	0.17	0.60	0.32	0.26	0.48	0.49	0.32	0.23	0.34	--	
Millard	0.28	0.15	0.29	0.11	0.10	0.07	0.17	0.14	0.42	0.52	0.18	
Piute	0.00	0.00	0.00	--	0.02	0.07	0.08	0.00	0.01	0.02	--	
Sevier	0.58	0.46	0.41	0.10	0.18	0.11	0.26	0.38	0.90	0.55	0.27	
Washington	0.17	0.46	1.16	0.57	1.30	0.56	0.32	0.21	0.16	0.35	0.10	
Wayne	--	0.08	0.07	0.04	0.06	0.03	0.17	0.09	0.48	0.56	0.54	
REGIONAL TOTALS	0.35	0.25	0.48	0.19	0.32	0.20	0.27	0.19	0.35	0.37	0.22	0.30
Northeastern Region												
Daggett	0.77	0.76	0.73	0.50	0.24	0.24	0.68	0.25	2.77	1.58	0.40	
Duchesne	0.56	0.58	0.24	0.14	0.29	0.67	1.00	1.21	1.42	0.24	0.42	
Uintah	1.56	1.39	0.97	0.14	0.19	0.32	1.36	0.68	1.22	0.53	0.27	
REGIONAL TOTALS	0.93	0.89	0.60	0.26	0.24	0.43	0.98	0.67	1.75	0.84	0.36	0.76
Southeastern Region												
Carbon	0.13	0.24	0.20	0.46	0.15	0.18	0.18	0.10	0.12	0.12	0.15	
Emery	0.20	0.04	0.30	0.06	0.08	0.04	0.27	0.26	0.21	0.28	0.16	
Grand	0.14	0.53	0.66	0.07	0.14	0.18	0.22	0.19	0.33	0.21	0.11	
San Juan	0.30	0.97	0.48	--	0.58	0.42	0.67	0.31	0.31	0.20	0.60	
REGIONAL TOTALS	0.25	0.53	0.45	0.19	0.28	0.22	0.35	0.21	0.23	0.21	0.30	0.29
STATE TOTALS	0.50	0.44	0.43	0.18	0.29	0.22	0.38	0.31	0.47	0.44	0.31	0.37

Table 3. Summary of cottontail rabbits young per 100 adults, 1970-80.

Region and County	Year 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Average 1970-79
Northern Region												
Box Elder	95	129	62	100	173	144	281	103	126	100	--	
Cache	--	0	0	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	25	--	--	0	--	200	100	--	--	--	
Rich	40	80	100	50	0	56	100	54	130	60	67	
Summit	64	--	14	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	76	100	56	73	145	120	222	96	137	85	67	111
Central Region												
Juab	246	171	117	100	--	67	20	100	44	13	78	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	123	144	148	142	50	38	256	200	217	312	352	
Tooele	100	100	100	0	67	100	133	129	125	100	71	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	157	145	135	121	53	54	160	154	161	167	194	131
Southern Region												
Beaver	--	14	61	92	11	0	--	33	70	63	40	
Garfield	103	118	86	57	56	77	103	71	64	250	--	
Iron	--	162	100	0	100	0	70	93	33	44	23	
Kane	28	50	86	44	200	160	87	65	56	82	--	
Millard	41	32	271	32	82	88	63	67	88	190	96	
Piute	--	--	--	--	0	20	75	--	--	--	--	
Sevier	350	390	450	200	183	44	67	126	147	171	350	
Washington	22	71	11	81	98	212	118	57	400	94	--	
Wayne	--	167	50	200	50	0	250	225	282	214	308	
REGIONAL TOTALS	68	93	64	67	92	120	89	86	96	139	114	91
Northeastern Region												
Daggett	57	81	121	63	87	77	152	48	98	123	58	
Duchesne	131	150	78	160	146	258	177	66	167	200	61	
Uintah	203	191	141	100	114	211	151	134	153	82	160	
REGIONAL TOTALS	126	139	120	87	114	198	159	78	125	118	73	126
Southeastern Region												
Carbon	100	53	145	250	117	227	85	112	118	230	133	
Emery	183	100	125	16	40	0	58	30	111	25	70	
Grand	160	79	297	33	62	47	54	100	77	50	250	
San Juan	228	215	111	--	140	150	179	120	35	30	68	
REGIONAL TOTALS	115	132	180	142	118	124	112	84	71	46	79	112
STATE TOTALS	102	123	99	86	105	132	132	89	112	121	107	110

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Cottontails Bagged	Cottontails/ Hunter-day	% of Pressure	% of Pressure
Northern Region						
Box Elder	327	13,845	26,636	1.92	15.90	20.87
Cache	19	782	1,055	1.35	0.90	0.83
Davis	7	170	153	0.90	0.20	0.12
Morgan	25	987	1,072	1.09	1.13	0.84
Rich	36	1,242	2,228	1.79	1.43	1.75
Summit	46	2,619	1,480	0.56	3.01	1.16
Weber	20	884	510	0.58	1.02	0.40
REGIONAL TOTALS	480	20,530	33,133	1.61	23.58	25.96
Central Region						
Juab	122	5,562	11,940	2.15	6.39	9.35
Salt Lake	18	850	476	0.56	0.98	0.37
Sanpete	59	3,572	3,521	0.99	4.10	2.76
Tooele	326	16,090	27,214	1.69	18.48	21.32
Utah	153	6,855	7,671	1.12	7.87	6.01
Wasatch	21	1,395	1,123	0.80	1.60	0.88
REGIONAL TOTALS	699	34,324	51,945	1.51	39.43	40.69
Southern Region						
Beaver	15	1,956	1,820	0.93	2.25	1.43
Garfield	6	238	442	1.86	0.27	0.35
Iron	18	1,021	1,293	1.27	1.17	1.01
Kane	12	782	1,089	1.39	0.90	0.85
Millard	62	3,742	6,378	1.70	4.30	5.00
Piute	8	510	782	1.53	0.59	0.61
Sevier	35	1,922	2,347	1.22	2.21	1.84
Washington	21	1,497	1,429	0.95	1.72	1.12
Wayne	21	1,021	1,514	1.48	1.17	1.19
REGIONAL TOTALS	198	12,689	17,094	1.35	14.58	13.39
Northeastern Region						
Daggett	17	714	1,072	1.50	0.82	0.84
Duchesne	92	3,555	4,933	1.39	4.08	3.86
Uintah	73	3,725	4,337	1.16	4.28	3.40
REGIONAL TOTALS	182	7,994	10,341	1.29	9.18	8.10
Southeastern Region						
Carbon	65	5,137	5,392	1.05	5.90	4.22
Emery	51	3,810	5,171	1.36	4.38	4.05
Grand	23	1,327	2,143	1.62	1.52	1.68
San Juan	25	1,174	2,228	1.90	1.35	1.75
REGIONAL TOTALS	164	11,447	14,934	1.30	13.15	11.70
Unknown counties	2	34	34	1.00	0.04	0.03
Mixed counties	1	34	170	5.00	0.04	0.13
STATE TOTALS	1,726	87,051	127,652	1.47	100	100

*Total hunter trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1974-80.

Region and County	Year						
	1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	1.03	1.25	1.63	1.87	2.56	1.84	1.92
Cache	1.12	0.31	1.30	1.28	1.59	1.22	1.35
Davis	0.66	0.21	2.05	1.83	0.39	2.00	0.90
Morgan	0.68	0.65	0.71	1.76	1.74	1.10	1.09
Rich	1.14	1.45	1.50	2.28	3.77	1.94	1.79
Summit	0.62	0.66	0.96	0.78	2.32	1.20	0.56
Weber	0.35	0.74	0.85	0.95	1.73	0.83	0.58
REGIONAL TOTALS	0.86	0.96	1.40	1.67	2.43	1.60	1.61
Central Region							
Juab	0.90	0.78	1.77	1.54	2.90	2.23	2.15
Salt Lake	0.86	0.94	1.35	1.20	1.55	0.96	0.56
Sanpete	1.14	0.64	1.27	0.82	1.50	1.46	0.99
Tooele	0.79	0.75	1.56	1.75	2.40	1.89	1.69
Utah	0.81	1.11	1.26	1.33	1.86	1.06	1.12
Wasatch	0.57	1.00	0.89	1.25	1.42	1.00	0.80
REGIONAL TOTALS	0.84	0.87	1.41	1.46	2.15	1.57	1.51
Southern Region							
Beaver	0.89	1.44	2.09	1.78	2.25	1.45	0.93
Garfield	1.45	1.00	1.02	0.50	0.80	2.12	1.86
Iron	0.61	0.84	1.19	1.08	1.48	1.74	1.27
Kane	1.57	2.31	1.00	2.55	2.80	2.01	1.39
Millard	1.15	0.70	1.67	1.78	1.84	1.82	1.70
Piute	0.08	1.14	0.60	2.06	2.06	1.27	1.53
Sevier	1.12	1.45	1.11	1.52	1.55	1.40	1.22
Washington	1.02	1.98	1.05	0.95	0.93	1.33	0.95
Wayne	1.08	1.73	2.17	2.88	1.42	1.76	1.48
REGIONAL TOTALS	1.03	1.53	1.45	1.79	1.54	1.64	1.35
Northeastern Region							
Daggett	1.69	0.73	3.18	2.10	3.25	3.30	1.50
Duchesne	1.44	1.86	3.31	2.92	3.67	1.49	1.39
Uintah	0.96	1.81	3.02	2.50	4.33	1.64	1.16
REGIONAL TOTALS	1.24	1.78	3.17	2.63	3.91	1.83	1.29
Southeastern Region							
Carbon	0.95	1.17	1.54	1.19	2.26	1.06	1.05
Emery	0.80	1.56	1.59	1.32	1.69	1.26	1.36
Grand	1.93	3.55	2.78	1.23	2.12	1.27	1.62
San Juan	2.12	1.81	1.42	1.05	2.81	1.42	1.90
REGIONAL TOTALS	1.11	1.70	1.74	1.24	2.11	1.20	1.30
Unknown counties	2.13	0.33	1.00	1.86	0.83	1.46	1.00
Mixed counties	5.33	0.00	1.49	1.56	0.00	1.25	5.00
STATE TOTALS	1.01	1.32	1.86	1.71	2.46	1.57	1.47

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1974-80.

Region and County	Year						
	1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	11.33	8.37	7.22	11.69	11.50	13.95	20.87
Cache	1.19	0.35	1.21	0.97	0.73	1.07	0.83
Davis	0.42	0.17	0.95	0.25	0.09	0.37	0.12
Morgan	0.86	0.58	0.55	2.99	2.74	1.90	0.84
Rich	0.55	1.50	1.14	2.41	4.96	2.89	1.75
Summit	2.00	1.11	0.77	1.08	2.88	1.95	1.16
Weber	0.70	1.17	0.59	0.69	0.67	0.61	0.40
REGIONAL TOTALS	17.04	13.25	12.44	20.07	23.58	22.73	25.96
Central Region							
Juab	4.35	2.84	3.77	4.22	5.16	7.79	9.35
Salt Lake	2.94	1.28	0.72	0.62	1.19	1.01	0.37
Sanpete	1.98	1.57	0.97	1.37	1.06	3.51	2.76
Tooele	4.19	4.82	7.12	10.38	10.17	16.48	21.32
Utah	9.84	7.21	6.12	6.94	6.77	7.40	6.01
Wasatch	0.55	0.87	1.05	0.89	0.80	1.18	0.88
REGIONAL TOTALS	23.85	18.59	19.75	24.42	25.15	37.37	40.69
Southern Region							
Beaver	1.60	0.25	1.68	0.46	0.89	0.47	1.43
Garfield	0.70	0.31	0.53	0.10	0.26	0.63	0.35
Iron	0.92	1.26	1.37	0.47	1.14	1.83	1.01
Kane	0.97	1.61	0.02	1.41	0.76	1.19	0.85
Millard	4.63	1.09	2.90	2.44	1.66	4.37	5.00
Piute	0.02	0.16	0.03	0.37	0.24	0.74	0.61
Sevier	1.05	1.07	0.36	1.02	1.15	2.14	1.84
Washington	4.79	8.51	2.47	0.70	0.93	1.70	1.12
Wayne	1.25	1.11	2.33	2.40	0.61	1.84	1.19
REGIONAL TOTALS	15.94	15.37	11.70	9.37	7.63	14.91	13.39
Northeastern Region							
Daggett	1.82	0.47	3.12	1.42	4.71	4.13	0.84
Duchesne	8.89	9.56	18.80	11.01	9.95	4.97	3.86
Uintah	5.99	14.01	15.38	14.17	16.60	5.82	3.40
REGIONAL TOTALS	16.71	24.03	37.30	26.60	13.26	14.92	8.10
Southeastern Region							
Carbon	8.37	7.60	6.05	5.41	4.84	3.46	4.22
Emery	5.53	9.09	4.74	5.60	3.51	3.69	4.05
Grand	2.46	7.58	4.14	0.54	1.32	0.62	1.68
San Juan	5.20	4.47	1.40	0.75	2.13	1.47	1.75
REGIONAL TOTALS	21.56	28.74	16.33	12.31	11.79	9.23	11.70
Unknown counties	4.55	0.02	0.01	2.77	0.59	0.14	0.03
Mixed counties	0.35	0.00	2.08	4.47	0.00	0.70	0.13
STATE TOTALS	100	100	100	100	100	100	100

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1974-80.

Region and County	Year						
	1974	1975	1976	1977	1978	1979	1980
Northern Region							
Box Elder	11.18	8.88	8.27	10.69	11.05	11.92	15.90
Cache	1.07	1.51	1.75	1.29	1.13	1.37	0.90
Davis	0.64	1.08	0.86	0.23	0.58	0.29	0.20
Morgan	1.27	1.18	1.47	2.91	3.87	2.70	1.13
Rich	0.49	1.36	1.42	1.81	3.24	2.35	1.43
Summit	3.27	2.23	1.51	2.37	3.06	2.55	3.01
Weber	2.04	0.08	1.29	1.23	0.95	1.16	1.02
REGIONAL TOTALS	19.95	18.33	16.57	20.53	23.89	22.34	23.58
Central Region							
Juab	4.91	4.80	3.99	4.70	4.37	5.47	6.39
Salt Lake	3.44	1.80	0.99	0.89	1.89	1.66	0.98
Sanpete	1.76	3.26	1.42	2.85	1.73	3.79	4.10
Tooele	5.40	8.52	8.53	10.13	10.44	13.67	18.48
Utah	12.31	8.57	9.07	8.96	8.93	10.99	7.87
Wasatch	0.98	1.16	2.20	1.21	1.39	1.85	1.60
REGIONAL TOTALS	28.79	28.11	26.20	28.74	28.76	37.44	39.43
Southern Region							
Beaver	1.82	0.23	1.51	0.44	0.97	0.50	2.25
Garfield	0.49	0.41	0.97	0.35	0.81	0.47	0.27
Iron	1.53	1.98	2.15	0.75	1.89	1.65	1.17
Kane	0.62	0.92	0.04	0.94	0.66	0.93	0.90
Millard	4.09	2.05	3.23	2.35	2.22	3.77	4.30
Piute	0.29	0.18	0.11	0.31	0.29	0.92	0.59
Sevier	0.96	0.98	0.60	1.16	1.83	2.40	2.21
Washington	4.75	5.67	4.40	1.25	2.44	2.00	1.72
Wayne	1.18	0.85	2.00	1.43	1.05	1.64	1.17
REGIONAL TOTALS	15.73	13.27	15.02	8.98	12.17	14.28	14.58
Northeastern Region							
Daggett	1.09	0.85	1.83	1.16	3.56	1.97	0.82
Duchesne	6.24	6.78	10.60	6.45	6.67	5.24	4.08
Uintah	6.29	10.24	9.50	9.69	9.44	5.59	4.28
REGIONAL TOTALS	13.62	17.86	21.93	17.30	19.66	12.80	9.18
Southeastern Region							
Carbon	8.93	8.57	7.35	7.76	5.26	5.13	5.90
Emery	6.98	7.70	5.55	7.26	5.11	4.59	4.38
Grand	1.29	2.82	2.78	0.75	1.54	0.77	1.52
San Juan	2.49	3.26	1.83	1.23	1.86	1.63	1.35
REGIONAL TOTALS	19.68	22.36	17.54	17.01	13.77	12.11	13.16
Unknown counties	2.16	0.08	0.02	2.54	1.75	0.15	0.04
Mixed counties	0.07	0.00	2.61	4.89	0.00	0.88	0.04
STATE TOTALS	100	100	100	100	100	100	100

Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-1980.

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
TOTALS (1967-80)	383,893	2,744,609	1,611,159	1.70	7.15
AVERAGES (1967-79)	27,595	201,304	117,239	1.72	7.29

Table 9. Cottontail rabbit field bag check summary, 1980.

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											
Cache											
Davis											
Morgan				N O	D A T A						
Rich											
Summit											
Weber											
REGIONAL TOTALS											
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	27	93	183	40	22	4	8	20	0	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	27	93	183	40	22	4	8	20	0	--	--
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	2	6	4	27	675	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	1	1	3	0	--	1	1	3	0	0	0.00
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	7	7	27	386	1	1	3	0	0	0.00
Northeastern Region											
Daggett	8	20	37	2	5	5	12	15	0	0	0.00
Duchesne	5	14	23	11	48	3	6	19	10	53	1.67
Uintah	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	34	60	13	22	8	18	34	10	29	0.55
Southeastern Region											
Carbon	1	2	5.5	2	36	1	2	5.5	2	36	1.00
Emery	3	7	8	2	25	1	4	4	1	25	0.25
Grand	2	7	10	4	57	--	--	--	--	--	--
San Juan	4	7	12.5	6	48	1	2	2	0	0	0.00
REGIONAL TOTALS	10	23	36	14	39	3	8	11.5	3	26	0.38
STATE TOTALS											

Table 10. Cottontail hunter success trend determined by field bag checks, 1975-80.

Region and County	1975 Bag/ 100 Hr	1975 Bag/ Hunter	1976 Bag/ 100 Hr	1976 Bag/ Hunter	1977 Bag/ 100 Hr	1977 Bag/ Hunter	1978 Bag/ 100 Hr	1978 Bag/ Hunter	1979 Bag/ 100 Hr	1979 Bag/ Hunter	1980 Bag/ 100 Hr	1980 Bag/ Hunter
Northern Region												
Box Elder	10	0.48	9	0.40	46	1.97	40	1.74	29	1.23		
Cache	--	--	--	--	17	0.67	--	--	4	0.33		
Davis	--	--	--	--	--	--	--	--	--	--		
Morgan	--	--	--	--	--	--	--	--	--	--	NO	DATA
Rich	30	1.33	58	2.21	33	2.29	52	2.79	19	0.73		
Summit	--	--	--	--	--	--	--	--	--	--		
Weber	50	0.50	--	--	--	--	167	1.67	--	--		
REGIONAL TOTALS	15	0.69	37	1.59	41	1.92	46	2.14	20	0.93		
Central Region												
Juab	0	0.00	10	2.00	--	--	--	--	67	2.00	--	--
Salt Lake	--	--	400	4.00	--	--	--	--	--	--	--	--
Sanpete	--	--	11	1.00	13	0.42	33	0.88	30	0.93	--	--
Tooele	0	0.00	14	0.57	38	1.65	--	--	134	4.25	--	--
Utah	--	--	7	0.23	--	--	--	--	80	2.00	--	--
Wasatch	--	--	--	--	50	2.00	--	--	--	--	--	--
REGIONAL TOTALS	0	0.00	14	0.76	30	1.14	33	0.88	79	2.41	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	314	3.14	100	1.00	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	57	1.33	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	314	3.14	63	1.25	--	--	--	--	--	3.86*
Northeastern Region												
Daggett	59	0.44	81	2.59	54	1.70	180	7.62	98	2.29	0	0.00
Duchesne	39	1.72	77	4.03	66	2.68	89	3.42	--	--	53	1.67
Uintah	87	2.93	157	6.24	138	4.83	189	4.13	--	--	--	--
REGIONAL TOTALS	54	1.91	98	4.60	68	2.49	162	6.10	98	2.29	29	0.55
Southeastern Region												
Carbon	57	2.00	40	2.19	62	3.00	289	4.50	--	--	36	1.00
Emery	6	0.00	28	2.19	8	0.30	26	1.40	--	--	25	0.25
Grand	112	3.33	47	1.39	11	0.29	22	0.60	50	0.50	--	--
San Juan	96	2.93	63	2.00	72	0.93	160	--	0	0.00	0	0.00
REGIONAL TOTALS	74	2.51	38	1.86	45	1.44	56	1.04	33	0.33	26	0.38
STATE TOTALS	43	1.80	60	2.85	49	1.82	108	3.88	65	1.85		

*Cottontails per hunter based on all hunts.

SNOWSHOE HARE

Harvest

During 1980, the sixth annual snowshoe hare hunting season was held statewide. Results of the 1980 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 1980 season compared to the season in 1979 and the average of the first five hunts follow:

	1980	Percent change from 1979	Percent change from Average
Snowshoe hare hunters	4,048	-40	-48
Snowshoe hares harvested	7,603	-48	-61
Hunter-days afield	11,140	-39	-52
Snowshoes per hunter-day	0.68	-16	-20
Snowshoes per hunter	1.88	-13	-25

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 1980 questionnaire indicate a 40 percent decrease in snowshoe hare hunters and a 48 percent decrease in harvest compared in 1979.

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

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

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1980.

Region and County	Sample Size*	Hunter-days Afield	Snowshoes Bagged	Snowshoe/ Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	32	1,106	901	0.82	9.92	11.86
Cache	18	901	289	0.32	8.09	3.80
Davis	2	85	0	0.00	0.76	0.00
Morgan	13	748	306	0.41	6.72	4.03
Rich	18	884	1,582	1.79	7.94	20.81
Summit	36	1,378	1,191	0.86	12.37	15.66
Weber	8	204	119	0.58	1.83	1.57
REGIONAL TOTALS	127	5,306	4,388	0.83	47.63	57.72
Central Region						
Juab	3	136	34	0.25	1.22	0.44
Salt Lake	4	255	170	0.67	2.29	2.24
Sanpete	11	646	561	0.87	5.80	7.38
Tooele	14	510	204	0.40	4.58	2.69
Utah	21	748	357	0.48	6.72	4.70
Wasatch	26	1,037	714	0.69	9.31	9.40
REGIONAL TOTALS	79	3,333	2,041	0.61	29.92	26.85
Southern Region						
Beaver	3	136	0	0.00	1.22	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	1	17	17	1.00	0.15	0.22
Piute	0	0	0	0.00	0.00	0.00
Sevier	10	459	187	0.41	4.12	2.46
Washington	0	0	0	0.00	0.00	0.00
Wayne	3	102	119	1.17	0.92	1.57
REGIONAL TOTALS	17	714	323	0.45	6.41	4.25
Northeastern Region						
Daggett	5	204	51	0.25	1.83	0.67
Duchesne	6	357	51	0.14	3.21	0.67
Uintah	7	272	170	0.63	2.44	2.24
REGIONAL TOTALS	18	833	272	0.33	7.48	3.58
Southeastern Region						
Carbon	6	153	187	1.22	1.37	2.46
Emery	7	459	323	0.70	4.12	4.25
Grand	0	0	0	0.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	13	612	510	0.83	5.50	6.71
Unknown counties	0	0	0	0.00	0.00	0.00
Mixed counties	1	340	68	0.20	3.05	0.90
STATE TOTALS	255	7,603	11,140	0.68	100	100

*Total hunter trips from questionnaire returns.

Table 12. Summary of snowshoe hares bagged per hunter-day by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	0.79	0.43	0.78	0.45	0.55	0.82
Cache	0.49	0.82	0.70	0.65	0.50	0.32
Davis	0.07	0.40	1.00	0.23	1.50	0.00
Morgan	0.67	0.72	0.87	0.84	0.58	0.41
Rich	1.21	0.86	0.62	3.02	1.40	1.79
Summit	0.34	1.16	1.06	1.65	0.93	0.86
Weber	0.40	0.88	0.67	0.76	0.52	0.58
REGIONAL TOTALS	0.57	0.87	0.83	1.07	0.74	0.83
Central Region						
Juab	0.50	0.50	0.00	1.25	2.09	0.25
Salt Lake	0.85	1.25	1.69	6.27	0.20	0.67
Sanpete	0.39	0.29	0.95	1.40	1.11	0.87
Tooele	0.80	0.40	0.33	1.80	0.38	0.40
Utah	0.47	0.71	0.67	0.50	0.71	0.48
Wasatch	0.67	0.62	0.83	0.67	0.97	0.69
REGIONAL TOTALS	0.60	0.63	0.82	1.47	0.93	0.61
Southern Region						
Beaver	0.50	0.75	1.00	2.67	1.00	0.00
Garfield	0.00	0.33	0.00	0.13	0.00	0.00
Iron	1.00	0.00	0.00	26.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	5.00	0.00
Millard	0.00	0.00	0.50	3.20	0.43	1.00
Piute	1.00	0.00	1.00	0.00	1.25	0.00
Sevier	0.47	0.63	0.34	0.83	0.96	0.41
Washington	0.00	0.00	2.00	1.00	4.00	0.00
Wayne	1.25	1.27	2.44	0.68	2.05	1.17
REGIONAL TOTALS	0.47	0.84	0.86	0.92	1.27	0.45
Northeastern Region						
Daggett	1.37	0.00	2.00	0.72	0.46	0.25
Duchesne	0.69	0.51	0.74	1.26	0.53	0.14
Uintah	0.91	0.69	0.59	0.96	1.00	0.63
REGIONAL TOTALS	0.91	0.56	0.71	0.97	0.60	0.33
Southeastern Region						
Carbon	0.81	0.94	0.60	1.00	0.70	1.22
Emery	0.33	0.61	0.44	1.62	0.59	0.70
Grand	0.00	1.00	0.00	5.00	0.00	0.00
San Juan	0.00	1.90	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.71	1.00	0.53	1.54	0.63	0.83
Unknown counties	--	1.00	1.17	0.67	0.00	0.00
Mixed counties	--	0.40	0.76	1.00	2.00	0.20
STATE TOTALS	0.61	0.76	0.80	1.15	0.81	0.68

Table 13. Percentage distribution of snowshoe hare harvested by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	15.38	2.25	5.14	2.83	7.58	11.86
Cache	9.18	10.03	5.99	4.81	5.68	3.80
Davis	0.25	0.35	0.86	0.54	1.50	0.00
Morgan	2.98	7.44	9.84	10.47	7.88	4.03
Rich	8.44	4.33	4.42	9.47	9.77	20.81
Summit	6.70	20.59	15.55	19.02	18.15	15.66
Weber	3.97	2.60	3.99	1.68	2.69	1.57
REGIONAL TOTALS	46.90	47.58	45.79	48.82	53.24	57.72
Central Region						
Juab	0.25	1.21	0.00	0.38	2.29	0.44
Salt Lake	2.73	1.73	3.85	14.36	0.20	2.24
Sanpete	2.98	1.04	5.99	0.54	8.13	7.38
Tooele	8.68	0.35	0.57	2.06	0.90	2.69
Utah	6.45	10.03	4.14	3.21	2.99	4.70
Wasatch	4.47	6.92	7.56	4.28	9.07	9.40
REGIONAL TOTALS	25.56	21.28	22.11	24.83	23.63	26.85
Southern Region						
Beaver	1.07	1.04	0.14	0.61	0.10	0.00
Garfield	0.40	0.17	0.00	0.31	0.00	0.00
Iron	0.27	0.00	0.00	1.99	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.50	0.00
Millard	0.13	0.00	0.14	1.22	0.30	0.22
Piute	0.00	0.00	0.14	0.00	1.00	0.00
Sevier	1.07	0.87	1.43	4.97	4.99	2.46
Washington	0.00	0.00	0.29	0.08	0.80	0.00
Wayne	2.00	3.29	3.14	1.91	3.89	1.57
REGIONAL TOTALS	4.93	5.36	5.28	11.08	11.57	4.25
Northeastern Region						
Daggett	0.67	0.00	0.86	2.22	1.30	0.67
Duchesne	8.12	5.36	5.71	3.36	2.39	0.67
Uintah	6.79	6.06	3.71	1.83	1.69	2.24
REGIONAL TOTALS	15.58	11.42	10.27	7.41	5.38	3.58
Southeastern Region						
Carbon	4.53	5.54	3.42	2.75	2.59	2.46
Emery	2.40	1.90	1.00	2.98	2.59	4.25
Grand	0.27	0.35	0.00	1.91	0.00	0.00
San Juan	1.33	3.29	0.00	0.00	0.00	0.00
REGIONAL TOTALS	8.52	11.07	4.42	7.64	5.18	6.71
Unknown counties	--	0.35	3.99	0.15	0.00	0.00
Mixed counties	--	1.04	8.13	0.08	1.00	0.90
STATE TOTALS	100	100	100	100	100	100

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1975-80.

Region and County	Year					
	1975	1976	1977	1978	1979	1980
Northern Region						
Box Elder	11.82	3.99	5.26	7.26	11.20	9.92
Cache	11.36	9.45	6.85	8.49	9.19	8.09
Davis	2.27	0.67	0.68	2.71	0.81	0.76
Morgan	2.73	7.99	9.02	14.35	10.96	6.72
Rich	4.24	3.86	5.71	3.59	5.64	7.94
Summit	11.97	13.72	11.76	13.21	15.79	12.37
Weber	6.06	2.26	4.79	2.54	4.19	1.83
REGIONAL TOTALS	50.45	41.94	44.06	52.14	57.78	47.63
Central Region						
Juab	0.30	1.86	1.03	0.35	0.89	1.22
Salt Lake	1.97	1.07	1.83	2.62	0.81	2.29
Sanpete	4.07	2.80	5.02	0.44	5.96	5.80
Tooele	6.67	0.67	1.37	1.31	1.93	4.58
Utah	8.33	10.92	4.91	7.35	3.38	6.72
Wasatch	4.09	8.66	7.31	7.26	7.57	9.31
REGIONAL TOTALS	26.06	25.97	21.46	19.34	20.55	29.92
Southern Region						
Beaver	0.30	1.07	0.11	0.26	0.08	1.22
Garfield	1.21	0.40	0.00	2.80	0.08	0.00
Iron	0.15	0.27	0.00	0.09	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.08	0.00
Millard	0.13	0.13	0.23	0.44	0.56	0.15
Piute	0.15	0.00	0.11	0.00	0.64	0.00
Sevier	2.88	1.07	3.31	6.82	4.19	4.12
Washington	0.15	0.00	0.11	0.09	0.16	0.00
Wayne	0.61	2.00	1.03	3.24	1.53	0.92
REGIONAL TOTALS	5.45	4.93	4.91	13.74	7.33	6.41
Northeastern Region						
Daggett	1.21	0.67	0.34	3.50	2.26	1.83
Duchesne	2.42	8.12	6.16	3.06	3.63	3.21
Uintah	3.48	6.79	5.02	2.19	1.37	2.44
REGIONAL TOTALS	7.12	15.58	11.53	8.75	7.25	7.48
Southeastern Region						
Carbon	8.64	4.53	4.57	3.15	2.98	1.37
Emery	2.27	2.40	1.83	2.10	3.55	4.12
Grand	0.00	0.27	0.34	0.44	0.00	0.00
San Juan	0.00	1.33	0.00	0.00	0.08	0.00
REGIONAL TOTALS	10.91	18.52	6.74	5.69	6.61	5.50
Unknown counties	--	0.27	2.74	0.26	0.08	0.00
Mixed counties	--	2.00	8.56	0.09	0.40	3.05
STATE TOTALS	100	100	100	100	100	100

Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-80.

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
TOTALS (1975-80)	43,255	105,583	126,082	0.84	2.44
AVERAGES (1975-79)	7,841	19,596	22,988	0.85	2.50

A P P E N D I X

Table 1. Comparison of 1980 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	25.9	31.8	38.0	47.2	56.4	64.4	74.0	72.0	62.4	50.6	37.2	28.6
1980	30.2	34.1	38.4	49.4	53.9	64.8	75.0	70.9	62.8	49.5	39.2	32.9
Departure (degrees)	+4.3	+2.3	+0.4	+2.2	-2.5	+0.4	+1.0	-1.1	+0.4	-1.1	+2.0	+4.3
No. 2 DIXIE												
Normal	39.0	44.1	49.2	57.6	66.5	75.2	82.6	80.6	73.7	62.5	48.4	40.2
1980	41.7	47.1	46.4	56.7	60.9	74.0	81.2	78.8	72.4	61.3	49.4	46.6
Departure (degrees)	+2.7	+3.0	-2.8	-0.9	-5.6	-1.2	-1.4	-1.8	-1.3	-1.2	+1.0	+6.4
No. 3 NORTH CENTRAL												
Normal	26.7	31.9	38.5	48.3	57.5	65.0	74.6	72.7	63.5	51.7	38.5	29.7
1980	30.1	34.1	38.3	49.9	54.4	65.4	74.7	70.4	63.1	50.1	39.0	31.6
Departure (degrees)	+3.4	+2.2	-0.2	+1.6	-3.1	+0.4	+0.1	-2.3	-0.4	-1.6	+0.5	+1.9
No. 4 SOUTH CENTRAL												
Normal	26.9	31.3	36.9	45.6	54.4	62.3	70.0	68.1	60.5	50.0	37.6	29.3
1980	30.8	34.5	34.7	45.8	50.8	62.8	71.0	67.4	60.4	48.6	38.7	36.5
Departure (degrees)	+3.9	+3.2	-2.2	+0.2	-3.6	+0.5	+1.0	-0.7	-0.1	-1.4	+1.1	+7.2
No. 5 NORTHERN MOUNTAINS												
Normal	20.9	24.3	30.2	40.8	49.9	56.8	65.1	63.2	55.0	45.0	32.3	24.2
1980	23.5	26.8	30.0	41.4	47.8	57.8	66.1	62.2	55.7	44.4	34.2	30.4
Departure (degrees)	+2.6	+2.5	-0.2	+0.6	-2.1	+1.0	+1.0	-1.0	+0.7	-0.6	+1.9	+6.2
No. 6 UINTAH BASIN												
Normal	16.8	23.9	35.0	46.7	56.4	63.8	71.5	69.2	60.4	48.7	34.1	22.1
1980	22.4	23.6	35.7	46.6	54.3	65.8	72.9	68.4	60.7	47.4	35.2	32.2
Departure (degrees)	+5.6	-0.3	-0.7	-0.1	-2.1	+2.0	+1.4	-0.8	+0.3	-1.3	+1.1	+10.1
No. 7 SOUTHEAST												
Normal	27.3	33.6	40.6	50.6	60.1	68.7	76.1	73.7	65.6	53.7	39.3	29.8
1980	32.3	37.7	39.2	49.8	56.9	70.9	77.8	74.1	65.8	52.3	40.9	37.9
Departure (degrees)	+5.0	+4.1	-1.4	-0.8	-3.2	+2.2	+1.7	+0.4	+0.2	-1.4	+1.6	+8.1
STATE AVERAGES												
Normal	26.2	31.6	38.3	48.1	57.3	65.2	73.4	71.4	63.0	51.7	38.2	29.1
1980	30.1	34.0	37.5	48.5	54.1	65.9	74.1	70.3	63.0	50.5	39.5	35.4
Departure (degrees)	+3.9	+2.4	-0.8	+0.4	-3.2	+0.7	+0.7	-1.1	0	-1.2	+1.3	+6.3

Table 2. Comparison of 1980 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	0.60	0.59	0.75	0.87	0.84	0.82	0.61	0.76	0.50	0.76	0.69	0.70
1980	1.75	1.35	1.46	0.62	2.59	0.60	0.49	0.45	1.25	0.62	0.65	0.31
Departure (inches)	+1.15	+0.76	+0.71	-0.25	+1.75	-0.22	-0.12	-0.31	+0.75	-0.14	-0.04	-0.39
No. 2 DIXIE												
Normal	1.15	1.21	1.30	0.91	0.53	0.38	0.89	0.95	0.67	0.88	0.91	1.17
1980	5.75	4.88	1.98	0.62	1.40	0.02	1.17	0.78	1.45	1.20	0.31	0.27
Departure (inches)	+4.60	+3.67	+0.68	-0.29	+0.87	-0.36	+0.28	-0.17	+0.78	+0.32	-0.60	-0.90
No. 3 NORTH CENTRAL												
Normal	1.47	1.32	1.62	1.96	1.67	1.50	0.59	0.94	0.85	1.36	1.49	1.56
1980	3.48	2.91	2.50	0.97	3.88	1.27	0.75	0.66	1.10	1.71	1.34	0.80
Departure (inches)	+2.01	+1.59	+0.88	-0.99	+2.21	-0.23	+0.16	-0.28	+0.26	+0.35	-0.15	-0.76
No. 4 SOUTH CENTRAL												
Normal	1.03	0.98	1.18	1.13	0.88	0.76	0.96	1.39	0.88	1.03	0.93	1.08
1980	3.04	3.11	1.96	0.69	2.02	0.12	0.83	0.88	2.39	1.30	0.51	0.17
Departure (inches)	+2.01	+2.13	+0.78	-0.44	+1.14	-0.64	-0.13	-0.51	+1.51	+0.27	-0.42	-0.91
No. 5 NORTHERN MOUNTAINS												
Normal	2.19	1.89	2.05	1.86	1.52	1.52	0.86	1.34	1.05	1.57	1.82	2.24
1980	5.53	3.80	2.67	1.13	3.01	0.45	0.81	0.84	1.27	1.76	1.27	1.04
Departure (inches)	-3.34	+1.91	+0.62	-0.73	+1.49	-1.07	-0.05	-0.50	+0.22	+0.19	-0.55	-1.20
No. 6 UINTAH BASIN												
Normal	0.51	0.43	0.50	0.68	0.68	0.90	0.62	0.87	0.72	0.94	0.51	0.69
1980	1.57	0.92	0.60	0.42	1.63	0.00	0.47	0.95	1.53	1.10	0.44	0.07
Departure (inches)	+1.06	+0.49	+0.10	-0.26	+0.95	-0.90	-0.15	+0.08	+0.81	+0.16	-0.07	-0.62
No. 7 SOUTHEAST												
Normal	0.61	0.56	0.60	0.68	0.59	0.56	0.74	1.23	0.77	1.07	0.61	0.73
1980	1.86	1.89	1.61	0.80	1.36	0.05	0.41	0.76	1.34	1.19	0.45	0.24
Departure (inches)	+1.25	+1.33	+1.01	+0.12	+0.77	-0.51	-0.33	-0.47	+0.57	+0.12	-0.16	-0.49
STATE AVERAGES												
Normal	1.08	1.00	1.14	1.16	0.96	0.92	0.75	1.07	0.78	1.09	0.99	1.17
1980	3.28	2.69	1.83	0.75	2.27	0.36	0.70	0.76	1.48	1.27	0.71	0.41
Departure (inches)	+2.20	+1.69	+0.69	-0.41	+1.31	-0.56	-0.05	-0.31	+0.70	+0.18	-0.28	-0.76

Table 3. Number and percent of total upland game hunters afield who reported hunting each game species during 1975-80.

Species	Number of Hunters						Percent of Total					
	1975	1976	1977	1978	1979	1980	1975	1976	1977	1978	1979	1980
Pheasant	77,566	74,029	67,195	83,800	87,462	84,868	79.3	81.1	75.0	79.6	83.4	84.7
Chukar	16,156	14,171	12,691	16,291	15,210	15,100	16.5	15.5	14.2	15.5	14.5	15.1
Mourning dove	37,378	31,293	26,905	35,985	34,903	32,627	38.2	34.3	30.0	34.2	33.3	32.6
Sage grouse	13,996	15,283	14,078	16,231	16,927	15,219	14.3	16.8	15.7	15.4	16.1	15.2
Forest grouse	20,102	21,186	19,188	25,318	21,993	19,511	20.6	23.2	21.4	24.0	21.0	19.5
Quail	6,397	5,215	4,446	5,924	5,632	4,156	6.5	5.7	5.0	5.6	5.4	4.1
Hungarian partridge	3,409	3,517	3,557	4,743	3,435	3,359	3.5	38.6	4.0	4.5	3.3	3.4
Wild turkey**	143*	130*	152*	189*	126*	70*	0.1	0.1	0.2	0.2	0.1	0.1
Sharp-tailed grouse**	--	--	--	--	156	--	--	--	--	--	0.1	--
Band-tailed pigeon**	--	--	--	--	62	62	--	--	--	--	0.1	0.1
Cottontail rabbit	24,803	28,239	35,831	35,590	33,385	25,156	25.4	31.0	40.0	33.8	31.8	25.1
Snowshoe hare	5,961	8,502	9,752	8,205	6,787	4,048	6.1	9.3	10.9	7.8	6.5	4.0
TOTAL HUNTERS***	97,808	91,226	89,593	105,288	104,834	100,164						

*Includes both spring and fall hunts.

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

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

Table 4. Percent of hunter trips resulting in failure to bag at least one bird, 1961-80.

	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
AVERAGES (1961-79)			32			13			50			41			41			37			44

Table 5. Regional and statewide summary of effort expended on upland game summer inventory, 1971-80.

Species	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
	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	--
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
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

Table 5 (continued)

Species	REGION											
	Northern		Central		Southern		Northeastern		Southeastern		STATE TOTALS	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
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
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
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

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	--	--	--	--	--	--	--	--	--	--	--	--
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	--

Table 6. Season framework for upland game during 1980.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Pheasant	Nov. 1-9	2 cocks	4 cocks	Statewide except Duchesne and Uintah counties.
	Nov. 1-14	2 cocks	4 cocks	Duchesne and Uintah counties.
	Nov. 1-30	2 cocks	4 cocks	All state and federal lands (subject to restrictions and closures imposed by administering agencies) in Box Elder, Carbon, Davis, Duchesne, Emery, Grand, Juab, San Juan, Tooele, Uintah and Weber counties.
Mourning dove	Sept. 1-30	10	20	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. 20, 1980-Jan. 31, 1981	5	10	Statewide except as noted below.
	Sept. 20-Nov. 30	5	10	Daggett, Davis, Duchesne, Cache, Morgan, Rich, Sanpete, Summit, Uintah and Wasatch counties, and those portions of the following counties lying east of Interstate Highway 15: Box Elder, Juab, Salt Lake, Utah and Weber counties.
Sage grouse	Sept. 20-26	3	6	Beaver, Box Elder (part), Garfield, Grand (part), Iron, Kane, Millard, Piute, Sevier, Uintah (part) and Wayne counties.
	Sept. 20-26	2	4	Carbon, Daggett, Duchesne, Emery, Grand (part), Sanpete (part), Uintah (part), Utah (part) and Wasatch (part).

Table 6 (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
	Sept. 20-26	1	2	Box Elder (part), Cache, Davis, Morgan, Rich, Summit, San Juan, Wasatch (part) and Weber counties.
	Sept. 20-21	1	2	Wasatch County (part).
	Sept. 22-26	1	2	Tooele County (part).
The following counties were closed to sage grouse hunting during 1980:				
				Salt Lake, Juab, Washington, Sanpete (part), Utah (part), Tooele (part) and Wasatch (part).
Forest grouse	Sept. 20-Nov. 30	4 aggregate	8 aggregate	Statewide.
Quail	Nov. 1-9	5	10	Statewide except Duchesne, Grand, Morgan, Summit, Uintah and Washington counties.
	Nov. 1-14	5	10	Duchesne and Uintah counties.
	Nov. 1-Dec. 31	8	16	Washington County.
Grand, Morgan and Summit counties were closed to quail hunting in 1980.				
Hungarian partridge	Sept. 20, 1980-Jan. 31, 1981	5	10	Tooele County. Parts of Box Elder, Juab, Salt Lake, Utah and Weber counties.
	Sept. 20-Nov. 30	5	10	Davis, Morgan, Cache, Rich and Summit counties. Parts of Box Elder, Juab, Salt Lake, Utah and Weber counties.

Table 6 (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Wild turkey				
Spring hunt	May 3-18	Season limit 1 male turkey		Garfield (part), Iron, Kane and Washington counties.
Fall hunt	Sept. 20-Oct. 5	Season limit 1 turkey of either sex		Garfield, Grand, Iron, Kane, San Juan (part), Washington and Wayne counties.
Snowshoe hare	Sept. 20, 1980 Jan. 31, 1981	5	10	Statewide.
Cottontail rabbit	Sept. 20, 1980 Jan. 31, 1981	10	20	Statewide except Box Elder (part), Cache, Carbon, Daggett, Davis, Duchesne, Emery, Grand, Morgan, Rich, San Juan, Summit, Uintah and Weber counties.
	Sept. 20, 1980-Jan. 31, 1981	5	10	Box Elder (part), Cache, Carbon, Daggett, Davis, Duchesne, Emery, Grand, Morgan, Rich, San Juan, Summit, Uintah and Weber counties.

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