

UTAH UPLAND GAME
Annual Report
1985



Utah Department of Natural Resources
Division of Wildlife Resources

86-7

U T A H
U P L A N D G A M E
Annual Report
1985

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Utah Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

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William H. Geer
Director

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JOB PERFORMANCE REPORT
RESEARCH PROJECT SEGMENT
(Inventory)

State: U T A H Project Title: Statewide Wildlife
Management Inventory
Project No.: W-65-R-34 Job Title: Statewide Upland Game
Inventory and Management
Job No.: A-4

Period Covered: December 15, 1984 to April 30, 1986

Abstract: This report includes upland game inventory and harvest data relating to the 1985-86 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indices derived by each method are included. Data obtained in 1985 are compared to 1984 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, 1984 through February 10, 1985, 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 23-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 1984 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, snowshoe hare, and wild turkey. An 8.6 percent sample of eligible licensees from the current year's (1985) resident small game license file and 1985 combination license file was selected for the game bird and rabbit and hare questionnaire. Separate questionnaires were mailed to all ptarmigan and wild turkey permittees. Indices derived include total hunters, hunter-days, total harvest and hunter success per day plus success for each season.

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

Beginning in 1978, the program was expanded to report total estimated hunter-days and harvest by species and county rather than just the percent of pressure and harvest. Wild turkey and ptarmigan questionnaires were analyzed separated by Game Management 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.

In 1985 a computerized pull apart mailer was again used to obtain harvest data. Data input and storage was entered on tape. This method was initiated in 1981.

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

INTRODUCTION

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

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

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

During 1985, a total of 81,119 Utah sportsmen spent 469,106 days afield in pursuit of various upland game species (Table 1). The harvest of upland game totaled 500,985 animals. The proportion of the total upland game hunters which pursued each species is shown in Appendix Table 3 and the percentage failing to bag at least one bird of each species in Appendix Table 4. The regulations for 1985 upland game hunting seasons are shown in Appendix Table 6.



Table 1. Summary of harvest statistics from the mail questionnaire for 1985.

Species	Hunters Afield	Total Harvest	Hunter Days	Bag per Hunter-day	Bag/Hunter For Season
Pheasant	69,889	146,807	233,328	0.63	2.10
Mourning dove	28,183	256,045	96,507	2.65	9.09
Chukar partridge	7,930	20,938	24,346	0.86	2.64
Sage grouse	7,586	11,466	14,702	0.78	1.51
Forest grouse	12,646	23,097	31,290	0.74	1.83
Quail	3,065	7,051	7,994	0.88	2.30
Hungarian partridge	1,157	707	2,314	0.31	0.61
Wild turkey					
spring	270	41	747	0.96	0.15
fall	--	--	--	--	--
Band-tailed pigeon	--	--	--	--	--
Sharp-tailed grouse	0	0	0	--	--
Ptarmigan	10	7	13	0.54	0.70
Cottontail	14,059	31,397	48,371	0.65	2.23
Snowshoe	3,365	3,429	9,494	0.36	1.02
TOTAL	--	500,985	469,106	--	--

Total hunters afield for all species of upland game = 81,119

HARVEST QUESTIONNAIRE

- Harvest statistics were obtained from a random sample of licensed hunters by their response to a hunter questionnaire. The combined upland game bird and rabbit-hare questionnaire was again used.

A total of 10,772 upland game bird questionnaires, a 8.6 percent sample, were mailed. Of the total, 648 (6.0%) questionnaires were undeliverable. Of the 10,124 questionnaires delivered, 5,843 (57.7%) usable upland game questionnaires were returned. Of those, 2,058 purchased a license but did not hunt upland game. By dividing the total of 125,226 eligible licensees by the usable returns (5,843), a projection factor of 21.431798 is derived.

The 1985 hunter questionnaire sample size decreased slightly from 1984, however, a followup questionnaire was sent to those who failed to return the first one. This resulted in a 54 percent overall rate of return for usable questionnaires. A high rate of return is desirable in order to obtain an adequate sample of harvest estimates in counties where hunting pressure and harvest are limited. Extremely small samples from these counties tend to over-estimate the harvest and thus bias the results. Although harvest, number of hunters and days-afield may be over-estimated where small samples are obtained, harvest per hunter-day should be relatively precise.

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

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

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

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

WEATHER CONDITIONS

Weather information used in this report is from the office of the Utah State Climatologist and N.O.A.A. Climatological Data Periodical. (Appendix Table 1, 2 and Figures 1 and 2.)

The 1984-85 winter weather was cold. Annual precipitation in 1985 was above normal statewide, except for the Dixie division. Above normal precipitation fell in November and December 1984. By the end of December, state average precipitation was 142 percent of normal. In the Northcentral Division, most precipitation accumulated as snow.

Temperatures dropped considerably below normal in January. Mean temperatures averaged 5° F below normal in January and February. In the Northcentral Division, mean temperatures in January and February were 6.9° F and 10.2° F below normal, respectively. Mean temperatures in the Uinta Basin were significantly below normal for both months. This weather can have devastating effects on introduced exotic small game such as pheasants, California quail, chukar and Hungarian partridge, if food is not available. Cottontails have also been severely impacted by cold winters since 1983.

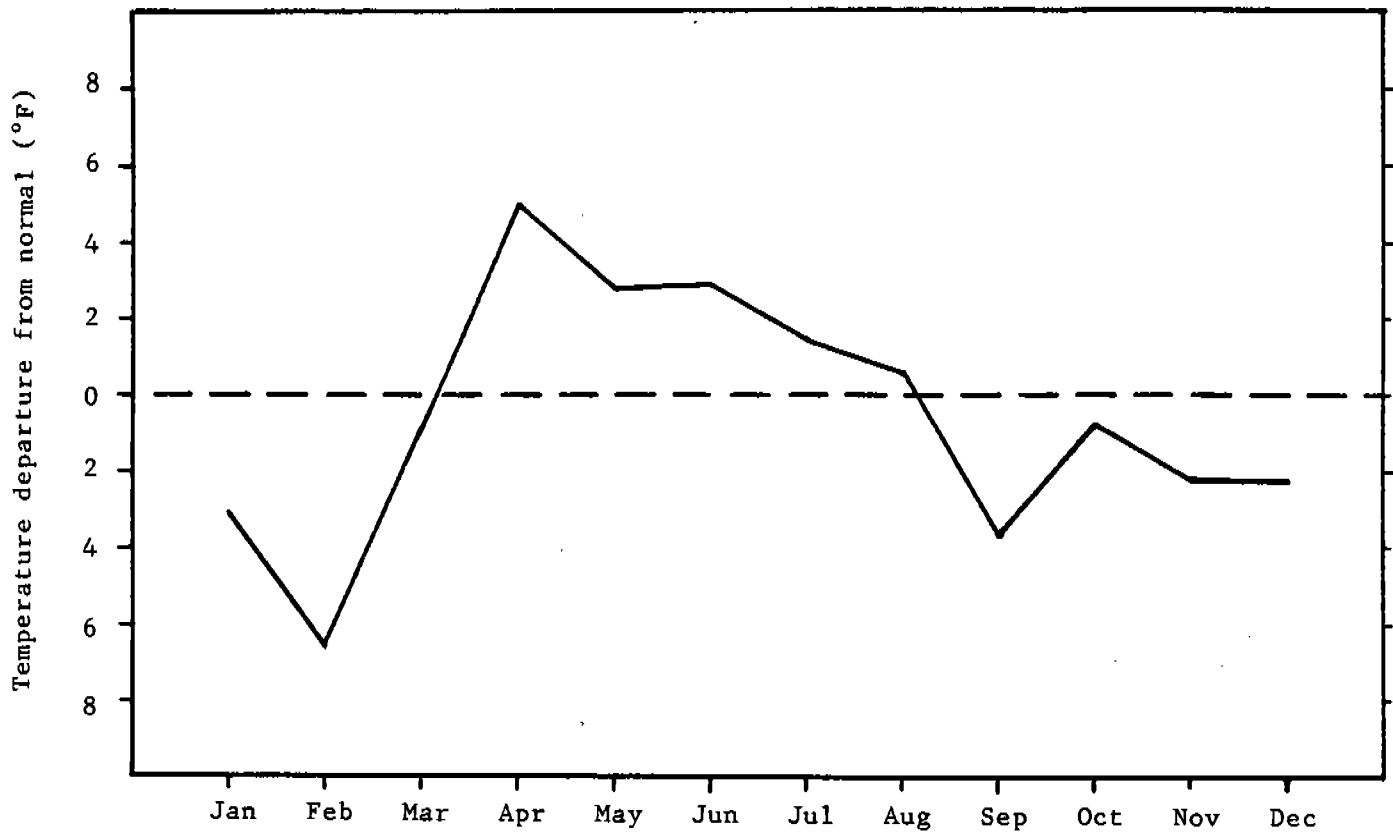


Figure 1. Monthly average temperature departure from normal, 1985

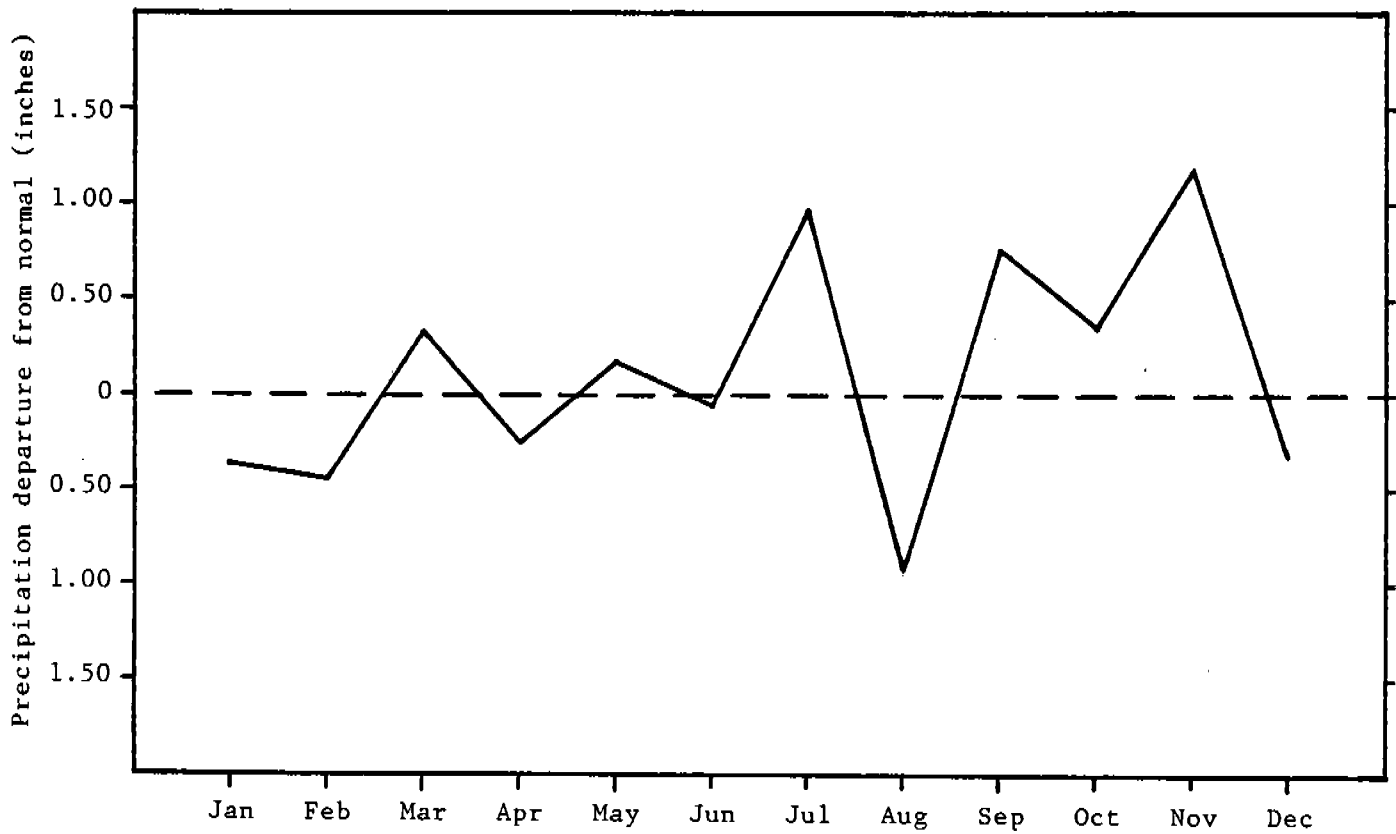


Figure 2. Monthly average precipitation departure from normal, 1985

April, May June and July were warmer and drier than normal, resulting in improved hatching success and brood survival. July was much more wet than normal resulting in good cover conditions. The accumulated precipitation averaged 130 percent of normal for each of these months.

LICENSE SALES

Small game license sales by type and cost are listed in Table 2. The number of licenses sold for all types decreased slightly in 1985. Likewise, the proportion of Utah's population hunting small game is declining (Table 3). In the early 1970's about 10 percent of Utah's population was hunting small game. By 2000, we project that only 5 percent will be hunting small game.

Table 4 identifies revenue generated to Utah Division of Wildlife Resources from small game license sales. Small game program budgets run about half the revenue generated, with the other half going to support services such as law enforcement, administration, accounting, and field service.

Table 2. Statewide small game license sales information, 1954-85.

Year	Adult Res. Small Game		Juv. Res. Small Game		Non. Res. Small Game		Combination	
	No.	Cost	No.	Cost	No.	Cost	No.	Cost
1954	12,990	3.50	5,170	2.00	561	15.00	79,574	6.00
1955	12,086	3.50	5,369	2.00	478	15.00	79,960	6.00
1956	12,102	3.50	5,735	2.00	524	15.00	80,968	6.00
1957	12,239	3.50	6,192	2.00	505	15.00	81,271	6.00
1958	14,290	3.50	6,563	2.00	696	15.00	85,198	6.00
1959	13,421	3.50	5,966	2.00	669	15.00	90,069	6.00
1960	12,020	3.50	5,022	2.00	576	15.00	90,085	6.00
1961	12,177	3.50	6,108	2.00	617	15.00	88,180	6.00
1962	12,953	3.50	6,536	2.00	607	15.00	91,412	6.00
1963	13,365	3.50	6,319	2.00	642	15.00	94,768	6.00
1964	13,073	3.50	6,453	2.00	681	15.00	98,556	6.00
1965	12,913	3.50	6,755	2.00	716	15.00	100,410	6.00
1966	13,854	3.50	7,477	2.00	725	15.00	103,849	6.00
1967	18,588	4.50	12,851	2.50	652	20.00	86,218	10.00
1968	20,647	4.50	15,205	2.50	703	20.00	91,020	10.00
1969	20,221	4.50	15,567	2.50	853	20.00	96,117	10.00
1970	19,564	4.50	15,827	2.50	1,009	20.00	100,467	10.00
1971	20,681	4.50	16,044	2.50	1,000	20.00	102,284	10.00
1972	19,796	4.50	16,523	2.50	1,075	20.00	107,414	10.00
1973	18,836	4.50	16,522	2.50	964	20.00	115,436	10.00
1974	17,434	4.50	16,334	2.50	974	20.00	117,770	10.00
1975	17,057	4.50	15,869	2.50	967	20.00	115,362	10.00
1976	33,078	6.00	16,261	3.00	1,141	20.00	76,587	18.00
1977	36,473	6.00	15,795	3.00	1,270	20.00	74,600	18.00
1978	37,082	6.00	15,419	3.00	1,449	20.00	81,227	18.00
1979	36,721	6.00	14,200	3.00	1,575	20.00	84,450	18.00
1980	30,189	8.00	14,042	4.00	1,330	30.00	100,177	23.00
1981	37,804	8.00	13,874	4.00	1,559	30.00	83,486	23.00
1982	36,850	8.00	14,040	4.00	1,637	30.00	82,970	23.00
1983	39,602	8.00	13,814	4.00	1,685	30.00	73,529	23.00
1984	36,070	8.00	13,170	4.00	1,633	30.00	73,081	23.00
1985	30,102	12.00	12,987	6.00	1,500	40.00	82,137	35.00

Table 3. Actual (1971-1985) and projected (1990-2000) proportion of Utah population hunting small game based upon assumption of improved sportsman access to private lands and successful transplants of turkey, chukar, and hungarian partridge on public lands.

Year	Utah Population	Licenses Sold			Proportion Hunting Small Game
		RSG ¹	NRSG	Total	
1954	750,000		561		
1955	783,000		478		
1956	809,000		524		
1957	826,000		505		
1958	845,000		696		
1959	870,000		669		
1960	890,627		576		
1961	936,000		617		
1962	958,000		607		
1963	974,000		642		
1964	978,000		681		
1965	991,000		716		
1966	1,009,000		725		
1967	1,019,000		652		
1968	1,029,000		703		
1969	1,047,000		853		
1970	1,059,273		1,009		
1971	1,101,000	101,421	1,000	101,521	9.2
1972	1,135,000	110,691	1,075	111,766	9.8
1973	1,169,000	115,129	964	116,093	9.8
1974	1,197,000	112,963	974	113,937	9.4
1975	1,234,000	108,636	967	109,603	8.8
1976	1,272,000	85,268	1,141	86,409	6.7
1977	1,316,000	86,549	1,270	87,819	6.6
1978	1,364,000	95,637	1,449	97,086	7.0
1979	1,416,000	100,116	1,575	101,691	7.1
1980	1,461,037	110,039	1,330	111,369	7.5
1981	1,524,830	103,041	1,559	104,600	6.8
1982	1,588,622	99,744	1,637	101,381	6.3
1983	1,652,415	93,303	1,685	94,988	5.6
1984	1,716,207	88,084	1,633	89,717	5.2
1985	1,780,000	94,991	1,500	96,491	5.4
1990	1,988,650	110,000	2,250	112,250	5.5
1995	2,134,250	115,000	2,500	117,500	5.4
2000	2,258,450	120,000	3,000	123,000	5.3

¹Adjusted for waterfowl hunters subtracted from combination licenses, R.S.G. = Adjusted combination plus juvenile small game plus adult small game.

²Utah Statistical Abstracts 1984 - projections constitute the December 1982 official State of Utah baseline projections (Office of State Planning Coordinator and Bureau of Economic and Business Research, University of Utah).

Table 4. Small game license sales and income, 1971-85 (JSG=juvenile small game, RSG=adult resident small game, CMB=combination license, NRSNG=nonresident small game).

Year	License Fees		Number of Licenses Sold				No. Federal Duck Stamp Sold ³		Total Gross Revenue Attributed to Small Game (\$)						
	JSG	RSG	CMB	NRSNG	JSG ⁴		RSG		CMB ²	NRSNG	TOTAL ¹	JSG ⁴	RSG	CMB ²	NRSNG
					JSG ⁴	RSG	CMB	NRSNG							
1971	2.50	4.50	10.00	20.00	16,044	20,681	102,284	1,000	37,588	20,055	93,064	200,557	20,000	336,676	
1972	2.50	4.50	10.00	20.00	16,523	19,796	107,414	1,075	33,042	20,653	89,082	230,553	21,500	361,789	
1973	2.50	4.50	10.00	20.00	16,522	18,836	115,436	964	35,665	20,652	84,762	247,290	19,280	371,985	
1974	2.50	4.50	10.00	20.00	16,334	17,434	117,770	974	38,575	20,417	78,453	245,504	19,480	363,855	
1975	2.50	4.50	10.00	20.00	15,869	17,057	115,362	967	39,652	19,836	76,756	234,701	19,340	350,633	
1976	3.00	6.00	18.00	20.00	16,261	33,078	76,587	1,141	40,658	24,391	198,468	184,675	22,820	430,355	
1977	3.00	6.00	18.00	20.00	15,795	36,473	74,600	1,270	40,319	23,692	218,838	176,204	25,400	434,135	
1978	3.00	6.00	18.00	20.00	15,419	37,082	81,227	1,449	38,091	23,128	222,492	221,719	28,980	556,320	
1979	3.00	6.00	18.00	20.00	14,200	36,721	84,450	1,575	35,255	21,300	220,326	252,862	31,500	525,988	
1980	4.00	8.00	23.00	30.00	14,042	30,189	100,177	1,330	34,369	28,084	241,512	425,120	39,900	734,616	
1981	4.00	8.00	23.00	30.00	13,874	37,804	83,486	1,559	32,123	27,748	302,432	331,805	46,770	708,755	
1982	4.00	8.00	23.00	30.00	14,040	36,850	82,970	1,637	34,116	28,080	294,800	315,597	49,110	709,087	
1983	4.00	8.00	23.00	30.00	13,814	39,602	73,529	1,685	33,642	25,620	305,249	257,670	50,134	638,672	
1984	4.00	8.00	23.00	30.00	13,170	36,070	73,081	1,633	34,237	26,340	288,560	250,544	48,990	614,434	
1985	6.00	12.00	35.00	40.00	12,987	30,102	82,137	1,500	30,235	38,961	361,224	484,246	60,000	944,431	

¹Value does not include cougar, bear, turkey permits and commercial hunting area licenses.

²Combination license values are based on the assumption that all waterfowl hunters purchased only combination licenses. They may fish and hunt big game but they do not hunt any other small game. Therefore, duck stamp sales are subtracted from combination license sale when projecting revenue generated. The proportion of the combination license fee attributed to small game equals the resident small game license fee divided by the resident fishing license fee plus the resident big game license fee plus the resident small game license fee.

³Total federal duck stamps sold does not include those sold during the second quarter, April-June, because persons purchasing stamps during this quarter tend not to be hunters.

⁴Half of the juvenile small game license sales were attributed to waterfowl hunters. Federal Duck Stamps are not required of juveniles less than 16 years of age.

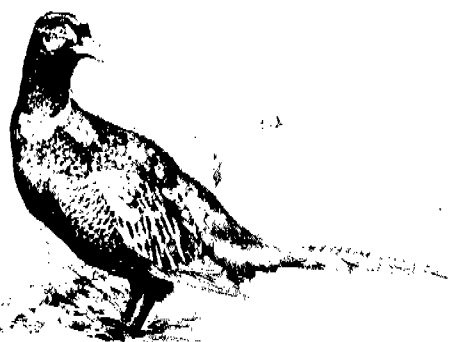
RING-NECKED PHEASANT

SUMMARY

The 1985 statewide breeding population, based on 1984 harvest data, declined about 13 percent from the 1984 breeding population. The effect of the 1983-84 winter is still being reflected by pheasant populations in northern Utah. Winter sex ratio indices may be biased by the fact that effort was not consistent when counting conditions were good. Flocks are often concentrated near roads where they are easily counted. Winter carry-over from 1984 was fair in northern and central Utah.

Weather conditions during the nesting season were very good in 1985. Statewide monthly average temperatures were above normal. Accumulated precipitation was also above normal. Although, fewer broods were observed, average brood size generally increased, nevertheless, overall production was down due to reduced breeding populations.

Harvest statistics compiled from the questionnaire indicated less success compared to 1984. Hunter pressure remained slightly above average but total harvest decreased 24 percent. Birds per hunter-day decreased 15 percent from 1984. Field bag check data also showed that hunter success declined during 1985.



Winter Sex Ratio Counts

Results of the survey for the winter of 1984-85 and long-term trends are shown in Tables 1 and 2 of this section. Statewide comparisons to the winter of 1983-84 and the 10-year average are as follows:

	<u>Winter of</u> <u>1984-85</u>	<u>Percent change from</u> <u>1983-84</u> <u>Average</u>	
Total pheasants counted (roadside)	2,153	-21	-63
Hens per cock	3.8	+46	0
Pheasants observed per 100 hours	1,116	-47	-24
Total hours effort (roadside)	193	+48	-60

Winter sex ratio counts indicated a 47 percent decline in pheasants observed. However, decreased effort in central and southern regions may reflect a biased decline in the breeding population. Density estimates can be biased due to the non-random nature of the survey technique if effort is minimal. The hen-cock ratio increased 46 percent from 1984 and was equal to the long term average. Counting conditions were generally good, but decreased effort reduced pheasant observations. No effort was expended in the Central Region, even though it accounts for one-third of the state's hunting pressure and harvest. More pheasants are harvested in Utah County than in any other county in the state.

Roadside Counts

A summary of summer roadside pheasant counts for 1985 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 1985 survey results compared to 1984 and the previous 10-year average follow:

	<u>1985</u>	<u>Percent change from</u> <u>1984</u> <u>Average</u>	
Total pheasants observed	1,629	-9	-38
Total miles driven	2,008	+5	-36
Pheasants per mile	0.81	-14	-20
Average brood size	6.71	+40	+30
Young per hen	5.04	+29	+37
Percent of hens with young	62	-17	-14

April, May, June and July temperatures were above normal. In the North Central, South Central, Uinta Basin and Southeast climatic subdivisions (major pheasant distribution), an average of 0.30 inches above normal precipitation fell in each climatic subdivision through the year. April and June were warmer and drier than normal. May was hotter and wetter than normal with July much wetter than normal. Hatching success should have been enhanced by warm, dry weather in April. Also, warm, dry weather in June should have increased brood survival. Counting conditions were affected by dense vegetation in many areas.

Pheasant production appears to have increased from 1984 in all regions except the Northeastern and the Southeastern. In the Northern Region, young broods were observed in the late summer indicating unsuccessful early nesting attempts. The density index (pheasants per mile) decreased from 0.94 in 1984 to 0.81 in 1985 which is below the 10-year average (1.01).

Record high levels of the Great Salt Lake and Utah Lake reduced both the quantity and quality of nesting and brood rearing habitat in Box Elder, Salt Lake, Davis, Weber and Utah counties.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire for 1985 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 1985 harvest statistics to 1984 and the 37-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Pheasant hunters	69,889	-9	-16
Pheasants harvested	146,807	-24	-37
Hunter-days afield	233,328	-10	+5
Pheasants per hunter-day	0.63	-15	-39
Pheasants per hunter	2.10	-16	-25

In northern Utah, hunters were told to expect fair hunting with success comparable to 1984. Low breeding populations were noted but production was fair for those birds which made it through the winter. Fair to poor success was predicted in central, northeastern and southern Utah. Success was expected to be good in southeastern Utah.

Total hunters decreased 9 percent from 1984 and remained below the long-term (1948-84) average. Hunter-days afield and total harvest also decreased 10 and 24 percent, respectively, from 1984. Hunter success (pheasants per hunter-day) also decreased 15 percent from 1984, and 39 percent below average. Pheasants per hunter also decreased 16 percent.

Long-term trends (1970-85) of total hunters, hunter-days, harvest and hunter success are shown in Figure 1. Generally, the trend continues toward more hunter-days with gradual declines in total pheasants harvested and hunter success.

Field Bag Checks

A summary of pheasant field bag check data for 1985 is shown in Table 14. The hunter success trend determined via bag checks since 1980 is found in Table 15. A comparison of 1985 data, on a statewide basis, to 1984 and the 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	3,474	+10	-27
Total hours hunted	9,825	+19	-37
Pheasants per hunter (complete hunts)	0.44	-24	-45
Pheasants bagged per 100 hours	13	-32	-28
Average hours per hunter-day (complete hunts)	3.3	+6	-21
Hours hunted per pheasant bagged (complete)	7.7	+45	+40

Checking Station Report

Weather was generally fair over the state Saturday and Sunday (November 2-3, 1985). Sunny and fair weather prevailed over northern Utah on Saturday, and temperatures were in the 60's.

Generally, hunting pressure was down substantially over the state. This is attributed to decreasing pheasant populations and to less land being accessible to hunters, particularly in Weber, Davis, Salt Lake, Utah and Millard counties. Hunter success was also down from 1984 statewide.

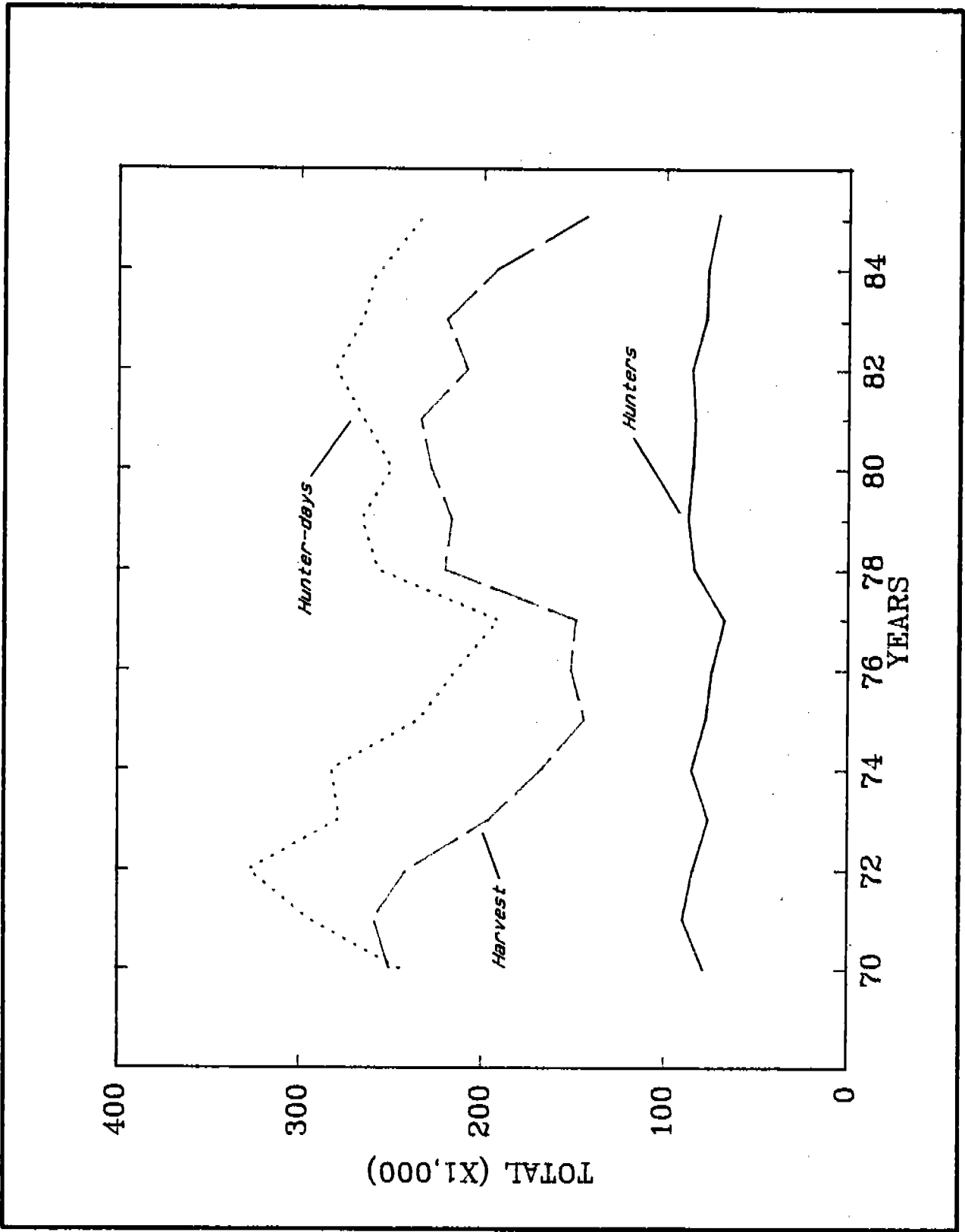


Figure 1. Statewide trend of pheasant harvest statistics.

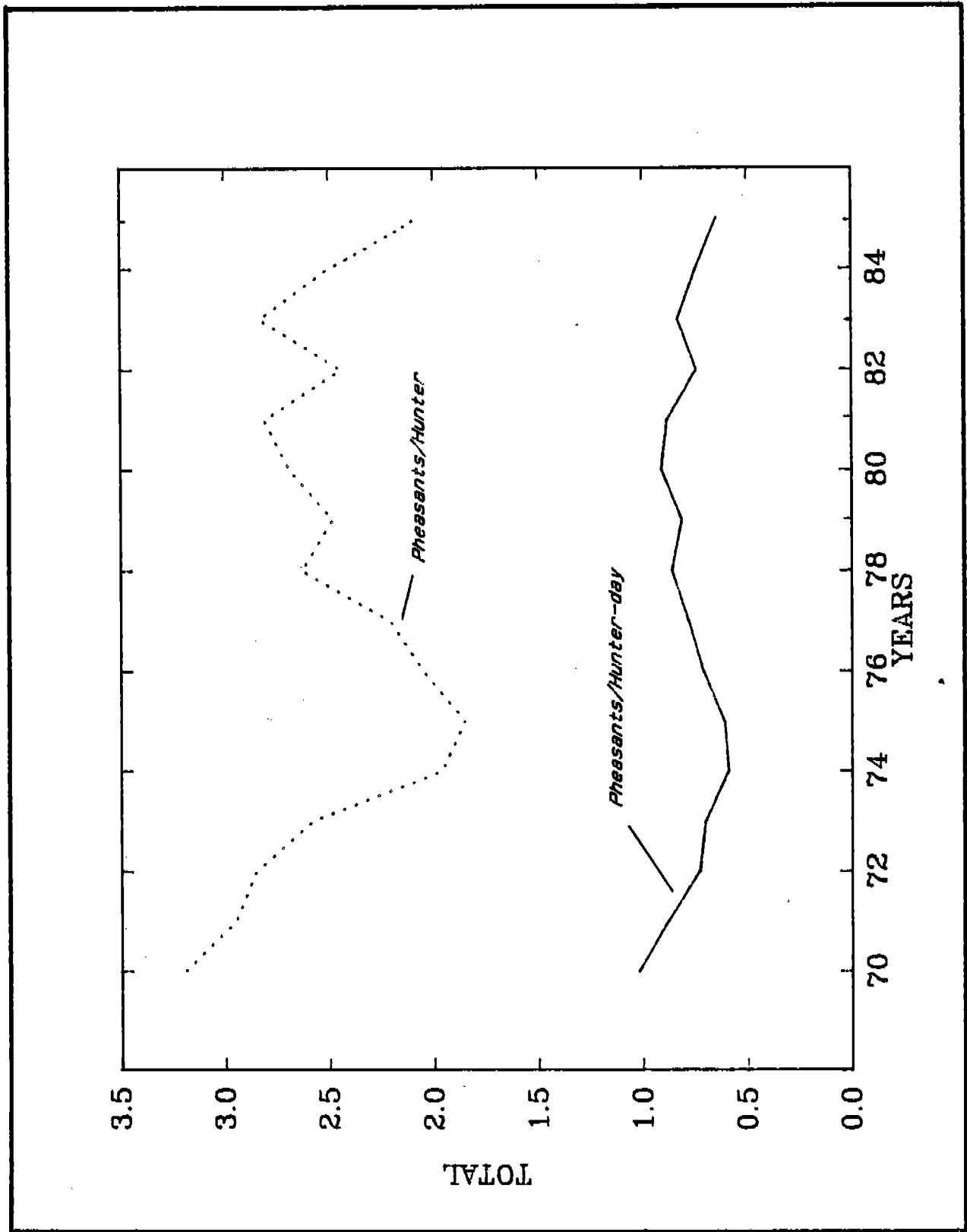


Figure 2. Statewide trend of pheasant harvest statistics.

Table 1. Summary of pheasant winter sex ratio counts, 1984-85.

Region and County	Roadside Observations			Flushing Observations			Effort Expended			Pheas. Obs./ 100 Hours of Road. Obs.					
	Cocks	Hens	Total	Hens/ 100 Cocks	Cocks/ 100 Hens	Total	Hens/ Cock	Cocks/ Hens	Total		Vehicle Miles	Hours of Effort			
Northern Region															
Box Elder	113	471	584	4.2	24	--	--	--	212	19	0	19	3,074		
Cache	28	160	188	5.7	18	--	--	--	80	6	0	6	3,133		
Davis	52	321	373	6.2	16	--	--	--	209	12	0	12	3,108		
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--		
Weber	16	121	137	7.6	13	--	--	--	99	4	0	4	3,425		
REGIONAL TOTALS	209	1,073	1,282	5.1	20	--	--	--	600	41	0	41	3,127		
Central Region															
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--		
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--		
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--		
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--		
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--		
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--		
Southern Region															
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--		
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--		
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--		
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--		
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--		
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--		
Sevier	38	122	160	3.2	31	12	39	51	3.3	31	6	0	6	2,667	
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--		
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	38	122	160	3.2	31	12	39	51	3.3	31	6	0	6	2,667	
Northeastern Region															
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--		
Duchesne	66	92	158	1.4	72	14	17	31	1.2	82	705	109	2	111	145
Uintah	37	144	181	3.9	26	--	--	--	--	--	181	11	1	12	1,645
REGIONAL TOTALS	103	236	307	2.6	38	14	17	31	1.2	82	886	120	3	123	282
Southeastern Region															
Carbon	17	48	65	2.8	35	14	24	38	1.7	37	100	5	0	5	1,300
Emery	85	222	307	2.6	38	--	--	--	--	--	[241]	[18]	--	[18]	[1,706]
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	102	270	372	2.6	38	14	24	38	1.7	37	341	23	0	23	1,617
STATE TOTALS	452	1,701	2,153	3.8	27	40	80	120	2.0	50	1,887	190	3	193	1,116

[] Estimate

Table 2. Trend of pheasant winter sex ratio counts, 1979-85.

Region and County	1979-80		1980-81		1981-82		1982-83		1983-84		1984-85	
	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr
<u>Northern Region</u>												
Box Elder	6.4	1,400	3.4	1,245	6.1	1,790	3.7	8,400	--	--	4.2	3,074
Cache	3.5	1,064	2.3	1,478	2.9	1,624	3.6	1,556	--	--	5.7	3,133
Davis	2.5	509	3.9	830	6.9	2,787	17.0	1,080	11.2	6,090	6.2	3,108
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	14.0	1,154	6.2	1,162	10.1	6,664	6.0	700	--	--	7.6	3,425
REGIONAL TOTALS	5.5	1,179	3.1	1,234	5.9	2,999	4.3	1,596	11.2	6,090	5.1	3,127
<u>Central Region</u>												
Juab	6.2	3,586	4.8	373	5.4	1,513	3.2	1,066	--	--	--	--
Salt Lake	2.0	419	1.9	577	3.8	1,205	1.3	973	--	--	--	--
Sanpete	3.1	1,451	3.8	86	8.2	5,445	7.7	4,328	--	--	--	--
Tooele	3.2	1,129	5.6	348	--	--	3.2	267	--	--	--	--
Utah	5.7	1,170	7.3	1,318	3.3	2,845	3.2	1,608	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4.2	1,405	4.7	891	5.6	3,641	6.3	2,668	--	--	--	4.7
<u>Southern Region</u>												
Beaver	0.4	150	1.2	433	2.6	2,666	5.3	543	2.7	433	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	2.3	206	3.8	--	2.9	837	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2.7	1,877	3.2	1,891	2.4	5,523	3.7	831	3.2	5,525	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	5.4	1,848	5.6	2,100	--	--	6.7	1,936	2.2	3,620	3.2	2,667
Washington	1.1	690	6.8	1,510	3.1	1,040	4.4	971	0.6	227	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2.9	1,081	3.9	1,539	2.6	2,033	5.1	1,121	2.6	2,009	3.2	2,667
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	2.2	1,072	1.6	787	1.9	600	1.5	553	1.7	1,113	1.4	145
Uintah	3.3	1,825	4.0	2,360	2.8	1,065	5.0	1,287	2.1	3,180	3.9	1,645
REGIONAL TOTALS	2.8	1,381	2.6	1,224	2.4	810	2.7	801	1.9	1,526	2.3	282
<u>Southeastern Region</u>												
Carbon	0.1	60	1.0	222	1.8	6,200	--	--	1.7	2,675	2.8	1,300
Emery	1.5	587	1.9	4,283	2.5	2,670	--	--	1.7	2,589	2.6	1,706
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	1.3	367	1.8	2,543	2.1	3,453	1.8	1,240	1.7	2,615	2.6	1,617
STATE TOTALS	3.6	1,191	3.4	1,151	4.6	2,838	5.5	1,900	2.6	2,104	3.8	1,116

Table 3. Pheasant summer inventory, 1985.

Region and County	No. Routes	Total Miles	Distinct Broods		Mixed Observ.		Adults w/o Young		Total Hens	Total Yng	Total Cocks	Total Pheas/ Mile	Yng/ Mile Brood	Mean Ad Hens	Yng/ Ad Hens	% Hens w/Yng	
			No. Yng	Yng	Hens	Yng	Cocks	Hens									
<u>Northern Region</u>																	
Box Elder	2	150	13	75	7	23	12	7	27	98	12	137	0.91	0.65	5.77	3.63	74
Cache	2	165	1	3	0	0	0	1	2	3	0	5	0.03	0.02	3.00	1.50	50
Davis	1	68	4	14	4	10	5	11	19	24	5	48	0.71	0.35	3.50	1.26	42
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5	383	18	92	11	33	17	19	48	125	17	190	0.50	0.33	5.11	2.60	60
<u>Central Region</u>																	
Juab	1	33	3	13	0	0	0	0	3	13	0	16	0.48	0.39	4.33	4.33	100
Salt Lake	1	80	5	25	0	0	4	3	8	25	4	37	0.46	0.31	5.00	3.13	63
Sanpete	2	190	25	207	19	86	14	4	48	293	14	355	1.87	1.54	8.28	6.10	92
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	303	33	245	19	86	18	7	59	331	18	408	1.35	1.09	7.42	5.61	56
<u>Southern Region</u>																	
Beaver	1	90	8	46	--	--	2	1	9	46	2	57	0.63	0.51	5.75	5.11	89
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	1	69	--	1	3	--	--	1	3	0	4	0.06	0.05	--	3.00	100	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	1	172	32	340	0	0	12	6	38	340	12	390	2.27	1.98	10.63	8.95	84
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2	208	42	217	8	44	15	7	57	261	15	333	0.62	1.25	5.17	4.58	88
Washington	1	45	--	--	--	--	4	2	2	0	4	6	0.13	--	--	--	--
Wayne*	1	66	3	10	2	9	1	1	6	19	1	26	0.39	0.28	3.33	3.17	83
REGIONAL TOTALS	7	650	85	613	11	56	34	17	113	669	34	816	1.25	1.03	7.35	5.92	85
<u>Northeastern Region</u>																	
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	3	332	6	24	0	0	20	2	8	24	20	52	0.16	0.07	4.00	3.00	75
Uintah	2	160	3	19	0	27	6	1	4	46	6	56	0.35	0.29	6.33	11.50	75
REGIONAL TOTALS	5	492	9	43	0	27	26	3	12	70	26	108	0.22	0.14	4.78	5.83	75
<u>Southeastern Region</u>																	
Carbon	1	60	1	1	0	0	4	1	2	1	4	7	0.12	0.02	1.00	0.50	50
Emery	3	120	10	52	2	23	7	6	18	75	7	100	0.83	0.63	5.20	4.17	67
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4	180	11	53	2	23	11	7	20	76	11	107	0.59	0.42	4.82	3.80	65
STATE TOTALS	25	2,008	156	1,046	43	225	106	53	252	1,271	106	1,629	0.81	0.63	6.71	5.04	62

*Data collected by Southeastern Region.

Table 4. Trend of pheasants observed per mile during summer roadside counts, 1975-85.

Region and County	Year										Average 1962-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	0.21	0.46	0.60	0.78	0.41	1.03	1.40	0.74	1.43	0.46	0.91	
Cache	0.68	0.44	0.22	0.71	0.34	0.08	0.92	0.17	0.04	0.19	0.03	
Davis	1.55	0.54	1.67	1.59	1.47	1.77	1.38	0.83	1.07	0.34	0.71	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	1.23	2.24	1.30	1.01	1.55	2.03	3.17	1.79	--	1.56	--	
REGIONAL TOTALS	0.71	0.86	0.85	0.96	0.76	1.23	1.56	0.78	0.63	0.48	0.50	1.24
<u>Central Region</u>												
Juab	0.82	1.20	0.54	0.09	0.13	0.94	0.89	0.61	0.44	0.77	0.48	
Salt Lake	0.54	0.55	0.29	0.09	0.64	0.60	1.09	1.24	--	1.80	0.46	
Sanpete	0.08	1.37	1.23	1.28	1.85	2.18	5.25	1.78	1.74	0.99	1.87	
Tooele	0.17	1.02	0.77	1.11	3.83	1.08	0.48	0.45	--	--	--	
Utah	0.64	1.45	0.98	1.96	4.14	1.90	2.19	3.89	1.95	2.21	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.62	1.16	0.93	1.40	2.83	1.68	2.01	2.15	1.72	1.49	1.35	1.89
<u>Southern Region</u>												
Beaver	0.07	0.69	0.49	0.71	1.01	0.47	0.63	0.66	0.23	0.11	0.63	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.19	0.39	0.30	0.49	0.97	0.67	1.24	0.07	0.31	--	0.06	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.41	0.47	0.49	1.38	1.11	0.88	2.85	1.15	1.28	1.09	2.27	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	0.40	0.72	0.88	1.72	1.10	1.13	0.87	1.37	1.27	1.52	0.62	
Washington	0.47	0.47	0.57	1.40	1.36	0.70	1.41	0.62	1.09	--	0.13	
Wayne	0.09	1.33	0.03	2.10	0.21	--	1.04	0.40	0.26	--	0.39	
REGIONAL TOTALS	0.28	0.58	0.57	1.29	1.08	0.86	1.65	1.05	0.94	1.09	1.25	1.11
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.33	0.34	0.39	0.68	0.38	0.56	0.84	0.73	0.72	0.68	0.16	
Uintah	0.54	1.45	1.15	1.75	1.90	1.60	1.05	1.27	2.97	1.33	0.35	
REGIONAL TOTALS	0.39	0.67	0.65	1.02	0.90	0.93	0.91	0.90	1.39	0.91	0.22	0.74
<u>Southeastern Region</u>												
Carbon	0.02	0.39	0.23	0.22	0.40	0.37	1.22	0.28	0.42	--	0.12	
Emery	0.88	0.47	0.61	0.53	0.39	0.49	0.74	0.74	0.32	0.66	0.83	
Grand	--	--	--	--	--	--	--	--	1.70	--	--	
San Juan	3.57	0.93	0.93	0.00	0.35	--	--	--	--	--	--	
REGIONAL TOTALS	0.60	0.44	0.44	0.35	0.38	0.45	0.86	0.61	0.39	0.66	0.59	0.68
STATE TOTALS	0.49	0.78	0.71	1.02	1.37	1.10	1.46	1.19	1.06	0.94	0.81	1.23

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1975-85.

Region and County	Year											Average 1962-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	0.13	0.31	0.41	0.55	0.03	0.69	1.07	0.44	0.63	0.26	0.65	
Cache	0.43	0.30	0.17	0.47	0.20	0.07	0.70	0.11	0.00	0.13	0.02	
Davis	0.84	0.54	1.17	1.26	0.99	1.27	0.81	0.43	0.78	0.16	0.35	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0.77	1.47	0.84	0.62	1.22	1.53	2.38	1.38	--	1.27	--	
REGIONAL TOTALS	0.43	0.58	0.58	0.68	0.55	0.88	1.15	0.52	0.35	0.32	0.33	0.89
<u>Central Region</u>												
Juab	0.71	1.06	0.46	0.76	0.02	0.85	0.63	0.42	0.36	0.58	0.39	
Salt Lake	0.35	0.37	0.21	0.07	0.44	0.32	0.57	0.84	--	1.26	0.31	
Sanpete	0.56	1.12	0.98	1.06	1.53	1.72	4.40	1.44	1.44	0.76	1.54	
Tooele	0.07	0.69	0.45	0.72	2.95	0.76	0.28	0.22	--	--	--	
Utah	0.33	0.99	0.60	1.43	3.00	1.30	1.68	2.52	1.34	1.26	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	0.38	0.84	0.63	1.06	2.11	1.21	1.51	1.63	1.31	0.99	1.09	1.43
<u>Southern Region</u>												
Beaver	0.03	0.54	0.33	0.58	0.87	0.37	0.54	0.48	0.17	0.08	0.51	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.08	0.31	0.17	0.38	0.74	0.53	1.07	0.04	0.23	--	0.05	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.27	0.34	0.34	1.12	0.89	0.69	2.27	0.83	1.00	0.89	1.98	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	0.28	0.56	0.70	1.45	0.93	0.90	0.67	1.07	0.94	1.19	1.25	
Washington	0.26	0.35	0.37	1.08	1.02	0.49	0.89	0.43	0.68	--	--	
Wayne	0.02	0.87	0.00	1.76	0.15	--	0.87	0.21	0.12	--	0.28	
REGIONAL TOTALS	0.17	0.44	0.41	1.05	0.87	0.67	1.30	0.76	0.68	0.86	1.03	0.87
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.23	0.21	0.25	0.53	0.27	0.37	0.52	0.54	0.55	0.46	0.07	
Uintah	0.27	1.07	0.79	1.41	1.50	1.20	0.83	0.95	2.25	1.12	0.29	
REGIONAL TOTALS	0.24	0.47	0.44	0.81	0.69	0.66	0.63	0.66	1.06	0.69	0.14	0.54
<u>Southeastern Region</u>												
Carbon	0.00	0.22	0.03	0.15	0.30	0.22	0.93	0.18	0.27	--	0.02	
Emery	0.57	0.20	0.33	0.35	0.28	0.35	0.52	0.45	0.18	0.45	0.63	
Grand	--	--	--	--	--	--	--	--	1.10	--	--	
San Juan	2.43	0.47	0.40	--	0.00	--	--	--	--	--	--	
REGIONAL TOTALS	0.39	0.22	0.18	0.24	0.26	0.31	0.65	0.68	0.23	0.45	0.42	0.50
STATE TOTALS	0.30	0.55	0.47	0.78	1.04	0.80	1.10	0.87	0.77	0.68	0.63	0.92

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1975-85.

Region and County	Year										Average 1962-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	2.44	4.18	3.68	3.64	3.92	2.60	4.09	3.00	1.41	2.44	3.63	
Cache	2.69	4.50	4.00	2.80	2.40	4.00	4.18	3.43	0.00	3.40	1.50	
Davis	1.53	3.75	3.18	4.71	2.30	2.78	1.81	1.25	3.31	1.67	1.26	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	2.07	2.35	2.12	1.81	4.13	3.97	3.38	4.70	--	5.50	--	
REGIONAL TOTALS	2.10	2.91	2.88	3.10	3.14	3.07	3.39	3.00	1.98	3.23	2.60	3.52
<u>Central Region</u>												
Juab	6.00	7.40	8.00	5.60	1.00	9.67	4.29	3.75	6.50	4.20	4.33	
Salt Lake	2.39	3.50	5.33	6.00	3.27	1.70	2.04	2.73	--	3.58	3.13	
Sanpete	2.67	5.22	5.09	6.03	5.91	4.97	6.71	5.48	5.85	5.38	6.10	
Tooele	1.33	3.06	1.93	2.69	3.93	2.88	2.43	2.17	--	--	--	
Utah	1.62	3.32	2.53	3.42	3.20	2.65	3.80	3.53	2.51	1.66	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	2.16	3.85	3.19	3.88	3.59	3.23	4.08	3.95	3.69	2.59	5.61	3.89
<u>Southern Region</u>												
Beaver	0.86	6.14	3.33	4.72	6.00	6.29	7.00	4.89	3.75	2.33	5.11	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.86	5.50	6.00	5.00	4.25	5.14	8.56	3.00	5.33	--	3.00	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	2.52	3.67	3.57	6.05	5.52	6.00	4.65	4.48	6.37	6.24	8.95	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	3.06	4.79	4.90	6.67	5.96	4.44	4.18	3.94	3.49	4.64	4.58	
Washington	1.94	5.83	2.47	4.52	4.95	5.50	2.69	3.46	2.23	--	--	
Wayne	0.25	2.60	--	7.57	5.00	--	8.75	1.67	3.33	--	3.17	
REGIONAL TOTALS	1.93	4.36	3.88	5.85	5.44	5.16	4.66	3.93	3.69	5.05	5.92	4.43
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	3.73	4.06	3.41	5.11	5.82	4.22	2.94	6.10	5.03	3.81	3.00	
Uintah	1.78	4.48	3.06	5.63	5.25	3.22	5.50	4.96	5.16	13.00	11.50	
REGIONAL TOTALS	2.73	4.34	3.18	5.39	5.39	3.52	3.73	5.54	5.11	6.38	5.83	4.42
<u>Southeastern Region</u>												
Carbon	0.00	2.05	0.42	3.00	4.80	5.00	7.91	5.67	3.13	--	0.50	
Emery	3.96	1.46	2.36	2.61	4.29	3.37	3.97	2.56	2.93	3.75	4.17	
Grand	--	--	--	--	--	--	--	--	5.50	--	--	
San Juan	2.55	1.75	1.20	0.00	0.00	--	--	--	--	--	--	
REGIONAL TOTALS	3.28	1.74	1.62	2.70	3.00	3.65	4.98	4.93	3.21	3.75	3.80	4.02
STATE TOTALS	2.28	3.56	3.11	4.32	4.05	3.60	4.12	3.88	3.85	3.92	5.04	3.98

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1975-1985.

Region and County	Year											Average 1963-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	78	73	79	80	62	68	83	73	52	56	74	
Cache	66	80	100	60	60	100	77	71	0	100	50	
Davis	97	75	58	88	80	63	71	67	75	33	42	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	34	58	44	39	70	100	91	91	--	92	--	
REGIONAL TOTALS	68	64	58	64	71	76	80	76	57	66	60	72
<u>Central Region</u>												
Juab	100	100	100	100	--	100	100	100	100	80	100	
Salt Lake	45	59	100	100	64	71	57	62	--	79	63	
Sanpete	64	90	85	90	100	83	97	92	92	90	92	
Tooele	33	78	57	69	96	75	71	67	--	--	--	
Utah	42	66	61	69	57	64	66	71	60	63	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	49	73	67	74	66	82	72	76	71	70	56	73
<u>Southern Region</u>												
Beaver	14	86	56	73	77	71	86	89	50	33	89	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	14	100	100	86	83	86	100	100	100	--	100	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	48	81	68	85	88	87	83	73	94	100	84	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	59	92	90	97	96	96	82	83	76	91	88	
Washington	31	50	73	87	95	33	66	77	83	--	--	
Wayne	50	40	--	100	100	--	88	78	--	--	83	
REGIONAL TOTALS	42	78	76	89	90	87	81	80	83	91	85	80
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	59	88	81	83	88	77	68	66	82	67	75	
Uintah	48	94	61	95	87	92	100	86	75	86	75	
REGIONAL TOTALS	53	91	68	90	88	87	78	75	77	72	75	77
<u>Southeastern Region</u>												
Carbon	0	59	17	44	100	75	100	67	63	--	50	
Emery	65	29	55	48	43	68	72	58	64	65	67	
Grand	--	--	--	--	--	--	--	--	100	--	--	
San Juan	55	50	60	0	0	--	--	--	--	--	--	
REGIONAL TOTALS	60	44	44	48	56	70	79	59	67	65	65	67
STATE TOTALS	54	71	65	76	73	77	79	75	74	75	62	74

Table 8. Trend of average brood size for pheasants, 1975-85.

Region and County	Year											Average 1962-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	3.14	5.75	4.67	5.71	6.38	3.40	4.90	4.13	4.00	4.63	5.77	
Cache	4.67	5.83	4.00	4.60	3.50	4.00	5.93	6.50	0.00	3.40	3.00	
Davis	2.75	4.33	5.73	4.79	4.00	5.13	3.64	2.00	5.40	3.33	3.50	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	5.78	5.05	6.57	4.80	6.00	4.37	3.70	5.66	--	6.00	--	
REGIONAL TOTALS	4.26	5.19	5.29	5.00	5.22	4.21	4.48	4.88	4.58	4.72	5.11	5.07
<u>Central Region</u>												
Juab	9.00	7.33	8.00	5.60	--	4.00	3.80	3.75	6.50	6.00	4.33	
Salt Lake	5.73	6.09	5.33	6.00	5.13	3.33	4.67	4.44	--	4.75	5.00	
Sanpete	4.72	5.88	4.92	6.56	5.98	5.43	7.24	5.93	6.39	6.38	8.28	
Tooele	4.00	4.38	3.33	4.57	8.93	3.83	3.67	3.50	--	--	--	
Utah	4.12	4.86	4.56	4.91	5.45	4.09	5.38	4.99	4.02	2.95	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	4.73	5.35	4.70	5.29	5.81	4.46	5.66	5.15	5.01	3.75	7.42	5.09
<u>Southern Region</u>												
Beaver	6.00	7.75	6.00	6.50	7.10	7.25	6.50	5.00	6.50	7.00	5.75	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	6.00	5.25	6.00	5.00	4.25	6.00	8.14	3.00	5.33	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	5.73	6.93	5.23	6.88	6.31	6.38	6.30	6.30	6.40	6.00	10.63	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	4.25	5.17	6.17	6.40	5.94	4.70	5.00	4.56	5.14	5.10	5.17	
Washington	5.80	8.00	3.57	6.33	5.00	--	5.90	4.40	3.90	--	--	
Wayne	--	7.00	--	10.25	5.00	--	1.00	2.00	--	--	3.33	
REGIONAL TOTALS	5.31	6.37	5.45	6.71	5.96	5.49	6.14	4.98	5.18	5.42	7.35	5.55
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	6.40	4.64	4.55	6.54	6.60	5.50	4.58	7.31	4.50	5.87	4.00	
Uintah	4.22	5.00	5.00	5.75	5.56	3.30	5.50	4.25	5.11	5.50	6.33	
REGIONAL TOTALS	5.37	4.85	4.80	6.12	5.93	3.90	4.89	5.84	4.87	5.72	4.78	5.53
<u>Southeastern Region</u>												
Carbon	--	3.00	2.50	6.75	3.33	6.67	7.67	6.00	3.00	--	1.00	
Emery	5.00	4.86	4.33	5.27	6.00	7.00	6.00	4.42	6.60	5.00	5.20	
Grand	--	--	--	--	--	--	--	--	5.50	--	--	
San Juan	--	3.50	4.00	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.00	4.40	4.07	5.67	5.00	6.86	6.24	4.64	5.30	5.00	4.82	5.63
STATE TOTALS	4.80	5.37	4.94	5.69	5.79	4.58	5.45	5.11	5.03	4.78	6.71	5.35

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	384	21,881	14,445	0.66	9.38	9.84
Cache	221	12,580	5,293	0.42	5.39	3.61
Davis	349	23,339	10,780	0.46	10.00	7.34
Morgan	10	471	21	0.05	0.20	0.01
Rich	(2)	(128)	(21)	(0.17)	(0.05)	(0.01)
Summit	(2)	(85)	(0)	(0.00)	(0.04)	(0.00)
Weber	459	32,790	18,024	0.55	14.05	12.28
REGIONAL TOTALS	1,427	91,278	48,585	0.53	39.12	33.09
<u>Central Region</u>						
Juab	115	4,457	3,129	0.70	1.91	2.13
Salt Lake	278	14,723	7,758	0.53	6.31	5.28
Sanpete	294	15,280	15,045	0.98	6.55	10.25
Tooele	141	6,429	3,836	0.60	2.76	2.61
Utah	711	39,220	25,310	0.65	16.81	17.24
Wasatch	(7)	(235)	(128)	(0.55)	(0.10)	(0.09)
REGIONAL TOTALS	1,546	80,347	55,208	0.69	34.44	37.61
<u>Southern Region</u>						
Beaver	23	1,435	750	0.52	0.66	0.51
Garfield	7	385	64	0.17	0.17	0.04
Iron	40	2,121	1,050	0.49	0.91	0.72
Kane	(1)	(42)	(0)	(0.00)	(0.02)	(0.00)
Millard	232	13,073	11,530	0.88	5.60	7.85
Piute	6	342	192	0.56	0.15	0.13
Sevier	228	13,609	9,665	0.71	5.83	6.58
Washington	39	2,421	1,028	0.42	1.04	0.70
Wayne	6	192	235	1.22	0.08	0.16
REGIONAL TOTALS	582	33,626	24,517	0.73	14.41	16.70
<u>Northeastern Region</u>						
Daggett	(2)	(85)	(42)	(0.50)	(0.04)	(0.03)
Duchesne	142	8,358	7,393	0.88	3.58	5.04
Uintah	138	8,787	5,465	0.62	3.77	3.72
REGIONAL TOTALS	282	17,231	12,901	0.75	7.38	8.79
<u>Southeastern Region</u>						
Carbon	75	4,436	1,843	0.42	1.90	1.26
Emery	98	6,215	3,579	0.58	2.66	2.44
Grand	(1)	(42)	(85)	(2.00)	(0.02)	(0.06)
San Juan	4	107	42	0.40	0.05	0.03
REGIONAL TOTALS	178	10,801	5,550	0.51	4.63	3.78
Unknown Counties	2	42	42	1.00	0.02	0.03
STATE TOTALS	4,017	233,328	146,807	0.63	100	100

*Total hunter trips from questionnaire returns.

() Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>								
Box Elder	1.01	0.94	1.11	1.03	0.86	0.99	0.81	0.66
Cache	0.99	0.81	0.97	0.88	0.74	0.82	0.66	0.42
Davis	0.69	0.63	0.65	0.65	0.63	0.58	0.56	0.46
Morgan	0.78	0.60	0.56	0.57	0.64	0.58	0.44	0.05
Rich	1.86	0.00	0.00	0.00	0.00	(0.67)	(0.80)	(0.17)
Summit	0.40	0.00	0.00	0.00	0.00	(0.96)	(0.80)	(0.00)
Weber	0.70	0.71	0.77	0.72	0.63	0.72	0.69	0.55
REGIONAL TOTALS	0.83	0.77	0.86	0.84	0.71	0.78	0.68	0.53
<u>Central Region</u>								
Juab	0.79	0.87	1.00	0.89	0.76	1.00	0.86	0.70
Salt Lake	0.72	0.62	0.70	0.68	0.57	0.66	0.51	0.53
Sanpete	0.91	1.07	1.18	1.18	1.00	1.20	1.08	0.98
Tooele	0.81	0.58	0.73	0.65	0.43	0.60	0.58	0.60
Utah	0.83	0.82	0.92	0.91	0.73	0.81	0.82	0.65
Wasatch	2.00	0.00	0.00	0.00	0.00	(0.21)	(0.29)	(0.55)
REGIONAL TOTALS	0.81	0.79	0.90	0.89	0.71	0.83	0.79	0.69
<u>Southern Region</u>								
Beaver	0.97	0.56	0.86	1.06	0.77	0.72	0.66	0.52
Garfield	0.97	0.48	0.69	0.53	0.81	0.41	0.52	0.17
Iron	0.83	0.66	0.83	0.74	0.69	0.61	0.43	0.49
Kane	0.00	0.00	0.00	0.00	0.00	(1.00)	(0.50)	(0.00)
Millard	1.06	1.04	1.24	1.02	0.97	1.10	0.92	0.88
Piute	0.97	0.95	0.88	0.85	1.00	0.80	0.66	0.56
Sevier	0.82	1.01	1.01	1.03	0.89	0.96	0.87	0.71
Washington	0.70	0.60	0.63	0.45	0.39	0.43	0.24	0.42
Wayne	1.00	1.17	1.43	0.67	0.88	0.50	0.25	1.22
REGIONAL TOTALS	0.91	0.93	1.03	0.95	0.85	0.89	0.79	0.73
<u>Northeastern Region</u>								
Daggett	1.00	0.00	0.00	0.00	0.00	(0.67)	(0.00)	(0.50)
Duchesne	1.41	1.13	1.13	1.09	1.05	1.15	0.99	0.88
Uintah	1.05	0.95	1.09	0.98	0.93	0.98	0.86	0.62
REGIONAL TOTALS	1.20	1.03	1.11	1.04	0.99	1.06	0.92	0.75
<u>Southeastern Region</u>								
Carbon	0.86	0.66	0.94	0.70	0.54	0.59	0.44	0.42
Emery	0.65	0.71	0.85	0.85	0.57	0.60	0.65	0.58
Grand	0.73	0.45	0.33	0.63	0.94	2.44	0.38	(2.00)
San Juan	0.57	0.33	0.29	0.68	0.50	0.76	2.50	0.40
REGIONAL TOTALS	0.72	0.68	0.87	0.78	0.56	0.62	0.57	0.51
Unknown Counties	0.85	0.84	1.17	0.77	0.48	1.03	0.47	1.00
STATE TOTALS	0.86	0.81	0.91	0.88	0.74	0.83	0.74	0.63

()Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 11. Percentage distribution of pheasant harvest by region and county, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>								
Box Elder	11.06	12.04	12.35	12.94	12.40	13.87	10.02	9.84
Cache	8.55	6.93	7.94	8.66	7.07	7.22	4.92	3.61
Davis	8.47	8.15	7.61	5.33	8.27	7.57	7.84	7.34
Morgan	0.25	0.35	0.20	0.23	0.20	0.13	0.08	0.01
Rich	0.24	0.00	0.00	0.00	0.00	(0.02)	(0.04)	(0.01)
Summit	0.04	0.00	0.00	0.00	0.00	(0.15)	0.13	0.00
Weber	10.11	10.84	10.03	7.79	10.18	10.66	12.82	12.28
REGIONAL TOTALS	38.71	38.31	38.13	34.95	38.12	39.46	35.69	33.08
<u>Central Region</u>								
Juab	1.24	1.61	1.75	3.19	2.10	1.87	1.80	2.13
Salt Lake	8.19	7.14	6.29	4.88	5.96	5.86	4.64	5.28
Sanpete	4.44	6.87	7.17	7.28	7.47	7.84	9.11	10.25
Tooele	2.22	1.70	1.52	2.05	1.83	2.08	2.29	2.61
Utah	18.83	17.67	17.65	17.89	16.54	15.73	18.69	17.24
Wasatch	0.07	0.00	0.00	0.00	0.00	(0.02)	(0.06)	(0.09)
REGIONAL TOTALS	35.00	34.99	34.38	35.29	33.90	33.38	36.52	37.52
<u>Southern Region</u>								
Beaver	0.51	0.28	0.51	0.91	0.68	0.40	0.58	0.51
Garfield	0.26	0.09	0.07	0.08	0.32	0.05	0.12	0.04
Iron	0.92	0.52	0.88	1.08	1.00	0.83	0.35	0.72
Kane	0.00	0.00	0.00	0.00	--	(0.01)	(0.04)	0.00
Millard	4.69	5.46	5.76	7.77	5.37	4.17	6.93	7.85
Piute	0.30	0.13	0.22	0.30	0.13	0.09	0.24	0.13
Sevier	3.99	5.72	5.04	5.37	5.86	5.04	6.06	6.58
Washington	0.78	0.99	0.86	0.58	0.48	0.50	0.35	0.70
Wayne	0.09	0.14	0.07	0.09	0.11	0.03	0.01	0.16
REGIONAL TOTALS	11.53	13.33	13.43	16.17	13.95	11.11	14.74	16.70
<u>Northeastern Region</u>								
Daggett	0.07	0.00	0.00	0.00	--	(0.00)	(0.00)	(0.03)
Duchesne	5.61	5.25	4.69	4.60	5.51	6.17	4.64	5.04
Uintah	5.63	5.24	5.00	3.99	5.13	6.03	4.87	3.72
REGIONAL TOTALS	11.31	10.49	9.69	8.58	10.64	12.20	9.74	8.76
<u>Southeastern Region</u>								
Carbon	1.04	0.85	1.60	1.73	1.51	1.40	1.01	1.26
Emery	1.43	1.66	2.50	2.84	1.46	1.80	2.13	2.44
Grand	0.10	0.03	0.01	0.11	0.13	0.13	0.05	0.06
San Juan	0.04	0.03	0.01	0.12	0.11	0.10	0.05	0.03
REGIONAL TOTALS	2.61	2.57	4.13	4.80	3.20	3.44	3.25	3.78
Unknown Counties	0.84	0.31	0.24	0.21	0.19	0.40	0.30	0.16
STATE TOTALS	100	100	100	100	100	100	100	100

() Data included in unknown counties because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 12. Percentage distribution of pheasant hunting pressure by county hunted, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>								
Box Elder	9.37	10.37	10.20	11.07	10.77	11.62	9.26	9.38
Cache	7.42	6.95	7.51	8.65	7.11	7.30	5.53	5.39
Davis	10.52	10.48	10.71	7.24	9.83	10.75	10.33	10.00
Morgan	0.28	0.48	0.33	0.33	0.23	0.19	0.14	0.20
Rich	0.11	0.00	0.00	0.00	--	--	(0.04)	(0.05)
Summit	0.08	0.00	0.00	0.00	--	--	(0.12)	(0.04)
Weber	12.30	12.42	11.91	9.62	11.92	12.20	13.93	14.05
REGIONAL TOTALS	40.07	40.70	40.66	36.93	39.86	42.06	39.20	39.03
<u>Central Region</u>								
Juab	1.35	1.50	1.60	3.16	2.05	1.55	1.55	1.91
Salt Lake	9.71	9.40	8.21	6.34	7.74	7.31	6.79	6.31
Sanpete	4.18	5.23	5.57	5.46	5.55	5.39	6.28	6.55
Tooele	2.34	2.38	1.89	2.77	3.18	2.85	2.93	2.76
Utah	19.43	17.48	17.64	17.30	16.94	16.00	16.90	16.81
Wasatch	0.03	0.00	0.00	0.00	--	--	(0.17)	(0.10)
REGIONAL TOTALS	37.03	35.99	34.91	35.03	35.46	33.10	34.46	34.34
<u>Southern Region</u>								
Beaver	0.45	0.40	0.54	0.74	0.66	0.46	0.65	0.66
Garfield	0.23	0.15	0.09	0.14	0.29	0.11	0.17	0.17
Iron	0.95	0.65	0.97	1.28	1.07	1.12	0.61	0.91
Kane	0.00	0.00	0.00	0.00	--	--	(0.06)	(0.02)
Millard	3.80	4.29	4.24	6.74	4.12	3.15	5.61	5.60
Piute	0.26	0.11	0.23	0.31	0.10	0.10	0.28	0.15
Sevier	4.15	4.62	4.57	4.60	4.90	4.34	5.17	5.83
Washington	0.96	1.33	1.24	1.14	0.91	0.95	1.10	1.04
Wayne	0.08	0.10	0.05	0.12	0.09	0.05	0.31	0.08
REGIONAL TOTALS	10.89	11.65	11.93	15.07	12.14	10.28	13.89	14.39
<u>Northeastern Region</u>								
Daggett	0.06	0.00	0.00	0.00	--	--	(0.06)	(0.04)
Duchesne	3.41	3.79	3.78	3.71	3.91	4.45	3.48	3.58
Uintah	4.58	4.48	4.20	3.59	4.10	5.08	4.24	3.77
REGIONAL TOTALS	8.05	8.28	7.98	7.30	8.01	9.53	7.72	7.34
<u>Southeastern Region</u>								
Carbon	1.03	1.05	1.57	2.18	2.08	1.97	1.71	1.90
Emery	1.90	1.91	2.67	2.95	1.89	2.51	2.43	2.66
Grand	0.12	0.06	0.04	0.15	0.10	0.04	0.10	0.02
San Juan	0.05	0.07	0.05	0.15	0.16	0.10	0.02	0.05
REGIONAL TOTALS	3.10	3.09	4.33	5.43	4.23	4.62	4.25	4.63
Unknown Counties	0.84	0.32	0.19	0.24	0.31	0.32	0.47	0.25
Mixed Counties	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

() Data combined in unknown counties because of small sample size.

Table 13. Statewide summary of pheasant harvest statistics, 1948-1985.

Year	Total Hunters	Total Harvest	Hunters-days Afield	Pheasants Per Hunter-day	Pheasants Per Hunter
1948	96,534	280,914	---	---	2.91
1949	88,369	263,340	189,453	1.39	2.98
1950	92,724	249,428	235,309	1.06	2.69
1951	76,576	246,575	171,233	1.44	3.22
1952	78,773	246,559	185,383	1.33	3.13
1953	82,595	245,307	176,480	1.39	2.97
1954	82,370	260,289	201,774	1.29	3.16
1955	78,793	196,195	178,359	1.10	2.49
1956	77,826	206,239	182,512	1.13	2.65
1957	83,025	228,319	170,387	1.34	2.75
1958	88,290	309,015	220,725	1.40	3.50
1959	86,268	243,276	202,730	1.21	2.82
1960	81,976	232,812	177,719	1.31	2.84
1961	83,493	238,439	243,305	0.98	2.86
1962	86,336	262,448	209,921	1.25	3.04
1963	87,647	297,873	198,582	1.50	3.40
1964	88,242	225,775	196,314	1.15	2.56
1965	77,409	211,876	186,215	1.14	2.74
1966	78,721	249,814	209,082	1.19	3.17
1967	85,664	284,000	257,033	1.10	3.32
1968	90,453	297,752	267,788	1.11	3.29
1969	90,573	250,241	277,887	0.90	2.76
1970	78,585	250,503	244,958	1.02	3.19
1971	87,878	259,189	294,618	0.88	2.95
1972	84,311	240,573	327,669	0.73	2.85
1973	75,968	196,012	278,033	0.70	2.58
1974	85,252	167,408	282,294	0.59	1.96
1975	77,566	143,783	234,615	0.61	1.85
1976	74,029	151,476	214,023	0.71	2.05
1977	67,195	148,168	191,142	0.78	2.21
1978	83,800	220,398	257,305	0.86	2.63
1979	87,462	216,700	266,245	0.81	2.48
1980	84,868	228,442	249,770	0.91	2.69
1981	83,408	234,217	265,381	0.88	2.81
1982	85,368	208,437	280,624	0.74	2.44
1983	77,847	220,074	265,731	0.83	2.83
1984	76,840	192,190	258,169	0.74	2.50
1985	69,889	146,807	233,328	0.63	2.10
<hr/>					
TOTALS (1948-85)	3,142,923	8,750,863	8,482,096	1.03	2.78
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AVERAGES (1948-84)	83,055	232,542	222,940	1.04	2.80

Table 14. Pheasant field bag check summary, 1985.

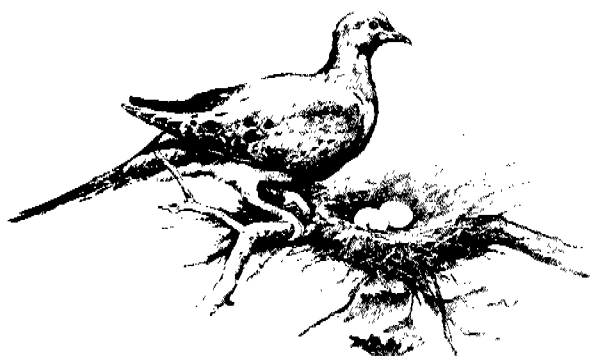
Region and County	ALL HUNTS				COMPLETE HUNTS						
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Hunts	Total Hunters	Total Hours	Total Birds/100 Hr	Birds/Hunter		
<u>Northern Region</u>											
Box Elder	332	677	1,750	178	10	202	416	1,455	130	9	0.31
Cache	36	119	295	21	7	12	38	96	5	5	0.13
Davis	140	360	968	153	16	56	126	369	58	16	0.46
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	283	512	1,231	101	8	236	428	1,029	77	7	0.18
REGIONAL TOTALS	791	1,668	4,244	453	11	506	1,008	2,949	270	9	0.27
<u>Central Region</u>											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	134	317	739	195	26	77	163	405	143	35	0.88
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	134	317	739	195	26	77	163	405	143	35	0.88
<u>Southern Region</u>											
Beaver	18	51	101	16	16	8	16	43	6	14	0.37
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	226	586	2,242	279	12	148	292	1,417	174	12	0.59
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	77	272	1,105	171	15	66	234	941	155	16	0.66
Washington	45	102	155	28	18	6	13	17	1	6	0.07
Wayne	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	366	1,011	3,603	494	14	228	555	2,418	336	14	0.61
<u>Northeastern Region</u>											
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	71	224	596	89	15	18	53	199	21	11	0.40
Uintah	73	208	528	81	15	13	43	104	16	15	0.37
REGIONAL TOTALS	144	432	1,124	170	15	31	96	303	37	21	0.38
<u>Southeastern Region</u>											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	15	46	115	18	16	1	5	40	9	23	1.80
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	15	46	115	18	16	1	5	40	9	23	1.80
STATE TOTALS	1,450	3,474	9,825	1,330	14	843	1,827	6,115	795	13	0.44

Table 15. Pheasant hunter success trend as determined by field bag check, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
<u>Northern Region</u>												
Box Elder	26	0.62	23	0.57	16	0.44	22	0.50	15	0.38	9	0.31
Cache	27	0.97	--	--	10	0.36	--	--	16	0.47	5	0.13
Davis	13	0.33	4	0.24	14	0.34	12	0.35	13	0.34	16	0.46
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	22	0.89	21	0.72	19	0.39	24	0.59	15	0.35	7	0.18
REGIONAL TOTALS	24	0.62	18	0.56	16	0.41	20	0.47	15	0.38		
<u>Central Region</u>												
Juab	22	0.44	16	0.44	21	0.32	54	0.35	--	--	--	--
Salt Lake	--	--	10	0.45	28	1.66	4	0.06	--	--	--	--
Sanpete	19	0.95	25	1.15	25	1.12	34	0.97	--	--	--	--
Tooele	120	2.00	67	1.75	118	1.86	80	2.18	--	--	--	--
Utah	27	0.80	32	0.94	21	0.58	26	0.86	53	1.62	35	0.88
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	25	0.83	28	0.99	24	0.75	31	0.31	53	1.62	35	0.88
<u>Southern Region</u>												
Beaver	--	--	25	0.86	20	1.08	--	--	24	0.31	14	0.37
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	25	0.75	26	1.08	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	28	0.90	20	0.75	12	0.40	12	0.71	16	0.66	12	0.59
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	29	1.17	32	1.33	22	0.92	22	1.01	23	0.94	16	0.66
Washington	25	0.64	--	--	--	--	21	0.70	--	--	6	0.07
Wayne	--	--	5	0.98	--	--	--	--	--	--	--	--
REGIONAL TOTALS	28	0.98	23	0.91	17	0.64	15	0.82	17	0.68	--	--
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	18	1.21	20	1.48	15	1.48	22	1.87	18	0.84	11	0.40
Uintah	19	0.61	15	0.98	16	1.21	19	1.47	25	0.77	15	0.37
REGIONAL TOTALS	19	1.04	18	1.29	15	1.36	21	1.64	21	0.80	21	0.38
<u>Southeastern Region</u>												
Carbon	18	0.47	--	--	--	--	21	0.55	4	0.09	--	--
Emery	22	0.83	11	0.31	19	0.63	17	0.29	9	0.29	23	1.80
Grand	--	--	17	0.33	--	--	--	--	--	--	--	--
San Juan	--	0.00	--	--	--	--	--	--	38	1.00	--	--
REGIONAL TOTALS	21	0.75	12	0.31	19	0.63	20	0.48	9	0.24	23	1.80
STATE TOTALS	22	0.84	20	0.90	17	0.71	20	0.85	19	0.58	13	0.44

MIGRATORY UPLAND GAME BIRDS

SUMMARY



Mourning Doves

The breeding density index decreased significantly in 1985 and remained below average.

Harvest statistics derived from the questionnaire showed decreased hunter pressure and harvest compared to 1984. However, hunter success increased 2 percent.

Field bag checks also indicated a decrease in harvest but slight increase in hunter success supporting the results of the questionnaire survey.

Division personnel collected 3,512 wings for aging during 1985. Aging of wings indicated juvenile per 100 adult ratio decreased to 114 compared to 131 in 1984, and the 18-year average of 115. Significantly, more harvested juvenile birds were hatched earlier than in 1984, but about equal to the long-term average.

Band-tailed Pigeons

No band-tailed pigeons were banded in Utah in 1985. Banding of band-tailed pigeons was discontinued in 1979, as a result of recommendations by the Four-Corners Band-tailed Pigeon Study Committee.

Hunter participation and harvest during the 1985 season is unknown because data was unavailable.



MOURNING DOVE

Call Count Survey

Results of the 1985 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 1985 survey to 1984 and the average for the period 1964-1984:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Average doves heard per route	8.0	-38	-41
Average calls heard per route	32.2	-45	-44
Average doves seen per route	10.5	-51	-29

Coo count data indicated decreased breeding activity in late May compared to 1984 and dropped to 41 percent below the long-term average.

Harvest

Hunter Questionnaire

Information obtained from the hunter questionnaire for 1985 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 1985 compared to 1984 and the 10-year (1975-84) average:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Mourning dove hunters	28,183	-8	-12
Mourning dove harvest	256,045	-9	-20
Hunter-days afield	96,507	-11	-11
Mourning doves per hunter-day	2.65	+2	-10
Mourning doves hunter	9.09	-2	-9

The Division predicted one week before the season 30,000 hunters and 275,000 harvest. A significant decrease in dove hunter success was predicted due to a 38 percent decline in spring dove call count index. However, hunter success increased two percent, although total harvest decreased slightly compared to 1984. Numbers of dove hunters, hunter-days afield and doves per hunter-day remained below the 10 year average.

Long-term harvest trends are depicted in Figure 2.

Accumulated annual precipitation was well above normal by September 1. Recurring thunderstorms produced excellent forage and cover conditions for doves.

Field Bag Checks

A summary of field bag check data for 1985 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1985 survey compared to 1984 and the average (1967-84) follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	1,792	+2	-1
Total hours hunted	6,078	-26	-5
Doves per hunter (complete hunts)	3.42	-10	-7
Doves bagged per 100 hours	95	+19	+2
Average hours per hunter-day (complete hunts)	3.9	-9	+3
Hours hunted per dove bagged	1.1	-15	0

September 2, 1985 was the Labor Day holiday so more hunters had an excellent opportunity to hunt. However, rain and scattered showers were common statewide on the opening day and affected the hunting. Field bag checks indicated a decrease in hunter success. This confirms the questionnaire results which also indicated a slight increase in hunter success. The total number of hunters checked was up 2 percent from 1984. Dove hunters spent less time afield per hunter-day than in 1984, and 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 1976 through 1985 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region since 1976 are shown in Table 11. Hatching dates for immature doves harvested in Utah in 1985 are shown in Table 12.

Following is a comparison of data collected in 1985 to 1984 and long-term averages (1966-84):

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Sample size	3,512	-10	+6
Immatures/100 adults	114	-13	-1
Percent of immatures hatched on: (N. Region)			
August 3 or later	38.7	-10	+1
July 25 or later	80.7	-12	0
Before July 25	19.3	+127	-1

Fewer wings were collected for aging during the 1985 season compared to 1984. The 114 immatures per 100 adults indicated an average hatch compared to the previous 19-year average. Wing analysis indicated significantly earlier hatching for 1985 compared with 1984 but about normal for the long-term average.

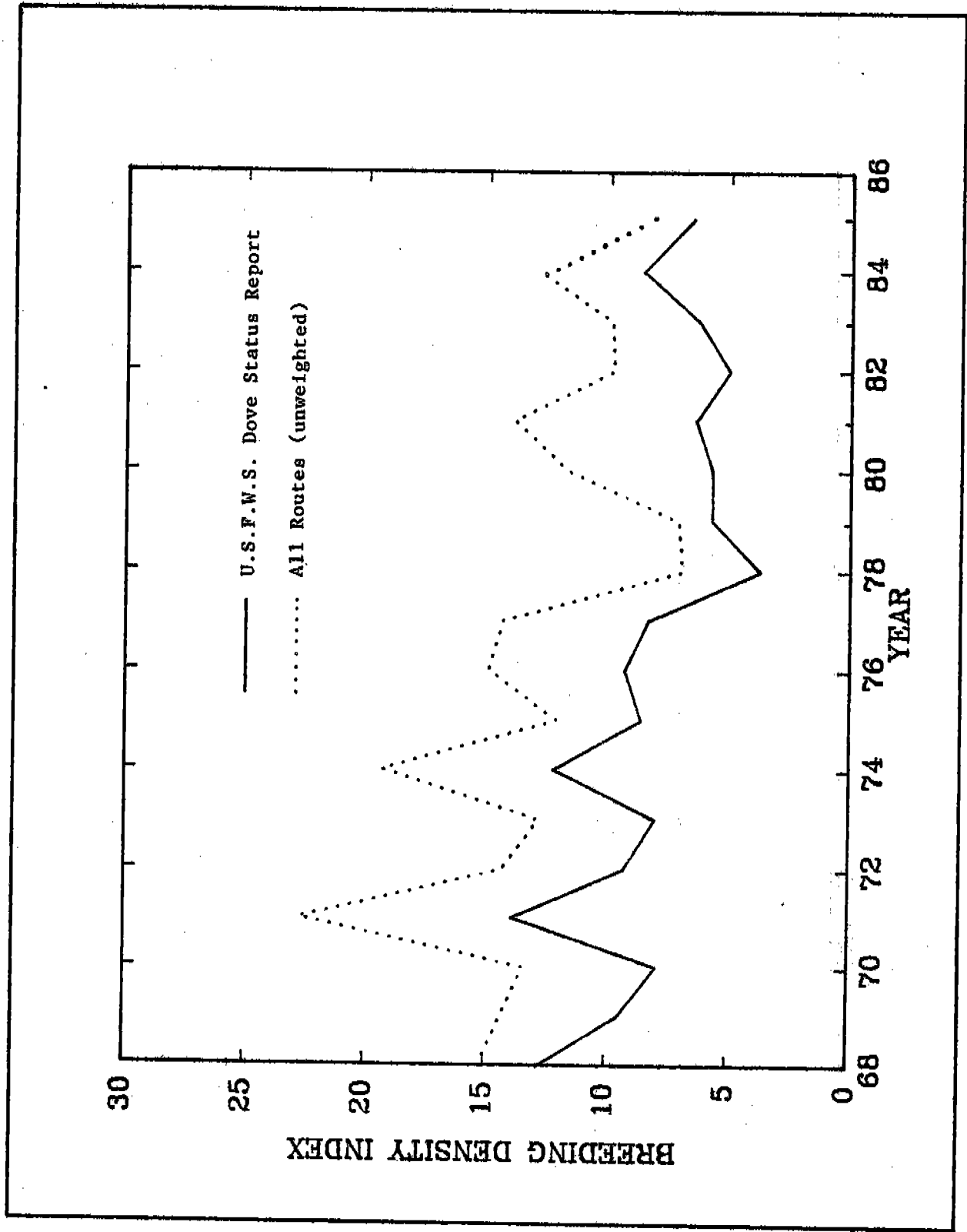


Figure 1. Mourning dove breeding density index trend.

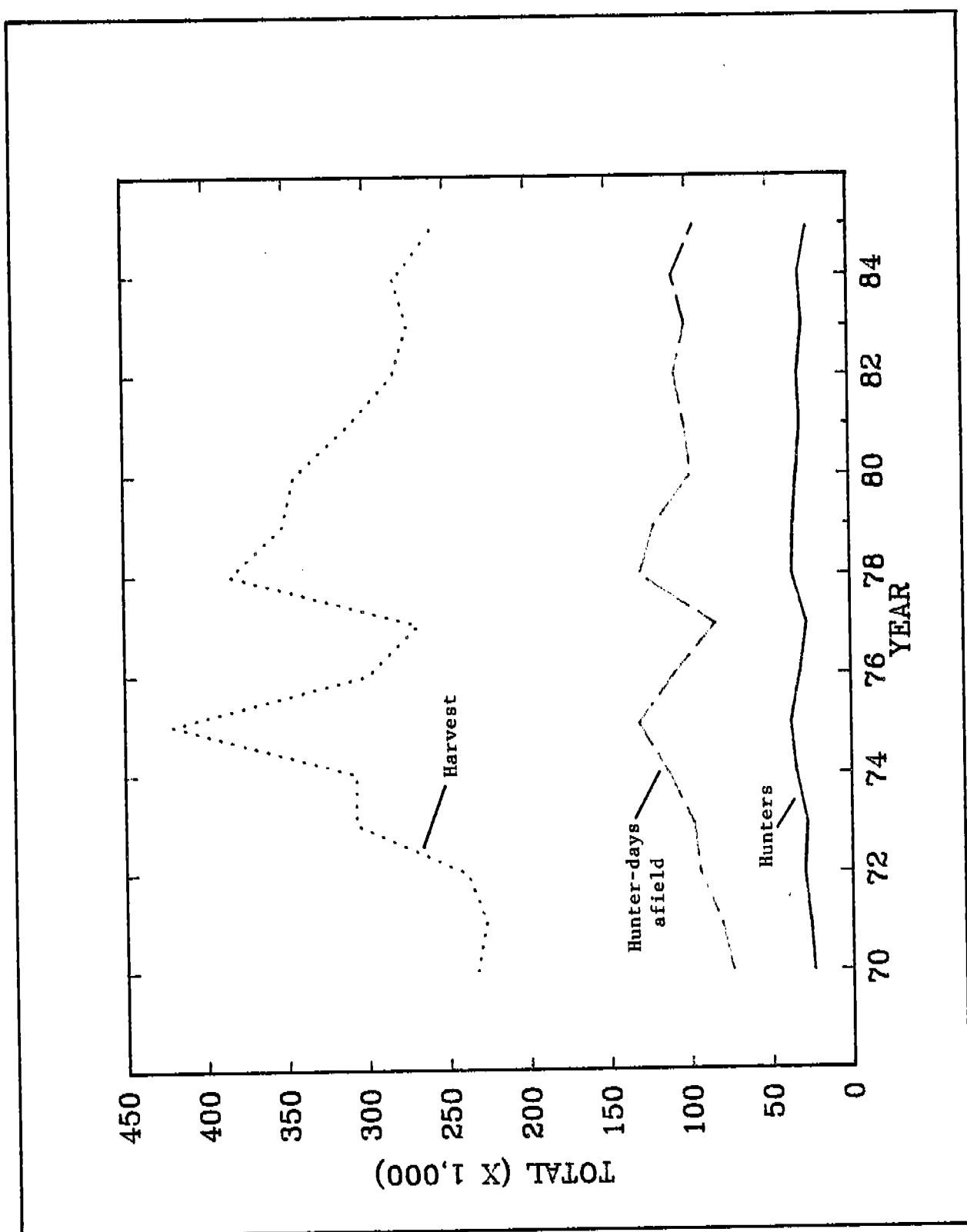


Figure 2. Statewide trends of mourning dove harvest statistics.

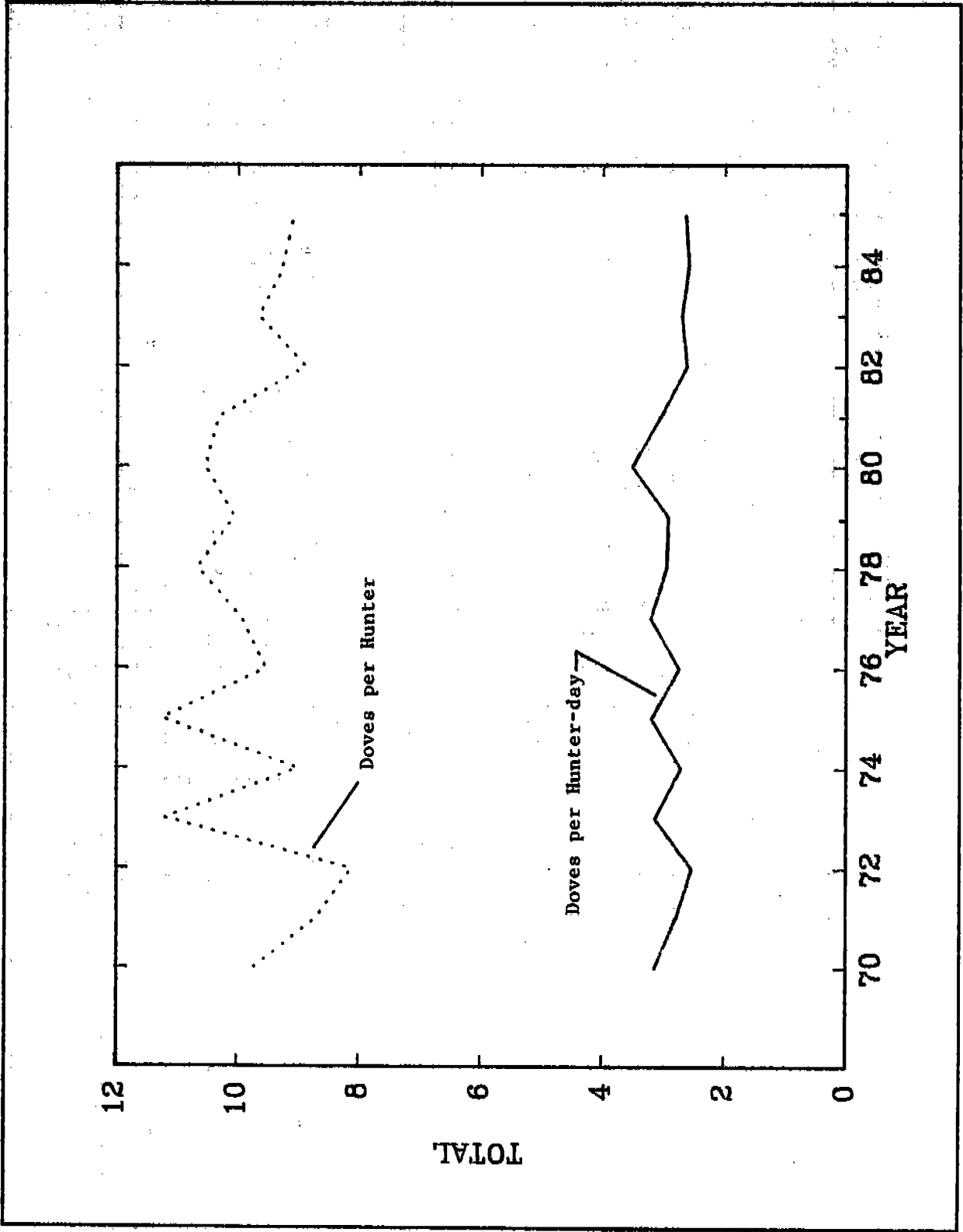


Figure 3. Statewide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call-count survey for 1985.

Region and County	Route Number	Total Doves Heard Per Route	Total Calls Heard Per Route	Total Doves Seen Per Route
<u>Northern Region</u>				
Summit	R1020	4	13	3
Box Elder	R1500	0	0	12
<u>REGIONAL TOTALS</u>		4	13	15
<u>Central Region</u>				
Juab	R2830	20	77	8
<u>REGIONAL TOTALS</u>		20	77	8
<u>Southern Region</u>				
Sevier-Sanpete	R0370	4	5	21
Wayne-Sevier	R0660	3	44	0
Garfield	R1090	3	10	0
Millard	R3640	2	2	7
Beaver	R3820	6	29	11
Iron	R4000	41	135	0
Washington	R4310	0	0	5
<u>REGIONAL TOTALS</u>		53	225	44
<u>Northeastern Region</u>				
Duchesne	R0080	8	24	0
Uintah	* R0220	5	8	25
<u>REGIONAL TOTALS</u>		13	32	25
<u>Southeastern Region</u>				
Emery	R0540	3	10	0
San Juan	R1171	25	123	65
San Juan	* R1450	2	3	1
<u>REGIONAL TOTALS</u>		30	136	66
<u>STATE TOTALS</u>		120	483	158
<u>STATE AVERAGE</u>		8.0	32.2	10.5
<u>PERCENT CHANGE</u> (from previous year)		-37.9	-45.1	-50.7

*New route location

Table 2. Regional and county summary of mourning dove breeding population trend as indicated by the number of doves heard per route during random call count surveys, 1974-85.

Region and County	Route Number	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region													
Summit	R1020	3	3	11	10	5	6	5	4	5	--	1	4
Box Elder	R1900	3	5	1	4	2	9	4	8	--	1	0	0
REGIONAL TOTALS		6	8	12	14	7	15	9	12	5	1	1	4
Central Region													
Juab	R2830	16	13	28	25	31	15	31	22	9	25	19	20
REGIONAL TOTALS		16	13	28	25	31	15	31	22	9	25	19	20
Southern Region													
Sevier-Sanpete	R0370	0	0	0	2	0	0	3	0	0	3	5	4
Wayne-Sevier	R0660	16	7	5	8	1	2	5	14	4	--	17	3
Garfield	R1090	0	0	3	1	0	0	0	9	2	3	15	3
Millard	R3640	22	21	6	29	8	4	2	10	9	5	14	2
Beaver	R3820	24	0	0	0	0	5	9	7	13	3	6	6
Iron	R4000	103	42	45	27	12	14	40	36	21	19	31	41
Washington	R4310	32	37	19	15	1	4	3	6	0	14	1	0
REGIONAL TOTALS		197	107	78	82	22	29	62	82	49	47	89	53
Northeastern Region													
Duchesne	R0080	14	9	11	14	2	2	1	13	7	0	1	8
Uintah	R0220	12	7	27	7	4	--	49	19	1	9	10	5
REGIONAL TOTALS		26	16	38	21	6	2	50	32	8	9	11	13
Southeastern Region													
Emery	R0540	4	6	14	4	10	9	7	22	7	11	10	3
San Juan	R1170	41	32	51	67	24	28	14	38	26	30	57	25
San Juan	R1450	*	*	2	1	3	1	3	0	24	5	7	2
REGIONAL TOTALS		45	38	67	72	37	38	24	60	57	46	74	30
STATE TOTALS		290	182	223	214	103	99	176	208	128	128	194	120
STATE AVERAGES		19.3	12.1	14.9	14.3	6.9	7.1	11.7	13.9	9.8	9.9	12.9	8.0
PERCENT CHANGE (from previous year)		+51	-37	+23	-4	-52	+3	+65	+18	-38	0	+30	-38

*Automatic zero.

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1984.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	121	6,450	14,037	2.18	6.68	5.48
Cache	70	4,222	9,858	2.34	4.37	3.85
Davis	65	4,865	7,458	1.53	5.04	2.91
Morgan	19	1,135	1,950	1.72	1.18	0.76
Rich	7	621	1,414	2.28	0.64	0.55
Summit	8	1,114	2,143	1.92	1.15	0.84
Weber	82	6,429	10,780	1.68	6.66	4.21
REGIONAL TOTALS	372	24,839	47,642	1.92	25.74	18.61
Central Region						
Juab	127	5,443	28,097	5.16	5.64	10.97
Salt Lake	103	7,479	14,316	1.91	7.75	5.59
Sanpete	57	3,857	10,437	2.71	4.00	4.08
Tooele	123	7,458	18,988	2.55	7.73	7.42
Utah	286	18,217	45,456	2.50	18.88	17.75
Wasatch	13	1,671	2,507	1.50	1.73	0.98
REGIONAL TOTALS	709	44,128	119,803	2.71	45.73	46.79
Southern Region						
Beaver	16	1,157	3,964	3.43	1.20	1.55
Garfield	4	107	64	0.60	0.11	0.02
Iron	36	2,078	10,372	4.99	2.15	4.05
Kane	4	278	707	2.54	0.29	0.28
Millard	100	6,108	26,253	4.30	6.33	10.25
Piute	7	900	1,435	1.60	0.93	0.56
Sevier	46	3,557	8,294	2.33	3.69	3.24
Washington	31	1,971	6,258	3.17	2.04	2.44
Wayne	9	364	900	2.47	0.38	0.35
REGIONAL TOTALS	253	16,523	58,251	3.53	17.12	22.75
Northeastern Region						
Daggett	3	64	0	0.00	0.07	0.00
Duchesne	25	1,457	3,643	2.50	1.51	1.42
Uintah	42	2,979	7,115	2.39	3.09	2.78
REGIONAL TOTALS	70	4,500	10,758	2.39	4.66	4.20
Southeastern Region						
Carbon	37	2,721	7,501	2.76	2.82	2.93
Emery	41	2,614	8,572	3.28	2.71	3.35
Grand	7	342	685	2.00	0.35	0.27
San Juan	11	835	2,828	3.38	0.87	1.10
REGIONAL TOTALS	96	6,515	19,588	3.01	6.75	7.65
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	1,500	96,507	256,045	2.65	100	100

*Total hunter trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region								
Box Elder	3.60	3.76	4.97	3.04	3.74	3.50	3.19	2.18
Cache	1.98	2.47	2.77	2.83	2.16	2.48	2.05	2.34
Davis	1.49	1.34	1.79	1.59	1.52	1.32	1.66	1.53
Morgan	2.10	3.14	2.91	2.73	4.78	2.65	1.91	1.72
Rich	4.19	1.71	2.00	3.00	1.57	3.08	6.69	2.28
Summit	1.86	3.36	4.71	3.19	2.34	2.08	3.89	1.92
Weber	1.66	1.91	2.29	2.18	1.93	1.81	1.55	1.68
REGIONAL TOTALS	2.38	2.53	3.31	2.57	2.50	2.43	2.27	1.92
Central Region								
Juab	4.46	4.38	4.70	3.82	3.64	5.35	4.44	5.16
Salt Lake	2.13	2.28	2.33	2.65	1.89	2.14	1.95	1.91
Sanpete	2.73	2.61	3.64	3.23	2.48	3.64	2.98	2.71
Tooele	3.19	2.53	3.43	2.30	2.54	2.74	2.90	2.55
Utah	2.39	2.22	3.08	2.96	2.10	2.10	2.21	2.50
Wasatch	2.89	2.59	3.45	1.46	1.39	0.83	2.20	1.50
REGIONAL TOTALS	2.73	2.62	3.23	2.86	2.33	2.64	2.60	2.71
Southern Region								
Beaver	5.67	4.94	5.03	4.86	4.78	5.62	3.45	3.43
Garfield	1.70	4.56	5.17	4.02	4.15	3.07	1.80	0.60
Iron	4.48	4.52	5.02	4.42	3.24	3.60	3.07	4.99
Kane	5.08	4.17	5.86	4.71	2.50	4.38	5.76	2.54
Millard	5.13	4.92	5.43	4.11	4.49	4.63	4.25	4.30
Piute	2.60	2.18	3.90	4.05	0.63	1.65	1.94	1.60
Sevier	2.52	2.91	3.63	2.30	2.51	2.73	2.11	2.33
Washington	3.90	3.25	3.73	4.19	2.92	4.34	2.62	3.17
Wayne	3.64	6.04	2.93	3.76	2.56	2.50	2.00	2.47
REGIONAL TOTALS	3.88	4.05	4.58	3.85	3.49	3.80	3.22	3.53
Northeastern Region								
Daggett	3.40	2.79	1.50	1.00	2.33	1.34	1.48	0.00
Duchesne	3.43	3.13	3.07	3.76	3.09	2.79	1.83	2.50
Uintah	2.70	2.96	3.44	1.81	2.51	2.33	2.61	2.39
REGIONAL TOTALS	3.01	3.01	3.22	2.43	2.74	2.39	2.20	2.39
Southeastern Region								
Carbon	2.85	3.14	3.88	3.42	3.13	2.06	2.13	2.76
Emery	3.00	2.54	3.04	3.62	2.37	2.00	2.24	3.28
Grand	4.00	3.68	4.66	4.12	2.99	2.85	2.46	2.00
San Juan	4.09	3.97	3.80	3.75	3.68	3.70	3.51	3.38
REGIONAL TOTALS	3.40	3.09	3.69	3.75	2.99	2.41	2.41	3.01
Unknown Counties	3.46	5.09	5.00	0.64	1.56	7.20	0.00	0.00
Mixed Counties	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	2.95	2.92	3.52	3.05	2.62	2.71	2.59	2.65

Table 5. Percentage distribution of mourning dove harvest by region and county, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>								
Box Elder	8.10	10.01	10.46	8.89	10.36	11.40	9.96	5.48
Cache	2.71	3.00	2.12	2.77	2.85	4.85	4.71	3.85
Davis	1.61	2.39	1.38	1.90	2.73	2.71	3.35	2.91
Morgan	0.65	1.03	0.96	1.05	1.27	0.64	0.30	0.76
Rich	0.59	0.22	0.27	0.23	0.26	0.54	0.77	0.55
Summit	0.36	0.19	0.16	0.46	0.48	0.12	0.25	0.84
Weber	3.07	3.78	3.72	3.37	5.67	4.31	3.57	4.21
REGIONAL TOTALS	17.08	20.63	19.07	18.66	23.62	24.56	22.92	18.61
<u>Central Region</u>								
Juab	8.88	9.55	9.25	6.99	7.97	8.93	9.42	10.97
Salt Lake	7.16	9.39	7.89	7.09	7.12	7.34	7.90	5.59
Sanpete	3.87	4.34	3.94	2.59	2.65	3.44	3.49	4.08
Tooele	6.18	5.57	7.55	5.31	8.27	9.46	8.67	7.42
Utah	16.20	12.73	14.92	17.37	15.20	14.14	13.94	17.75
Wasatch	0.66	0.63	0.80	0.78	0.58	0.24	0.86	0.98
REGIONAL TOTALS	42.95	42.22	44.35	40.13	41.79	43.56	44.27	46.79
<u>Southern Region</u>								
Beaver	1.68	1.62	1.69	1.70	2.60	1.65	2.31	1.55
Garfield	0.65	1.11	1.07	1.54	1.17	0.90	0.26	0.02
Iron	4.20	2.60	2.60	4.20	2.64	2.71	1.68	4.05
Kane	0.98	0.80	0.40	1.36	0.11	0.84	1.41	0.28
Millard	9.28	10.84	8.55	7.73	6.80	6.17	10.20	10.25
Piute	0.81	0.45	0.60	1.03	0.03	0.41	0.45	0.56
Sevier	4.26	5.23	3.63	2.91	3.37	3.23	3.98	3.24
Washington	2.91	2.45	3.39	3.16	3.25	3.70	2.37	2.44
Wayne	0.86	1.25	0.22	0.64	0.35	0.12	0.11	0.35
REGIONAL TOTALS	25.63	26.36	22.15	24.26	20.42	19.74	22.77	22.75
<u>Northeastern Region</u>								
Daggett	0.09	0.22	0.04	0.12	0.15	0.21	0.42	0.00
Duchesne	2.31	1.66	2.07	2.40	2.30	1.53	0.99	1.42
Uintah	2.61	2.79	2.29	1.99	2.52	2.49	2.66	2.78
REGIONAL TOTALS	5.01	4.67	4.41	4.50	4.97	4.24	4.07	4.20
<u>Southeastern Region</u>								
Carbon	1.75	1.96	2.82	2.44	3.94	2.28	2.39	2.93
Emery	2.38	1.92	2.85	3.32	2.00	2.37	1.45	3.35
Grand	2.32	0.90	1.98	3.90	1.20	0.99	0.88	0.27
San Juan	1.90	1.10	2.30	2.75	1.90	2.08	1.24	1.10
REGIONAL TOTALS	8.35	5.89	9.95	12.40	9.04	7.73	5.97	7.65
Unknown counties	0.94	0.23	0.07	0.05	0.15	0.18	0.00	0.00
Mixed counties	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1978-85.

Region and County	Year							
	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region								
Box Elder	6.63	7.76	7.40	8.91	7.25	8.84	8.10	6.68
Cache	4.03	3.54	2.69	2.98	3.46	5.29	5.97	4.37
Davis	3.18	5.21	2.71	3.65	4.69	5.57	5.24	5.04
Morgan	0.91	0.95	1.16	1.17	0.70	0.65	0.41	1.18
Rich	0.42	0.37	0.49	0.23	0.43	0.48	0.30	0.64
Summit	0.57	0.17	0.12	0.44	0.54	0.16	0.17	1.15
Weber	5.44	5.76	5.72	4.72	7.71	6.45	5.97	6.66
REGIONAL TOTALS	21.17	23.77	20.30	22.10	24.78	27.45	26.16	25.74
Central Region								
Juab	5.87	6.36	6.93	5.57	5.73	4.53	5.50	5.64
Salt Lake	9.92	12.00	11.94	8.16	9.90	9.30	10.51	7.75
Sanpete	4.18	4.86	3.81	2.44	2.80	2.57	3.04	4.00
Tooele	5.70	6.42	7.75	7.05	8.52	9.39	7.76	7.73
Utah	20.00	16.70	17.05	17.90	18.92	18.28	16.38	18.88
Wasatch	0.68	0.71	0.82	1.63	1.08	0.78	1.01	1.73
REGIONAL TOTALS	46.36	47.04	48.29	42.76	46.95	44.85	44.21	45.73
Southern Region								
Beaver	0.88	0.95	1.18	1.06	1.48	0.80	1.74	1.20
Garfield	1.12	0.71	0.73	1.17	0.74	0.80	0.37	0.11
Iron	2.77	1.68	1.82	2.90	2.13	2.05	1.42	2.15
Kane	0.57	0.56	0.24	0.88	0.11	0.52	0.63	0.29
Millard	5.34	6.43	5.54	5.74	3.97	3.62	6.23	6.33
Piute	0.92	0.60	0.54	0.77	0.11	0.68	0.60	0.93
Sevier	4.98	5.24	3.53	3.86	3.51	3.20	4.89	3.69
Washington	2.20	2.20	3.20	2.30	2.92	2.31	2.35	2.04
Wayne	0.69	0.60	0.26	0.52	0.35	0.13	0.15	0.38
REGIONAL TOTALS	19.46	18.98	17.05	19.20	15.34	14.11	18.38	17.12
Northeastern Region								
Daggett	0.08	0.23	0.1	0.35	0.17	0.42	0.75	0.07
Duchesne	1.98	1.55	2.38	1.94	1.95	1.49	1.40	1.51
Uintah	2.84	2.74	2.35	3.34	2.63	2.90	2.65	3.09
REGIONAL TOTALS	4.90	4.52	4.83	5.63	4.75	4.81	4.80	4.66
Southeastern Region								
Carbon	1.81	1.82	2.56	2.17	3.30	3.00	2.91	2.82
Emery	2.34	2.21	3.30	2.80	2.21	3.23	1.68	2.71
Grand	1.71	0.71	1.50	2.88	1.05	0.94	0.93	0.35
San Juan	1.37	0.81	2.14	2.23	1.35	0.53	0.91	0.87
REGIONAL TOTALS	7.23	5.56	9.49	10.08	7.91	8.71	6.44	6.75
Unknown counties	0.80	0.13	0.05	0.23	0.26	0.07	0.02	0.00
Mixed counties	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 7. Statewide summary of mourning dove harvest statistics, 1951-85.

Year	Total Hunters	Total Harvest	Hunters-days Afield	Doves Per Hunter-day	Doves Per Hunter
1951	3,007	20,448	4,455	4.59	6.80
1952	6,420	49,498	10,784	4.59	7.71
1953	9,887	75,636	17,797	4.25	7.65
1954	9,901	75,941	19,724	3.85	7.67
1955	9,653	79,444	19,282	4.12	8.23
1956	10,744	95,729	20,411	4.69	8.91
1957	11,298*	86,769*	18,620*	4.66	7.68
1958	11,853	85,934	21,591	3.98	7.25
1959	12,142	110,856	24,911	4.45	9.13
1960	12,440	108,477	25,766	4.21	8.72
1961	15,192	128,001	33,434	3.89	8.42
1962	14,663	144,826	34,281	4.23	9.89
1963	18,258	162,769	40,490	4.02	8.91
1964	19,829	193,538	51,671	3.75	9.76
1965	18,710	164,087	48,835	3.36	8.69
1966	20,594	212,696	60,608	3.51	10.33
1967	25,161	263,949	74,171	3.56	10.49
1968	25,105	207,922	70,186	2.96	8.28
1969	29,131	279,311	90,965	3.07	9.59
1970	23,908	232,469	73,984	3.14	9.72
1971	26,064	226,645	81,271	2.79	8.70
1972	29,341	238,354	94,046	2.53	8.12
1973	27,435	307,062	97,788	3.14	11.19
1974	34,021	306,076	112,967	2.71	9.00
1975	37,378	420,308	131,312	3.20	11.24
1976	31,293	298,505	108,780	2.74	9.54
1977	26,905	267,487	83,218	3.21	9.94
1978	35,985	383,696	130,173	2.95	10.66
1979	34,903	351,161	120,459	2.92	10.06
1980	32,627	343,851	97,644	3.52	10.54
1981	30,060	310,068	101,728	3.05	10.31
1982**	31,756	282,188	107,728	2.62	8.89
1983	28,258	272,979	100,568	2.71	9.66
1984	30,573	282,307	108,793	2.59	9.23
1985	28,183	256,045	96,507	2.65	9.09
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TOTALS					
(1951-85)	772,678	7,325,017	2,334,934	(122.21)	(320.00)
(1975-84)	319,738	3,212,535	1,090,389	(29.51)	(100.07)
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AVERAGES					
(1951-85)	22,077	209,286	66,712	3.49	9.14
(1975-84)	31,974	321,254	109,040	2.95	10.01

*Estimated.

**Bag Limit increased to 15.

Table 8. Mourning dove field bag check summary, 1985.

Region and County	ALL HUNTS					COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr	Total Complete Hunts	Total Birds/100 Hr	
Northern Region											
Box Elder	86	215	827	410	50	63	159	624	309	50	1.94
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	86	215	827	410	50	63	159	624	309	50	1.94
Central Region											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	29	64	211	105	50	5	12	60	24	40	2.00
Wasatch	7	19	46	37	80	2	7	31	7	23	1.00
REGIONAL TOTALS	36	83	257	142	55	7	19	91	31	34	1.63
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	3	4	16	15	94	--	--	--	--	--	--
Iron	5	8	13	90	692	3	5	10	72	720	14.40
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	19	38	231	209	905	5	10	20	60	300	6.00
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	34	85	256	375	1,465	1	2	4	3	75	1.50
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	3	5	10	11	110	--	--	--	--	--	--
REGIONAL TOTALS	64	140	526	700	133	9	17	34	135	397	7.94
Northeastern Region											
Daggett	1	2	3	0	0	--	--	--	--	--	--
Duchesne	2	2	1	22	2,200	2	2	1	22	2,200	11.00
Uintah	11	22	46	104	227	1	1	3	15	500	15.00
REGIONAL TOTALS	14	26	50	126	252	3	3	4	37	925	12.33
Southeastern Region											
Carbon	9	24	82	99	121	2	3	30	31	103	10.33
Emery	18	49	96	173	181	7	20	39	70	182	3.50
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	5	11	21	19	90	1	2	4	8	200	4.00
REGIONAL TOTALS	32	84	199	291	32	10	25	73	109	150	4.36
LEHI CHECK STATION	344	831	2,602	1,906	73	276	667	2,550	1,581	62	2.37
NEPHI CHECK STATION*	153	413	1,617	2,201	136	78	209	935	1,561	167	7.47
STATE TOTALS	729	1,792	6,078	5,776	95	446	1,099	4,311	3,763	87	3.42

*Includes Millard and Juab counties.

Table 9. Mourning dove hunter success trend determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter	Doves/ 100 Hr Hunter
<u>Northern Region</u>												
Box Elder	131	5.98	135	5.52	109	4.80	128	5.61	101	4.35	50	1.94
Cache	163	5.33	--	--	--	--	33	1.67	--	--	--	--
Davis	81	2.74	59	1.70	122	3.30	75	2.00	116	2.42	--	--
Morgan	--	--	--	--	--	--	100	1.00	--	--	--	--
Rich	--	--	--	--	406	14.60	--	--	156	6.25	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	317	9.50	214	3.00	182	6.20	--	--
REGIONAL TOTALS	129	5.72	128	4.99	120	4.99	126	5.12	103	4.36	50	1.94
<u>Central Region</u>												
Juab	68	4.30	--	--	--	--	--	--	--	--	--	--
Salt Lake	333	3.33	--	--	--	--	61	1.40	--	--	--	--
Sanpete	20	0.56	200	1.00	37	0.92	--	--	--	--	--	--
Tooele	241	8.09	139	0.93	--	2.77*	133	3.33	--	--	--	--
Utah	53	1.80	--	--	--	--	172	7.86	62	1.33	40	2.00
Wasatch	--	--	--	--	--	--	0	0.00	--	--	23	1.00
REGIONAL TOTALS	75	3.84	63	0.96	37	0.92	122	3.90	62	1.33	34	1.63
<u>Southern Region</u>												
Beaver	224	9.25	78	2.89	113	5.42	--	--	88	8.36	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	720	14.00
Iron	500	10.00	--	--	--	--	--	--	--	--	--	--
Kane	180	5.65	--	--	--	--	35	6.13	--	--	--	--
Millard	172	6.20	152	5.96	--	3.75*	113	8.03	101	4.85	300	6.00
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	1.88*	--	1.83*	--	2.15*	75	1.50
Washington	343	6.86	--	--	--	--	236	4.71	--	--	--	--
Wayne	--	--	150	2.77	30	1.13	--	--	--	--	--	--
REGIONAL TOTALS	203	6.41	125	4.45	97	4.41	148	6.80	94	6.09	397	7.94
<u>Northeastern Region</u>												
Daggett	59	1.11	226	5.20	--	--	--	--	--	--	--	--
Duchesne	100	1.00	--	--	66	2.00	67	1.60	135	3.45	2,300	11.00
Uintah	124	2.38	166	2.92	400	4.00	146	2.11	50	0.94	500	15.00
REGIONAL TOTALS	87	1.61	198	3.95	200	3.33	108	1.93	90	1.93	925	12.33
<u>Southeastern Region</u>												
Carbon	177	3.65	1,000	10.00	230	6.68	183	2.20	750	9.38	103	10.33
Emery	233	3.50	664	9.13	205	4.79	193	5.80	428	15.00	182	3.50
Grand	--	--	--	--	32	10.50	--	--	--	--	--	--
San Juan	261	5.64	115	2.50	--	--	566	11.33	188	4.45	200	4.00
REGIONAL TOTALS	215	4.43	415	6.75	153	5.90	231	5.74	358	7.33	150	4.36
NEPHI CHECK STATION	37	1.68	116	5.62	91	3.94	155	7.40	56	2.61	167	7.47
LEHI CHECK STATION	50	2.39	95	3.97	185	3.16	83	5.14	135	6.50	62	2.37
STATE TOTALS	64	2.94	107	4.34	125	3.98	117	5.76	87	3.80	87	3.42

*Doves per hunter index based on all hunts.

Table 10. Age composition (Immatures/100 Adults) of mourning doves harvested, 1976-85.

Region and County	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1975-84 Avg.
	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)	I/100A (n)
Northern Region											
Box Elder	103 (1870)	216 (1296)	88 (999)	84 (1271)	121 (1454)	107 (700)	124 (716)	143 (515)	135 (1172)	146 (137)	
Cache	114 (15)	0 (2)	--	106 (33)	151 (113)	--	--	67 (5)	--	181 (45)	
Bavis	--	150 (10)	--	71 (65)	169 (43)	--	107 (56)	55 (17)	121 (42)	85 (74)	
Morgan	--	--	--	--	--	--	--	188 (46)	--	--	
Rich	--	--	--	92 (25)	--	--	4,200 (43)	--	53 (23)	600 (7)	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	117 (13)	233 (20)	--	190 (29)	--	--	--	--	--	--	
REGIONAL TOTALS	103 (1898)	216 (1328)	88 (992)	86 (1423)	124 (1610)	107 (700)	135 (815)	143 (617)	133 (1237)	138 (443)	125 (1373)
Central Region											
Juab	240 (136)	283 (199)	63 (75)	--	--	--	--	--	--	--	
Salt Lake	147 (42)	275 (120)	--	--	--	--	--	--	--	--	
Sanpete	222 (87)	139 (74)	--	--	--	--	--	--	--	--	
Tooele	156 (115)	195 (177)	60 (262)	84 (103)	118 (96)	78 (71)	80 (137)	--	--	--	
Utah	170 (278)	113 (286)	61 (1814)	80 (1823)	45 (29)	--	100 (32)	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	184 (658)	177 (856)	61 (2151)	81 (1926)	95 (125)	78 (71)	89 (169)	--	--	--	112 (892)
Southern Region											
Beaver	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	320 (30)	--	--	--	--	--	--	--	--	--	--
Northeastern Region											
Daggett	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region											
Carbon	--	--	--	67 (167)	--	--	160 (138)	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	260 (18)	76 (88)	--	--	--	--	
San Juan	97 (274)	--	--	--	--	50 (84)	--	--	--	--	
REGIONAL TOTALS	97 (274)	--	--	67 (167)	281 (80)	65 (102)	119 (226)	--	--	--	141 (196)
NEPHE CHECK STATION	--	--	87 (2013)	114 (1814)	100 (862)	105 (1067)	62 (754)	108 (1239)	198 (1130)	107 (1678)	110 (1268)
LEHI CHECK STATION	--	--	--	--	98 (1204)	75 (2075)	83 (1075)	84 (1021)	96 (1517)	107 (1391)	87 (1378)
STATE TOTALS	118 (2860)	200 (2184)	75 (5163)	91 (5330)	111 (3881)	87 (4015)	91 (3143)	106 (2877)	131 (3884)	117 (3512)	114 (3800)

Table 11. Percent of harvest by hatching date of immature mourning doves in northern Utah, 1976-85.

Date Hatched	Age* (Days)	PERCENT OF HARVEST BY HATCH DATE													S A M P L E S I Z E									
		1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985			
Aug 3	29	none	42.5	36.4	52.8	45.6	35.6	46.1	32.6	22.8	43.1	44.7	409	329	246	265	316	166	152	77	304	115		
Jul 31	32	1	22.9	27.9	25.3	22.7	26.9	33.6	24.9	21.3	29.4	26.8	220	252	118	132	239	121	116	72	207	69		
Jul 25	38	2	17.9	17.3	12.0	14.3	16.4	14.2	21.7	21.0	19.0	14.0	172	156	56	83	146	51	101	71	134	36		
Jul 18	45	3	7.2	6.7	5.8	8.1	11.6	5.0	7.7	14.8	6.0	3.9	69	60	27	47	103	18	36	50	42	10		
Jul 9	54	4	4.0	4.3	3.0	5.0	5.1	0.6	4.7	9.2	2.1	1.9	38	39	14	29	45	2	22	31	15	5		
Jun 30	63	5	2.0	2.4	0.4	1.5	2.4	--	4.1	6.2	0.4	1.6	19	22	2	9	21	0	19	21	3	4		
Jun 21	72	6	1.0	2.9	0.2	1.7	1.5	--	2.8	2.1	0.0	0.0	10	26	1	10	13	0	13	7	0	0		
Jun 8	85	7	0.9	2.2	--	--	0.3	--	1.3	2.4	--	0.0	9	20	0	0	3	0	6	8	0	0		
May 22	102	8	1.7	--	0.2	0.2	--	0.3	0.2	0.0	--	0.0	16	--	1	1	0	1	1	1	0	0		
Apr 27	127	9	--	--	0.2	0.9	0.2	0.3	--	--	--	0.0	--	--	1	5	2	1	0	0	0	0		
Apr 21	133	10	--	--	--	--	--	--	--	--	--	7.0	--	--	--	0	0	0	0	0	0	18		
			100	100	100	100	100	100	100	100	100	100	962	904	466	581	888	360	466	338	705	257		

*Allen, J. M., 1963.

P = Last primary molted.

Table 12. Percent of harvest by hatching date of immature mourning doves from the various regions and check stations in Utah, 1985.

Date Hatched (Days)	Age* P	PERCENT OF HARVEST BY HATCH DATE										S A M P L E									
		N Region		Nephi CS		Lehi CS		C Region		SE Region		N Region		Nephi CS		Lehi CS		C Region		SE Region	
		Other	Total	Other	Total	Other	Total	Other	Total	Other	Total	Other	Total	Other	Total	Other	Total	Other	Total	Other	Total
Aug 3	29	none	44.7	36.5	43.1	--	--	--	--	--	115	146	91	--	--	237	--	--	--	--	
Jul 31	32	1	26.8	39.3	37.9	--	--	--	--	69	157	80	--	--	237	--	--	--	--	--	
Jul 25	38	2	14.0	16.5	14.7	--	--	--	--	36	66	31	--	--	97	--	--	--	--	--	
Jul 18	45	3	3.9	4.3	2.4	--	--	--	--	10	17	5	--	--	22	--	--	--	--	--	
Jul 9	54	4	1.9	1.0	0.0	--	--	--	--	5	4	0	--	--	4	--	--	--	--	--	
Jun 30	63	5	1.6	1.5	0.0	--	--	--	--	4	6	0	--	--	6	--	--	--	--	--	
Jun 21	72	6	0.0	0.7	0.0	--	--	--	--	0	3	0	--	--	3	--	--	--	--	--	
Jun 8	85	7	0.0	0.0	0.0	--	--	--	--	0	0	0	--	--	0	--	--	--	--	--	
May 22	102	8	0.0	0.0	0.9	--	--	--	--	0	0	2	--	--	2	--	--	--	--	--	
Apr 27	127	9	0.0	0.2	0.5	--	--	--	--	0	1	1	--	--	2	--	--	--	--	--	
Apr 21	133	10	7.0	0.0	0.5	--	--	--	--	18	0	1	--	--	1	--	--	--	--	--	
			100	100	100	100	100	100	100	257	400	211	--	--	611	--	--	--	--	--	

*Allen, J. M., 1963.

P = Last primary molted.

BAND-TAILED PIGEON

Banding

Between 1969 and 1978, 2,649 total pigeons were banded in Utah and 975 recaptured. Results of banding efforts through 1972 indicated a direct recovery rate of 1.4 percent. If expanded, using an assumed 30 percent band reporting rate, an estimated harvest rate of less than 5 percent of the state's pigeon population is indicated. Addition of an estimated 16 percent crippling loss would result in a total kill rate of from 5-10 percent, well within the harvestable surplus.

Harvest

Results of the 1985 band-tailed pigeon harvest are unknown, because no hunter reports were received. Permits were not required, therefore, a questionnaire was not sent to participants. Harvest trends since 1970 are shown in Table 14.

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Band-tailed pigeon hunters	---	---	---
Band-tailed pigeon harvest	---	---	---
Hunter-days afield	---	---	---
Pigeons per hunter-day	---	---	---
Pigeons per hunter	---	---	---

Total hunters, hunter-days afield and total harvest are unknown for 1985, however, it is assumed that a majority of the 1985 harvest again occurred in Iron and Washington counties.

Table 13. Band-tailed pigeon harvest statistics, 1985.

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

*Based on hunter-days.

Table 14. Band-tailed pigeon harvest trend, 1970-85.

Year	Total Hunters Afield	Total Harvest	Hunter-Days Afield	Pigeons Per Hunter-day	Pigeons Per Hunter
1970	34	109	53	2.1	3.2
1971	54	156	110	1.4	2.9
1972	61	211	122	1.7	3.5
1973	25	18	42	0.4	0.7
1974	74	95	141	0.7	1.3
1975	54	116	119	1.0	2.2
1976	54	119	162	0.7	2.2
1977	70	435	225	1.9	6.2
1978	78	264	238	1.1	3.4
1979	62	117	133	0.9	1.9
1980	62	182	175	1.0	2.9
1981	67	101	142	0.7	1.5
1982	51	113	125	0.9	2.2
1983	—	—	—	—	—
1984	—	—	—	—	—
1985	—	—	—	—	—
TOTALS (1970-85)	746	2,036	1,787	1.1	2.7
AVERAGES (1970-84)	57	157	137	1.1	2.8

CHUKAR PARTRIDGE

SUMMARY

The statewide breeding population of chukars decreased in 1985 following another severe winter in northwestern Utah. Late winter and early spring precipitation, critical to successful chukar production, was below average. Below normal cold temperatures in January and February also resulted in an extended period of snow cover limiting exposed winter feed for chukars.

Results of the brood survey indicated that brood production was above average, although breeding populations were down. Favorable nesting conditions and adequate forage were available as a result of accumulated precipitation during November and December. The indicated chukar density increased significantly during 1985, but chukars observed per 100 hours of effort were still 24 percent below average.

Harvest statistics reflected a slight increase in harvest. Likewise, hunter success (chukars per hunter-day) increased 30 percent from 1984. Chukar hunters decreased 19 percent and spent 21 percent less time afield than in 1984. Apparently, good reproduction helped compensate for the winter losses and decreased breeding populations.



Brood Counts

Results of the annual random brood survey for 1985 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 1985 compared to 1984 and the 10-year (1975-84) average:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total chukars observed	385	+70	-57
Young per 100 adults	670	+57	+101
Mean brood size	8.46	+22	+4
Chukars observed per 100 hours	286	+63	-24
Total hours effort	134.5	+5	-36

Harvest data for 1984 indicated breeding populations for 1985 were significantly below statewide average. In addition, adverse winter weather continued to stress the breeding populations for the second consecutive year in northern Utah. Late winter and early spring precipitation (January-April) was below average over the entire state (Figure 2). However, below normal temperatures in January and February were extremely harsh with Utah chukar populations. Significant above average temperatures were recorded in April, May and June. Above normal precipitation occurred in July during the brood rearing period.

Effort on chukar brood counts increased slightly from 1984 but remained far below average.

Brood count sample sizes were again extremely small for all regions. The Central Region counted 8 and the Southeastern Region counted 3 of the state total of 13 broods. Chukar density was 24 percent below the 10-year average but production was up considerably from 1984.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire survey for 1985 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 1985 harvest statistics to 1984 and the 27-year average:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Chukar hunters	7,930	-19	-47
Chukars harvested	20,938	+4	-51
Hunter-days afield	24,346	-21	-42
Chukars per hunter-day	0.86	+30	-9
Chukars per hunter	2.64	+29	-4

Chukar hunters spent 21 percent less time afield but harvested about 4 percent more birds than in 1984. Chukars per hunter-day was above the 1984 level but still 9 percent below the statewide average. The Central Region again had the highest percentage of the harvest (69%) in 1985, and also had the highest percentage of hunter pressure (56%).

Field Bag Check

A summary of field bag check data for 1985 is shown in Table 10. The hunter success trend determined by field bag checks since 1980 is shown in Table 11. Data for the 1985 season compared to 1984 and the (1966-84) average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	580	+544	+17
Total hours hunted	3,342	+1,033	+52
Chukars per hunter (complete hunts)	0.12	-14	-88
Chukars bagged per 100 hours	3	-25	-87
Average hours per hunter-day (complete hunts)	6.0	+50	+33
Hours hunted per chukar bagged (complete hunts)	50.1	+76	+708

Field bag checks indicate hunter success was down 14 percent from 1984 and well below (88%) average. However, these data were significantly influenced by the large sample from the Box Elder County Checking Station where 87% of total hunters were checked. Box Elder county hunters accumulated 92% of total hunter-days afield but harvested only 4 percent of total birds. It can be assumed that many of these Box Elder County hunters were spending much of their time hunting other species particularly sage grouse. All other regions indicated improved hunter success although sample sizes were small. If Box Elder County data was not considered, then, fewer hunters pursued chukars in 1985 and spent less time afield. The hours required to bag a chukar was 48 percent less than average. When Box Elder County data is added, the time required to bag a chukar was 708 percent more than average.

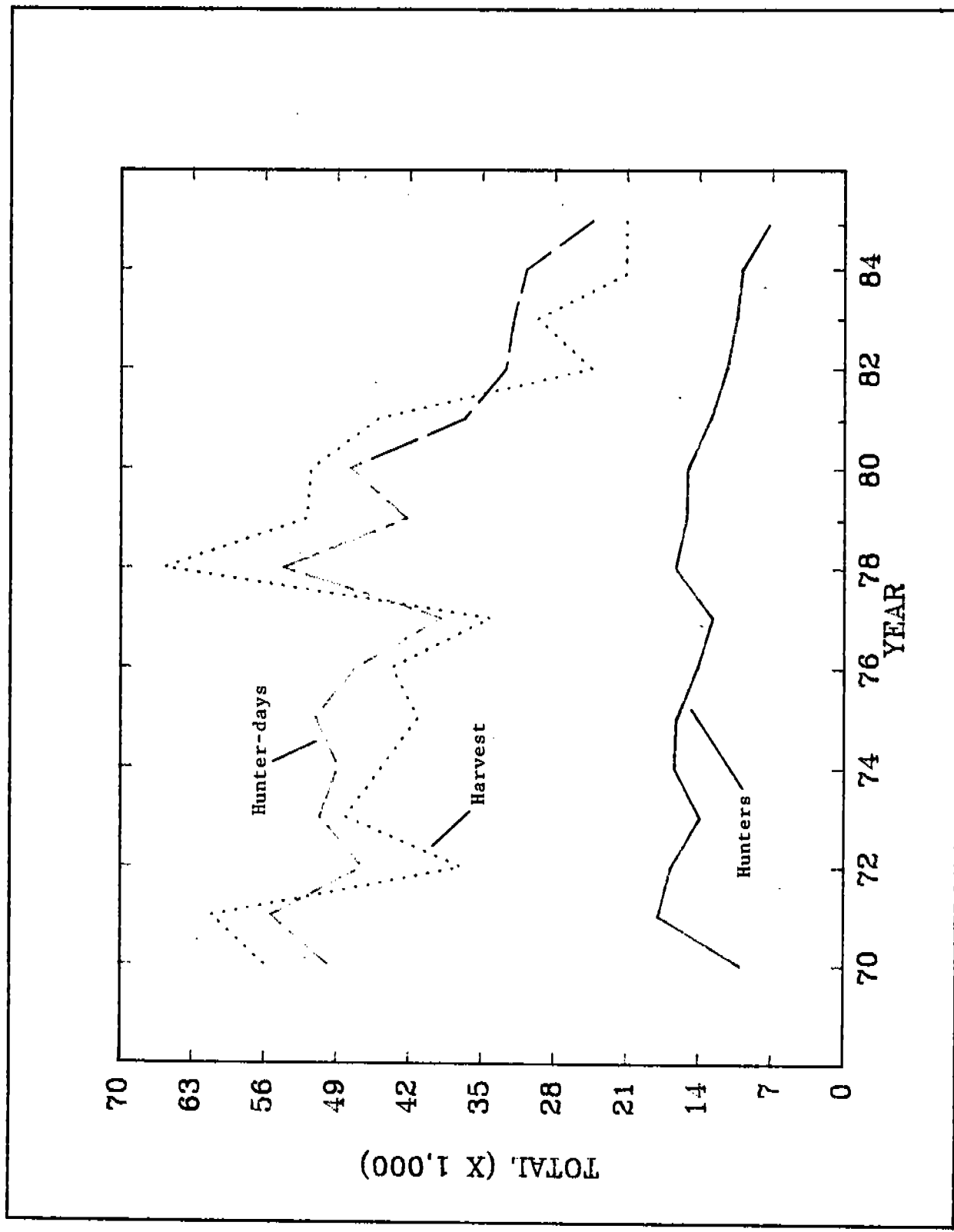


Figure 1. Statewide trends of chukar partridge harvest statistics.

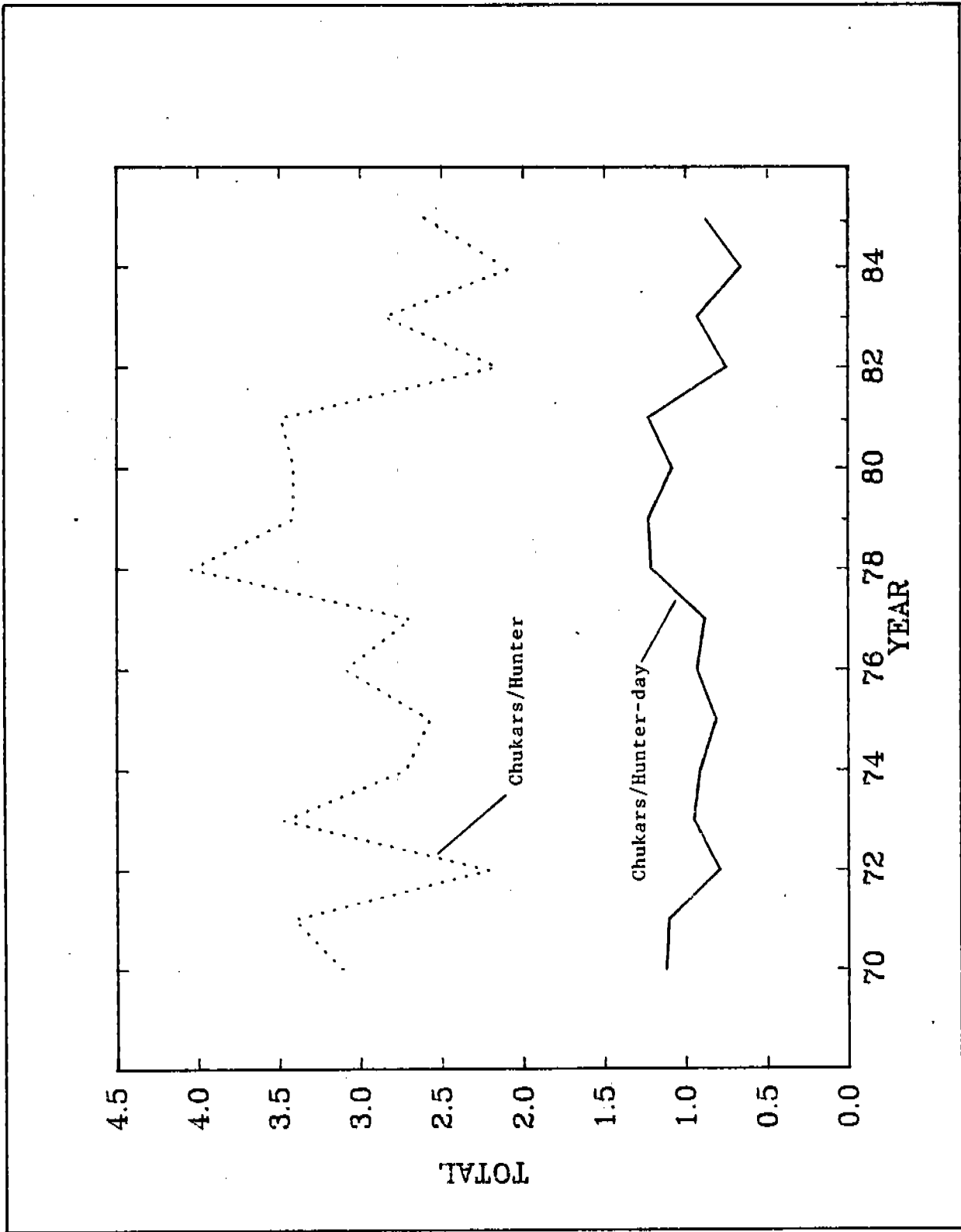


Figure 2. Statewide trends of chukar partridge harvest statistics.

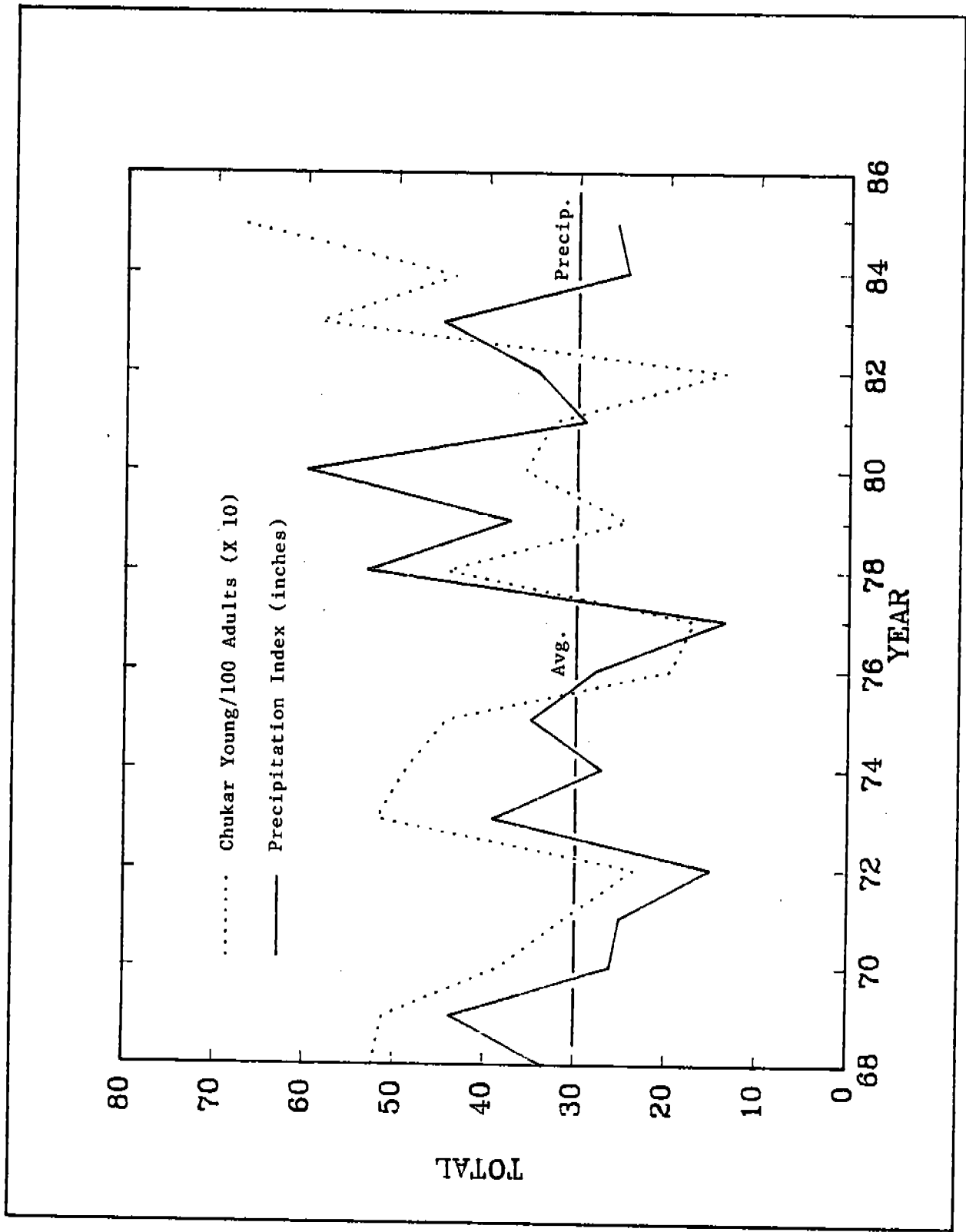


Figure 3. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production.

Table 1. Chukar summer inventory summary, 1985.

Region and County	Distinct Broods		Mixed Yng & Adults		Total Adults	Total Yng	Young/100 Ad	Veh. Miles	Hours of Effort		Birds/100 Hr					
	# Ad	Yng	Mean Brood	Ad Yng					Adults w/o Yng	100 Ad		Yng	Veh. Miles	Hours of Effort	Total	
<u>Northern Region</u>																
Box Elder	2	3	18	9.00	0	108	0	3	126	4,200	116	7	7	40	54	239
Cache	0	0	0	--	0	0	0	0	0	--	[100]	10	8	0	18	--
Davis	0	0	0	--	0	0	0	0	0	--	20	6	0	5	11	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	3	18	9.00	0	108	0	3	126	4,200	236	23	15	45	73	155
<u>Central Region</u>																
Juab	0	0	0	--	0	0	0	0	0	--	100	6	0	0	6	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	7	7	59	8.43	10	62	5	22	121	550	248	17	0	4	21	681
Utah	1	1	10	10.00	2	29	10	13	39	300	105	9	0	0	9	578
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	8	8	69	8.63	12	91	15	35	160	457	453	32	0	4	36	542
<u>Southern Region</u>																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<u>Northeastern Region</u>																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>Southeastern Region</u>																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	1	1	5	5.00	5	14	0	6	19	317	[60]	3	--	--	3	833
Grand	2	2	18	9.00	4	12	0	6	30	500	114	8.5	0	0	8.5	424
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	3	23	7.67	9	26	0	12	49	408	174	11.5	0	0	11.5	530
STATE TOTALS	13	14	110	8.46	21	225	15	50	335	670	903	70.5	15	49	134.5	286

*Data collected by Southeastern Region.

Table 2. Trend of chukar young per 100 adults, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Northern Region												
Box Elder	842	733	300	562	198	111	326	120	--	--	4,200	--
Cache	550	1,900	--	--	300	--	--	--	600	--	--	--
Davis	--	--	--	--	3	43	65	7	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	750	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	750	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	814	722	300	562	81	53	193	27	262	--	4,200	335
Central Region												
Juab	500	352	356	1,100	--	557	315	600	--	800	--	--
Salt Lake	0	--	380	--	283	--	400	50	--	--	--	--
Sanpete	--	488	331	440	500	767	--	400	--	--	--	--
Tooele	264	417	96	686	771	697	359	585	--	436	550	--
Utah	--	800	150	0	205	243	--	--	--	--	300	--
Wasatch	--	--	--	--	--	--	--	--	800	--	--	--
REGIONAL TOTALS	308	411	230	386	518	572	348	512	800	481	457	447
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	450	--	--	350	--	--	122	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	340	--	--	--	--	--	--
Millard	50	264	95	150	450	550	200	--	--	--	--	--
Piute	500	--	--	0	500	--	938	642	--	--	--	--
Sevier	--	--	--	--	--	600	800	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	900	--	--	--	600	737	--	--	--
REGIONAL TOTALS	114	294	95	233	420	425	410	389	737	--	--	346
Northeastern Region												
Daggett	--	--	--	--	575	--	--	--	--	--	--	--
Duchesne	--	800	375	0	--	--	163	--	--	--	--	--
Uintah	--	766	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	755	375	--	--	--	78	--	--	--	--	402
Southeastern Region												
Carbon	633	--	125	--	--	700	--	--	--	359	--	--
Emery	367	200	--	500	--	--	--	220	--	--	317	--
Grand	377	98	0	980	416	--	577	518	617	775	500	--
San Juan	552	40	58	220	--	--	533	--	--	337	--	--
REGIONAL TOTALS	437	97	59	591	416	700	575	426	617	392	408	431
STATE TOTALS	443	196	170	444	245	358	326	138	586	426	670	333

Table 3. Trend of chukar mean brood size from 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	11.00	10.50	6.00	14.60	9.57	--	8.33	12.00	--	--	9.00	--
Cache	--	19.00	--	--	3.00	--	--	--	6.00	--	--	--
Davis	--	--	--	--	2.00	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	7.50	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	7.50	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	11.00	13.33	6.00	14.60	8.00	--	8.33	3.00	7.00	--	9.00	8.91
<u>Central Region</u>												
Juab	8.67	7.75	9.00	11.00	--	7.70	5.45	6.00	--	8.00	--	--
Salt Lake	--	--	--	--	5.67	--	4.00	--	--	--	--	--
Sanpete	--	11.00	6.50	5.00	6.33	--	--	--	--	--	--	--
Tooele	9.00	7.20	6.00	6.50	14.07	9.91	8.92	10.60	--	6.00	8.43	--
Utah	--	8.00	3.00	0.00	6.00	4.00	--	--	--	--	10.00	--
Wasatch	--	--	--	--	--	6.00	--	--	--	--	--	--
REGIONAL TOTALS	8.83	7.68	6.64	6.50	11.38	8.16	7.13	10.14	--	6.80	8.63	8.14
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	9.50	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	3.00	6.71	3.50	0.00	6.00	10.00	--	--	--	--	--	--
Piute	5.00	--	--	0.00	10.00	--	10.50	3.00	--	--	--	--
Sevier	--	--	--	--	--	--	8.00	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	9.00	--	--	--	9.00	--	--	--	--
REGIONAL TOTALS	4.00	7.33	3.50	9.00	8.00	10.00	9.67	7.00	--	--	--	7.31
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	9.00	--	--	--	--	--
Duchesne	--	8.00	3.75	0.00	--	--	--	--	--	--	--	--
Uintah	--	7.67	--	--	--	--	--	10.00	--	--	--	--
REGIONAL TOTALS	--	7.75	3.75	--	--	--	9.00	--	10.00	--	--	7.63
<u>Southeastern Region</u>												
Carbon	9.50	9.00	--	--	--	--	--	--	--	5.50	--	--
Emery	9.80	12.00	6.17	--	5.00	--	--	--	--	--	5.00	--
Grand	6.25	4.00	6.00	--	0.00	12.50	--	11.90	8.25	7.75	9.00	--
San Juan	10.00	4.33	3.00	--	1.00	--	--	5.33	--	--	--	--
REGIONAL TOTALS	9.05	6.00	5.58	--	3.00	12.50	--	11.30	8.25	7.00	7.67	7.84
STATE TOTALS	10.00	7.12	7.10	5.77	8.75	10.35	8.23	9.48	8.00	6.91	8.46	8.17

Table 4. Trend of chukars observed per 100 hours, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	895	208	32	307	438	43	645	90	--	--	239	--
Cache	130	167	--	--	57	--	--	--	700	--	--	--
Davis	--	--	--	--	608	760	810	1,127	100	--	--	--
Morgan	--	100	--	--	--	--	--	--	850	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	640	197	32	307	430	140	502	479	227	--	155	330
<u>Central Region</u>												
Juab	229	413	152	109	1,500	206	692	363	--	200	--	--
Salt Lake	25	0	400	--	209	--	500	43	--	--	--	--
Sanpete	0	157	192	142	200	248	--	857	--	--	--	--
Tooele	291	452	136	917	1,038	1,468	985	1,013	--	441	681	--
Utah	0	129	33	133	1,220	533	--	38	--	--	578	--
Wasatch	--	--	--	--	--	350	--	--	491	--	--	--
REGIONAL TOTALS	178	302	157	243	623	440	722	578	164	291	542	370
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	0	440	--	--	1,200	--	--	500	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	36	1,020	216	182	220	236	1,467	--	--	--	--	--
Piute	150	0	--	0	120	--	1,660	433	--	--	--	--
Sevier	--	--	--	--	--	1,400	900	17	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	0	--	10	83	--	--	--	700	3,350	--	--	--
REGIONAL TOTALS	37	616	114	115	242	525	1,436	266	3,350	--	--	745
<u>Northeastern Region</u>												
Daggett	0	--	0	--	--	--	--	--	--	--	--	--
Duchesne	0	22	73	0	0	--	300	790	--	--	--	--
Uintah	0	96	0	--	0	--	614	454	86	--	--	--
REGIONAL TOTALS	0	52	27	0	0	--	533	348	27	--	--	197
<u>Southeastern Region</u>												
Carbon	1,100	--	450	--	0	1,600	--	--	--	420	--	--
Emery	233	370	0	200	--	--	--	--	--	--	833	--
Grand	2,277	2,950	40	379	1,020	--	2,891	1,167	2,871	291	424	--
San Juan	721	492	136	67	0	--	1,120	--	--	1,750	--	--
REGIONAL TOTALS	996	883	98	185	230	160	2,338	1,578	2,871	858	530	1,020
STATE TOTALS	303	370	96	213	396	336	978	496	398	176	286	376

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	68	3,171	1,757	0.55	13.02	8.39
Cache	9	342	42	0.13	1.04	0.20
Davis	5	300	128	0.43	1.23	0.61
Morgan	5	214	64	0.30	0.88	0.31
Rich	1	21	0	0.00	0.09	0.00
Summit	1	21	0	0.00	0.09	0.00
Weber	6	471	85	0.18	1.93	0.41
REGIONAL TOTALS	95	4,543	2,078	0.46	18.66	9.92
<u>Central Region</u>						
Juab	24	1,500	2,443	1.63	6.16	11.67
Salt Lake	17	1,114	1,071	0.96	4.56	5.12
Sanpete	25	1,457	1,864	1.28	5.98	8.90
Tooele	88	6,150	6,879	1.12	25.26	32.85
Utah	56	3,171	2,250	0.71	13.02	10.75
Wasatch	7	321	21	0.07	1.32	0.10
REGIONAL TOTALS	217	13,716	14,530	1.06	56.34	69.40
<u>Southern Region</u>						
Beaver	6	450	0	0.00	1.85	0.00
Garfield	2	235	0	0.00	0.97	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	1	214	0	0.00	0.89	0.00
Millard	35	1,435	2,228	1.55	5.89	10.64
Piute	7	450	321	0.71	1.85	1.53
Sevier	13	728	150	0.21	2.99	0.72
Washington	1	257	0	0.00	1.06	0.00
Wayne	2	64	64	1.00	0.26	0.31
REGIONAL TOTALS	67	3,836	2,764	0.72	15.76	13.20
<u>Northeastern Region</u>						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	1	21	42	2.00	0.09	0.20
Uintah	5	214	214	1.00	0.88	1.02
REGIONAL TOTALS	6	235	257	1.09	0.97	1.23
<u>Southeastern Region</u>						
Carbon	11	664	278	0.42	2.73	1.33
Emery	23	1,071	664	0.62	4.40	3.17
Grand	7	278	364	1.31	1.14	1.74
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	41	2,014	1,307	0.65	8.27	6.24
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	426	24,346	20,938	0.86	100	100

*Total hunter trips from questionnaire returns.

Table 6. Summary of chukars bagged per hunter-day by region and county, 1977-85.

Region and County	Year								
	1977	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region									
Box Elder	1.23	1.80	1.34	1.41	1.55	0.75	1.00	0.30	0.55
Cache	1.11	0.89	0.60	0.74	0.42	0.38	0.42	0.43	0.13
Davis	1.29	2.20	2.19	0.75	0.33	0.47	0.17	0.53	0.43
Morgan	0.88	1.08	1.38	0.75	0.75	1.21	1.02	0.10	0.30
Rich	0.13	1.22	0.38	0.60	0.50	0.67	0.83	0.80	0.00
Summit	1.00	0.75	1.02	0.78	0.73	0.00	1.38	0.67	0.00
Weber	0.75	0.77	0.67	0.48	1.25	0.91	0.61	2.46	0.18
REGIONAL TOTALS	1.15	1.57	1.25	1.25	1.28	0.74	0.91	0.41	0.46
Central Region									
Juab	0.73	0.63	1.13	0.86	0.66	0.57	1.00	0.92	1.63
Salt Lake	1.41	0.89	1.20	0.89	1.32	0.96	0.95	1.59	0.96
Sanpete	0.90	0.70	1.15	0.90	1.72	0.57	0.77	1.14	1.28
Tooele	0.86	1.06	1.37	0.89	0.97	0.73	0.94	0.95	1.12
Utah	0.56	0.66	0.83	1.01	0.81	0.74	0.85	0.62	0.71
Wasatch	0.56	1.29	0.44	0.58	0.33	0.94	0.61	0.07	0.07
REGIONAL TOTALS	0.80	0.91	1.15	0.92	0.98	0.73	0.90	0.88	1.06
Southern Region									
Beaver	0.20	0.00	0.00	0.86	2.33	0.61	1.80	1.60	0.00
Garfield	0.00	2.00	1.71	2.55	1.11	1.00	0.38	1.83	0.00
Iron	--	0.00	0.00	0.00	1.00	0.17	--	2.00	0.00
Kane	--	0.00	3.00	4.00	0.00	0.00	0.38	0.67	0.00
Millard	0.66	0.98	1.29	1.04	1.92	1.57	1.28	0.80	1.55
Piute	0.67	1.35	0.78	0.56	1.78	0.59	0.68	0.50	0.71
Sevier	0.53	0.76	0.67	0.39	1.48	0.41	0.40	0.37	0.21
Washington	0.33	0.00	1.67	0.00	0.00	0.00	--	0.50	0.00
Wayne	3.94	1.10	3.00	2.85	2.29	0.83	0.50	0.00	1.00
REGIONAL TOTALS	0.80	0.95	0.89	0.85	1.71	0.68	0.71	0.63	0.72
Northeastern Region									
Daggett	--	0.00	2.25	0.00	0.00	0.00	--	--	0.00
Duchesne	0.19	1.78	1.20	1.28	1.30	0.43	0.50	0.22	2.00
Uintah	0.33	1.88	1.38	0.27	1.20	2.06	1.00	1.45	1.00
REGIONAL TOTALS	0.25	1.56	1.38	1.00	1.25	1.15	0.63	0.90	1.09
Southeastern Region									
Carbon	0.19	0.58	1.88	1.01	1.24	0.76	0.88	0.42	0.42
Emery	0.39	0.18	1.27	1.37	1.06	0.83	1.54	0.44	0.62
Grand	0.26	0.33	3.39	1.80	1.89	1.02	1.61	0.37	1.31
San Juan	0.00	1.56	4.00	1.67	0.67	2.20	1.82	0.25	0.00
REGIONAL TOTALS	0.27	0.40	2.14	1.44	1.42	0.90	1.43	0.40	0.65
Unknown Counties	0.77	1.48	1.00	0.17	1.83	1.00	1.27	0.00	0.00
STATE TOTALS	0.88	1.21	1.23	1.08	1.23	0.75	0.93	0.66	0.86

Table 7. Percentage distribution of chukar harvest by region and county, 1977-85.

Region and County	Year								
	1977	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region									
Box Elder	37.25	49.32	27.64	38.93	26.85	25.31	23.59	6.64	8.39
Cache	6.97	4.51	1.29	1.84	1.27	1.25	1.49	1.81	0.20
Davis	1.77	2.95	2.58	0.49	0.09	0.56	0.09	1.61	0.61
Morgan	2.21	2.74	2.75	2.24	1.98	3.20	2.16	0.30	0.31
Rich	0.09	0.33	0.34	0.10	0.05	0.13	0.22	0.41	0.00
Summit	0.66	0.27	1.15	0.23	0.52	0.00	1.31	0.20	0.00
Weber	1.19	2.19	0.87	0.49	0.94	1.94	1.40	3.22	0.41
REGIONAL TOTALS	50.13	62.31	36.61	44.33	31.71	32.39	30.25	14.18	9.92
Central Region									
Juab	2.12	0.88	2.94	3.33	2.31	2.07	3.16	7.24	11.67
Salt Lake	5.78	3.65	4.12	2.90	6.94	4.51	4.15	7.04	5.12
Sanpete	2.07	1.43	4.63	2.14	2.93	3.01	3.56	2.51	8.90
Tooele	17.08	16.74	20.44	14.56	14.11	18.23	20.34	26.66	32.85
Utah	8.52	5.18	8.05	12.71	7.69	13.97	12.76	11.97	10.75
Wasatch	0.44	1.10	0.20	0.46	0.05	1.07	0.63	0.10	0.10
REGIONAL TOTALS	36.01	28.98	40.37	36.10	34.03	42.86	44.60	55.53	69.40
Southern Region									
Beaver	0.04	0.00	0.00	0.40	0.99	1.07	0.40	0.80	0.00
Garfield	0.00	0.55	0.34	1.84	0.47	0.38	0.13	1.11	0.00
Iron	--	0.00	0.00	0.00	0.05	0.06	0.00	0.20	0.00
Kane	--	0.00	0.50	0.13	0.00	0.00	0.27	0.20	0.00
Millard	2.52	1.49	2.47	1.65	3.63	5.33	4.55	10.96	10.64
Piute	0.71	0.70	1.57	0.92	6.13	0.63	0.94	3.22	1.53
Sevier	2.56	1.83	3.59	1.68	5.10	4.07	2.34	3.72	0.72
Washington	0.04	0.00	0.14	0.00	0.00	0.00	0.00	0.10	0.00
Wayne	2.78	0.33	0.17	1.22	0.76	0.31	0.09	0.00	0.31
REGIONAL TOTALS	8.65	4.90	8.77	7.84	17.13	11.84	8.73	20.32	13.20
Northeastern Region									
Daggett	--	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.40	0.49	0.67	1.35	0.61	0.63	0.22	0.20	0.20
Uintah	0.62	0.27	0.50	0.10	0.57	2.32	0.31	1.61	1.02
REGIONAL TOTALS	1.02	0.76	1.43	1.45	1.18	2.94	0.53	1.81	1.23
Southeastern Region									
Carbon	0.26	0.33	5.21	2.34	2.64	2.82	1.94	2.51	1.33
Emery	0.88	0.21	1.99	2.34	4.29	3.38	8.12	2.72	3.17
Grand	0.93	0.76	5.33	5.20	8.31	3.01	4.28	2.81	1.74
San Juan	0.00	0.43	0.22	0.33	0.19	0.69	0.90	0.10	0.00
REGIONAL TOTALS	2.07	1.74	12.76	10.21	15.43	9.90	15.24	8.15	6.24
Unknown Counties	2.12	1.31	0.06	0.07	0.52	0.06	0.63	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100	100

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1977-85.

Region and County	Year								
	1977	1978	1979	1980	1981	1982	1983	1984	1985
Northern Region									
Box Elder	26.68	33.14	25.32	29.87	21.19	25.13	22.01	14.54	13.02
Cache	5.51	6.13	2.65	2.70	3.71	2.44	3.27	2.77	1.04
Davis	1.20	1.62	1.45	0.71	0.35	0.89	0.50	1.98	1.23
Morgan	2.21	3.06	2.45	3.23	3.24	1.97	1.97	1.98	0.88
Rich	0.58	0.33	1.10	0.18	0.12	0.14	0.25	0.33	0.09
Summit	0.58	0.44	1.38	0.32	0.87	0.70	0.88	0.20	0.09
Weber	1.40	3.43	1.58	1.10	0.93	1.59	2.14	0.86	1.93
REGIONAL TOTALS	38.15	48.15	35.93	39.10	30.40	32.86	31.01	22.67	18.66
Central Region									
Juab	2.56	1.70	3.20	4.19	4.28	2.72	2.93	5.15	6.16
Salt Lake	3.61	4.98	4.24	3.52	6.43	3.52	4.07	2.91	4.58
Sanpete	2.02	2.47	4.96	2.56	2.08	3.94	4.32	1.45	5.98
Tooele	17.49	19.08	18.39	17.54	17.83	18.71	20.16	18.44	25.26
Utah	13.38	9.45	11.95	13.64	11.70	14.16	13.87	12.62	13.02
Wasatch	0.70	1.03	0.55	0.85	0.17	0.84	0.96	0.99	1.32
REGIONAL TOTALS	39.74	38.71	43.30	42.29	42.50	43.88	46.31	41.57	56.34
Southern Region									
Beaver	0.19	0.07	0.00	0.50	0.52	1.31	0.21	0.33	1.85
Garfield	0.04	0.33	0.24	0.78	0.52	0.28	0.33	0.39	0.97
Iron	--	0.07	0.07	0.04	0.06	0.28	0.08	0.07	0.00
Kane	--	0.00	0.21	0.04	0.00	0.14	0.67	0.20	0.89
Millard	3.33	1.85	2.34	1.70	2.32	2.53	3.31	8.99	5.89
Piute	0.93	0.63	2.48	1.78	4.23	0.80	1.30	4.23	1.85
Sevier	4.23	2.92	6.58	4.65	4.23	7.36	5.45	6.61	2.99
Washington	0.12	0.00	0.10	0.00	0.00	0.05	0.00	0.13	1.06
Wayne	0.62	0.37	0.07	0.46	0.41	0.28	0.17	0.20	0.26
REGIONAL TOTALS	9.46	6.24	12.09	9.94	12.28	13.03	11.51	21.14	15.76
Northeastern Region									
Daggett	--	0.07	0.14	0.04	0.00	0.00	0.08	0.00	0.00
Duchesne	1.86	0.33	0.69	1.14	0.58	1.08	0.42	0.59	0.09
Uintah	1.67	0.18	0.45	0.39	0.58	0.84	0.29	0.73	0.88
REGIONAL TOTALS	3.53	0.59	1.27	1.56	1.16	1.92	0.79	1.32	0.97
Southeastern Region									
Carbon	1.20	0.70	3.41	2.49	2.61	2.77	2.05	3.90	2.73
Emery	1.98	1.44	1.93	1.85	4.98	3.05	4.90	4.10	4.40
Grand	3.10	2.77	1.93	3.13	5.39	2.20	2.47	5.02	1.14
San Juan	0.39	0.33	0.07	0.21	0.35	0.23	0.46	0.26	0.00
REGIONAL TOTALS	6.67	5.24	7.34	7.67	13.32	8.25	9.89	13.28	8.27
Unknown Counties	2.40	1.07	0.07	0.43	0.35	0.05	0.46	0.00	0.00
Mixed Counties	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100	100

Table 9. Statewide summary of chukar partridge harvest statistics, 1958-85.

Year	Total Hunters	Total Harvest	Hunters-days Afield	Chukars Per Hunter-day	Chukars Per Hunter
1958	11,124	19,578	25,100	0.78	1.76
1959	11,154	8,700	26,364	0.33	0.78
1960	13,252	21,733	30,610	0.71	1.64
1961	14,046	20,821	35,675	0.58	1.48
1962	11,638	33,500	35,010	0.95	2.88
1963	14,532	42,806	40,824	1.05	2.95
1964	16,090	42,974	39,971	1.08	2.67
1965	16,431	35,335	45,067	0.78	2.15
1966	17,133	61,370	54,448	1.13	3.58
1967	17,485	48,906	50,671	0.97	2.80
1968	20,744	73,218	61,402	1.19	3.53
1969	22,529	80,917	71,674	1.13	3.59
1970	18,013	56,053	49,911	1.12	3.11
1971	17,917	61,151	55,378	1.10	3.41
1972	16,685	36,925	46,502	0.79	2.21
1973	13,888	48,135	50,677	0.95	3.47
1974	16,412	44,658	48,856	0.91	2.72
1975	16,156	41,151	51,083	0.81	2.57
1976	14,171	43,726	47,143	0.93	3.09
1977	12,691	34,155	38,873	0.88	2.69
1978	16,291	65,747	54,239	1.21	4.04
1979	15,210	51,918	42,254	1.23	3.41
1980	15,100	51,511	47,778	1.08	3.41
1981	12,907	44,983	36,662	1.23	3.49
1982	11,326	24,460	32,691	0.75	2.16
1983	10,418	29,649	31,904	0.93	2.85
1984	9,846	20,179	30,715	0.66	2.05
1985	7,930	20,938	24,346	0.86	2.64
TOTALS (1958-85)	411,119	1,165,197	1,160,828	(26.12) 1.00	(77.13) 2.83
AVERAGES (1958-84)	14,933	42,380	42,092	0.94	2.76

Table 10. Chukar field bag check summary, 1985.

Region and County	ALL HUNTS				COMPLETE HUNTS				Total Birds/ 100 Hr Hunter
	Total Parties	Total Hunters	Total Hours	Total Birds/ 100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds	
<u>Northern Region</u>									
Box Elder	201	505	3,061	3	199	500	3,058	3	0.01
Cache	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	201	505	3,061	3	199	500	3,058	3	0.01
<u>Central Region</u>									
Juab	7	19	75	19	5	14	53	19	36
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	7	19	75	19	5	14	53	19	36
<u>Southern Region</u>									
Beaver	8	17	54	15	8	17	54	15	28
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	2	6	39	6	2	6	39	6	1.00
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	10	23	93	21	10	23	93	21	23
<u>Northeastern Region</u>									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
<u>Southeastern Region</u>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	5	12	42	10	--	--	--	--	--
Grand	7	21	71	31	3	7	55	22	40
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	12	33	113	41	3	7	55	22	40
STATE TOTALS	230	580	3,342	84	217	544	3,259	65	2

*Includes data from Southeastern Region.

Table 11. Chukar hunter success trend as determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
Northern Region												
Box Elder	15	0.64	47	1.90	5	0.28	11	0.50	2	0.09	--	--
Cache	14	0.50	9	0.33	--	--	--	--	6	0.50	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	29	1.00	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	15	0.63	46	1.83	5	0.28	11	0.51	3	0.10	--	--
Central Region												
Juab	--	--	62	2.10	--	--	--	--	--	--	36	1.36
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	44	1.60	10	0.50	16	0.83	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	50	1.77	10	0.50	16	0.83	--	--	36	1.36
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	28	0.88
Garfield	--	--	--	--	25	0.74	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	550	2.75	--	--	15	1.00
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	33	0.67	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	25	0.96	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	26	0.92	25	0.74	550	2.75	--	--	23	0.91
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	44	1.71	33	0.67	26	0.81	79	3.00	--	--	--	--
Grand	73	2.54	60	2.00	--	--	83	3.29	--	--	40	3.14
San Juan	--	--	--	--	--	--	--	--	25	1.50	--	--
REGIONAL TOTALS	57	2.11	54	1.56	20	0.67	81	3.17	12	0.38	40	3.14
STATE TOTALS	21	0.89	44	1.69	9	0.40	22	0.98	4	0.14	31	1.08

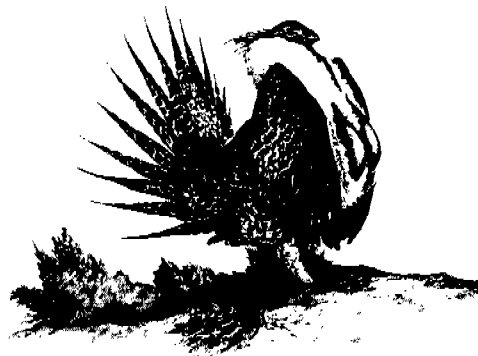
SAGE GROUSE

SUMMARY

Harvest data for 1984 indicated below average breeding populations of sage grouse for 1985. Strutting ground surveys indicated a decrease in the average male grouse attendance from 1984.

Brood surveys showed increased production throughout the state. Likewise, birds observed per 100 hours increased 58 percent compared to 1984, but remained significantly below average.

The increase in production in 1985 was apparent in harvest statistics collected from questionnaires and from field bag checks. Total statewide harvest increased 5 percent but was 24 percent below the 22-year average. Sage grouse bagged per hunter and sage grouse bagged per hunter-day also increased from the previous year. Total hunters and hunter-days afield both decreased 8 and 4 percent, respectively, from 1984.



Strutting Ground Counts

The status of the sage grouse breeding population for 1985, as indicated by strutting ground counts, is shown in Table 1 of this section. Results of this survey for 1985 compared to 1984 and the 1967-84 average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Number of grounds counted	97	+126	-8
Total male grouse counted	1,234	+86	-41
Average male grouse per ground	13	-13	-35
Percent change from previous year (comparable grounds)	-1	--	--

Access for spring 1985 strutting ground counts was generally good in all regions of the state. The numbers of grouse observed increased statewide, although the Central Region submitted no observation data. The statewide index for comparable grounds was down 1 percent from 1984. Harvest data for 1984 indicated significantly below average populations going into the winter of 1984-85, but the numbers of juvenile birds indicated increased production during 1985. Declines in breeding populations and loss of habitat continue to be the trend in most areas of the state.

Brood Counts

Results of the summer inventory survey for 1985 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 1985 are compared to 1984 and the previous 10-year (1975-84) average as follows:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total sage grouse counted	1,080	+14	-60
Young per 100 adults	147	+18	-5
Mean brood size	4.04	-5	-10
Sage grouse observed per 100 hours	284	+58	-24
Total hours effort	380	-28	-46

The effort devoted to sage grouse brood counts was 46 percent below average, and the total number of grouse counted was 60 percent below average.

Sage grouse density increased 58 percent from 1984, and production showed an 18 percent increase, however, both remained 24 and 5 percent below average, respectively. An increase in young grouse were observed, but the average brood size was 10 percent below the 10-year average.

Harvest

Hunter Questionnaire

Results of the 1985 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 1985 hunting season compared to 1984 and the 1963-84 average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Sage grouse hunters	7,586	-8	-30
Sage grouse harvested	11,466	+5	-24
Hunter-days afield	14,702	-4	-18
Sage grouse per hunter-day	0.78	+8	-7
Sage grouse per hunter	1.51	+14	+7

Although sage grouse populations are below average, production increased slightly in 1985 and was reflected in the harvest. Total statewide harvest increased 5 percent, while total sage grouse hunters and hunter-days afield decreased. Hunter success decreased 11 percent in the Northern Region where five of the seven counties were closed to sage grouse hunting. Nevertheless, 20 percent of the harvest and 32 percent of the hunting pressure still occurred in the Northern region.

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

Field Bag Checks

A summary of field bag check data for 1985 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12. Results of the 1985 survey compared to 1984 and the 1975-84 average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	985	-2	-50
Total hours hunted	4,796	-19	-40
Sage grouse per hunter (complete hunts)	0.93	+15	+12
Sage grouse bagged per 100 hours	17	+31	-11
Average hours per hunter-day (complete hunts)	4.7	-20	+2
Hours hunted per grouse bagged	5.8	-22	0

Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1985 is found in Table 13 and the trend from 1982-85 in Table 14.

Following are data derived from wing surveys in 1985 compared to 1984 and the 1980-84 average:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Sample size	797	-3	-34
Percent males	46	+12	+12
Percent females	54	-8	-8
Young per 100 adults	192	+24	+50
Young per 100 hens (adult)	285	+12	+47

Analysis of wings collected at checking stations during the 1985 season indicates that statewide production was up compared to 1984, and above the previous 5-year average.

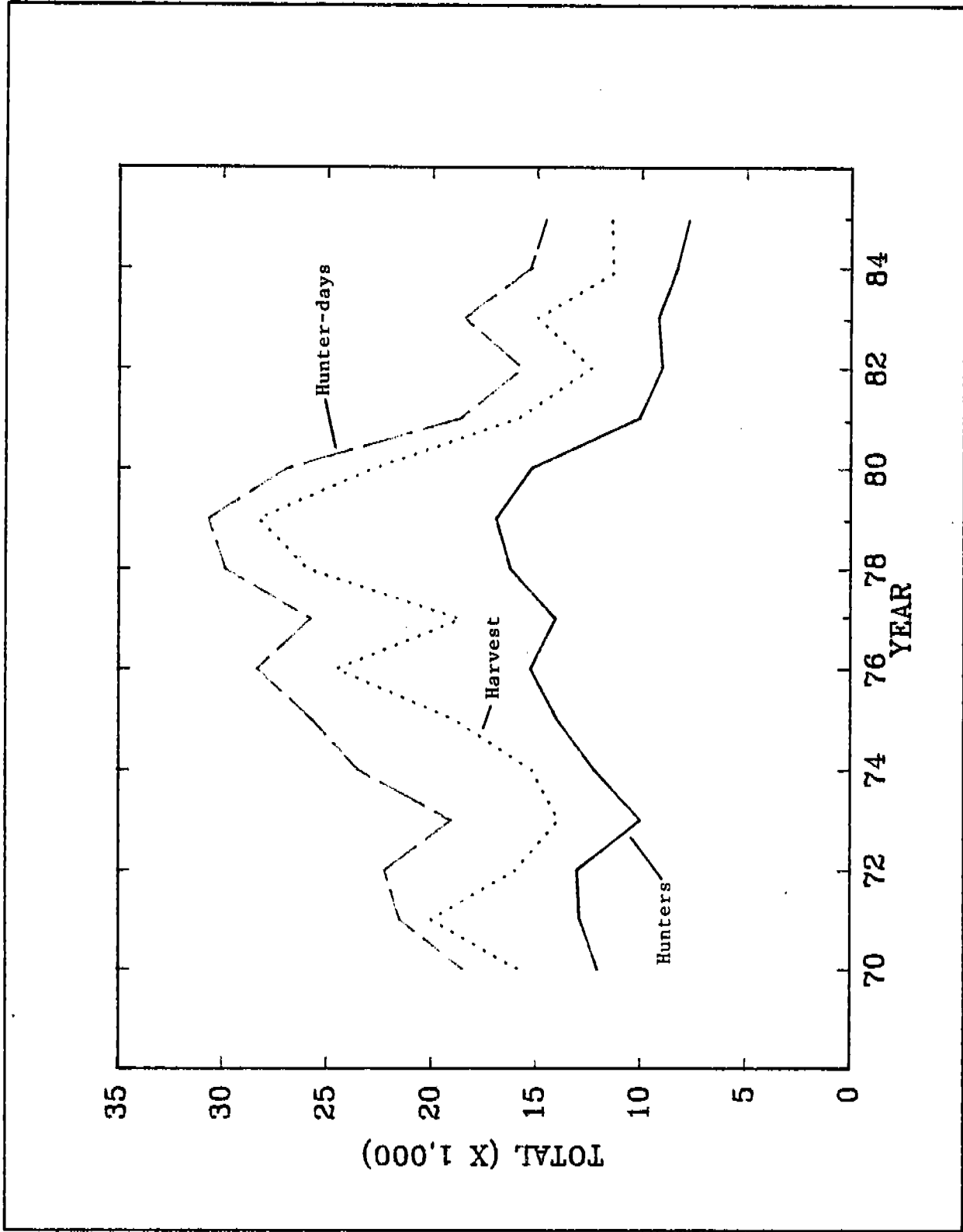


Figure 1. Statewide trend of sage grouse harvest statistics.

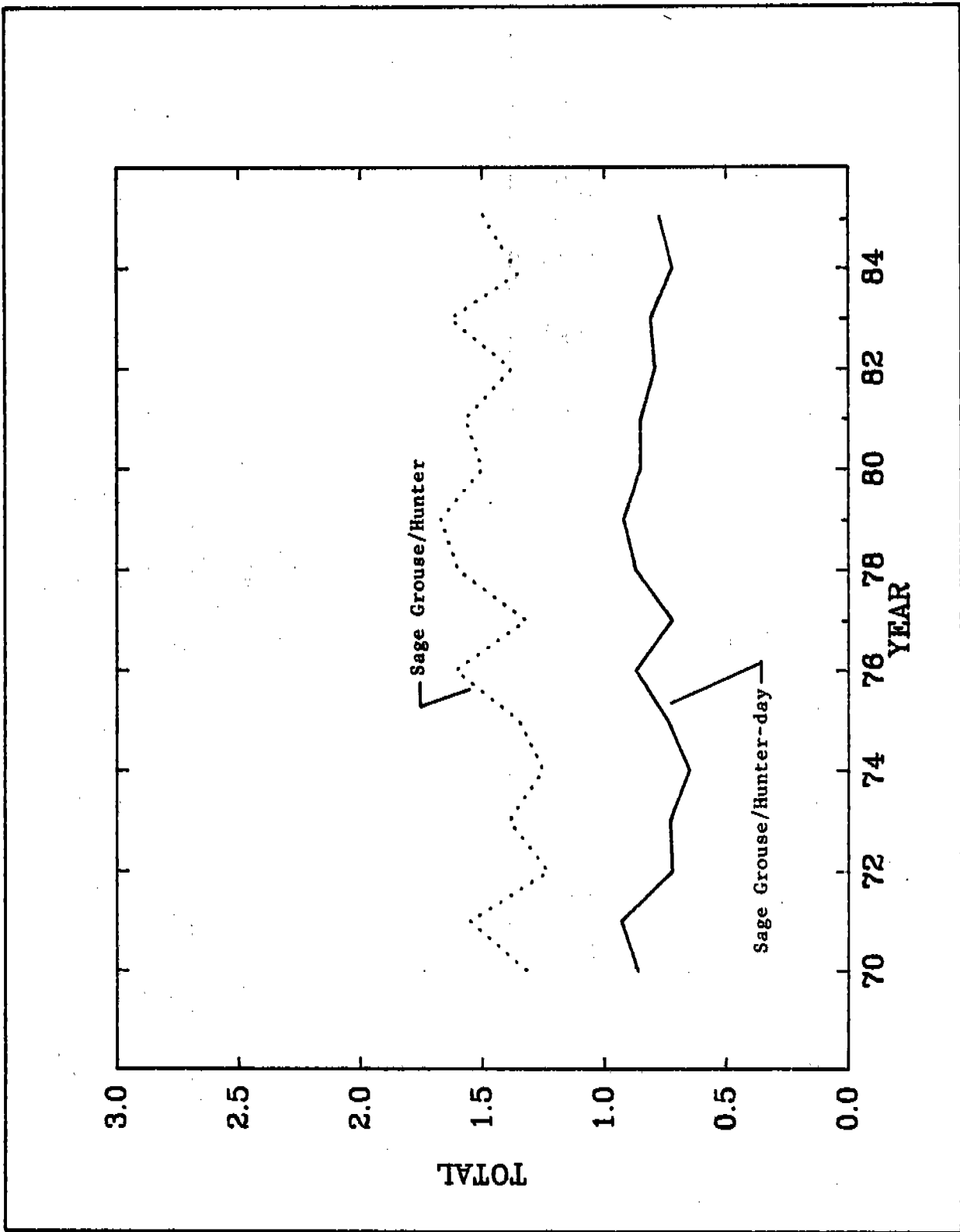


Figure 2. Statewide trend of sage grouse harvest statistics.

Table 1. Summary of sage grouse strutting ground counts by region and county, 1975-85.

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>											
BOX ELDER											
No. strutting grounds counted	19	15	22	18	24	28	35	15	17	8	32
Total male grouse counted	346	239	621	452	763	899	711	384	322	216	309
County average	18	16	28	25	32	32	20	26	19	27	10
% change from previous year - comparable grounds	+29	0	+53	+3	+69	+9	-35	-24	-29	-8	+7
CACHE											
No. strutting grounds counted	3	3	3	1	3	1	3	1	0	1	0
Total male grouse counted	100	35	45	15	32	18	18	19	0	5	--
County average	33	12	15	15	11	18	6	19	--	5	--
% change from previous year - comparable grounds	+133	-68	+29	-40	0	+20	-33	+58	--	--	--
MORGAN											
No. strutting grounds counted	3	3	3	3	3	3	3	3	3	1	3
Total male grouse counted	41	52	43	111	75	131	57	65	31	2	33
County average	14	17	14	37	25	44	19	22	10	2	11
% change from previous year - comparable grounds	-35	+27	-17	+158	-32	+76	-57	+16	-31	-91	+1,000
RICH											
No. strutting grounds counted	10	8	13	15	11	11	13	7	9	6	18
Total male grouse counted	268	326	321	417	382	236	259	153	188	103	399
County average	27	41	25	28	35	21	20	22	21	17	22
% change from previous year - comparable grounds	-32	+57	-13	+17	+11	-40	+5	-21	+2	-2	+49

Table 1 (continued)

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
SUMMIT											
No. strutting grounds counted	4	6	6	6	8	1	7	2	7	1	0
Total male grouse counted	88	107	169	91	116	15	60	11	46	16	—
County average (all strutting grounds)	22	18	28	15	15	15	9	6	7	16	—
% change from previous year - comparable grounds	-30	-10	+52	-29	+5	+15	+13	-50	-9	+78	—
REGIONAL TOTALS											
No. strutting grounds counted	39	35	47	43	49	44	61	28	36	17	53
Total male grouse counted	843	759	1,199	1,086	1,368	1,299	1,105	632	587	342	741
Average grouse per ground (all strutting grounds)	22	23	26	25	28	30	18	23	16	20	14
% change from previous year - comparable grounds	-1	+8	+19	+10	+29	-2	-27	-20	-22	-9	+27
Southern Region											
GARFIELD											
No. strutting grounds counted	14	14	10	11	9	8	11	9	8	7	—
Total male grouse counted	233	201	192	224	211	97	298	359	197	133	—
County average (all strutting grounds)	17	14	19	20	23	12	27	39	25	19	—
% change from previous year - comparable grounds	-35	-14	+2	+24	0	-48	+114	+78	-12	-46	—
WAYNE											
No. strutting grounds counted	11	13	12	12	9	8	14	14	1*	(12)*	—
Total male grouse counted	160	260	256	166	221	32	284	300	123	(89)	—
County average (all strutting grounds)	15	20	21	14	25	4	20	21	123	(7)	—
% change from previous year - comparable grounds	-33	+3	+19	-31	-59	—	—	—	—	—	—

*No counts because of snow. Aerial count made in Wayne County only (not added to regional total).

Table 1 (continued)

Region and County	Year											
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
BEAVER												
No. strutting grounds counted	6	8	7	7	6	5	7	7	7	7	4	--
Total male grouse counted	122	108	90	66	134	113	140	131	117	48	--	--
County average (all strutting grounds)	20	14	13	9	22	23	20	19	17	12	--	--
% change from previous year - comparable grounds	+1	-32	+8	-27	+137	+1	+6	-6	-11	+78	--	--
IRON												
No. strutting grounds counted	9	9	5	10	5	6	7	9	4	--	--	--
Total male grouse counted	51	26	54	87	83	84	101	111	105	--	--	--
County average (all strutting grounds)	6	3	11	9	17	14	14	12	26	--	--	--
% change from previous year - comparable grounds	-41	-50	+108	+11	+48	+1	+20	-3	+27	--	--	--
SEVIER												
No. strutting grounds counted	--	2	3	4	4	--*	2	4	--	--	--	--
Total male grouse counted	--	2	26	23	9	--	0	5	--	--	--	--
County average (all strutting grounds)	--	1	9	6	2	--	0	1	--	--	--	--
% change from previous year - comparable grounds	--	--	+200	-11	60	--	--	--	--	--	--	--
MILLARD												
No. strutting grounds counted	--	1	1	1	--	--*	1	1	--	1	--	--
Total male grouse counted	--	11	3	14	--	--	22	22	--	4	--	--
County average (all strutting grounds)	--	11	3	14	--	--	22	22	--	4	--	--
% change from previous year - comparable grounds	--	--	-73	+367	--	--	--	0	--	--	--	--

Table 1 (continued)

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
REGIONAL TOTALS											
No. strutting grounds counted	40	47	37	45	33	27	42	44	23	12	--
Total male grouse counted	566	608	618	580	691	326	845	928	563	185	--
Average grouse per ground (all strutting grounds)	14	13	17	13	21	12	20	21	24	15	-7
% change from previous year - comparable grounds	-30	-13	+14	-13	-22	-32	+46	+33	-9	-33	--
Central Region											
SANPETE											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total male grouse counted	5	10	4	7	6	9	9	11	8	0	0
County average (all strutting grounds)	3	5	2	4	3	5	5	6	4	--	--
% change from previous year - comparable grounds	--	+100	-60	+75	-14	+17	0	+22	-27	-100	0
TOOELE											
No. strutting grounds counted	5	5	5	5	5	5	5	5	6	6	6
Total male grouse counted	59	80	77	37	116	131	46	28	28	23	55
County average (all strutting grounds)	12	16	15	7	23	26	9	6	5	4	9
% change from previous year - comparable grounds	-30	+15	-4	-52	-38	+13	-64	-64	0	-18	+139
WASATCH											
No. strutting grounds counted	2	2	2	2	2	2	2	2	2	2	2
Total male grouse counted	201	216	206	184	119	45	45	18	54	57	63
County average (all strutting grounds)	101	108	103	92	60	23	23	9	27	29	32
% change from previous year - comparable grounds	+103	+7	-5	-11	-35	-62	0	-60	+200	+6	+11

Table 1 (continued)

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
REGIONAL TOTALS											
No. strutting grounds counted	9	9	9	9	9	9	9	9	10	10	10
Total male grouse counted	265	306	287	228	197	185	100	57	90	80	118
Average grouse per ground (all strutting grounds)	29	34	32	25	22	21	11	6	9	8	12
% change from previous year - comparable grounds	+45	+12	-6	-21	-35	-24	-51	-43	+58	-11	+48
Northeastern Region											
DAGGETT											
No. strutting grounds counted	3	3	3	3	3	5	6	6	6	--	5
Total male grouse counted	30	40	55	78	47	51	68	18	45	--	25
County average (all strutting grounds)	10	13	18	26	16	10	11	3	7	--	5
% change from previous year - comparable grounds	-19	+33	+38	+42	-40	-19	+20	-57	+56	--	-43
DUCHESNE											
No. strutting grounds counted	11	15	14	14	10	16	16	15	15	--	13
Total male grouse counted	172	245	161	227	93	120	112	156	178	--	121
County average (all strutting grounds)	16	16	12	16	9	8	7	10	12	--	9
% change from previous year - comparable grounds	-5	-14	-20	+37	-35	+5	0	+15	+17	--	-29
UINTAH											
No. strutting grounds counted	9	10	11	13	11	12	10	12	16	--	12
Total male grouse counted	240	257	245	454	338	126	174	242	273	--	190
County average (all strutting grounds)	27	26	22	35	31	11	17	20	17	--	16
% change from previous year - comparable grounds	+29	0	-16	+63	-18	-67	+56	+40	-21	--	-21

Table 1 (continued)

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
REGIONAL TOTALS											
No. strutting grounds counted	23	28	28	30	24	33	32	33	37	--	30
Total male grouse counted	442	542	461	759	478	297	354	416	396	--	336
Average grouse per ground (all strutting grounds)	19	19	17	25	20	9	11	13	13	--	11
% change from previous year - comparable grounds	+12	-3	-13	+51	-25	-48	+27	+17	-3	--	-26
Southeastern Region											
CARBON											
No. strutting grounds counted	2	5	9	5	--	--	6	1	1	--	--
Total male grouse counted	65	134	140	41	--	--	2	0	16	--	--
County average (all strutting grounds)	33	27	16	8	--	--	3	--	16	--	--
% change from previous year - comparable grounds	+48	+83	-10	-64	--	--	--	--	+100	--	--
EMERY											
No. strutting grounds counted	--	1	2	1	--	--	--	2	--	--	--
Total male grouse counted	--	13	33	12	--	--	--	9	--	--	--
County average (all strutting grounds)	--	13	17	12	--	--	--	5	--	--	--
% change from previous year - comparable grounds	--	--	+23	-25	--	--	--	--	--	--	--
SAN JUAN											
No. strutting grounds counted	6	6	4	5	4	5	4	4	6	4	4
Total male grouse counted	115	98	117	96	67	41	63	47	59	57	39
County average (all strutting grounds)	19	16	29	18	17	8	16	12	10	14	10
% change from previous year - comparable grounds	-9	-14	+22	-17	+1	-33	+65	-25	+52	-14	-29

Table 1 (continued)

Region and County	Year										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
REGIONAL TOTALS											
No. strutting grounds counted	8	12	15	11	4	5	10	7	7	4	4
Total male grouse counted	180	245	290	149	67	41	65	56	75	57	39
Average grouse per ground (all strutting grounds)	23	20	19	14	17	8	7	8	11	14	10
%change from previous year - comparable grounds	+21	+20	+4	-37	+1	-33	+58	-28	+34	-14	-29
STATE TOTALS											
No. strutting grounds counted	119	131	136	138	120	116	154	121	113	43	97
Total male grouse counted	2,296	2,460	2,855	2,802	2,808	2,148	2,469	2,089	1,711	664	1,234
Average grouse per ground (all strutting grounds)	19	19	21	20	23	19	16	17	15	15	13
%change from previous year - comparable grounds	-4	+2	+6	-15	-13	-20	-9	-1	-8	-18	-1

*No counts because of snow conditions.

Table 2. Sage grouse summer inventory summary, 1985.

Region and County	Distinct Broods		Mixed Yng & Adults		Mean Brood	Total Adults	Total Yng	Young/100 Ad	Veh. Miles	Hours of Effort		Birds/100 Hr			
	# Ad	Yng	Ad	Yng						Veh.	Horse		Walk	Total	
Northern Region															
Box Elder	13	13	69	0	0	13	26	69	265	43	6	19	0	25	380
Cache	0	0	0	0	0	0	0	0	--	225	13	2	0	15	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	1	1	3	0	0	0	1	3	300	20	9	12	0	21	19
Rich	24	24	95	3	11	83	110	106	96	1,736	64	0	11	75	288
Summit	0	0	0	0	0	0	0	0	--	140	9	20	4	33	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	38	38	167	3	11	96	137	178	130	2,164	101	53	15	169	186
Central Region															
Juab	0	0	0	0	0	0	0	0	--	40	2	0	2	4	0.00
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	7	7	23	6	12	15	28	35	125	81	7	12	7	26	242
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	9	9	18	6	17	66	81	35	43	360	34	3	6.5	43.5	267
REGIONAL TOTALS	16	16	41	2	29	81	109	70	64	481	43	15	15.5	73.5	244
Southern Region															
Beaver	1	1	5	2	4	18	21	9	43	100	3	0	4	7	429
Garfield	4	4	18	8	21	5	17	39	229	140	16	0	3	19	295
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	7	7	25	8	16	12	27	41	152	170	13	0	6	19	358
REGIONAL TOTALS	12	12	48	18	41	35	65	89	137	410	32	0	13	45	342
Northeastern Region															
Gaggett	7	7	21	8	13	5	20	34	170	136	16	3	0	19	284
Duchesne	11	11	52	17	43	4	32	95	297	410	30	5	4	39	325
Uintah	12	12	60	28	107	24	64	167	261	120	16	3	7	26	888
REGIONAL TOTALS	30	30	133	43	163	33	116	296	255	666	62	11	11	84	490
Southeastern Region															
Carbon	1	1	4	4.00	0	0	1	4	400	--	[2]	--	--	[2]	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	2	2	7	3.50	0	6	8	7	88	106	6	0	0.5	6.5	231
REGIONAL TOTALS	3	3	11	3.67	0	6	9	11	122	106	8	0	0.5	8.5	235
STATE TOTALS	99	99	400	4.04	86	244	251	436	147	3,827	246	79	55	380	284

[] Estimate

Table 3. Trend of sage grouse young per 100 adults, 1975-85.

Region and County	Year										Average		
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1975-84	1975-84
<u>Northern Region</u>													
Box Elder	106	250	75	125	81	84	68	127	135	75	265		
Cache	329	486	450	--	0	300	122	--	--	--	--		
Davis	--	--	--	--	--	--	--	--	--	--	--		
Morgan	64	71	35	414	66	89	120	--	240	--	300		
Rich	94	106	81	273	101	33	85	85	--	164	96		
Summit	52	247	106	316	221	74	114	80	67	--	--		
Weber	--	200	0	--	--	--	--	--	--	--	--		
REGIONAL TOTALS	102	170	77	194	99	67	82	91	145	126	130	115	115
<u>Central Region</u>													
Juab	--	--	76	46	262	204	245	--	--	--	--		
Salt Lake	--	--	--	--	--	--	--	--	--	--	--		
Sanpete	280	414	257	224	154	267	348	314	305	--	--		
Tooele	168	286	123	283	449	143	101	107	176	100	125		
Utah	--	--	--	--	--	--	--	--	--	--	--		
Wasatch	118	123	54	93	163	170	236	166	157	175	43		
REGIONAL TOTALS	138	187	77	112	204	171	171	209	214	155	64	164	164
<u>Southern Region</u>													
Beaver	205	181	69	156	100	142	104	32	--	400	43		
Garfield	277	174	174	176	272	383	84	128	133	140	229		
Iron	--	--	80	313	229	269	113	148	150	63	--		
Kane	--	0	--	--	57	--	--	--	1,000	--	--		
Millard	--	--	--	--	--	--	--	--	--	--	--		
Piute	67	0	--	--	--	--	--	--	--	--	--		
Sevier	0	533	0	625	--	--	--	--	--	--	--		
Washington	--	--	--	--	--	--	--	--	--	--	--		
Wayne	545	286	115	308	288	291	263	193	104	411	152		
REGIONAL TOTALS	287	194	103	224	230	235	154	130	98	92	137	175	175
<u>Northeastern Region</u>													
Daggett	51	190	169	198	169	200	230	369	88	250	170		
Duchesne	120	161	53	199	127	248	235	305	240	145	297		
Uintah	107	249	235	269	279	401	253	183	375	67	261		
REGIONAL TOTALS	97	206	154	226	191	297	242	237	265	126	255	204	204
<u>Southeastern Region</u>													
Carbon	116	214	46	164	400	--	64	--	--	238	400		
Emery	--	--	--	--	--	--	--	--	--	--	--		
Grand	400	25	3	--	71	--	--	--	--	--	--		
San Juan	47	22	24	94	--	400	350	--	57	500	88	153	153
REGIONAL TOTALS	63	68	25	142	223	450	83	--	57	267	122	122	122
STATE TOTALS	120	171	87	181	175	163	142	179	202	125	147	155	155

Table 4. Trend of sage grouse mean brood size, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	3.81	5.59	4.36	4.76	4.32	3.36	3.97	3.92	5.00	5.75	5.31	
Cache	5.00	6.25	4.50	--	--	1.00	3.50	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	3.80	4.25	3.50	6.44	4.00	5.60	5.14	--	4.20	--	3.00	
Rich	4.00	6.04	3.83	5.24	4.58	3.36	3.67	4.45	--	3.92	3.96	
Summit	3.75	5.00	4.50	5.77	5.00	3.78	3.67	2.67	3.33	--	--	
Weber	--	2.00	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	4.03	5.45	4.17	5.20	4.52	3.61	3.94	4.00	4.25	4.36	4.39	4.35
<u>Central Region</u>												
Juab	--	--	4.50	3.33	4.25	5.00	2.00	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	4.00	5.67	3.20	4.57	6.44	5.58	4.80	6.36	5.83	--	--	
Tooele	5.50	5.07	4.17	5.13	5.64	4.09	3.00	3.33	4.33	3.33	3.29	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	3.86	4.70	3.27	4.90	4.90	4.09	3.83	4.81	3.14	4.90	2.00	
REGIONAL TOTALS	4.22	4.98	3.44	4.82	5.18	4.41	3.44	5.32	4.37	4.54	2.56	4.47
<u>Southern Region</u>												
Beaver	3.90	4.95	3.57	4.29	4.00	4.14	5.50	4.00	--	4.00	5.00	
Garfield	4.18	3.50	4.00	4.00	4.39	5.00	4.50	3.43	3.43	4.00	4.50	
Iron	--	--	3.00	5.50	4.68	4.12	3.57	6.40	3.00	3.50	--	
Kane	--	--	--	--	--	--	--	--	5.00	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	1.00	--	--	--	--	--	--	--	--	--	--	
Sevier	--	5.33	--	6.25	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	5.45	3.95	4.40	4.56	4.74	4.60	3.96	4.43	3.67	5.00	3.57	
REGIONAL TOTALS	4.27	4.18	4.00	4.55	4.61	4.48	3.93	4.52	3.62	4.27	4.00	4.27
<u>Northeastern Region</u>												
Daggett	3.25	4.55	4.80	5.05	5.10	4.75	4.11	5.13	5.80	4.63	3.00	
Duchesne	3.60	4.11	3.56	4.00	4.73	4.42	3.91	5.32	4.59	3.77	4.73	
Uintah	4.69	5.21	4.48	4.87	4.67	5.55	5.27	4.95	5.13	3.00	5.00	
REGIONAL TOTALS	4.24	4.70	4.30	4.94	4.79	5.05	4.50	5.10	5.00	3.96	4.43	4.66
<u>Southeastern Region</u>												
Carbon	2.67	5.05	4.14	5.17	4.67	--	--	--	--	4.33	4.00	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	4.00	3.00	--	--	5.00	--	--	--	--	--	--	
San Juan	3.50	--	3.29	--	--	--	3.50	--	4.00	5.00	3.50	
REGIONAL TOTALS	3.17	4.77	3.71	5.17	3.25	--	3.50	--	4.00	4.50	3.67	4.07
STATE TOTALS	4.15	4.89	3.99	4.97	4.77	4.51	4.05	4.85	4.58	4.27	4.04	4.50

Table 5. Trend of sage grouse observed per 100 hours, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	187	457	670	452	1,835	575	571	238	90	195	380	
Cache	261	410	29	--	0	154	232	--	--	11	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	140	433	218	160	412	427	471	77	93	--	19	
Rich	452	724	580	838	952	393	648	188	--	198	288	
Summit	109	268	361	369	226	111	135	100	81	--	--	
Weber	--	12	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	204	429	461	400	545	315	440	144	82	110	186	313
<u>Central Region</u>												
Juab	0	0	580	255	588	206	380	--	--	--	0.00	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	86	263	255	594	743	319	303	426	214	--	--	
Tooele	257	781	311	265	776	710	627	207	203	105	242	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	520	1,353	1,253	767	652	360	147	362	41	122	267	
REGIONAL TOTALS	329	740	618	556	695	410	347	342	111	118	244	427
<u>Southern Region</u>												
Beaver	188	555	428	242	89	920	613	62	767	167	429	
Garfield	112	226	211	545	468	229	480	291	300	257	295	
Iron	--	--	771	220	1,315	342	1,085	315	71	260	--	
Kane	--	233	0	--	588	--	--	--	275	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	62	100	--	--	--	--	--	--	--	--	--	
Sevier	0	950	83	207	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	209	491	240	444	494	338	538	783	612	381	358	
REGIONAL TOTALS	134	348	265	380	617	346	653	429	392	304	342	387
<u>Northeastern Region</u>												
Daggett	132	352	575	637	1,274	489	800	300	467	308	284	
Duchesne	84	347	446	392	258	446	574	845	433	454	325	
Uintah	386	716	513	397	705	474	398	1,036	866	314	888	
REGIONAL TOTALS	217	473	509	427	673	483	507	800	631	364	490	508
<u>Southeastern Region</u>												
Carbon	49	147	283	295	200	5	219	--	--	415	--	
Emery	0	--	0	0	--	--	--	--	--	--	--	
Grand	500	1,125	550	71	240	--	--	--	--	--	--	
San Juan	321	304	341	194	--	100	50	--	50	57	231	
REGIONAL TOTALS	128	220	332	237	210	36	141	--	50	194	235	172
STATE TOTALS	196	428	445	407	621	374	444	401	258	180	284	375

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunter pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
Northern Region						
Box Elder	60	2,228	1,628	0.73	15.15	14.20
Cache	+18	707	150	0.21	4.81	1.31
Davis	+4	85	21	0.25	0.58	0.18
Morgan	+6	171	42	0.25	1.16	0.37
Rich	27	1,071	321	0.30	7.28	2.80
Summit	+5	214	42	0.20	1.46	0.37
Weber	+9	300	128	0.43	2.04	1.12
REGIONAL TOTALS	129	4,779	2,336	0.49	32.51	20.37
Central Region						
Juab	+3	85	342	4.00	0.58	2.98
Salt Lake	+6	257	21	0.08	1.75	0.18
Sanpete	+8	385	171	0.44	2.62	1.49
Tooele	+9	278	64	0.23	1.89	0.56
Utah	+23	1,178	535	0.45	8.01	4.67
Wasatch	11	450	85	0.19	3.06	0.75
REGIONAL TOTALS	60	2,636	1,221	0.46	17.93	10.65
Southern Region						
Beaver	10	385	128	0.33	2.62	1.12
Garfield	30	964	750	0.78	6.56	6.54
Iron	5	278	514	1.85	1.89	4.48
Kane	1	42	21	0.50	0.29	0.18
Millard	+5	107	214	2.00	0.73	1.87
Piute	10	407	385	0.95	2.77	3.36
Sevier	7	321	128	0.40	2.18	1.12
Washington	+2	85	42	0.50	0.58	0.37
Wayne	24	771	921	1.19	5.24	8.03
REGIONAL TOTALS	94	3,364	3,107	0.92	22.88	27.10
Northeastern Region						
Daggett	7	278	257	0.92	1.89	2.24
Duchesne	24	900	600	0.67	6.12	5.23
Uintah	50	2,057	2,228	1.08	13.99	19.43
REGIONAL TOTALS	81	3,236	3,086	0.95	22.01	26.91
Southeastern Region						
Carbon	5	214	128	0.60	1.46	1.12
Emery	4	171	107	0.63	1.16	0.93
Grand	1	21	21	1.00	0.14	0.18
San Juan	1	21	0	0.00	0.14	0.00
REGIONAL TOTALS	11	428	257	0.60	2.91	2.24
Unknown Counties	1	257	1,457	5.67	1.75	12.71
Closed Areas	(98)	(3,852)	(1,772)	(0.46)	(26.20)	(15.45)
STATE TOTALS	376	14,702	11,466	0.78	100	100

*Total hunter trips from questionnaire returns.

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

()Data reported for closed areas.

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>							
Box Elder	1.27	1.41	1.26	0.78	0.88	0.80	0.73
Cache	0.74	0.61	0.40	0.50	0.47	0.54	0.21*
Davis	0.00	0.27	0.22*	0.36*	0.45*	0.18*	0.25*
Morgan	0.68	0.57	0.74	0.30	0.15	0.32	0.25*
Rich	0.76	0.53	0.53	0.51	0.44	0.50	0.30
Summit	0.77	0.48	0.38	0.32	0.50	0.23	0.20*
Weber	0.58	0.85	0.16	0.39	0.47	0.67	0.43*
<u>REGIONAL TOTALS</u>	<u>0.87</u>	<u>0.94</u>	<u>0.76</u>	<u>0.56</u>	<u>0.58</u>	<u>0.55</u>	<u>0.49</u>
<u>Central Region</u>							
Juab	1.24	0.94	1.14*	0.17	0.36*	0.33*	4.00*
Salt Lake	0.87*	0.64*	0.75*	2.08*	0.50*	0.25*	0.08*
Sanpete	0.59	0.56	1.40*	0.31*	0.33*	0.64*	0.44*
Tooele	0.69*	0.86	0.54	0.86*	0.30*	0.53*	0.23*
Utah	0.90	0.57	0.64	0.50*	1.08*	0.77*	0.45*
Wasatch	0.67	0.58	0.50	0.54	0.65	0.28	0.19
<u>REGIONAL TOTALS</u>	<u>0.76</u>	<u>0.64</u>	<u>0.68</u>	<u>0.62</u>	<u>0.63</u>	<u>0.51</u>	<u>0.46</u>
<u>Southern Region</u>							
Beaver	1.06	0.86	1.06	1.24	0.95	1.29	0.33
Garfield	1.24	1.20	1.34	1.12	1.33	1.33	0.78
Iron	0.50	0.82	0.92	0.92	1.35	1.00	1.85
Kane	0.00	0.00	0.71	0.00	--	0.00	0.50
Millard	0.00	0.70	0.00	1.00*	1.88*	0.67*	2.00*
Piute	0.92	0.79	2.00	0.93	1.30	1.44	0.95
Sevier	0.55	0.58	0.45	0.85	0.67	0.67	0.40
Washington	2.00*	1.75	0.00	5.50*	--	0.00*	0.50*
Wayne	1.49	1.19	1.42	1.22	1.26	1.25	1.19
<u>REGIONAL TOTALS</u>	<u>1.11</u>	<u>0.96</u>	<u>1.17</u>	<u>1.21</u>	<u>0.16</u>	<u>1.19</u>	<u>0.92</u>
<u>Northeastern Region</u>							
Daggett	1.28	0.77	0.84	1.00	1.04	0.16	0.92
Duchesne	1.26	0.70	1.00	0.85	1.31	0.50	0.67
Uintah	1.21	0.94	1.01	1.16	1.15	0.98	1.08
<u>REGIONAL TOTALS</u>	<u>1.23</u>	<u>0.82</u>	<u>0.97</u>	<u>1.04</u>	<u>1.17</u>	<u>0.76</u>	<u>0.95</u>
<u>Southeastern Region</u>							
Carbon	0.82	0.53	0.19*	0.44*	0.27*	0.33*	0.60
Emery	0.92	1.26	1.00*	0.00*	0.08*	1.50*	0.63
Grand	0.00	1.50	0.38	0.25	--	0.00	1.00
San Juan	0.25	0.17	0.00	1.50*	1.00*	0.00*	0.00
<u>REGIONAL TOTALS</u>	<u>0.77</u>	<u>0.69</u>	<u>0.28</u>	<u>0.47</u>	<u>0.26</u>	<u>0.90</u>	<u>0.60</u>
Unknown counties	1.95	1.25	0.22	2.00	--	7.50	5.67
Mixed counties	0.00	0.00	0.00	0.00	--	--	--
Illegal areas (Total)	0.00	0.00	0.00	(0.62)*	(0.60)*	(0.60)*	(0.46)*
<u>STATE TOTALS</u>	<u>0.92</u>	<u>0.85</u>	<u>0.85</u>	<u>0.79</u>	<u>0.81</u>	<u>0.72</u>	<u>0.78</u>

*Closed season.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
Northern Region							
Box Elder	15.08	31.07	23.29	18.19	15.56	18.95	14.20
Cache	6.59	3.06	1.87	3.84	4.56	4.83	1.31*
Davis	0.00	0.60	0.27*	0.50*	2.86*	0.92*	0.18*
Morgan	2.37	1.19	2.68	1.36	0.44	2.60	0.37*
Rich	10.91	5.74	4.95	4.33	3.48	3.90	2.80
Summit	6.33	3.50	2.95	2.35	3.13	1.86	0.37*
Weber	1.80	1.64	0.40	1.86	1.52	3.34	1.12*
REGIONAL TOTALS	43.13	46.80	36.41	32.43	31.55	36.43	20.37
Central Region							
Juab	1.34*	1.12*	2.14*	0.12*	0.35*	0.37*	2.98*
Salt Lake	1.34*	0.67*	1.61*	3.09*	0.71*	0.18*	0.18*
Sanpete	1.80	1.34	0.94*	1.11*	1.42*	1.30*	1.49*
Tooele	0.57	3.28	2.54	1.49*	0.62*	1.48*	0.56*
Utah	4.84	3.80	4.55*	2.85*	5.72*	5.02*	4.67*
Wasatch	6.18	5.96	1.74	3.22	1.34	1.86	0.75
REGIONAL TOTALS	16.06	16.17	13.52	11.88	10.17	10.22	10.65
Southern Region							
Beaver	0.87	2.38	4.55	2.60	1.87	1.67	1.12
Garfield	4.32	5.29	14.86	9.28	10.46	9.66	6.54
Iron	0.26	1.04	1.61	2.85	3.13	1.30	4.48
Kane	0.00	0.00	0.67	0.00	0.00	0.00	0.18
Millard	0.00	0.52	0.00	0.62*	2.68*	0.74*	1.87*
Piute	1.13	1.64	0.80	1.73	2.32	4.27	3.36
Sevier	1.03	2.09	1.34	2.72	2.86	1.48	1.12
Washington	0.10*	0.52*	0.00	4.08*	0.00*	0.00*	0.37*
Wayne	6.07	5.07	6.29	9.53	9.21	7.44	8.03
REGIONAL TOTALS	13.79	18.55	30.12	33.42	32.54	26.58	27.10
Northeastern Region							
Daggett	3.29	1.27	4.28	1.36	2.14	0.55	2.24
Duchesne	6.28	4.92	4.15	5.69	5.72	2.60	5.23
Uintah	9.68	7.60	10.31	13.49	16.99	15.98	19.43
REGIONAL TOTALS	19.25	13.79	18.74	20.55	24.85	19.15	26.91
Southeastern Region							
Carbon	4.27	2.24	0.40*	0.50*	0.53*	0.92*	1.12
Emery	1.24	1.79	0.13*	0.00*	0.09*	3.90*	0.93
Grand	0.00	0.22	0.40	0.12	—	0.00	0.18
San Juan	0.15	0.07	0.00	0.37*	0.27*	0.00*	0.00
REGIONAL TOTALS	5.66	4.32	0.94	0.99	0.89	4.83	2.24
Unknown counties	2.11	0.37	0.27	0.74	0.00	2.78	12.71
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Illegal areas	(2.78)	(2.31)	(10.04)	(17.95)	(15.25)	(14.83)	(11.47)
STATE TOTALS	100	100	100	100	100	100	100

*Closed season; ()Percent of total harvest in closed areas.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>							
Box Elder	10.96	17.48	15.74	18.40	14.33	16.89	15.15
Cache	8.16	4.23	3.99	6.07	7.89	6.38	4.71*
Davis	0.00	1.89	1.03*	1.08*	5.14*	3.72*	0.58*
Morgan	3.23	1.77	3.08	3.62	2.39	5.85	1.16*
Rich	13.19	9.15	7.98	6.75	6.44	5.58	7.28
Summit	7.64	6.18	6.61	5.77	5.07	5.71	1.46*
Weber	2.85	1.64	2.17	3.72	2.60	3.59	2.04*
<u>REGIONAL TOTALS</u>	<u>46.03</u>	<u>42.33</u>	<u>40.59</u>	<u>45.40</u>	<u>43.87</u>	<u>47.74</u>	<u>32.51</u>
<u>Central Region</u>							
Juab	1.00*	1.01*	1.60*	0.59*	0.79*	0.79*	0.58*
Salt Lake	1.42*	0.88*	1.82*	1.17*	1.15*	0.53*	1.75*
Sanpete	2.80	2.02	0.57*	2.84*	3.55*	1.46*	2.62*
Tooele	0.76*	3.22	3.99	1.37*	1.66*	1.99*	1.89*
Utah	4.98	5.62	6.04*	4.50*	4.27*	4.65*	8.01*
Wasatch	8.49	8.77	2.96	4.70	1.66	4.78	3.06
<u>REGIONAL TOTALS</u>	<u>19.45</u>	<u>21.51</u>	<u>16.99</u>	<u>15.17</u>	<u>13.09</u>	<u>14.23</u>	<u>17.93</u>
<u>Southern Region</u>							
Beaver	0.76	2.33	3.65	1.66	1.59	0.93	2.62
Garfield	3.23	3.72	9.46	6.56	6.37	5.18	6.56
Iron	0.47	1.07	1.48	2.45	1.88	0.93	1.89
Kane	0.00	0.00	0.80	0.00	0.65	0.00	0.29
Millard	0.28	0.63	0.00	0.49*	1.15*	0.79*	0.73*
Piute	1.14	1.77	0.34	1.47	1.45	2.12	2.77
Sevier	1.80	3.03	2.51	2.54	3.47	1.59	2.18
Washington	0.05*	0.25*	0.00	0.59*	0.14*	0.13*	0.58*
Wayne	3.28	3.75	3.76	6.16	5.93	4.25	5.24
<u>REGIONAL TOTALS</u>	<u>11.48</u>	<u>16.40</u>	<u>22.01</u>	<u>21.92</u>	<u>22.64</u>	<u>15.96</u>	<u>22.88</u>
<u>Northeastern Region</u>							
Daggett	2.37	1.39	4.33	1.08	1.66	2.25	1.89
Duchesne	4.60	5.93	3.53	5.28	3.54	3.84	6.12
Uintah	7.40	6.88	3.67	9.20	11.95	11.70	13.99
<u>REGIONAL TOTALS</u>	<u>14.37</u>	<u>14.20</u>	<u>16.53</u>	<u>15.56</u>	<u>17.15</u>	<u>17.95</u>	<u>22.01</u>
<u>Southeastern Region</u>							
Carbon	4.79	3.60	1.82*	0.88*	1.59*	1.99*	1.46
Emery	1.23	1.20	0.11*	0.20*	0.94*	1.86*	1.16
Grand	0.14	0.12	0.91	0.39	0.00	0.00	0.14
San Juan	0.57	0.38	0.00	0.20*	0.22*	0.00*	0.14
<u>REGIONAL TOTALS</u>	<u>6.74</u>	<u>5.30</u>	<u>2.85</u>	<u>1.66</u>	<u>2.75</u>	<u>3.85</u>	<u>2.91</u>
Unknown counties	1.93	0.25	1.03	0.29	0.50	0.26	1.75
Mixed counties	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Illegal areas	0.00	0.00	(12.99)	(13.91)	(20.60)	(17.91)	(26.21)
<u>STATE TOTALS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

*Closed season; ()Percent of total pressure in closed areas.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-85.

Year	Total* Hunters	Total* Harvest	Hunter-days Afield	Sage Grouse Per Hunter-day	Sage Grouse Per Hunter
1951	840	2,458	--	--	2.93
1952	678	2,230	--	--	3.29
1953	895	2,581	--	--	2.88
1954	802	2,510	--	--	3.13
1955	579	1,742	--	--	3.01
1956	495	1,375	--	--	2.97
1957	470	1,303	--	--	2.77
1958	567	1,797	--	--	3.17
1959	699	1,875	--	--	2.68
1960	861	2,246	--	--	2.61
1961	1,078**	1,918**	--	--	1.78**
1962***	2,382	5,352	5,097	1.05	1.89
1963	12,366	3,793	15,564	0.89	1.12
1964	4,362	6,827	5,807	1.18	1.56
1965	3,243	3,881	4,673	0.83	1.20
1966	2,612	3,962	4,006	0.99	1.52
1967	5,336	5,089	7,860	0.65	0.95
1968	9,115	11,109	13,601	0.82	1.22
1969	12,894	22,282	20,466	1.09	1.73
1970	12,036	15,877	18,506	0.86	1.32
1971	12,893	20,013	1,509	0.93	1.55
1972	13,040	15,983	22,232	0.72	1.23
1973	10,017	13,926	19,049	0.73	1.39
1974	12,214	15,215	23,516	0.65	1.25
1975	13,996	18,916	25,720	0.74	1.35
1976	15,283	24,541	28,342	0.87	1.61
1977	14,078	18,615	25,759	0.72	1.32
1978	16,231	25,938	29,861	0.87	1.60
1979	16,927	28,280	30,682	0.92	1.67
1980	15,219	22,770	26,893	0.85	1.50
1981	10,083	15,857	18,617	0.85	1.57
1982	8,997	12,383	15,663	0.79	1.38
1983	9,201	14,949	18,467	0.81	1.63
1984	8,283	10,921	15,266	0.72	1.32
1985	7,586	11,466	14,702	0.78	1.51
<hr/>					
TOTALS					
(1963-1985)	246,012	342,593	406,761	(19.26)	(32.50)
<hr/>					
AVERAGES					
(1963-1984)	10,838	15,051	17,821	0.84	1.41

*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, 1985.

Region and County	ALL HUNTS				COMPLETE HUNTS				
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr	Birds/Hunter
<u>Northern Region</u>									
Box Elder	196	486	3,026	16	196	489	3,026	16	0.98
Cache *	--	--	--	--	--	--	--	--	--
Davis *	--	--	--	--	--	--	--	--	--
Morgan *	--	--	--	--	--	--	--	--	--
Rich	31	75	266	18	27	60	227	18	0.68
Summit *	--	--	--	--	--	--	--	--	--
Weber *	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	227	564	3,292	16	223	549	3,253	16	0.95
<u>Central Region</u>									
Juab *	--	--	--	--	--	--	--	--	--
Salt Lake *	--	--	--	--	--	--	--	--	--
Sanpete *	--	--	--	--	--	--	--	--	--
Tooele *	--	--	--	--	--	--	--	--	--
Utah *	2	3	6	17	2	3	6	17	0.33
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	3	6	17	2	3	6	17	0.33
<u>Southern Region</u>									
Beaver	2	10	29.5	6	2	10	29.5	6	0.60
Garfield	11	36	129.5	29	6	20	88.5	25	1.10
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard *	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington *	--	--	--	--	--	--	--	--	--
Wayne	47	126	673.5	85	41	112	60.5	137	0.74
REGIONAL TOTALS	60	172	832.5	120	49	142	178.5	111	0.78
<u>Northeastern Region</u>									
Daggett	9	32	110	19	3	11	53	23	1.09
Duchesne	9	22	41	7	4	6	8	25	0.33
Uintah	74	189	511	149	39	87	240	40	1.10
REGIONAL TOTALS	92	243	662	175	46	104	301	110	1.06
<u>Southeastern Region</u>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	2	2	1.5	2	2	2	1.5	2	1.00
Grand	1	1	2	2	1	1	2	2	2.00
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3	3	3.5	4	3	3	3.5	4	1.33
STATE TOTALS	384	985	4,796	827	323	801	3,742	747	0.93

*Closed Season

Table 12. Sage grouse hunter success trend determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
Northern Region												
Box Elder	29	1.22	22	1.05	13	0.78	16	1.05	13	0.82	16	0.98
Cache	3	0.13	4	0.15	2	0.05	4	0.13	4	0.18	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	7	0.33	5	0.24	7	0.28	13	0.53	17	0.56	18	0.68
Summit	6	0.20	21	0.43	--	--	--	--	--	--	--	--
Weber	6	0.27	--	--	--	--	--	--	11	0.44	--	--
REGIONAL TOTALS	18	0.82	19	0.86	12	0.66	15	0.94	13	0.78	16	0.95
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	68	1.00	58	0.95	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	17	0.33
Wasatch	41	0.85	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	58	0.95	58	0.95	--	--	--	--	--	--	17	0.33
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	20	0.60
Garfield	--	--	41	2.00	72	1.88	--	--	--	--	25	1.10
Iron	36	0.84	18	0.18	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	39	2.11	30	1.76	15	0.90	25	1.35	11	0.94	137	0.74
REGIONAL TOTALS	36	1.78	30	1.71	20	1.06	25	1.35	11	0.94	62	0.78
Northeastern Region												
Daggett	28	1.04	41	0.93	30	0.97	33	1.00	33	0.67	23	1.09
Duchesne	--	--	--	--	22	0.50	60	1.25	45	0.83	25	0.33
Uintah	28	1.49	23	0.73	34	1.20	34	0.89	25	0.80	40	1.10
REGIONAL TOTALS	28	1.23	25	0.75	33	1.13	35	0.93	26	0.79	36	1.06
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	133	1.00
Grand	--	--	--	--	--	--	--	--	--	--	100	2.00
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	114	1.33
STATE TOTALS	21	0.92	21	0.91	14	0.74	18	0.99	14	0.81	20	0.93

Table 13. Sex and age composition of harvested sage grouse, 1985.

Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
<u>Northern Region</u>									
Box Elder	296	35	73	108	93	95	188	174	258
Cache	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	70	9	15	24	31	15	46	192	307
Summit	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	366	44	88	132	124	110	234	177	266
<u>Central Region</u>									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
<u>Southern Region</u>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	236	27	49	76	82	78	160	211	327
REGIONAL TOTALS	236	27	49	76	82	78	160	211	327
<u>Northeastern Region</u>									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	195	18	47	65	70	60	130	200	277
REGIONAL TOTALS	195	18	47	65	70	60	130	200	277
<u>Southeastern Region</u>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	797	89	184	273	276	248	524	192	285

Table 14. Sex and age composition of harvested sage grouse from 1982-85.

Region and County	1982				1983				1984				1985				Averages 1980-84									
	Sex Ratio %		Young/100H		Sex Ratio %		Young/100H		Sex Ratio %		Young/100H		Sex Ratio %		Young/100H		Sex Ratio %		Young/100H							
	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F					
Northern Region																										
Box Elder	385	38	62	73	45	358	41	59	138	95	297	40	60	261	161	296	43	57	258	174						
Cache	4	100	0	--	100	6	67	33	400	200	4	25	75	--	--	--	--	--	--	--						
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Rich	34	29	71	183	183	29	55	45	163	81	34	21	79	230	209	70	57	43	307	192						
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	423	38	62	82	52	393	42	58	141	95	335	38	62	248	160	366	46	54	266	177	503	38	62	127	83	
Central Region																										
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Teocle	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	58	38	62	139	90	
Southern Region																										
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Garfield	193	31	69	214	172	179	39	61	276	184	118	45	55	500	258	--	--	--	--	--						
Iron	21	38	62	82	75	11	27	73	800	267	28	46	54	229	133	--	--	--	--	--						
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Hillard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Wayne	268	40	60	328	231	243	41	59	358	242	268	42	58	196	121	236	46	54	327	211						
REGIONAL TOTALS	482	36	64	254	194	433	39	61	325	216	414	43	57	250	149	236	46	54	327	211	479	42	58	286	187	
Northeastern Region																										
Daggett	38	34	66	157	138	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Uintah	254	47	53	327	243	174	44	56	297	200	71	49	51	321	173	195	45	55	277	200						
REGIONAL TOTALS	292	46	54	293	224	174	44	56	297	200	71	49	51	321	173	195	45	55	277	200	207	43	57	279	192	
Southeastern Region																										
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	1197	39	61	179	125	1000	43	57	228	152	820	41	59	255	155	797	46	54	285	192	1,208	41	59	194	128	

n = wing sample size.

FOREST GROUSE

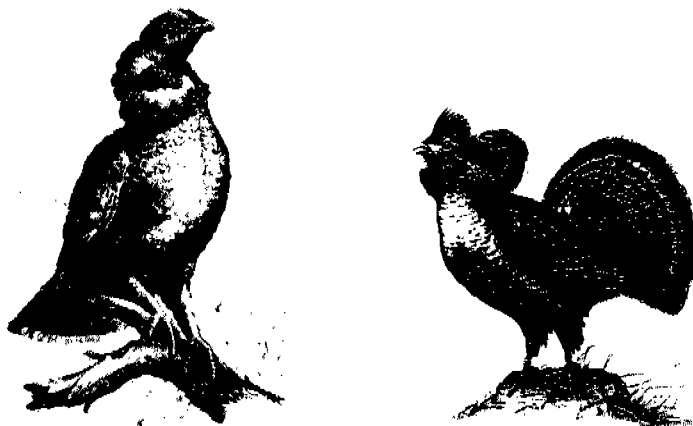
SUMMARY

Judging from harvest statistics for the fall of 1984, the 1985 breeding populations of both ruffed and blue grouse were lower than average, making the fourth consecutive year of below average breeding populations. Production of ruffed grouse appeared to be good even though total populations are depressed. When compared to the lack of ruffed grouse observed during brood surveys in 1984, the observation of 61 ruffed grouse including 10 broods in 1985 suggest a slight increase in abundance. Harvest data confirmed this conclusion.

Production of blue grouse increased from 1984 but remained below the 10-year average. Blue grouse observed per 100 hours of effort increase 33 percent above average. A total of 78 forest grouse broods were observed during 1985 compared with 33 in 1984 and 69 in 1983.

Harvest statistics indicated a higher density of forest grouse. Total harvest increased from 20,396 in 1984 to 23,097 in 1985, a 13 percent increase. Total hunters also increased 10 percent in 1985 compared to 1984, and days afield increased from 27,244 to 31,290.

Field bag check data confirmed the increased success shown by the questionnaire. Limited blue grouse wing data also indicated an increase in both young per 100 adults and young per 100 hens in the Northern region.



Brood Counts

Ruffed Grouse

Results of the annual random brood survey for 1985 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 1985 compared to 1984 and the previous 10-year average follow:

	<u>1985</u>	<u>Percent change from 1984</u>	<u>Average</u>
Total ruffed grouse observed	61	+100	-65
Young per 100 adults	336	—	+5
Mean brood size	4.70	—	+3
Ruffed grouse observed per 100 hours	22	—	-24
Total hours effort	279	-9	-65

Harvest statistics for 1984 indicated a below average breeding population for 1985.

Effort on brood surveys continued to decrease significantly, and was 9 percent less than 1984 and 65 percent below average.

Since no ruffed grouse were observed during the 1984 summer inventory period, 1985 data cannot be compared to 1984. However, in 1985 grouse observed per 100 hours was 24 percent below average, while mean brood size was 3 percent above average indicating good production.

Blue Grouse

Results of the annual random brood survey for 1985 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 1985 compared to 1984 and the 10-year average follow:

	<u>1985</u>	<u>Percent change from 1984</u>	<u>Average</u>
Total blue grouse observed	388	+131	-31
Young per 100 adults	229	+21	-4
Mean brood size	3.56	+12	-11
Blue grouse observed per 100 hours	101	+84	+33
Total hours effort (forest grouse)	384	+26	-52

Harvest statistics for 1984 indicated the blue grouse breeding population for 1985 was significantly below average.

All indications from the 1985 summer surveys on blue grouse were that production increased 21 percent from 1984, but remained below the average.

Total observations increased 131 percent, partially the result of increased effort. The number of grouse observed per 100 hours of effort increased from 1984 and was 33 percent above average.

Wing samples collected at checking stations were limited, but indicated a slightly increased production rate in the Northern Region.

Harvest

Hunter Questionnaire

Results of the 1985 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 1985 compared to 1984 and the 22-year (1963-84) average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Forest grouse hunters	12,646	+10	-15
Forest grouse harvested	23,097	+13	-34
Hunter-days afield	31,290	+15	-11
Forest grouse per hunter-day	0.74	-1	-26
Forest grouse per hunter	1.83	+3	-22
Percent ruffed grouse	37.7	+14	-3
Percent blue grouse	58.1	-6	+7
Percent unidentified	4.2	-12.5	-38

Although statewide grouse populations are below average, results from the harvest questionnaire confirmed increasing forest grouse population levels as implied by summer surveys. Total harvest increased 13 percent from the near record low harvest of 1984. However, hunter success (grouse per hunter-day) was 26 percent below average, and the number of grouse harvested per hunter was 22 percent below average. Hunter pressure increased considerably from 1984, but was still 11 percent below the 22-year average.

Field Bag Checks

A summary of field bag check data for 1985 is found in Table 15. Hunter success trends determined via this method are shown in Table 16. Results of the 1985 survey compared to 1984 and the 10-year (1975-84) average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	480	+17	-70
Total hours hunted	1,882	+24	-70
Forest grouse per hunter (complete hunts)	0.57	+6	+11
Forest grouse bagged per 100 hours	15	+7	0
Average hours per hunter-day (complete hunts)	4.12	+8	+3
Hours hunted per grouse bagged (complete hunts)	7.2	+1	-13

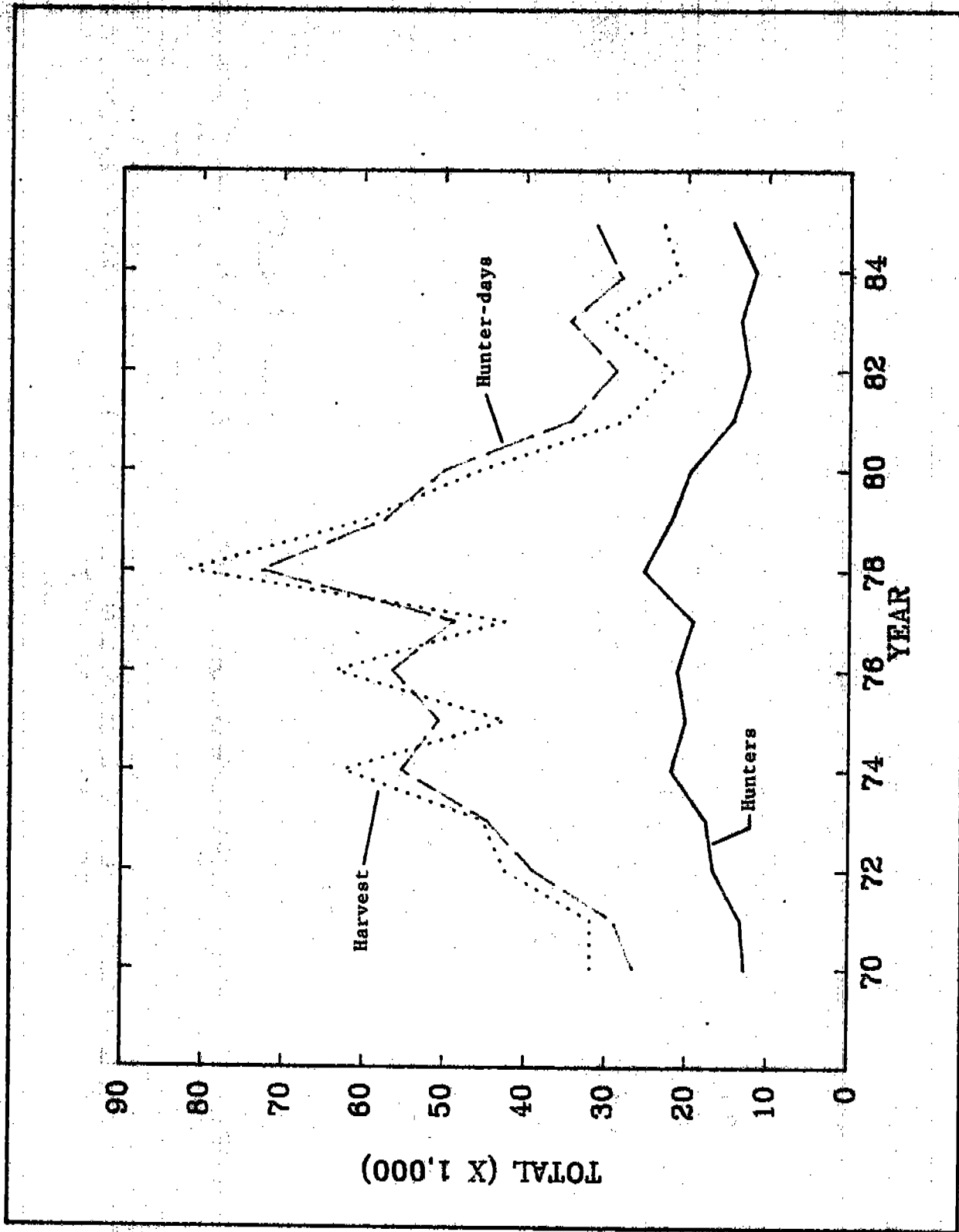


Figure 1. Statewide trends of forest grouse harvest statistics.

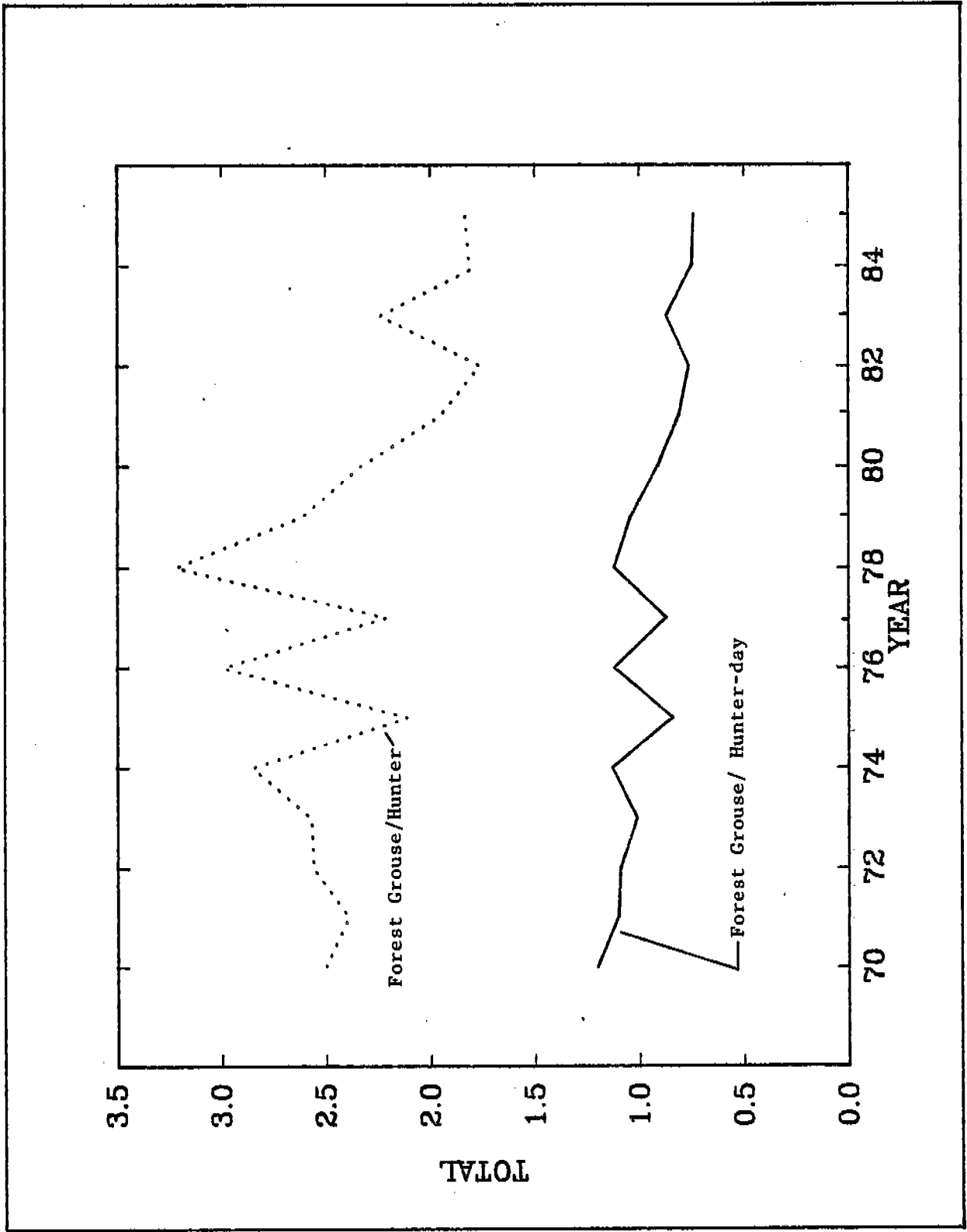


Figure 2. Statewide trends of forest grouse harvest statistics.

Table 1. Ruffed grouse summer inventory, 1985.

Region and County	Distinct Broods		Mean & Adults		Mixed Yng		Total Yng	Total Adults	Total Yng w/o Yng	Young/100 Ad	Veh. Miles	Hours of Effort		Birds/100 Hr		
	# Ad	Yng	Brood	Ad	Yng	Ad						Yng	Veh.		Horse	Walk
Northern Region																
Box Elder	0	0	0	0	0	0	0	0	0	0	143	2	0	32	34	
Coché	2	2	7	3.50	0	0	0	2	7	350	246	46	6	0	52	17
Davis	0	0	0	0	0	0	0	0	0	0	99	7	0	11	18	0
Morgan	0	0	0	0	0	1	1	0	0	0	30	9	34	0	43	2
Rich	3	3	20	6.67	0	0	0	3	20	667	20	2	0	0	2	1,150
Summit	3	3	10	3.33	0	0	2	5	10	200	20	15	14	0	29	52
Weber	1	1	3	3.00	0	0	1	2	3	150	300	20	0	4	24	21
REGIONAL TOTALS	9	9	40	4.44	0	0	4	13	40	308	858	101	54	47	202	26
Central Region																
Juab	0	0	0	0	0	0	0	0	0	0	120	10	0	0	10	0
Salt Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sanpete	1	1	7	7.00	0	0	0	1	7	700	50*	5*	0	0	5*	160
Tooele	0	0	0	0	0	0	0	0	0	0	6	0	0	11	11	0
Utah	0	0	0	0	0	0	0	0	0	0	160	20	0	0	20	0
Wasatch	0	0	0	0	0	0	0	0	0	0	150	10	0	1	11	0
REGIONAL TOTALS	1	1	7	7.00	0	0	0	1	7	700	486	45	0	12	57	14
Southern Region																
Beaver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Millard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Piute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sevier	0	0	0	0	0	0	0	0	0	0	200	20	0	0	20	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wayne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	0	200	20	0	0	20	0
Northeastern Region																
Daggett	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duchesne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southeastern Region																
Carbon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Emery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Juan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTALS	10	10	47	4.70	0	0	4	14	47	336	1,544	166	54	59	279	22

Table 2. Trend of ruffed grouse young per 100 adults, 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	250	250	--	--	--	--	--	--	300	--	--	--
Cache	329	300	300	262	450	138	--	--	700	--	350	--
Davis	--	--	--	--	1,100	--	--	--	--	--	--	--
Morgan	--	500	--	100	400	600	--	--	200	--	0	--
Rich	317	300	--	--	--	--	--	--	--	--	667	--
Summit	217	250	475	400	500	200	200	--	--	--	200	--
Weber	--	--	400	--	500	500	267	--	--	--	150	--
REGIONAL TOTALS	286	245	364	260	460	217	250	--	286	--	308	296
<u>Central Region</u>												
Juab	500	100	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	167	0	--	--	200	92	--	--	--	--	--
Sanpete	233	387	289	462	506	373	390	476	475	--	700	--
Tooele	--	--	--	--	--	--	--	300	--	--	--	--
Utah	57	56	150	300	280	217	300	275	--	--	--	--
Wasatch	--	--	--	--	300	--	--	--	300	--	--	--
REGIONAL TOTALS	164	273	246	424	416	295	282	414	392	--	700	323
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	233	--	575	300	400	600	500	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	233	--	575	300	400	600	500	--	--	--	--	435
<u>Northeastern Region</u>												
Daggett	--	500	--	--	240	--	475	--	--	--	--	--
Duchesne	600	124	67	300	450	--	700	--	--	--	--	--
Uintah	--	500	--	600	--	300	--	--	--	--	--	--
REGIONAL TOTALS	600	195	67	343	300	300	520	--	--	--	--	332
<u>Southeastern Region</u>												
Carbon	200	350	300	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	200	350	300	--	--	--	--	--	--	--	--	283
STATE TOTALS	241	244	298	345	398	294	311	404	353	--	336	321

Table 3. Trend of ruffed grouse mean brood size, 1975-85.

Region and County	Year											Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985		
Northern Region													
Box Elder	5.00	2.50	--	--	--	--	--	--	--	--	--	--	--
Cache	3.83	3.00	4.00	4.33	5.14	3.67	--	--	3.00	--	--	3.50	--
Devils	--	--	--	--	9.00	--	--	--	--	--	--	--	--
Morgan	--	5.00	--	1.60	4.89	6.00	--	--	5.00	--	--	--	--
Rich	4.75	3.00	--	--	--	--	--	--	--	--	--	6.67	--
Summit	3.00	4.00	4.75	4.00	5.00	4.00	2.00	--	--	--	--	3.33	--
Weber	--	--	4.00	--	5.00	5.00	4.00	--	--	--	--	3.00	--
REGIONAL TOTALS	4.00	3.98	4.25	3.88	5.20	4.33	3.33	--	5.00	--	4.44	4.13	--
Central Region													
Juab	5.00	2.00	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	5.00	--	--	--	2.00	2.20	--	--	--	--	--	--
Sanpete	4.50	5.36	4.44	5.11	5.79	5.14	5.47	5.47	4.75	--	7.00	--	--
Tooele	--	--	--	--	--	--	--	4.00	--	--	--	--	--
Utah	4.00	2.00	3.00	4.00	4.67	3.25	3.00	--	--	--	--	--	--
Wasatch	--	--	--	--	3.00	--	--	--	9.00	--	--	--	--
REGIONAL TOTALS	4.50	4.94	4.08	4.83	5.20	4.25	4.57	5.13	5.22	--	7.00	4.75	--
Southern Region													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	2.33	--	5.75	3.00	4.80	6.00	5.00	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2.33	--	5.75	3.00	4.80	6.00	5.00	--	--	--	--	4.48	--
Northeastern Region													
Daggett	--	5.00	--	--	4.00	--	4.75	--	--	--	--	--	--
Buchesne	6.00	3.50	2.00	4.50	4.50	--	7.00	--	--	--	--	--	--
Uintah	--	5.00	--	6.00	--	6.00	--	--	--	--	--	--	--
REGIONAL TOTALS	6.00	4.10	2.00	4.80	4.20	6.00	5.20	--	--	--	--	4.61	--
Southeastern Region													
Carbon	2.00	3.50	3.00	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2.00	3.50	3.00	--	--	--	--	--	--	--	--	--	2.83
STATE TOTALS	3.87	4.12	4.26	4.46	5.06	4.52	4.57	5.13	5.15	--	4.70	4.57	--

Table 4. Trend of ruffed grouse observed per 100 hours, 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	54	50	--	--	--	--	--	--	29	--	--	--
Cache	45	13	50	25	18	25	--	3	6	--	--	17
Davis	0	10	--	--	60	--	--	--	--	--	--	--
Morgan	0	33	--	8	149	20	--	--	57	--	--	2
Rich	--	27	--	--	--	--	--	--	--	--	1,150	52
Summit	46	100	144	61	600	21	--	--	--	--	--	21
	--	0	111	--	16	17	31	--	--	--	--	26
REGIONAL TOTALS	41	20	49	18	38	19	10	1	12	--	--	23
<u>Central Region</u>												
Juab	27	40	--	--	--	--	--	--	--	--	--	--
Salt Lake	0	20	4	--	2	150	70	--	--	--	--	--
Sanpete	69	181	125	203	270	200	515	293	271	--	--	160
Tooele	0	0	0	--	--	--	--	880	--	--	--	--
Utah	32	19	25	30	39	37	14	38	3	--	--	--
Wasatch	0	0	--	--	48	3	--	--	86	--	--	--
REGIONAL TOTALS	23	64	56	99	73	47	98	144	63	--	14	74
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	0	--	0	--	--	--	--	--	--	--	--	--
Iron	0	--	0	--	--	--	--	--	--	--	--	--
Kane	0	--	0	--	--	--	--	--	--	--	--	--
Millard	--	--	0	--	--	--	--	--	--	--	--	--
Piute	0	--	0	--	--	--	--	--	--	--	--	--
Sevier	2	--	12	2	15	3	2	--	--	--	--	--
Washington	0	--	0	--	--	--	--	--	--	--	--	--
Wayne	--	--	0	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	--	9	2	15	3	2	--	--	--	--	6
<u>Northeastern Region</u>												
Daggett	0	20	0	--	85	--	164	--	--	--	--	--
Duchesne	11	47	9	46	48	--	12	--	--	--	--	--
Uintah	0	62	0	11	--	350	--	--	--	--	--	--
REGIONAL TOTALS	5	44	4	21	26	350	26	--	--	--	--	68
<u>Southeastern Region</u>												
Carbon	33	12	7	--	9	--	--	--	--	--	--	--
Emery	0	--	0	--	33	--	--	--	--	--	--	--
Grand	0	--	--	--	--	--	--	--	--	--	--	--
San Juan	0	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	11	7	3	--	12	--	--	--	--	--	--	8
STATE TOTALS	12	25	23	29	37	20	27	66	19	--	22	29

Table 5. Blue grouse summer inventory summary, 1985.

Region and County	Distinct Broods		Mixed Yng & Adults		Total Adults	Total Yng	Total Young/100 Ad	Miles Veh.	Hours of Effort		Birds/100 Hr	
	# Ad	Yng	Ad	Yng					Yng w/o Yng	Ad		Miles Veh.
Northern Region												
Box Elder	0	0	0	0	0	0	0	143	2	0	32	34
Cache	3	3	10	3	8	15	25	246	46	6	0	52
Davis	3	3	11	3	6	6	11	99	7	0	11	18
Morgan	1	1	9	0	0	1	9	30	9	34	0	43
Rich	0	0	0	0	0	0	0	20	2	0	0	2
Summit	2	2	9	0	0	2	9	20	15	14	0	29
Weber	6	6	32	0	2	8	32	300	20	0	4	24
REGIONAL TOTALS	15	15	71	4	13	32	86	858	101	54	47	282
Central Region												
Juab	0	0	0	0	3	3	0	120	10	0	0	10
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	8	8	27	5	10	9	37	6	0	0	11	11
Utah	6	6	21	0	6	12	21	160	20	0	0	20
Wasatch	0	0	0	0	0	0	0	150	10	0	1	11
REGIONAL TOTALS	14	14	48	5	18	37	58	436	40	0	12	52
Southern Region												
Beaver	1	1	2	0	0	1	2	111	3	0	6	9
Garfield	7	7	19	2	3	11	22	24	6	15	6	27
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	9	9	23	0	0	9	23	154	13	0	2	15
Millard	3	3	12	0	1	4	12	40	2	10	0	12
Piute	1	1	3	0	0	1	3	25	6	0	0	6
Sevier	6	6	25	0	0	6	25	200	20	0	0	20
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	1	1	6	0	0	1	6	10	1	0	0	7
REGIONAL TOTALS	28	28	90	2	3	33	93	564	51	25	14	90
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region												
Carbon	1	1	3	0	0	1	3	150	--	15*	--	15*
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	8	8	24	0	0	4	24	200	--	10*	--	10*
San Juan	2	2	6	0	0	2	6	300	--	15*	--	15*
REGIONAL TOTALS	11	11	33	0	0	5	33	206	--	40*	--	40*
STATE TOTALS	68	68	242	11	28	118	270	1,858	232	79	73	384

*Estimated

Table 6. Trend of blue grouse young per 100 adults, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Northern Region												
Box Elder	100	429	--	400	380	600	360	--	125	350	--	--
Cache	356	331	100	322	167	83	254	--	467	--	167	--
Davis	0	150	320	500	100	600	--	--	300	250	183	--
Morgan	130	341	117	230	0	233	200	--	--	300	900	--
Rich	167	500	--	--	--	300	--	--	--	--	--	--
Summit	143	333	333	560	325	400	389	--	--	500	450	--
Weber	0	400	400	425	280	425	221	400	--	--	400	--
REGIONAL TOTALS	194	333	167	357	205	217	271	400	220	300	269	266
Central Region												
Juab	500	--	--	200	200	124	300	--	400	400	0	--
Salt Lake	25	333	238	160	230	350	200	38	--	--	--	--
Sanpete	--	325	260	89	275	--	--	471	--	--	--	--
Tooele	86	227	82	108	225	141	138	--	138	--	168	--
Utah	0	300	27	266	169	279	88	100	200	--	175	--
Wasatch	400	400	--	800	214	--	--	200	250	--	--	--
REGIONAL TOTALS	192	277	120	156	200	167	153	317	156	400	157	214
Southern Region												
Beaver	--	--	--	--	200	--	200	214	700	250	200	--
Garfield	400	100	300	380	375	--	--	340	300	241	200	--
Iron	--	--	--	200	233	340	--	--	--	--	--	--
Kane	--	--	--	400	--	--	--	--	267	--	255	--
Millard	--	--	700	567	475	--	--	235	--	100	300	--
Piute	--	200	--	--	--	--	387	350	--	200	300	--
Sevier	233	106	86	214	100	179	155	238	100	80	417	--
Washington	--	500	--	600	400	--	500	--	367	--	--	--
Wayne	--	275	567	--	--	--	--	--	400	--	600	--
REGIONAL TOTALS	246	142	146	288	158	193	253	245	237	164	282	207
Northeastern Region												
Daggett	--	487	367	343	154	336	442	469	500	--	--	--
Duchesne	350	431	380	567	220	409	257	382	340	--	--	--
Uintah	300	525	350	500	460	354	380	238	311	--	--	--
REGIONAL TOTALS	320	461	372	486	202	366	371	381	402	--	--	373
Southeastern Region												
Carbon	167	321	500	225	100	350	200	--	700	300	150	--
Emery	--	--	300	--	--	--	--	--	--	--	--	--
Grand	200	110	300	--	--	--	100	--	--	25	200	--
San Juan	200	155	100	380	250	200	300	--	100	175	300	--
REGIONAL TOTALS	189	209	269	255	140	275	208	--	200	140	206	209
STATE TOTALS	195	281	181	278	188	219	274	297	272	190	229	238

Table 7. Trend of blue grouse mean brood size, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Northern Region												
Box Elder	3.00	5.75	--	4.00	3.80	6.00	3.60	--	5.00	7.00	--	
Cache	5.30	4.48	3.40	4.46	2.50	3.75	3.67	--	4.33	--	3.33	
Davis	--	4.00	3.67	5.00	3.50	6.00	--	--	3.00	5.50	3.67	
Horgan	3.25	4.45	2.80	3.83	--	3.00	2.00	--	--	3.00	9.00	
Rich	5.00	5.00	--	--	--	3.00	--	--	--	--	--	
Summit	2.75	5.00	5.00	5.60	4.33	4.00	3.89	--	--	5.00	4.50	
Weber	--	6.00	4.00	4.25	3.50	4.25	3.57	4.00	--	--	5.33	
REGIONAL TOTALS	4.25	4.67	3.56	4.55	3.63	3.90	3.65	4.00	4.20	4.83	4.73	4.12
Central Region												
Juab	5.00	--	--	4.00	2.00	3.67	4.00	--	4.00	4.00	0.00	
Salt Lake	1.00	5.00	4.75	2.67	3.29	3.50	--	--	--	--	--	
Sanpete	--	3.25	4.33	4.00	2.75	--	--	5.44	--	--	--	
Tooele	3.50	3.45	2.50	4.40	4.20	3.58	3.20	--	3.83	--	3.38	
Utah	--	4.29	1.50	3.13	3.13	3.00	7.00	3.00	4.00	--	3.50	
Wasatch	4.00	4.00	--	8.00	5.00	--	--	3.00	5.00	--	--	
REGIONAL TOTALS	3.40	3.97	3.64	3.61	3.30	3.37	3.89	5.05	4.00	4.00	3.43	3.82
Southern Region												
Beaver	--	--	--	--	5.00	--	4.00	2.60	7.00	3.33	2.00	
Garfield	6.00	--	6.00	4.75	5.00	--	--	3.40	3.00	3.22	--	
Iron	--	--	--	2.00	3.50	4.25	--	--	--	--	--	
Kane	--	--	--	4.00	--	--	--	--	4.00	--	--	
Millard	--	--	7.00	5.67	6.33	--	--	3.64	--	2.67	4.00	
Piute	--	2.00	--	--	--	--	4.67	3.50	--	4.00	3.00	
Sevier	3.82	3.17	4.29	4.50	3.29	4.95	3.44	4.04	2.50	2.00	4.16	
Washington	--	5.00	--	6.00	4.00	--	5.00	--	3.67	--	--	
Wayne	--	5.50	6.00	--	--	--	--	--	4.00	--	6.00	
REGIONAL TOTALS	4.00	3.50	4.90	4.65	4.04	4.82	4.15	3.70	3.58	2.95	3.21	4.03
Northeastern Region												
Daggett	--	4.88	3.67	4.00	4.00	7.20	4.45	4.91	4.33	--	--	
Duchesne	7.00	4.60	4.22	5.30	3.00	5.00	3.60	3.88	3.40	--	--	
Uintah	4.50	5.25	3.50	5.00	5.75	3.70	4.75	2.71	5.60	--	--	
REGIONAL TOTALS	5.33	4.78	3.94	4.83	3.95	4.90	4.35	4.00	4.63	--	--	4.52
Southeastern Region												
Carbon	3.33	4.25	4.75	4.50	2.00	3.50	2.00	--	7.00	3.00	3.00	
Emery	--	--	3.00	--	--	--	--	--	--	--	--	
Grand	4.00	3.67	6.00	--	--	--	2.50	--	--	--	3.00	
San Juan	3.50	3.40	4.00	6.00	5.00	4.00	3.00	--	4.00	1.75	3.00	
REGIONAL TOTALS	3.57	3.88	4.57	5.40	3.50	3.67	2.60	--	5.50	2.17	3.00	3.87
STATE TOTALS	4.05	4.29	4.00	4.44	3.69	4.20	3.97	4.06	4.29	3.18	3.56	4.02

Table 8. Trend of blue grouse observed per 100 hours, 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	46	132	--	39	800	58	230	--	64	38	--	--
Cache	124	75	62	41	7	44	74	--	14	--	77	--
Davis	10	52	84	188	140	92	7	--	33	110	94	--
Morgan	35	417	173	127	--	86	30	--	4	200	23	--
Rich	--	40	--	--	--	--	--	--	--	--	--	--
Summit	83	93	81	400	850	18	293	--	--	12	38	--
Weber	125	62	167	42	51	58	174	71	4	--	167	--
REGIONAL TOTALS	80	94	87	65	30	57	121	20	15	28	58	60
<u>Central Region</u>												
Juab	27	0	--	86	38	336	73	--	29	125	30	--
Salt Lake	14	98	112	111	70	450	36	48	14	--	--	--
Sanpete	0	27	31	65	33	--	--	281	--	--	--	--
Tooele	108	354	172	1,080	557	248	271	--	344	--	536	--
Utah	118	54	23	96	176	104	52	36	32	--	165	--
Wasatch	36	250	--	46	88	3	--	53	50	--	--	--
REGIONAL TOTALS	29	91	56	113	109	122	55	127	94	17	183	81
<u>Southern Region</u>												
Beaver	--	--	--	--	107	--	46	220	133	233	33	--
Garfield	56	16	53	86	61	--	--	--	--	141	122	--
Iron	--	--	0	150	333	275	--	--	--	--	--	--
Kane	0	--	0	250	--	--	--	--	122	--	213	--
Millard	--	--	133	250	2,300	--	--	248	15	107	133	--
Piute	0	75	0	--	--	--	557	225	--	200	67	--
Sevier	21	34	28	38	46	68	20	48	50	72	155	--
Washington	0	55	0	--	125	--	800	--	117	--	--	--
Wayne	--	375	2,000	0	--	--	--	--	--	--	700	--
REGIONAL TOTALS	21	40	35	56	61	74	41	74	80	122	140	48
<u>Northeastern Region</u>												
Daggett	0	157	88	100	420	600	736	389	632	--	--	--
Duchesne	14	105	84	148	209	130	75	126	51	--	--	--
Uintah	27	86	20	19	44	256	308	54	239	--	--	--
REGIONAL TOTALS	15	112	63	83	150	220	228	138	232	--	--	138
<u>Southeastern Region</u>												
Carbon	35	77	44	46	19	35	17	--	80	53	33	--
Emery	0	--	40	--	33	--	--	--	--	--	--	--
Grand	33	68	62	6	--	--	--	--	--	50	360	--
San Juan	53	108	24	99	54	46	218	--	100	73	53	--
REGIONAL TOTALS	39	81	38	46	29	38	128	--	90	60	123	61
STATE TOTALS	33	81	52	106	68	93	93	91	83	55	101	76

Table 9. Summary of effort expended on forest grouse brood counts, 1985.

Region and County	Vehicle Miles Traveled	Hours Effort Expended			Total
		Vehicle	Horseback	Walking	
Northern Region					
Box Elder	143	2	0	32	34
Cache	246	46	6	0	52
Davis	99	7	0	11	18
Morgan	30	9	34	0	43
Rich	20	2	0	0	2
Summit	20	15	14	0	29
Weber	300	20	0	4	24
REGIONAL TOTALS	858	101	54	47	202
Central Region					
Juab	120	10	0	0	10
Salt Lake	---	---	---	---	---
Sanpete	---	---	---	---	---
Tooele	6	0	0	11	11
Utah	160	20	0	0	20
Wasatch	150	10	0	1	11
REGIONAL TOTALS	436	40	0	12	52
Southern Region					
Beaver	111	3	0	6	9
Garfield	24	6	15	6	27
Iron	---	---	---	---	---
Kane	154	13	0	2	15
Millard	40	2	10	0	12
Piute	25	6	0	0	6
Sevier	200	20	0	0	20
Washington	---	---	---	---	---
Wayne	10	1	0	0	1
REGIONAL TOTALS	564	51	25	14	90
Northeastern Region					
Daggett	---	---	---	---	---
Duchesne	---	---	---	---	---
Uintah	---	---	---	---	---
REGIONAL TOTALS	---	---	---	---	---
Southeastern Region					
Carbon	---	15*	---	---	15*
Emery	---	---	---	---	---
Grand	---	10*	---	---	10*
San Juan	---	15*	---	---	15*
REGIONAL TOTALS	---	40*	---	---	40*
STATE TOTALS	1,858	232	79	73	384

*Estimated

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged				Birds per Hunter-day	% of Pressure	% of Harvest
			Ruffed	Blue	Unident.	Total			
Northern Region									
Box Elder	20	1,135	128	321	65	514	0.45	3.63	2.23
Cache	89	4,436	1,393	2,614	0	4,007	0.90	14.18	17.35
Davis	53	2,593	492	792	23	1,307	0.50	8.29	5.66
Morgan	23	1,028	600	300	0	900	0.88	3.29	3.90
Rich	25	1,307	342	578	65	985	0.75	4.18	4.26
Summit	24	1,157	621	171	22	814	0.70	3.70	3.52
Weber	40	1,885	771	364	0	1,135	0.60	6.02	4.91
REGIONAL TOTALS	274	13,544	4,350	5,143	172	9,665	0.71	43.29	41.85
Central Region									
Juab	4	235	42	85	108	235	1.00	0.75	1.02
Salt Lake	20	857	235	321	0	556	0.65	2.74	2.41
Sanpete	37	1,864	492	728	130	1,350	0.72	5.96	5.84
Tooele	19	664	192+	471	1	664	1.00	2.12	2.87
Utah	61	2,593	685	1,500	43	2,228	0.86	8.29	9.65
Wasatch	39	1,950	621	450	86	1,157	0.59	6.53	5.01
REGIONAL TOTALS	180	8,165	2,271	3,557	362	6,190	0.75	26.09	26.80
Southern Region									
Beaver	13	835	214+	278	0	492	0.59	2.67	2.13
Garfield	10	407	21+	278	22	321	0.79	1.30	1.39
Iron	9	707	321+	342	1	664	0.94	2.26	2.87
Kane	6	192	42+	107	1	150	0.78	0.61	0.65
Millard	8	300	0+	128	22	150	0.50	0.96	0.65
Piute	10	364	85	171	86	342	0.94	1.16	1.48
Sevier	29	1,328	300	728	0	1,028	0.77	4.24	4.45
Washington	3	150	0+	64	257	321	2.14	0.48	1.39
Wayne	7	235	107+	128	22	257	1.09	0.75	1.10
REGIONAL TOTALS	95	4,522	1,093	2,228	408	3,729	0.82	14.45	16.14
Northeastern Region									
Daggett	10	364	107	235	0	342	0.94	1.16	1.48
Duchesne	18	964	321	257	0	578	0.60	3.08	2.50
Uintah	38	1,521	257	1,178	0	1,435	0.94	4.86	6.21
REGIONAL TOTALS	66	2,850	685	1,671	0	2,356	0.83	9.10	10.20
Southeastern Region									
Carbon	14	728	150	321	43	514	0.71	2.33	2.23
Emery	15	728	107	150	0	257	0.35	2.33	1.11
Grand	8	535	42+	300	0	342	0.64	1.71	1.48
San Juan	4	214	0+	42	0	42	0.20	0.68	0.18
REGIONAL TOTALS	41	2,207	300	814	43	1,157	0.52	7.05	5.01
Unknown Counties	0	0	0	0	0	0	0.00	0.00	0.00
Mixed Counties	0	0	0	0	0	0	0.00	0.00	0.00
STATE TOTALS	656	31,290	8,701	13,416	980	23,097	0.74	100	100

*Total hunter trips from questionnaire returns.

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

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	1.20	1.35	0.68	0.87	0.60	0.45
Cache	0.96	0.87	0.78	1.04	0.76	0.90
Davis	0.74	0.66	0.55	0.98	0.66	0.50
Morgan	0.50	0.59	0.73	1.01	0.44	0.88
Rich	0.73	0.17	0.66	0.65	0.86	0.75
Summit	0.72	0.73	0.81	0.75	0.54	0.70
Weber	0.90	0.75	0.81	0.84	0.60	0.60
REGIONAL TOTALS	0.86	0.77	0.74	0.92	0.66	0.71
<u>Central Region</u>						
Juab	1.21	1.07	0.71	0.77	0.43	1.00
Salt Lake	1.12	0.32	0.86	0.84	1.25	0.65
Sanpete	0.73	0.86	0.70	0.60	0.99	0.72
Tooele	1.03	0.89	1.07	0.97	0.40	1.00
Utah	1.09	0.85	0.77	0.85	0.84	0.86
Wasatch	0.65	0.81	0.55	0.76	0.43	0.59
REGIONAL TOTALS	0.95	0.82	0.75	0.78	0.78	0.75
<u>Southern Region</u>						
Beaver	0.89	0.61	1.00	1.13	1.05	0.59
Garfield	0.91	1.08	0.50	1.09	0.67	0.79
Iron	0.73	0.94	0.73	1.03	0.59	0.94
Kane	1.00	0.79	0.53	0.05	0.67	0.78
Millard	1.56	1.04	0.78	0.54	0.64	0.50
Piute	1.10	1.40	0.70	1.16	1.27	0.94
Sevier	1.26	0.61	0.82	1.03	0.73	0.77
Washington	0.00	0.50	0.00	0.42	0.00	2.14
Wayne	0.67	0.40	0.56	0.46	0.34	1.09
REGIONAL TOTALS	1.16	0.80	0.75	0.89	0.82	0.82
<u>Northeastern Region</u>						
Daggett	0.55	0.92	1.15	1.00	0.47	0.94
Duchesne	0.71	1.25	0.75	0.99	0.67	0.60
Uintah	0.87	1.20	0.93	0.98	1.23	0.94
REGIONAL TOTALS	0.76	1.07	0.91	0.98	0.96	0.83
<u>Southeastern Region</u>						
Carbon	0.88	0.72	0.50	0.48	0.00	0.71
Emery	0.83	0.93	0.79	0.70	0.90	0.35
Grand	0.00	1.53	0.50	0.25	1.60	0.64
San Juan	1.00	1.00	1.00	0.25	0.67	0.20
REGIONAL TOTALS	0.87	0.98	0.69	0.54	0.86	0.52
Unknown Counties	0.00	1.67	0.67	1.33	1.00	1.00
STATE TOTALS	0.91	0.81	0.76	0.87	0.75	0.74

Table 12. Percentage distribution of forest grouse harvest by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	4.73	4.41	4.79	4.31	3.38	2.23
Cache	18.23	19.25	18.02	22.58	15.72	17.35
Davis	3.47	2.51	3.03	5.73	4.48	5.66
Morgan	2.01	5.10	3.17	3.42	2.88	3.90
Rich	3.13	0.53	3.73	2.76	3.78	4.26
Summit	5.59	6.47	4.15	3.78	2.49	3.52
Weber	5.67	6.54	9.71	8.58	7.86	4.91
REGIONAL TOTALS	42.83	44.82	46.59	51.16	49.59	41.85
<u>Central Region</u>						
Juab	1.71	2.21	1.06	1.60	1.19	1.02
Salt Lake	3.43	0.91	2.53	2.80	4.48	2.41
Sanpete	3.80	3.35	4.57	4.89	6.97	5.84
Tooele	2.42	2.51	4.15	3.06	1.00	2.87
Utah	16.70	17.43	12.03	10.67	13.34	9.65
Wasatch	4.81	4.11	3.80	3.69	2.58	5.01
REGIONAL TOTALS	32.87	30.52	28.15	26.71	29.56	26.80
<u>Southern Region</u>						
Beaver	0.63	1.75	0.42	0.80	2.09	2.13
Garfield	0.37	1.07	0.21	1.64	1.39	1.39
Iron	1.12	1.29	1.69	1.64	1.59	2.87
Kane	0.37	0.84	0.70	0.04	0.59	0.65
Millard	2.91	2.05	0.99	0.31	0.70	0.65
Piute	0.82	1.60	2.18	0.98	5.57	1.48
Sevier	7.98	2.89	6.26	4.71	4.38	4.45
Washington	0.00	0.08	0.00	0.22	0.00	1.39
Wayne	0.15	0.15	0.35	0.27	0.40	1.11
REGIONAL TOTALS	14.35	11.72	12.81	10.61	16.72	16.14
<u>Northeastern Region</u>						
Daggett	0.86	2.74	2.67	0.84	0.89	1.48
Duchesne	2.16	1.14	3.24	3.78	1.59	2.50
Uintah	3.58	2.28	3.80	3.73	7.56	6.21
REGIONAL TOTALS	6.60	6.16	9.71	8.35	10.05	10.20
<u>Southeastern Region</u>						
Carbon	1.68	1.60	0.70	0.71	0.00	2.23
Emery	1.49	1.98	0.77	1.38	1.79	1.11
Grand	0.00	1.75	0.28	0.09	0.79	1.48
San Juan	0.19	1.07	0.84	0.13	0.40	0.18
REGIONAL TOTALS	3.35	6.39	2.60	2.30	2.99	5.01
Unknown Counties	0.00	0.38	0.14	0.89	0.10	0.00
STATE TOTALS	100	100	100	100	100	100

Table 13. Percentage distribution of forest grouse hunting pressure by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	3.60	2.66	5.33	4.30	4.25	3.63
Cache	17.24	17.95	17.58	18.86	15.35	14.18
Davis	4.28	3.09	4.16	5.11	5.07	8.29
Morgan	3.67	7.05	3.30	2.94	4.91	3.29
Rich	3.91	2.54	4.26	3.72	3.28	4.18
Summit	7.04	7.18	3.89	4.41	3.42	3.70
Weber	5.71	7.12	9.11	8.87	9.69	6.02
REGIONAL TOTALS	45.46	47.59	47.63	48.22	45.97	43.29
<u>Central Region</u>						
Juab	1.29	1.67	1.12	1.82	2.08	0.75
Salt Lake	2.79	2.29	2.24	2.90	2.68	2.74
Sanpete	4.76	3.16	4.95	7.09	5.29	5.96
Tooele	2.14	2.29	2.93	2.75	1.86	2.12
Utah	13.97	16.71	11.77	10.96	11.84	8.29
Wasatch	6.73	4.15	5.22	4.22	4.54	6.23
REGIONAL TOTALS	13.69	30.26	28.24	29.74	28.31	26.09
<u>Southern Region</u>						
Beaver	0.65	2.35	0.32	0.62	1.49	2.67
Garfield	0.37	0.80	0.32	1.31	1.56	1.30
Iron	1.39	1.11	1.76	1.39	2.01	2.26
Kane	0.34	0.87	1.01	0.85	0.67	0.61
Millard	1.70	1.61	0.96	0.50	0.82	0.96
Piute	0.68	0.93	2.34	0.74	3.28	1.16
Sevier	5.78	3.84	5.75	3.99	4.47	4.24
Washington	0.20	0.12	0.05	0.46	0.00	0.48
Wayne	0.20	0.31	0.48	0.50	0.89	0.75
REGIONAL TOTALS	11.32	11.94	13.00	10.38	15.20	14.45
<u>Northeastern Region</u>						
Daggett	1.43	2.41	1.76	0.74	1.41	1.16
Duchesne	2.79	0.74	3.25	3.33	1.79	3.08
Uintah	3.74	1.55	3.09	3.33	4.62	4.86
REGIONAL TOTALS	7.96	4.70	8.10	7.40	7.82	9.10
<u>Southeastern Region</u>						
Carbon	1.73	1.79	1.07	1.20	0.30	2.33
Emery	1.63	1.73	0.75	1.70	1.49	2.33
Grand	0.00	0.93	0.43	0.31	0.37	1.71
San Juan	0.17	0.87	0.64	0.46	0.44	0.68
REGIONAL TOTALS	3.54	5.32	2.88	3.67	2.61	7.05
Unknown Counties	0.03	0.19	0.16	0.57	0.07	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. Statewide summary of forest grouse harvest statistics, 1963-85.

Year	Total Harvest			Hunter-days		Grouse/Hunter-day		Grouse Per Hunter						
	Hunters	Ruffed	Blue	Percent	Unknown	Percent	Total	Afield	Ruffed	Blue	Total			
1963	7,425	5,470	(40.2)	7,372	(54.2)	766	(5.6)	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)	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)	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)	12,387	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	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)	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)	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)	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)	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)	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)	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)	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)	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)	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)	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)	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)	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)	49,899	0.31	0.55	0.91	0.79	1.41	2.33
1981	14,329	8,557	(30.7)	17,852	(64.0)	1,485	(5.3)	34,305	0.25	0.52	0.81	0.60	1.25	1.95
1982	12,384	7,509	(34.5)	12,138	(55.7)	2,131	(9.8)	28,767	0.26	0.42	0.76	0.60	0.98	1.76
1983	13,414	11,366	(37.8)	16,955	(56.4)	1,767	(5.9)	34,530	0.33	0.49	0.87	0.84	1.26	2.24
1984	11,511	6,780	(33.2)	12,647	(62.0)	969	(4.8)	27,244	0.25	0.46	0.75	0.59	1.10	1.77
1985	12,646	8,701	(37.7)	13,416	(58.1)	980	(4.2)	31,290	0.28	0.43	0.74	0.69	1.06	1.83

TOTALS

(1963-85)	339,472	306,673	(38.8)	431,573	(54.5)	53,027	(6.7)	791,273	0.38	0.54	0.99	0.90	1.27	2.33
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AVERAGES

(1963-84)	14,856	13,544	(38.8)	19,007	(54.4)	2,336	(6.8)	34,917	0.39	0.54	1.00	0.91	1.28	2.35
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Table 15. Forest grouse field bag check summary, 1985.

Region and County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr	Birds/180 Hr Hunter	
Northern Region										
Box Elder	77	187	840	130	15	186	837	130	15	0.70
Cache	--	--	--	--	76	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	34	78	274	15	5	65	249	15	6	0.23
Rich	3	3	7	3	43	2	6	0	--	--
Summit	4	7	23	6	26	7	23	6	28	0.86
Weber	--	--	--	--	--	260	1,115	151	14	0.58
REGIONAL TOTALS	118	275	1,144	154	13	260	1,115	151	14	0.58
Central Region										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete*	--	--	--	--	--	--	--	--	--	--
Tooele	4	10	36	15	42	8	26	12	46	1.50
Utah*	30	75	284	10	4	75	284	10	4	0.13
Wasatch	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	34	85	320	25	8	83	310	22	7	0.27
Southern Region										
Beaver	2	7	22	9	41	3	10	1	10	0.33
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	4	8	34	0	0	5	24	0	0	0.00
Millard	--	--	--	--	--	--	--	--	--	--
Plute	1	2	6	3	50	2	6	3	50	1.5
Seyler	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	7	17	62	12	19	10	40	4	10	0.40
Northeastern Region										
Daggett	4	14	64	13	20	2	54	11	20	1.10
Duchesne	1	3	18	0	0	3	18	0	--	0.00
Uintah	35	76	251	58	23	23	87	28	32	1.22
REGIONAL TOTALS	40	93	333	71	21	36	159	39	25	1.08
Southeastern Region										
Carbon	2	6	18	7	39	2	18	7	39	1.17
Emery	2	3	3	4	133	3	3	4	133	1.33
Grand	1	1	2	1	50	1	2	1	50	1.00
San Juan	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5	10	23	12	52	5	23	12	52	1.20
STATE TOTALS	204	480	1,882	274	15	399	1,647	228	14	0.57

*Includes data from Southeastern Region.

Table 16. Forest grouse hunter success trend determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
Northern Region												
Box Elder	--	--	4	0.25	12	0.40	13	0.40	4	0.10	--	--
Cache	6	0.27	11	0.52	8	0.32	10	0.41	15	0.56	15	0.70
Davis	42	1.00	12	0.33	13	0.44	21	0.83	18	0.67	--	--
Morgan	--	--	--	--	33	1.00	29	2.00	--	--	--	--
Rich	2	0.07	8	0.30	2	0.10	2	0.09	13	0.57	6	0.23
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	6	0.24	7	0.27	1	0.04	7	0.28	2	0.08	26	0.86
REGIONAL TOTALS	6	0.25	10	0.43	7	0.28	11	0.45	13	0.47	14	0.58
Central Region												
Juab	81	1.86	--	--	59	1.63	--	--	22	0.59	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	20	1.25	50	1.00	--	--	--	--	17	0.50	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	11	0.51	12	0.55	14	0.70	15	0.62	9	0.39	46	1.50
Wasatch	--	--	--	--	18	0.31	15	0.70	--	--	4	0.13
REGIONAL TOTALS	12	0.56	12	0.55	15	0.71	15	0.63	11	0.43	7	0.27
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	9	0.33	--	--	10	0.33
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	16	0.40	--	--	--	--	--	--	--	--
Millard	--	--	--	--	7	0.25	3	0.14	89	1.33	0	0.00
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	9	0.64	88	3.00	--	--	--	--	50	1.50
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	10	0.56	58	2.00	5	0.20	89	1.33	10	0.40
Northeastern Region												
Daggett	54	1.60	--	--	56	1.25	55	1.75	--	--	20	1.10
Duchesne	0	0.00	17	0.50	20	0.50	--	--	26	1.15	0	0.00
Uintah	--	--	34	1.69	19	0.61	14	0.59	29	1.25	32	1.22
REGIONAL TOTALS	39	1.26	32	1.49	21	0.65	24	0.92	28	1.22	25	1.08
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	39	1.17
Emery	--	--	--	--	--	--	--	--	--	--	133	1.33
Grand	--	--	100	1.00	--	--	100	2.00	--	--	50	1.00
San Juan	--	--	50	1.00	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	83	1.00	--	--	100	2.00	--	--	52	1.20
STATE TOTALS	8	0.35	11	0.51	12	0.49	14	0.55	14	0.54	14	0.57

Table 17. Sex and age composition of harvested blue grouse, 1985.

Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total*		
<u>Northern Region</u>									
Box Elder	17	1	1	2	6	9	15	750	1,500
Cache+	---	---	---	---	---	---	---	---	---
Davis+	---	---	---	---	---	---	---	---	---
Morgan	---	---	---	---	---	---	---	---	---
Rich+	---	---	---	---	---	---	---	---	---
Summit	---	---	---	---	---	---	---	---	---
Weber+	83	16	16	32	26	25	51	159	319
REGIONAL TOTALS	100	17	17	34	32	34	66	194	388
<u>Central Region</u>									
Juab	---	---	---	---	---	---	---	---	---
Salt Lake	---	---	---	---	---	---	---	---	---
Sanpete	---	---	---	---	---	---	---	---	---
Tooele	---	---	---	---	---	---	---	---	---
Utah	---	---	---	---	---	---	---	---	---
Wasatch	---	---	---	---	---	---	---	---	---
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---
<u>Southern Region</u>									
Beaver	---	---	---	---	---	---	---	---	---
Garfield	---	---	---	---	---	---	---	---	---
Iron	---	---	---	---	---	---	---	---	---
Kane	---	---	---	---	---	---	---	---	---
Millard	---	---	---	---	---	---	---	---	---
Piute	---	---	---	---	---	---	---	---	---
Sevier	---	---	---	---	---	---	---	---	---
Washington	---	---	---	---	---	---	---	---	---
Wayne	---	---	---	---	---	---	---	---	---
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---
<u>Northeastern Region</u>									
Daggett	---	---	---	---	---	---	---	---	---
Duchesne	---	---	---	---	---	---	---	---	---
Uintah	---	---	---	---	---	---	---	---	---
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---
<u>Southeastern Region</u>									
Carbon	---	---	---	---	---	---	---	---	---
Emery	---	---	---	---	---	---	---	---	---
Grand	---	---	---	---	---	---	---	---	---
San Juan	---	---	---	---	---	---	---	---	---
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---
STATE TOTALS	100	17	17	34	32	34	66	194	388

*Includes unclassified juveniles.

+Combined data from Davis, Cache, Rich and Weber counties considered as one population of blue grouse.

QUAIL

SUMMARY

The 1985 breeding populations of California and Gambel's quail were slightly lower than 1984, and considerably less than average.

However, production of Gambel's quail increased from 1984, but remained well below average. Likewise, quail observation trends remain below average in most areas of the state.

Statewide harvest statistics, when compared to 1984, showed a decrease in total hunters and total harvest. Hunter success (birds per hunter-day) remained below average statewide. There was an increase in hunter days afield but decrease in total harvest of Gambel's quail reported in Washington County.



Brood Counts

Results of the annual random brood counts for 1985 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 1985 compared to 1984 and the previous 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total quail observed	258	+83	-61
Young per 100 adults	473	+122	+95
Mean brood size	8.62	+70	+23
Quail observed per 100 hours	645	+117	+11
Total hours effort	40	-16	-64

Harvest statistics for 1984 indicated a decreased breeding population of quail statewide; breeding populations of California quail decreased significantly. However, Gambel's quail in Washington County showed a slight increase in breeding population.

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

Brood counts indicated good production of both California and Gambel's quail. Production increased significantly from 1984 and was well above average.

Harvest

Results of the annual hunter questionnaire for 1985 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 1985 season to 1984 and the previous 26-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Quail hunters	3,065	-16	-53
Quail harvested	7,051	-15	-62
Hunter-days afield	7,994	-18	-51
Quail per hunter-day	0.88	+4	-22
Quail per hunter	2.30	+1	-18

Harvest for 1985 decreased 15 percent from 1984 and 62 percent below average.

Hunter success and total harvest for Washington County (Gambel's quail) decreased 37 percent and 35 percent, respectively from 1984. Hunter-days afield increased 5 percent. Approximately 36 percent of the statewide harvest of quail was taken in Washington County during 1985 compared to 46 percent in 1984 and nearly 24 percent in 1983.

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

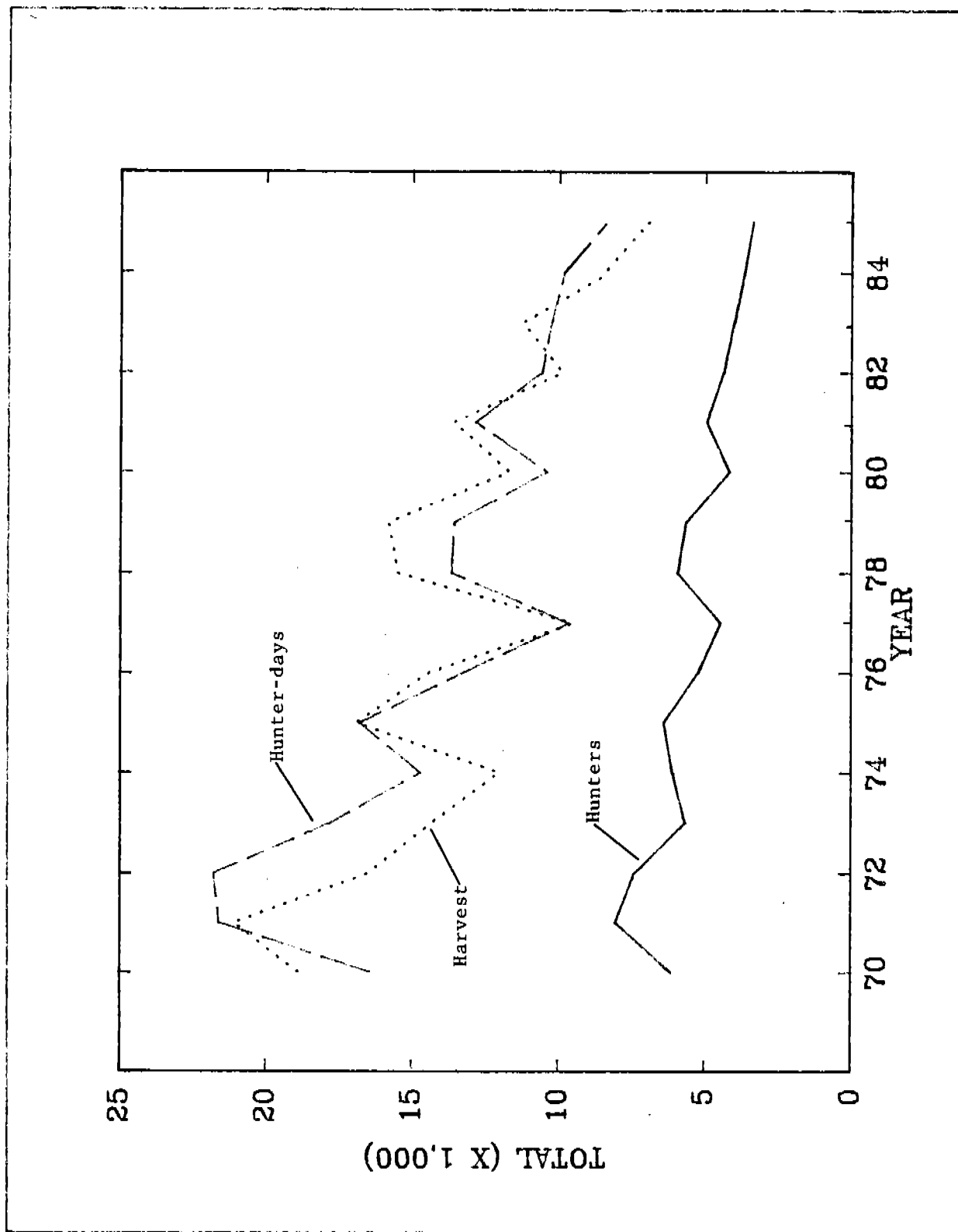


Figure 1. Statewide trend of quail harvest statistics.

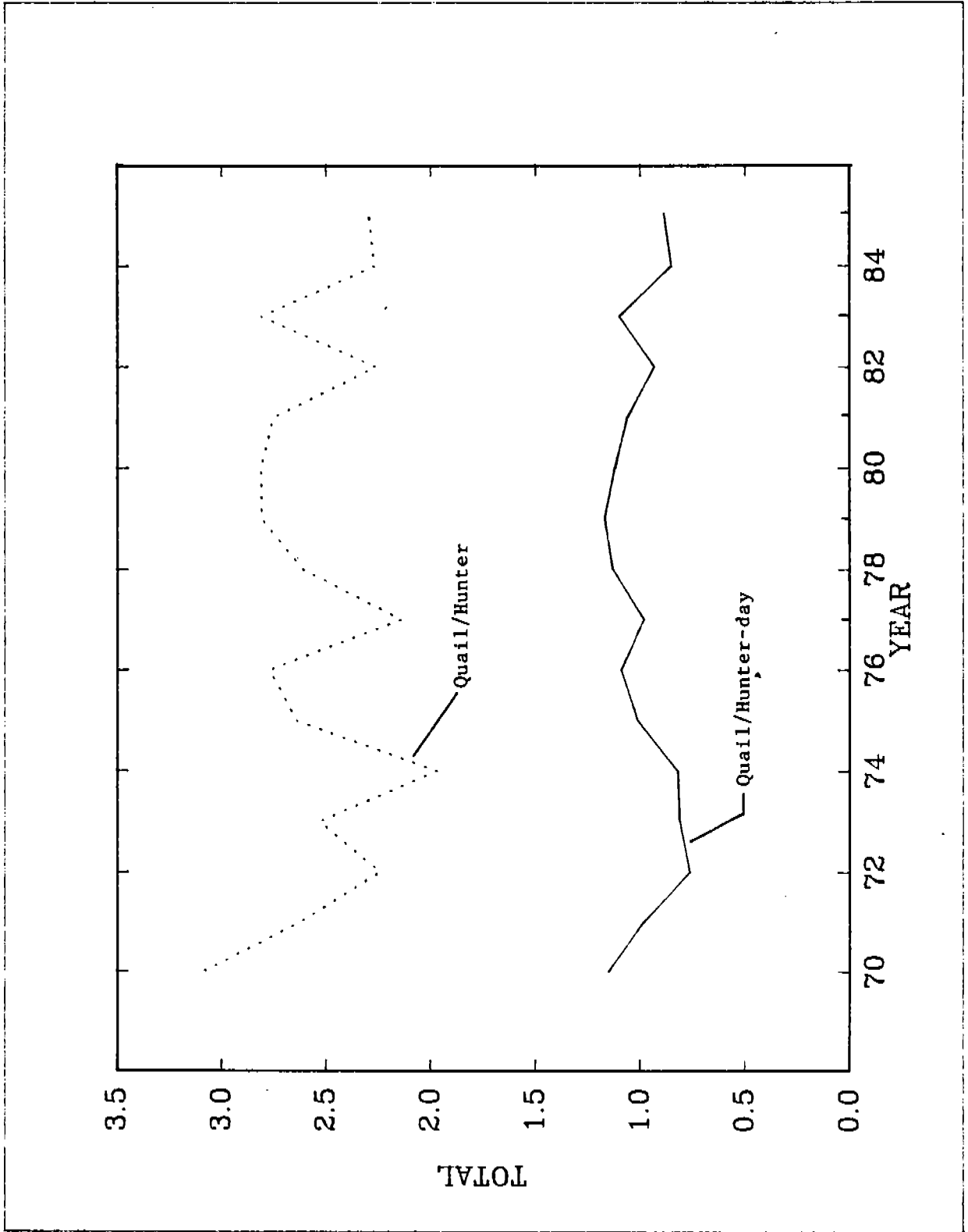


Figure 2. Statewide trend of quail harvest statistics.

Table 1. Quail summer inventory summary, 1985.

Region and County	Distinct Broods		Mixed Yng & Adults		Total Adults	Total Yng	Young/100 Ad	Veh. Miles	Hours of Effort		Birds/100 Hr	
	# Ad	Yng	Mean Brood	Ad Yng					Yng w/o Yng	Veh. Horse		Walk Total
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	2	2	21	10.50	0	0	2	21	1,050	2	2	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	2	2	21	10.50	0	0	2	21	1,050	2	2	
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	2	2	14	7.00	0	0	2	14	700	5	5	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	2	2	14	7.00	0	0	2	14	700	5	5	
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	2	4	18	9.00	0	0	9	13	138	9	0	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	
Washington	7	11	59	8.43	14	101	3	28	160	80	16	
Wayne	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	9	15	77	8.56	14	101	12	41	178	434	33	
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	
STATE TOTALS	13	19	112	8.62	14	101	12	45	213	473	40	
											645	

*Waterhole count

Table 2. Trend of quail young per 100 adults, 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	440	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	196	94	35	--	--	--	--	--
Morgan	--	300	--	--	500	--	--	--	550	--	1,050	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	217	0	133	--	233	--	--	--	125	--	--	--
REGIONAL TOTALS	217	180	133	--	209	94	128	--	130	--	1,050	156
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	154	97	86	77	256	400	67	40	40	--	--	--
Sanpete	300	580	230	300	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	229	64	80	44	240	714	100	--	--	--	700	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	188	108	95	127	245	656	72	40	40	--	700	175
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	50	146	98	47	204	156	540	300	133	133	138	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	700	--	--	250	--	--	--	--
*Washington	580	199	149	555	301	93	226	152	624	224	571	--
*Wayne	--	244	238	1,250	--	--	550	--	--	--	--	--
REGIONAL TOTALS	429	190	146	317	283	114	439	162	544	213	434	284
<u>Northeastern Region</u>												
Daggett	450	600	0	--	--	--	--	--	--	--	--	--
Duchesne	314	0	129	190	340	114	583	600	--	--	--	--
Uintah	475	323	383	800	653	338	305	411	--	--	--	--
REGIONAL TOTALS	411	265	122	335	517	282	367	286	--	--	--	323
<u>Southeastern Region</u>												
Carbon	--	450	--	650	--	--	--	--	--	--	--	--
Emery	0	--	0	19	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	300	--	--	--	--	--
San Juan	--	--	41	--	40	--	--	--	--	--	--	--
REGIONAL TOTALS	0	450	38	89	40	--	300	--	--	--	--	153
STATE TOTALS	360	163	112	272	285	155	311	134	412	213	473	242

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

Table 3. Trend of quail mean brood size from 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Northern Region												
Box Elder	--	--	--	--	--	--	11.00	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	6.75	5.00	1.33	--	--	--	--	--
Morgan	--	--	--	--	5.00	--	--	11.00	--	--	10.50	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	3.75	--	--	--	--
REGIONAL TOTALS	--	--	--	--	6.40	5.00	6.85	--	5.20	--	10.50	5.86
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	6.80	7.00	6.40	2.00	4.60	4.00	--	--	3.00	--	--	--
Sanpete	6.00	5.80	4.33	4.75	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	7.00	2.50	4.00	4.00	4.00	5.00	3.00	--	--	--	7.00	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	6.56	5.64	5.78	3.44	4.43	4.50	3.00	--	3.00	--	7.00	4.54
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	8.00	10.20	6.67	6.25	11.25	5.63	8.54	--	3.00	4.00	9.00	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	7.00	--	--	--	--	--	--	--
*Washington	0.84	6.08	7.83	11.80	8.51	5.22	6.42	6.00	13.50	5.09	8.43	--
*Wayne	--	9.00	13.00	--	--	--	5.50	--	--	--	--	--
REGIONAL TOTALS	0.63	7.40	8.07	10.21	8.86	5.45	7.97	6.00	11.17	5.06	8.56	8.08
Northeastern Region												
Daggett	4.50	6.00	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	3.43	6.86	6.00	4.00	9.00	--	--	--	--	--
Uintah	10.00	3.55	7.67	8.00	6.34	3.55	12.80	6.17	--	--	--	--
REGIONAL TOTALS	6.86	3.67	4.70	7.53	6.17	3.59	11.71	6.17	--	--	--	6.30
Southeastern Region												
Carbon	--	9.00	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	4.50	--	--	--	--	--
San Juan	--	--	4.50	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	9.00	4.50	--	--	--	4.50	--	--	--	--	6.00
STATE TOTALS	9.16	5.58	6.25	7.55	8.08	4.52	8.09	6.05	9.71	5.06	8.62	7.01

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

Table 4. Trend of quail observed per 100 hours, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	1,800	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	956	729	525	--	--	--	--	--
Morgan	--	1,200	--	--	600	--	--	222	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	238	22	350	--	1,000	--	--	825	--	--	--	--
REGIONAL TOTALS	238	140	350	--	927	729	891	--	511	--	--	541
<u>Central Region</u>												
Juab	--	0	--	--	--	--	--	--	--	--	--	--
Salt Lake	592	2,838	2,092	575	1,067	167	63	527	1,400	--	--	--
Sanpete	480	262	236	400	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	383	512	90	217	1,700	900	75	--	--	--	320	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	513	1,041	805	378	1,429	296	258	414	247	--	320	598
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	1,600	2,867	1,088	867	1,340	1,536	3,911	800	350	177	344	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	50	800	--	--	1,400	--	--	--	--
*Washington	143	632	596	750	2,741	675	275	771	605	380	783	--
*Wayne	14	517	645	333	--	--	650	--	--	--	--	--
REGIONAL TOTALS	917	729	702	667	1,951	867	1,053	691	580	357	663	851
<u>Northeastern Region</u>												
Daggett	157	41	--	--	--	--	--	--	--	--	--	--
Duchesne	153	43	240	310	209	79	205	27	42	--	--	--
Uintah	460	715	483	563	890	613	708	328	100	--	--	--
REGIONAL TOTALS	226	241	350	398	443	314	406	123	58	--	--	284
<u>Southeastern Region</u>												
Carbon	--	220	--	1,500	--	--	--	--	--	--	--	--
Emery	17	--	67	950	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	400	--	--	--	--	--
San Juan	--	0	238	0	127	--	--	--	--	--	--	--
REGIONAL TOTALS	17	110	206	425	127	--	400	--	--	--	--	214
STATE TOTALS	549	571	588	530	1,193	541	720	408	411	297	645	581

*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, 1985.

Region and County	Sample Size*	Hunter-Days Afield	Birds Bagged	Birds Per Hunter-Day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	2	42	21	0.50	0.53	0.30
Cache	1	85	0	0.00	1.06	0.00
Davis	10	814	364	0.45	10.18	5.16
Morgan	2	42	42	1.00	0.53	0.60
Rich	0	0	0	0.00	0.00	0.00
Summit	0	0	0	0.00	0.00	0.00
Weber	13	600	428	0.71	7.51	6.07
REGIONAL TOTALS	28	1,585	857	0.54	19.83	12.15
<u>Central Region</u>						
Juab	1	21	0	0.00	0.26	0.00
Salt Lake	6	342	642	1.88	4.28	9.11
Sanpete	2	42	64	1.50	0.53	0.91
Tooele	1	42	64	1.50	0.53	0.91
Utah	35	1,457	878	0.60	18.23	12.45
Wasatch	2	42	0	0.00	0.53	0.00
REGIONAL TOTALS	47	1,950	1,650	0.85	24.39	23.40
<u>Southern Region</u>						
Beaver	1	128	235	1.83	1.60	3.33
Garfield	0	0	0	0.00	0.00	0.00
Iron	1	64	0	0.00	0.80	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	4	171	107	0.63	2.14	1.52
Plute	0	0	0	0.00	0.00	0.00
Sevier	2	107	192	1.80	1.34	2.72
Washington	34	2,036	2,507	1.23	25.47	35.56
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	42	2,507	3,043	1.21	31.36	43.16
<u>Northeastern Region</u>						
Daggett	0	0	0	0.00	0.00	0.00
Duchesne	7	578	407	0.70	7.23	5.77
Uintah	11	642	642	1.00	8.03	9.11
REGIONAL TOTALS	18	1,221	1,050	0.86	15.27	14.89
<u>Southeastern Region</u>						
Carbon	6	342	342	1.00	4.28	4.85
Emery	5	342	107	0.31	4.28	1.52
Grand	1	21	0	0.00	0.26	0.00
San Juan	1	21	0	0.00	0.26	0.00
REGIONAL TOTALS	13	728	450	0.62	9.11	6.38
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	148	7,994	7,051	0.88	100	100

*Total hunter-trips from questionnaire returns.

**Closed to quail hunting in 1984.

Table 6. Summary of quail bagged per hunter-day by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	0.60	0.07	0.25	0.50	0.21	0.50
Cache	0.50	0.00	1.67	1.40	0.00	0.00
Davis	0.80	0.97	0.53	1.00	0.43	0.45
Morgan	0.00	0.40	0.00	2.50	0.00	1.00
Rich	0.00	0.00	0.67	0.00	0.00	0.00
Summit	2.50	0.00	0.00	0.29	0.00	0.00
Weber	0.88	0.67	1.11	1.08	0.64	0.71
<u>REGIONAL TOTALS</u>	<u>0.77</u>	<u>0.59</u>	<u>0.79</u>	<u>0.94</u>	<u>0.40</u>	<u>0.54</u>
<u>Central Region</u>						
Juab	2.75	0.00	1.60	2.00	0.33	0.00
Salt Lake	1.54	0.88	1.13	1.00	0.32	1.88
Sanpete	0.00	0.00	0.00	0.75	0.00	1.50
Tooele	0.00	0.30	0.00	2.00	0.22	1.50
Utah	1.31	0.84	0.81	0.86	0.82	0.60
Wasatch	0.00	1.67	0.00	2.67	1.25	0.00
<u>REGIONAL TOTALS</u>	<u>1.37</u>	<u>0.79</u>	<u>0.86</u>	<u>0.96</u>	<u>0.65</u>	<u>0.85</u>
<u>Southern Region</u>						
Beaver	0.00	2.00	0.00	0.00	0.00	1.83
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	1.50	0.00
Kane	0.00	1.16	0.00	0.00	0.00	0.00
Millard	1.08	1.16	1.97	1.33	1.00	0.63
Piute	0.00	2.00	0.00	0.00	0.50	0.00
Sevier	0.00	2.00	0.14	0.00	0.86	1.80
Washington	1.45	1.99	1.19	1.53	1.98	1.23
Wayne	0.00	1.20	1.00	3.00	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>1.43</u>	<u>1.77</u>	<u>1.27</u>	<u>1.50</u>	<u>1.64</u>	<u>1.21</u>
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	4.50	0.00	0.00
Duchesne	0.74	1.07	1.05	1.46	0.08	0.70
Uintah	0.84	0.74	0.64	0.70	0.72	1.00
<u>REGIONAL TOTALS</u>	<u>0.81</u>	<u>0.84</u>	<u>0.83</u>	<u>1.11</u>	<u>0.54</u>	<u>0.86</u>
<u>Southeastern Region</u>						
Carbon	0.82	0.69	0.89	0.40	0.00	1.00
Emery	0.55	0.75	0.67	0.76	0.00	0.31
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	3.00	1.33	0.00	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>0.60</u>	<u>0.76</u>	<u>0.85</u>	<u>0.67</u>	<u>0.00</u>	<u>0.62</u>
Unknown counties	0.00	0.00	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>1.12</u>	<u>1.06</u>	<u>0.93</u>	<u>1.10</u>	<u>0.85</u>	<u>0.88</u>

Table 7. Percentage distribution of quail harvest by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	1.74	0.31	0.62	1.54	0.98	0.30
Cache	0.15	0.00	1.55	0.83	0.00	0.00
Davis	7.98	5.47	2.95	9.03	6.11	5.16
Morgan	0.00	0.31	0.00	0.59	0.00	0.60
Rich	0.00	0.00	0.31	0.00	0.00	0.00
Summit	0.73	0.00	0.00	0.23	0.00	0.00
Weber	6.10	2.50	9.47	4.87	2.19	6.07
<u>REGIONAL TOTALS</u>	<u>16.69</u>	<u>8.59</u>	<u>14.91</u>	<u>17.09</u>	<u>9.29</u>	<u>12.15</u>
<u>Central Region</u>						
Juab	1.60	0.00	1.24	0.23	0.48	0.00
Salt Lake	5.37	3.59	5.59	4.16	1.46	9.11
Sanpete	0.00	0.00	0.00	0.71	0.00	0.91
Tooele	0.00	0.47	0.00	1.42	0.98	0.91
Utah	17.85	20.16	22.98	13.66	18.33	12.45
Wasatch	0.00	0.78	0.00	0.94	1.22	0.00
<u>REGIONAL TOTALS</u>	<u>24.82</u>	<u>25.00</u>	<u>29.81</u>	<u>21.12</u>	<u>22.49</u>	<u>23.40</u>
<u>Southern Region</u>						
Beaver	0.00	0.31	0.00	0.00	0.00	3.33
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.00	0.00	0.72	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	1.89	7.81	9.16	1.89	7.82	1.52
Piute	0.00	0.31	0.00	0.00	0.48	0.00
Sevier	0.00	0.16	0.16	0.00	1.46	2.72
Washington	43.83	40.78	20.81	24.37	46.45	35.56
Wayne	0.00	0.94	0.47	0.71	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>45.72</u>	<u>50.31</u>	<u>30.59</u>	<u>26.97</u>	<u>56.97</u>	<u>43.16</u>
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	4.28	0.00	0.00
Duchesne	2.90	4.53	10.09	16.16	0.48	5.77
Uintah	6.82	7.03	7.30	12.24	10.76	9.11
<u>REGIONAL TOTALS</u>	<u>9.72</u>	<u>11.56</u>	<u>17.39</u>	<u>32.68</u>	<u>11.24</u>	<u>14.89</u>
<u>Southeastern Region</u>						
Carbon	1.31	3.13	3.88	0.23	0.00	4.85
Emery	1.74	0.94	2.17	1.89	0.00	1.52
Grand	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.00	0.47	1.24	1.08	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>3.05</u>	<u>4.53</u>	<u>7.30</u>	<u>2.10</u>	<u>0.00</u>	<u>6.38</u>
Unknown counties	0.00	0.00	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Table 8. Percentage distribution of quail hunting pressure by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	3.26	4.46	2.32	3.39	3.93	0.53
Cache	0.33	0.17	0.87	0.64	0.61	1.06
Davis	11.26	5.95	5.22	9.93	12.00	10.18
Morgan	1.47	0.83	0.29	0.25	0.41	0.53
Rich	0.00	0.00	0.43	0.00	0.00	0.00
Summit	0.33	0.00	0.43	0.91	0.00	0.00
Weber	7.83	3.97	7.97	4.96	2.90	7.51
<u>REGIONAL TOTALS</u>	<u>24.47</u>	<u>15.37</u>	<u>17.54</u>	<u>20.08</u>	<u>19.87</u>	<u>19.83</u>
<u>Central Region</u>						
Juab	0.65	1.65	0.72	0.13	1.23	0.26
Salt Lake	3.92	4.30	4.64	4.57	3.93	4.28
Sanpete	0.00	0.00	0.00	1.04	0.61	0.53
Tooele	0.16	1.65	0.58	0.78	3.72	0.53
Utah	15.33	25.45	26.52	13.37	19.04	18.23
Wasatch	0.33	0.50	0.00	0.39	0.83	0.53
<u>REGIONAL TOTALS</u>	<u>20.39</u>	<u>33.55</u>	<u>32.46</u>	<u>24.28</u>	<u>29.39</u>	<u>24.39</u>
<u>Southern Region</u>						
Beaver	0.00	0.17	0.14	0.00	0.00	1.60
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.14	0.00	0.41	0.80
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	1.96	7.11	4.35	1.56	6.62	2.14
Piute	0.00	0.17	0.00	0.00	0.83	0.00
Sevier	0.00	0.17	1.01	0.39	1.45	1.34
Washington	33.93	21.65	16.38	17.51	19.87	25.47
Wayne	0.00	0.83	0.43	0.25	0.20	0.00
<u>REGIONAL TOTALS</u>	<u>35.89</u>	<u>30.08</u>	<u>22.46</u>	<u>19.72</u>	<u>29.39</u>	<u>31.36</u>
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	1.56	0.00	0.00
Duchesne	4.40	4.46	8.99	12.14	4.97	7.23
Uintah	9.14	10.08	10.58	19.20	12.63	8.03
<u>REGIONAL TOTALS</u>	<u>13.54</u>	<u>14.55</u>	<u>19.57</u>	<u>32.90</u>	<u>17.59</u>	<u>15.27</u>
<u>Southeastern Region</u>						
Carbon	1.79	4.79	4.06	0.64	2.90	4.28
Emery	3.59	1.32	3.04	2.74	0.61	4.28
Grand	0.00	0.00	0.00	0.13	0.20	0.26
San Juan	0.33	0.17	0.87	0.00	0.00	0.26
<u>REGIONAL TOTALS</u>	<u>5.71</u>	<u>6.28</u>	<u>7.97</u>	<u>3.51</u>	<u>3.72</u>	<u>9.11</u>
Unknown counties	0.00	0.17	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Table 9. Statewide summary of quail harvest statistics, 1951-1985.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Quail Per Hunter-day	Quail Per Hunter
1951	3,856	6,362	7,069	0.90	1.65
1952	2,694	6,105	5,500	1.11	2.27
1953	2,676	5,753	4,494	1.28	2.15
1954	3,855	7,479	8,696	0.86	1.94
1955	--	--	--	0.17	2.10
1956	--	--	--	--	2.26
1957	--	--	--	--	1.85
1958	--	--	--	--	3.73
1959	8,554	22,854	18,174	1.26	2.67
1960	7,117	21,272	13,971	1.52	2.99
1961	9,980	27,362	25,746	1.06	2.74
1962	6,462	18,710	14,660	1.27	2.89
1963	8,059	28,088	16,383	1.71	3.49
1964	8,951	31,189	20,510	1.52	3.48
1965	6,163	17,532	16,528	1.06	2.45
1966	6,465	22,771	16,720	1.36	3.52
1967	8,455	26,187	23,806	1.10	3.10
1968	9,302	28,469	23,132	1.23	3.06
1969	9,160	26,119	22,529	1.16	2.85
1970	6,141	18,896	16,452	1.15	3.08
1971	8,039	21,082	21,595	0.98	2.62
1972	7,380	16,504	21,779	0.76	2.24
1973	5,654	14,324	17,777	0.81	2.53
1974	6,097	12,005	14,702	0.82	1.97
1975	6,397	16,903	16,805	1.01	2.64
1976	5,215	14,454	13,261	1.09	2.77
1977	4,446	9,496	9,646	0.98	2.14
1978	5,924	15,491	13,649	1.13	2.61
1979	5,632	15,821	13,550	1.17	2.81
1980	4,156	11,690	10,400	1.12	2.81
1981	4,946	13,586	12,843	1.06	2.75
1982	4,368	9,870	10,575	0.93	2.26
1983	4,012	11,248	10,232	1.10	2.81
1984	3,654	8,303	9,805	0.85	2.27
1985	3,065	7,051	7,994	0.88	2.30
<hr/>					
TOTALS (1959-85)	173,794	487,261	433,224	1.12	2.80
<hr/>					
AVERAGES (1959-84)	6,566	18,470	16,355	1.13	2.81

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

Index	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980*
Mean calls per station	1.57	0.36	0.06	0.00	2.55	0.76	0.25	0.97	5.20	---*
Mean quail calling per station	0.37	0.11	0.03	0.00	0.40	0.13	0.03	0.19	0.53	---*
Mean total calls route	23.50	5.30	1.00	0.00	38.20	11.40	3.75	14.60	78.00	---*
Mean total quail calling route	5.50	1.70	0.40	0.00	6.00	2.00	0.50	2.80	8.00	---*

*Discontinued.

Table 11. Gambel's quail long period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1974-85. These counts have been conducted since 1962.

Index	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total young	24	145	61	—	67	253	72	37	85	114	166	47
Total adults	6	20	53	—	29	77	52	25	33	14	86	11
Total quail	30	165	114	17	86	330	124	62	118	128	252	58
Young per 100 adults	400	725	115	—	353	329	138	148	258	814	193	427

HUNGARIAN PARTRIDGE

SUMMARY

Harvest data for 1984 indicated that 1985 breeding population densities were well below 1984 and the long term average. The total lack of brood data allowed no estimates of Hun densities for 1985.

The 1985 hunt indicated decreased hunting pressure on Huns when compared to 1984. The number of hunters afield and Huns harvested also decreased significantly in 1985. The hunter-days afield decreased 30 percent from 1984. Total hunters, days afield and harvest remained significantly below the long-term average. Hunter success was 64 percent below the long-term average.



Brood Counts

Results of the annual random brood counts for 1985 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 1985 compared to 1984 and the previous 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total Huns observed	0	--	--
Young per 100 adults	--	--	--
Mean brood size	--	--	--
Huns observed per 100 hours	--	--	--
Total hours effort	38	-83	-56

Harvest data for 1984 indicated a significantly below average breeding population for 1985.

The hours of effort decreased 83 percent from 1984, and 56 percent below average. No hungarian partridge were observed during the summer inventory counts, therefore, no data comparisons could be made.

Harvest

Hunter Questionnaire

Results of the annual hunter questionnaire for 1985 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 1985 season compared to 1984 and the previous 26-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Hungarian partridge hunters	1,157	-24	-70
Hungarian partridge harvest	707	-48	-92
Hunter-days afield	2,314	-30	-76
Huns per hunter-day	0.31	-24	-64
Huns per hunter	0.61	-31	-72

Hungarian partridge hunting pressure decreased 30 percent, while success decreased 24 percent during 1985 as compared to 1984. Harvest was 92 percent below the 26-year average and the lowest on record since 1959.

Field Bag Checks

Results of the survey for 1985 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indices obtained for 1985 compared to 1984 and the previous 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	505	--	+1,430
Total hours hunted	3,076	--	+2,341
Huns per hunter (complete hunts)	0.16	--	-72
Huns bagged per 100 hours	3	--	-81
Average hours per hunter-day (complete hunts)	6.1	--	+91
Hours hunted per Hun bagged (complete hunts)	38.4	--	+412

Field bag check data submitted in 1985 was for Box Elder County only, and was collected at the game checking station at Snowville, Utah. Many of these hunters are hunting sagegrouse, but Huns are often found in the same areas.

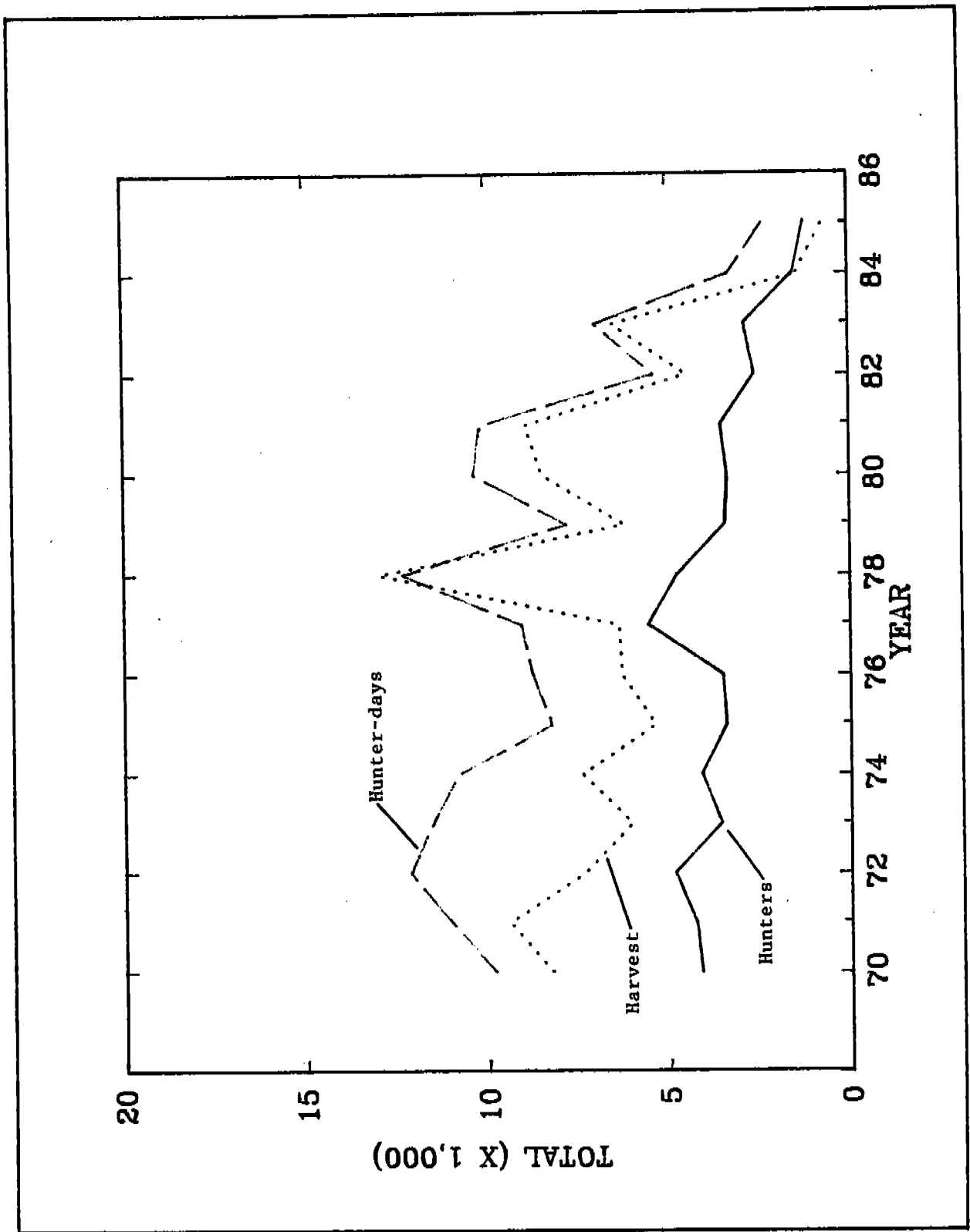


Figure 1. Statewide trend of Hungarian partridge harvest statistics.

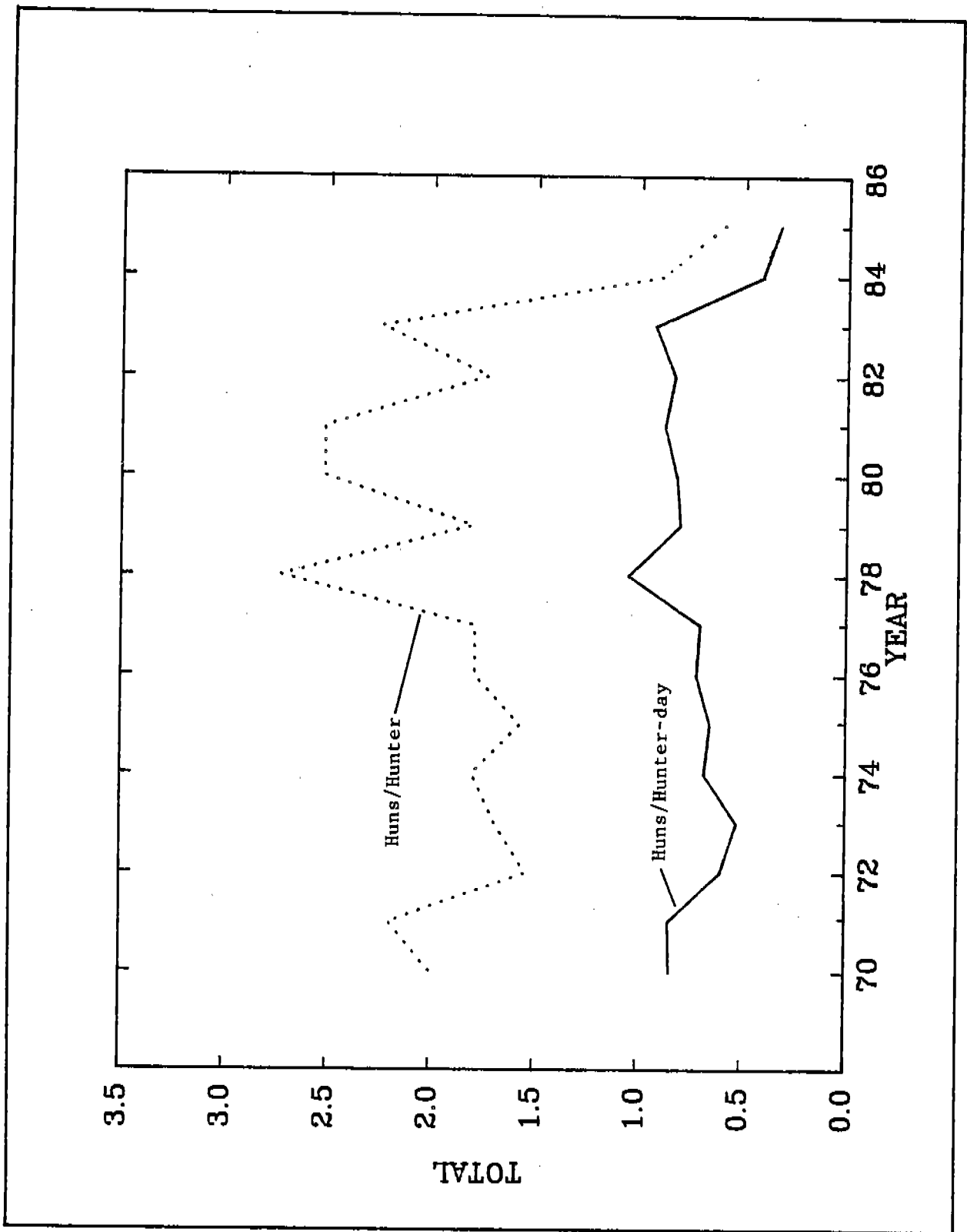


Figure 2. Statewide trend of Hungarian partridge statistics.

Table 1. Hungarian partridge summer inventory summary, 1985.

Region and County	Distinct Broods		Mean		Mixed Yng & Adults		Total Adults	Total Yng	Total Young/100 Ad	Veh. Miles	Hours of Effort		Birds/100 Hr	
	# Ad	Yng	Brood	Ad	Yng	w/o Yng					Veh.	Horse		Walk
Northern Region														
Box Elder	0	0	--	0	0	0	0	0	--	114	6	32	0	38
Cache	0	0	--	0	0	0	--	--	--	--	--	--	--	--
Davis	0	0	--	0	0	0	--	--	--	--	--	--	--	--
Morgan	0	0	--	0	0	0	--	--	--	--	--	--	--	--
Rich	0	0	--	0	0	0	--	--	--	--	--	--	--	--
Summit	0	0	--	0	0	0	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0	0	0	0	0	0	0	0	0	114	6	32	0	38
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														
Emery														
Grand														
San Juan														
REGIONAL TOTALS														
STATE TOTALS	0	0	0	0	0	0	0	0	0	114	6	32	0	38
														0.00

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 2. Trend of Hungarian partridge young per 100 adults, 1975-85.

Region and County	Year										Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	
<u>Northern Region</u>											
Box Elder	600	421	467	580	840	688	671	409	400	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	533	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	700	300	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	600	431	467	580	840	691	600	409	400	--	577
<u>Central Region</u>											
Juab	--	--	--	--	500	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	233	173	--	--	--	--	--	--	--	--
Tooele	--	550	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	0	--	--	--	--	--
Wasatch	--	20	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	200	173	--	500	--	--	--	--	--	418
<u>Southern Region</u>											
Beaver											
Garfield											
Iron											
Kane											
Millard											
Piute											
Sevier											
Washington											
Wayne											
REGIONAL TOTALS											
<u>Northeastern Region</u>											
Daggett											
Duchesne											
Uintah											
REGIONAL TOTALS											
<u>Southeastern Region</u>											
Carbon											
Emery											
Grand											
San Juan											
REGIONAL TOTALS											
STATE TOTALS	600	328	369	580	780	663	600	409	400	--	546

Table 3. Trend of Hungarian partridge mean brood size from 1975-85.

Region and County	Year										Average 1975-84	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		1985
Northern Region												
Box Elder	13.44	10.22	10.77	11.60	8.40	11.00	12.00	11.25	10.67	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	7.00	6.00	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13.44	10.22	10.77	11.60	8.40	9.50	10.80	11.25	10.67	--	--	10.83
Central Region												
Juab	--	--	--	--	5.00	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	2.00	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	2.00	--	--	5.00	--	--	--	--	--	--	5.00
Southern Region												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne												
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery												
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	13.44	9.40	10.77	11.60	7.83	9.50	10.80	11.25	10.67	--	--	10.66

Table 4. Trend of Hungarian partridge observed per 100 hours, 1975-85.

Region and County	Year										Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	
<u>Northern Region</u>											
Box Elder	262	184	109	203	235	154	570	144	67	--	0
Cache	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	1,900	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	262	205	109	151	174	158	639	144	67	--	0
<u>Central Region</u>											
Juab	--	--	--	--	600	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	400	820	--	--	--	--	--	--	--	--
Tooele	--	2,600	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	120	--	--	0	33	--	--	--	--	--
REGIONAL TOTALS	--	371	820	--	200	17	--	--	--	--	372
<u>Southern Region</u>											
Beaver											
Garfield											
Iron											
Kane											
Millard											
Piute											
Sevier											
Washington											
Wayne											
REGIONAL TOTALS											
<u>Northeastern Region</u>											
Daggett											
Duchesne											
Uintah											
REGIONAL TOTALS											
<u>Southeastern Region</u>											
Carbon											
Emery											
Grand											
San Juan											
REGIONAL TOTALS											
STATE TOTALS	262	238	131	151	177	144	565	144	67	--	0

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Birds Bagged	Birds per Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	38	1,735	428	0.25	74.98	60.34
Cache	1	21	42	2.00	0.91	5.94
Davis	0	0	0	0.00	0.00	0.00
Morgan	1	42	0	0.00	1.82	0.00
Rich	0	0	0	0.00	0.00	0.00
Summit	0	0	0	0.00	0.00	0.00
Weber	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	40	1,800	471	0.26	77.79	66.62
<u>Central Region</u>						
Juab	0	0	0	0.00	0.00	0.00
Salt Lake	1	42	21	0.50	1.82	2.97
Sanpete	1	21	0	0.00	0.91	0.00
Tooele	4	278	128	0.46	12.01	18.10
Utah	3	64	0	0.00	2.77	0.00
Wasatch	1	42	64	1.50	1.82	9.05
REGIONAL TOTALS	10	450	214	0.48	19.45	30.27
<u>Southern Region</u>						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00
Millard	1	0	0	0.00	0.00	0.00
Piute	0	0	0	0.00	0.00	0.00
Sevier	0	0	0	0.00	0.00	0.00
Washington	0	0	0	0.00	0.00	0.00
Wayne	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	0	0	0.00	0.00	0.00
<u>Northeastern Region</u>						
Daggett	1	21	21	1.00	0.91	2.97
Duchesne	0	0	0	0.00	0.00	0.00
Uintah	1	21	0	0.00	0.91	0.00
REGIONAL TOTALS	2	42	21	0.50	1.82	2.97
<u>Southeastern Region</u>						
Carbon	0	0	0	0.00	0.00	0.00
Emery	0	0	0	0.00	0.00	0.00
Grand	1	21	0	0.00	0.91	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	21	0	0.00	0.91	0.00
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	54	2,314	707	0.31	100	100

*Total hunter-trips from questionnaire returns.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	0.88	1.31	0.83	0.99	0.44	0.25
Cache	0.77	0.60	1.03	0.80	0.15	2.00
Davis	1.50	0.00	5.00	0.29	0.00	--
Morgan	2.25	0.50	1.40	0.75	0.00	0.00
Rich	1.00	0.50	2.00	0.94	0.00	--
Summit	1.00	1.50	0.00	0.00	--	--
Weber	1.00	0.00	1.00	1.36	1.00	--
REGIONAL TOTALS	0.88	1.10	0.89	0.93	0.41	0.26
<u>Central Region</u>						
Juab	0.00	1.20	0.00	0.00	--	--
Salt Lake	1.00	0.06	0.00	0.00	0.50	0.50
Sanpete	0.00	0.00	0.00	0.00	--	0.00
Tooele	0.60	0.09	0.00	1.91	0.00	0.46
Utah	0.28	0.25	0.00	0.13	2.00	0.00
Wasatch	0.68	0.40	0.00	1.77	1.00	1.50
REGIONAL TOTALS	0.48	0.18	0.00	0.96	0.55	0.48
<u>Southern Region</u>						
Beaver	2.50	0.00	0.00	0.00	0.00	--
Garfield	0.00	0.00	0.00	0.00	--	--
Iron	0.00	0.00	1.00	0.00	--	--
Kane	0.00	0.00	0.00	0.00	--	--
Millard	0.00	0.00	0.00	1.00	--	--
Piute	0.00	0.00	0.00	0.00	--	--
Sevier	0.00	0.00	0.00	0.50	--	--
Washington	0.25	0.00	0.13	2.00	0.00	--
Wasatch	0.68	0.40	0.00	1.77	1.00	--
REGIONAL TOTALS	0.48	0.18	0.00	0.96	0.55	0.00
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	0.00	--	1.00
Duchesne	1.20	1.00	0.00	0.00	0.00	--
Uintah	0.00	1.00	2.00	0.00	0.00	0.00
REGIONAL TOTALS	1.20	1.00	1.33	0.00	0.00	0.50
<u>Southeastern Region</u>						
Carbon	1.00	0.00	0.00	0.00	--	--
Emery	0.00	1.00	0.00	0.00	--	--
Grand	0.00	0.00	0.00	0.00	--	0.00
San Jaun	0.00	0.00	0.00	0.00	--	--
REGIONAL TOTALS	1.00	1.00	0.00	0.00	--	0.00
Unknown Counties	0.00	0.00	0.00	0.00	0.00	0.00
STATE TOTALS	0.82	0.88	0.83	0.93	0.41	0.31

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	73.75	78.81	74.66	67.61	79.04	60.34
Cache	9.82	13.81	11.64	14.39	2.94	5.94
Davis	0.60	0.00	1.71	0.40	0.00	0.00
Morgan	1.80	0.71	7.19	1.23	0.00	0.00
Rich	0.20	0.48	1.37	3.27	0.00	0.00
Summit	0.40	0.71	0.00	0.00	0.00	0.00
Weber	0.20	0.00	1.71	3.07	8.90	0.00
<u>REGIONAL TOTALS</u>	<u>86.77</u>	<u>94.52</u>	<u>98.29</u>	<u>89.97</u>	<u>91.03</u>	<u>66.62</u>
<u>Central Region</u>						
Juab	0.00	1.43	0.00	0.00	0.00	0.00
Salt Lake	0.20	0.24	0.00	0.00	1.47	2.97
Sanpete	0.00	0.00	0.00	0.00	0.00	0.00
Tooele	2.40	1.43	0.00	4.30	0.00	18.10
Utah	2.61	1.19	0.00	0.40	5.96	0.00
Wasatch	4.61	0.48	0.00	4.72	1.47	9.05
<u>REGIONAL TOTALS</u>	<u>9.82</u>	<u>4.76</u>	<u>0.00</u>	<u>9.42</u>	<u>8.90</u>	<u>30.27</u>
<u>Southern Region</u>						
Beaver	1.00	0.00	0.00	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.34	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	0.40	0.00	0.00
Piute	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	0.00	0.20	0.00	0.00
Washington	1.00	0.00	0.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>2.00</u>	<u>0.00</u>	<u>0.34</u>	<u>0.60</u>	<u>0.00</u>	<u>0.00</u>
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.00	0.00	0.00	2.97
Duchesne	1.20	0.24	0.00	0.00	0.00	0.00
Uintah	0.00	0.24	1.37	0.00	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>1.20</u>	<u>0.48</u>	<u>1.37</u>	<u>0.00</u>	<u>0.00</u>	<u>2.97</u>
<u>Southeastern Region</u>						
Carbon	0.20	0.00	0.00	0.00	0.00	0.00
Emery	0.00	0.24	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
<u>REGIONAL TOTALS</u>	<u>0.20</u>	<u>0.24</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Unknown counties	0.00	0.00	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	68.58	52.72	74.65	63.43	73.62	74.98
Cache	10.47	20.08	9.40	16.80	7.95	0.91
Davis	0.33	0.21	0.28	1.33	1.81	0.00
Morgan	0.65	1.26	4.27	1.51	3.66	1.82
Rich	0.16	0.84	0.57	3.24	0.60	0.00
Summit	0.33	0.42	1.14	1.14	0.00	0.00
Weber	0.16	0.21	1.42	2.10	3.66	0.00
REGIONAL TOTALS	80.69	75.73	91.75	89.56	91.39	77.79
<u>Central Region</u>						
Juab	0.16	1.05	0.00	1.14	0.00	0.00
Salt Lake	0.16	3.35	0.28	0.00	1.21	1.82
Sanpete	0.00	0.00	0.00	0.37	0.00	0.91
Tooele	3.27	13.60	3.99	2.10	3.66	12.01
Utah	7.53	4.18	1.99	3.04	1.21	2.77
Wasatch	5.56	1.05	0.85	2.47	0.60	1.82
REGIONAL TOTALS	16.69	23.22	7.12	9.13	6.74	19.45
<u>Southern Region</u>						
Beaver	0.33	0.00	0.00	0.19	1.21	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	0.28	0.00	0.00	0.00
Kane	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.33	0.00	0.00	0.37	0.00	0.00
Piute	0.65	0.00	0.00	0.00	0.16	0.00
Sevier	0.00	0.00	0.00	0.37	0.00	0.00
Washington	0.33	0.00	0.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	1.64	0.00	0.28	0.93	1.21	0.00
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.28	0.00	0.00	0.91
Duchesne	0.82	0.21	0.00	0.00	0.00	0.00
Uintah	0.00	0.21	0.57	0.00	0.60	0.91
REGIONAL TOTALS	0.82	0.42	0.85	0.00	0.60	1.82
<u>Southeastern Region</u>						
Carbon	0.16	0.00	0.00	0.19	0.00	0.00
Emery	0.00	0.21	0.00	0.00	0.00	0.00
Grand	0.00	0.00	0.00	0.00	0.00	0.91
San Juan	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.16	0.21	0.00	0.19	0.00	0.91
Unknown counties	0.00	0.42	0.00	0.19	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-85.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Huns Per Hunter-day	Huns Per Hunter
1955	--	--	--	--	0.39
1956	--	--	--	--	0.89
1957	--	--	--	--	0.45
1958	--	--	--	--	1.34
1959	1,846	1,820	3,354	0.54	0.99
1960	2,847	4,877	4,929	0.99	1.71
1961	3,205	3,648	6,645	0.54	1.13
1962	3,440	8,970	9,153	0.98	2.61
1963	4,676	13,343	13,291	1.00	2.85
1964	4,249	11,812	9,688	1.22	2.78
1965	4,498	12,183	11,798	1.03	2.71
1966	4,549	15,348	11,473	1.34	3.37
1967	6,321	16,049	15,105	1.06	2.54
1968	6,935	17,089	16,674	1.02	2.46
1969	5,591	11,966	15,515	0.77	2.14
1970	4,128	8,236	9,818	0.84	2.00
1971	4,276	9,407	11,011	0.85	2.20
1972	4,754	7,335	12,135	0.60	1.54
1973	3,566	6,014	11,516	0.52	1.69
1974	4,103	7,389	10,789	0.68	1.80
1975	3,409	5,358	8,216	0.65	1.57
1976	3,517	6,287	8,753	0.72	1.79
1977	5,557	6,360	9,058	0.70	1.79
1978	4,743	12,969	12,328	1.05	2.73
1979	3,435	6,200	7,787	0.80	1.80
1980	3,359	8,466	10,366	0.82	2.52
1981	3,545	8,916	10,147	0.88	2.52
1982	2,590	4,475	5,379	0.83	1.73
1983	2,889	6,506	6,998	0.93	2.25
1984	1,523	1,360	3,309	0.41	0.89
1985	1,157	707	2,314	0.31	0.61
TOTAL (1959-85)	102,708	223,090	257,549	0.87	2.17
AVERAGES (1959-84)	3,906	8,553	9,817	0.87	2.19

Table 10. Hungarian partridge field bag check summary, 1985.

Region and County	ALL HUNTS				COMPLETE HUNTS			
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr
<u>Northern Region</u>								
Box Elder	203	505	3,076	80	3	503	3,074	80
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
REGIONAL TOTALS	203	505	3,076	80	3	503	3,074	80
<u>Central Region</u>								
Juab								
Salt Lake								
Sanpete								
Tooele								
Utah								
Wasatch								
REGIONAL TOTALS								
<u>Southern Region</u>								
Beaver								
Garfield								
Iron								
Kane								
Millard								
Piute								
Sevier								
Washington								
Wayne								
REGIONAL TOTALS								
<u>Northeastern Region</u>								
Daggett								
Duchesne								
Uintah								
REGIONAL TOTALS								
<u>Southeastern Region</u>								
Carbon								
Emery								
Grand								
San Juan								
REGIONAL TOTALS								
STATE TOTALS	203	505	3,076	80	3	503	3,074	80
								0.16

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
Northern Region												
Box Elder	13	0.36	30	1.11	32	1.33	17	0.62	--	--	3	0.16
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	13	0.36	30	1.11	32	1.33	17	0.62	--	--	3	0.16
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	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	13	0.36	30	1.11	32	1.33	17	0.62	--	--	3	0.16

WILD TURKEY

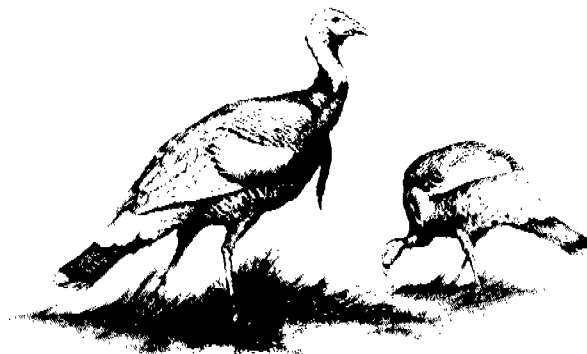
SUMMARY

Turkey populations have improved considerably on all units during the past two years, and the increasing numbers are reflected in the reported observations and the annual harvest.

Hunter success and turkey observation data for the 1985 spring season indicated that the East Zion area had another year of increasing turkey population. The Boulder Mountains and LaSal Mountains also indicated growing populations. However, the remaining units of the state were closed to hunting. Rio Grande turkeys were released on Pine Valley mountain in 1984, but the population was not considered to be huntable in 1985.

Spring hunting pressure was up from 1984 but hunter success was down 40 percent. A fall turkey hunting season was not held in 1985. A total of 41 Tom turkeys were harvested in the spring hunt of 1985 compared to 43 taken in 1984. Observations of turkey increased in 1985, with most observations again made on the East Zion area.

Precipitation and temperatures in south-central Utah were slightly above normal in April, May and June. The effect on production was not determined because of limited data, however, production appeared to be good.



Brood Counts

Annual random brood counts have been conducted each year since the introduction of turkeys into Utah in the early 1950's; however, success in finding broods has usually been poor. Sample sizes have generally been too low to meaningfully indicate relative density or production from year to year. Spring harvest data for 1985 indicated good breeding populations on all units, but harvest decreased 5 percent from 1984.

During 1985, only one turkey brood with 3 young was observed in Grand County. A total of 13 adults and 12 young were observed during the inventory period on the LaSal Mountains. No additional observation data was submitted from the Southern Region.

Harvest

Spring Gobbler Season

Results of the 1985 spring season are shown in Table 1 of this section. The trend of these data since the first spring season in 1967 is shown in Table 2. The 1985 spring season compared to 1984 and the previous 18-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Permits sold	314	+65	+120
Hunters afield	270	+60	+108
Turkeys harvested	41	-5	+193
Hunter-days afield	747	+55	+128
Percent hunter success	15	-40	+36
Turkeys bagged per hunter-day	0.96	-33	+50
Percent of hunters who observed turkeys	52	-28	+37

Permit sales and hunters afield increased from 1984 and were well above average. Although the total harvest decreased from 43 in 1984 to 41 in 1985, harvest remained 193 percent above the 18 year average. The proportion of hunters who reported having observed turkeys decreased 28 percent below the 1984 level but 37 percent above average. The East Zion unit again accounted for 49 percent of the hunting pressure based on hunter-days afield.

Approximately 14 percent of the turkey hunters used rifles during the spring turkey season, and 7 turkeys were harvested with a rifle. Six percent of the hunters used archery tackle but were unsuccessful in taking a turkey.

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

Fall Season

Fall turkey hunts were not authorized in Utah during 1985. However, data of fall seasons through 1984 are shown in Tables 4-9. The statewide summary of fall harvest statistics is presented in Table 10.

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Permits sold	0	--	--
Hunters afield	0	--	--
Turkeys harvested	0	--	--
Hunter-days afield	0	--	--
Percent hunter success	0	--	--
Turkeys bagged per hunter-day	0	--	--
Percent of hunters who observed turkeys	0	--	--

The trend of fall harvest statistics through 1984 is shown in Figure 2.

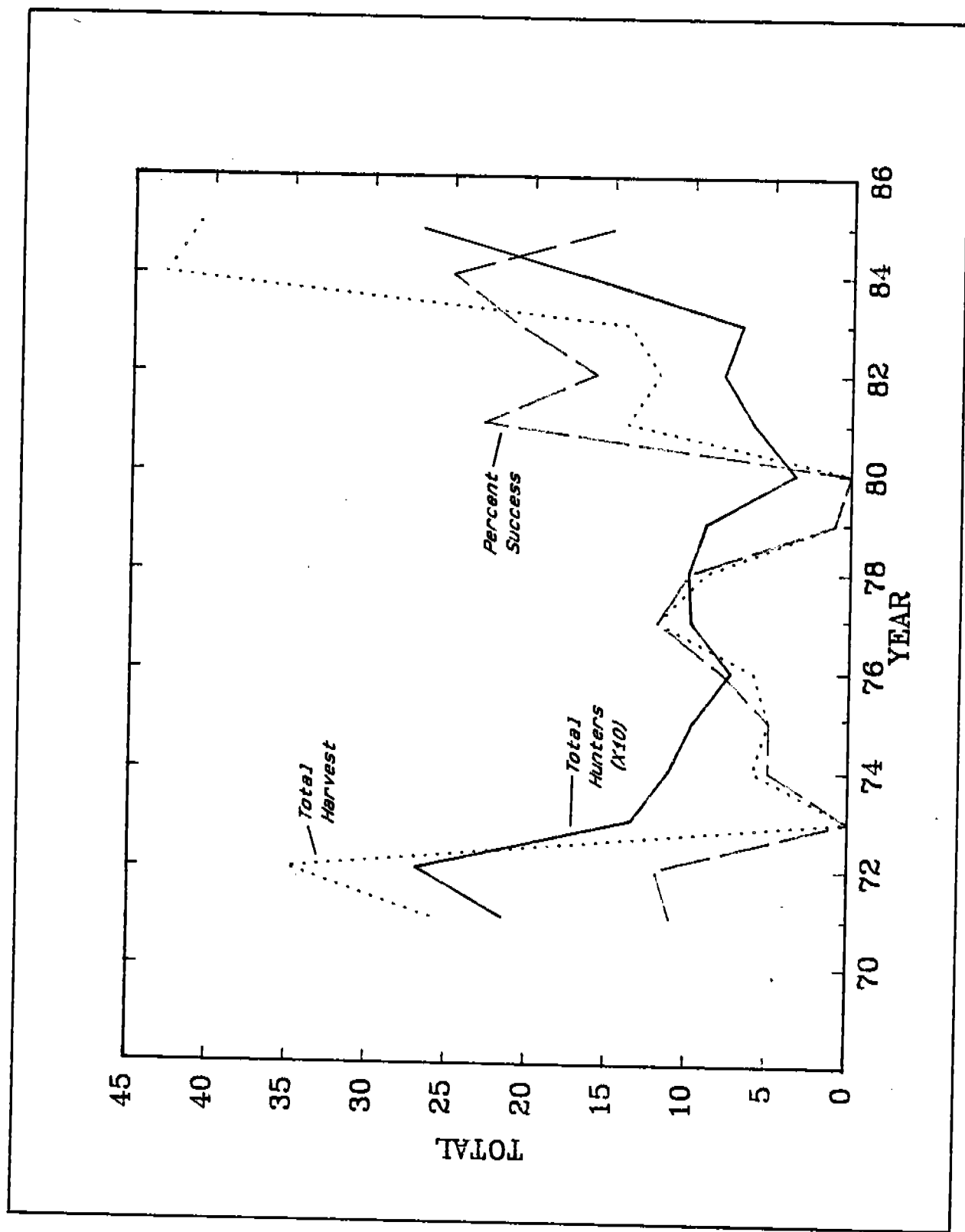


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

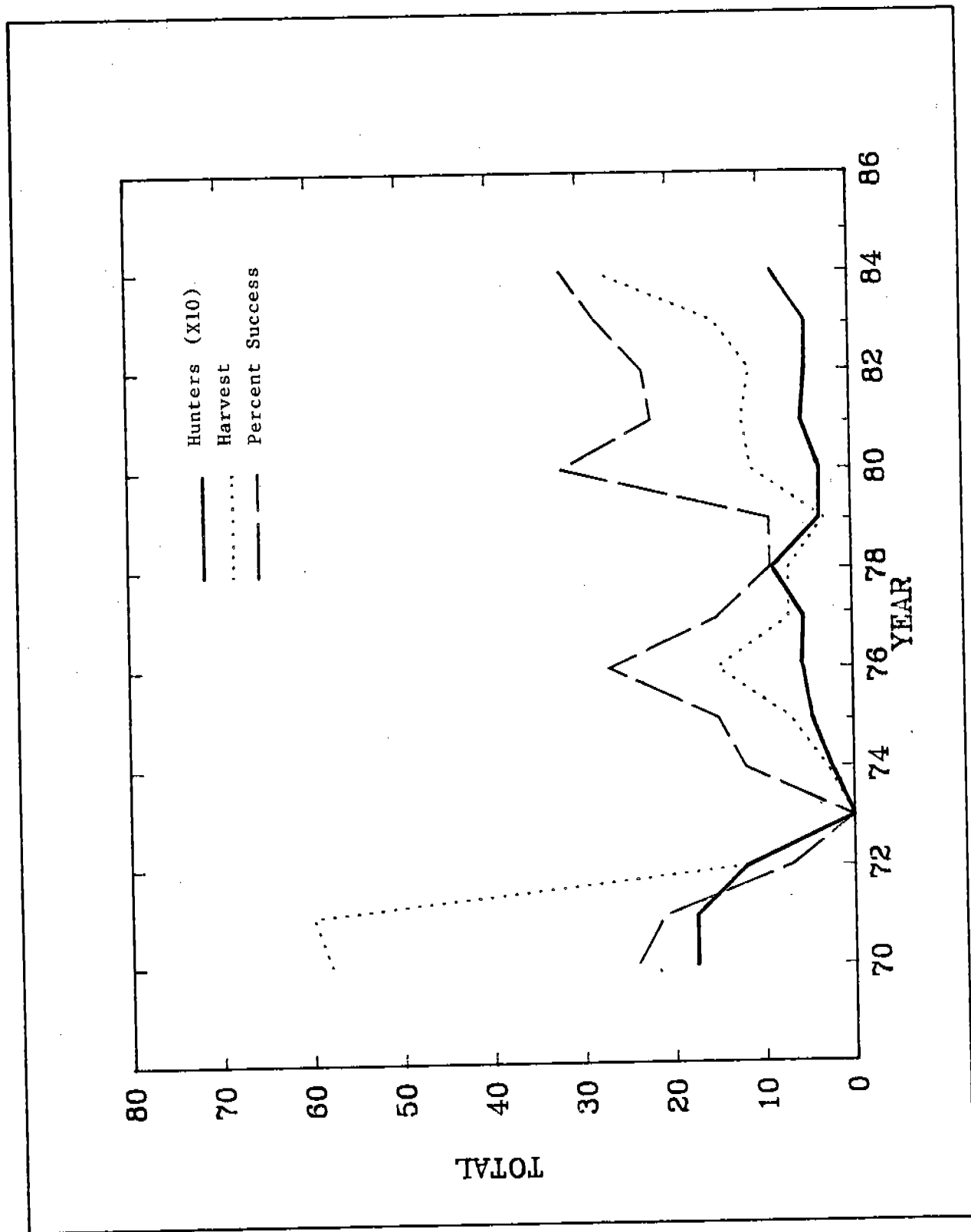


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1985 spring turkey season.

Data	Elk Ridge		East Zion		Boulder		LaSalle		Beaver		Ping 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															314	--
No hunts															36	44
Hunters afield	C	106	129	60	73	59	72		C		(3)	(4)		222	270	
Hunter-days	L	302	368	154	187	159	194		L		(5)	(6)		614	747	
Turkeys bagged	O	20	24	6	7	8	10		O		0	0		34	41	
Percent success	S	19	--	10	--	14	--		S		--	--		15	--	
Turkeys bagged per hunter-day	E								E							
Reported crippling loss	D	0.07	--	0.04	--	0.05	--		D		--	--		0.06	--	
(loss/100 bagged)	S	5	--	0	--	0	--		S		0	--		3	--	
Turkeys observed	E	473	--	90	--	109	--		E		(10)	--		672	--	
Gobblers	A	115	--	33	--	37	--		A		(2)	--		185	--	
Hens	S	280	--	44	--	61	--		S		(4)	--		385	--	
Unidentified	O	78	--	13	--	11	--		O		(4)	--		102	--	
Number of hunters who saw turkeys	N	64	--	26	--	25	--		N		(2)	--		115	--	
Percent of hunters who saw turkeys		60	--	46	--	42	--				(67)	--		52	--	

Projection factor = 1.2171

() Hunters hunted more than one area; data included in specific area hunted.

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-85.

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day		Percent of Hunters Observing Turkeys	Total Permits**
		Afield	Afield		Afield	Afield					
EAST ZION	1967	24	9	59	38	0.15	58				
	1968	130	16	364	11	0.04	48				
	1969	77	4	210	6	0.02	35				
	1970				NO SEASON						
	1971	106	14	272	12	0.05	38				
	1972	113	20	321	14	0.06	47				
	1973	43	0	96	0	0.00	14				
	1974	34	2	73	7	0.03	23				
	1975	29	3	42	8	0.06	33				
	1976	31	5	74	16	0.05	38				
	1977	47	6	117	13	0.05	48				
	1978	36	4	80	13	0.06	56				
	1979	35	1	95	4	0.01	11				
	1980	35	0	84	0	0.00	17				
	1981	39	13	94	32	0.14	68				
	1982	62	11	134	18	0.08	70				
	1983	48	12	122	25	0.10	68				
	1984	108	30	313	27	0.09	70				
	1985	129	24	368	19	0.07	60				
BOULDER MOUNTAINS	1967	17	2	43	12	0.05	75				
	1968	134	15	330	10	0.05	33				
	1969	141	6	300	4	0.02	16				
	1970				NO SEASON						
	1971	27	1	64	4	0.02	13				
	1972	42	3	107	8	0.03	28				
	1973	22	0	52	0	0.00	6				
	1974	23	0	56	0	0.00	25				
	1975	16	1	34	7	0.04	8				
	1976	12	0	25	0	0.00	10				
	1977	6	0	13	0	0.00	40				
	1978	16	1	31	0	0.00	14				
	1979	5	0	10	0	0.00	0				
	1980				NO SEASON						
	1981				NO SEASON						
	1982				NO SEASON						
	1983	6	1	7	20	0.17	40				
	1984	33	9	85	27	0.11	73				
	1985	73	7	187	10	0.04	46				

Table 2 (continued)

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
		Afield			Afield					
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					
	1981	18		1	31		6	0.03	24	
	1982	18		1	50		6	0.02	35	
	1983	12		1	27		10	0.10	30	
	1984	24		4	70		19	0.06	88	
	1985	72		10	194		14	0.05	42	
	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	0	
1979					NO SEASON					50
1980					NO SEASON					
1981					NO SEASON					
1982					NO SEASON					
1983					NO SEASON					
1984					NO SEASON					
1985 SEASON CLOSED 1979-1985										

Table 2 (continued)

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per		Percent of Hunters Observing	Total Permits**
		Afield			Afield			Hunter-day	Turkeys		
PINE VALLEY MOUNTAINS	1971	23		4	92	15	0.04	70			
	1972	22		1	52	5	0.02	42			
	1973	17		0	38	0	0.00	7			
	1974	8		1	23	14	0.05	43			
	1975	6		0	12	0	0.00	0			
	1976			0	13	0	0.00	40			
	1977	2		0	7	0	0.00	0			
	1978	0		0	0	0	0.00	0			
	1979	3		0	15	0	0.00	0			
	1980	0		0	0	0	0.00	0			
	1981	2		0	2	0	0.00	0			
	1982	0		0	0	0	0.00	0			
	1983	3		0	5	0	0.00	0			
	1984***	0		0	0	0	0.00	0			
1985***			NO SEASON								
BLUE MOUNTAIN-ELK RIDGE	1974	17		2	34	13	0.07	27			
	1975	19		1	62	6	0.02	56			
	1976	11		0	23	0	0.00	33			
	1977	7		1	14	17	0.08	17			
	1978	12		2	39	18	0.06	36			
	1979	8		0	17	0	0.00	0			
	1980				NO SEASON						
	1981				NO SEASON						
	1982				NO SEASON						
	1983				NO SEASON						
	1984				NO SEASON						
1985			SEASON CLOSED 1980-1985								
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			

Table 2 (continued)

Hunting Unit	Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per		Percent of Hunters	Total Permits**
		Afield			Afield	Hunter-day		Hunter-day	Observing Turkeys		
MIXED UNITS	1981	1		0	2		0	0.00		100	
(cont'd.)	1982	0		0	0		0	0.00		0	
	1983	0		0	0		0	0.00		0	
	1984	4		0	15		0	0.00		33	
	1985	4		0	6		0	0.00		67	
N O S E A S O N											
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										
	1971	215		26	576		11	0.04		38	223
	1972	269		35	751		12	0.05		39	285
	1973	135		0	311		0	0.00		10	150
	1974	112		6	289		5	0.02		22	121
	1975	97		5	219		5	0.03		29	103
	1976	74		6	185		8	0.03		32	81
	1977	99		12	248		12	0.05		39	108
	1978	101		9	246		10	0.04		42	116
	1979	90		1	237		1	0.01		8	113
	1980	35		0	84		0	0.00		17	40
	1981	60		14	129		23	0.11		53	83
	1982	80		12	184		16	0.07		62	91
	1983	69		14	161		21	0.09		55	92
	1984	169		43	482		25	0.09		72	190
	1985	270		41	747		15	0.06		52	314
STATE TOTALS	(1967-85)	2,211		279	6,317		13	0.04		(640)	2,748
STATE AVERAGES	(1967-84)	130		14	328		11	0.04		38	143

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

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

***Note the Pine Valley Mountains Unit was closed by emergency action in 1984 and by amendment to the proclamation in 1985 to protect Rio Grande turkeys released on the area in February 1984.

Table 3. Summary of the 1985 fall turkey season.

Data	Pine Valley		Blue Mtn.-		Boulder Mtns.		East Zion		Lasai		Unknown		STATE TOTALS		
	Rep't	Calc	Elk Ridge	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold	C		C		C		C		C		C		C		C
No hunts	L		L		L		L		L		L		L		L
Hunters afield	O		O		O		O		O		O		O		O
Hunter-days	S		S		S		S		S		S		S		S
Turkeys bagged	E		E		E		E		E		E		E		E
Percent success	D		D		D		D		D		D		D		D
Turkeys bagged per hunter-day	S		S		S		S		S		S		S		S
Reported crippling loss (loss/100 bagged)	E		E		E		E		E		E		E		E
Turkeys observed	A		A		A		A		A		A		A		A
Number of hunters who saw turkeys	S		S		S		S		S		S		S		S
Percent of hunters who saw turkeys	O		O		O		O		O		O		O		O
	N		N		N		N		N		N		N		N

Projection factor = 0.00

Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1969-85.

Year	Hunters		Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent Bagging		Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
	Afield					2 Turkeys	Turkeys				
1969	45		103	0	0			0.00	0	0	0
1970	24		77	2	8			0.03	0	16	10
1971	20		46	0	0			0.00	0	0	0
1972	7		17	0	0			0.00	0	0	0
1973**	--		--	--	--			--	--	--	--
1974**	--		--	--	--			--	--	--	--
1975	13		36	0	0			0.00	0	0	0
1976	4		10	0	0			0.00	0	0	0
1977	2		5	0	0			0.00	0	0	0
1978	0		0	0	0			0.00	0	0	0
1979	--		--	--	--			--	--	--	--
1980	3		6	0	0			0.00	0	0	0
1981	0		0	0	0			0.00	0	0	0
1982**	--		--	--	--			--	--	--	--
1983**	--		--	--	--			--	--	--	--
1984	--		--	--	--			--	--	--	--
1985**	--		--	--	--			--	--	--	--

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

**Closed Season.

Table 5. Summary of East Zion wild turkey harvest data for fall hunts from 1969-85.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent		Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
					Bagging 2 Turkeys	Turkeys Observed				
1969	137	374	35	16	10	0.09	19	426	25	
1970	87	203	43	32	16	0.21	5	469	40	
1971	90	229	39	27	16	0.17	6	264	31	
1972	59	154	10	12	4	0.06	12	96	22	
1973**	--	--	--	--	--	--	--	--	--	
1974**	--	--	--	--	--	--	--	--	--	
1975	13	18	6	46	--	0.33	0	36	44	
1976	31	57	13	42	--	0.23	8	137	50	
1977	22	34	5	25	--	0.16	0	33	26	
1978	47	107	6	14	--	0.06	40	130	32	
1979	19	36	3	18	--	0.09	0	50	29	
1980	19	31	10	50	--	0.32	43	97	50	
1981	34	62	12	36	--	0.20	56	136	48	
1982	49	131	11	23	--	0.09	10	185	47	
1983	48	106	15	31	--	0.14	0	303	50	
1984	96	215	31	33	--	0.15	14	380	50	
1985**	--	--	--	--	--	--	--	--	--	

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

**Closed Season.

Table 6. Summary of LaSalle Mountain wild turkey harvest data for fall hunts from 1969-85.

Year	Hunters		Hunter-days		Turkeys Bagged	Percent Success*	Percent Bagging		Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
	Afield		Afield				2 Turkeys					
1969	17		51		1	7	0		0.02	0	40	7
1970	18		30		3	11	6		0.10	0	15	20
1971	13		27		5	18	18		0.18	0	25	27
1972	31		70		2	4	4		0.02	0	63	27
1973**	--		--		--	--	--		--	--	--	--
1974	20		6		2	10	--		0.03	100	61	38
1975	9		33		1	11	--		0.03	0	21	67
1976	15		49		2	13	--		0.04	0	45	15
1977	24		78		1	6	--		0.02	0	13	10
1978	26		93		1	5	--		0.01	0	201	50
1979	15		33		0	0	--		0.00	0	11	8
1980	12		33		1	11	--		0.04	0	30	44
1981	20		48		0	0	--		0.00	0	0	0
1982**	--		--		--	--	--		--	--	--	--
1983**	--		--		--	--	--		--	--	--	--
1984**	--		--		--	--	--		--	--	--	--
1985**	--		--		--	--	--		--	--	--	--

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

**Closed Season.

Table 7. Summary of Beaver Mountain wild turkey harvest data for fall hunts from 1970-85.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success*	Percent		Turkeys/ Hunter-Day	Cripples/ 100 Bagged	Turkeys Observed	% Hunters	
					Bagging 2 Turkeys	Observing Turkeys					
1970	30	87	7	15	8	0.08	0	48	31		
1971	13	24	5	18	18	0.20	0	64	46		
1972	6	12	0	0	0	0.00	0	11	40		
1973**	--	--	--	--	--	--	--	--	--	--	
1974**	--	--	--	--	--	--	--	--	--	--	
1975	5	13	0	0	--	0.00	0	0	0		
1976	5	18	0	0	--	0.00	0	0	0		
1977	--	--	--	--	--	--	--	--	--	--	
1978**	--	--	--	--	--	--	--	--	--	--	
1979**	--	--	--	--	--	--	--	--	--	--	
1980**	--	--	--	--	--	--	--	--	--	--	
1981**	--	--	--	--	--	--	--	--	--	--	
1982**	--	--	--	--	--	--	--	--	--	--	
1983**	--	--	--	--	--	--	--	--	--	--	
1984**	--	--	--	--	--	--	--	--	--	--	
1985**	--	--	--	--	--	--	--	--	--	--	

Wild turkeys were transplanted onto the Beaver Mountain during the winter of 1967-68. The first hunting season was held in 1970. Transplants made again in 1985.

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

**Closed Season.

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for fall hunts from 1970-85.

Year	Hunters		Hunter-days		Turkeys Bagged	Percent Success*	Percent Bagging		Turkeys/Hunter-Day	Cripples/100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
	Afield	Afield	Afield	Afield			2 Turkeys	Turkeys				
1970	6	21	3	50	0	0.14	33	16	80			
1971	32	87	11	23	12	0.13	22	98	35			
1972	11	19	0	0	0	0.00	0	0	0			
1973**	--	--	--	--	--	--	--	--	--			
1974**	--	--	--	--	--	--	--	--	--			
1975	0	0	0	0	0	0.00	0	0	0			
1976	0	0	0	0	0	0.00	0	0	0			
1977	1	2	0	0	0	0.00	0	0	0			
1978	6	8	0	0	0	0.00	0	4	80			
1979	1	1	0	0	0	0.00	0	0	0			
1980	0	0	0	0	0	0.00	0	0	0			
1981	1	4	0	0	0	0.00	0	0	0			
1982	2	5	0	0	0	0.00	0	5	100			
1983	1	2	0	0	0	0.00	0	0	0			
1984**	1	1	0	0	0	0.00	0	0	0			
1985**	--	--	--	--	--	--	--	--	--			

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

**Closed Season.

Table 9. Summary of Blue Mountain-Elk Ridge* wild turkey harvest data for the fall hunt, 1974-85.

Year	Hunters Afield	Hunter-days Afield	Turkeys Bagged	Percent Success	Turkeys/Hunter Day	Cripples/100 Bagged	Turkeys Observed	% Hunters Observing Turkeys
1974	5	9	1	20	0.11	0	20	20
1975	6	15	0	0	0.00	0	0	0
1976	1	2	0	0	0.00	0	0	0
1977	5	14	1	29	0.09	0	2	25
1978	6	11	0	0	0.00	0	0	0
1979	1	1	0	0	0.00	0	0	0
1980**	--	--	--	--	--	--	--	--
1981**	--	--	--	--	--	--	--	--
1982**	--	--	--	--	--	--	--	--
1983**	--	--	--	--	--	--	--	--
1984**	--	--	--	--	--	--	--	--
1985**	--	--	--	--	--	--	--	--

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

**Closed Season.

Table 10. Statewide summary of fall wild turkey harvest statistics, 1963-85.

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	362	81	81	38	0.22	15	0.22	1,158	15	15	1,158	60	60	60	
1965	214	207	406	406	50	50	24	0.12	8	0.12	730	8	8	730	29	29	29	
1966*	192	187	471	471	43	43	23	0.09	7	0.09	756	7	7	756	36	36	36	
1967	146	135	405	405	40	40	30	0.10	16	0.10	748	16	16	748	48	48	48	
1968*	368	344	883	883	183	183	38	0.21	15	0.21	2,321	15	15	2,321	54	54	54	
1969	223	210	549	549	36	36	11	0.06	19	0.06	466	19	19	466	17	17	17	
1970	197	174	418	418	58	58	24	0.14	6	0.14	564	6	6	564	31	31	31	
1971	184	174	444	444	60	60	21	0.14	8	0.14	451	8	8	451	28	28	28	
1972	124	118	303	303	12	12	7	0.04	10	0.04	173	10	10	173	21	21	21	
1973***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1974	29	26	79	79	3	3	12	0.04	33	0.04	83	33	33	83	38	38	38	
1975	58	46	115	115	7	7	15	0.06	0	0.06	57	0	0	57	26	26	26	
1976	68	56	136	136	15	15	27	0.11	7	0.11	182	7	7	182	32	32	32	
1977	60	53	133	133	7	7	15	0.06	0	0.06	48	0	0	48	18	18	18	
1978*	102	88	223	223	7	7	9	0.03	33	0.03	335	33	33	335	38	38	38	
1979	46	36	71	71	3	3	9	0.05	0	0.05	61	0	0	61	19	19	19	
1980	43	35	69	69	11	11	32	0.16	38	0.16	127	38	38	127	44	44	44	
1981	63	55	114	114	12	12	22	0.11	56	0.11	141	56	56	141	32	32	32	
1982	56	50	136	136	11	11	23	0.08	10	0.08	185	10	10	185	47	47	47	
1983	61	49	112	112	15	15	28	0.13	0	0.13	303	0	0	303	49	49	49	
1984	97	86	193	193	28	28	32	0.14	14	0.14	380	14	14	380	49	49	49	
1985***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTALS	2,801	2,538	5,486	5,486	746	746	(470)	0.14	(310)	0.14	9,084	(310)	(310)	9,084	(764)	(764)	(764)	(764)
AVERAGES	133	121	261	261	36	36	22	0.14	15	0.14	433	15	15	433	36	36	36	36

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

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

***Closed Season.

WHITE-TAILED PTARMIGAN

SUMMARY

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

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

In Utah, sharp-tailed grouse were completely protected from hunting from 1925-1973. Beginning in the early 1970's, field reports from various individuals and observations by Division personnel indicated that sharptails were becoming more numerous in several areas. It was felt, at this time, that limited hunting was justified. Limited hunting was legalized in 1974 and continued through 1979. However, due to a decline in observations during the 1980 spring and summer inventory period, the entire state was closed to hunting sharptails, and remained closed through 1985.

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

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

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

There was no legal harvest of sharp-tailed grouse from 1980 through 1985. Populations have remained down since 1978. Severe winters and loss of habitat have severely reduced sharp-tailed grouse numbers in northern Utah.

Table 1. Summary of sharp-tailed grouse dancing ground counts, 1975-85.

County	No.	Dancing Ground Name	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Box Elder	1.	West Hills #1 (located 1977)			21	--	12	3	12	0	12	0	0	
	2.	West Hills #2 (located 1977)			7	--	3	1	0	0	2	0	18	
	3.	West Hills #3 (located 1977)			13	--	0	0	0	0	0	0	0	
	4.	Hunsaker's Field (located 1977)			13	16	3	0	0	0	0	0	0	
	5.	Whites Valley (located 1977)			12	--	0	0	0	0	6	0	2	
	6.	North Whites Valley (located 1977)			10	15	--	0	0	0	0	0	0	
	7.	Pocatello Valley #1 (located 1978)				7	4	1	9	19*	0	6	2	0
	8.	Pocatello Valley #2 (located 1978)				25	3	6	10	0	0	8	3	9
	9.	Pocatello Valley #3 (located 1978)				4	0	0	0	0	0	0	0	0
	10.	Pocatello Valley #4 (located 1978)				6	0	0	0	0	--	0	0	0
	11.	Ag. Station								3	0	0	0	0
Cache	1.	Bankhead Well (relocated 1975)	13	6	8	7	2	2	0	0	--	--	--	
	2.	Baxter Ridge (relocated 1975)	12	0	0	--	--	3	5	3	--	--	--	
	3.	Crow Mtn. #1 (located 1979)				0	7	4	6	3	--	--	--	
	4.	Crow Mtn. #2 (located 1979)					6	0	5	0	--	--	--	
	5.	High Creek (located 1981)							7	--	--	--	--	
Morgan	1.	Cottonwood #1 (located 1975)	9	9	14	6	3	--	--	--	--	--	--	
	2.	Cottonwood #2 (located 1975)	18	9	6	16	25	--	--	--	--	--	--	
	3.	Deep Creek #2						4	--	--	--	--	--	
Weber	1.	Monastery (located 1969)	27	10	Active	Active	3	0	0	0	--	--	--	
Total grounds counted			5	5	10	9	15	16	17	15	11	2	11	
Total grouse counted			79	34	104	102	71	24	57	31	28	5	29	
Average number of grouse/ground			15.8	6.8	10.4	11.3	4.7	1.5	3.4	2.1	2.5	2.5	2.6	

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

SHARP-TAILED GROUSE

SUMMARY

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

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

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

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

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

The 1985 spring survey was cancelled because above average snow pack made the upper Henry's Fork and Smith Fork drainages inaccessible. Snowpack was above average and snow melt was slower than normal for June.

Brood surveys were made August 14-22, 1985, on Flat Top Mountain in Henry's Fork, Painter Basin and Joulious Creek. Birds were located in each of the areas surveyed. Four brood were observed and fourteen young were banded. Average brood size was 3.5 young.

Above average precipitation and abundant green forage again seemed to affect distribution patterns of ptarmigan broods in 1985.

Hunter Success

Fifty-five hunters obtained permits to hunt ptarmigan in Utah for the fourth season. An estimated 14 hunters actually hunted with 7 birds reported killed. This was the third year ptarmigan were taken by Utah sportsmen. Two hunters (14 percent of the hunters afield) killed all seven of the harvested ptarmigan. Hunter success was 0.54 birds bagged per hunter-day.

Four of the 14 hunters afield hunted in areas where it was unlikely they would see ptarmigan. Many permits are obtained by sportsmen who think they might hunt during a fishing or elk hunting trip, but don't seriously plan on the ptarmigan hunt.

Table 1. Summary of white-tailed ptarmigan breeding territories (pairs), 1977-85.

County	Location	1977	(6/12-19) 1978	(6/18-24) 1979	(6/12-17) 1980	(6/12-14) 1981	(6/16-17) 1982	1983	(6/18-19) 1984	1985
Summit	Lake Blanchard				2					
Duchesne	Painter Basin	7 ¹	10 ²							
Duchesne	Gilbert Basin		2							C ⁴
Duchesne	Atwood Basin									A
Duchesne	Yellowstone River				2					N
Summit	Henry's Fork			4						C
Summit	Flat Top Mtn.									E
Summit	Beaver Creek			3	0		0			L
Summit	Smith's Fork									L
Uintah	Leidy Peak				0 ³					E
									1	D

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

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

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

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

Table 2. Ptarmigan brood inventory, 1977-85.

Area:	DATE									
	8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	8/18-31/81	8/17-30/82	8/23-30/83	8/26-28/84	8/14-22/85	
<u>Painter Basin</u>										
n	7	7	7	7	12	0 ³	2 ⁴	3		
mean brood	4.00	4.71	3.29	4.71	3.67		4.50			
young/100 adult hens	400	413	329	471	314		450			
hens w/o broods	0	1	0	0	2		0			
adult males	3	5	5	0	14		0			
<u>Henry's Fork</u>										
n	0	0	1	0	4	0	0	0		
mean brood			4.00		4.50					
young/100 adult hens			400		450					
hens w/o broods			0		0					
adult males			1		0					
<u>Yellowstone</u>										
n	0	0	0	0	4	4				
mean brood					4.50	4.25				
young/100 adult hens					450					
hens w/o broods					0					
adult males					0					
<u>Smith's Fork</u>										
n	0	0	0	0	0	0	25	15		
mean brood							3.50	6.00		
young/100 adult hens							350	300		
hens w/o broods							0	1		
adult males			2				0	0		
<u>Atwood Basin</u>										
n			1	1						
mean brood			4.00	5.00						
young/100 adult hens			400	500						
hens w/o broods			0	0						
adult males			3	0						

Table 2. (continued)

Area:	DATE								
	8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	8/18-31/81	8/17-30/82	8/23-30/83	8/26-28/84	8/14-22/85
<u>Flat Top Mountain</u>									
n								1	
mean brood								6.00	
young/100 adult hens									
hens w/o broods									1
adult males									
<u>Little E. Fork - Black's Fork</u>									
n			0						
Mean brood									
young/100 adult hens									
hens w/o broods									
adult males									
<u>Rainbow Basin</u>									
n				1					
mean brood				4.0					
young/100 adult hens				400					
hens w/o brood				0					
adult males				0					
<u>Gilbert Basin</u>									
n		3	5.00	2					
mean brood		500		500					
young/100 adult hens		0		0					
hens w/o broods		3		0					
adult males									
<u>Samuel's Draw</u>									
n				1					
mean brood				4.00					
young/100 adult hens				400					
hens w/o broods				0					
adult males				0					

Table 2. (continued)

Area:	DATE									
Statistics	8/15-19/77	8/13-19/78	8/14-24/79	8/17-29/80	8/18-31/81	8/17-30/82	8/23-30/83	8/26-28/84	8/14-22/85	
East F. Black's Fork										
n				0						
mean brood										
young/100 adult hens										
hens w/o broods										
adult males										
Lake Fork River										
n				0						
TOTAL										
n	7	7	12 ¹	11 ²	20	5	4	5	4	
mean brood	4.00	4.71	4.50	4.73	4.00	4.20	4.00	6.00	3.50	
young/100 adult hens	400	413	450	473	364	400	400	300	350	
hens w/o brood	0	1	0	0	2	0	0	2	0	
adult males	3	5	18	0	14	0	0	0	0	
Total birds observed	38	46	84	63	116	20	20	—	18	

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

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

³After 4 days of searching.

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

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

ⁿNumber of broods.

Table 3. Ptarmigan hatching chronology by year, 1978-85.

Year	Sample Size	Mean Hatching Date
1978	39	7-25
1979	21	7-13
1980	24	7-20
1981	27	7-10
1982	10	7-12 to 24
1983	4	7-20
1984	--	--
1985	--	--

Table 4. Summary of the 1985 ptarmigan season.

Data	Henry's Black's Smith's Uinta Painter Atwood Gunsight Weber W. Beaver Gilbert										STATE TOTALS		
	Fork	Fork	Fork	River	Basin	Basin	Pass	River	Creek	Basin	Other	Rep't	Calc
Permits issued												55	--
No hunts												45	45
Hunters afield												10	10
Hunter-days												13	13
Ptarmigan bagged					4						3	7	7
Percent success												14	14
Ptarmigan bagged per hunter-day	0.00											0.54	0.54
Reported crippling loss (loss/100 bagged)												14	14
Ptarmigan observed												9	9
Number of hunters who saw ptarmigan												2	2
Percent of hunters who saw ptarmigan												14	14

Projection factor =

() Hunted Gunsight Pass also - not added to total.

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

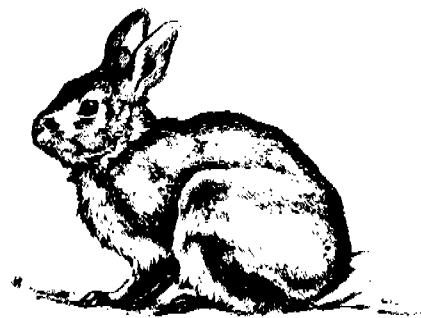
RABBITS AND HARES

SUMMARY

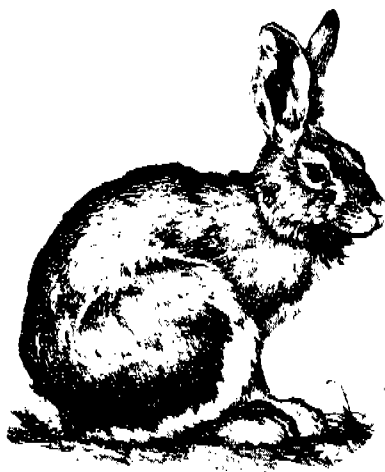
Cottontail Rabbits

An extremely depressed breeding population for 1985 was indicated by the 1984 harvest statistics.

Summer roadside counts also indicated a decreased population density statewide. Harvest statistics indicated 50 percent of the harvest was from the Southern and Southeastern regions, with a total harvest of 31,397 cottontails by 14,059 hunters afield.



Snowshoe Hares



The 1985 snowshoe hare hunting season was the eleventh held since the Legislature provided protected status to this species in 1975.

Harvest statistics for 1985 indicated decreased hunter participation and hunter success. This decrease reflects statewide rabbit populations. Although efforts have been made to educate hunters in the identification of the snowshoe hare and the whitetailed jackrabbit, it is still a potential problem which could bias the snowshoe data.

COTTONTAIL RABBIT

Roadside Counts

Results of the annual roadside counts for 1985 are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1975 is shown in Tables 2 and 3, respectively. Indices for 1985 compared to 1984 and the 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total miles driven	1,656	+55	-30
Total cottontails counted	211	+24	-77
Cottontails observed per mile	0.13	-19	-65
Young observed per 100 adults	73	-27	-31

An increased, but yet, below average breeding population for 1985 was indicated by 1984 harvest statistics. Production, however, was 27 percent below 1984 and 31 percent below the average.

The cottontail per mile index was down statewide and was 65 percent below the average.

Harvest

Hunter Questionnaire

Results of the 1985 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 1979 are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figure 2. Results of the 1985 season compared to 1984 and the 18-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Cottontail hunters	14,059	-24	-47
Cottontail harvest	31,397	-55	-83
Hunter-days afield	48,371	-28	-55
Cottontails per hunter-day	0.65	-36	-58
Cottontails per hunter	2.23	-40	-65

Total hunters, harvest and hunter-days afield, decreased significantly from 1984. Total harvest was 83 percent below average and success decreased to 58 percent below average, indicating a sharply decreased population of cottontails. The winters of 1982-83 and 1983-84 appear to have had a profound effect on the rabbit population statewide. The population crash was apparent in the spring of 1984, and has been confirmed by the 1984 and 1985 harvest data.

Field Bag Checks

Results of the survey for 1985 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 1985 field bag check data to 1984 and the average.

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Total hunters checked	14	-78	-96
Total hours hunted	31	-79	-97
Cottontails per hunter (complete hunts)	0.80	-61	-59
Cottontails bagged per 100 hours	13	-82	-79
Hours per hunter-day (complete hunts)	3.8	+41	+19
Hours per cottontail bagged (complete hunts)	4.8	+269	+151

Field bag check data was limited to the Northeastern region and Millard County. Data from other regions was not obtained.

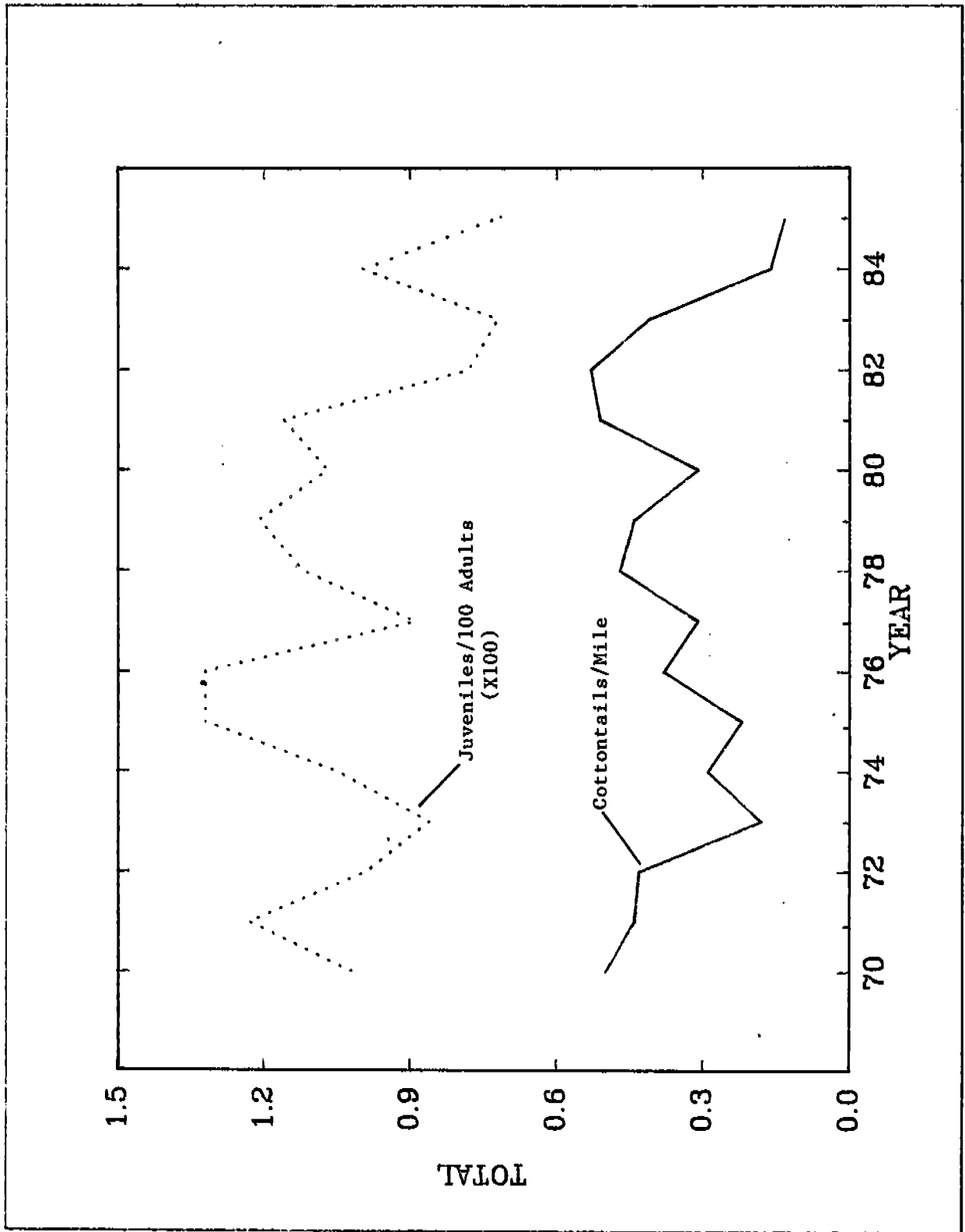


Figure 1. Cottontail rabbit population indexes trend.

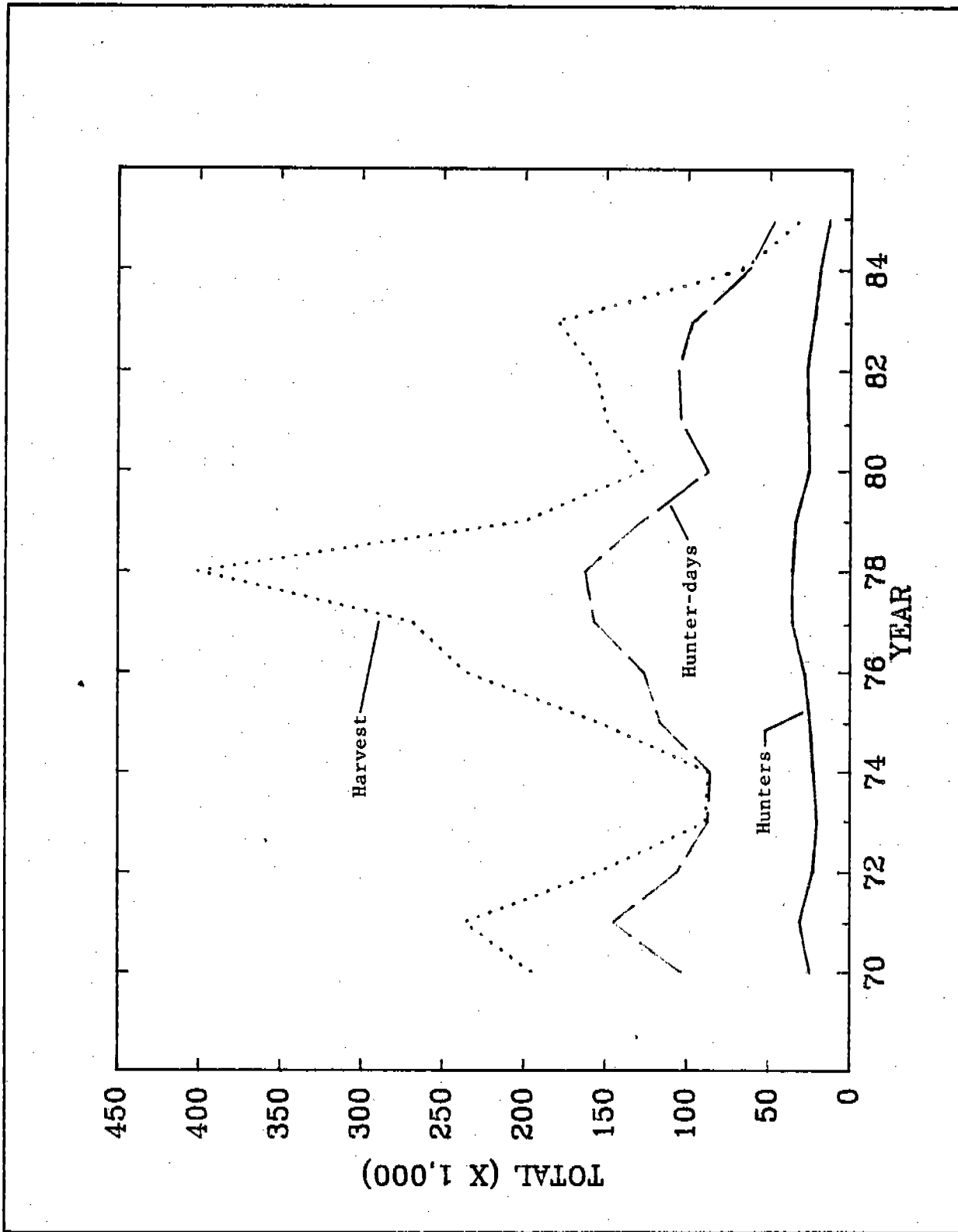


Figure 2. Cottontail rabbit harvest trend.

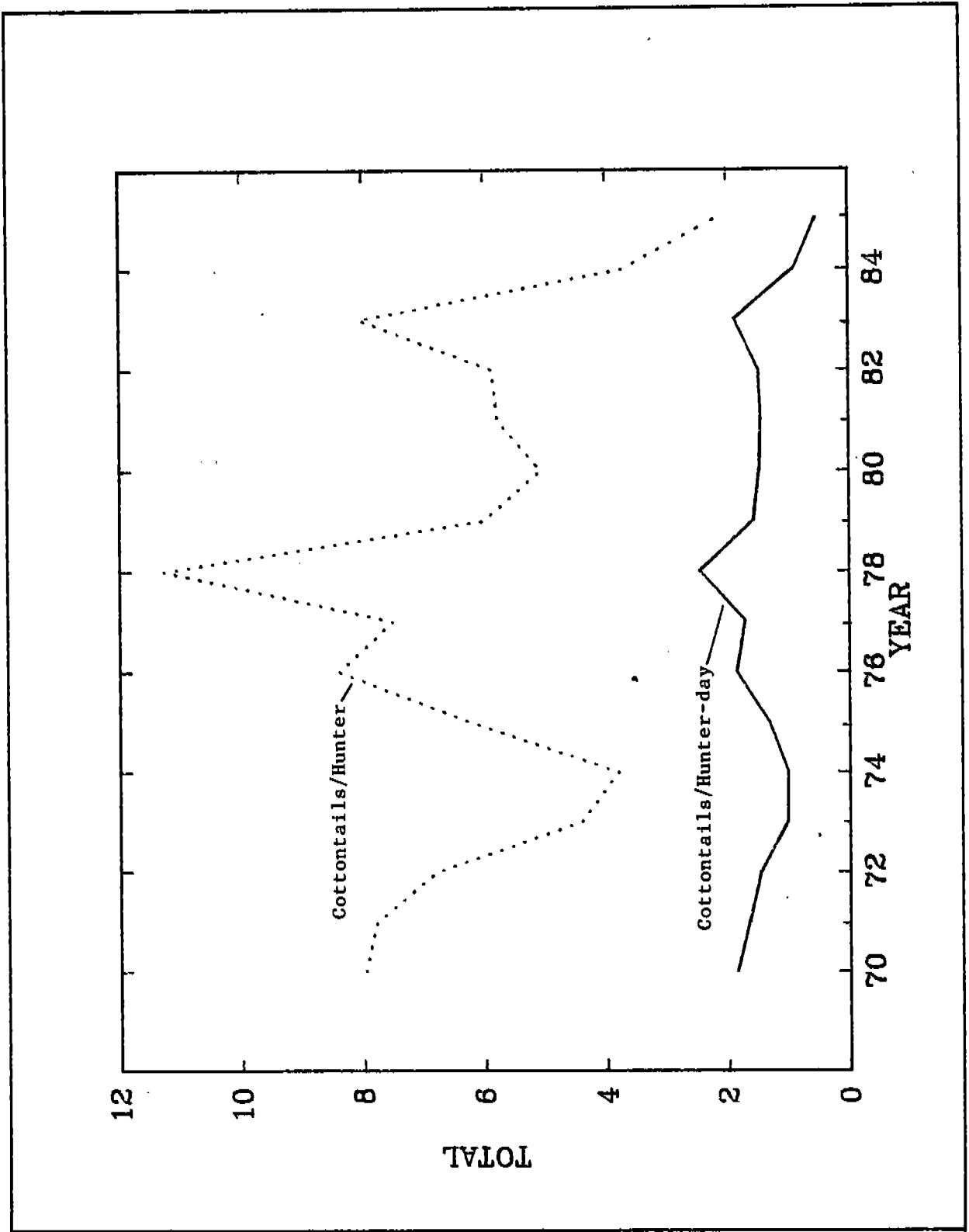


Figure 3. Cottontail rabbit harvest trend.

Table 1. Cottontail rabbit summer inventory summary, 1985.

Region and County	Miles Driven	Rabbits Observed				Young Per 100 Adults	Rabbits Per Mile
		Adults	Young	Unclass.	Total		
<u>Northern Region</u>							
Box Elder	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--
<u>Central Region</u>							
Juab	85	0	0	0	0	0	0.00
Salt Lake	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--
Tooele	90	0	0	0	0	0	0.00
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	175	0	0	0	0	0	0.00
<u>Southern Region</u>							
Beaver	90	3	0	0	3	0	0.03
Garfield*	90	3	1	1	5	33	0.06
Iron	69	11	9	3	23	82	0.33
Kane	120	31	31	0	62	100	0.52
Millard	172	1	2	0	3	200	0.02
Piute	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--
Washington	90	11	8	2	21	73	0.23
Wayne	--	--	--	--	--	--	--
REGIONAL TOTALS	631	60	51	6	117	85	0.19
<u>Northeastern Region</u>							
Daggett	160	13	6	0	19	46	0.12
Duchesne	120	13	2	1	16	15	0.13
Uintah	120	0	0	0	0	0	0.00
REGIONAL TOTALS	400	26	8	1	35	31	0.09
<u>Southeastern Region</u>							
Carbon	60	3	0	0	3	--	0.05
Emery	120	6	13	5	24	216	0.20
Grand	90	1	3	2	6	300	0.67
San Juan	180	16	7	3	26	43	0.14
REGIONAL TOTALS	450	26	23	10	59	88	0.13
STATE TOTALS	1,656	112	82	17	211	73	0.13

*Includes data from Southeastern Region.

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1975-85.

Region and County	Year										Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	
<u>Northern Region</u>											
Box Elder	0.32	0.72	0.97	0.29	0.33	--	0.37	0.01	--	--	--
Cache	--	0.00	--	0.05	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	0.02	0.17	0.16	0.10	--	--	--	--	--	--	--
Rich	0.16	0.46	0.26	0.47	0.30	0.11	0.13	0.16	--	--	--
Summit	--	--	--	--	--	--	--	--	0.18	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.19	0.45	0.59	0.30	0.32	0.11	0.26	0.06	0.18	--	0.27
<u>Central Region</u>											
Juab	0.07	0.08	0.18	0.19	0.23	0.29	1.12	0.38	--	0.00	0.00
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	0.18	0.36	0.37	0.86	1.15	1.06	1.29	0.78	0.57	--	--
Tooele	0.04	0.16	0.19	0.21	0.51	0.26	0.13	0.10	--	0.02	0.00
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.09	0.20	0.25	0.43	0.64	0.54	0.85	0.43	0.57	0.01	0.00
<u>Southern Region</u>											
Beaver	0.04	0.20	0.11	0.22	0.22	0.06	0.19	0.12	0.04	0.01	0.03
Garfield	0.28	0.39	0.15	0.13	0.15	--	--	0.27	0.25	--	0.06
Iron	0.09	0.21	0.36	0.66	0.45	0.45	--	0.18	0.38	0.27	0.33
Kane	0.48	0.49	0.32	0.23	0.34	--	0.69	--	--	--	0.52
Millard	0.07	0.17	0.14	0.42	0.52	0.18	0.56	0.28	0.16	0.04	0.02
Piute	0.07	0.08	0.00	0.01	0.02	--	0.10	0.13	0.03	--	--
Sevier	0.11	0.26	0.38	0.90	0.55	0.27	0.83	0.27	0.23	--	--
Washington	0.56	0.32	0.21	0.16	0.35	0.10	0.24	0.32	0.38	--	0.23
Wayne	0.03	0.17	0.09	0.48	0.56	0.54	0.49	0.69	--	0.80	--
REGIONAL TOTALS	0.20	0.27	0.19	0.35	0.37	0.22	0.45	0.29	0.19	0.18	0.19
<u>Northeastern Region</u>											
Daggett	0.24	0.68	0.25	2.77	1.58	0.40	0.32	0.45	0.58	0.22	0.12
Duchesne	0.67	1.00	1.21	1.42	0.24	0.42	1.78	2.28	0.58	0.28	0.13
Uintah	0.32	1.36	0.68	1.22	0.53	0.27	0.48	1.97	2.97	0.11	0.00
REGIONAL TOTALS	0.43	0.98	0.67	1.75	0.84	0.36	0.81	1.46	1.21	0.21	0.09
<u>Southeastern Region</u>											
Carbon	0.18	0.18	0.10	0.12	0.12	0.15	0.12	0.10	0.11	--	0.05
Emery	0.04	0.27	0.26	0.21	0.28	0.16	0.41	0.18	0.23	0.18	0.20
Grand	0.18	0.22	0.19	0.33	0.21	0.11	0.32	0.67	0.15	0.13	0.67
San Juan	0.42	0.67	0.31	0.31	0.20	0.60	0.42	1.26	0.40	--	0.14
REGIONAL TOTALS	0.22	0.35	0.21	0.23	0.21	0.30	0.36	0.58	0.25	0.17	0.13
STATE TOTALS	0.22	0.38	0.31	0.47	0.44	0.31	0.51	0.53	0.41	0.16	0.13

Table 3. Summary of cottontail rabbits young per 100 adults, 1975-85.

Region and County	Year											Average 1975-84
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Northern Region												
Box Elder	144	281	103	126	100	--	77	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	200	100	--	--	--	--	--	--	--	--	--
Rich	56	100	54	130	60	67	43	63	67	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	120	222	96	137	85	67	71	63	67	--	--	103
Central Region												
Juab	67	20	100	44	13	78	102	53	--	0	0	0
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	38	256	200	217	312	352	197	209	225	--	--	--
Tooele	100	133	129	125	100	71	200	80	--	--	0	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	54	160	154	161	167	194	147	140	225	0	0	156
Southern Region												
Beaver	0	--	33	70	63	40	55	83	33	0	0	0
Garfield	77	103	71	64	250	--	--	38	120	--	33	33
Iron	0	70	93	33	44	23	--	57	35	40	82	82
Kane	160	87	65	56	82	--	106	--	--	--	100	100
Millard	88	63	67	88	190	96	170	94	125	75	200	200
Plute	20	75	--	--	--	--	--	--	200	--	--	--
Sevier	44	67	126	147	171	350	--	33	61	--	--	--
Washington	212	118	57	400	94	--	123	150	81	--	73	73
Wayne	0	250	225	282	214	308	287	343	--	380	--	--
REGIONAL TOTALS	120	89	86	96	139	114	184	145	82	215	85	127
Northeastern Region												
Daggett	77	152	48	98	123	58	104	140	66	33	46	46
Duchesne	258	177	66	167	200	61	42	37	16	22	15	15
Uintah	211	151	134	153	82	160	176	44	76	233	0	0
REGIONAL TOTALS	198	159	78	125	118	73	67	48	63	42	31	97
Southeastern Region												
Carbon	227	85	112	118	230	133	83	66	40	--	--	--
Emery	0	58	30	111	25	70	97	43	75	217	216	216
Grand	47	54	100	77	50	250	137	148	150	33	300	300
San Juan	150	179	120	35	30	68	105	72	43	--	43	43
REGIONAL TOTALS	124	112	84	71	46	79	103	82	54	156	88	91
STATE TOTALS	132	132	89	112	121	107	116	78	72	100	73	106

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Cottontails Bagged	Cottontails/Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	49	2,614	1,200	0.46	5.40	3.82
Cache	7	321	300	0.93	0.66	0.96
Davis	5	685	0	0.00	1.42	0.00
Morgan	12	664	364	0.55	1.37	1.16
Rich	12	535	278	0.52	1.11	0.89
Summit	16	1,028	364	0.35	2.13	1.16
Weber	6	642	85	0.13	1.33	0.27
REGIONAL TOTALS	107	6,493	2,593	0.40	13.42	8.26
<u>Central Region</u>						
Juab	35	1,157	642	0.56	2.39	2.04
Salt Lake	12	707	150	0.21	1.46	0.48
Sanpete	22	1,093	385	0.35	2.26	1.23
Tooele	100	6,279	3,300	0.53	12.98	10.51
Utah	84	3,986	2,593	0.65	8.24	8.26
Wasatch	17	1,028	492	0.48	2.13	1.57
REGIONAL TOTALS	270	14,252	7,565	0.53	29.46	24.09
<u>Southern Region</u>						
Beaver	6	814	407	0.50	1.68	1.30
Garfield	4	192	192	1.00	0.40	0.61
Iron	14	642	385	0.60	1.33	1.23
Kane	4	300	621	2.07	0.62	1.98
Millard	40	2,078	1,778	0.86	4.30	5.66
Piute	2	64	64	1.00	0.13	0.20
Sevier	17	685	385	0.56	1.42	1.23
Washington	25	3,193	3,450	1.08	6.60	10.99
Wayne	13	471	685	1.45	0.97	2.18
REGIONAL TOTALS	125	8,444	7,972	0.94	17.46	25.35
<u>Northeastern Region</u>						
Daggett	11	578	578	1.00	1.19	1.84
Duchesne	70	4,564	2,893	0.63	9.44	9.21
Uintah	53	3,793	1,843	0.49	7.84	5.87
REGIONAL TOTALS	134	8,937	5,315	0.59	18.48	16.93
<u>Southeastern Region</u>						
Carbon	44	3,300	2,293	0.69	6.82	7.30
Emery	43	4,800	3,064	0.64	9.92	9.76
Grand	15	750	1,307	1.74	1.55	4.16
San Juan	12	1,200	1,071	0.89	2.48	3.41
REGIONAL TOTALS	114	10,051	7,736	0.77	20.78	24.64
Unknown Counties	2	192	214	1.11	0.40	0.68
STATE TOTALS	752	48,371	31,397	0.65	100	100

*Total hunter trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>							
Box Elder	1.84	1.92	1.99	1.12	1.44	0.72	0.46
Cache	1.22	1.35	0.68	0.61	0.77	0.71	0.93
Davis	2.00	0.90	0.07	0.00	1.05	0.57	0.00
Morgan	1.10	1.09	1.46	0.95	1.65	1.19	0.55
Rich	1.94	1.79	1.87	1.03	2.28	1.61	0.52
Summit	1.20	0.56	1.21	0.87	1.44	0.17	0.35
Weber	0.83	0.58	1.10	0.70	0.56	0.68	0.13
<u>REGIONAL TOTALS</u>	<u>1.60</u>	<u>1.61</u>	<u>1.65</u>	<u>1.00</u>	<u>1.43</u>	<u>1.76</u>	<u>0.40</u>
<u>Central Region</u>							
Juab	2.23	2.15	1.73	1.43	1.21	1.41	0.56
Salt Lake	0.96	0.56	0.71	1.07	1.74	0.88	0.21
Sanpete	1.46	0.99	1.44	0.86	1.12	0.48	0.35
Tooele	1.89	1.69	1.29	1.12	1.21	0.82	0.53
Utah	1.06	1.12	0.99	0.74	1.02	0.82	0.65
Wasatch	1.00	0.80	0.82	0.80	0.49	0.69	0.48
<u>REGIONAL TOTALS</u>	<u>1.57</u>	<u>1.51</u>	<u>1.26</u>	<u>1.06</u>	<u>1.16</u>	<u>0.88</u>	<u>0.53</u>
<u>Southern Region</u>							
Beaver	1.45	0.93	1.79	2.00	1.25	0.28	0.50
Garfield	2.12	1.86	1.05	1.86	0.98	0.84	1.00
Iron	1.74	1.27	1.03	0.77	0.80	1.48	0.60
Kane	2.01	1.39	0.81	1.84	0.58	2.19	2.07
Millard	1.82	1.70	1.57	1.58	1.04	0.89	0.86
Piute	1.27	1.53	1.52	0.38	0.80	0.67	1.00
Sevier	1.40	1.22	0.97	0.87	0.66	0.79	0.56
Washington	1.33	0.95	1.03	1.53	0.92	0.93	1.08
Wayne	1.76	1.48	2.69	1.41	1.52	1.93	1.45
<u>REGIONAL TOTALS</u>	<u>1.64</u>	<u>1.35</u>	<u>1.32</u>	<u>1.39</u>	<u>0.93</u>	<u>1.06</u>	<u>0.94</u>
<u>Northeastern Region</u>							
Daggett	3.30	1.50	1.12	1.38	1.77	1.19	1.00
Duchesne	1.49	1.39	1.80	2.17	3.41	1.62	0.63
Uintah	1.64	1.16	1.41	2.18	3.09	1.47	0.49
<u>REGIONAL TOTALS</u>	<u>1.20</u>	<u>1.30</u>	<u>1.53</u>	<u>2.13</u>	<u>3.12</u>	<u>1.51</u>	<u>0.59</u>
<u>Southeastern Region</u>							
Carbon	1.06	1.05	1.42	1.61	1.73	0.52	0.69
Emery	1.26	1.36	1.30	1.38	1.61	0.78	0.64
Grand	1.27	1.62	1.56	2.44	2.27	1.53	1.74
San Juan	1.42	1.90	1.87	2.93	2.09	1.51	0.89
<u>REGIONAL TOTALS</u>	<u>1.20</u>	<u>1.30</u>	<u>1.53</u>	<u>1.81</u>	<u>1.79</u>	<u>0.90</u>	<u>0.77</u>
Unknown counties	1.46	1.00	2.60	1.35	1.78	0.00	1.11
Mixed counties	1.25	5.00	1.11	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>1.57</u>	<u>1.47</u>	<u>1.44</u>	<u>1.48</u>	<u>1.88</u>	<u>1.02</u>	<u>0.65</u>

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>							
Box Elder	13.95	20.87	14.87	6.05	5.93	5.49	3.82
Cache	1.07	0.83	0.72	0.36	0.33	0.50	0.96
Davis	0.37	0.12	0.03	0.00	0.16	0.12	0.00
Morgan	1.90	0.84	0.82	0.38	0.64	0.73	1.16
Rich	2.89	1.75	0.80	0.36	0.96	2.08	0.89
Summit	1.95	1.16	1.66	0.65	0.83	0.29	1.16
Weber	0.61	0.40	0.62	0.38	0.11	0.56	0.27
REGIONAL TOTALS	22.73	25.96	19.50	8.19	8.95	9.77	8.26
<u>Central Region</u>							
Juab	7.79	9.35	6.79	5.76	1.95	5.28	2.04
Salt Lake	1.01	0.37	0.41	1.09	1.16	2.29	0.48
Sanpete	3.51	2.76	1.31	0.94	1.21	0.82	1.23
Tooele	16.48	21.32	10.58	10.04	6.53	9.18	10.51
Utah	7.40	6.01	5.63	3.55	3.44	5.43	8.26
Wasatch	1.18	0.88	0.59	0.73	0.17	0.91	1.57
REGIONAL TOTALS	37.37	40.69	25.32	22.10	14.44	23.91	24.09
<u>Southern Region</u>							
Beaver	0.47	1.43	0.72	0.76	0.30	0.32	1.30
Garfield	0.63	0.35	1.14	0.64	0.32	0.47	0.61
Iron	1.83	1.01	1.79	0.81	0.52	1.82	1.23
Kane	1.19	0.85	0.66	0.34	0.29	2.05	1.98
Millard	4.37	5.00	5.50	4.94	1.50	3.64	5.66
Piute	0.74	0.61	0.46	0.08	0.06	0.12	0.20
Sevier	2.14	1.84	1.94	0.79	0.48	0.56	1.23
Washington	1.70	1.12	2.06	2.99	1.49	5.05	10.99
Wayne	1.84	1.19	2.77	0.98	0.61	2.43	2.18
REGIONAL TOTALS	14.91	13.39	17.04	12.33	5.56	16.46	25.35
<u>Northeastern Region</u>							
Daggett	4.13	0.84	0.53	1.28	1.36	2.20	1.84
Duchesne	4.97	3.86	7.92	15.10	16.19	13.17	9.21
Uintah	5.82	3.40	7.13	14.70	29.37	14.23	5.87
REGIONAL TOTALS	14.92	8.10	15.58	31.08	46.93	29.61	16.93
<u>Southeastern Region</u>							
Carbon	3.46	4.22	6.96	9.98	9.60	4.90	7.30
Emery	3.69	4.05	4.68	5.47	6.98	4.69	9.76
Grand	0.62	1.68	2.96	2.79	2.15	5.99	4.16
San Juan	1.47	1.75	6.93	5.78	4.55	4.66	3.41
REGIONAL TOTALS	9.23	11.70	21.53	24.01	23.28	20.25	24.64
Unknown counties	0.14	0.03	0.19	2.28	0.84	0.00	0.68
Mixed counties	0.70	0.13	0.84	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1979-85.

Region and County	Year						
	1979	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>							
Box Elder	11.92	15.90	10.75	8.04	7.73	7.77	5.40
Cache	1.37	0.90	1.50	0.88	0.79	0.72	0.66
Davis	0.29	0.20	0.55	0.15	0.29	0.21	1.42
Morgan	2.70	1.13	0.80	0.59	0.72	0.63	1.37
Rich	2.35	1.43	0.62	0.52	0.79	1.32	1.11
Summit	2.55	3.01	1.97	1.10	1.08	1.74	2.13
Weber	1.16	1.02	0.80	0.81	0.38	0.84	1.33
REGIONAL TOTALS	22.34	23.58	17.00	12.10	11.79	13.23	13.42
<u>Central Region</u>							
Juab	5.47	6.39	5.65	5.98	3.05	3.84	2.39
Salt Lake	1.66	0.98	0.84	1.51	1.25	2.67	1.46
Sanpete	3.79	4.10	1.32	1.61	2.03	1.74	2.26
Tooele	13.67	18.48	11.80	13.25	10.12	11.43	12.98
Utah	10.99	7.87	8.14	7.15	6.26	6.78	8.24
Wasatch	1.85	1.60	1.03	1.36	0.65	1.35	2.13
REGIONAL TOTALS	37.44	39.43	28.77	30.86	23.36	27.82	29.46
<u>Southern Region</u>							
Beaver	0.50	2.25	0.58	0.57	0.44	1.20	1.68
Garfield	0.47	0.27	1.56	0.51	0.61	0.57	0.40
Iron	1.65	1.17	2.49	1.57	1.22	1.26	1.33
Kane	0.93	0.90	1.17	0.28	0.93	0.96	0.62
Millard	3.77	4.30	5.06	4.64	2.73	4.20	4.30
Piute	0.92	0.59	0.43	0.30	0.14	0.18	0.13
Sevier	2.40	2.21	2.88	1.35	1.38	0.72	1.42
Washington	2.00	1.72	2.88	2.90	3.05	5.52	6.60
Wayne	1.64	1.17	1.48	1.03	0.75	1.29	0.97
REGIONAL TOTALS	14.28	14.58	18.52	13.14	11.25	15.91	17.46
<u>Northeastern Region</u>							
Daggett	1.97	0.82	0.68	1.38	1.45	1.89	1.19
Duchesne	5.24	4.08	6.31	10.33	8.93	8.34	9.44
Uintah	5.59	4.28	7.25	9.98	17.87	9.87	7.84
REGIONAL TOTALS	12.80	9.18	14.24	21.69	28.25	20.11	18.48
<u>Southeastern Region</u>							
Carbon	5.13	5.90	7.03	9.20	10.42	9.66	6.82
Emery	4.59	4.38	5.18	5.88	8.18	6.12	9.92
Grand	0.77	1.52	2.73	1.70	1.78	3.99	1.55
San Juan	1.63	1.35	5.34	2.93	4.09	3.15	2.48
REGIONAL TOTALS	12.11	13.16	20.28	19.70	24.46	22.93	20.78
Unknown counties	0.15	0.04	0.10	2.51	0.89	0.00	0.40
Mixed counties	0.88	0.04	1.09	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100

Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-85.

Year	Total Hunters	Total Harvest	Hunter-days Afield	Cottontails Per Hunter-day	Cottontails Per Hunter
1967	23,249	181,812	92,681	1.95	7.79
1968	26,889	225,450	93,126	2.42	8.38
1969	29,760	184,034	119,596	1.54	6.18
1970	24,486	195,248	103,725	1.86	7.97
1971	30,824	239,511	145,287	1.65	7.78
1972	22,835	155,102	105,941	1.46	6.79
1973	20,109	88,603	87,036	1.02	4.41
1974	22,737	86,506	85,499	1.01	3.80
1975	24,803	154,182	116,707	1.32	6.22
1976	28,239	235,952	126,737	1.86	8.39
1977	35,831	269,263	157,257	1.71	7.51
1978	35,590	401,071	163,019	2.46	11.27
1979	33,385	200,223	127,497	1.57	6.00
1980	25,156	127,652	87,051	1.47	5.07
1981	25,906	149,765	104,183	1.44	5.78
1982	26,714	156,696	105,644	1.48	5.87
1983	22,467	180,767	96,151	1.88	8.05
1984	18,616	69,186	67,643	1.02	3.72
1985	14,059	31,397	48,371	0.65	2.23
TOTALS (1967-85)	491,655	3,277,241	1,981,018	(28.17)	(117.34)
AVERAGES (1967-84)	26,533	180,324	107,369	1.53	6.40

Table 9. Cottontail rabbit field bag check summary, 1985.

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	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS												
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS												
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	2	5	19	4	21	2	5	19	4	21	0.80	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS												
Northeastern Region												
Daggett	1	1	2	0	--	--	--	--	--	--	--	
Duchesne	2	8	10	0	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS												
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS												
STATE TOTALS												
	5	14	31	4	13	2	5	19	4	21	0.80	

Table 10. Cottontail hunter success trend determined by field bag checks, 1980-85.

Region and County	1980		1981		1982		1983		1984		1985	
	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter	Bag/ 100 Hr Hunter
Northern Region												
Box Elder	34	1.09	26	1.00	--	--	17	0.60	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	29	1.33	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	34	1.09	26	1.00	--	--	24	1.00	--	--	--	--
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	21	0.80
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	386	3.86*	--	--	--	--	--	--	--	--	21	0.80
Northeastern Region												
Daggett	0	0.00	26	0.50	104	2.88	172	4.43	107	3.20	--	--
Duchesne	53	1.67	59	2.14	75	2.00	148	3.70	100	0.75	--	--
Uintah	--	--	53	1.00	101	2.22	225	6.75	111	1.91	--	--
REGIONAL TOTALS	29	0.55	49	1.58	98	2.30	173	4.50	108	2.00	--	--
Southeastern Region												
Carbon	36	1.00	--	--	94	1.78	--	--	67	2.87	--	--
Emery	25	0.25	114	3.60	33	0.88	--	--	--	--	--	--
Grand	--	--	44	--	--	--	--	--	0	0.00	--	--
San Juan	0	0.00	114	3.00	225	4.50	57	3.43	50	1.33	--	--
REGIONAL TOTALS	26	0.38	106	3.50	62	1.44	57	3.43	61	2.13	--	--
STATE TOTALS	33	0.66	49	1.52	85	1.99	106	3.07	76	2.06	21	0.80

*Cottontails per hunter based on all hunts.

SNOWSHOE HARE

Harvest

The eleventh annual snowshoe hare hunting season was held statewide in 1985. Results of the 1985 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 1985 season compared to 1984 and the 10-year average follow:

	<u>1985</u>	<u>Percent change from</u>	
		<u>1984</u>	<u>Average</u>
Snowshoe hare hunters	3,365	-11	-42
Snowshoe hares harvested	3,429	-47	-75
Hunter-days afield	9,494	-12	-45
Snowshoes per hunter-day	0.36	-40	-51
Snowshoes per hunter	1.02	-40	-54

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 1985 questionnaire indicate an 11 percent decrease in snowshoe hare hunters and a 47 percent decrease in harvest compared to 1984. This corresponds to the depressed rabbit populations statewide.

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

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1985.

Region and County	Sample Size*	Hunter-days Afield	Snowshoes Bagged	Snowshoe/Hunter-day	% of Pressure	% of Harvest
<u>Northern Region</u>						
Box Elder	19	792	107	0.14	8.34	3.12
Cache	4	171	128	0.75	1.80	3.73
Davis	6	578	64	0.11	6.09	1.87
Morgan	6	214	0	0.00	2.25	0.00
Rich	6	342	21	0.06	3.60	0.61
Summit	18	1,350	857	0.63	14.22	24.99
Weber	3	257	42	0.71	2.71	1.22
REGIONAL TOTALS	62	3,707	1,221	0.33	39.05	35.61
<u>Central Region</u>						
Juab	2	107	0	0.00	1.13	0.00
Salt Lake	3	128	21	0.17	1.35	0.61
Sanpete	6	278	64	0.23	2.93	1.87
Tooele	11	792	192**	0.24	8.34	5.60
Utah	14	535	342	0.64	5.64	9.97
Wasatch	12	407	128	0.32	4.29	3.73
REGIONAL TOTALS	48	2,250	750	0.33	23.70	21.87
<u>Southern Region</u>						
Beaver	0	0	0	0.00	0.00	0.00
Garfield	4	107	42	0.40	1.13	1.22
Iron	1	85	42	0.50	0.90	1.22
Kane	1	85	64	0.75	0.90	1.87
Millard	2	85	0	0.00	0.90	0.00
Piute	0	0	0	0.00	0.00	0.00
Sevier	6	171	42	0.25	1.80	1.22
Washington	3	171	85	0.50	1.80	2.48
Wayne	3	85	85	1.00	0.90	2.48
REGIONAL TOTALS	20	792	364	0.46	8.34	10.62
<u>Northeastern Region</u>						
Daggett	4	107	107	1.00	1.13	3.12
Duchesne	16	1,157	342	0.30	12.19	9.97
Uintah	11	835	407	0.49	8.80	11.87
REGIONAL TOTALS	31	2,100	857	0.41	22.12	24.99
<u>Southeastern Region</u>						
Carbon	9	514	150	0.29	5.41	4.37
Emery	3	128	85	0.67	1.35	2.48
Grand	0	0	0	0.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	12	642	235	0.37	6.76	6.85
Unknown Counties	0	0	0	0.00	0.00	0.00
STATE TOTALS	173	9,494	3,429	0.36	100	100

*Total hunter trips from questionnaire returns.

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

Table 12. Summary of snowshoe hares bagged per hunter-day by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	0.82	0.43	0.31	0.27	2.93	0.14
Cache	0.32	0.46	0.62	0.53	1.27	0.75
Davis	0.00	0.25	0.00	0.00	0.29	0.11
Morgan	0.41	0.25	0.50	0.45	0.14	0.00
Rich	1.79	2.17	0.53	0.67	0.58	0.06
Summit	0.86	0.91	0.77	0.94	0.61	0.63
Weber	0.58	1.00	0.32	0.39	0.31	0.17
<u>REGIONAL TOTALS</u>	<u>0.83</u>	<u>0.72</u>	<u>0.46</u>	<u>0.47</u>	<u>1.30</u>	<u>0.33</u>
<u>Central Region</u>						
Juab	0.25	0.83	1.83	1.20	0.33	0.00
Salt Lake	0.67	1.00	0.20	0.00	0.23	0.17
Sanpete	0.87	0.84	0.97	0.48	0.80	0.23
Tooele	0.40	0.08	1.01	0.94	0.68	0.24
Utah	0.48	0.26	0.39	0.38	0.71	0.64
Wasatch	0.69	0.97	0.84	0.65	0.44	0.32
<u>REGIONAL TOTALS</u>	<u>0.61</u>	<u>0.53</u>	<u>0.88</u>	<u>0.60</u>	<u>0.55</u>	<u>0.33</u>
<u>Southern Region</u>						
Beaver	0.00	0.00	1.00	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	0.40
Iron	0.00	0.75	0.00	0.17	3.00	0.50
Kane	0.00	0.00	0.00	0.00	0.00	0.75
Millard	1.00	0.00	1.00	0.00	0.00	0.00
Piute	0.00	0.00	0.50	1.45	0.20	0.00
Sevier	0.41	0.29	0.75	0.36	0.00	0.25
Washington	0.00	0.00	0.00	1.00	0.00	0.50
Wayne	1.17	2.00	0.58	0.81	1.22	1.00
<u>REGIONAL TOTALS</u>	<u>0.45</u>	<u>0.62</u>	<u>0.65</u>	<u>0.67</u>	<u>0.65</u>	<u>0.46</u>
<u>Northeastern Region</u>						
Daggett	0.25	0.00	0.47	0.60	0.33	1.00
Duchesne	0.14	0.67	0.79	0.89	0.43	0.30
Uintah	0.63	0.34	0.58	0.61	0.20	0.49
<u>REGIONAL TOTALS</u>	<u>0.33</u>	<u>0.51</u>	<u>0.67</u>	<u>0.69</u>	<u>0.30</u>	<u>0.41</u>
<u>Southeastern Region</u>						
Carbon	1.22	0.34	1.32	0.10	0.13	0.29
Emery	0.70	0.71	1.28	0.59	0.19	0.67
Grand	0.00	1.00	3.00	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	2.00	0.00
<u>REGIONAL TOTALS</u>	<u>0.83</u>	<u>0.43</u>	<u>1.30</u>	<u>0.36</u>	<u>0.17</u>	<u>0.37</u>
Unknown counties	0.00	2.33	0.81	0.65	0.00	0.00
Mixed counties	0.20	0.78	0.00	0.00	0.00	0.00
<u>STATE TOTALS</u>	<u>0.68</u>	<u>0.61</u>	<u>0.71</u>	<u>0.57</u>	<u>0.60</u>	<u>0.36</u>

Table 13. Percentage distribution of snowshoe hare harvested by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	11.86	5.80	5.63	5.30	36.79	3.12
Cache	3.80	6.63	2.15	4.87	4.40	3.73
Davis	0.00	0.55	0.00	0.00	0.62	1.87
Morgan	4.03	0.55	2.32	2.75	0.31	0.00
Rich	20.81	7.18	2.98	2.11	2.20	0.61
Summit	15.66	17.40	5.96	7.00	7.85	24.99
Weber	1.57	3.59	1.49	1.90	1.25	1.22
REGIONAL TOTALS	57.72	41.70	20.53	23.93	53.46	35.61
<u>Central Region</u>						
Juab	0.44	1.38	7.28	1.27	0.62	0.00
Salt Lake	2.24	1.93	0.33	0.00	0.93	0.61
Sanpete	7.38	4.42	4.64	2.54	1.25	1.87
Tooele	2.69	0.28	13.74	10.17	4.07	5.60
Utah	4.70	4.97	3.48	6.36	6.91	9.97
Wasatch	9.40	7.74	7.62	4.67	5.02	3.73
REGIONAL TOTALS	26.85	20.72	37.09	25.01	18.87	21.87
<u>Southern Region</u>						
Beaver	0.00	0.00	0.33	0.00	0.00	0.00
Garfield	0.00	0.00	0.00	0.00	0.00	1.22
Iron	0.00	0.83	0.00	0.21	0.93	1.22
Kane	0.00	0.00	0.00	0.00	0.00	1.87
Millard	0.22	0.00	0.17	0.00	0.00	0.00
Piute	0.00	0.00	0.33	3.38	0.31	0.00
Sevier	2.46	1.38	0.50	1.68	0.00	1.22
Washington	0.00	0.00	0.00	0.84	0.00	2.48
Wayne	1.57	2.21	1.16	4.67	6.91	2.48
REGIONAL TOTALS	4.25	4.42	2.48	10.78	8.16	10.62
<u>Northeastern Region</u>						
Daggett	0.67	0.00	1.32	0.63	0.31	3.12
Duchesne	0.67	14.09	13.91	11.66	8.16	9.97
Uintah	2.24	5.80	10.43	19.09	5.34	11.87
REGIONAL TOTALS	3.58	19.89	25.66	31.39	13.83	24.99
<u>Southeastern Region</u>						
Carbon	2.46	3.59	5.46	0.84	3.45	4.37
Emery	4.25	1.38	6.13	5.73	0.93	2.48
Grand	0.00	0.55	0.50	0.00	0.00	0.00
San Juan	0.00	0.00	0.00	0.00	1.25	0.00
REGIONAL TOTALS	6.71	5.52	12.09	6.57	5.65	6.85
Unknown counties	0.00	1.93	2.15	2.33	0.00	0.00
Mixed counties	0.90	5.80	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1980-85.

Region and County	Year					
	1980	1981	1982	1983	1984	1985
<u>Northern Region</u>						
Box Elder	9.92	8.21	12.66	11.21	7.49	8.34
Cache	8.09	8.71	2.46	5.19	2.06	1.80
Davis	0.76	1.34	0.59	0.00	1.31	6.09
Morgan	6.72	1.34	3.28	3.49	1.31	2.25
Rich	7.94	2.01	3.99	1.80	2.24	3.60
Summit	12.37	11.56	5.51	4.22	7.68	14.22
Weber	1.83	2.18	3.28	2.77	2.43	2.71
REGIONAL TOTALS	47.63	35.34	31.77	28.68	24.53	39.05
<u>Central Region</u>						
Juab	1.22	1.01	2.81	0.60	1.12	1.13
Salt Lake	2.29	1.17	1.17	0.36	2.43	1.35
Sanpete	5.80	3.18	3.40	3.01	0.93	2.93
Tooele	4.58	2.01	9.61	6.15	3.55	8.34
Utah	6.72	11.56	6.33	9.64	5.80	5.64
Wasatch	9.31	4.86	6.45	4.10	6.73	4.29
REGIONAL TOTALS	29.92	23.79	29.78	23.86	20.60	23.70
<u>Southern Region</u>						
Beaver	1.22	0.00	0.23	0.12	1.31	0.00
Garfield	0.00	0.00	0.00	0.12	0.18	1.13
Iron	0.00	0.67	0.00	0.72	0.18	0.90
Kane	0.00	0.00	0.00	0.00	0.00	0.90
Millard	0.15	0.17	0.12	0.48	0.18	0.90
Piute	0.00	0.00	0.47	1.33	0.93	0.00
Sevier	4.12	2.85	0.47	2.65	1.31	1.80
Washington	0.00	0.00	0.00	0.48	0.00	1.80
Wayne	0.92	0.67	1.41	3.26	3.37	0.90
REGIONAL TOTALS	6.41	4.36	2.70	9.15	7.49	8.34
<u>Northeastern Region</u>						
Daggett	1.83	0.50	1.99	0.60	0.55	1.13
Duchesne	3.21	12.73	12.54	7.48	11.42	12.19
Uintah	2.44	10.39	12.78	17.72	15.73	8.80
REGIONAL TOTALS	7.48	23.62	27.32	25.80	27.71	22.12
<u>Southeastern Region</u>						
Carbon	1.37	6.37	2.93	4.82	16.10	5.41
Emery	4.12	1.17	3.40	5.55	2.99	1.35
Grand	0.00	0.34	0.12	0.00	0.18	0.00
San Juan	0.00	0.00	0.12	0.12	0.37	0.00
REGIONAL TOTALS	5.50	7.87	6.57	10.48	19.66	6.76
Unknown counties	0.00	0.50	1.88	2.05	0.00	0.00
Mixed counties	3.05	4.52	0.00	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-85.

Year	Total Hunters	Total Harvest	Hunters-days Afield	Hares Per Hunter-day	Hares Per Hunter
1975	5,961	12,072	19,770	0.61	2.03
1976	8,502	15,500	20,367	0.76	1.82
1977	9,752	21,232	26,535	0.80	2.18
1978	8,205	34,535	30,155	1.15	4.21
1979	6,787	14,641	18,115	0.81	2.16
1980	4,048	7,603	11,140	0.68	1.88
1981	3,554	7,750	12,782	0.61	2.18
1982	4,245	9,257	13,073	0.71	2.18
1983	3,544	6,302	11,088	0.57	1.78
1984	3,796	6,455	10,840	0.60	1.70
1985	3,365	3,429	9,494	0.36	1.02
TOTALS (1975-85)	61,759	138,776	183,359	7.66 0.76	23.14 2.25
AVERAGES (1975-84)	5,839	13,535	17,387	0.73	2.21

A P P E N D I X

Table 1. Comparison of 1985 monthly average temperatures (°F) to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. 1 WESTERN												
Normal	26.9	32.7	38.7	47.0	56.5	65.7	74.4	72.0	62.4	50.5	37.2	28.4
1985	22.8	26.2	37.6	51.8	59.9	68.9	76.4	71.7	58.7	49.5	34.1	22.4
Departure (degrees)	-4.1	-6.5	-1.1	+4.8	+3.4	+3.2	+2.0	-0.3	-3.7	-1.0	-3.1	-6.0
No. 2 DIXIE												
Normal	38.7	43.9	48.8	56.4	65.4	75.2	82.0	79.7	72.6	61.5	47.8	39.8
1985	39.6	41.1	48.9	63.8	68.3	79.0	84.5	80.7	68.3	60.5	44.9	41.7
Departure (degrees)	+0.9	-2.8	+0.1	+7.4	+2.9	+3.8	+2.5	+1.0	-4.3	-1.0	-2.9	+1.9
No. 3 NORTH CENTRAL												
Normal	27.0	31.9	38.6	47.4	57.1	65.9	74.6	72.2	63.1	51.3	38.0	28.9
1985	20.1	21.7	35.1	52.1	60.0	68.0	75.5	71.7	58.9	50.2	33.9	22.6
Departure (degrees)	-6.9	-10.2	-3.5	+4.7	+2.9	+2.1	+0.9	-0.5	-4.2	-1.1	-4.1	-6.3
No. 4 SOUTH CENTRAL												
Normal	27.1	31.6	37.0	44.9	54.0	63.1	70.4	68.0	60.2	49.8	37.1	28.8
1985	25.1	26.6	37.0	49.2	56.1	65.9	71.4	69.0	56.4	48.7	34.5	27.1
Departure (degrees)	-2.0	-5.0	0.0	+4.3	+2.1	+2.8	+1.0	+1.0	-3.8	-1.1	-2.6	-1.7
No. 5 NORTHERN MOUNTAINS												
Normal	21.2	24.7	30.6	40.0	49.6	57.6	65.3	63.1	55.0	44.9	32.0	23.6
1985	16.5	18.0	29.3	44.7	52.5	60.2	67.1	63.7	51.9	45.1	29.4	20.3
Departure (degrees)	-4.7	-6.7	-1.3	+4.7	+2.9	+2.6	+1.8	+0.6	-3.1	+0.2	-2.6	-3.3
No. 6 UINTAH BASIN												
Normal	17.2	24.1	35.5	46.2	56.2	64.9	72.1	69.3	60.3	48.5	33.5	21.2
1985	10.2	11.8	33.2	51.2	58.8	67.5	73.1	70.6	57.5	47.4	33.7	18.0
Departure (degrees)	-7.0	-12.3	-2.3	+5.0	+2.6	+2.6	+1.0	+1.3	-2.8	-1.1	+0.2	-3.2
No. 7 SOUTHEAST												
Normal	27.0	33.8	41.0	50.2	59.8	69.7	76.6	73.8	65.4	53.7	39.5	29.3
1985	28.9	30.3	42.5	54.1	62.4	73.0	77.7	75.5	61.6	53.2	39.2	32.0
Departure (degrees)	+1.9	-3.5	+1.5	+3.9	+2.6	+3.3	+1.1	+1.7	-3.8	-0.5	-0.3	+2.7
STATE AVERAGES												
Normal	26.4	31.8	38.6	47.4	56.9	66.0	73.6	71.2	62.7	51.5	37.9	28.6
1985	23.3	25.1	37.7	52.4	59.7	68.9	75.1	71.8	59.0	50.7	35.7	26.3
Departure (degrees)	-3.1	-6.7	-0.9	+5.0	+2.8	+2.9	+1.5	+0.6	-3.7	-0.8	-2.2	-2.3

Table 2. Comparison of 1985 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. 1 WESTERN												
Normal	0.59	0.57	0.74	0.81	0.91	0.67	0.63	0.72	0.55	0.65	0.62	0.54
1985	0.33	0.45	1.06	0.39	0.88	0.50	1.48	0.05	1.20	0.88	1.22	0.57
Departure (inches)	-0.26	-0.12	+0.32	-0.42	-0.03	-0.17	+0.85	-0.67	+0.65	+0.23	+0.60	+0.03
No. 2 DIXIE												
Normal	1.35	1.36	1.42	0.82	0.66	0.36	0.78	1.01	0.76	0.78	0.99	0.96
1985	1.38	0.38	1.01	0.68	0.47	0.24	1.17	0.05	1.21	1.17	2.50	0.46
Departure (inches)	+0.03	-0.98	-0.41	-0.14	-0.19	-0.12	+0.39	-0.96	+0.45	+0.39	+1.51	-0.50
No. 3 NORTH CENTRAL												
Normal	1.56	1.39	1.60	1.96	1.60	1.19	0.65	0.95	0.99	1.31	1.34	1.41
1985	0.83	1.26	1.79	0.63	2.40	1.10	1.71	0.04	2.25	1.68	2.95	1.44
Departure (inches)	-0.73	-0.13	+0.19	-1.33	+0.80	-0.09	+1.06	-0.91	+1.26	+0.37	+1.61	+0.03
No. 4 SOUTH CENTRAL												
Normal	1.09	1.06	1.15	1.04	0.94	0.54	0.96	1.31	1.00	0.92	0.98	0.97
1985	0.69	0.52	1.93	1.46	1.02	0.72	2.20	0.16	0.87	1.54	2.18	0.72
Departure (inches)	-0.40	-0.54	+0.78	+0.42	+0.08	+0.18	+1.24	-1.15	-0.13	+0.62	+1.20	-0.25
No. 5 NORTHERN MOUNTAINS												
Normal	2.16	1.92	1.89	1.88	1.54	1.17	0.88	1.23	1.15	1.45	1.62	1.98
1985	0.79	1.35	2.31	1.01	2.16	1.10	2.15	0.04	2.06	1.95	3.91	1.11
Departure (inches)	-1.37	-0.57	+0.42	-0.87	+0.62	-0.07	+1.27	-1.19	+0.91	+0.50	+2.29	-0.87
No. 6 UINTAH BASIN												
Normal	0.51	0.45	0.57	0.68	0.78	0.72	0.58	0.81	0.71	0.87	0.54	0.61
1985	0.61	0.11	0.75	0.35	0.80	0.67	1.72	0.08	1.59	0.87	0.86	0.49
Departure (inches)	+0.10	-0.34	+0.18	-0.33	+0.02	-0.05	+1.14	-0.73	+0.88	0.00	+0.32	-0.12
No. 7 SOUTHEAST												
Normal	0.72	0.61	0.64	0.61	0.67	0.40	0.77	1.05	0.78	1.09	0.73	0.74
1985	0.77	0.19	1.46	1.41	0.66	0.27	1.70	0.04	2.16	1.57	1.50	0.25
Departure (inches)	+0.05	-0.42	+0.82	+0.80	-0.01	-0.13	+0.93	-1.01	+1.38	+0.48	+0.77	-0.49
STATE AVERAGES												
Normal	1.14	1.05	1.14	1.11	1.01	0.72	0.75	1.01	0.85	1.01	0.97	1.03
1985	0.77	0.61	1.47	0.85	1.20	0.66	1.73	0.07	1.62	1.38	2.16	0.72
Departure (inches)	-0.37	-0.44	+0.33	-0.26	+0.19	-0.06	+0.98	-0.94	+0.77	+0.37	+1.19	-0.31

CLIMATIC REPORTING DIVISIONS AND SELECTED CLIMOGRAPHS

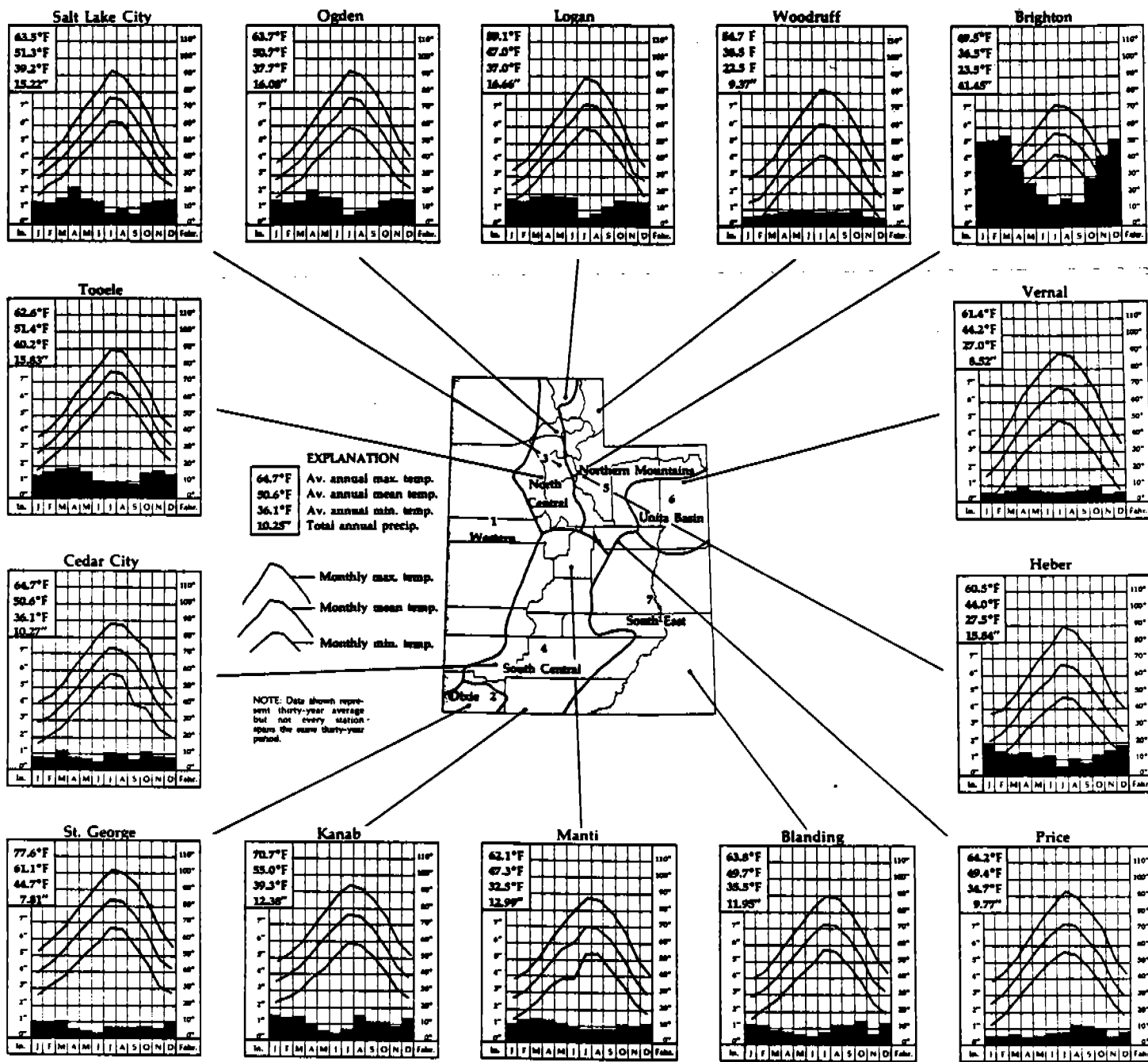


Figure 1. Climographs for selected reporting stations in Utah. Temperatures and precipitation are 30-year averages. Figure is from the Office of Utah State Climatologist. Utah State University, UMC 48, Logan, Utah 84322.

UTAH'S
PRECIPITATION
TRENDS FOR
THE WATER YEARS
1973-74
THROUGH
1983-84

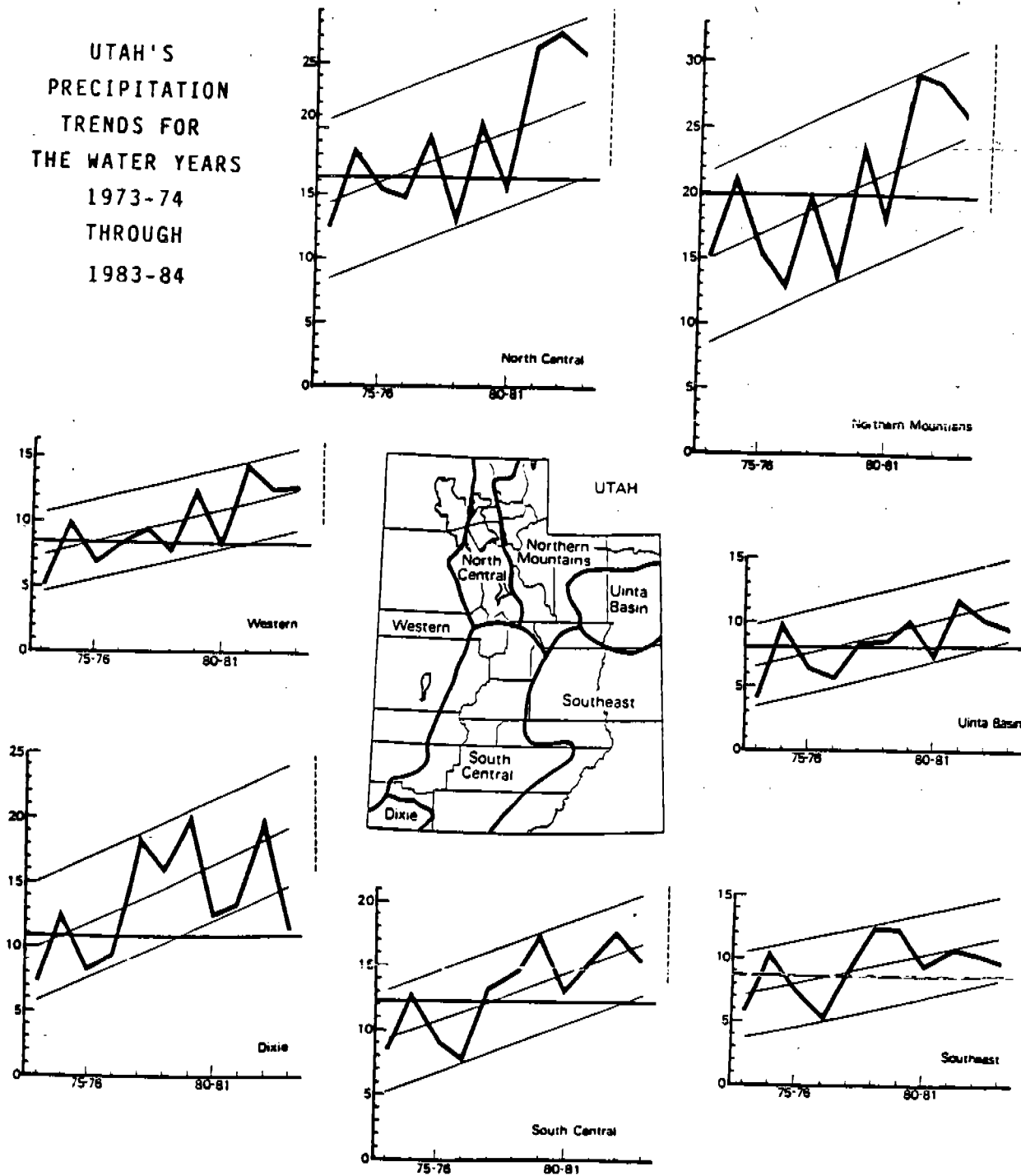


Figure 2. The heavy solid lines connect water-year precipitation accumulations for the period 1973-74 through 1983-84. The heavy horizontal lines indicate the normal precipitation values for the divisions. In addition, there are three fine, solid lines on each graph: the center one is a trend line and the other two are straight lines drawn parallel to the trend lines but far enough removed to enclose all of the precipitation values except for last year's value in the Dixie Division. The broken vertical lines at the right ends of the trend lines show the probable range of values for the 1984-85 water year, assuming that the present trend of wet years continues.

Table 3. Number and percent of total upland game hunters afield who reported hunting each game species during 1980-85.

Species	Number of Hunters						Percent of Total					
	1980	1981	1982	1983	1984	1985	1980	1981	1982	1983	1984	1985
Pheasant	84,868	83,408	85,368	77,847	76,840	69,889	84.7	86.7	87.4	85.9	86.9	86.2
Chukar	15,100	12,907	11,326	10,418	9,846	7,930	15.1	13.4	11.6	11.5	11.1	9.8
Mourning dove	32,627	30,060	31,756	28,258	30,573	28,183	32.6	31.2	32.5	31.2	34.6	34.7
Sage grouse	15,219	10,083	8,997	9,201	8,283	7,586	15.2	10.5	9.2	10.2	9.4	9.4
Forest grouse	19,511	14,329	12,384	13,414	11,511	12,645	19.5	14.9	12.7	14.8	13.0	15.6
Quail	4,156	4,946	4,368	4,012	3,654	3,065	4.1	5.1	4.5	4.4	4.1	3.8
Hungarian partridge	3,359	3,545	2,590	2,889	1,523	1,157	3.4	3.7	2.7	3.2	1.7	1.4
Wild turkey**	70*	115*	23	118*	255*	270	0.1	0.1	0.02	0.1	0.3	0.3
Sharp-tailed grouse**	--	--	--	--	--	--	--	--	--	--	--	--
Band-tailed pigeon**	62	67	51	--	--	--	0.1	0.1	0.1	--	--	--
Ptarmigan**	--	--	19	13	20	14	--	--	0.02	0.01	0.02	0.02
Cottontail rabbit	25,156	25,906	26,714	22,467	18,616	14,059	25.1	26.9	27.3	24.8	21.1	17.3
Snowshoe hare	4,048	3,554	4,245	3,544	3,796	3,365	4.0	3.7	4.3	3.9	4.3	4.1
TOTAL HUNTERS***	100,164	96,196	97,705	90,592	88,431	81,119						

*Includes both spring and fall hunts.

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

***Note: This is not the total of the columns because many upland game hunters hunted more than one species.

Table 4. Percent of hunter trips resulting in failure to bag at least one bird, 1961-85.

Year	Pheasant			Dove			Chukar			Sage Grouse			Forest Grouse			Quail			Huns		
	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%	0 Bag	Hunt. Trips	%
1961	714	3,204	22	51	583	9	318	539	59	--	--	--	--	--	--	109	383	28	72	123	59
1962	500	2,685	19	39	456	9	147	362	41	--	--	--	--	--	--	62	201	31	36	108	33
1963	795	3,317	24	53	691	8	248	550	45	220	468	47	188	281	67	71	305	23	59	177	33
1964	911	3,115	29	60	681	9	266	568	47	45	154	29	144	229	63	94	316	30	62	150	41
1965	1,165	4,009	29	--	--	--	486	851	57	82	168	49	225	311	72	128	371	34	93	233	40
1966	1,242	4,297	29	136	1,067	13	423	881	48	54	131	41	133	331	40	106	315	34	63	219	29
1967	1,353	4,833	28	153	1,319	12	477	915	52	138	266	52	194	475	41	161	424	38	116	315	37
1968	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	665	27	171	457	37	132	347	38
1969	1,897	5,335	36	214	1,568	14	647	1,250	52	241	648	37	273	646	42	182	465	39	148	292	51
1970	1,546	4,686	33	193	1,274	15	466	962	48	257	603	43	209	666	31	126	314	40	101	210	48
1971	1,783	5,049	35	210	1,333	16	464	934	50	234	625	37	223	673	33	162	385	42	87	210	41
1972	1,743	4,617	38	270	1,421	19	457	827	55	259	593	44	271	794	34	154	339	45	120	224	54
1973	1,659	4,699	35	209	1,596	13	414	824	50	226	553	41	329	1,019	32	128	311	41	97	196	49
1974	2,347	5,323	44	323	1,951	17	511	955	54	292	668	44	388	1,259	31	157	333	47	108	227	48
1975	2,472	5,604	44	329	2,554	13	607	1,105	55	374	901	42	535	1,354	40	177	406	44	121	220	55
1976	1,739	4,294	40	273	1,709	16	408	781	52	259	783	33	371	1,131	33	105	266	39	87	184	47
1977	1,874	5,175	36	295	1,967	15	511	943	54	397	972	41	528	1,388	38	125	299	42	106	247	43
1978	1,507	4,858	31	279	1,986	14	343	882	39	301	853	35	419	1,419	30	103	306	34	85	246	35
1979	2,222	7,024	32	343	2,671	13	528	1,150	46	400	1,215	33	585	1,691	35	130	403	32	119	243	49
1980	1,684	5,867	29	258	2,145	12	458	1,008	45	392	944	42	501	1,283	39	87	254	34	75	206	36
1981	1,305	4,637	28	239	1,558	15	302	669	45	184	493	37	297	741	40	97	241	40	57	172	33
1982	1,768	6,725	26	363	2,338	16	406	824	49	269	620	43	325	919	35	128	292	44	89	176	51
1983	1,645	7,153	23	348	2,381	15	362	880	41	294	729	40	300	1,118	27	105	310	34	82	225	36
1984	1,245	4,643	27	274	1,711	16	287	548	52	202	435	46	270	640	42	84	189	44	51	76	67
1985	1,207	4,017	30	221	1,500	15	208	426	49	161	376	43	228	656	35	61	148	41	35	54	65
AVERAGES (1961-84)	31			13			49			41			40			37			44		

Table 5 (continued)

Species	R E G I O N												STATE TOTALS	
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
<u>Wild Turkey</u>														
1971	--	--	--	--	726	73	--	--	215	28	941	101	--	--
1972	--	--	--	--	73	62	--	--	290	54	363	116	--	--
1973	--	--	--	--	143	11	--	--	--	--	143	11	--	--
1974	--	--	--	--	0	0	--	--	799	64	799	64	--	--
1975	--	--	--	--	215	18	--	--	792	100	1,007	118	--	--
1976	--	--	--	--	125	16	--	--	362	45	487	61	--	--
1977	--	--	--	--	193	29	--	--	421	58	614	87	--	--
1978	--	--	--	--	--	--	--	--	204	55	204	55	--	--
1979	--	--	--	--	--	--	--	--	190	14	190	14	--	--
1980	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1981	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1982	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1983	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1984	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1985	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<u>Cottontail</u>														
1971	338	--	330	--	1,054	--	410	570	--	--	2,702	--	--	--
1972	510	--	279	--	939	--	360	555	--	--	2,643	--	--	--
1973	337	--	242	--	849	--	270	270	--	--	1,968	--	--	--
1974	270	--	180	--	1,040	--	370	542	--	--	2,402	--	--	--
1975	330	--	231	--	1,237	--	340	712	--	--	2,850	--	--	--
1976	510	--	260	--	1,372	--	300	626	--	--	3,068	--	--	--
1977	360	--	262	--	1,329	--	400	556	--	--	2,907	--	--	--
1978	382	--	264	--	1,038	--	300	761	--	--	2,745	--	--	--
1979	270	--	264	--	1,174	--	388	390	--	--	2,486	--	--	--
1980	90	--	265	--	655	--	359	540	--	--	1,909	--	--	--
1981	270	--	270	--	903	--	400	580	--	--	2,423	--	--	--
1982	240	--	240	--	722	--	298	602	--	--	2,102	--	--	--
1983	90	--	90	--	822	--	340	590	--	--	1,932	--	--	--
1984	--	--	177	--	356	--	340	196	--	--	1,069	--	--	--
1985	--	--	175	--	631	--	400	450	--	--	1,656	--	--	--

Table 6. Season framework for upland game during 1985.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Pheasant	Nov. 2-10	2 cocks	4 cocks	Statewide
	Nov. 2-15	2 cocks	4 cocks	Box Elder, Cache, Davis, Millard, Sevier and Weber counties.
	Nov. 2-17	2 cocks	4 cocks	Duchesne and Uintah counties.
	Nov. 2-Dec. 1	2 cocks	4 cocks	All state and federal lands (subject to restrictions and closures imposed by administering agencies) in Carbon, Duchesne, Emery, Grand, Juab, San Juan, Sanpete, Tooele, and Uintah counties; and that portion of Wayne County east of Capitol Reef National Park; and Bear River National Wildlife Refuge.
Mourning dove	Sept. 1-30	15	30	Statewide.
Band-tailed pigeon	Sept. 1-30	5	10	Beaver, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sevier, Washington and Wayne counties.
Chukar	Sept. 14, 1985- Jan. 31, 1986	5	10	Beaver, Carbon, Emery, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sevier, Tooele, Washington, Wayne and portions of Box Elder, Juab, Salt Lake and Utah counties (west of I-15).
	Sept. 14-Nov. 30	5	10	Daggett, Duchesne, Sanpete, Uintah and Wasatch counties and those portions of the following counties lying east of Interstate 15: Juab, Salt Lake, and Utah (south of U-189).

Table 6 (continued)

Species	Season Dates	Daily Bag Possession		Area Open
		Limit	Limit	
Sage grouse	Sept. 14-22	3	6	Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties.
	Sept. 14-22	2	4	Box Elder (part); Daggett, Duchesne (part), Grand, Uintah, and Wasatch (part).
	Sept. 14-20	1	2	Box Elder (part), Cache, Carbon, Emery, Rich, San Juan (part) and Wasatch (part) counties.

The following counties were closed to sage grouse hunting during 1985:

Cache, Davis, Duchesne (part), Juab, Millard, Morgan, Salt Lake, San Juan (part), Sanpete, Summit, Tooele, Utah, Wasatch (part), Washington and Weber.

Forest grouse	Sept. 14- Nov. 30	4 (aggregate)	8 (aggregate)	Statewide.
Quail	Nov. 2-10	5	10	Statewide except Morgan, and Summit counties.
	Nov. 2-17	5	10	Duchesne and Uintah counties.
	Nov. 2-Dec. 31	5	10	Washington County.

Morgan and Summit counties were closed to quail hunting in 1985.

Hungarian partridge	Sept. 14, 1985- Jan. 31, 1986	2	4	Part of Box Elder County.
	Sept. 14-Nov. 30	2	4	Juab (part), Rich, Tooele, Salt Lake (part), and Utah (part) counties.

Table 6 (continued)

Species	Season Dates	Daily Bag Possession		Area Open
		Limit	Limit	
Wild turkey				
Spring hunt	May 3-25	Season limit 1 male turkey	1	Garfield, Grand, Iron, Kane, Washington (part), Wayne and San Juan (part) counties.
Fall hunt	SEASON CLOSED			
Washington County, west of I-15 was closed to protect transplanted turkeys on the Pine Valley Mountains.				
Ptarmigan	Sept. 7-Oct. 15	4	4	Summit, Daggett, Duchesne and Uintah counties.
Snowshoe hare	Sept. 14, 1985- Jan. 31, 1986	5	10	Statewide.
Cottontail rabbit	Sept. 14, 1985- Jan. 31, 1986	10	20	Beaver, Box Elder (part), Cache, Carbon, Davis, Emery, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sevier, Washington and Wayne counties.
	Sept. 14, 1985- Jan. 31, 1986	5	10	Box Elder (part), Cache, Daggett, Davis, Duchesne, Juab, Morgan, Rich, Salt Lake, Sanpete, Summit, Tooele, Uintah, Utah. Wasatch and Weber counties.

Table 7. Summary of upland game harvest questionnaire returns, 1962-1985

Year	Questionnaires Mailed	Total Returns	Percent	Useable Returns	Percent	Percent of Licensees who did not hunt
1962	10,068	4,122	41.0	3,433	34.0	22.0
1963	11,058	5,062	46.0	4,325	39.0	21.0
1964	10,718	4,840	45.0	4,180	39.0	23.0
1965	11,917	6,232	53.0	—	—	34.0
1966	13,131	5,734	43.7	5,734	43.7	34.6
1967	12,012	5,764	48.0	5,764	48.0	25.1
1968	14,068	6,138	43.6	6,138	43.6	25.6
1969	15,036	6,429	42.8	6,429	42.8	28.0
1970	14,730	6,639	45.1	6,639	45.1	38.8
1971	15,149	—	43.2	—	—	—
1972	15,272	—	—	6,399	41.9	—
1973	17,572	—	—	7,999	45.5	—
1974	27,379	9,157	38.6	8,027	29.3	—
1975	26,657	10,880	40.8	9,132	34.3	—
1976	21,250	7,889	37.1	6,226	29.3	—
1977	20,984	9,329	44.5	8,099	38.6	—
1978	24,733	7,575	30.6	6,529	26.4	—
1979	27,616	10,498	38.0	9,274	33.6	26.4
1980	27,952	9,857	35.3	8,496	30.4	33.1
1981	13,925	7,941	57.0	6,367	45.4	31.4
1982	22,609	10,167	45.0	8,734	38.6	27.0
1983	23,430	10,324	44.1	9,497	40.5	28.7
1984	12,026	6,455	57.2	6,324	56.0	31.1
1985	10,772	5,904	54.8	5,843	54.2	35.2

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