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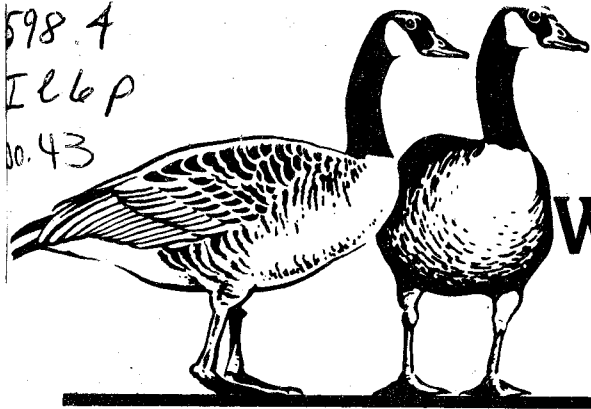
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# WATERFOWL PROGRAM

ILLINOIS DEPARTMENT OF CONSERVATION  
DIVISION OF FISH AND WILDLIFE RESOURCES

## WATERFOWL HARVEST AND HUNTER USE AT REND LAKE DURING THE 1982 WATERFOWL SEASON

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**Abstract:** Hunter use and harvest during the 1982 season was again determined from daily hunter registration at all access areas to public hunting at Rend Lake. The duck season at Rend Lake opened on 28 October 1982 and closed 50 days later on 16 December. Due to a continued decline in the Canada goose flock, the Illinois goose season was shortened to 40 days in 1982. The goose season at Rend Lake opened on 22 November and closed on 31 December. In addition to a shortened season, the bag limit on Canada geese was reduced to one bird per day for the 1982 season. Waterfowl hunters reported a total harvest of 6,845 ducks and 1,109 Canada geese on public hunting areas at Rend Lake. A total of 17 commercial clubs were licensed in 1982. Twelve of these clubs reported a harvest of 243 geese on private lands around Rend Lake. Regulations were changed in 1982 so that outlying non-commercial areas did not have to register hunters and report their harvest. Approximately 14,682 hunter-trips were made to public hunting areas at Rend Lake in 1982. It is impossible to identify hunter-trips taken specifically for geese during the duck season. Following the close of the duck season 2,713 hunters tried for geese during the period of 17 December to 31 December 1982. The success rate for duck hunters at Rend Lake for the 1982 season was .57 ducks per trip. This compares favorably with the .46 success rate reported in 1981 and the .39 success rate in 1980. The success rate for hunters who harvested geese both during and after the duck season was .08. Following the close of the duck season, goose hunters reported a success rate of .18. An Illinois waterfowl hunter questionnaire survey conducted during the 1982 season revealed a total harvest of 4,140 Canada geese in Franklin and Jefferson Counties surrounding Rend Lake.

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## INTRODUCTION

Waterfowl harvest at Rend Lake has been monitored by some type of system since 1975. The 1982 season was the fourth consecutive season that hunters were required to register at all access areas to public hunting at Rend Lake before each day's hunt. Regulations governing the taking of Canada geese were changed in 1982 so that only commercial clubs were required to obtain a license and register hunters and harvest on private lands around Rend Lake. In the past, non-commercial areas were required to observe the same hunter registration and reporting procedures as commercial clubs.

A statewide waterfowl hunter questionnaire survey was initiated in 1981. This survey was conducted again during the 1982 season and will be continued annually in the future. This survey will be used to determine the Canada goose harvest on private lands in the surrounding Rend Lake area where reporting is no longer required. Commercial clubs continued to register hunters daily during the 1982 season and reported their harvest on the same registration sheets as used by commercial clubs in the Southern Illinois Quota Zone.

The Rend Lake Wildlife Management Area is a cooperative project between the U.S. Army Corps of Engineers and the Illinois Department of Conservation. It consists of approximately 16,000 acres of land and water in Jefferson and Franklin Counties. Implementation of the waterfowl harvest and hunter use survey was partially funded by Pittman-Robertson Projects W-43-R and W-83-D.

A note of thanks is extended to all Division of Lands, Division of Fish and Wildlife Resources, and the U.S. Army Corps of Engineers personnel who assisted in the distribution and collection of hunter registration sheets throughout the 1982 season at Rend Lake. Thanks is also extended to Division of Law Enforcement personnel who enforced the registration regulations. The harvest and hunter use survey would not be possible without the willing assistance of many dedicated people. Finally, a very special note of thanks is extended to all sportsmen who participated in the 1982 season, whose cooperation and efforts to comply to the registration regulation have helped make this project a success. An accurate determination of harvest and hunter use is crucial to the continued evaluation of the waterfowl management program at Rend Lake.

## METHODS

Waterfowl hunter use and harvest was monitored at Rend Lake again during the 1982 season using daily hunter registration and harvest reporting at all public access areas. This has proven to be a reliable, although time consuming, technique of gathering hunter use and harvest data.

Registration boxes and signs were repaired or replaced before the 1982 season at all 43 hunter access areas around the lake and management areas. Hunters were required to sign in before hunting and report their daily kill following each day's hunt. Registration sheets were collected daily and the number of hunters and harvest by species were tallied for each day of the season.

Canada goose harvest and hunter activity on private land surrounding Rend Lake was monitored using a system somewhat similar to that used in the Southern Illinois Quota Zone. Commercial licenses were issued for all areas where reimbursement was received for goose hunting privileges. Hunters were required to register before hunting and report their harvest at the end of the hunt. Hunting registers were then submitted by club owners at the end of the season to the Union County Field Office for tabulation of harvest and hunter use.

Changes in the Wildlife Code eliminated the requirement for licensing and hunter registration on non-commercial (free) areas in 1982. The goose harvest on these areas was determined from a statewide waterfowl hunter questionnaire survey conducted during the 1982 season. Questionnaires were mailed to 1,412 randomly selected waterfowl hunters in Illinois. Over 80 percent of the questionnaires were returned and the resulting data were used to estimate the number of waterfowl hunters and total Canada goose harvest in the Rend Lake area of Franklin and Jefferson Counties.

#### RESULTS AND DISCUSSION

The 1982 duck season in the southern zone opened on 28 October and closed 50 days later on 16 December. Because of a shortened season from 50 days to 40 days, the 1982 goose season opened on 22 November and continued to 31 December.

The number of private goose clubs licensed in the Rend Lake area declined from 79 in 1981 to 17 in 1982 because of changes in the regulations governing licensing of waterfowl clubs in Illinois.

#### Hunter Use

Waterfowl hunters reported a total of 14,682 trips to Rend Lake public hunting areas during the 1982 season. This was an 18 percent decline from the 17,873 hunter-trips reported for the 1981 season. Following the close of the duck season, goose hunters reported 2,713 trips to Rend Lake public hunting areas. This represents a 34 percent decline from the 4,106 goose hunter-trips following the 1981 duck season.

The average number of waterfowl hunters per day of the duck season was 239. This was down 13 percent from the average daily number of hunters reported during the 1981 season. Hunting pressure was heaviest at Rend Lake in mid-November. During the week 18-27 November, 3,071 waterfowl hunters visited Rend Lake. Overall hunting pressure was fairly constant throughout the entire season (Table 1). Public hunting areas receiving the heaviest use during the 1982 duck season included Cottonwood (1,642 hunters), Bonnie Church Camp (922 hunters), and Whistling Wings (723 hunters).

Twelve of the 17 licensed commercial goose clubs complied with regulations and returned their registration sheets at the close of the season. These 12 clubs reported a total of 1,274 hunter-trips during the 1982 season. Over 4,000 hunter-trips were reported to private clubs in 1981 before regulation changes eliminated the requirement for licensing and hunter registration on non-commercial areas in 1982.

The Illinois waterfowl hunter questionnaire survey revealed that during the 1982 season an estimated 3,600 goose hunters spent 16,900 hunter-trips afield in the Rend Lake area in Franklin and Jefferson Counties.

#### Harvest

Waterfowl hunters at Rend Lake harvested 6,845 ducks and 1,109 Canada geese on the public hunting areas during the 1982 season. Duck harvest increased nine percent, whereas goose harvest, due to the reduced bag limit and shortened season, declined 61 percent from the 1981 harvest of 2,827 geese. The peak harvest period for ducks was in early November. During the 10-day period of 29 October to 7 November 1,937 ducks were harvested at Rend Lake (Table 1). Peak mallard harvest (1,382) occurred during the next 10-day period of 8-17 November. Total mallard harvest for the 1982 season was 4,390. This compares very closely with the 1981 mallard harvest of 4,415. Table 2 compares the 1982 waterfowl harvest by species with the previous 7 years. Wood ducks again ranked second in the harvest at Rend Lake. Waterfowl harvest on each public hunting area is shown in Table 3. Duck hunters reported the highest success during the 1982 season at the Cottonwood access area. A total of 1,730 ducks including 1,278 mallards were taken on this area. The second most important area in terms of harvest was the Bonnie Church Camp with a harvest of 901 ducks including 798 mallards.

Canada goose harvest was greatest during the last 10-day period following the close of the duck season. The peak goose harvest for a 10-day period dropped 59 percent from 1,214 in 1981 to 499 in 1982. The most successful public hunting areas in terms of numbers of geese harvested during the duck season were Casey Fork and Marina (59 geese), Bonnie Dam (57 geese), Turnip Patch (56 geese) and Lambrusco (54 geese).

Registers received from 12 of the 17 licensed commercial clubs in the Rend Lake vicinity revealed a very low harvest of 243 Canada geese. In 1981, 61 licensed clubs reported a harvest of 1,916 geese on private lands surrounding Rend

Lake. The great decline in the reported goose harvest on private lands was partially due to the change in regulations which required far fewer clubs to report in 1982.

The 1982 Illinois waterfowl hunter questionnaire survey revealed an estimated total harvest of 4,140 Canada geese in the Rend Lake area. This was a 50 percent decline from the 1981 survey harvest estimate of 8,286 geese. The harvest estimate of 4,140 geese, resulting from the hunter questionnaire survey, means that 2,800 unreported geese were harvested on private lands in the surrounding Franklin and Jefferson County area.

### Hunter Success

Waterfowl hunters at Rend Lake reported a success rate of .57 ducks per hunter-trip during the 1982 season. The success rate reported in 1981 (.46) was 19 percent lower. The success rate on opening day was .97 ducks per hunter and during the first 20 days of the season hunters enjoyed a respectable success rate of nearly a duck per trip (Table 1). Hunter success dropped significantly later in the season.

Goose hunting is often incidental to duck hunting at Rend Lake. This makes the hunter success rate for geese during the duck season rather meaningless. Based on total waterfowl hunters and total geese harvested, the success rate for 1982 was a very low .08 geese per hunter-trip. Following the close of the duck season, goose hunters harvested geese at a reported rate of .18 geese per trip (Table 1). This was significantly below the success rates reported in 1980 (.34) and 1981 (.30).

Private commercial clubs in the Rend Lake vicinity also reported a low success rate of .19 geese per hunter-trip. The overall success rate calculated from the hunter questionnaire survey data was .24 geese per trip. Data from all sources confirm that the 1982 Rend Lake goose season was a very poor season in terms of hunter success. Table 4 shows that the 1982 goose hunter success rate was the lowest ever recorded at Rend Lake.

### Population Status

A peak population of 15,925 ducks was inventoried at Rend Lake during the period of 8-15 November 1982 (Table 5, Figure 1). This represents a 46 percent decline from the peak inventory of 29,300 recorded in early November of 1981. Duck numbers were consistently lower throughout the fall and winter of 1982 than in 1981, but above the numbers recorded in 1980.

The in-season Canada goose population at Rend Lake peaked at 24,000 geese on 13 December (Table 6, Figure 2). This number of geese was slightly above the 1981 in-season peak of 18,000 and about equal to the 1980 peak of 25,000. In 1982 the usual late winter buildup of geese did not occur. In January, 1980, 88,000 Canada geese were observed at Rend Lake. Likewise, in January, 1981 the goose population peaked at 120,000. Because of the mild winter weather and a delayed migration, the goose flock at Rend Lake failed to approach the 1980 and 1981 late winter levels. The January 1983 peak population of 35,000 was 71

percent below the 1981 peak number.

#### CONCLUSIONS

For the third consecutive year, drought conditions in prairie Canada impacted waterfowl reproduction and the 1982 fall flight of ducks. Although fewer ducks were reported at Rend Lake in 1982, it was one of the few reservoir areas that showed an increase in harvest and hunter success from the 1981 season (Table 7).

Extremely mild weather conditions throughout the fall and winter of 1982 affected waterfowl migrations and impacted hunter success. Fewer geese at Rend Lake in 1982 was due to a delayed migration from northern areas in the flyway because of the mild winter. A reduced population and a higher proportion of adults in the goose flock, because of below average production, resulted in extremely low goose hunter success during the 1982 season.

Hunter pressure declined for the first year since records have been kept at Rend Lake. This was partially due to the shortened goose season and reduced bag limit on Canada geese. Below average hunter success in 1980 and 1981, and extremely heavy pressure in 1981 may also have affected hunter use in 1982. Extremely poor goose hunter success late in the season alleviated hunter management problems experienced in previous years.

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Table 1. Waterfowl harvest and hunter activity at Rend Lake, Illinois during the 1982 waterfowl season.

Date	No. of Hunters	Harvest			Hunter Success	
		Mallard	Total	Canada Geese	Duck	Geese
Oct. 28	563	135	547	(5)	.97	--
Oct. 29-Nov. 07	2,382	924	1,937	0	.81	--
Nov. 08-Nov. 17	1,814	1,382	1,797	(3)	.99	--
Nov. 18-Nov. 27*	3,071	840	1,213	195	.39	.06
Nov. 28-Dec. 07	2,207	471	591	216	.27	.10
Dec. 08-Dec. 16**	1,932	638	760	191	.39	.10
Dec. 17-Dec. 31	2,713	---	---	499	---	.18
Season Totals	14,682	4,390	6,845	1,109	.57	.08

\* First day of goose season, Nov. 22.

\*\* Last day of duck season, Dec. 16.

Table 2. Harvest of ducks by species at Rend Lake, (Southern Zone), Illinois, 1975 through 1982. 1975-1978 data from bag checks conducted daily during the hunting season. 1979-1982 data from hunter registration reports.

Species	1975	1976	1977	1978	1979	1980	1981	1982
<b>Dabbling Ducks</b>								
Mallard	4,576	4,618	5,272	5,531	3,488	3,727	4,415	4,390
Black duck	166	174	157	183	115	127	180	222
Galdwall	592	274	703	611	334	291	366	335
American Wigeon	296	80	293	351	196	134	205	283
Green-winged teal	592	1,112	98	412	286	414	146	247
Blue-winged teal	58	108	78	618	47	47	66	174
Northern Shoveler	21	33	98	91	82	95	34	74
Pintail	36	93	195	183	81	83	80	216
Wood duck	390	455	1,504	948	302	388	476	537
Total	6,727	6,947	8,398	8,928	4,931	5,306	5,968	6,478
<b>Diving Ducks</b>								
Redhead	7	0	0	15	71	44	47	31
Canvasback	0	53	0	31	46	39	17	32
Scaup	58	274	175	214	149	94	112	117
Ring-necked duck	14	20	114	92	103	114	80	108
Common Goldeneye	0	73	17	31	0	0	4	0
Bufflehead	14	0	0	76	61	54	20	34
Ruddy duck	0	0	0	31	29	0	21	45
Total	93	420	306	490	459	345	301	367
Mergansers	58	47	44	61	2	0	14	0
<b>ALL SPECIES</b>	6,878	7,414	8,748	9,060	5,435	5,651	6,283	6,845

\* Slight differences in harvest figures from Table 1 represent differences in treatment of data.

Table 3. Waterfowl harvest and hunter use on public hunting areas at Rend Lake, Illinois for the 1982 duck season.<sup>a/</sup>

NAME OF PUBLIC ACCESS AREA	TOTAL HUNTERS	TOTAL HARVEST		
		MALLARDS	DUCKS	C. GEESE
Balbinos	19	0	0	1
Bonnie Church Camp	922	798	901	6
Bonnie Dam	347	214	290	57
Bonnie North	7	20	31	0
Bonnie South	490	87	170	21
Buck Creek	530	110	297	10
Casey Fork & Marina	278	52	93	59
Casey Fork Dam	342	187	362	17
Casey Fork East	327	54	216	1
Casey Fork West	153	41	107	1
Casey Fork North	0	0	0	0
Casey Fork South	45	8	10	3
Cottonwood	1,642	1,278	1,730	38
County Line	176	4	19	14
Crossroads	26	0	1	0
Dam West	78	7	42	7
Dareville	617	228	390	8
Elk Prairie	90	18	23	1
Genevo	128	64	109	5
All Gun Club	317	92	174	17
Hamilton Branch	10	0	0	0
Honkers Point	255	8	20	8
Ina	202	46	43	31
Ken Gray	154	0	4	8
Lambrusco	300	2	7	54
Lone Cedar	9	0	0	0
Lone Pine	32	10	6	1
Mine 21	164	5	22	8
Muddy North	0	0	0	0
Muddy South	64	10	20	0
Nason North	91	20	54	0
Nason South	154	27	40	8
Pin Oak Flats	186	26	76	2
RLCD	70	12	18	4
Sail Boat Harbor	75	32	56	6
Silo	637	309	487	0
Turnip Patch	396	33	87	56
Waltonville East	904	347	601	10
Waltonville Dam	90	22	48	6
Walton (Others)	11	0	0	0
Ward Branch	374	32	71	38
Wayne Fitzgerald	26	2	5	1
Whistling Wings	723	165	232	50
Bluegill	37	9	9	8
Ryder Branch	79	11	21	0
Total <sup>b/</sup>	11,577	4,390	6,892	565

a/ Does not include hunters and harvest for the remainder of the goose season after the close of duck season.

b/ Minor variance in figures from Table 1 reflect difference in treatment of data.

Table 4. Waterfowl harvest and hunter success on public hunting areas of Rend Lake, Illinois, 1974-1982.

Year	No. of Hunters	Harvest		Hunter Success	
		Ducks	Geese	Ducks	Geese
1974	8,485	7,331	*	.86	*
1975	6,428	6,878	1,710	1.07	.58*
1976	6,555	7,414	2,017	1.13	.21**
1977	8,377	8,748	1,630	1.04	.19
1978	12,622	9,060	4,604	.78	.36
1979	12,978	5,375	1,917	.52	.15
1980	16,134	5,493	3,508	.39	.22
1981	17,873	6,285	2,827	.46	.16
1982	14,682	6,845	1,109	.57	.08

\* No survey conducted.

\*\* Last 20 days of goose season after close of duck season.

Table 5. Number of ducks counted during aerial inventories of southern Illinois reservoirs, 1978-1982.  
Data from the Illinois Natural History Survey.

Area and Year	10/15-20	10/25-11/1	11/8-15	11/25-12/1	12/10-15	12/20-1/1	1/5-1/10
<b>Carlyle</b>							
1978		19,090	89,665	180,800	106,890		235
1979	6,935	109,605	103,320	136,435	91,850		33,750
1980	3,890	22,175	8,615	4,575	2,790	3,600	6,400
1981		45,275	32,860	34,900	51,785	40,850	1,700
1982	2,080	12,500	35,580		25,875	21,750	6,750
<b>Rend Lake</b>							
1978		9,350	15,180	19,185	11,125		965
1979	1,255	11,080	26,460	27,615	13,680		15,550
1980	4,720	4,710	7,505	3,125	1,275	1,300	1,050
1981		29,300	15,430	15,425	25,765	8,955	1,480
1982	2,605	6,765	15,925		10,840	8,245	2,715
<b>Shelbyville</b>							
1978		1,840	670	3,815	170		
1979	710	5,500	5,430	2,775			2,165
1980	1,525	2,740	435	700	270	1,830	100
1981		100	1,100	585	2,140	260	625
1982	440	1,450	1,055		975	1,440	750
<b>Baldwin</b>							
1978		9,175	19,410	40,660	21,375		12,565
1979	600	49,535	50,160	53,450	38,355		15,780
1980	815	2,510	3,615	1,215	875	815	935
1981		12,850	14,690	19,665	21,050	30,555	20,325
1982	515	1,635	15,190				555
<b>Sangchris</b>							
1978		5,690	26,455	63,025	42,855		18,025
1979	1,570	9,350	23,020	34,635	20,305		11,130
1980	1,465	5,450	9,445	8,955	5,425	4,000	5,360
1981		7,435	15,575	24,505	25,090	8,450	1,110
1982	595	1,470	10,560		12,695	7,080	2,620
<b>Total</b>							
1978		45,145	151,380	307,485	182,415		31,790
1979	11,070	185,250	218,390	254,910	164,190		78,375
1980	12,415	37,585	29,615	18,570	10,635	11,545	13,845
1981		94,960	79,655	95,080	125,830	89,070	25,240
1982	6,235	23,820	78,310		50,385	38,515	13,390

Table 6. Canada goose numbers at Rend Lake through the fall and winter of 1980-1982.

1980		1981		1982	
<u>Date</u>	<u>No. of Geese</u>	<u>Date</u>	<u>No. of Geese</u>	<u>Date</u>	<u>No. of Geese</u>
10-14-80	7,000	10-13-81	1,500	10-12-82	3,000
10-20-80	16,000	10-19-81	3,000	10-18-82	3,000
11-03-80	16,000	10-27-81	8,000	10-25-82	3,000
11-10-80	18,000	11-03-81	10,000	11-01-82	7,000
11-24-80	20,000	11-17-81	15,000	11-08-82	12,000
12-02-80	20,000	12-02-81	18,000	11-15-82	8,000
12-16-80	25,000	12-07-81	17,000	11-24-82	11,000
01-05-81	46,000	12-14-81	16,000	11-29-82	14,000
01-12-81	75,000	01-07-82	110,000	12-06-82	14,000
01-19-81	75,000	01-18-82	120,000	12-13-82	24,000
01-27-81	88,000	01-29-82	110,000	12-20-82	22,000
02-02-81	65,000	02-11-82	4,000	01-03-83	18,000
02-13-81	75,000	02-22-82	75,000	01-17-83	35,000

Table 7. Hunter use, harvest and success from public waterfowl areas in Illinois during 1982

	Hunting Pressure		Harvest		Success Per Hunter Efforts	
	Hunters	% Change From 1981	Harvest	% Change From 1981	Average Daily Success Ratio	% Change From 1981
1. Anderson Lake	1,425	+23.9	1,225	+37.2	.86	+11.7
2. Baldwin Lake	2,015	-17.3	1,510	-20.0	.75	N.C.
3. Batchtown	2,974	-59.0	1,871	-59.4	.63	0
4. Calhoun Point	1,837	-7.1	1,155	-6.5	.63	+1.6
5. Carlyle Lake	8,934	-10.8	8,518	-27.6	.95	-19.0
6. Chain O'Lakes	1,180	+14.3	902	-13.6	.80	-20.8
7. Coleman Lake	502	---	87	---	.17	---
8. Collins Lake	838	+29.1	296	-07.2	.35	-28.6
9. Des Plaines River	757	-15.1	216	N.C.	.29	+16.0
10. Glades	2,109	-14.2	1,089	-7.9	.52	+8.3
11. Godar-Diamond	3,311	-3.7	2,418	-5.4	.73	-1.4
12. Horseshoe Lake, Madison	2,274	+31.7	1,304	+17.9	.57	-10.9
13. Kankakee River	377	-49.7	109	+29.8	.29	+163.6
14. Lake De Pue	695	-31.4	421	-36.6	.60	-7.7
15. Marshall Co.	2,166	+31.8	1,249	+30.4	.58	0
16. Mermet	1,485	-11.1	538	-33.6	.36	-26.5
17. Rend Lake	11,969	-13.1	6,833	+8.7	.57	+23.9
18. Rice Lake	1,489	+29.2	1,399	+67.1	.94	+30.5
19. Sanganois	3,485	+08.0	3,658	+01.0	1.05	-07.1
20. Sangchris Lake	1,545	-06.8	789	-18.1	.51	-12.1
21. Spring Lake	2,236	+18.9	1,374	-2.1	.61	-17.6
22. Starved Rock	895	-04.2	766	+10.9	.86	+17.8
23. Stump Lake	2,562	-21.0	1,794	-19.3	.70	+2.9
24. William Powers	239	---	179	---	.80	---
25. Woodford Co.	2,623	+10.6	2,495	+22.4	.95	+11.8

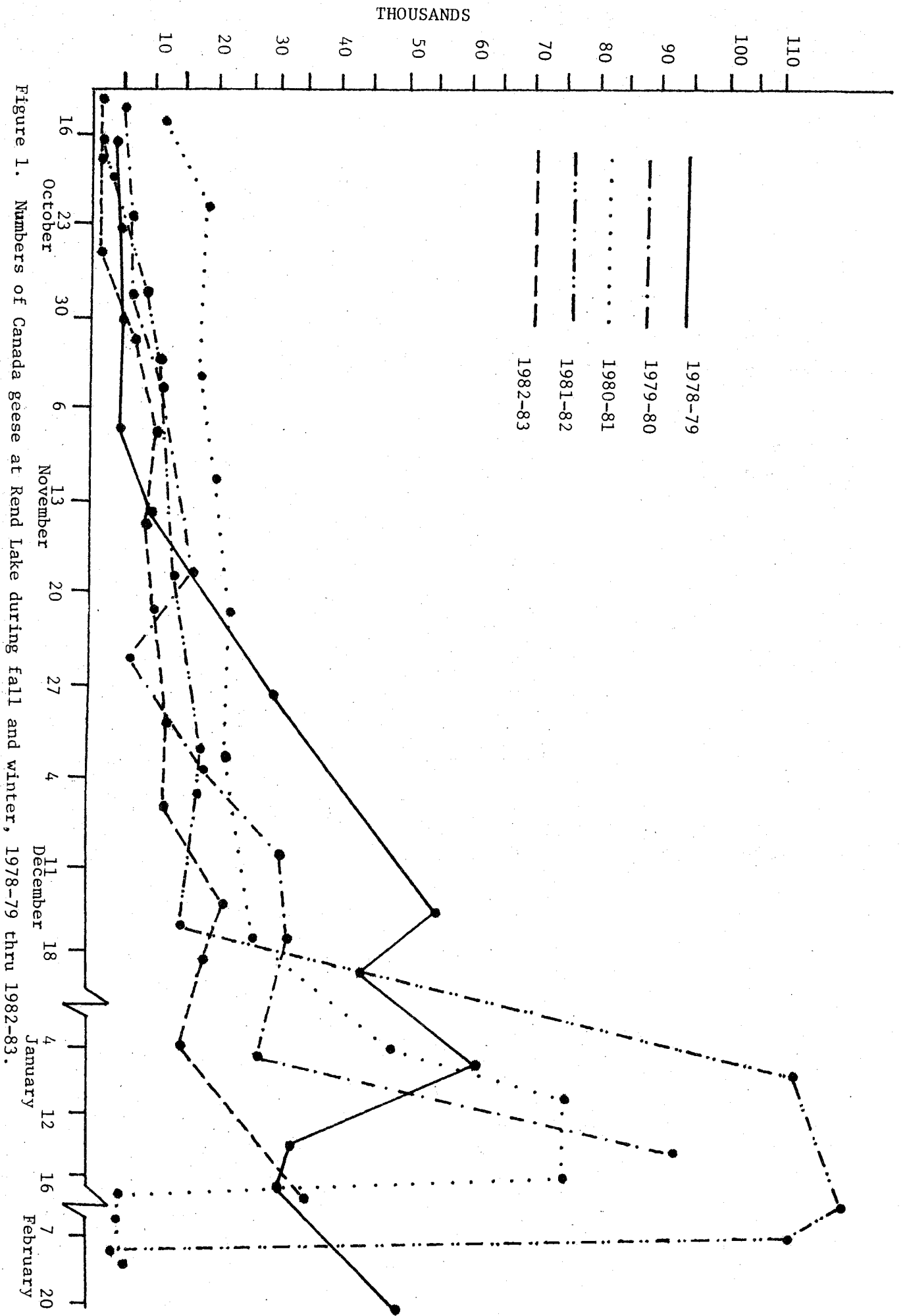


Figure 1. Numbers of Canada geese at Rend Lake during fall and winter, 1978-79 thru 1982-83.



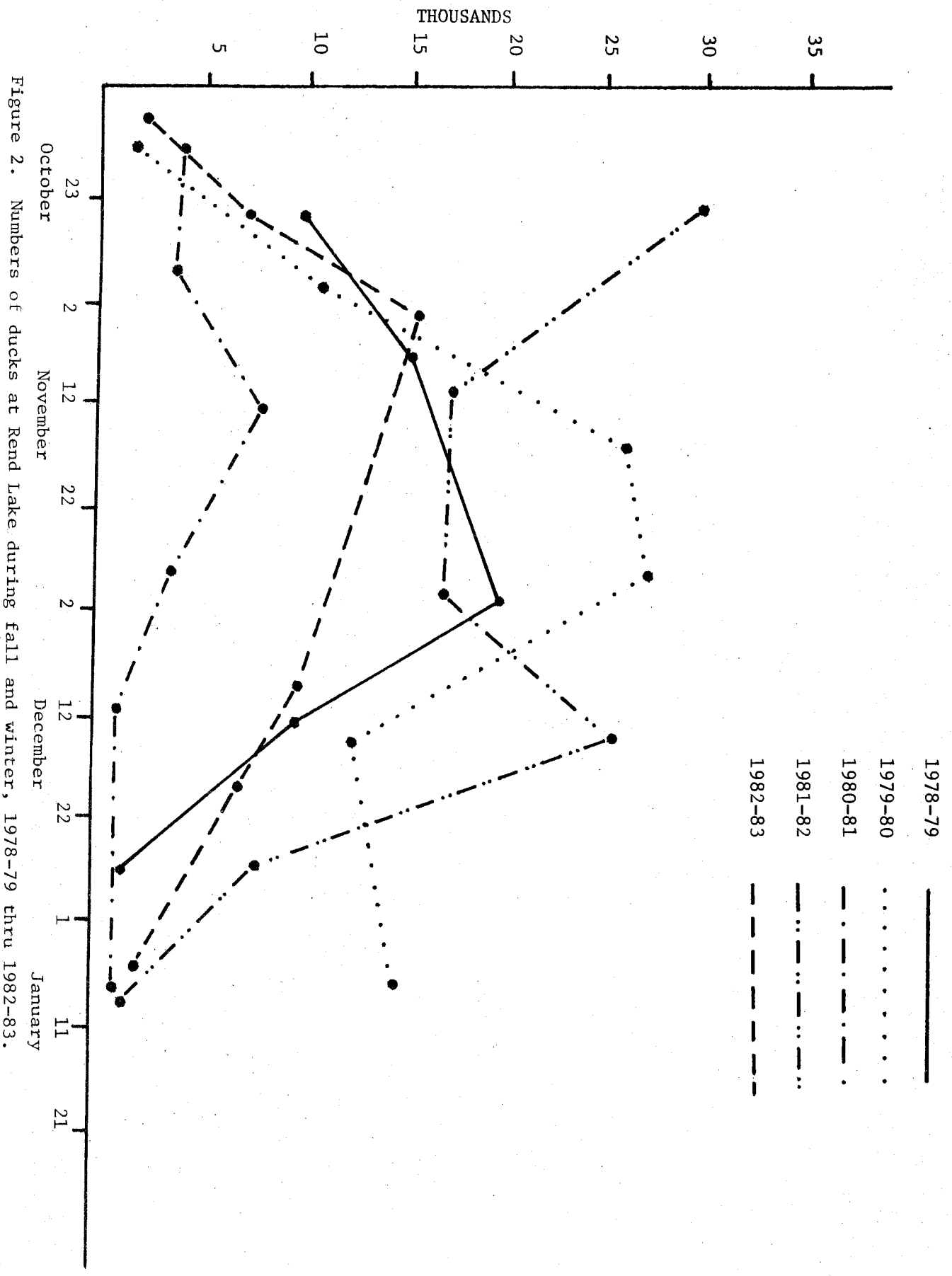


Figure 2. Numbers of ducks at Rend Lake during fall and winter, 1978-79 thru 1982-83.