



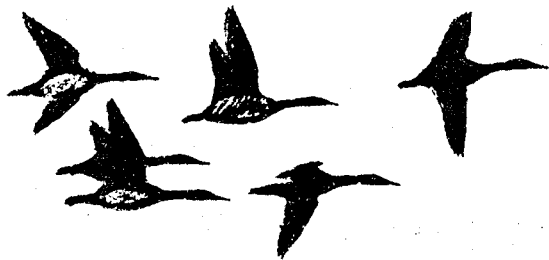
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WATERFOWL HARVEST AND HUNTER USE AT REND LAKE DURING THE 1979 SEASON

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Abstract: The duck season in the southern zone which includes Rend Lake opened on 30 October 1979 and closed 50 days later on 19 December 1979. The goose season opened concurrent with the duck season but closed on 31 December 1979. An estimated 5,375 ducks and 1,917 geese were harvested on public lands at Rend Lake throughout the 1979 season. Thirty-seven licensed goose clubs reported a total harvest of 734 geese on private lands surrounding Rend Lake. Approximately 12,978 hunter-trips were made to public hunting areas at Rend Lake in 1979. It is impossible to identify hunter-trips taken specifically for geese during the duck season, however 2,548 hunter-trips were made after the close of the duck season during the period 20-31 December 1979. The overall success rate for duck hunters at Rend Lake for the 1979 season was .52 ducks per trip. Hunter use and harvest at Rend Lake in 1979 was determined by mandatory hunter registration and report of harvest at all access areas to public hunting areas. The in-season goose population peaked at 32,000 geese on 12 December 1979. Peak duck populations were recorded on 30 November 1979 when 27,615 ducks were inventoried at Rend Lake.

INTRODUCTION

Waterfowl harvest at Rend Lake has been monitored by some type of survey since 1975. In previous years, harvest and hunter use were monitored by a system of combined bag checks, car counts, and windshield card questionnaires. This report summarizes the 1979 harvest and hunter use data collected by mandatory registration and report of harvest by hunters on the Rend Lake public hunting areas. An accurate determination of harvest and hunter use is crucial for the continued evaluation of the waterfowl management program at Rend Lake.

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 financed by Pittman-Robertson Project W-43-R.

A note of thanks is extended to all Division of Public Lands, Division of Wildlife Resources, Division of Law Enforcement and U.S. Army Corps of Engineers personnel who assisted in the distribution and collection of hunter registration sheets

throughout the 1979 waterfowl season at Rend Lake. A great amount of time and effort was expended in construction, erection and maintenance of registration boxes at access areas around the lake and the management areas. The harvest and hunter use survey would not be possible without the willing assistance of many dedicated people.

METHODS AND MATERIALS

Waterfowl hunter use and harvest data at Rend Lake were collected in 1979 by a method differing from previous years. For the 1975-1978 seasons, waterfowl harvest at Rend Lake was estimated by sampling hunters at access areas on a scheduled basis. Data were collected by bag checks combined with car counts three days per week and windshield cards were placed on cars and the cars counted on the other four days of the week. Because of the low card return rate and the small sample size on many days, this system of monitoring hunter activity and harvest was discontinued. Prior to the 1979 waterfowl season, registration boxes and signs were constructed and erected at all 34 hunter access areas around the lake and the management areas. Hunting regulations were amended so that it became mandatory that waterfowl hunters sign-in before hunting and report their daily kill following each days hunt. Registration sheets were collected on a daily basis and the number of hunters and harvest by species was tallied for each day of the season.

Canada goose harvest on private land surrounding Rend Lake was determined in past years by personal contact with club owners and land owners. In 1979, a registration and reporting system similar to that existing in the southern Illinois quota zone was established at Rend Lake. Commercial licenses were issued for areas where reimbursement was received for goose hunting privileges. Free permits were issued for all other areas where goose hunting occurred. Hunters were required to register before hunting and report their harvest after each days 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.

Canada goose population data were gathered from aerial inventories conducted weekly (weather permitting) throughout the season. These inventories were conducted by biologists with the Illinois Department of Conservation and the U.S. Fish and Wildlife Service using the DOC Cessna 210 or Cessna 337. Aerial duck inventories were conducted bi-weekly by Robert Crompton of the Illinois Natural History Survey.

RESULTS AND DISCUSSION

The 1979 waterfowl season opened in the southern zone and at Rend Lake on 31 October 1979 and closed 50 days later on 19 December 1979. The goose season opened concurrent with the duck season but continued to 31 December 1979. Weather conditions during the fall and winter were extremely mild and harvest and hunter success reflect those unfavorable hunting conditions.

Hunter Use

A total of 12,978 hunter-trips were taken to Rend Lake public hunting areas during the 1979 waterfowl season. Goose hunters, following the close of the duck season, accounted for 2,548 of these hunter-trips. The average number of hunters per day at Rend Lake through the duck season was 209. This compares closely with the 231 average hunters per day during the 1978 season. The week with the heaviest hunting intensity during the season was the first week (31 October - 6 November) when 1,740 hunters visited Rend Lake (Table 1). Hunting pressure at Rend Lake was heavy on opening day and early in the season then gradually stabilized at a relatively high level throughout the remainder of the season (Table 2). Hunting pressure at Rend Lake during the 1979 season showed little change from the 1978 season (3 percent increase). Licensed private goose clubs in the Rend Lake vicinity reported a total of 3,212 hunter-trips during the 1979 season.

Harvest

Waterfowl hunters at Rend Lake harvested 5,375 ducks and 1,917 geese during the 1979 season. The peak of the harvest occurred during the 7-day period of 31 October - 6 November 1979 when 1,664 ducks were taken. Hunters enjoyed a good harvest rate during the first two weeks of the season. Harvest then dropped markedly and continued at a slow pace throughout the remainder of the season (Table 1). The greatest number of geese were harvested during the 7-day period of 5 December - 11 December 1979 when 327 geese were taken. Canada goose harvest at Rend Lake was down 58 percent from the estimated 4,604 geese harvested during the 1978 season. Duck harvest was also 41 percent below the 1978 harvest of 9,060 ducks. A complete breakdown of the 1979 duck harvest at Rend Lake by species is presented in Table 3.

Registers received from 37 licensed private goose clubs in the Rend Lake vicinity revealed a harvest of 734 geese on private lands. This compares with an estimated harvest of 1,500 Canada geese on private lands in 1978.

Hunter Success

The 1979 survey at Rend Lake revealed a duck hunting success rate of .52 ducks per trip. The highest success rate (.96) was reported by hunters during the first week of the season. Goose hunting is often incidental to duck hunting at Rend Lake. This makes hunter success rates for geese rather unmeaningful. Based on total hunters and total geese harvested, the success rate for the 1979 season was .15. Following the close of the duck season, goose hunters harvested geese at the rate of .22 birds per trip. Goose hunting success on private lands in the vicinity of Rend Lake was low throughout the 1979 season. The overall success rate reported by licensed goose clubs in 1979 was .23 birds per trip.

Compared to the 1978 season, duck hunting success was down 33 percent and goose hunting success on public hunting areas was down 58 percent. The 1979 success rate for waterfowlers at Rend Lake was the lowest ever recorded since the survey was initiated (Table 4).

Population Status

The in-season Canada goose population at Rend Lake peaked at 32,000 on 17 December 1979. This represents a 42 percent decline from the peak of 55,000 observed during the 1978 season. Later in the winter, after the close of the hunting season, 90,000 Canada geese were inventoried at Rend Lake. This was significantly higher than the peak inventory of 62,000 observed during the late winter of 1978-79 (Figure 1). A peak population of 27,615 ducks was inventoried at Rend Lake on 30 November 1979 (Figure 2). This represents a 44 percent increase over the peak population of 19,185 ducks reported in 1978.

Conclusions

The registration of waterfowl hunters at Rend Lake proved to be an effective and efficient system of monitoring hunter use and harvest. Private goose club operators and other land owners cooperated fully in applying for licenses and maintaining hunter and harvest registers. Although some vandalism of registration sheets and boxes did occur at the access areas to public hunting areas, the incidence was infrequent and not significant. The registration system is a definite improvement over the sampling system based on bag checks and wind-shield cards which has been used in past years. The registration survey will therefore be continued for the 1980 waterfowl season.

LITERATURE CITED

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Table 1. Waterfowl harvest and hunter success on the public hunting areas at Rend Lake, Illinois throughout the 1979 waterfowl season.

Date	No. of Hunters	Harvest			Hunter Success	
		Mallards	Ducks	Geese	(Ducks)	(Geese)
Oct. 31 - Nov. 06	1,740	686	1,664	186	.96	.11
Nov. 07 - Nov. 13	1,790	799	1,247	174	.70	.10
Nov. 14 - Nov. 20	1,124	463	603	129	.54	.11
Nov. 21 - Nov. 27	1,377	293	392	101	.28	.07
Nov. 28 - Dec. 04	1,291	479	590	152	.46	.12
Dec. 05 - Dec. 11	1,394	451	495	327	.36	.23
Dec. 12 - Dec. 19*	1,714	380	384	317	.22	.18
Dec. 20 - Dec. 25	1,060	---	---	261	---	.25
Dec. 26 - Dec. 31	1,488	---	---	270	---	.18
Season Totals	12,978	3,551	5,375	1,917	.52	.15

*Final day of duck season

Table 2. Mean number of hunters per day at Rend Lake, Illinois, during the duck season, 1974 through 1979.

Days	Zoning Not in Effect			Zoning in Effect		
	1974	1975	MEAN	1977	1978	1979
Rend Lake (Southern Zone)						
Opening Day	180 ^a	166 ^a	201	882 ^b	456 ^a	456 ^a
First 14 Days	163	130	148	283	253	274
Middle 17-22 Days	147	109	135	157	218	179
Last 14 Days	158	129	124	99	182	213
ENTIRE SEASON	154	121	135	178	218	215
						598
						271
						185
						165
						204

^aMidweek opening.

^bSaturday opening.

^cLake frozen last part of season.

Table 3. Harvest of ducks by species at Rend Lake, (Southern Zone), Illinois, 1974 through 1979. Data from bag checks conducted daily during the hunting seasons and hunter registration reports in 1979.*

Species	Zoning Not in Effect			Zoning in Effect		
	1974	1975	1976	1977	1978	1979
Dabbling Ducks						
Mallard	5,941	4,576	4,618	5,272	5,531	3,488
Black duck	199	166	174	157	183	115
Gadwall	97	592	274	703	611	334
American wigeon	70	296	80	293	351	196
Green-winged teal	103	592	1,112	98	412	286
Blue-winged teal	76	58	108	78	168	47
Northern shoveler	21	21	33	98	91	82
Pintail	59	36	93	195	183	81
Wood duck	549	390	455	1,504	948	302
TOTAL	7,115	6,727	6,947	8,398	8,478	4,931
Diving Ducks						
Redhead	0	7	0	0	15	71
Canvasback	5	0	53	0	31	46
Scaup	119	58	274	175	214	149
Ring-necked duck	65	14	20	114	92	103
Common goldeneye	11	0	73	17	31	0
Bufflehead	5	14	0	0	76	61
Ruddy duck	0	0	0	0	31	29
TOTAL	205	93	420	306	490	459
Hooded merganser	11	58	47	44	61	2
Other ducks	0	0	0	0	31	43
ALL SPECIES	7,331	6,878	7,414	8,748	9,060	5,435
			7,207			7,748

* Table taken from Evaluation of Experimental Zoning for Duck Hunting in Illinois, 1977-1979, Anderson W.L., 1980. Slight differences in harvest figures from Table 1 represent differences in treatment of data.

Table 4. Waterfowl harvest and hunter success at Rend Lake, Illinois, 1974-1979.

Year	No. of Hunters	Harvest		Hunter Success	
		Ducks	Geese	Ducks	Geese
1974	8,485	7,331	a/	.86	a/
1975	6,428	6,878	1,710	1.07	.58 ^{b/}
1976	6,555	7,414	2,017	1.13	.21 ^{b/}
1977	8,377	8,748	1,630	1.04	--
1978	12,622	9,060	4,604	.78	.36
1979	12,978	5,375	1,917	.52	.15

a/ No survey conducted

b/ Last 20 days of goose season after close of duck season

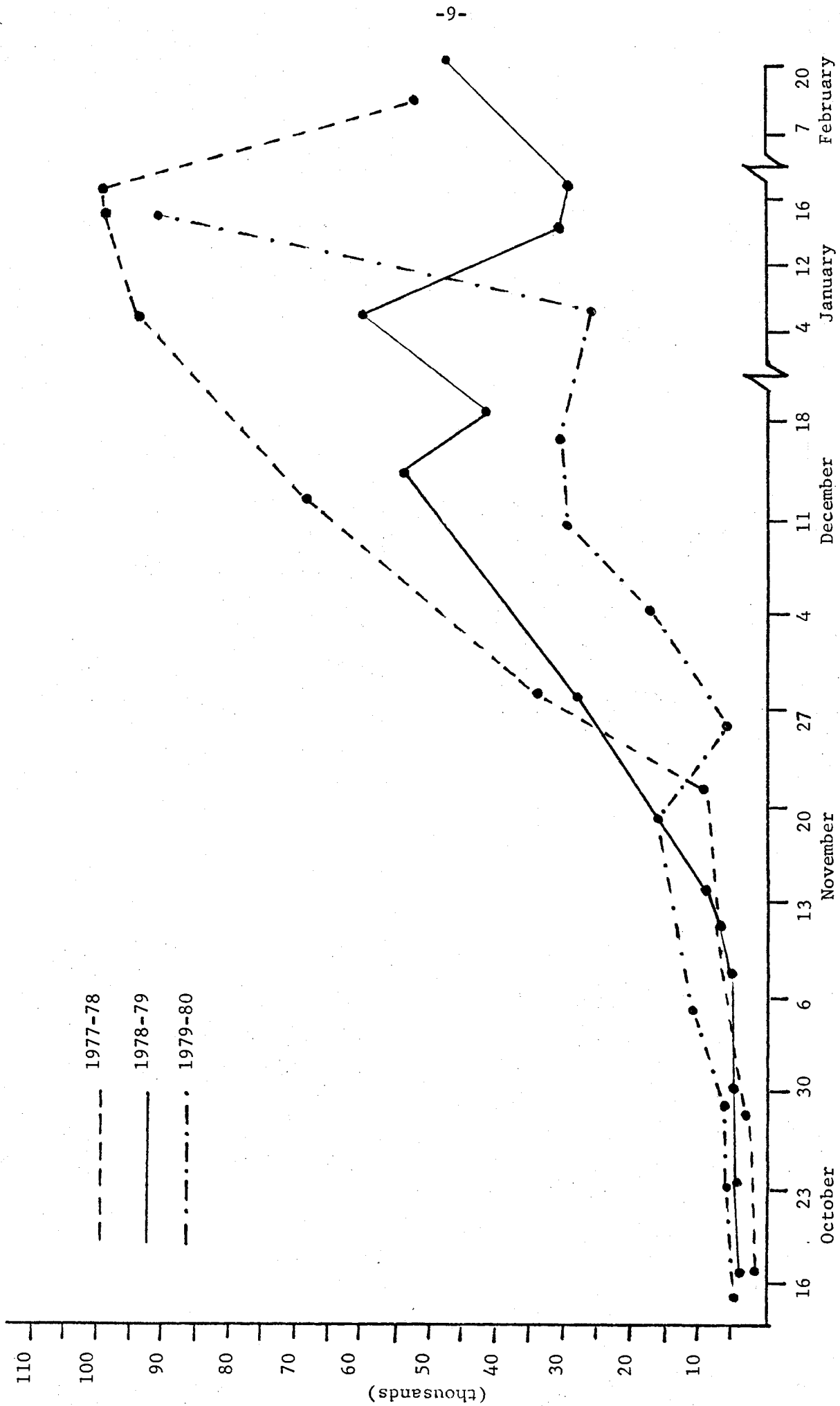


Figure 1. Numbers of Canada geese at Rend Lake during fall and winter, 1977-78, 1978-79 and 1979-80.

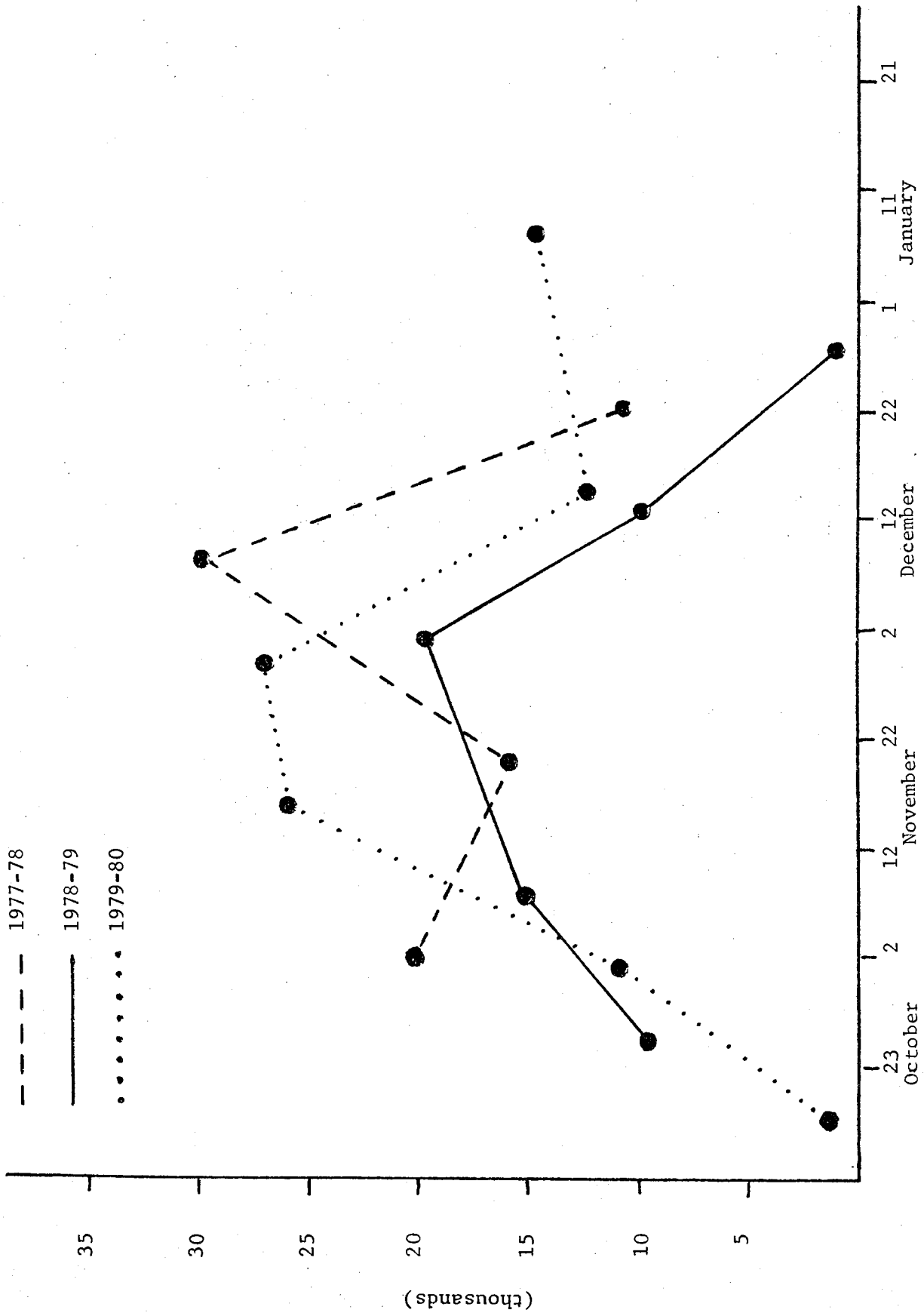


Figure 2. Numbers of ducks at Rend Lake during fall and winter, 1977-78, 1978-79 and 1979-80.

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