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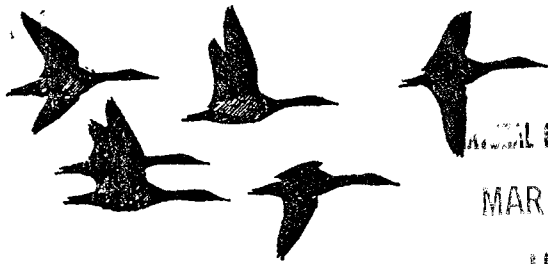
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WATERFOWL HARVEST AND HUNTER USE AT REND LAKE DURING THE 1978 SEASON

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Abstract: The duck season at Rend Lake opened on 2 November 1978 and closed 50 days later on 21 December 1978. The goose season opened concurrent with the duck season but closed on 27 December 1978. An estimated 9,060 ducks and 4,604 geese were harvested on public lands at Rend Lake throughout the 1978 season. The goose harvest on private lands surrounding Rend Lake was estimated at 1,500 birds. An estimated 12,622 hunter trips were made to Rend Lake in 1978. It is impossible to identify hunter trips taken specifically for geese during the duck season, however 1,078 hunter trips were made after the close of the duck season during the period 21-27 December 1978. The overall success rate for duck hunters at Rend Lake for the 1978 season was .78 ducks per trip. Estimates of hunter use and harvest at Rend Lake are based on a combination of bag checks/car counts and windshield card/car counts. The in-season goose population peaked at 55,000 on 14 December 1978. Peak duck populations were reached on 1 December 1978 when nearly 20,000 ducks were inventoried at Rend Lake.

INTRODUCTION

In 1975 a survey was initiated to assess waterfowl harvest on the Rend Lake Wildlife Management Area. The harvest survey was continued in 1976 and 1977 and this report summarizes the harvest and hunter use data collected during the survey of the 1978 waterfowl season. An accurate determination of harvest and hunter use is crucial for assessing the success of waterfowl management programs.

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.

Appreciation is due to many individuals who assisted in collection of waterfowl harvest data throughout the season. The following personnel spent many long and tedious hours in data collection: Site Superintendent Larry Leitner, Refuge Manager Max Newton and his staff, and Wildlife Biologists Jack Golden, Bill Mestel, Paul Moore, and Tom Micetich. Recognition is also given to M. Di Gregorio and

other U.S. Corps of Engineer personnel who contributed to the survey by making many bag checks and car counts throughout the season.

METHODS AND MATERIALS

The methods and techniques for sampling the access areas were similar to those used in previous years and documented in previous periodic reports (Hamer and Arthur 1976). Data were collected by two methods. Bag checks combined with car counts were conducted three days per week and windshield cards were placed on cars and the cars counted on the other four days of the week. Projections of the harvest were then made using the data collected by these two means. Canada goose harvest on private land surrounding Rend Lake was determined by personal contact with commercial club operators and private land owners where hunting occurred.

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. Aerial duck inventories were conducted bi-weekly by Robert Crompton of the Illinois Natural History Survey.

RESULTS AND DISCUSSION

A total of 352 cards were placed on windshields during the 1978 duck season. One hundred and eighteen of these were returned by hunters for a 34 percent return rate. Thirty seven cards were distributed after the duck season before the close of the goose season. Eleven of these cards were returned by goose hunters for a 30 percent return rate. Bag checks were conducted on 21 days of the season. Because of the low card return rate and the small sample size on many days, survey results should be viewed with a certain degree of caution.

Hunter Use

During the 1978 waterfowl season an estimated 12,622 man-days of hunting effort were expended at Rend Lake. The 50 day duck season opened 2 November 1978 and closed 21 December 1978. During this period, 11,544 hunter trips were taken. Following the close of the duck season another 1,078 man-days were expended in hunting Canada geese before the close of the goose season on 27 December 1978. The average number of hunters per day at Rend Lake through the duck season was 231. The two-week period with the heaviest hunting intensity was 21 November-30 November 1978 (Table 1). The total of 11,544 duck hunters in 1978 represents a 38% increase in hunting pressure from 1977.

Harvest

Waterfowl hunters at Rend Lake harvested an estimated 9,060 ducks and 4,604 geese during the 1978 season. The greatest duck harvest occurred during the ten-day period of 21 November-30 November 1978 when 2,203 ducks were taken. The greatest number of geese were harvested during the ten-day period 1 December-10

December 1978 when 1,193 geese were taken (Table 1). In 1977 the survey revealed a harvest of 8,748 ducks and 1,630 Canada geese. The 1978 harvest represents a 3.5 percent increase in duck harvest over 1977 and a 108 percent increase in the goose harvest. Commercial goose club operators and other private land owners in the Rend Lake area reported a total harvest of 1,500 Canada geese on private land.

Hunter Success

The 1978 survey revealed a duck hunting success of .78 ducks per trip. The highest success during the season occurred during the two week period of 1 December-10 December 1978 when a success rate of .93 was reported (Table 1). Success rates for Canada geese are not too meaningful as goose harvest is often incidental during the duck season. Based on the total number of hunters in the field during the 1978 season a success rate of .36 geese per hunter trip was calculated from the survey data. In 1977 a hunter success of 1.04 ducks per hunter trip was reported. The 1978 hunter success therefore represents a 25 percent decrease in the success rate from 1977.

Population Status

A peak in-season population of 55,000 Canada geese was observed at Rend Lake on 14 December 1978. This represents a 21 percent decrease from the peak of 70,000 recorded during the 1977 waterfowl season. Later in the winter after the close of hunting seasons, 62,000 Canada geese were inventoried at Rend Lake. This is also significantly lower than the peak population of 100,000 recorded during late winter of 1977-78 (Figure 1). A peak population of 19,185 ducks was inventoried at Rend Lake on 1 December 1978 (Figure 2). This represents a 39 percent decline from the 31,615 peak duck inventory recorded in December of 1977.

Conclusions

The significant increase in the goose harvest in 1978 at Rend Lake identifies the need for continuing with an improved harvest monitoring system in this area. Rend Lake possesses great potential for becoming an important goose harvest area and accurate assessment of the magnitude of the harvest is essential for future management of the overall goose management program in Illinois. For this reason, plans are being finalized now for a hunter and harvest registration system at Rend Lake for the 1979-80 waterfowl season. This system will replace the windshield card and bag check method of data collection and will hopefully overcome the recognized deficiencies in the current harvest monitoring system.

LITERATURE CITED

- Roetker, F. H. 1977. Canada goose harvest and hunter use at Rend Lake during the 1976 season. Illinois Dept. Conservation, Migratory Bird Sect., Periodic Rpt. No. 18. 5pp.
- Roetker, F. H., and W. L. Anderson. 1978. Canada goose harvest and hunter use at Rend Lake during the 1977 season. Illinois Dept. Conservation, Migratory Bird Sect., Periodic Rpt. No. 21. 3pp.

Table 1. Hunter use, harvest and success throughout the 1978 waterfowl season at Rend Lake.

Date	<u>Hunting Pressure</u>		<u>Harvest</u>		<u>Success</u>	
	No. of Hunter Trips	Ducks	Geese	Ducks	Geese	
Nov. 2-10	2,452	2,147	435	.88	.18	
Nov. 11-20	2,112	1,749	536	.83	.25	
Nov. 21-30	2,857	2,203	715	.77	.25	
Dec. 1-10	2,040	1,897	1,193	.93	.58	
Dec. 11-21	2,083 _b	1,064	1,310	.51	.63	
Dec. 22-27 ^a	1,078 ^b	---	415	---	.38	
Total	12,622	9,060	4,604	.78	.36	

a Duck season closed

b Goose hunters only

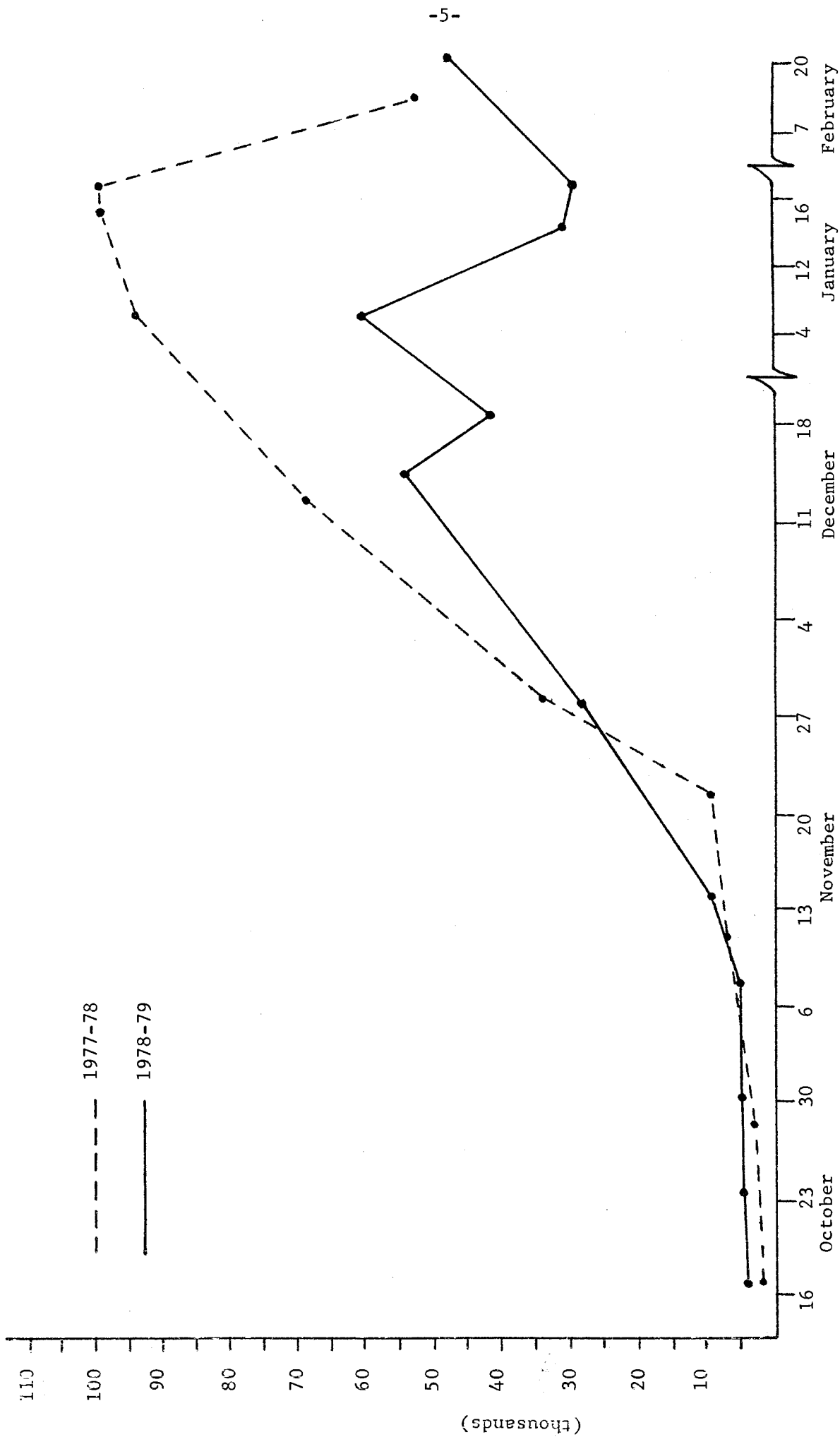


Figure 1. Numbers of Canada geese at Rend Lake during fall and winter, 1977-78, 1978-79.

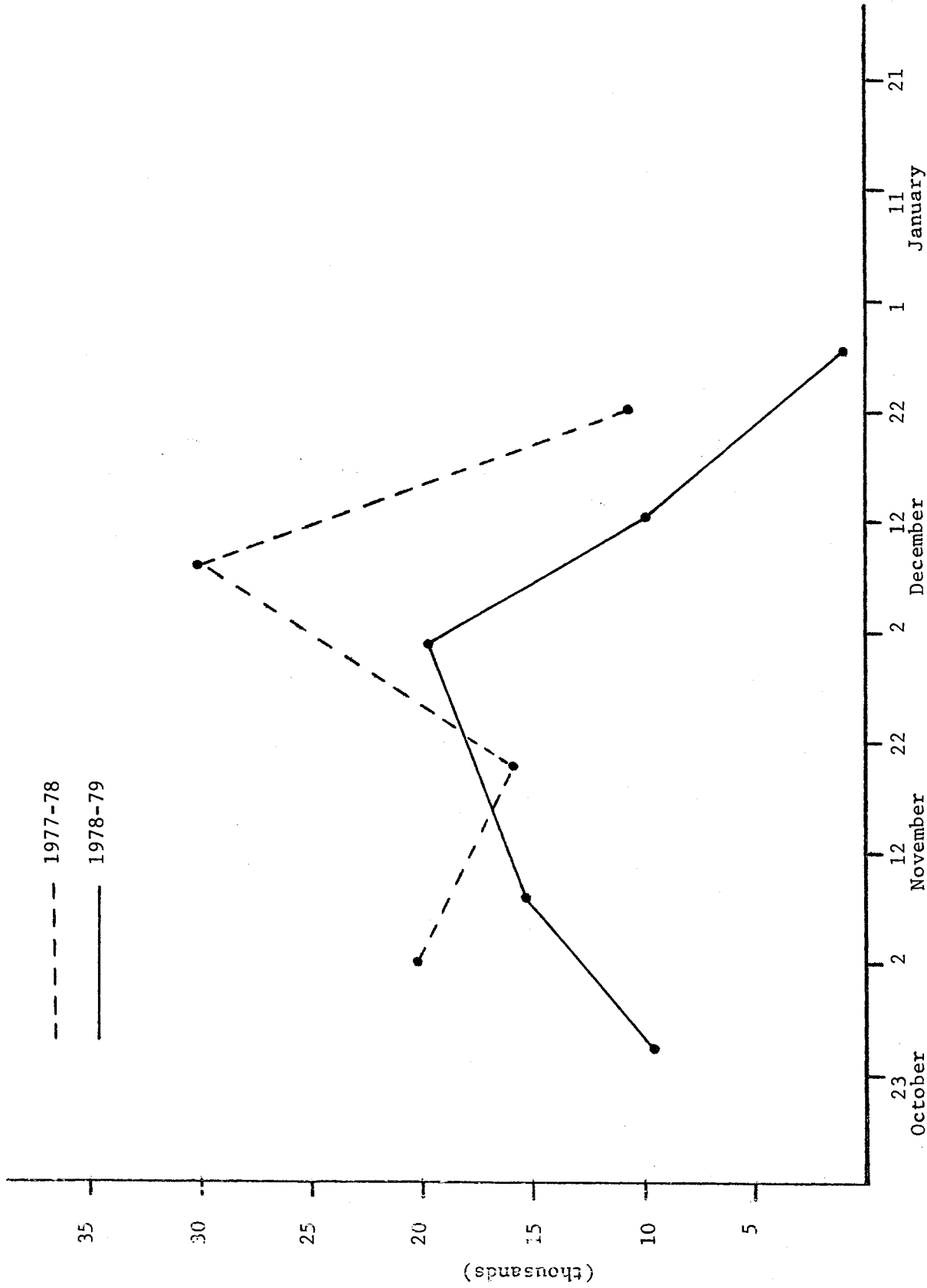


Figure 2. Numbers of ducks at Rend Lake during fall and winter, 1977-78, 1978-79.