

Xtra

Southern James Bay Population

Canada Geese

Population Trend Information 1973-92

Southeast Region, Mississippi Flyway

**Compiled By
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INTRODUCTION

There has been concern about the status of the Southern James Bay Population (SJBP) of Canada geese for several years. This concern increased in 1989 when it was demonstrated that there had been a significant population decline in those geese that arrived at Wheeler National Wildlife Refuge (NWR) prior to December 16.

Since both Tennessee and Cross Creeks NWR's are also major SJBP wintering areas, the 1973-92 population data were analyzed to determine if a decreasing trend was also apparent at either of these refuges.

Collar observation data for each refuge were analyzed to determine the percent of interior geese that was associated with the SJBP population during the 1985-91 period. Comparisons were made between the number of SJBP geese reported on major concentration areas in Region 4, the number that was estimated to actually be present and how the percent of SJBP geese changed during the 1985-91 period.

RESULTS

Both Wheeler and Tennessee NWR's showed significant population declines of those geese arriving prior to December 16 (Figures 1 and 2). The Cross Creeks data suggested there is a decline of those geese that arrive prior to November 16 but not for those geese

arriving after December 1 (Figure 3). Peak populations that occurred after January 1 did not show a significant decline for Wheeler, Tennessee nor Cross Creeks during the 1973-92 period. Figures 4 - 6 show the same refuge population data but arranged differently. Figures 7 - 9 show trends of the combined populations of all three refuges by time period. The combined refuge populations show a declining trend of those geese arriving prior to December 15.

Based upon collar observation data the number of SJBP Canada geese reported as being present in Region 4 during the coordinated December survey has been exaggerated since at least 1985 (Figure 10). It is estimated that in 1985 about 35% of the geese reported as SJBP were not SJBP. By 1991 this percentage had increased to 75% (Figure 11). Presently the criteria used to assign geese to a particular population are based upon where the geese are observed and historic band recovery information. These criteria will probably be improved during the next few years. The mixing of populations on wintering areas is one reason that spring population surveys have been initiated on the breeding grounds.

Most of the interior geese that were incorrectly reported as SJBP geese are associated with the Mississippi Valley Population (MVP) and a few with the Eastern Prairie Population (EPP). Table 1 shows the estimated percent of interior geese that is associated with each population. It is important to recognize that the estimated percent of geese associated with each population is only valid for interior geese. Since we do not know how many giant

geese are present on concentration areas in December, the actual number of interior geese is also unknown.

The mixing of SJB, MVP and EPP interior geese on Tennessee and Cross Creeks refuges makes it difficult to determine the status of an individual population on a refuge. The observation of neck collars is presently the most expedient and accurate method of determining population affiliation of Canada geese on an individual refuge.

The evidence indicates that the number of SJB Canada geese arriving prior to December 16 on refuges in Region 4 is declining and may be in serious trouble. It is important to be aware of this information and continually support actions that may help to reverse the declining population trend. Efforts are presently underway to gain support for improved harvest controls in appropriate states and provinces.

Figure 1

Wheeler NWR Peak Canada Goose Population Trends
by Time Period 1973-92

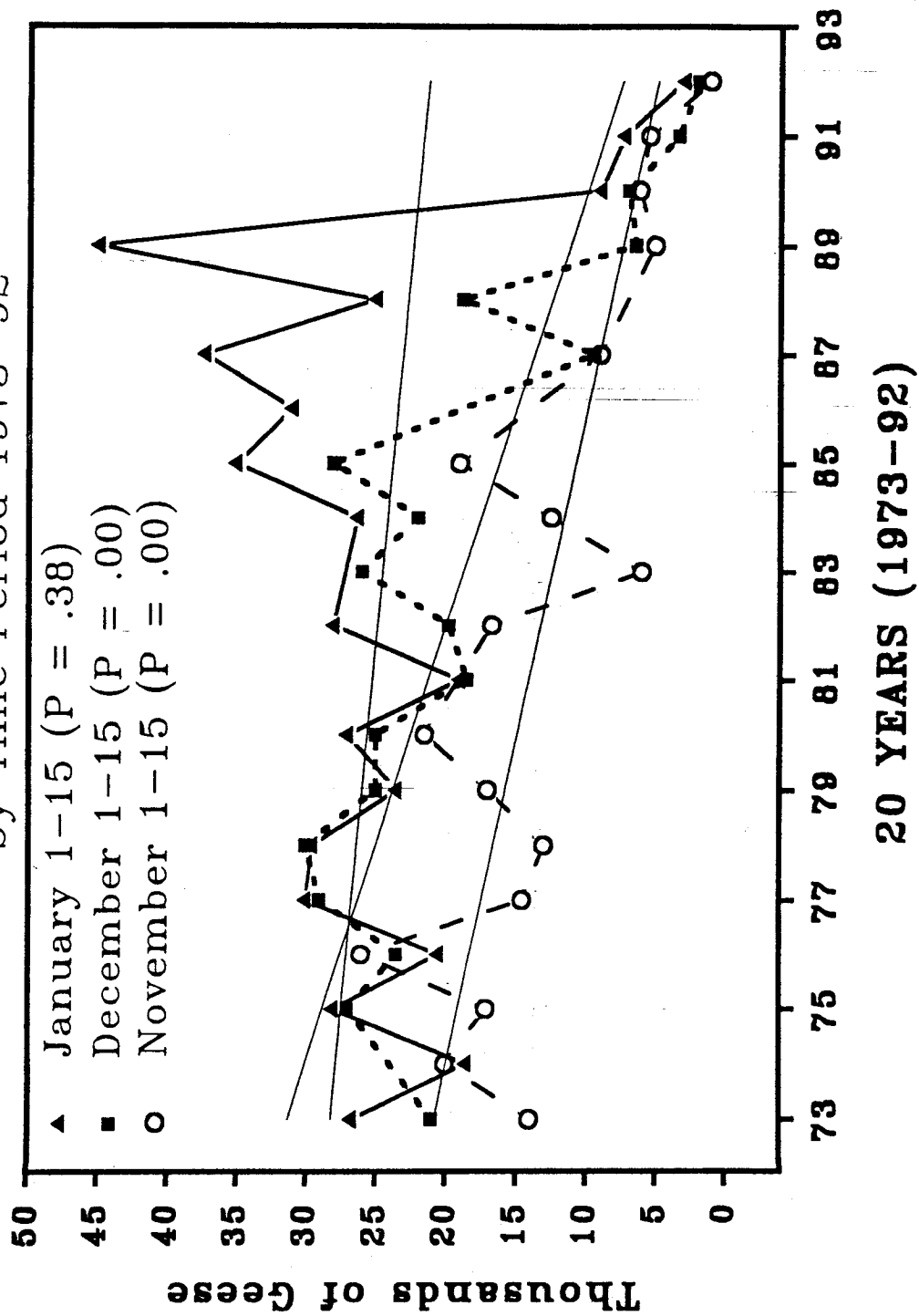


Figure 2

Tennessee NWR Peak Canada Goose Population Trends
by Time Period 1973-92

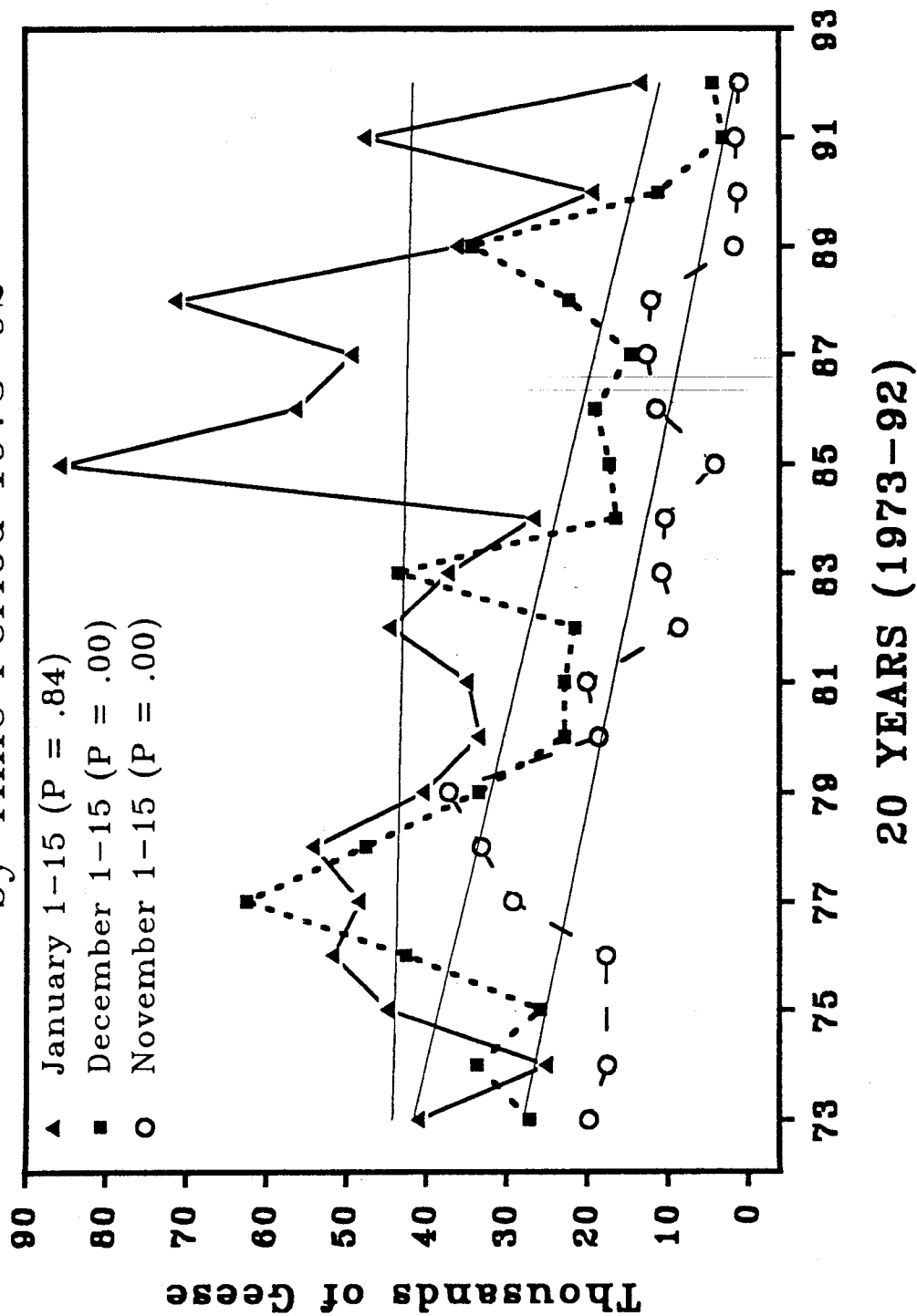


Figure 3

Cross Creeks NWR Peak Canada Goose Population Trends
by Time Period 1973-92

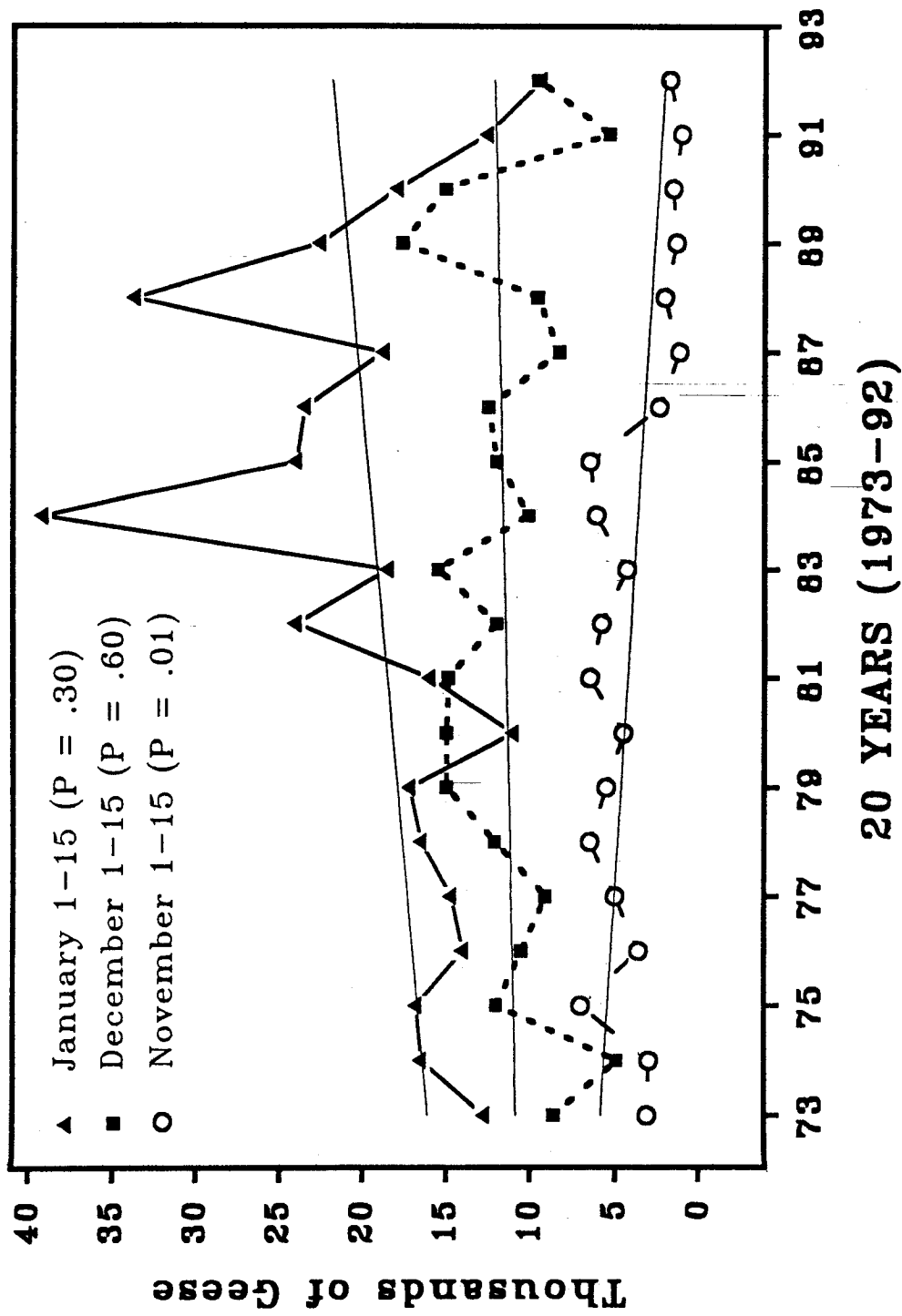


Figure 4

NOVEMBER 1-15 Peak Canada Goose Populations for
Cross Creeks, Tennessee and Wheeler NWR's

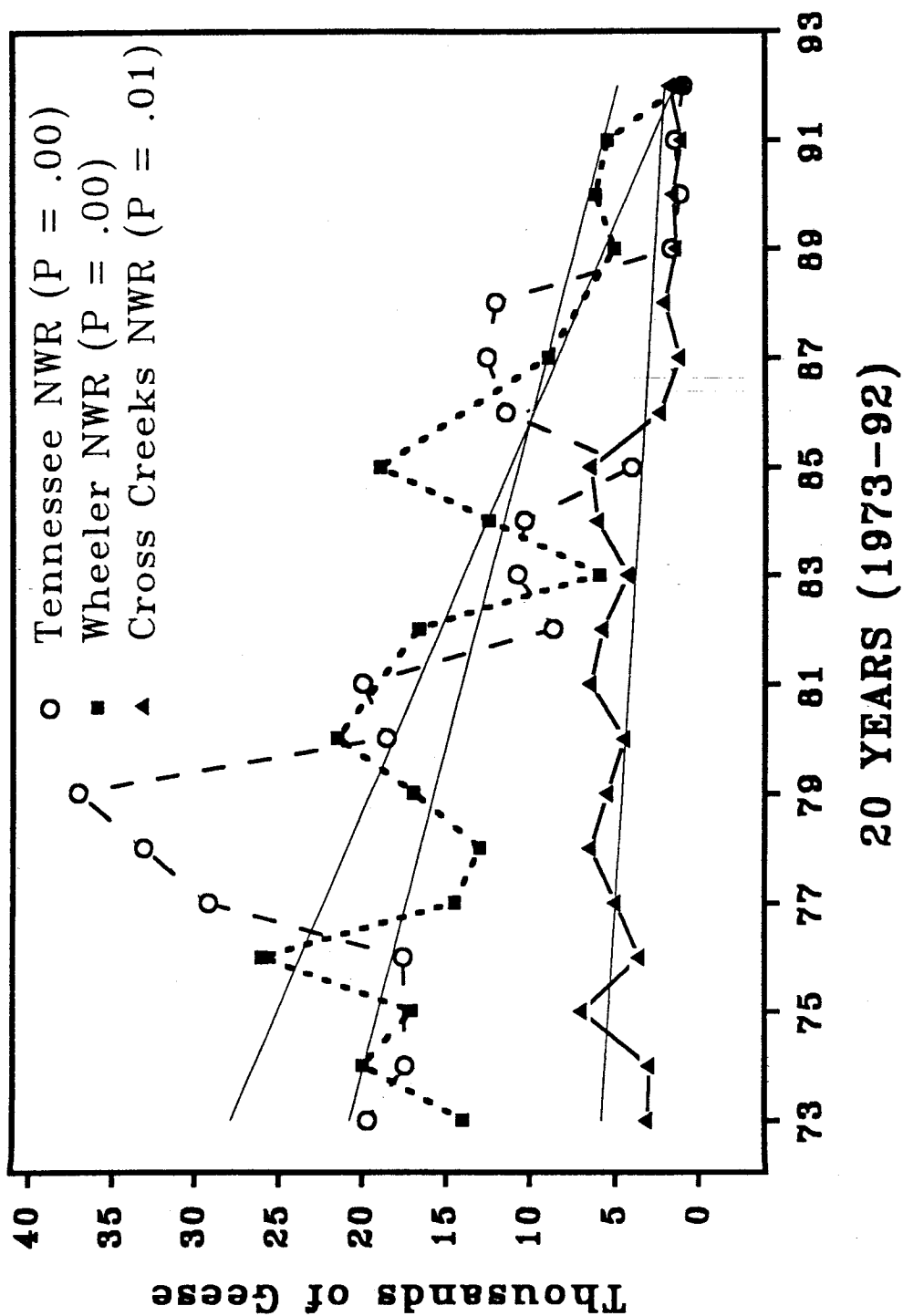


Figure 5

DECEMBER 1-15 Peak Canada Goose Populations for
Cross Creeks, Tennessee and Wheeler NWR's

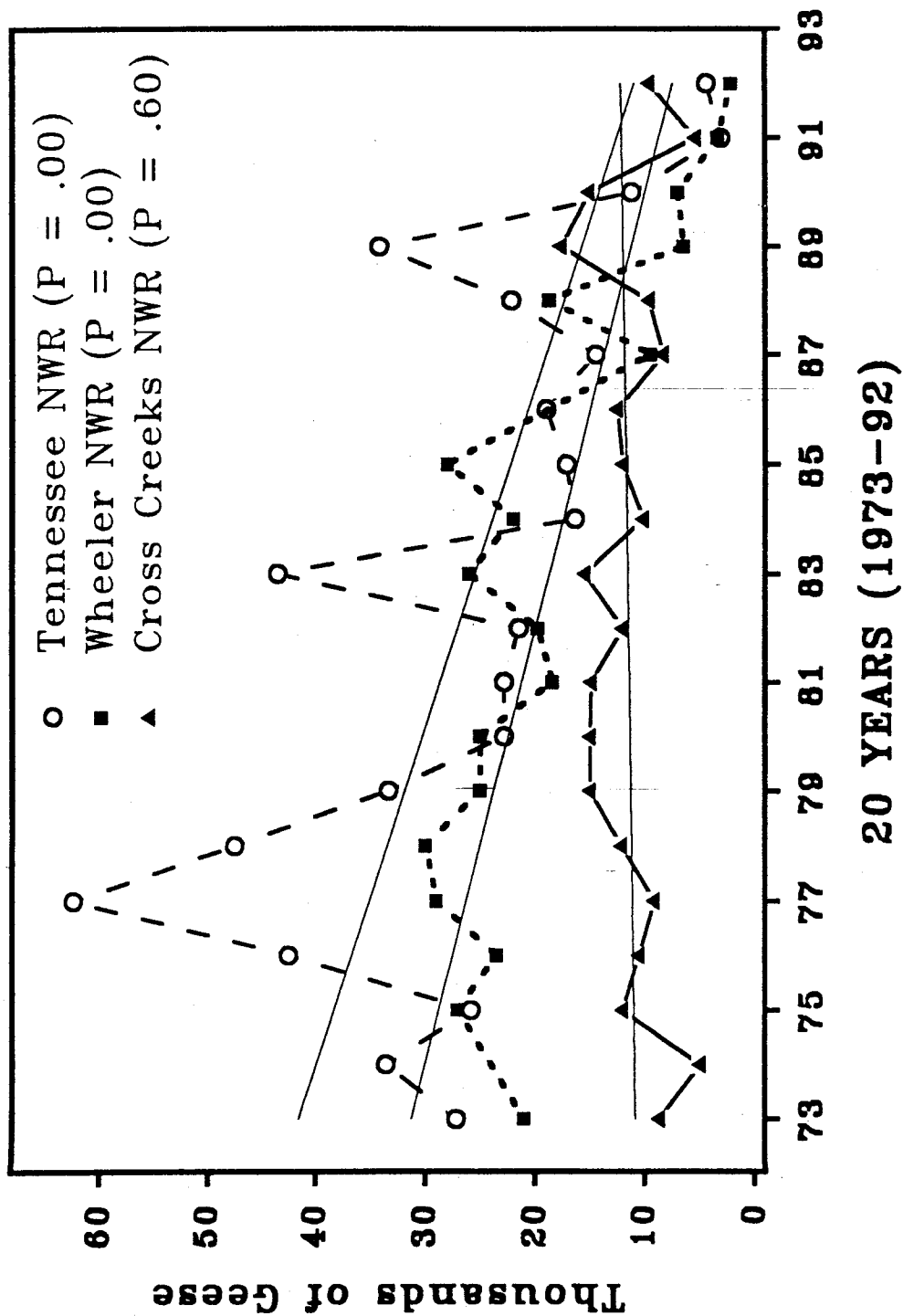


Figure 6

JANUARY 1-15 Peak Canada Goose Populations for
Cross Creeks, Tennessee and Wheeler NWR's

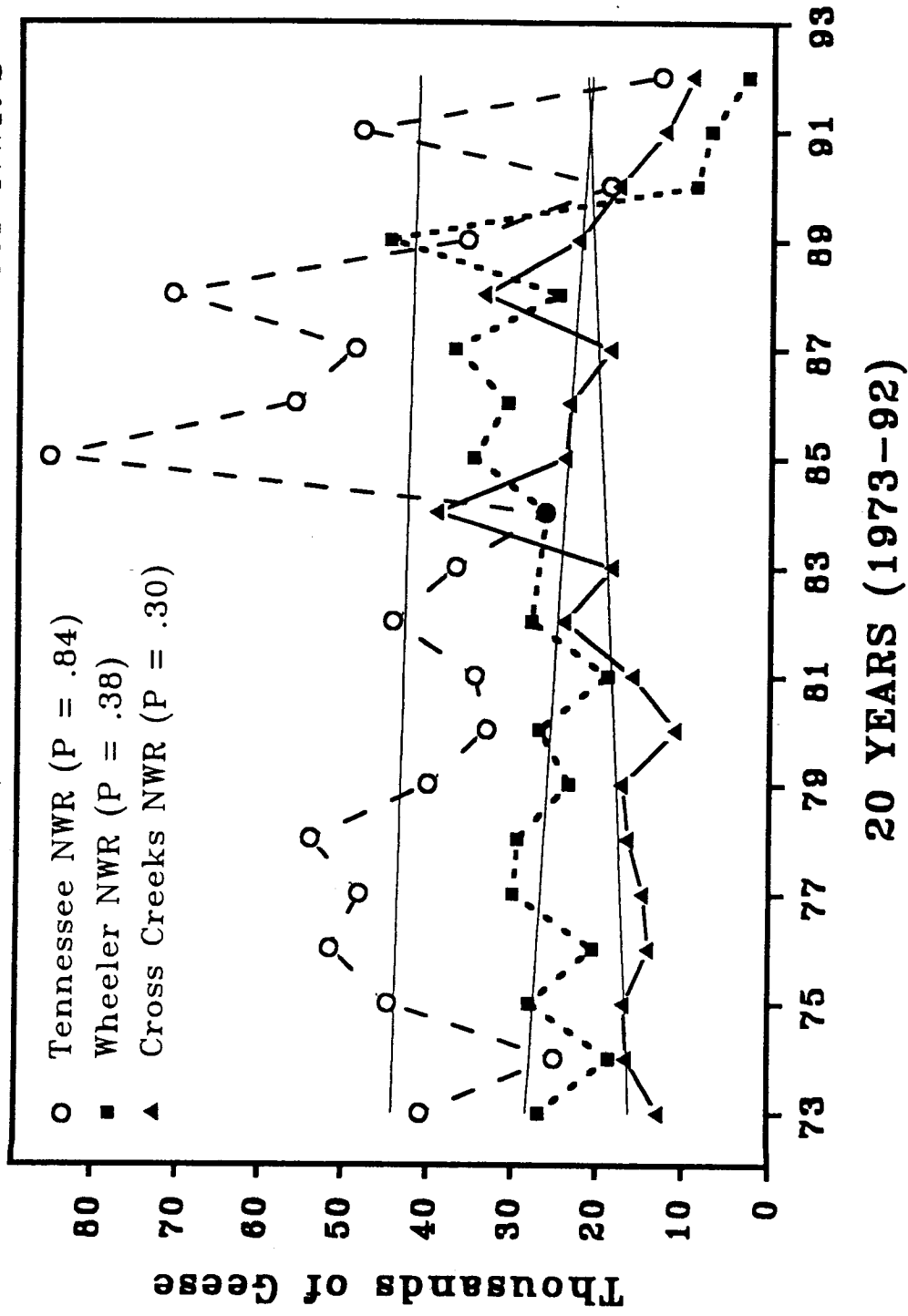


Figure 7

Combined November 1-15 Peak Canada Goose Populations
for Cross Creeks, Tennessee and Wheeler NWR's

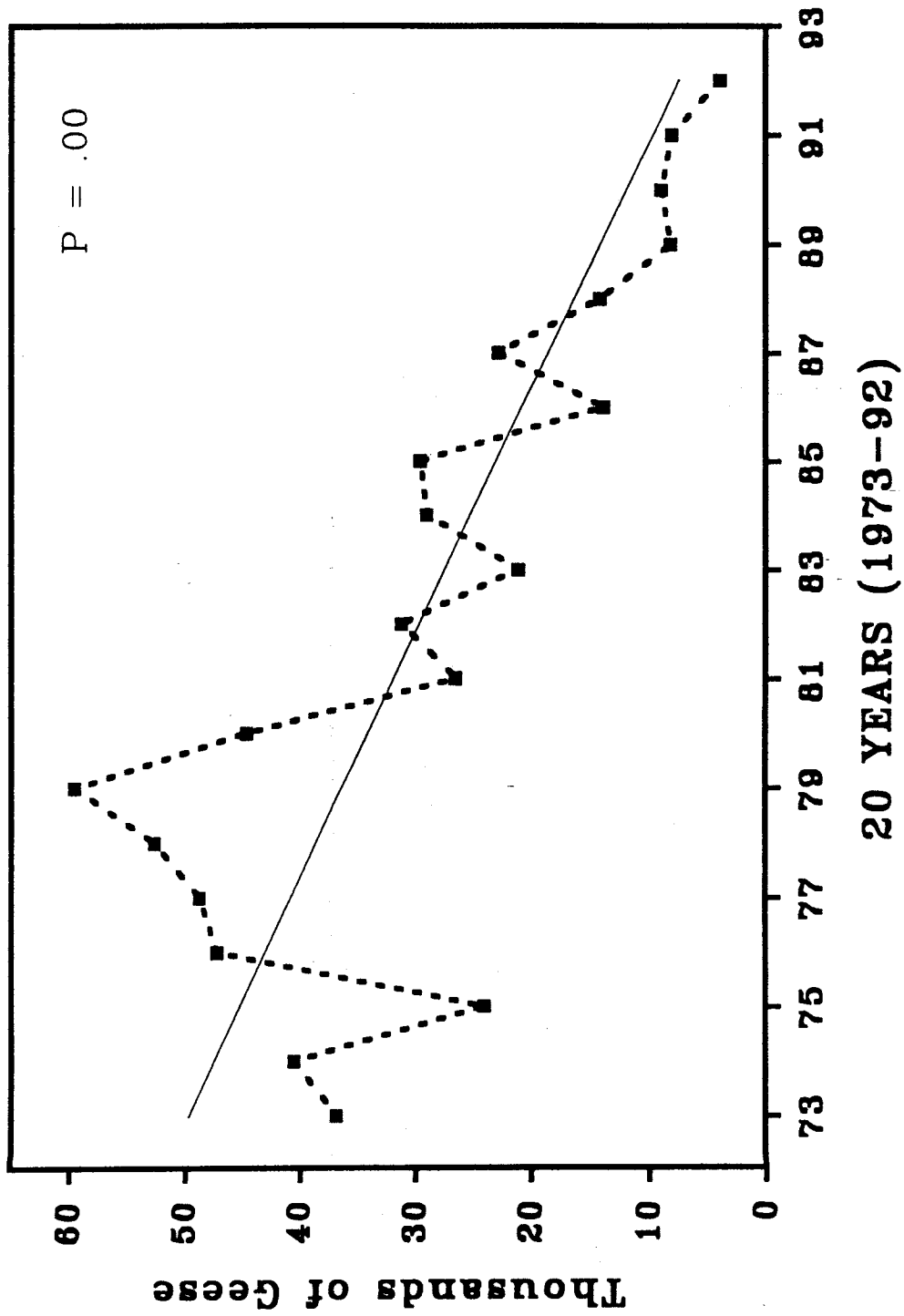


Figure 8

Combined December 1-15 Peak Canada Goose Populations for
Cross Creeks, Tennessee and Wheeler NWR's

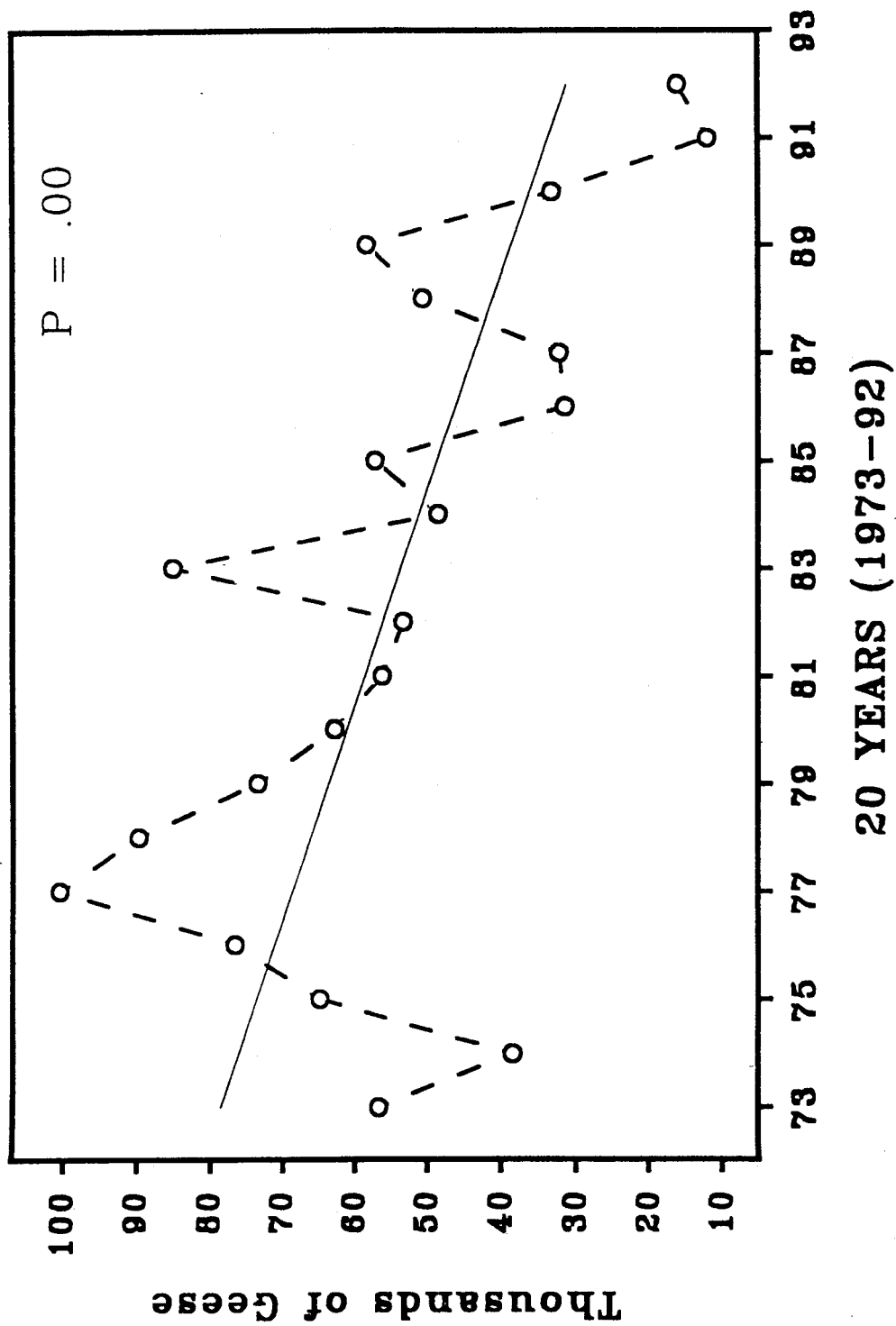


Figure 9

Combined January 1-15 Peak Canada Goose Populations
for Cross Creeks, Tennessee and Wheeler NWR's

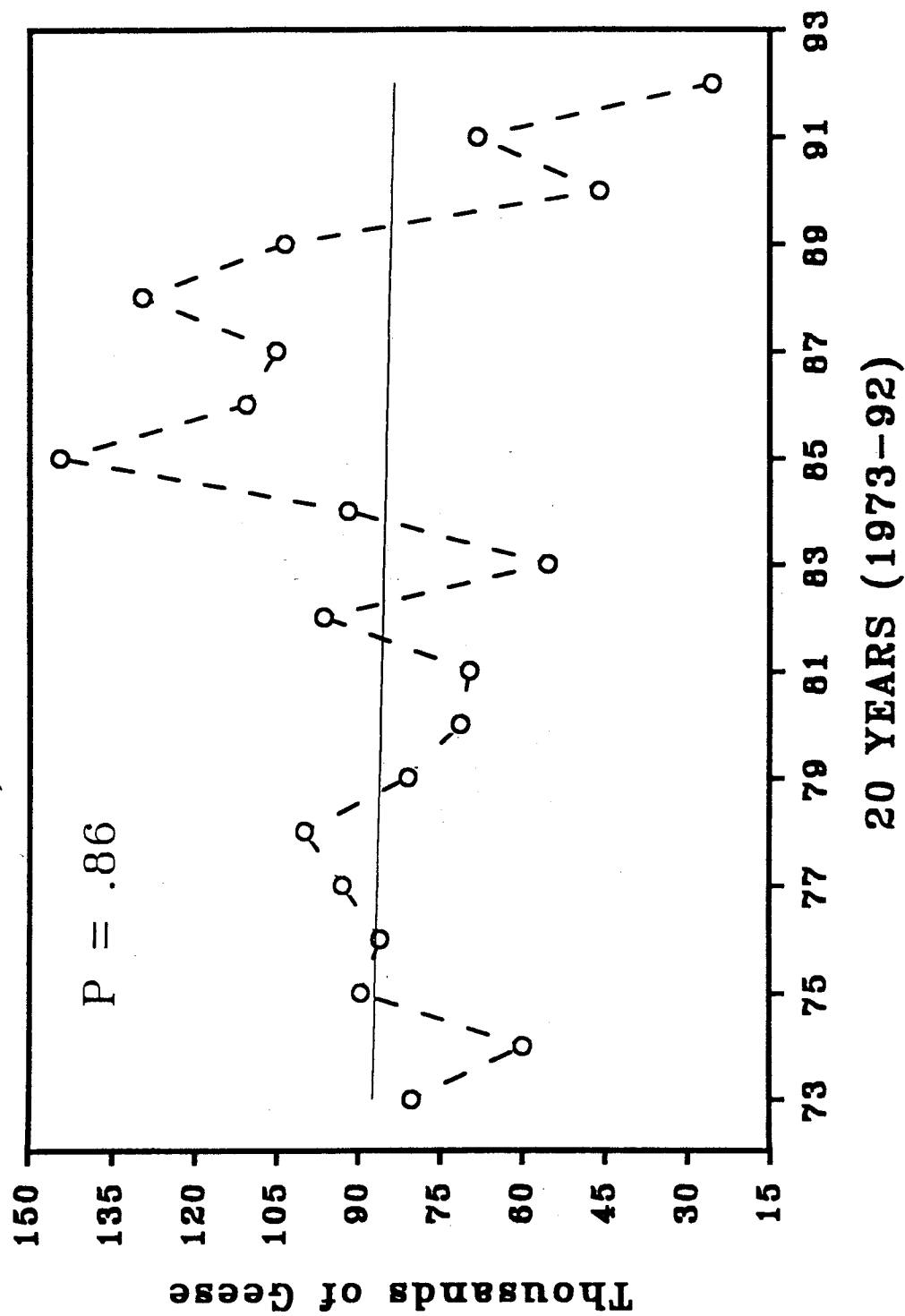
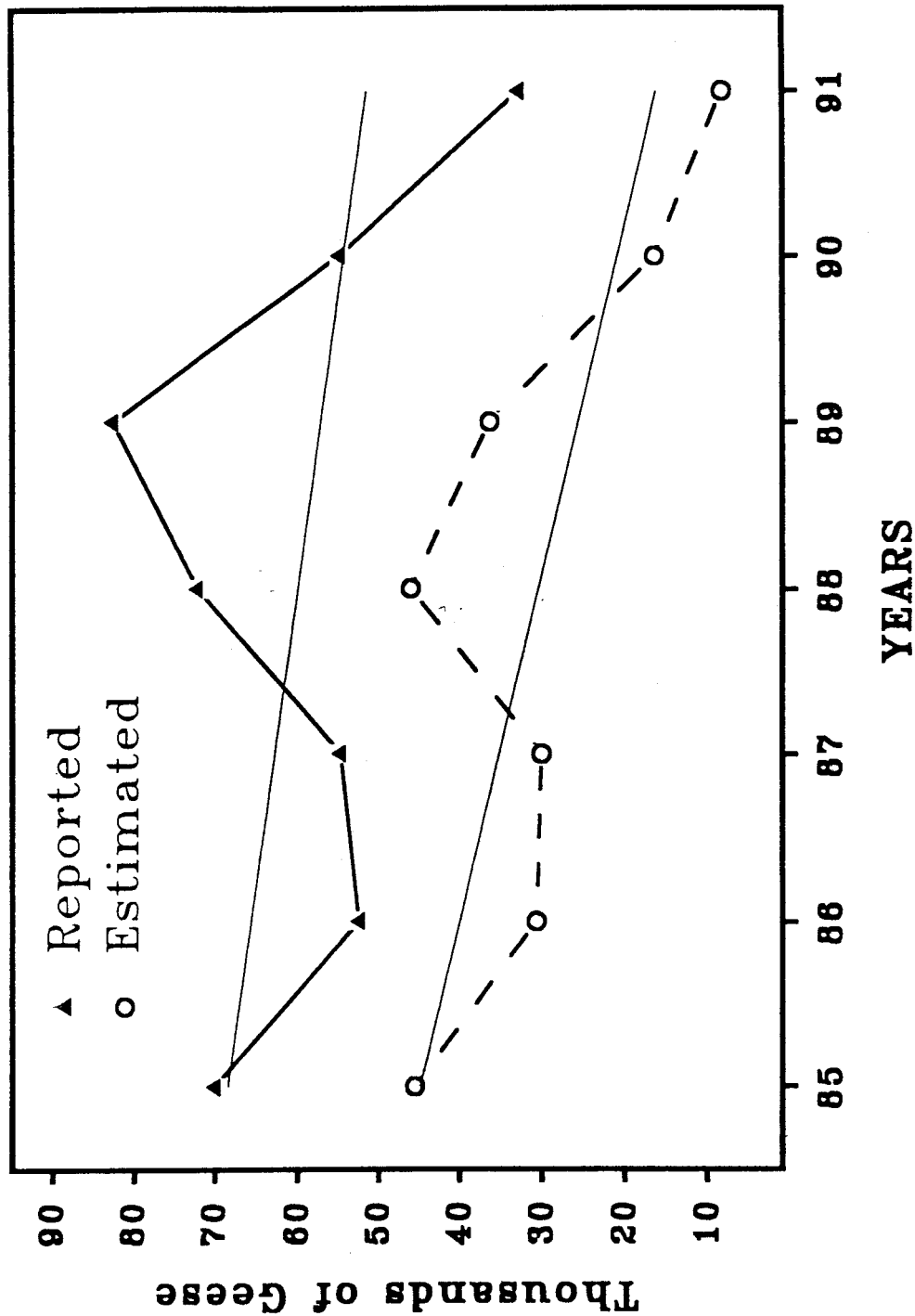


Figure 10

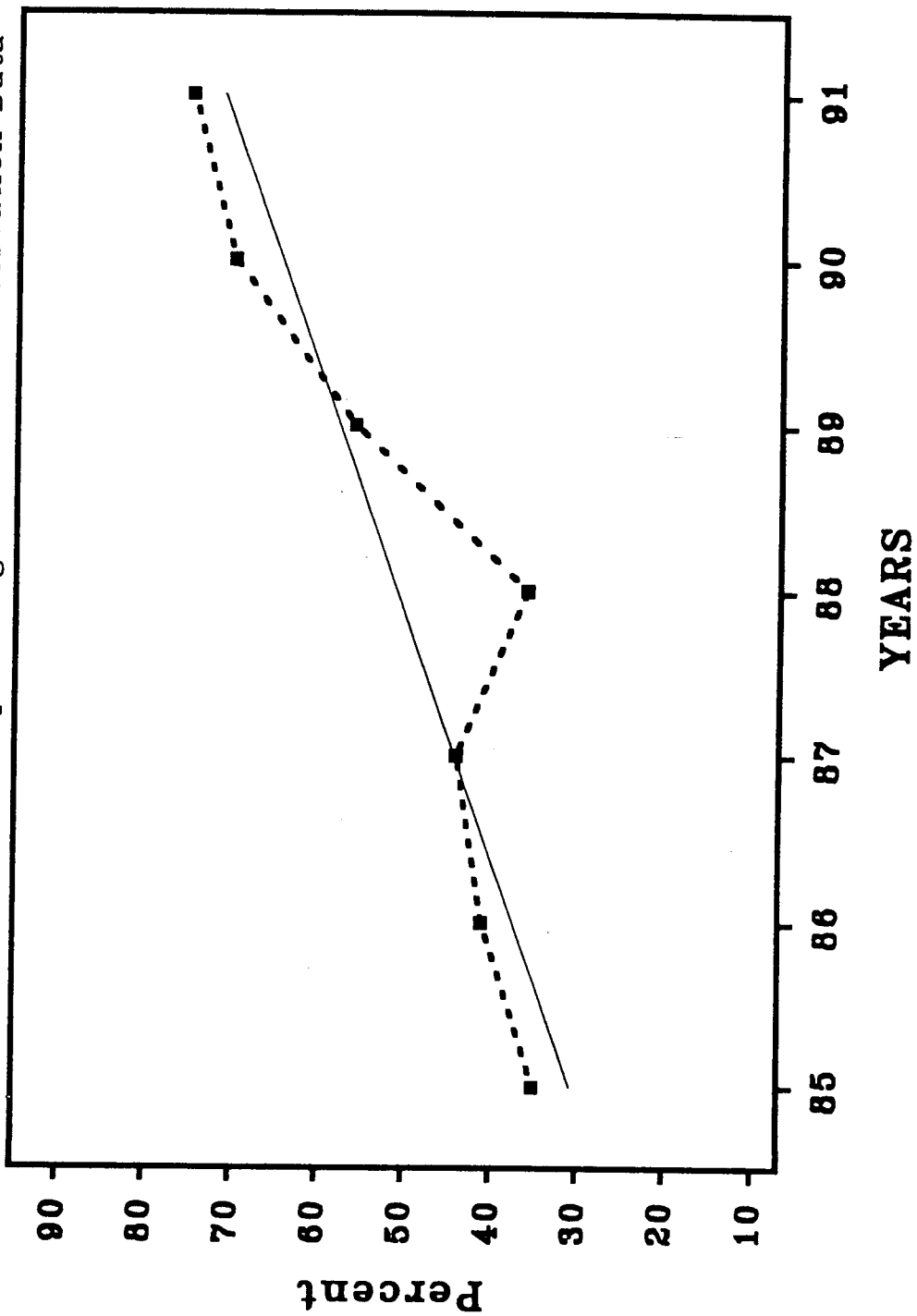
Number of SJBP Canada Geese Reported on Major Concentration Areas* During the Coordinated December Survey Compared to the Number Actually Present. Estimates Based Upon Weighted Collar Observation Data.



*Concentration areas include Henderson Sloughs WMA KY, Tennessee and Cross Creeks NWR's TN and Wheeler NWR AL.

Figure 11

Percent of Interior Canada Geese on Major Concentration Areas* Reported as SJBP Geese During the Coordinated December Survey That are Not SJBP Geese. Estimates are Based Upon Weighted Collar Observation Data



*Concentration areas include Henderson Sloughs WMA KY, Tennessee and Cross Creeks NWR's TN and Wheeler NWR AL

Table 1

Estimated percent of Eastern Prairie (EPP), Mississippi Valley (MVP) and Southern James Bay (SJB) populations of interior Canada geese that occurred on wintering refuges Southeast Region, Mississippi Flyway. The average percentage for each refuge was calculated from the sum of the weighted collar observation data for all years.

Refuge/Year	Percent EPP	Percent MVP	Percent SJB
TENNESSEE			
1985-86	1.7	49.4	48.9
1986-87	0.0	45.4	54.6
1987-88	1.8	34.2	64.0
1988-89	0.9	31.2	67.9
1989-90	2.5	68.4	29.1
1990-91	4.7	49.8	45.5
1991-92	6.6	59.0	34.4
Average	2.3	53.2	44.5
CROSS CREEKS			
1985-86	1.3	32.9	65.8
1986-87	1.9	47.4	50.7
1987-88	4.8	53.2	41.9
1988-89	6.5	41.8	51.7
1989-90	0.0	39.3	60.7
1990-91	18.3	43.0	38.6
1991-92	0.8	93.8	5.4
Average	4.0	54.2	41.8
WHEELER			
1985-86	0.0	0.0	100.0
1986-87	0.3	4.7	95.1
1987-88	2.0	6.4	91.6
1988-89	0.0	8.1	91.9
1989-90	3.3	25.2	71.5
1990-91	2.1	18.5	79.3
1991-92	1.7	31.8	66.5
Average	1.3	12.6	86.0