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Status of Wildlife Populations,
Fall 1995 and 1982-1994 Hunting
and Trapping Harvest Statistics

compiled by
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Note: Data in this report may change as a result of future verification and more comprehensive analysis.

Status of Wildlife Populations, Fall 1995

and

1982-94 Hunting and Trapping Harvest Statistics

This is the 19th year that the Wildlife Populations and Research Unit has compiled this booklet; it is primarily an administrative document intended for DNR personnel. (Since 1984 we have also generated a companion volume containing annual summaries of activities and findings from each ongoing research project in the Unit).

Most of the field work associated with collection of census and survey data for farmland and forest wildlife is performed by wildlife biologists and managers (conservation officers also participate in August roadside counts). The Farmland and Forest Wildlife Population and Research groups coordinate these activities, analyze and interpret data, and prepare recommendations for harvest regulations and season setting.

Much of the census and survey work for wetland species is done by personnel in the Wetland Wildlife Populations and Research Group.

Most of the hunting and trapping harvest estimates are calculated and summarized by St. Paul central office personnel.

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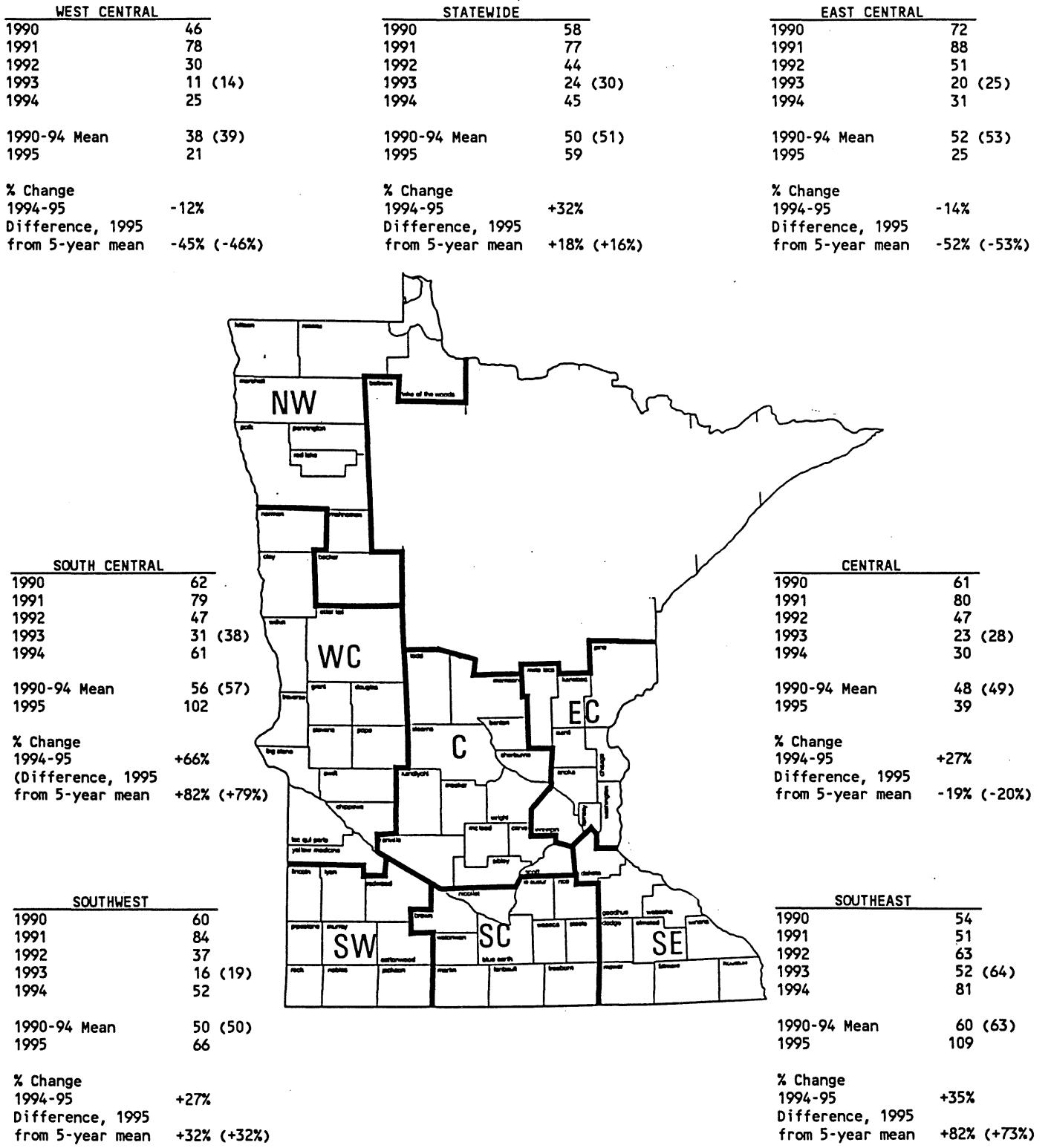


Figure 1. Ring-necked pheasants seen per 100 miles of August roadside count route, 1990-95, and percent change 1994-95 for routes surveyed both years. Numbers in parentheses are adjusted for the correction to the 1993 pheasant index.

Table 1. County, regional, and statewide August roadside count indices for ring-necked pheasants in Minnesota, 1990-1995.

Region and County	Miles surveyed 1995	Pheasants seen per 100 miles						Percent change ^a 1994-95	
		1990	1991	1992	1993	1994	1995		
West Central	916	45.6	78.0	29.5	11.0	24.8	21.4	37.8	-11.7
Big Stone	69	136	125	19	17	3	19		
Chippewa	50	64	80	58	10	44	14		
Clay	75	0	13	12	1	0	25		
Douglas	50	38	32	52	0	0	2		
Grant	50	8	18	30	24	0	16		
Lac Qui Parle	74	73	252	45	36	116	70		
Norman	50	0	0	0	2	0	0		
Otter Tail	50	18	22	10	0	2	0		
Pope	75	96	156	57	16	88	17		
Stevens	75	103	128	36	3	19	28		
Swift	75	37	108	79	33	53	60		
Traverse	75	0	31	9	0	2	1		
Wilkin	75	1	9	3	0	0	0		
Yellow Medicine	73	31	39	4	5	16	21		
Central	748	60.5	80.0	46.6	23.1	29.9	39.5	48.0	+26.7
Benton	50	24	36	56	8	20	44		
Carver	48	54	38	28	54	40	52		
Kandiyohi	75	51	207	123	44	44	83		
McLeod	50	88	74	52	2	6	76		
Meeker	50	133	272	88	33	51	120		
Morrison	50	36	68	0	38	44	2		
Renville	50	0	0	0	0	0	14		
Scott	50	140	28	62	28	2	90		
Sherburne	50	0	42	12	2	0	0		
Sibley	75	63	79	49	0	58	27		
Stearns	100	16	39	20	41	41	12		
Todd	50	78	88	12	8	0	0		
Wright	50	116	28	70	20	42	10		
East Central	400	72.0	88.2	51.3	20.2	31.3	25.3	52.6	-13.7
Anoka	50	108	76	6	0	6	0		
Chisago	50	131	164	136	77	59	24		
Hennepin	25	164	0	36	4	0	88		
Isanti	75	45	105	5	1	20	5		
Kanabec	50	40	8	2	6	30	18		
Mille Lacs	50	102	190	104	34	28	22		
Pine	50	8	66	36	12	28	60		
Washington	50	8	6	58	0	56	26		

Table 1. Continued.

Region and County	Miles surveyed 1995	Pheasants seen per 100 miles						Percent change ^a 1994-95	
		1990	1991	1992	1993	1994	1995		
Southwest	478	59.6	83.6	37.5	15.6	51.8	65.9	49.6	+27.3
Cottonwood	50	26	58	26	24	12	172		
Jackson	53	90	22	12	4	98	92		
Lincoln	50	60	390	174	20	86	130		
Lyon	50	32	48	0	0	32	20		
Murray	50	52	10	32	44	4	38		
Nobles	75	33	47	31	7	53	52		
Pipestone	50	64	86	20	38	90	32		
Redwood	50	22	8	32	2	40	20		
Rock	50	170	102	14	6	50	44		
South Central	800	61.8	79.0	47.2	30.8	61.3	101.9	56.0	+66.3
Blue Earth	75	16	--	11	3	51	51		
Brown	75	41	47	5	4	60	68		
Faribault	75	15	7	--	1	12	72		
Freeborn	75	60	52	23	45	73	89		
LeSueur	75	145	323	224	111	113	259		
Martin	75	41	19	19	16	44	65		
Nicollet	75	72	37	5	1	9	20		
Rice	75	87	127	76	73	99	211		
Steele	50	86	116	72	34	74	110		
Waseca	75	95	36	43	49	112	143		
Watonwan	75	29	25	3	1	31	36		
Southeast	502	53.6	51.0	63.4	52.2	81.2	109.2	60.3	+34.5
Dakota	50	6	6	56	10	12	62		
Dodge	50	62	34	94	18	84	204		
Fillmore	50	16	48	134	162	134	184		
Goodhue	50	38	16	22	0	20	46		
Houston	50	26	52	14	6	60	62		
Mower	75	88	59	25	15	91	76		
Olmsted	77	128	131	151	180	228	182		
Wabasha	50	36	70	28	34	22	148		
Winona	50	28	0	22	0	2	0		
Statewide	3844	57.5	76.9	44.2	24.3	44.7	58.9	49.5	+32.2

^a Percent change for 1994-95 calculated only for routes surveyed both years.

Table 2. Statewide pheasant population parameters calculated from August roadside count results, 1990-95.

Population Parameter	1990	1991	1992	1993	1994	1995	1990-95 Mean	Percent change ^a 1994-95
Cocks/100 Miles	4.9	5.9	3.8	2.6	3.8	4.5	4.2	+18
Hens/100 Miles	7.8	10.6	6.5	2.6	5.5	7.7	6.6	+41
Broods/100 Miles	7.9	12.1	6.3	3.3	6.5	8.6	7.2	+33
Mean Brood Size	5.7	5.0	5.4	5.9	5.5	5.5	5.5	0
Broods/100 Hens	101.0	114.6	98.0	126.0	118.0	111.0	111.5	-6
Median Hatch Date	Jun 9	Jun 2	Jun 8	Jun 4	Jun 6	Jun 7	Jun 6 ^b	

^a Percent change for 1994-95 calculated only for routes surveyed both years.

^b Median hatch date, 1990-94.

Table 3. Regional and statewide August roadside count indices for gray (Hungarian) partridge, 1990-95.

Agricultural Region	Miles Surveyed 1995	Partridge seen per 100 miles						Percent change ^a 1994-95
		1990	1991	1992	1993	1994	1995	
Northwest	474	20.4	15.3	1.7	0.0	0.2	0.0	7.5 -100
West Central	916	14.8	15.5	6.3	0.8	2.2	2.1	7.9 -3
Central	748	19.5	11.6	5.5	1.9	7.4	2.8	9.2 -63
East Central	400	0.0	0.7	0.0	0.0	0.0	0.0	0.1 0
Southwest	478	101.5	66.5	11.8	3.2	36.0	23.5	43.8 -35
South Central	800	62.7	23.9	10.1	1.0	22.1	24.5	24.0 +11
Southeast	502	34.6	18.4	10.4	11.8	23.4	15.0	19.7 -36
Statewide	4318	35.2	20.9	6.7	2.4	12.5	9.8	15.5 -22

^a Percent change 1994-95 for routes surveyed both years only.

Table 4. Statewide gray (Hungarian) partridge population parameters calculated from August roadside count results, 1990-95.

Population Parameter	1990	1991	1992	1993	1994	1995	1990-94 Mean	Percent change ^a 1994-95
							Mean	
Adults/100 Miles	11.8	8.0	2.4	0.8	2.8	2.7	5.2	-4
Broods/100 Miles	3.3	2.1	0.7	0.1	1.2	0.9	1.5	-26
Mean Brood Size	7.1	6.1	6.0	11.2	7.9	7.9	7.7	0
Broods/100 Adults	28.0	26.1	30.1	16.2	43.1	33.1	28.7	-23
Median Hatch Date	Jun 21	Jun 23	Jun 23	Jun 29	Jun 22	Jun 20	Jun 23 ^b	

^a Percent change 1994-95 for routes surveyed both years only.

^b Median hatch date, 1990-94.

Table 5. August roadside count indices for selected farmland wildlife species and percent change 1994-95 by agricultural region.

Agricultural Region	Miles Surveyed 1995	Animals seen per 100 miles driven											
		Eastern Cottontail			White-tailed Jackrabbit			Mourning dove			White-tailed deer		
		1994	1995	Percent change ^a	1994	1995	Percent change ^a	1994	1995	Percent change ^a	1994	1995	Percent change ^a
Northwest	474	0.0	0.6	NA ^b	0.0	0.2	NA	63.6	85.2	+34	20.8	27.4	+32
West Central	916	1.1	2.3	+113	0.6	0.4	-20	282.4	242.2	-15	15.9	14.0	-12
Central	748	4.0	3.7	-7	0.1	0.3	+100	189.4	169.1	-10	3.9	4.7	+17
East Central	400	4.9	6.7	+35	0.2	0.0	-100	86.6	74.5	-13	4.7	8.3	+77
Southwest	478	2.3	4.2	+82	0.2	0.2	0	158.5	112.9	-29	9.7	9.2	-5
South Central	800	5.4	6.5	+21	1.0	1.0	0	133.5	197.5	+48	5.5	3.6	-34
Southeast	502	6.4	8.1	+27	0.0	0.4	NA	153.2	234.5	+53	13.4	10.8	-19
Statewide ^c	4318	3.4	4.4	+31	0.4	0.4	+12	167.1	173.4	+3	10.3	10.5	+1

^a Percent change 1994-95 calculated only for routes surveyed both years.

^b NA is Not Applicable.

^c Statewide means include the Northwest agricultural region.

Table 6. Statewide August roadside count indices for selected farmland wildlife species, 1991-1995.

Species	Animals seen per 100 miles driven					Percent change ^a 1994-95
	1991	1992	1993	1994	1995	
Ring-necked pheasant ^b	76.9	44.2	24.3	44.7	58.9	+32
Gray (Hungarian) partridge	20.9	6.7	2.4	12.5	9.8	-22
Mourning dove	248.3	222.2	133.5	167.1	173.4	+3
Eastern cottontail	5.3	4.7	3.8	3.4	4.4	+31
White-tailed jack rabbit	0.8	0.6	0.2	0.4	0.4	+12
White-tailed deer	10.9	9.5	9.2	10.3	10.5	+1
Sharp-tailed grouse	0.29	0.09	0.02	0.00	0.02	NA ^c
Greater prairie-chicken	0.00	0.00	0.00	0.00	0.00	0
Sandhill crane	2.87	3.19	2.58	4.71	4.63	-2
Badger	0.02	0.00	0.00	0.02	0.02	0
Gray and fox squirrel	1.38	0.93	1.30	0.83	1.34	+61
Gray and red fox	0.56	0.67	0.43	0.67	0.28	-57
Striped and spotted skunk	0.22	0.09	0.16	0.25	0.25	0

^a Percent change 1994-95 calculated only for routes surveyed both years.

^b Ring-necked pheasant means do not include the Northwest agricultural region.

^c NA is Not Applicable.

Table 7. Animals seen per 100 miles of August roadside count for 5 species in Minnesota, statewide, 1955-1995.^a

Year	Animals seen per 100 miles driven				
	Ring-necked Pheasant	Gray Partridge	Eastern Cottontail	White-tailed Jackrabbit	Mourning Dove
1955	368.1	9.9	17.8	7.0	324.5
1956	290.0	6.6	13.0	5.6	422.6
1957	272.6	5.5	11.2	6.3	274.5
1958	409.1	8.7	14.8	8.5	326.0
1959	266.8	9.3	6.2	4.0	311.4
1960	276.3	4.4	9.8	3.6	300.8
1961	336.0	4.5	9.4	3.5	392.4
1962	197.4	5.8	7.9	2.7	334.6
1963	248.1	5.1	7.4	3.6	396.5
1964	149.8	1.6	5.4	2.0	375.9
1965	77.2	3.6	4.4	1.6	271.6
1966	105.0	4.9	5.6	1.8	299.6
1967	61.9	4.6	5.5	2.8	NC ^b
1968	71.4	3.5	5.8	1.9	293.5
1969	39.2	3.7	5.1	2.7	245.6
1970	69.6	9.1	4.9	1.8	348.3
1971	66.4	10.8	3.7	2.1	415.4
1972	47.3	7.5	3.9	1.9	349.8
1973	63.3	19.1	5.8	1.9	428.2
1974	76.3	12.0	6.2	1.5	380.8
1975	34.8	14.6	3.3	1.3	405.8
1976	44.8	17.6	5.2	2.2	407.4
1977	85.0	32.1	6.8	2.4	409.8
1978	79.0	37.0	8.9	3.8	344.5
1979	54.2	33.9	7.3	3.7	347.9
1980	104.9	44.6	6.4	2.8	352.2
1981	133.5	42.9	10.2	2.5	347.6
1982	60.2	24.5 (22.1)	5.6 (5.2)	1.8 (1.7)	325.0 (313.6)
1983	56.2	24.4 (23.4)	7.2 (6.7)	1.0 (1.0)	298.9 (286.6)
1984	28.6	21.3 (20.0)	3.3 (2.9)	0.9 (0.8)	292.0 (279.2)
1985	34.6	40.7 (37.0)	4.8 (4.4)	1.3 (1.2)	273.7 (270.1)
1986	21.2	22.4 (20.6)	4.4 (4.0)	0.4 (0.5)	207.0 (204.1)
1987	50.0	37.1 (33.4)	7.7 (6.9)	0.7 (0.7)	257.1 (252.4)
1988	34.8	41.5 (37.3)	4.3 (4.0)	0.7 (0.7)	252.3 (245.0)
1989	39.8	41.5 (39.7)	5.9 (5.4)	1.7 (1.6)	297.9 (283.4)
1990	57.5	37.1 (35.2)	7.3 (6.7)	1.4 (1.4)	266.0 (255.6)
1991	76.9	21.5 (20.9)	5.7 (5.3)	0.7 (0.8)	252.8 (248.3)
1992	44.2	7.4 (6.7)	5.2 (4.7)	0.6 (0.6)	224.7 (222.2)
1993	24.3	2.7 (2.4)	4.2 (3.8)	0.2 (0.2)	139.8 (133.5)
1994	44.7	14.0 (12.5)	3.8 (3.4)	0.4 (0.4)	179.7 (167.1)
1995	58.9	11.1 (9.8)	4.9 (4.4)	0.4 (0.4)	184.1 (173.4)

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982. Numbers in parentheses are statewide means which include the Northwest agricultural region. These were not calculated for ring-necked pheasants because the Northwest counties are outside the pheasant range.

^b No count.

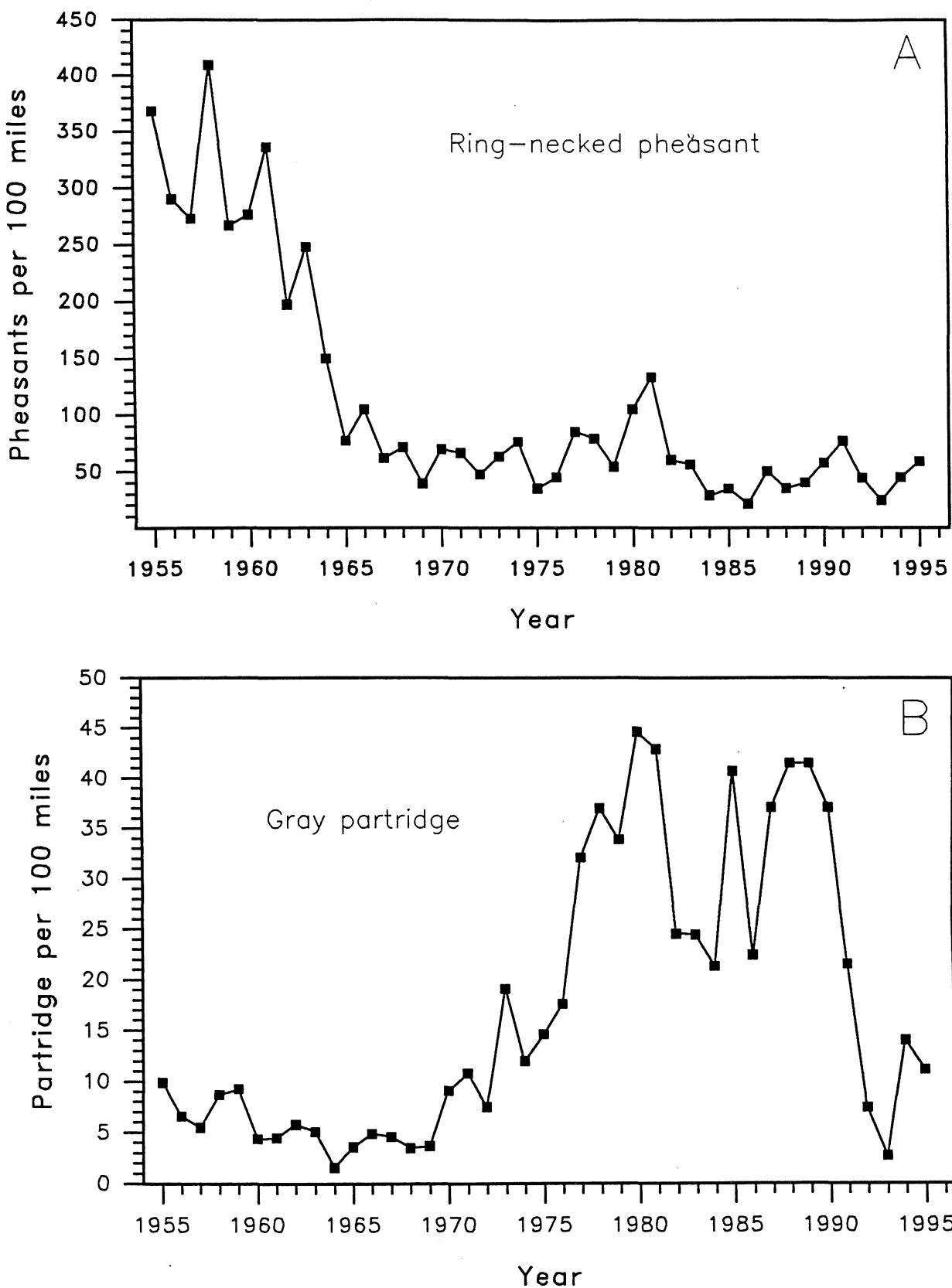


Figure 2. August roadside count indices (birds seen per 100 miles driven) for (A) Ring-necked pheasant and (B) Gray partridge, 1955–1995. Gray partridge means do not include the Northwest agricultural region.

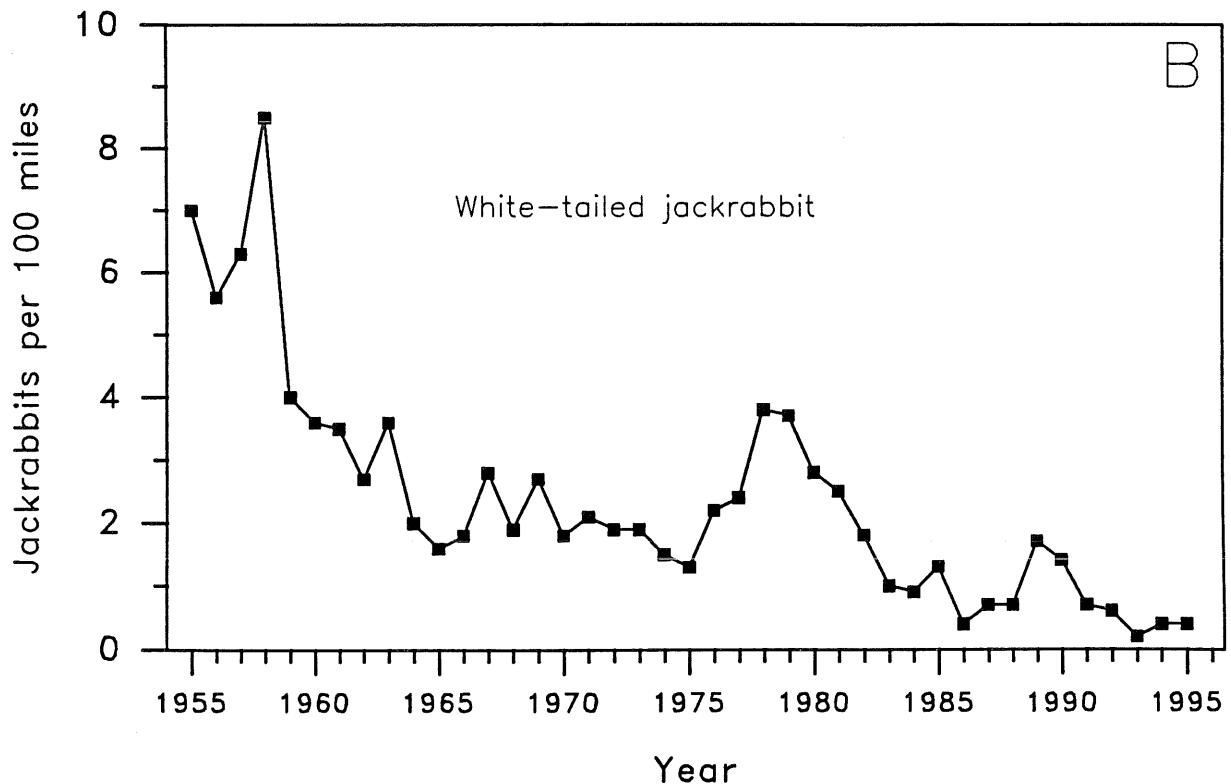
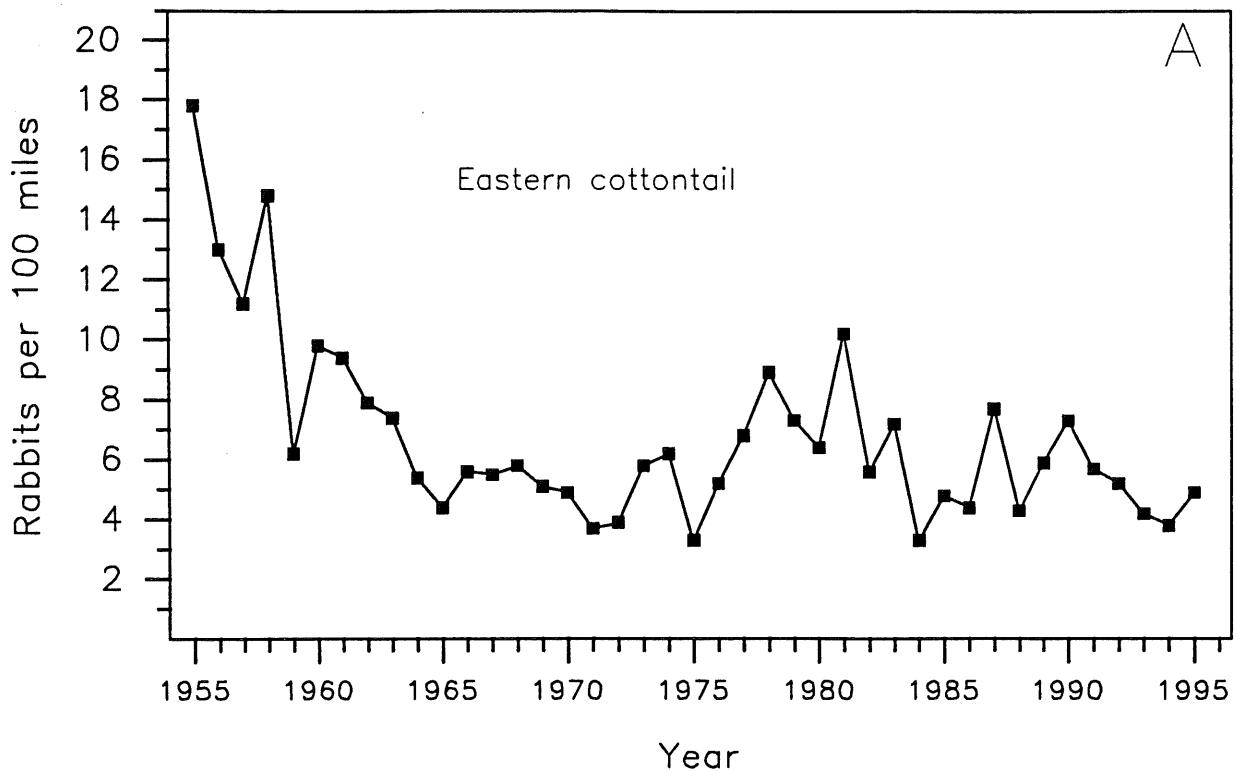


Figure 3. August roadside count indices (animals seen per 100 miles driven) for (A) Eastern cottontail and (B) White-tailed jackrabbit, 1955–1995. Means do not include the Northwest agricultural region.

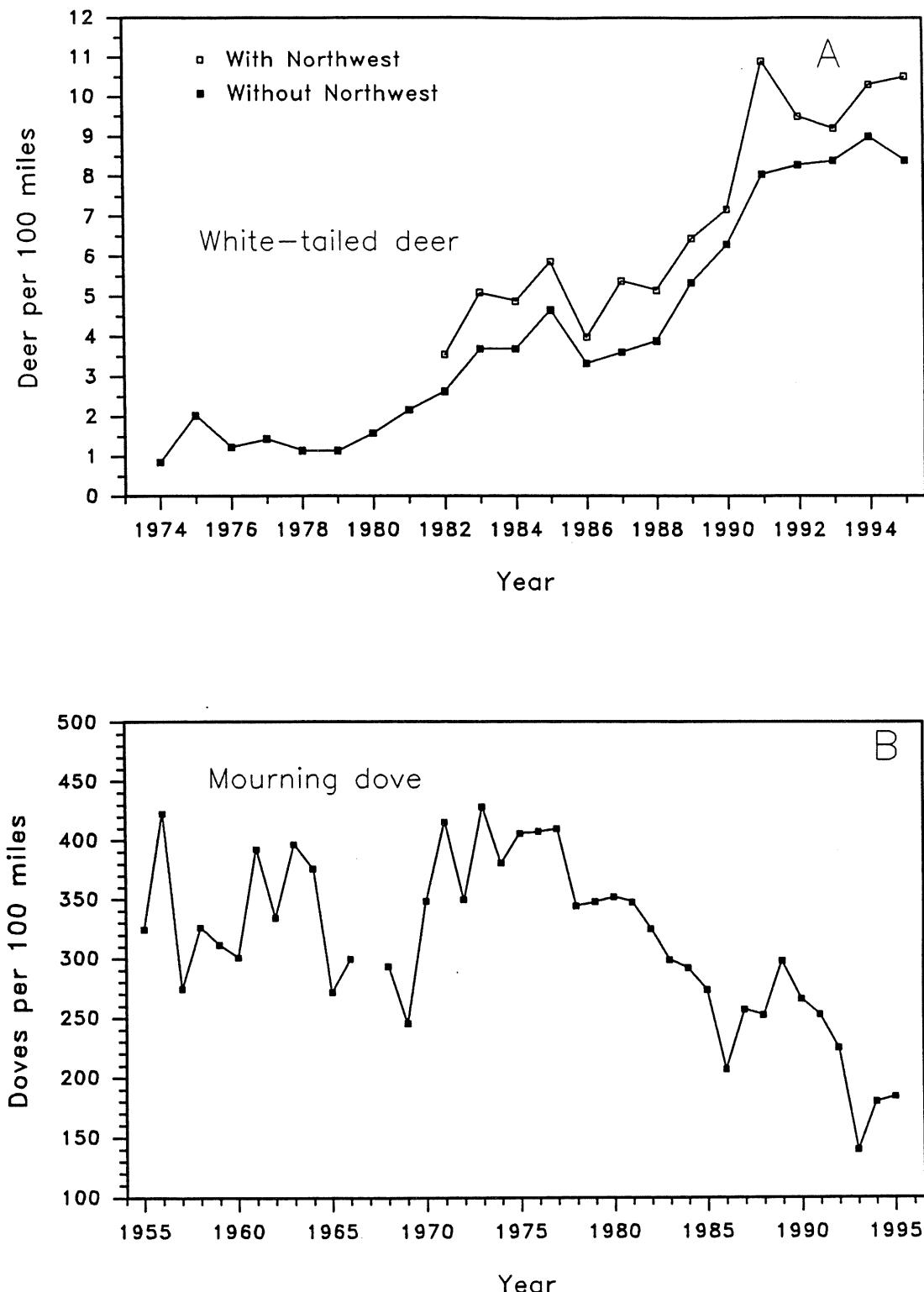


Figure 4. August roadside count indices (animals seen per 100 miles driven) for (A) White-tailed deer, including and excluding the Northwest agricultural region, 1974–1995; and (B) mourning dove, 1955–1995. Dove means do not include the Northwest agricultural region. Doves were not counted in 1967.

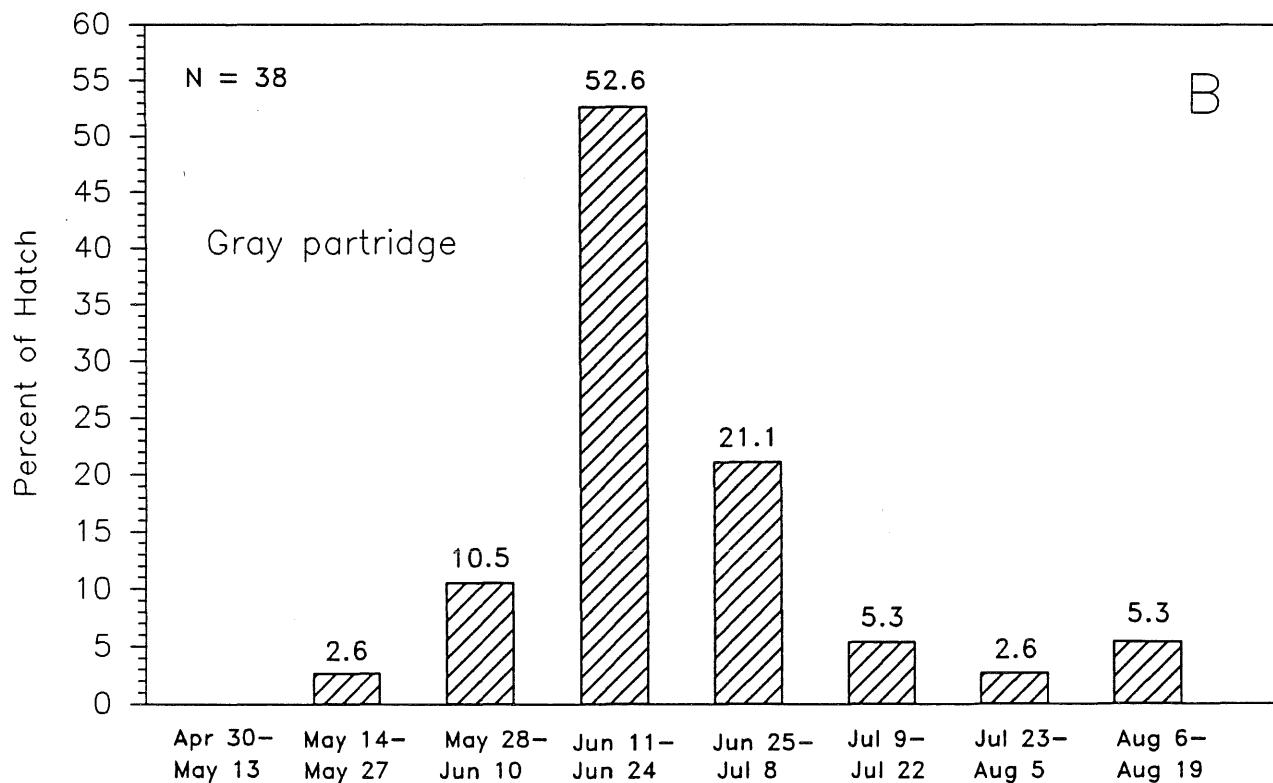
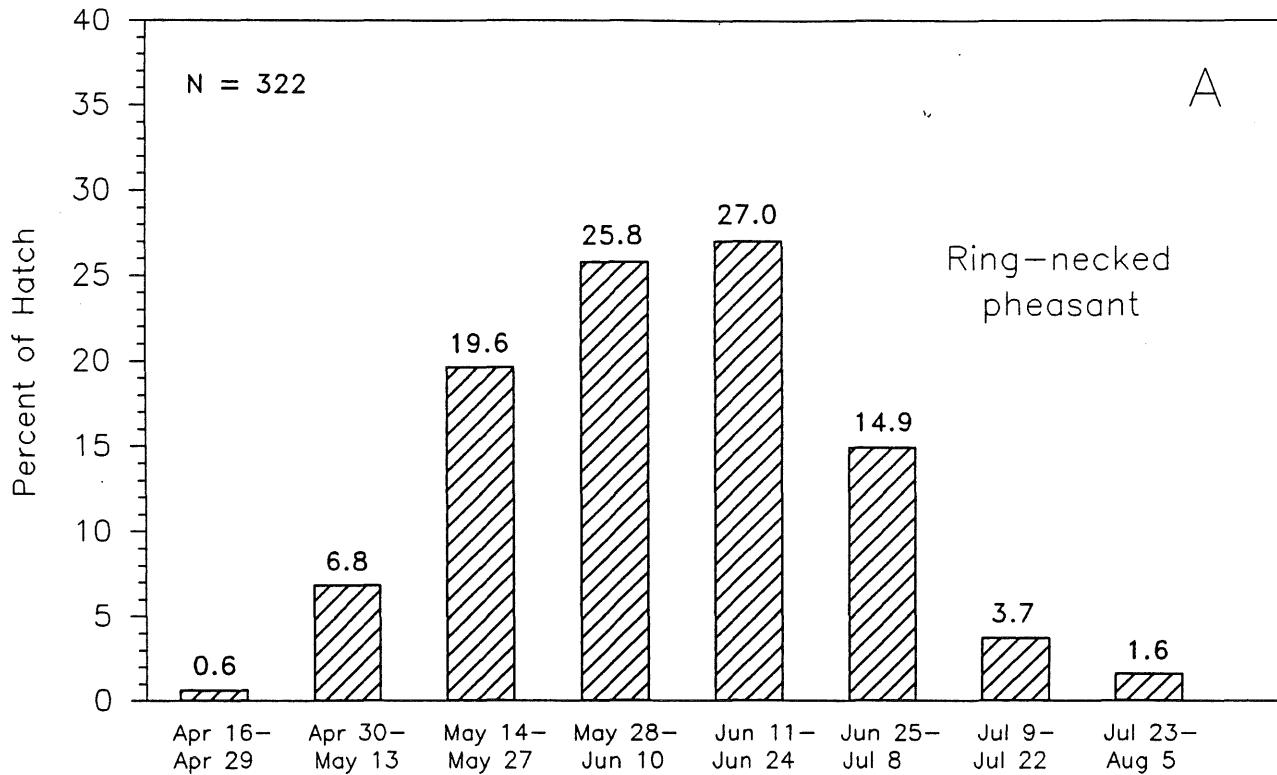


Figure 5. Biweekly distribution of (A) Ring-necked pheasant, and (B) Gray partridge hatch, 1995.

Table 8. Ring-necked pheasants seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1995.

Year	Agricultural region							State-wide
	WC	C	EC	SW	SC	SE	NW	
1955	334.8	163.2	140.0	580.5	620.2	212.0	NO COUNT	368.1
1956	248.8	208.1	175.2	357.2	477.5	169.0		290.0
1957	260.2	130.4	134.6	336.6	522.2	179.6		272.6
1958	490.3	261.9	300.0	473.4	592.9	125.6		409.1
1959	306.6	187.3	73.1	509.5	412.8	55.3		266.8
1960	367.0	243.4	202.5	294.3	356.8	37.7		276.3
1961	494.3	266.7	254.5	365.8	381.3	115.1		336.0
1962	264.2	140.5	143.8	214.7	239.3	114.0		197.4
1963	443.8	191.5	156.9	251.8	227.4	134.8		248.1
1964	224.5	83.1	26.3	185.3	211.1	83.8		149.8
1965	121.4	38.1	8.7	90.4	98.1	68.8		77.2
1966	109.6	67.2	26.3	108.8	175.5	101.8		105.0
1967	56.4	29.7	10.4	51.5	126.2	81.0		61.9
1968	64.9	39.7	16.9	78.1	124.7	94.0		71.4
1969	12.8	22.3	20.2	33.3	68.3	101.9		39.2
1970	19.7	26.9	8.9	55.2	108.6	194.2		69.6
1971	40.3	44.0	14.8	59.3	76.7	175.2		66.4
1972	19.9	28.0	44.0	37.3	66.7	104.8		47.3
1973	38.3	35.4	53.0	36.2	74.5	168.0		63.3
1974	50.6	73.3	84.7	59.8	93.0	107.5		76.3
1975	13.1	33.7	75.1	6.7	24.6	78.6		34.8
1976	11.9	28.1	68.2	2.1	82.8	80.8		44.8
1977	45.8	84.7	101.4	6.4	145.0	125.8		85.0
1978	36.1	79.9	178.4	23.2	106.0	77.2		79.0
1979	44.6	61.7	100.5	13.4	53.3	54.7		54.2
1980	78.8	116.8	221.2	19.5	110.0	84.9		104.9
1981	123.8	139.1	267.8	75.8	125.8	95.2		133.5
1982 ^b	70.8	43.7	155.1	26.1	49.1	28.9	0.0	60.2
1983	89.7	51.5	107.3	10.1	24.9	51.4	0.0	56.2
1984	66.5	13.6	10.1	8.4	25.8	20.6	0.4	28.6
1985	62.9	16.3	41.3	14.3	29.6	31.6	2.5	34.6
1986	19.6	10.7	22.4	19.8	23.5	37.4	0.0	21.2
1987	79.5	36.4	24.5	60.4	41.7	39.0	0.0	50.0
1988	45.3	31.2	40.0	24.7	31.6	30.1	0.0	34.8
1989	33.1	42.3	53.6	32.0	39.6	43.4	0.0	39.8
1990	45.6	60.5	72.0	59.6	61.8	53.6	0.0	57.5
1991	78.0	80.0	88.2	83.6	79.0	51.0	0.0	76.9
1992	29.5	46.6	51.3	37.5	47.2	63.4	0.0	44.2
1993	11.0	23.1	20.2	15.6	30.8	52.2	0.0	24.3
1994	24.8	29.9	31.3	51.8	61.3	81.2	0.0	44.7
1995	21.4	39.5	25.3	65.9	101.9	109.2	0.0	58.9

^a Statewide means do not include the Northwest agricultural region because counties there are outside the pheasant range.

^b Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982 for all species except ring-necked pheasants.

Table 9. Gray partridge seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1995.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	16.4	8.0	0.0	10.8	9.5	9.0	NO COUNT	9.9	
1956	2.9	8.3	0.0	14.7	6.0	7.8		6.6	
1957	6.4	4.5	0.0	11.7	7.0	0.2		5.5	
1958	20.4	8.6	0.0	10.2	0.3	6.0		8.7	
1959	13.0	17.3	0.0	20.4	5.3	0.0		9.3	
1960	3.9	6.5	0.0	12.1	0.6	4.9		4.4	
1961	5.6	13.4	0.0	2.1	0.6	0.0		4.5	
1962	2.5	10.4	0.0	3.1	0.3	22.0		5.8	
1963	3.3	10.8	0.0	11.1	0.9	4.8		5.1	
1964	0.9	2.5	0.0	2.0	1.9	2.4		1.6	
1965	5.3	2.9	0.0	6.8	2.3	4.0		3.6	
1966	1.8	3.5	0.0	18.3	0.1	11.4		4.9	
1967	2.6	2.2	0.0	8.2	13.5	0.0		4.6	
1968	4.4	3.1	0.0	9.5	0.0	5.0		3.5	
1969	5.2	2.6	0.0	10.9	0.0	4.5		3.7	
1970	7.1	8.2	0.0	32.8	3.7	4.0		9.1	
1971	12.7	3.8	0.0	28.9	7.2	10.1		10.8	
1972	6.7	3.3	0.0	18.3	1.6	18.4		7.5	
1973	8.2	7.8	0.0	66.9	11.7	26.0		19.1	
1974	6.9	10.3	0.0	27.4	8.4	20.2		12.0	
1975	11.0	2.3	0.0	67.5	8.6	5.6		14.6	
1976	10.6	8.7	0.0	59.3	15.4	22.4		17.6	
1977	16.0	32.8	0.0	93.3	31.0	31.6		32.1	
1978	26.1	22.6	0.2	144.2	30.7	14.8		37.0	
1979	43.0	24.3	0.0	88.5	34.8	12.2		33.9	
1980	57.9	41.7	0.0	99.0	41.2	27.6		44.6	
1981	38.1	26.8	0.5	138.7	44.4	19.0		42.9	
1982 ^a	23.6	23.0	0.7	69.7	17.1	16.0	3.6	24.5	22.1
1983	29.3	18.7	0.0	64.6	22.8	8.0	15.2	24.4	23.4
1984	18.2	17.3	0.0	49.7	26.5	16.2	9.5	21.3	20.0
1985	30.7	17.5	0.0	94.9	63.3	42.2	2.2	40.7	37.0
1986	10.1	4.6	0.0	59.6	45.3	20.8	3.5	22.4	20.6
1987	14.7	15.1	0.0	99.2	47.0	66.6	3.6	37.1	33.4
1988	25.9	18.2	3.1	110.7	63.6	40.4	3.8	41.5	37.3
1989	20.0	13.1	0.0	93.5	84.1	42.0	24.8	41.5	39.7
1990	14.8	19.5	0.0	101.5	62.7	34.6	20.4	37.1	35.2
1991	15.5	11.6	0.7	66.5	23.9	18.4	15.3	21.5	20.9
1992	6.3	5.5	0.0	11.8	10.9	10.4	1.7	7.4	6.7
1993	0.8	1.9	0.0	3.2	1.0	11.8	0.0	2.7	2.4
1994	2.2	7.4	0.0	36.0	22.1	23.4	0.2	14.0	12.5
1995	2.1	2.8	0.0	23.5	24.5	15.0	0.0	11.1	9.8

* Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 10. Eastern cottontails seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1995.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	8.1	15.0	14.5	20.3	19.6	32.0	NO COUNT	17.8	
1956	9.6	16.2	12.4	16.2	12.8	12.7		13.0	
1957	6.6	9.7	8.3	18.3	13.7	14.0		11.2	
1958	12.8	13.5	16.2	22.1	17.2	6.5		14.8	
1959	5.0	16.0	5.6	6.5	5.3	2.2		6.2	
1960	5.9	13.6	6.4	15.6	11.9	4.9		9.8	
1961	6.2	12.4	6.1	13.8	10.9	5.6		9.4	
1962	5.6	7.3	4.2	12.6	10.0	8.2		7.9	
1963	6.8	4.2	4.9	11.6	9.3	8.6		7.4	
1964	5.2	3.3	1.0	11.8	6.6	5.4		5.4	
1965	3.9	4.4	0.9	5.4	5.7	5.8		4.4	
1966	5.3	3.2	1.8	9.5	7.5	6.0		5.6	
1967	5.8	4.6	2.1	7.1	8.7	3.2		5.5	
1968	4.6	3.2	3.5	9.3	8.8	5.8		5.8	
1969	3.6	3.9	0.9	9.5	8.3	4.5		5.1	
1970	3.6	5.0	1.5	6.9	5.7	6.2		4.9	
1971	4.8	2.6	1.5	6.7	3.2	2.1		3.7	
1972	3.8	4.7	3.6	4.8	3.5	3.5		3.9	
1973	5.0	8.6	6.0	6.5	5.4	4.2		5.8	
1974	3.4	6.5	14.2	6.5	6.1	6.4		6.2	
1975	2.3	4.4	8.3	1.6	1.5	3.1		3.3	
1976	3.7	5.5	6.5	2.1	6.1	7.6		5.2	
1977	4.8	6.7	12.9	6.4	4.9	7.8		6.8	
1978	5.0	8.6	21.4	11.8	7.3	4.6		8.9	
1979	4.6	7.7	7.5	12.7	8.0	4.4		7.3	
1980	4.4	7.0	9.9	6.7	7.2	3.8		6.4	
1981	7.0	10.3	18.1	9.9	8.4	12.0		10.2	
1982 ^a	4.8	6.6	7.8	3.2	6.7	4.9	1.9	5.6	5.2
1983	7.0	5.9	13.2	5.7	3.6	12.2	1.9	7.2	6.7
1984	2.4	2.0	3.5	3.8	4.1	4.8	0.2	3.3	2.9
1985	2.4	4.4	4.7	6.5	5.7	7.6	0.2	4.8	4.4
1986	1.5	4.8	5.9	6.3	5.3	4.8	0.2	4.4	4.0
1987	5.7	7.0	11.5	8.2	6.6	10.6	0.6	7.7	6.9
1988	2.7	3.2	6.4	6.4	3.9	5.9	1.3	4.3	4.0
1989	3.6	5.9	8.9	6.7	4.2	9.2	1.3	5.9	5.4
1990	3.6	6.3	10.6	4.0	6.6	16.8	1.9	7.3	6.7
1991	2.8	5.8	8.9	4.2	6.0	9.2	2.0	5.7	5.3
1992	3.0	6.1	8.5	4.0	4.7	7.2	0.4	5.2	4.7
1993	1.1	3.1	8.5	2.1	5.7	7.8	0.4	4.2	3.8
1994	1.1	4.0	4.9	2.3	5.4	6.4	0.0	3.8	3.4
1995	2.3	3.7	6.7	4.2	6.5	8.1	0.6	4.9	4.4

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 11. White-tailed jackrabbits seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1995.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	9.0	2.6	1.5	13.0	10.6	1.6	NO COUNT	7.0	
1956	5.8	3.7	1.9	10.1	7.7	2.4		5.6	
1957	4.8	5.2	0.9	19.5	6.1	1.3		6.3	
1958	7.3	6.4	0.7	20.1	11.9	0.9		8.5	
1959	1.4	0.7	0.4	15.4	7.8	0.6		4.0	
1960	3.7	4.8	0.2	9.8	2.5	0.2		3.6	
1961	3.7	5.0	0.0	6.5	3.5	0.2		3.5	
1962	4.2	2.3	0.2	4.5	2.8	0.7		2.7	
1963	9.7	2.2	0.0	2.4	3.0	1.0		3.6	
1964	2.9	1.3	0.0	3.7	2.4	0.6		2.0	
1965	1.9	1.9	0.2	4.2	1.2	0.4		1.6	
1966	2.3	1.8	0.2	4.6	1.1	0.6		1.8	
1967	5.3	1.2	0.2	4.2	4.0	0.0		2.8	
1968	1.7	0.8	0.0	6.9	1.9	1.0		1.9	
1969	3.1	0.7	0.5	10.1	1.8	0.7		2.7	
1970	4.0	1.5	0.0	1.9	1.3	0.4		1.8	
1971	5.3	1.6	0.0	2.9	0.8	0.0		2.1	
1972	3.6	1.3	0.0	1.5	2.1	0.5		1.9	
1973	4.0	0.2	0.0	2.9	1.7	0.2		1.9	
1974	3.9	1.5	0.0	1.5	0.7	0.0		1.5	
1975	3.2	0.6	0.3	2.1	0.2	0.2		1.3	
1976	4.4	0.6	0.0	5.2	1.7	1.2		2.2	
1977	3.5	2.8	0.2	4.9	1.6	0.8		2.4	
1978	3.4	2.8	0.7	13.1	3.0	1.0		3.8	
1979	4.6	5.3	0.5	6.4	2.7	1.1		3.7	
1980	3.7	1.2	1.2	8.3	1.5	2.7		2.8	
1981	2.1	2.2	0.0	7.2	1.5	3.0		2.5	
1982 ^a	2.6	0.9	0.5	4.6	1.1	0.9	1.5	1.8	1.7
1983	2.3	0.9	0.0	0.0	0.9	0.8	1.3	1.0	1.0
1984	1.5	0.8	0.0	1.7	0.4	0.6	0.4	0.9	0.8
1985	1.7	0.4	0.0	3.2	1.5	0.7	1.0	1.3	1.2
1986	0.4	0.4	0.0	0.6	0.9	0.0	1.0	0.4	0.5
1987	1.2	0.3	0.0	0.4	1.0	1.0	0.4	0.7	0.7
1988	0.6	0.4	0.0	2.0	1.0	0.4	0.6	0.7	0.7
1989	2.6	1.1	0.0	2.1	2.4	0.6	1.1	1.7	1.6
1990	2.2	0.4	0.2	1.3	2.1	1.2	2.1	1.4	1.4
1991	1.4	0.7	0.0	0.4	0.4	0.4	2.3	0.7	0.8
1992	0.3	0.8	0.0	1.1	0.8	0.4	0.4	0.6	0.6
1993	0.0	0.3	0.0	0.2	0.2	0.4	0.6	0.2	0.2
1994	0.6	0.1	0.2	0.2	1.0	0.0	0.0	0.4	0.4
1995	0.4	0.3	0.0	0.2	1.0	0.4	0.2	0.4	0.4

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 12. Mourning doves seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1995.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	334.8	274.6	116.0	539.1	395.7	196.8	NO	324.5	
1956	347.4	552.6	277.7	591.5	461.0	285.9	COUNT	422.6	
1957	303.3	245.9	167.7	243.3	382.8	200.4		274.5	
1958	350.2	296.8	192.3	270.1	455.6	292.8		326.0	
1959	377.4	307.3	220.9	358.0	447.3	94.4		311.4	
1960	273.7	333.5	121.7	336.8	430.4	186.7		300.8	
1961	377.3	372.7	135.7	480.8	563.0	316.7		392.4	
1962	338.1	337.5	215.3	312.5	395.7	314.3		334.6	
1963	636.2	273.2	212.0	506.2	435.4	313.4		396.5	
1964	680.6	256.5	167.1	399.7	395.3	217.4		375.9	
1965	311.7	244.5	185.2	460.0	217.2	270.8		271.6	
1966	363.4	210.2	152.0	505.3	310.9	229.3		299.6	
1967 ^a									
1968	411.4	207.7	124.9	261.3	254.2	385.0		293.5	
1969	268.3	280.1	124.9	476.5	132.0	194.9		245.6	
1970	601.2	217.9	113.2	527.1	203.7	273.5		348.3	
1971	580.4	256.9	181.6	365.8	258.9	751.7		415.4	
1972	600.2	233.8	169.0	307.7	229.6	314.3		349.8	
1973	601.7	279.6	288.0	480.3	392.1	329.1		428.2	
1974	588.4	321.1	241.5	352.4	269.1	381.5		380.8	
1975	653.5	302.5	152.9	546.0	338.3	259.8		405.8	
1976	599.9	373.4	224.0	535.7	367.0	281.8		407.4	
1977	699.2	308.2	168.0	679.5	281.5	223.7		409.8	
1978	502.1	326.2	173.9	430.6	275.9	282.4		344.5	
1979	600.7	406.1	138.0	379.5	197.5	212.8		347.9	
1980	695.7	302.1	140.3	421.5	235.0	182.3		352.2	
1981	634.1	284.6	153.0	513.6	213.0	178.9		347.6	
1982 ^b	557.3	242.8	175.1	304.0	277.7	213.1	225.1	325.0	313.6
1983	517.0	289.2	130.5	277.9	213.9	193.3	188.6	298.9	286.6
1984	530.9	233.2	128.7	267.4	183.2	269.0	175.6	292.0	279.2
1985	500.6	245.4	93.2	242.5	212.5	151.1	233.9	273.7	270.1
1986	325.0	180.1	115.1	204.0	160.5	180.4	176.8	207.0	204.1
1987	440.9	222.9	104.7	257.3	208.1	161.1	215.2	257.1	252.4
1988	385.7	203.9	121.5	300.0	202.6	210.2	184.4	252.3	245.0
1989	501.4	242.5	125.9	329.7	257.3	180.0	165.9	297.9	283.4
1990	443.1	232.4	128.0	159.4	175.5	353.4	170.3	266.0	255.6
1991	316.9	255.0	187.3	169.5	234.9	287.0	205.8	252.8	248.3
1992	261.2	241.2	134.8	198.3	222.3	236.6	202.1	224.7	222.2
1993	175.4	179.5	86.8	92.8	100.2	165.2	82.1	139.8	133.5
1994	282.4	189.4	86.6	158.5	133.5	153.2	63.6	179.7	167.1
1995	242.2	169.1	74.5	112.9	197.5	234.5	85.2	184.1	173.4

^a Mourning doves were not counted in 1967.

^b Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 13. Greater prairie-chicken spring booming ground counts for 14 northwestern counties, 1982-95 (counts coordinated and summarized by AWM Terry Wolfe, Crookston).

County	Number of booming males (Number of booming grounds)													
	1982	1983	1984 ^b	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Becker	133 (13)	174 (17)	96 (9)	41 (3)	99 (11)	53 (7)	19 (3)	18 (3)	69 (7)	30 (3)	69 (6)	58 (10)	21 (3)	20 (2)
Cass	68 (16)*	65 (15)	54 (15)*	58 (14)	52 (14)	60 (15)	59 (13)	48 (9)	51 (8)	52 (12)	55 (10)	38 (8)	30 (5)	18 (5)
Chippewa	0	2 (1)	0	0	0	0	0	0	0	0	0	0	0	0
Clay	216 (12)*	161 (15)	110 (7)	127 (7)	86 (9)*	87 (9)	0	83 (8)	307 (18)	411 (28)	654 (45)	366 (36)	306 (31)	422 (38)
Hubbard	3 (1)	3 (1)	5 (1)	16 (6)*	16 (4)	22 (5)	24 (4)	19 (5)	29 (5)	24 (5)	18 (2)	17 (3)	14 (3)	9 (3)
Mahnomen	294 (22)	316 (22)	149 (19)	134 (15)	102 (17)	63 (9)	29 (5)	0	46 (6)	21 (3)	143 (13)	76 (76)	31 (4)	21 (6)
Marshall	7 (2)	3 (1)	2 (2)	0	0	0	0	0	1 (1)	0	0	0	0	0
Norman	273 (15)	194 (11)*	119 (8)	86 (7)	128 (10)	87 (9)	111 (9)	73 (7)	145 (11)	215 (12)	339 (15)	221 (26)	248 (25)	278 (30)
Ottertail	12 (1)	10 (3)	7 (1)	5 (1)	0*	0	21 (3)	0	0	1 (1)	4 (1)	16 (2)	5 (1)	0
Pennington	6 (1)	5 (1)	4 (1)	3 (1)	0	0	0	0	9 (1)	0	0	0	0	0
Polk	283 (29)	232 (26)	146 (22)*	162 (18)	96 (17)*	72 (8)	72 (10)	150 (17)	204 (23)	267 (25)	311 (27)	190 (22)	189 (18)	228 (27)
Red Lake	19 (2)	14 (2)	12 (2)	2 (1)	0	0	0	5 (1)	34 (6)	38 (6)	38 (5)	12 (2)	21 (3)	25 (4)
Wadena	64 (11)	18 (6)	19 (2)	34 (9)*	17 (7)*	105 (20)	99 (16)	59 (13)	134 (17)	145 (21)	38 (7)	43 (8)	12 (4)	9 (2)
Wilkin	269 (20)	223 (18)	60 (6)	149 (15)*	81 (9)*	99 (8)	58 (3)	100 (6)	199 (15)	228 (13)	244 (13)	142 (11)	207 (12)	213 (16)
Total males/ground	1,648(146)	1,420(139)	783 (95)	817 (97)	677 (98)	648 (90)	492 (66)	555 (69)	1,228(118)	1,432(129)	1,913(144)	1,179(138)	1,084 (109)	1,274 (133)
	11.2	10.2	8.2	8.4	6.9	7.2	7.4	8.0	10.4	11.1	13.3	8.5	9.9	9.6

* Data include only grounds on which counts were conducted. In several counties booming grounds were located but counts were not made, they are not included in the data presented.

^b Part of the reason for the low number of chickens is incomplete counts of known grounds. This was the case for Polk County and a few others. However, even after allowing for uncounted grounds, chicken numbers were down.

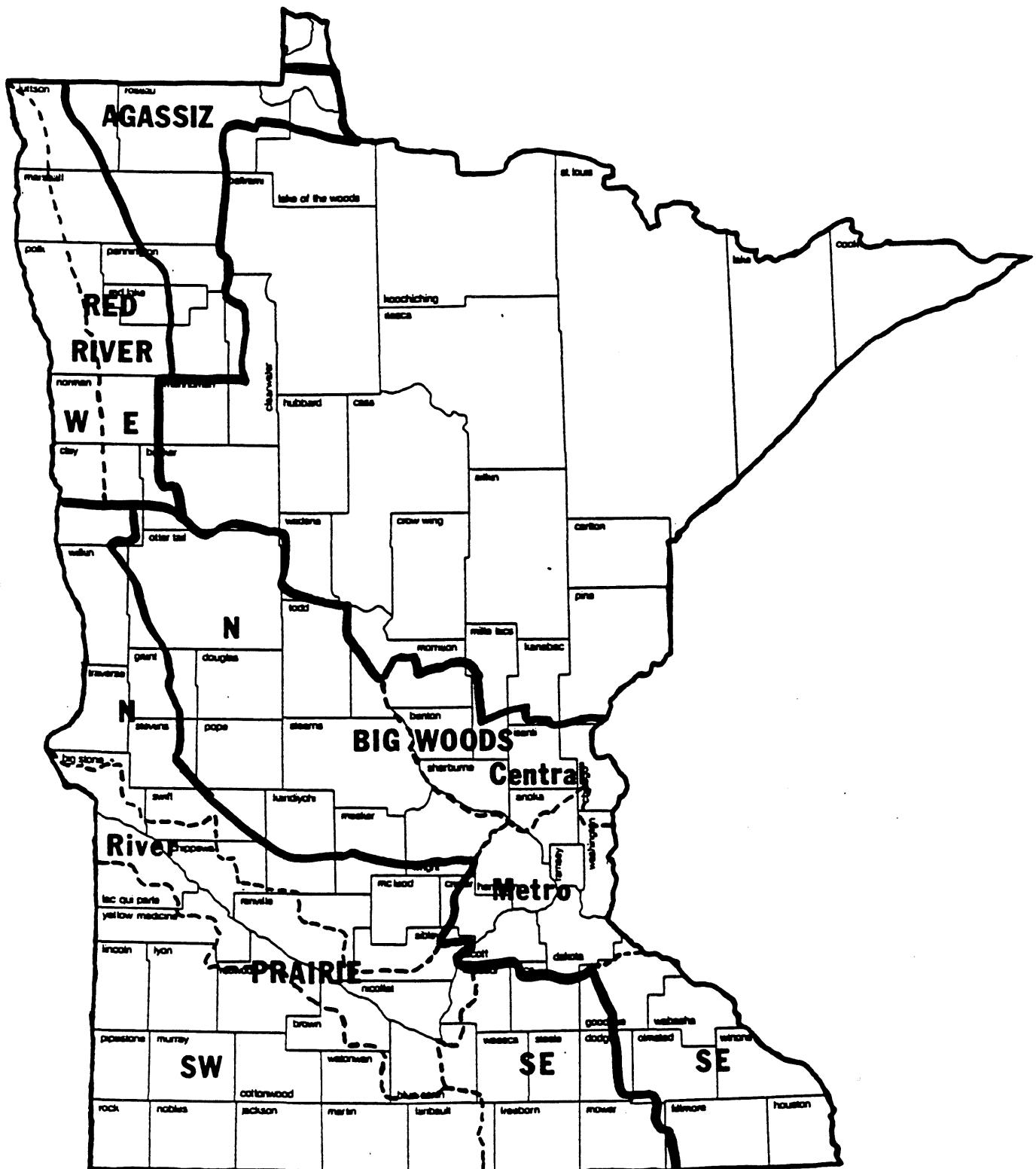


Figure 6. Deer Management Units (DMU) and sub-units in the Farmland Zone.

Table 14. Reproductive performance of white-tailed deer in Minnesota for the Northwest^a Deer Management Unit (DMU), 1991-1995. The mean values (1991-95) are provided as references.

Year	Fawns			Adults		
	n	Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1995	4	25	0.25	6	100	2.00
1994	7	14	0.14	13	92	1.38
1993	7	0	0.00	11	100	1.64
1992	13	8	0.08	21	95	1.57
1991	11	9	0.09	15	87	1.60
Mean (1991-95)		11	0.11		95	1.64

^a Red River (East and West) and Agassiz DMUs were combined into the Northwest DMU due to the small sample sizes.

Table 15. Reproductive performance of white-tailed deer in Minnesota for the Big Woods Deer Management Unit, 1991-1995. The mean values (1991-95) are provided as references.

Year	Fawns			Adults			
	Subunit	n	Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1995		<u>21</u>	<u>19</u>	<u>0.19</u>	<u>54</u>	<u>91</u>	<u>1.78</u>
	North	10	0	0.00	15	93	1.60
	Central	1	0	0.00	2	100	2.00
	Metro	9	33	0.33	26	85	1.73
	Southeast	1	100	1.00	11	100	2.09
1994		46	15	0.17	99	94	1.67
1993		45	38	0.40	92	93	1.71
1992		65	22	0.25	96	95	1.82
1991		50	20	0.22	71	96	1.76
Mean (1991-95)			23	0.25		94	1.75

Table 16. Reproductive performance of white-tailed deer in Minnesota for the Prairie Deer Management Unit, 1991-1995. The mean values (1991-95) are provided as references.

Year Subunit	n	Fawns		Adults		
		Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1995	<u>39</u>	<u>21</u>	<u>0.26</u>	<u>50</u>	<u>92</u>	<u>1.72</u>
North	6	0	0.00	5	80	1.60
River	18	17	0.17	24	100	1.83
Southwest	10	50	0.70	17	82	1.53
Southeast	5	0	0.00	4	100	2.00
1994	32	16	0.22	46	98	1.89
1993	39	38	0.41	74	93	1.74
1992	37	19	0.22	44	93	1.93
1991	30	20	0.20	67	94	1.82
Mean (1991-95)		23	0.26		94	1.82

Table 17. Estimated pre-fawning deer density^a (deer/mi²), permit and harvest summary, and pre-fawning population goals (deer/mi²) by deer management unit (DMU), sub-unit (DMSU), and permit area (PA) in Minnesota's farmland zone, 1994-95.

DMU	DMSU	PA	1994					1995					Pre-fawning population goal							
			Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest										
					Buck	Antler-less	Total ^c			Buck	Antler-less	Total ^c								
RED RIVER																				
West																				
401		1.9	433	304	289	593	1.7	1000	254	620	874	0.8-1.2								
402		2.7	732	450	462	912	2.2	1600	355	928	1283	1.7-2.3								
Total		2.3	1,165	754	751	1,505	1.9	2,600	609	1,548	2,157									
East																				
403		4.1	573	304	376	680	3.6	600	239	396	635	2.2-2.8								
404		5.8	1100	570	648	1218	4.4	1200	421	700	1121	2.7-3.3								
405		4.4	1238	533	690	1223	3.8	1800	383	996	1379	2.2-2.8								
406		6.7	1121	455	652	1107	5.4	1800	355	1,040	1395	2.7-3.3								
407		4.9	1382	570	914	1484	3.7	2000	395	1,284	1679	3.6-4.4								
408		4.7	1193	537	696	1233	4.6	2200	367	1,265	1632	3.6-4.4								
Total		5.1	6,607	2,969	3,976	6,945	4.2	9,600	2,160	5,681	7,841									
RED RIVER TOTAL		4.0	7,772	3,723	4,727	8,450	3.3	12,200	2,769	7,229	9,998									
AGASSIZ																				
201		7.6	300	179	229	408	6.7	300	159	224	383	9.0-11.0								
202		10.3	600	325	301	626	11.3	800	244	390	634	10.0-12.0								
203		14.1	650	234	316	550	12.5	650	205	315	520	13.5-16.5								
204		7.3	1940	803	1,080	1883	6.8	2000	652	1,085	1737	5.0-6.0								
205		8.3	2123	971	1,425	2396	7.5	2700	684	1,672	2356	6.2-7.4								
206		6.4	900	601	595	1196	6.9	1500	490	961	1451	5.3-6.3								
207		7.5	1000	395	463	858	7.5	1000	313	463	776	7.7-9.2								
208		4.5	761	317	359	676	4.2	850	267	408	675	2.7-3.3								
209		4.4	1105	433	531	964	3.5	1500	322	723	1045	2.3-2.7								
AGASSIZ																				

Table 17. Continued.

DMU	DMSU	1994					1995					Pre-fawning population goal	
		PA	Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest			
					Buck	Antler- less	Total ^c			Buck	Antler- less	Total ^c	
210		6.3	1805	691	858	1549	6.4	2200	495	1,060	1555	2.3-2.7	
AGASSIZ TOTAL		6.9	11,184	4,949	6,157	11,106	6.5	13,500	3,831	7,301	11,132		
BIG WOODS													
North													
409		15.8	3015	955	1,983	2938	17.4	7000	1181	4,415	5596	5.6-6.8	
410		7.7	5039	1644	2,595	4239	7.8	9000	1671	4,481	6152	5.5-6.5	
411		9.0	4536	1463	2,387	3850	11.3	7000	1597	3,591	5188	5.0-6.0	
412		6.1	4408	1415	2,333	3748	6.4	5000	1442	2,616	4058	3.6-4.4	
413		7.1	3237	1076	1,784	2860	7.5	3600	1028	1,933	2961	5.0-6.0	
414		8.7	2945	1091	1,537	2628	11.3	3500	1149	1,816	2965	8.5-10.0	
415		4.9	2200	846	1,167	2013	6.8	2600	855	1,348	2203	4.5-5.5	
416		5.3	1835	714	1,227	1941	5.7	2000	667	1,327	1994	3.6-4.4	
417		4.8	3069	1296	1,704	3000	5.7	3500	1202	1,891	3093	3.5-4.5	
418		3.9	2327	888	1,283	2171	4.7	2500	749	1,355	2104	3.6-4.4	
419		6.1	1686	648	741	1389	9.3	2200	686	944	1630	3.0-4.0	
429		3.4	689	315	388	703	6.0	1000	320	507	827	3.0-4.0	
Total		6.7	34,986	12,35	19,12	31,480	7.9	48,900	12,54	26,22	38,771		
Central													
221		7.4	1400	717	923	1640	7.3	1400	766	1,093	1859	9.0-11.0	
222		10.7	1300	715	728	1443	13.0	2000	833	1,303	2136	10.8-13.2	
223		10.4	1795	565	979	1544	8.4	2000	527	1,245	1772	7.0-9.0	
224		21.0	350	72	136	208	11.3	275	79	124	203	18.0-22.0	
225		6.1	1971	619	843	1462	8.5	2000	508	1,000	1508	7.2-8.8	
226		11.3	2099	743	1,020	1763	8.9	3000	464	1,626	2090	5.4-6.6	
Total		9.2	8,915	3,431	4,629	8,060	9.1	10,675	3,177	6,391	9,568		
Metro^e													
227		11.6	2861	847	1,167	2014	5.8	3000	391	2,091	2482	4.8-5.8	

Table 17. Continued.

Table 17. Continued.

DMU	DMSU	PA	1994					1995					Pre-fawning population goal	
			Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest				
					Buck	Antler- less	Total ^c			Buck	Antler- less	Total ^c		
425			2.0	648	310	410	720	2.3	750	352	532	884	1.2-1.8	
426			3.3	1116	386	618	1004	3.7	1100	500	707	1207	2.0-3.0	
427			1.8	775	362	418	780	2.2	750	471	419	890	1.3-1.7	
428			2.2	1000	392	410	802	3.6	1100	405	522	927	2.3-2.8	
Total			2.7	8157	3594	4934	8528	3.1	9350	4053	6,730	10783		
River														
431			5.3	813	350	638	988	4.5	800	301	709	1010	2.2-2.5	
433			6.0	959	518	806	1324	6.3	1000	485	865	1350	4.0-5.0	
435			5.3	1266	522	706	1228	4.4	1300	488	842	1330	3.2-3.8	
440			2.0	600	470	493	963	3.2	600	366	577	943	3.2-3.8	
442			3.5	1075	577	842	1419	3.8	1075	591	968	1559	3.2-3.8	
443			3.6	650	369	548	917	4.4	650	323	639	962	3.2-4.0	
Total			4.1	5363	2806	4033	6839	4.3	5425	2554	4,600	7154		
Southwest														
446			3.4	700	237	399	636	3.2	600	235	374	609	3.2-4.0	
447			1.9	400	284	326	610	2.3	400	315	360	675	2.5-3.1	
448			2.6	350	321	389	710	3.6	300	336	326	662	3.2-4.0	
449			3.1	500	427	542	969	3.6	500	470	428	898	3.2-4.0	
450			1.3	400	302	339	641	2.1	400	349	364	713	1.2-1.8	
451			2.7	450	346	453	799	2.9	500	391	508	899	2.4-3.0	
452			1.4	250	212	215	427	1.7	250	235	230	465	1.4-2.0	
453			1.8	350	266	301	567	1.7	350	270	316	586	1.4-2.0	
454			2.5	600	531	553	1084	3.1	650	558	637	1195	2.0-2.6	
455			3.2	150	76	109	185	4.5	150	78	115	193	3.7-4.5	
PRAIRIE														
Southwest														

Table 17. Continued.

DMU	DMSU	PA	1994					1995					Pre-fawning population goal	
			Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest				
					Buck	Antler-less	Total ^c			Buck	Antler-less	Total ^c		
	456		2.1	600	344	417	761	2.5	600	376	455	831	1.7-2.3	
	457		1.4	200	391	270	661	3.1	200	424	193	617	1.7-2.3	
	458		1.7	400	348	358	706	2.5	400	375	388	763	1.5-2.1	
	459		1.8	500	521	469	990	2.7	525	521	457	978	1.7-2.3	
	Total		2.1	5850	4606	5140	9746	2.7	5825	4933	5,151	10084		
Southeast														
28	461		3.5	1100	549	735	1284	4.3	1400	477	890	1367	2.5-3.1	
	462		3.9	1439	575	744	1319	4.7	1700	516	847	1363	2.7-3.3	
	463		2.4	658	253	388	641	2.1	600	209	348	557	1.7-2.3	
	464		2.3	500	281	303	584	3.2	625	267	361	628	1.7-2.3	
	465		2.3	491	282	336	618	2.6	600	226	385	611	1.5-2.1	
	466		1.9	800	588	573	1161	2.5	900	546	603	1149	1.6-2.2	
	467		1.4	500	533	400	933	2.6	500	490	400	890	1.0-1.6	
	Total		2.4	5488	3061	3479	6540	3.1	6325	2731	3,834	6565		
	PRAIRIE TOTAL		2.6	24,858	14,06	17,58	31,653	3.1	26,925	14,27	20,31	34,586		
	FARMLAND			109,17	48,59	64,31	112,90			44,70	82,68	127,39		
	TOTAL		4.8	7	0	2	2	5.1	136,650	9	3	2		

* Pre-fawning deer density estimates are determined from population modeling. Historical density estimates may differ from those previously published due to periodic recalculation as more accurate modeling information is available.

^b Total permits issued includes antlerless permits and management permits.

^c Total harvest includes deer tagged with regular firearms, multizone firearms, muzzleloader, archery, and management permit licenses.

^d Total permits offered includes projected antlerless permits based on research and management recommendations.

^e Excluding permit areas 228 and 337, which are not modeled.

^f Permits and antlerless harvest represent Orchard Subpermit Area.

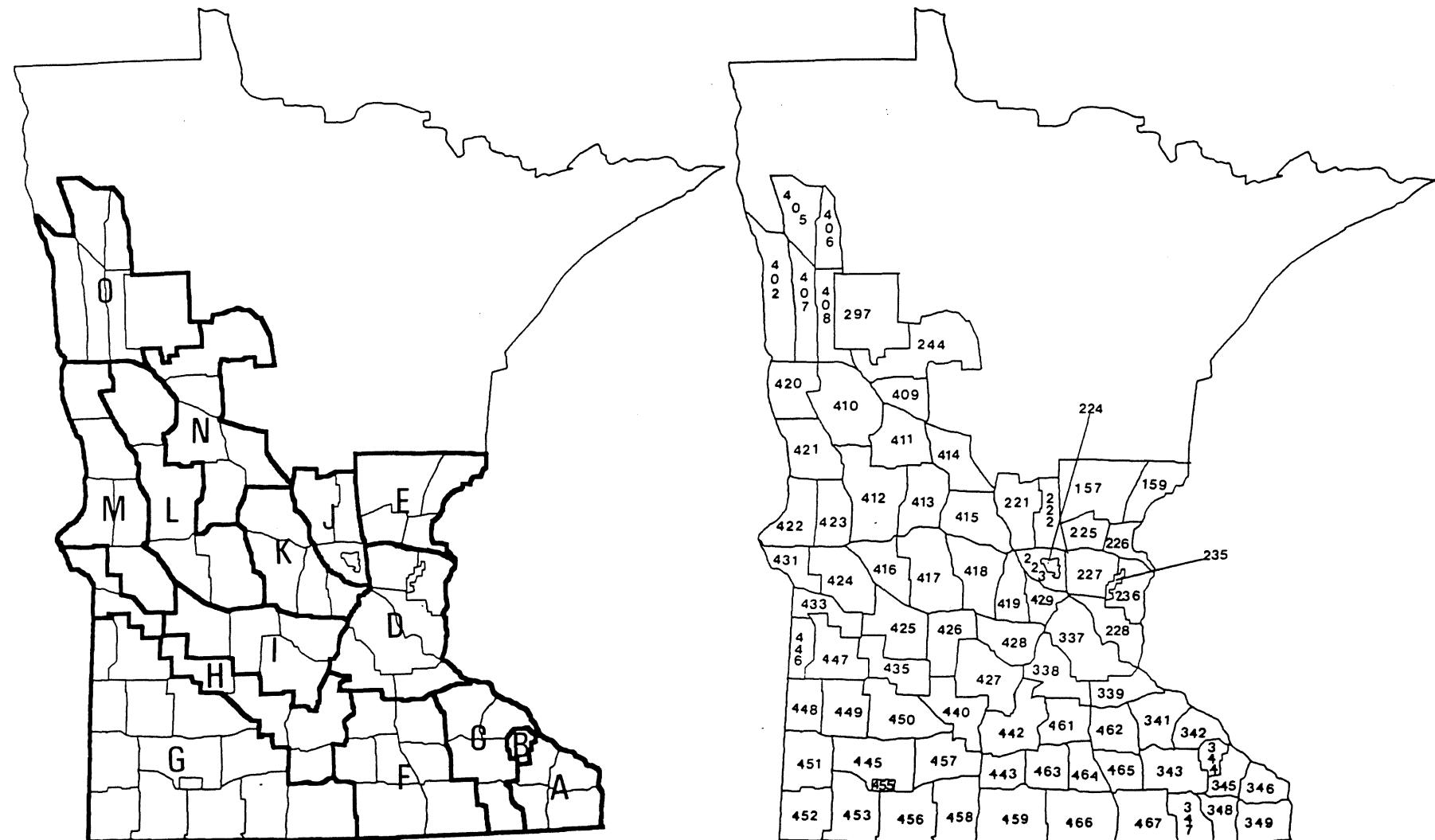


Figure 7. (a) Location of turkey management units (TMU's) and (b) antlerless deer permit areas used for the wild turkey survey, Minnesota, November-December, 1994.

Table 18. Percent of antlerless-deer hunters observing wild turkeys (HOWT) in Minnesota, November-December, 1993-94.

Turkey Management Unit	Year	n (Respondents)	HOWT	99% CI on HOWT for 1993-94
A	1992	629	62.8	7.0
	1993	637	64.8	
	1994	618	61.2	
B	1992	473	62.4	8.6
	1993	467	53.1	
	1994	421	59.6	
C	1992	632	52.4	7.2
	1993	637	57.6	
	1994	615	55.0	
D	1992	563	17.1	5.6
	1993	633	17.4	
	1994	633	19.3	
E	1992	581	3.4	3.4
	1993	647	7.1	
	1994	638	4.7	
F	1992	583	19.0	6.4
	1993	594	24.8	
	1994	652	27.6	
G	1992	625	3.7	3.6
	1993	644	5.3	
	1994	616	7.6	
H	1992	598	16.4	5.3
	1993	655	16.0	
	1994	636	17.1	
I	1992	596	4.5	2.7
	1993	569	3.9	
	1994	562	2.7	
J	1992	560	2.1	2.7
	1993	609	1.6	
	1994	539	4.6*	
K	1992	600	6.0	3.7
	1993	624	5.6	
	1994	614	8.5	
L	1992	653	1.7	2.5
	1993	687	2.5	
	1994	667	4.2	
M	1992	578	2.9	2.6
	1993	597	3.4	
	1994	613	3.1	
N	1992	663	2.1	2.0
	1993	710	1.7	
	1994	657	2.3	
O	1992	576	3.8	2.2
	1993	626	1.9	
	1994	620	2.6	

* Significant change in index from 1993 to 1994 ($p < 0.01$)

PREDATOR SCENT POST SURVEY

NOTE: This survey is organized and coordinated by the Forest Wildlife Populations and Research Group, 1201 E. Hwy 2, Grand Rapids, MN 55744. Results are presented at this location in the book because of the statewide nature of the data.

ЧЕЛОСТНОЙ ДИСК ВИДОВЫЙ

1994 SCENT STATION ROUTE SPECIFICS

Zone	Rts. Done	No. Segments	Segment Density	Station Nights
Forest	42	181	1/179 mi ²	1,733
Transition	29	119	1/213 mi ²	1,118
Farm	<u>25</u>	<u>103</u>	1/255 mi ²	<u>.996</u>
	96	403		3,847

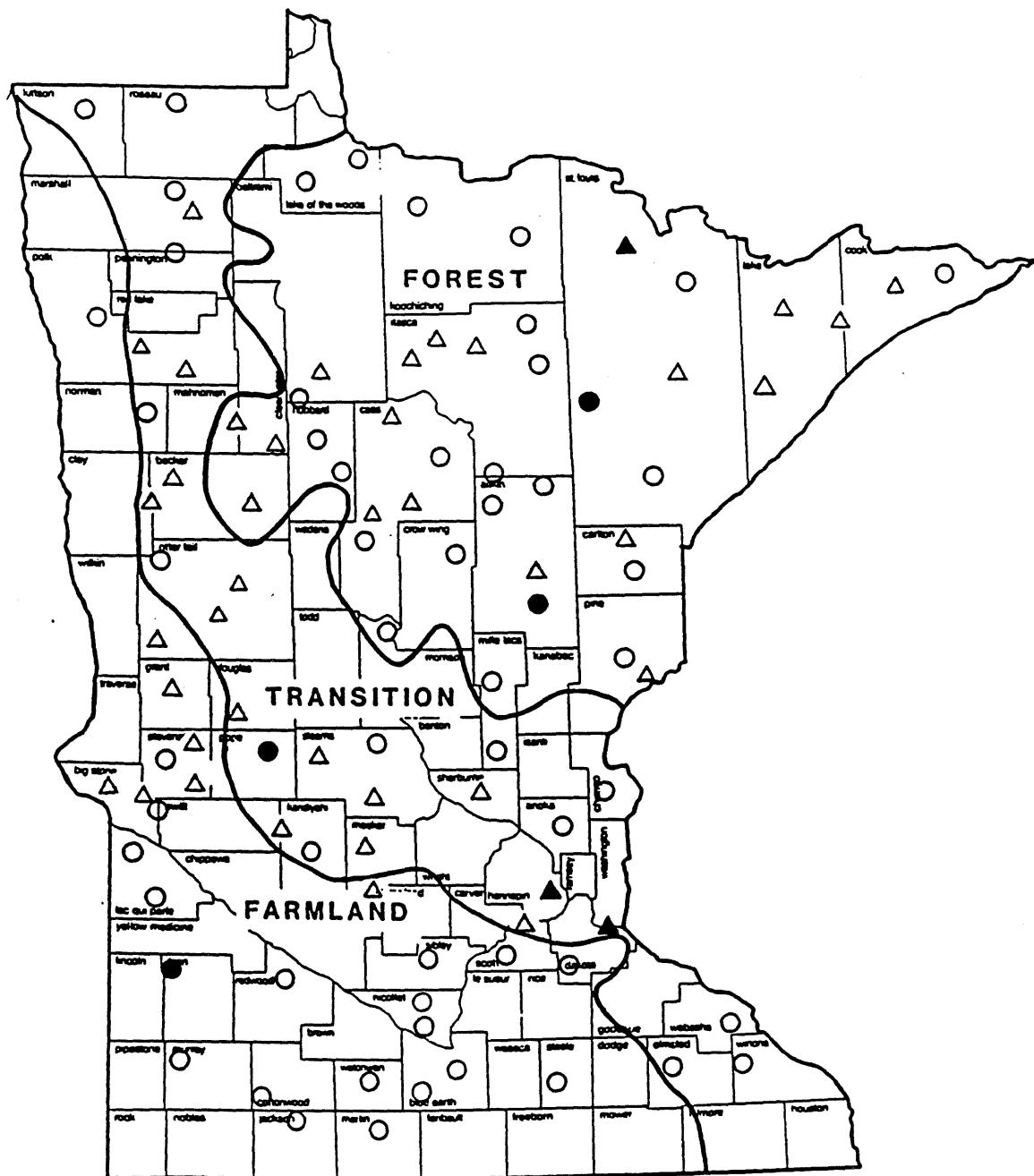


Figure 8. Approximate locations of scent post routes conducted by DNR Section of Wildlife (O) and cooperators (Δ) in the Forest, Transition, and Farmland Survey Zones, 1994. Shaded symbols indicate routes not completed in 1994.

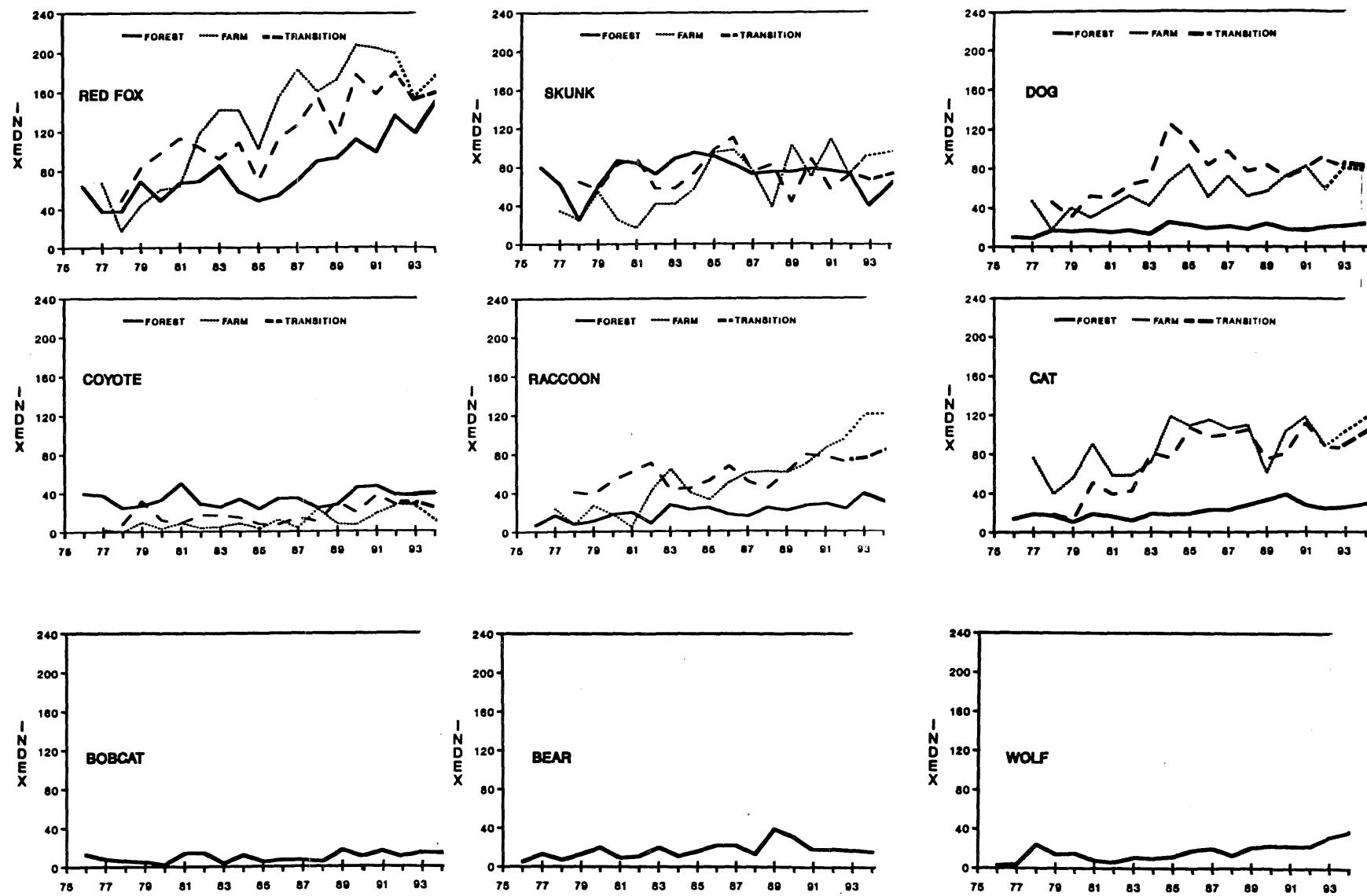


Figure 9. Scent post visitation indices for nine species in the Forest, Transition, and Farmland survey zones, 1976-94.

FOREST WILDLIFE POPULATIONS
1201 E. Hwy 2
Grand Rapids, MN 55744
(218) 327-4432

Table 19. Mean number of ruffed grouse drums per stop by census zone, 1961-95.

Year	CensusZone					Rangewide mean
	Northwest	North	Northeast	Central Hardwoods	Southeast	
1961	1.4	2.2	0.9	1.0	1.0	1.4
1962	3.0	2.1	0.5	1.2	1.6	1.6
1963	0.4	0.6	0.5	0.4	1.1	0.6
1964	0.4	0.7	0.9	0.3	0.6	0.6
1965	1.5	1.3	0.7	0.6	1.4	1.0
1966	1.6	1.2	0.6	0.7	1.9	1.0
1967	2.8	1.9	1.3	1.0	2.2	1.6
1968	3.8	2.3	1.6	1.0	2.4	2.0
1969	3.3	2.7	1.4	1.4	2.3	2.2
1970	2.1	3.2	0.9	1.6	2.1	2.2
1971	1.4	3.6	1.0	1.7	3.7	2.4
1972	2.1	3.7	1.0	2.1	3.1	2.7
1973	0.5	1.5	0.6	0.9	3.7	1.1
1974	0.7	1.1	0.8	0.7	3.0	1.0
1975	1.2	1.4	0.8	0.8	2.6	1.3
1976	0.8	1.5	0.4	0.9	1.8	1.1
1977	0.9	1.6	0.7	0.9	2.5	1.2
1978	2.1	2.4	0.8	1.4	2.3	1.7
1979	1.7	2.2	0.7	1.3	2.2	1.6
1980	1.9	2.1	0.7	1.9	2.7	1.7
1981	1.2	1.7	0.8	1.8	2.4	1.4
1982	0.9	1.1	0.3	0.9	1.1	0.8
1983	0.6	1.1	0.6	0.8	1.5	0.9
1984	1.0	1.1	0.6	0.5	1.4	0.8
1985	0.7	1.2	0.6	0.6	1.5	0.9
1986	1.7	1.1	0.4	0.6	2.5	1.0
1987	1.6	1.6	0.7	0.8	1.2	1.2
1988	1.3	2.0	1.0	1.0	1.1	1.4
1989	2.2	2.6	1.5	1.2	1.2	1.9
1990	0.8	2.5	0.9	1.1	1.2	1.6
1991	1.0	1.7	0.8	0.7	0.7	1.2
1992	1.0	1.0	0.5	0.6	0.6	0.8
1993	0.9	0.8	0.5	0.6	0.5	0.7
1994	1.7	1.0	0.5	0.5	0.4	0.9
1995	2.1	1.5	0.6	0.9	0.5	1.2

RUFFED GROUSE 1994-1995

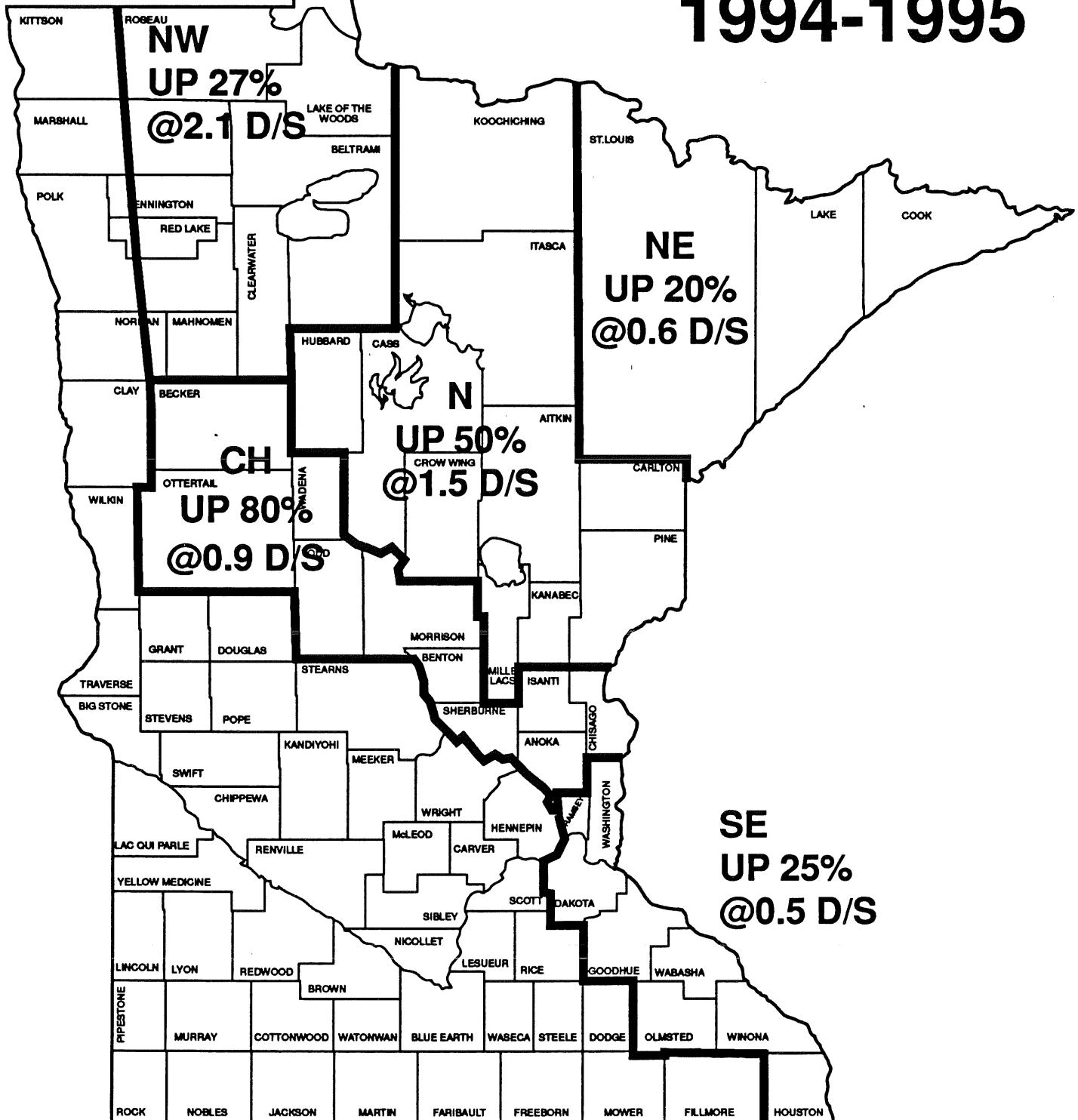


Figure 10. Changes in average numbers of ruffed grouse drums per stop on roadside counts, 1994-1995.

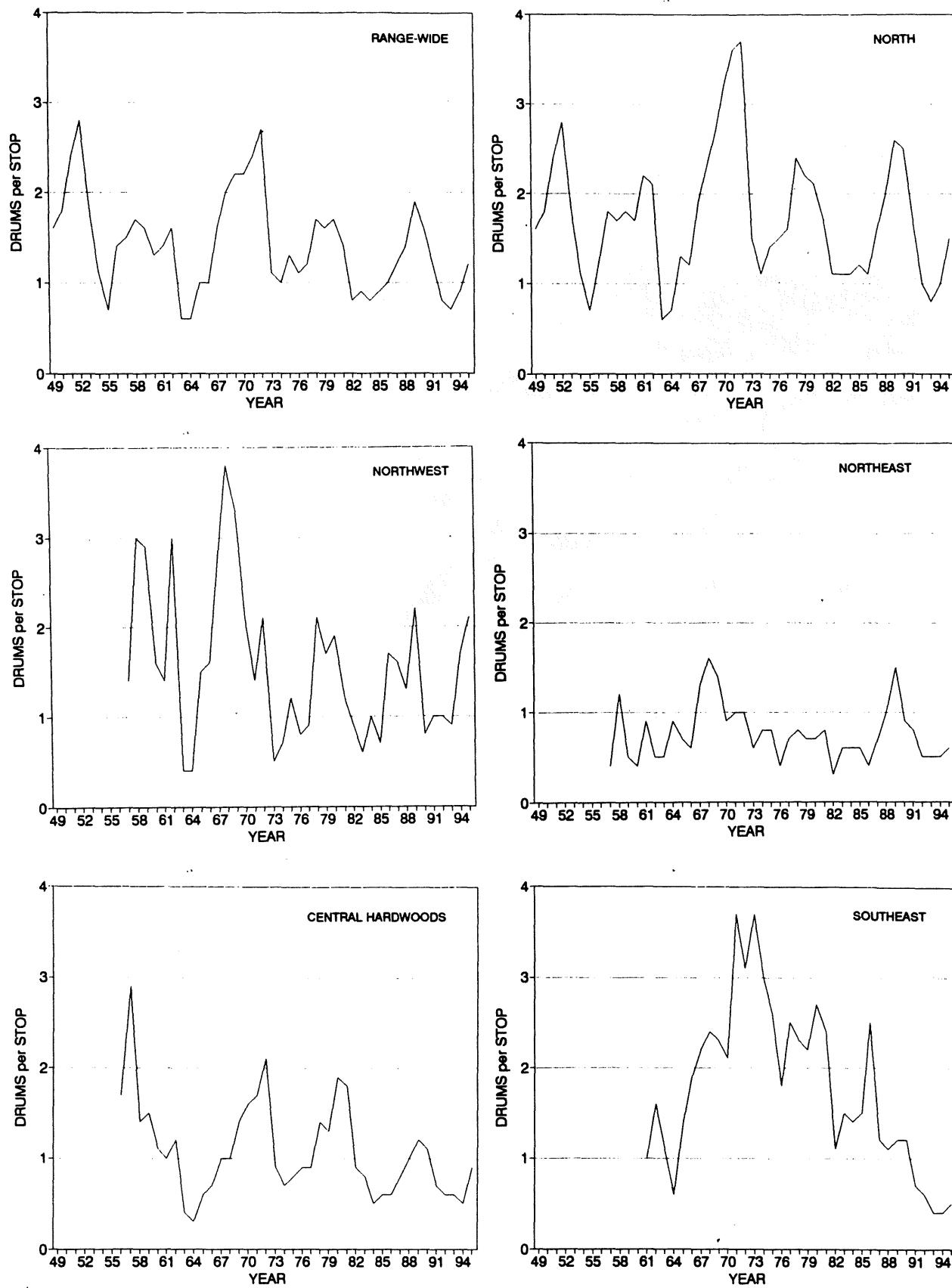


Figure 11. Summary of ruffed grouse drumming trends range-wide and in each of five survey zones, 1949-95.

SHARP-TAILED GROUSE 1994-1995

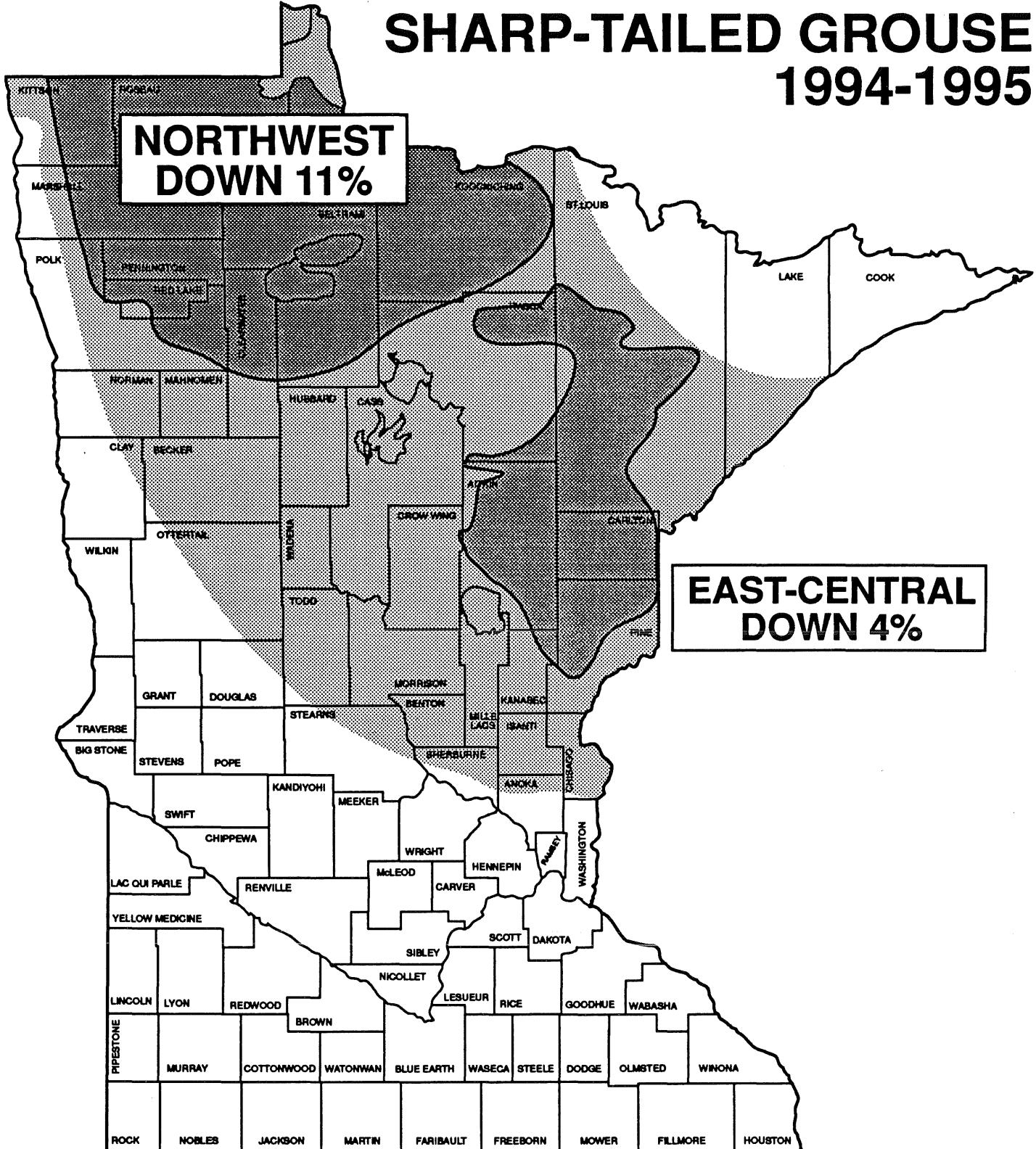


Figure 12. Status of male sharp-tailed grouse on 123 Northwest and 124 East-Central range dancing grounds, 1994-1995.

Table 20. Number of snowshoe hares seen per 100 km of ruffed grouse drumming routes in the North, Northwest, and Northeast survey zones, 1974-95.

Year	Hares seen per 100 km
1974	0.4
1975	0.0
1976	2.0
1977	2.8
1978	9.0
1979	8.8
1980	14.1
1981	9.8
1982	1.8
1983	0.7
1984	0.2
1985	0.3
1986	0.2
1987	0.5
1988	0.9
1989	2.7
1990	2.3
1991	1.2
1992	1.4
1993	0.5
1994	0.2
1995	0.5

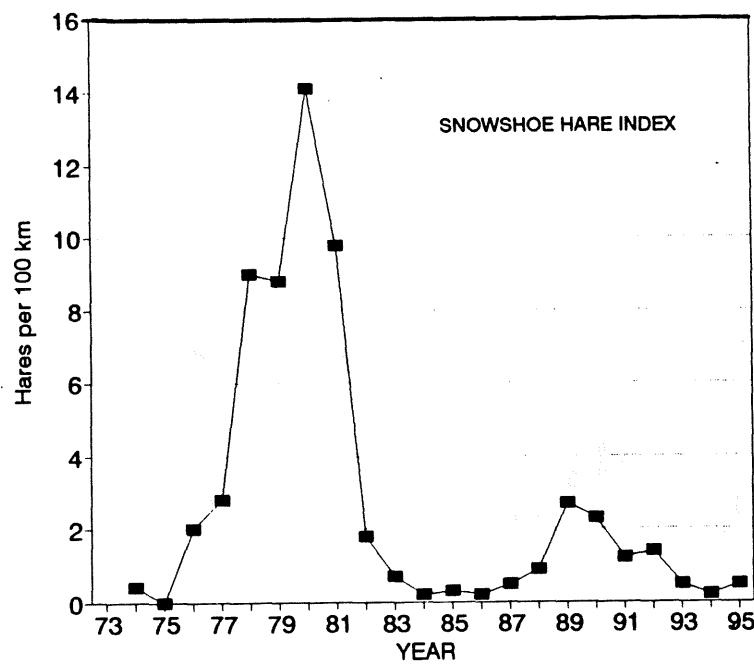


Figure 13. Snowshoe hare index (hares/100 km) based on hares seen on northern ruffed grouse drumming routes, 1974-95.

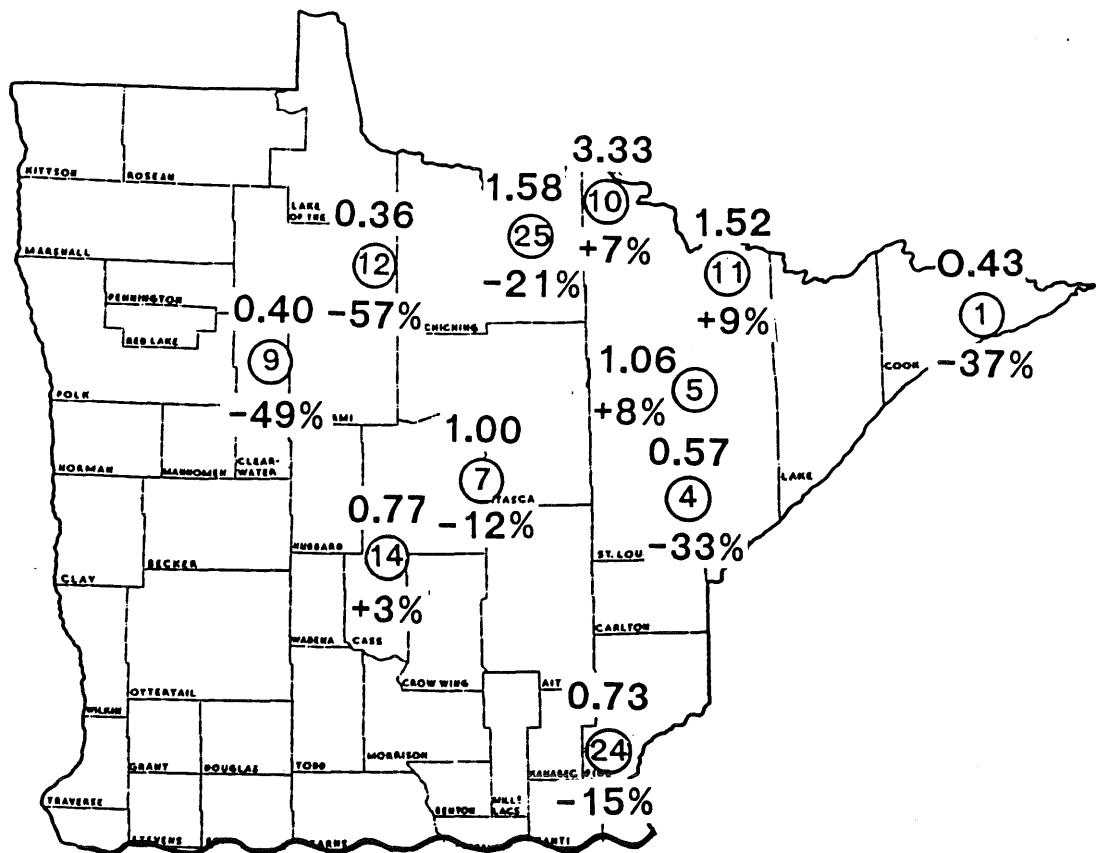


Figure 14. Approximate locations of 23 aerial beaver survey routes flown in 1994.

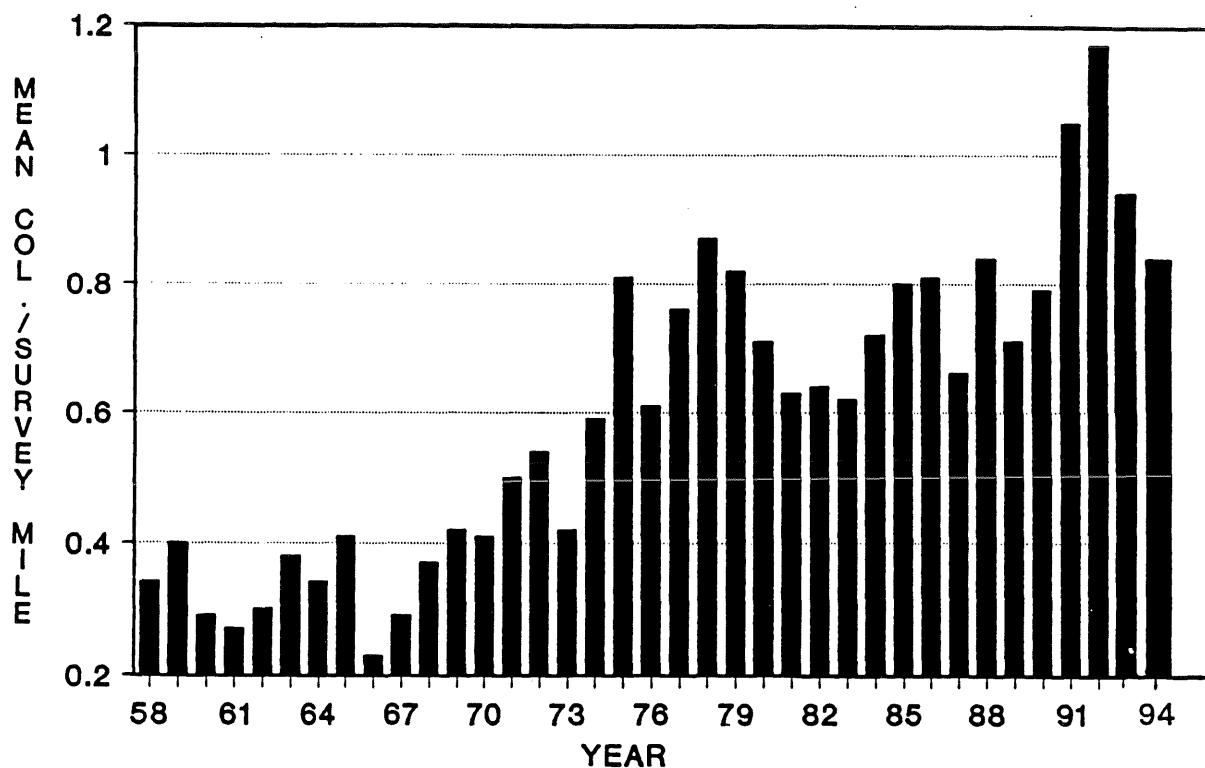


Figure 15. Range-wide mean number of live beaver colonies per mile of survey route, 1958-94.

Table 21. Live beaver colonies per mile of census route in northern Minnesota, 1988-94.

Number	Route name	Year							1988-93 Mean	% Change 1993-mean
		1988	1989	1990	1991	1992	1993	1994		
1	Cascade	0.40	0.43	0.44	1.13	1.50	0.68	0.43	0.76	-43.4
2	Kawishiwi	0.72	0.47	0.80	1.03	1.08	-	-	0.82	-
3	Itasca	0.48	0.56	0.45	0.92	1.09	-	-	0.70	-
4	South St. Louis	0.64	-	0.92	1.35	0.87	0.70	0.57	0.90	-36.7
5	Central St. Louis	-	0.83	0.81	1.12	1.02	0.98	1.06	0.95	+11.6
6	Carlton & Pine	1.04	-	1.06	1.50	1.09	-	-	1.17	-
7	Cass	0.77	0.84	0.98	1.16	1.62	1.14	1.00	1.08	-7.4
8	Balsam-Hennepin	0.57	0.59	0.46	0.61	-	-	-	0.59	-
9	Pinewood-Mississippi	0.38	0.36	0.49	0.41	-	0.79	0.40	0.51	-21.6
10	Kabetogama Peninsula	2.93	2.92	3.3	2.62	2.85	3.10	3.33	2.97	+12.1
11	Ely-Finger Lakes	1.23	1.09	1.20	1.67	1.35	1.40	1.52	1.32	+16.7
12	Hay Creek-Kelliher	0.49	0.56	0.46	0.58	0.78	0.84	0.36	0.62	-41.9
13	Cook County Transect	0.31	0.68	0.38	1.18	0.83	-	-	0.56	-
14	Cass-Crow Wing	0.77	0.89	0.87	0.96	0.88	0.75	0.77	0.85	-9.4
15	Little Willow-Aitkin	0.66	0.59	0.63	0.68	-	-	-	0.64	-
16	East Aitkin County	1.03	0.80	-	-	-	-	-	-	-
17	West Vermilion	0.87	-	1.29	-	1.25	-	-	1.14	-
18	Blackduck	1.20	-	1.24	-	1.55	-	-	1.33	-
19	Splitrock	1.18	0.53	0.73	2.42	1.80	-	-	1.33	-
20	Isabella	-	-	-	-	-	-	-	-	-
21	Red Lake-Pine Island	0.30	0.36	0.33	0.51	0.56	-	-	0.41	-
22	Northome	0.77	-	1.14	0.78	1.08	-	-	0.94	-
23	Kanabec County	1.29	0.94	0.81	0.58	0.77	-	-	0.88	-
24	Southern Pine	1.95	1.03	0.93	0.89	1.15	0.86	0.86	1.14	-36.0
25	Koochiching North	1.39	1.15	1.05	1.43	1.62	2.00	1.58	1.44	+9.7

BOBCAT POPULATION ESTIMATE

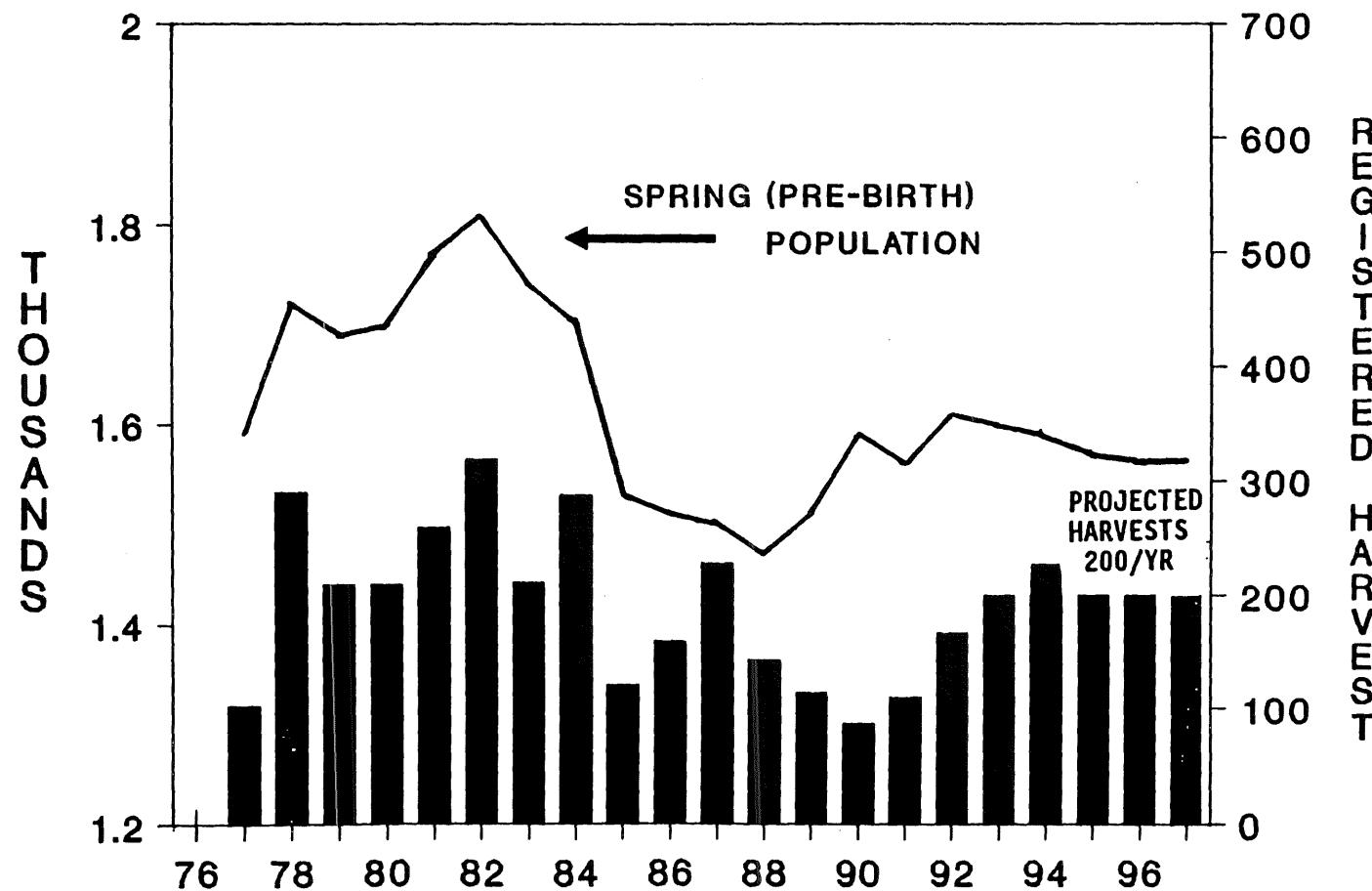


Figure 16. Population modeling summaries for bobcat, 1977-97.

Table 22. Bobcat harvest, age structure, and population index data, 1980 to 1994.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Registered take	210	260	274	208	280	119	160	214	140	129	84	106	167	201	238
% autumn pop. taken ¹	10	12	14	10	13	6	8	11	8	6	5	6	9	12	14
Carcasses examined	48	230	261	205	288	99	132	163	114	119	62	93	151	161	187
% juveniles	31	37	35	37	37	33	26	33	49	39	20	35	28	32	26
% 1.7 yrs. old	33	23	15	26	13	19	17	16	18	17	34	33	22	20	16
% ≥ 2.7 yrs. old	36	40	50	37	50	48	57	51	42	44	46	32	50	48	58
Juv.:≥2.7 yr. females	1.9	2.1	1.3	1.5	1.4	1.2	0.9	1.4	1.7	2.0	0.8	3.6	1.2	1.4	0.8
% male juveniles	80	59	47	54	52	41	53	44	58	49	58	59	55	51	64
% male 1.7 yrs.	69	63	49	53	66	41	32	52	62	53	80	55	45	45	43
% male ≥ 2.7 yrs.	56	55	47	30	44	43	51	48	46	56	44	70	53	52	45
Overall % males	66	58	48	45	51	42	51	48	54	53	59	61	53	50	50
Mean pelt price	\$79	\$73	\$66	\$61	\$76	\$70	\$120	\$101	\$68	\$48	\$43	\$37	\$28	\$43	\$36
Scent post index ²	2	14	14	3	12	5	8	7	5	17	10	16	10	14	14
Snowshoe hare index ³	9.8	1.8	0.7	0.2	0.3	0.2	0.5	0.9	2.7	2.3	1.2	1.4	0.5	0.2	0.5

¹ estimated from population model

² index for autumn prior to harvest

³ index for spring after harvest season

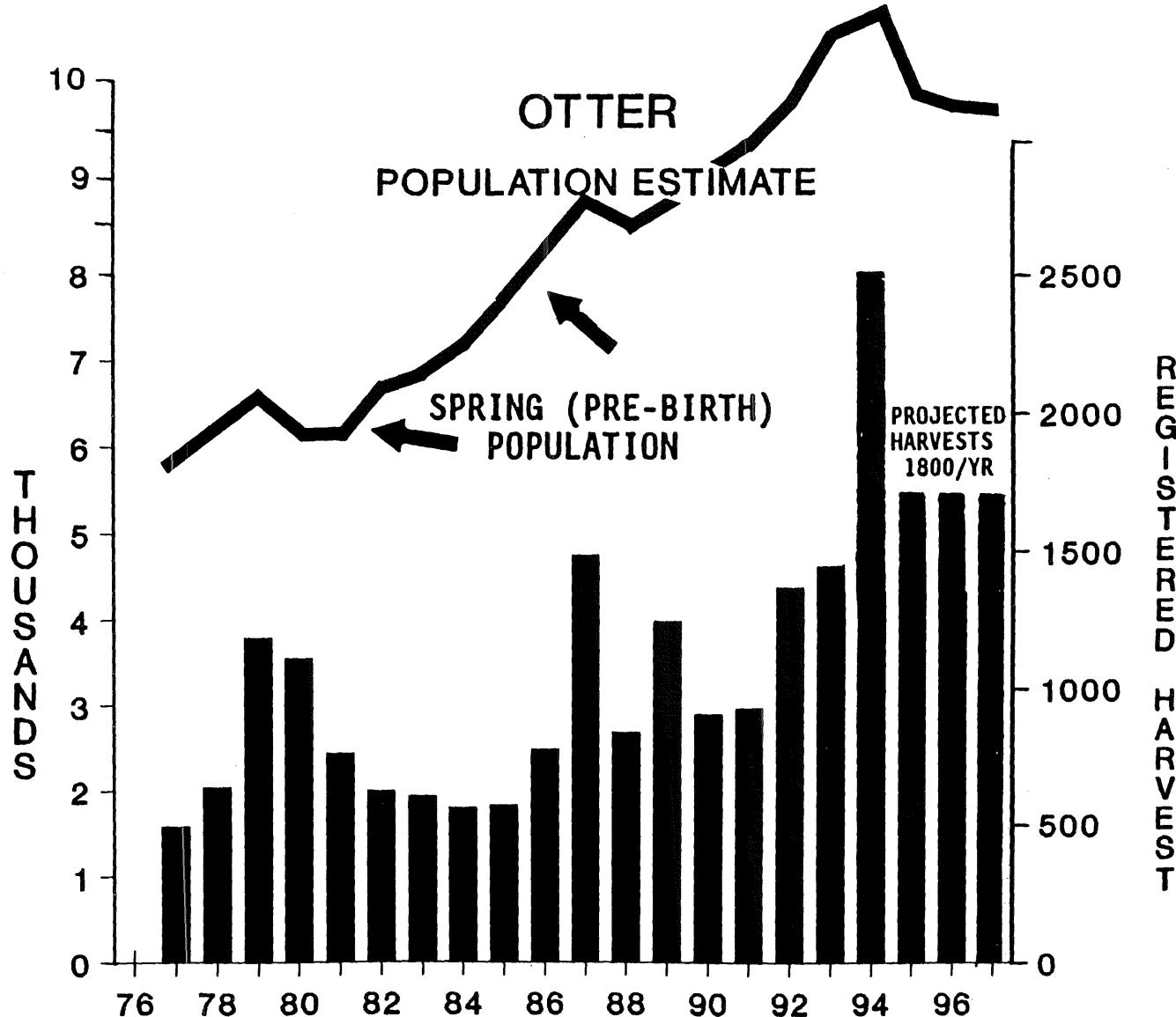


Figure 17. Population modeling summaries for otter, 1977-97.

Table 23. Otter harvest, carcass collection, and pelt price data, 1982-94.
 Carcasses were not collected after 1986.

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Season dates	11/13-11/27	11/12-11/26	11/17-12/01	11/16-12/15	10/24-11/29	10/24-11/29	10/29-11/27	10/28-12/17	10/27-1/6	10/26-1/5	10/24-1/3	10/23-1/9	10/29-1/8
Limit	2	2	2	3	3	3	3	3	3	3	4	4	4
Registered harvest	385	408	513	559	777	1,386	922	1,294	903	855	1,365	1,454	2,445
% of autumn pop. harvested*	11	10	9	9	11	20	12	17	13	13	17	18	22
No. of carcasses examined	389	433	549	572	745	---	---	---	---	---	---	---	---
% juveniles	50.6	42.3	47.9	43.4	45.2	---	---	---	---	---	---	---	---
% yearlings	25.6	30.9	23.3	22.9	23.3	---	---	---	---	---	---	---	---
% male juveniles	56.7	55.7	47.1	53.3	45.1	---	---	---	---	---	---	---	---
% males ≥ 1.7 yrs.	65.1	56.8	50.0	50.0	48.1	---	---	---	---	---	---	---	---
Mean pelt prices:													
Otter	\$26	\$25	\$22	\$21	\$24	\$23	\$22	\$22	\$24	\$25	\$29	\$43	\$48
Beaver (fall)	\$11	\$12	\$12	\$15	\$20	\$17	\$14	\$12	\$9	\$9	\$7	\$11	\$14

* From population modeling; includes an additional 25% accidental harvest over registered total.

FISHER POPULATION ESTIMATE

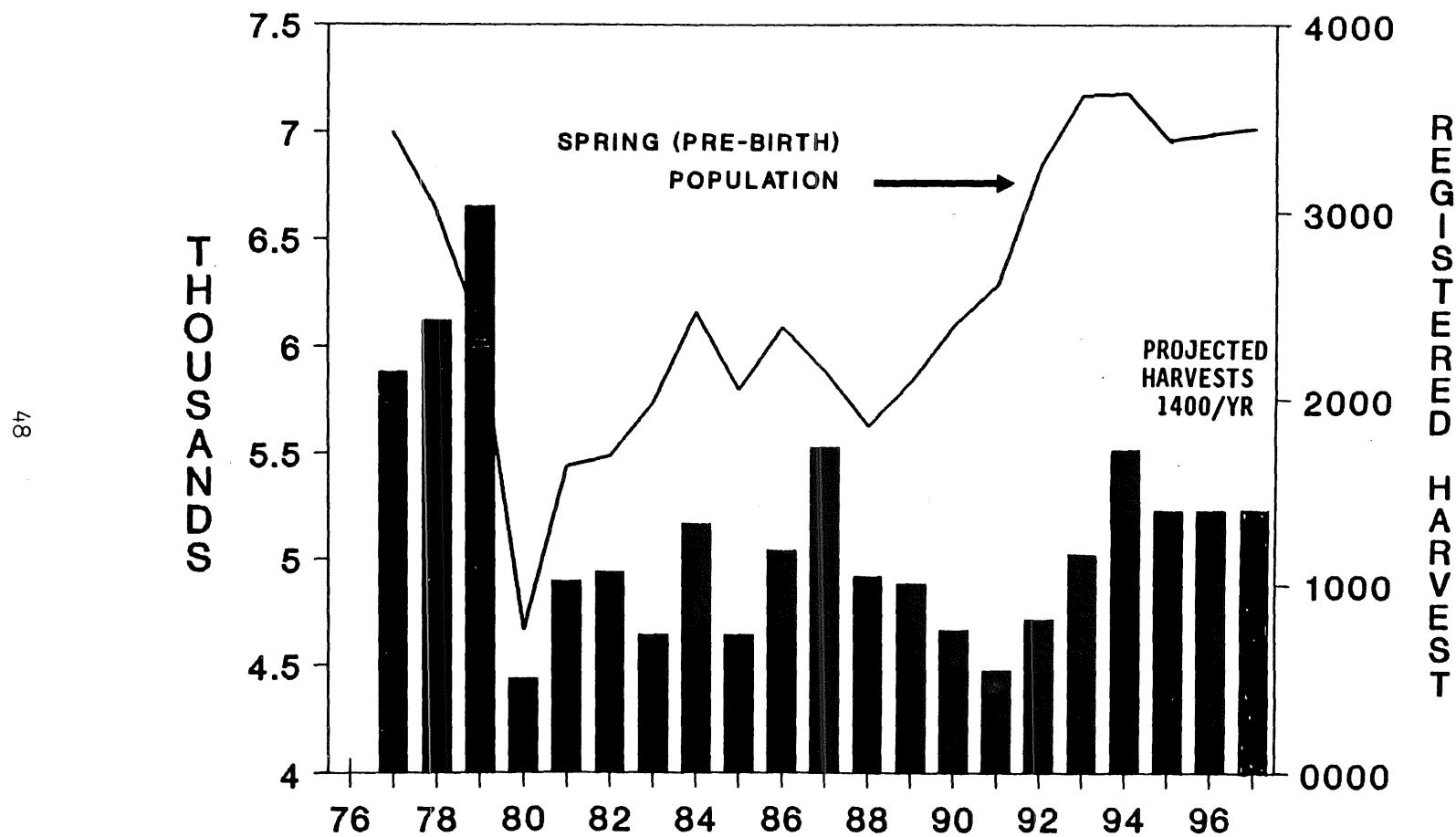


Figure 18. Population modeling summaries for fisher, 1977-97.

Table 24. Fisher harvest, carcass collection, and pelt price data, 1982-94

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Season	12/1-12/10	12/1-12/11	12/1-12/16	11/30-12/15	11/23-12/4	11/28-12/13	11/26-12/11	12/2-12/17	12/1-12/16	11/30-12/15	11/28-12/13	12/4-12/19	12/3-12/18
Limit	1	1	1	1	1	1	1	1	1	1	1	2	2
Registered Harvest	912	631	1285	678	1068	1642	1025	1243	746	528	777	1158	1771
% of available fall population harvested ¹	17	10	18	10	14	21	16	15	12	10	11	16	21
No. carcasses examined ²	1073	662	1270	712	1186	1534	805	1024	592	410	629	937	1360
% juveniles	66	69	63	63	59	53	70	64	65	66	54	59	56
% 1.7 yrs.	19	18	20	20	24	15	15	19	14	21	25	22	18
% ≥ 2.7 yrs.	15	13	17	18	18	22	15	17	21	13	21	19	26
Juv.:adult female ratio	9.4:1	8.8:1	7.2:1	5.4:1	5.3:1	4.7:1	6.8:1	5.8:1	4.5:1	7.8:1	4.9:1	5.3:1	4.0:1
% male juveniles	46	45	52	46	48	46	48	47	44	50	42	47	47
% male 1.7 yrs.	41	40	45	40	50	40	45	47	55	52	55	37	54
% male ≥ 2.7 yrs.	52	40	45	34	37	37	33	36	30	35	45	42	44
% males overall	46	44	49	43	46	43	45	45	43	48	46	44	48
Pelt price: males	\$70	\$71	\$70	\$74	\$84	\$84	\$54	\$26	\$35	\$21	\$16	\$14	\$19
females	\$99	\$121	\$122	\$130	\$162	\$170	\$100	\$53	\$46	\$48	\$29	\$28	\$30
Snowshoe hare index ³	0.7	0.2	0.3	0.2	0.5	0.9	2.7	2.3	1.2	1.4	0.5	0.5	0.5

¹ estimated from population model

² may exceed registration totals due to accidental catches, Indian Reservation season framework, etc.

³ index for Spring after harvest season.

PINE MARTEN POPULATION ESTIMATE

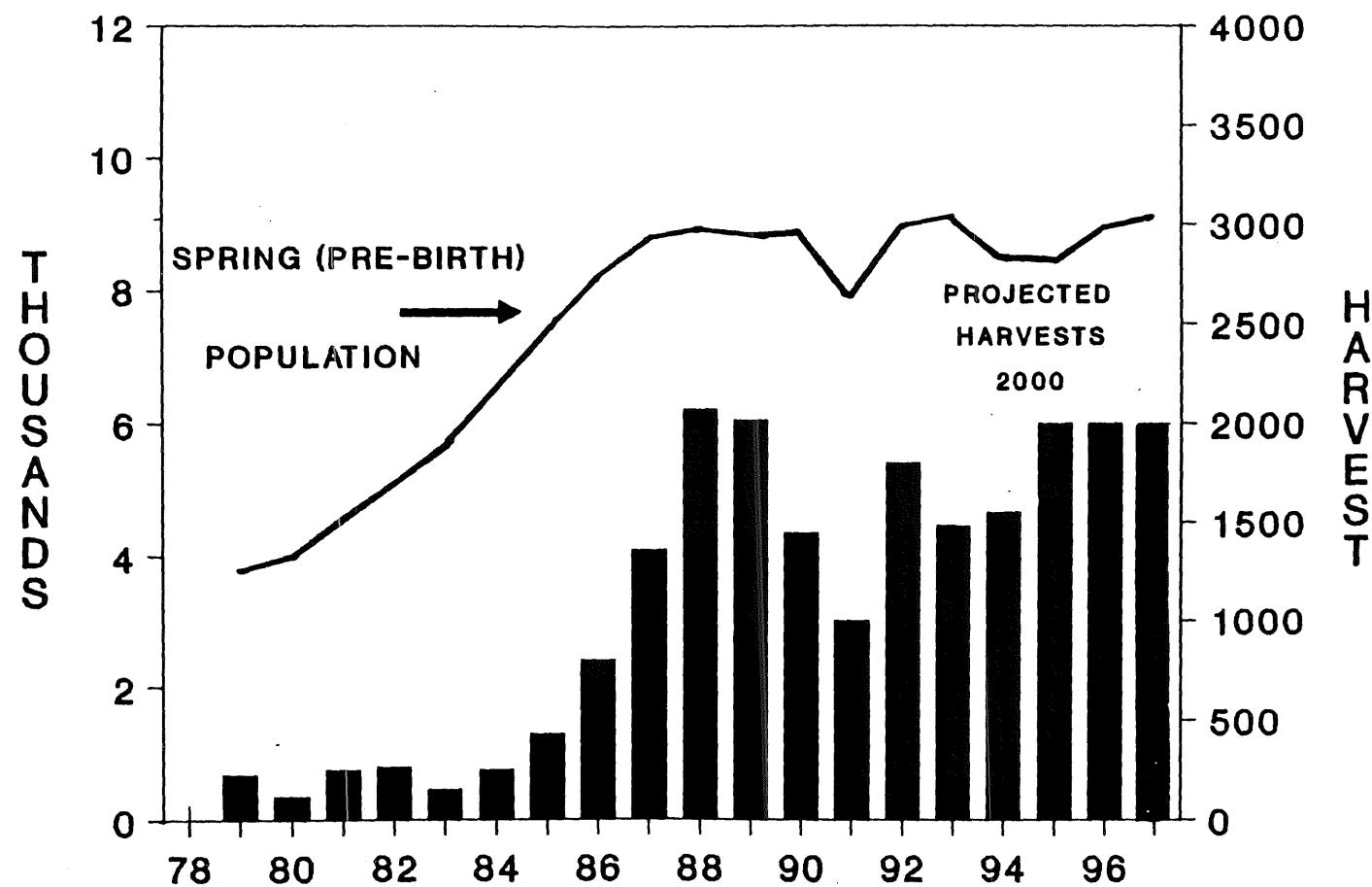


Figure 19. Population modeling summaries for pine marten, 1979-97.

Table 25. Pine marten harvest, carcass collection, and pelt price data, 1985-94.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Season	11/30-12/15	11/29-12/14	11/28-12/13	11/26-12/11	12/ 2-12/17	12/ 1-12/16	11/30-12/15	11/28-12/13	12/ 4-12/19	12/3-12/18
Limit	1	1	1	2	2	2	1	2	2	2
Registered take	430	798	1,363	2,072	2,119	1,349	656	1,601	1,436	1,527
% of available fall population harvested ¹	6	9	16	20	20	16	12	17	22	18
No. carcasses examined ²	507	884	1,754	1,977	1,014	1,375	716	1,661	1,396	1,452
% juveniles	73	64	66	66	68	48	74	65	57	58
% 1.7 yrs.	18	21	18	11	12	18	9	18	20	15
% ≥ 2.7 yrs.	9	15	16	23	20	34	17	17	23	27
juv.:adult female ratio	17.0:1	12.3:1	11.2:1	8.6:1	9.7:1	3.6:1	16.1:1	15.1:1	7.5:1	6.4:1
% male juveniles	69	65	65	58	57	59	69	63	61	62
% male 1.7 yrs.	68	71	67	50	63	54	71	70	71	76
% male ≥ 2.7 yrs.	82	81	75	66	65	61	72	75	67	67
% males overall	70	69	67	59	59	59	70	66	64	66
Pelt price: male	\$30	\$36	\$43	\$50	\$48	\$44	\$40	\$28	\$36	\$34
female	\$28	\$27	\$39	\$43	\$47	\$41	\$27	\$25	\$30	\$28

1 estimated from population model

2 may exceed registration totals due to harvests by Indians, accidental catches, etc.

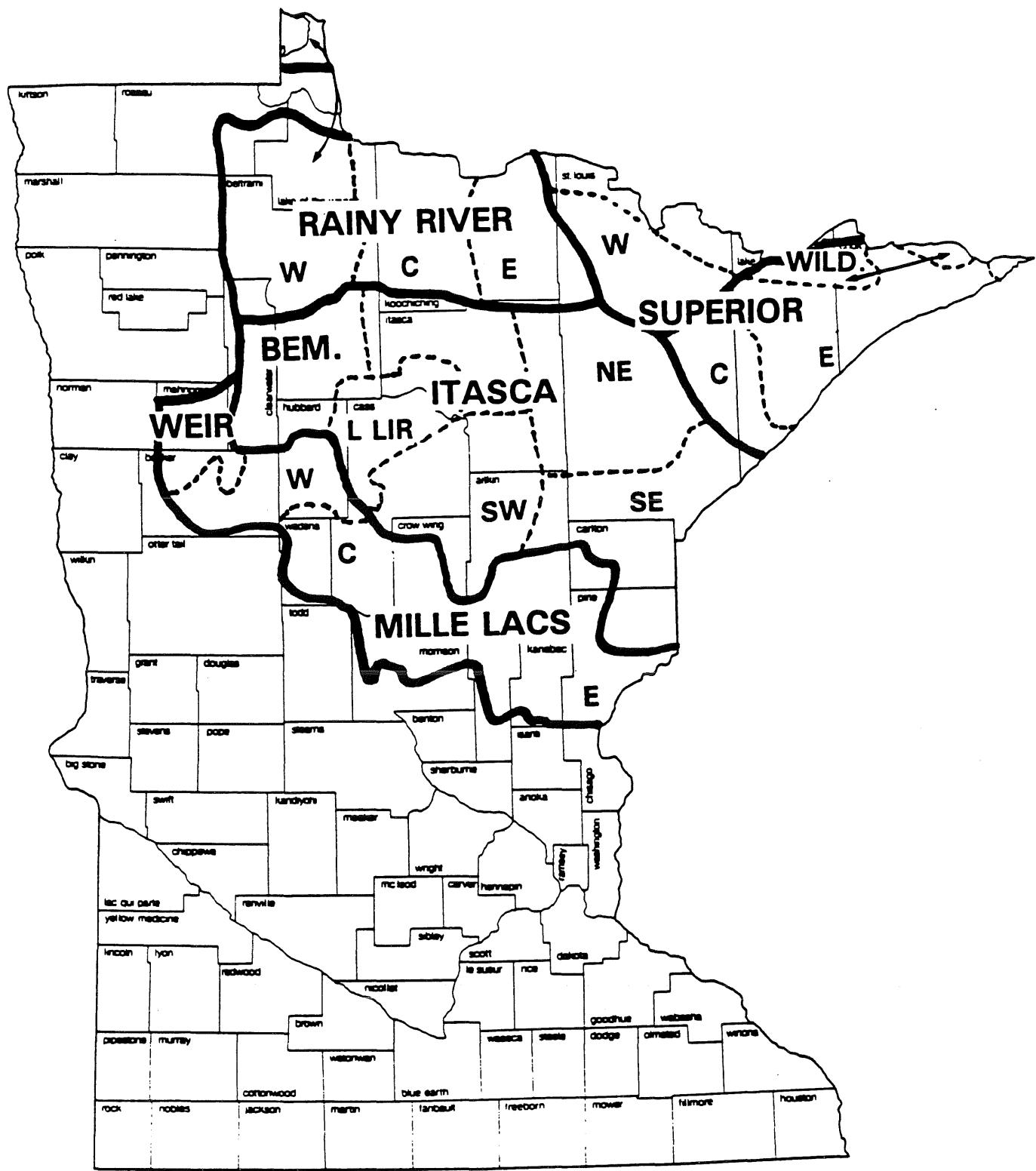


Figure 20. Deer Management Units (DMU) and sub-DMU's in the Forest Zone.

Table 26. Spring white-tailed deer densities estimated from population modeling in Deer Management Units of Minnesota's Forest zone, 1984-95*

Permit Area DMU	Deer per square mile											
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Permit Area 167-169	19	20	17	18	19	18	20	21	22	21	21	21
Permit Area 170-171	17	19	18	19	21	19	20	21	22	20	20	21
Permit Area 172	30	33	30	32	35	31	34	36	35	32	32	32
Permit Area 173-174	22	24	23	25	28	25	28	30	26	25	25	26
Permit Area 175-179	12	14	13	14	15	13	14	14	15	15	15	16
Permit Area 180-184, & 199	13	15	15	16	17	15	16	16	16	16	16	17
Permit Area 197-198	9	10	10	11	11	10	11	12	13	13	14	15
Permit Area 284-286	16	16	15	16	18	16	18	20	20	19	19	20
ITASCA DMU	15	17	16	17	18	16	18	19	19	18	18	19
Permit Area 154-156	14	16	17	19	21	19	21	22	20	17	16	16
Permit Area 157-158	20	21	23	26	28	31	33	35	31	25	24	23
Permit Area 159	23	25	27	31	33	36	39	41	29	27	27	28
Permit Area 244	14	14	14	15	17	16	19	22	23	20	19	20
Permit Area 245	18	18	17	17	18	17	19	21	21	18	17	18
Permit Area 246	18	18	17	17	18	17	19	21	21	18	17	18
Permit Area 247	18	19	19	20	21	21	23	24	24	23	22	21
Permit Area 248	15	15	15	16	17	17	19	21	20	20	19	19
Permit Area 249	11	11	12	12	13	14	15	17	16	14	13	13
Permit Area 297-298	11	12	12	13	13	12	13	13	14	14	13	14
MILLE LACS DMU	16	17	17	18	20	20	22	23	21	19	18	18
Permit Area 104-106	9	10	10	11	11	10	11	11	12	11	12	13
Permit Area 107-109, & 195	9	10	9	10	11	10	11	11	12	12	14	15
Permit Area 110	20	20	20	22	23	22	24	26	27	24	24	25
Permit Area 211-213	11	10	9	10	11	10	11	12	13	12	12	13
RAINY RIVER DMU	10	10	10	11	11	10	11	12	13	12	13	14
Permit Area 119-121	12	14	15	16	17	15	17	18	18	18	17	18
Permit Area 122-125	8	9	9	10	10	9	9	9	9	9	8	8
Permit Area 126, 128-129	4	4	5	6	6	6	6	5	4	4	4	5
SUPERIOR DMU	8	9	10	10	11	10	11	11	11	10	10	10

* Historical density figures may differ from those previously published because of annual recalculation as more accurate modeling data are available.

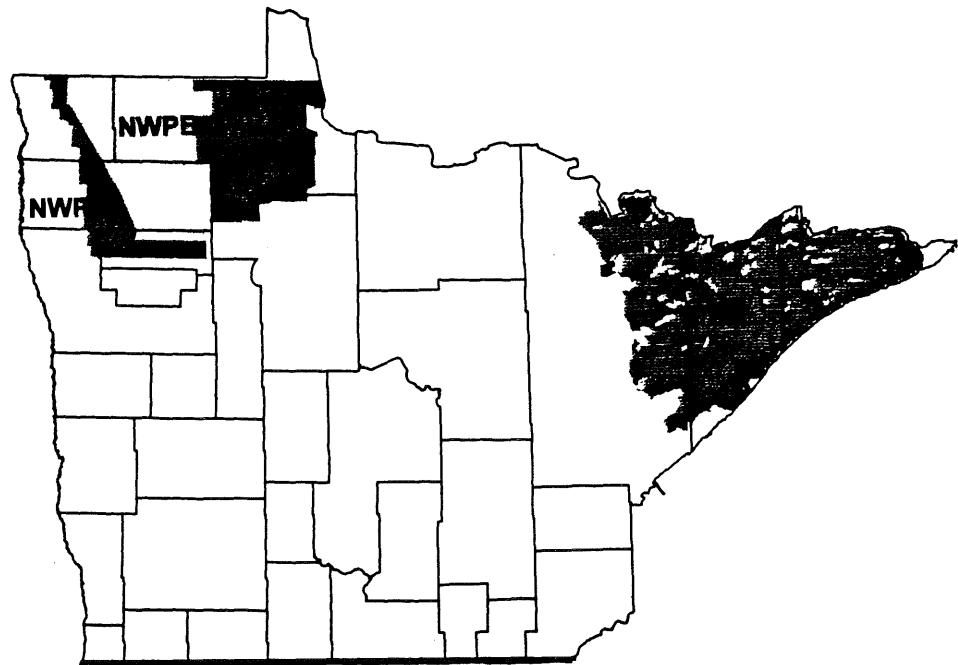


Figure 21. Aerial moose survey area boundaries.

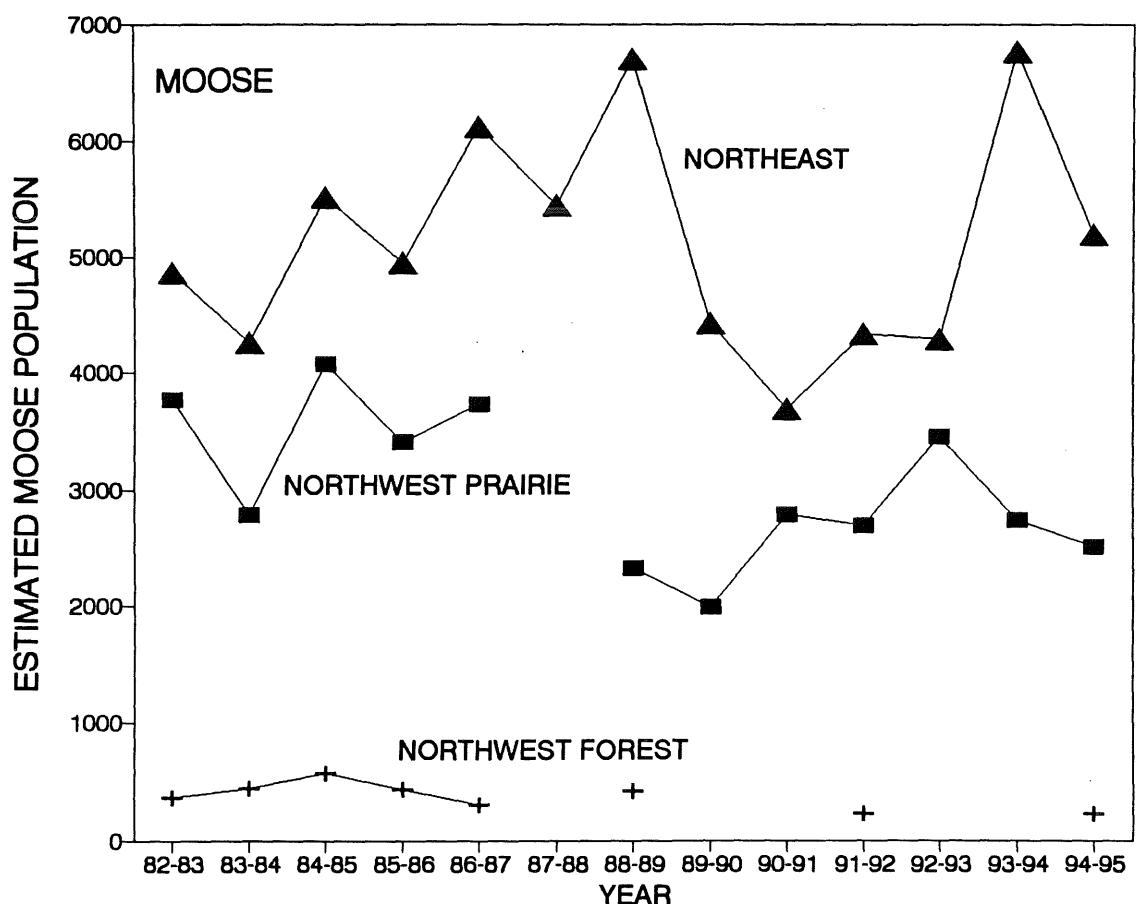


Figure 22. Moose population trends by survey area in northern Minnesota. Trend lines are broken where survey information was not collected.

Table 27. Moose population estimates from aerial moose survey in Minnesota, 1982-95.

Year	<u>Population Estimate by Survey Area (+90% CI)</u>		
	Northwest Prairie	Northwest Forest	Northeast
1982-83	3772 (930)	370 (124)	4877 (999)
1983-84	2784 (567)	446 (139)	4274 (925)
1984-85	4086 (518)	578 (148)	4451 (\pm 774)
1985-86	3415 (412)	433 (100)	4918 (\pm 1029)
1986-87	3740 (747)	307 (83)	5994 (\pm 1438)
1987-88	no survey	no survey	5492 (\pm 1090)
1988-89	2328 (474)	419 (153)	6938 (\pm 2502)
1989-90	1985 (435)	no survey	4492 (\pm 1227)
1990-91	2771 (817)	no survey	3572 (\pm 1670)
1991-92	2678 (\pm 629)	223 (\pm 65)	4362 (\pm 1323)
1992-93	3452 (\pm 640)	no survey	4292 (\pm 1371)
1993-94	2735 (\pm 491)	no survey	6768 (\pm 1807)
1994-95	2500*	229 (\pm 88)	5193 (\pm 1516)
change 1993-94 to 1994-95	- 9%		- 23%

* The Northwest Prairie (NWP) survey area was re-stratified and split into two separate survey areas, the Northwest Prairie East (NWPE) and the Northwest Prairie West (NWPW). Results from these two areas were combined to give the NWP population estimate.

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Table 28. Estimated spring duck populations of selected species in Minnesota, 1975-95.

Species	Year	Unadjusted population index	Visibility factor	Adjusted population estimate (thousands)
Mallard	1975	55,093	3.19	176
	1976	69,844	1.69	118
	1977	60,617	2.21	134
	1978	56,152	2.61	147
	1979	61,743	2.57	159
	1980	83,775	2.05	172
	1981	79,562	1.95	155
	1982	51,655	2.33	121
	1983	73,424	2.12	156
	1984	94,514	1.99	188
	1985	96,045	2.26	217
	1986	108,328	2.16	235
	1987	165,881	1.16	192
	1988	155,453	1.75	272
	1989	124,362	2.19	273
	1990	140,879	1.65	232
	1991	128,315	1.75	225
	1992	144,125	2.50	360
	1993	123,771	2.47	306
	1994	138,482	3.08	426
	1995	142,557	2.24	319
Blue-winged teal	1975	45,948	3.95	181
	1976	89,370	4.87	436
	1977	37,391	3.86	144
	1978	28,491	8.53	243
	1979	46,708	5.21	243
	1980	50,966	6.49	331
	1981	64,546	2.59	167
	1982	42,772	4.75	203
	1983	42,728	2.81	120
	1984	89,896	2.82	254
	1985	90,453	2.91	264
	1986	68,235	2.69	183
	1987	102,480	1.99	204
	1988	101,135	2.38	240
	1989	90,300	3.16	286
	1990	107,183	3.09	331
	1991	91,495	2.90	265
	1992	93,107	3.83	357
	1993	64,670	4.02	260
	1994	70,324	5.48	385
	1995	47,737	4.40	210

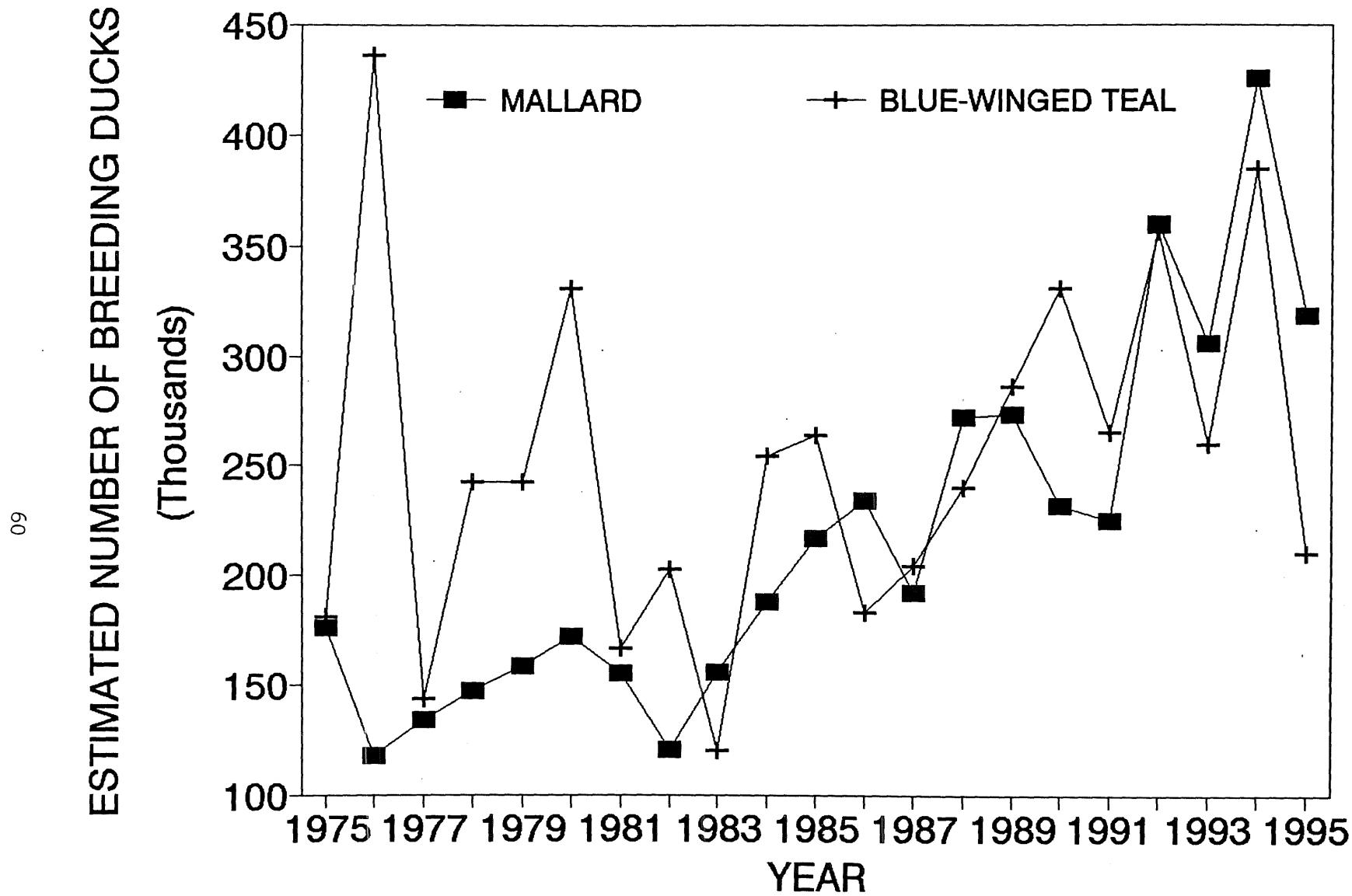


Figure 23. Estimated number of mallards and blue-winged teal breeding in Minnesota, 1975-95.

Table 29. Winter population estimates (post hunting season) of the Canada goose eastern prairie flock, 1963-94 (taken from: U.S. Fish and Wildlife Service/Canadian Wildlife Service. 1995. Waterfowl population status, 1995. July 1995. 45pp).

Year	Population
1963	110,000
1964	103,000
1965	104,000
1966	121,000
1967	145,000
1968	134,000
1969	107,000
1970	121,000
1971	152,000
1972	177,000
1973	187,000
1974	188,000
1975	199,000
1976	254,000
1977	270,000
1978	207,000
1979	172,000
1980	151,000
1981	175,000 ^a
1982	210,000
1983	163,000 ^b
1984	168,000
1985	169,000
1986	183,000
1987	228,000
1988	184,000
1989	325,000
1990	218,000
1991	189,000
1992	146,000
1993	116,000
1994	234,000

^a In 1983, U.S.F.W.S. revised a previously published estimate (145,000) due to supplemental information.

^b Supplemental information suggests that the 1983 population was 170,000 - 190,000 birds.

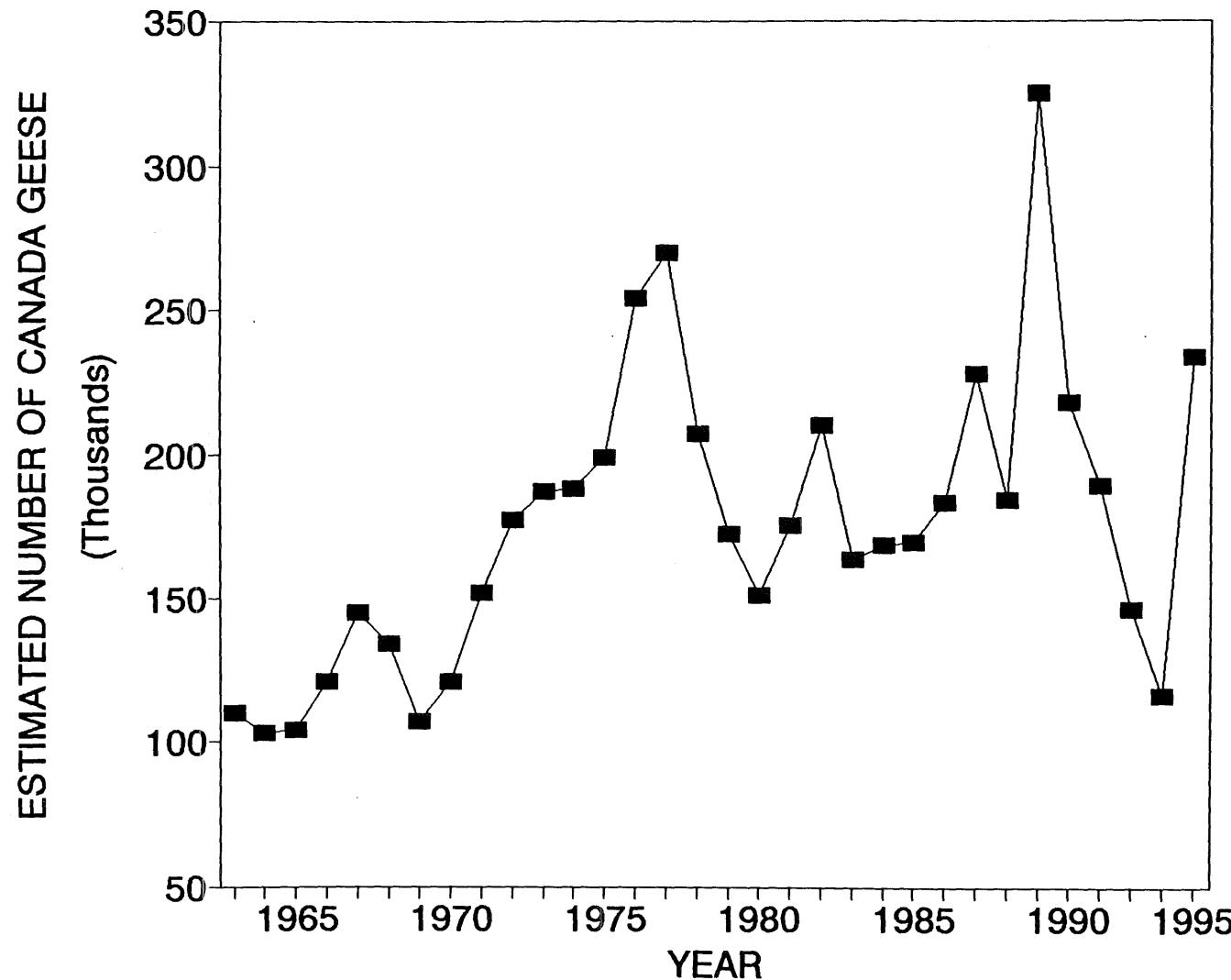


Figure 24. Winter population estimates of the Eastern Population of Canada geese, 1963-95 (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service reports 1995. Waterfowl population status, 1995. July 1995. 45pp).

Table 30. Estimated number of May ponds (adjusted for visibility) in Prairie Canada (portions of Alberta, Saskatchewan and Manitoba) 1961-95 and north-central U.S. (North Dakota, South Dakota and Montana) 1974-95. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service, 1995. Waterfowl population status, 1995. July 1995. 45pp).

Year	<u>Ponds (thousands)</u>	
	Prairie Canada	North Central U.S. ^a
1961	2,006	--
1962	2,531	--
1963	2,499	--
1964	3,445	--
1965	4,415	--
1966	4,672	--
1967	4,732	--
1968	1,938	--
1969	3,530	--
1970	4,957	--
1971	4,096	--
1972	4,065	--
1973	2,937	--
1974	6,693	1,509
1975	6,267	1,911
1976	5,057	1,392
1977	2,278	771
1978	3,622	1,590
1979	4,859	1,522
1980	2,141	761
1981	1,443	683
1982	3,185	1,458
1983	3,906	1,259
1984	2,458	1,766
1985	4,283	1,327
1986	4,025	1,735
1987	2,598	1,348
1988	2,110	794
1989	1,696	1,290
1990	2,817	691
1991	2,494	706
1992	2,784	825
1993	2,268	1,793
1994	3,769	2,216
1995	3,893	2,443
Average	3,359	1,297
1995	3,893	2,443
% Change in 1995 from:		
1994	+ 3	+10
Average	+16	+88

^a No comparable survey data available for the north-central U.S. during 1961-73.

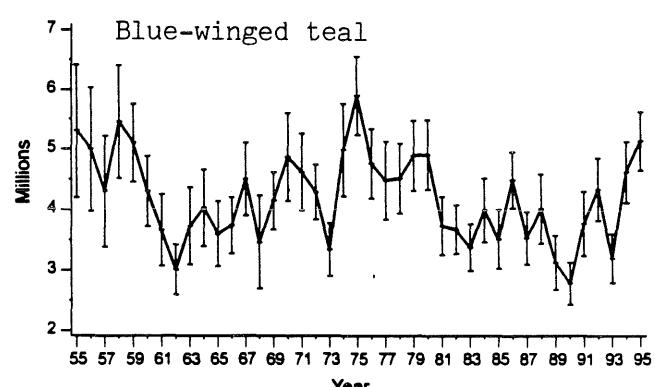
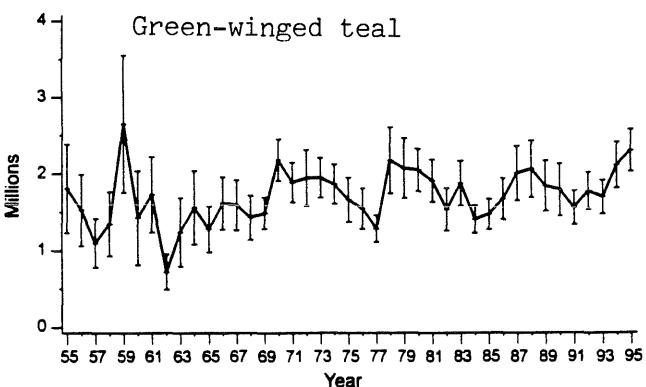
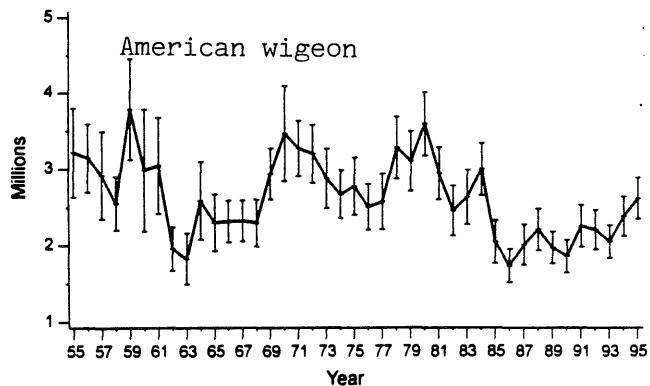
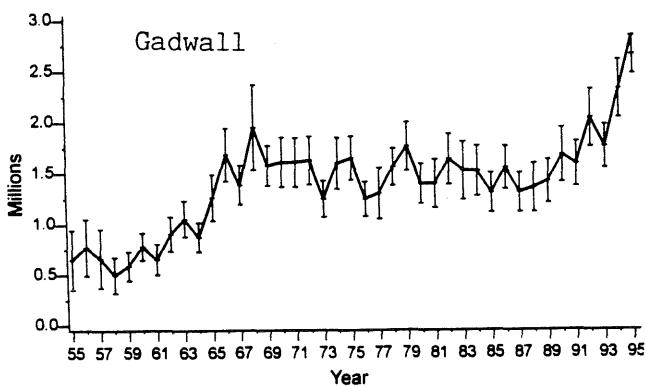
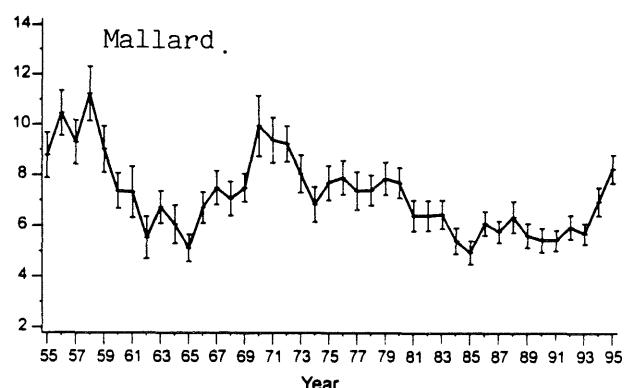
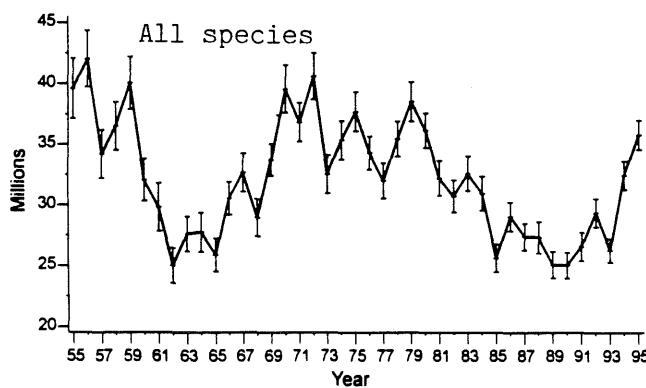


Figure 25. Estimates of North American breeding populations of selected ducks and number of water areas in May in Prairie Canada and Northcentral U.S. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service 1995. Waterfowl population status, 1995 July 1995. 39 pp).

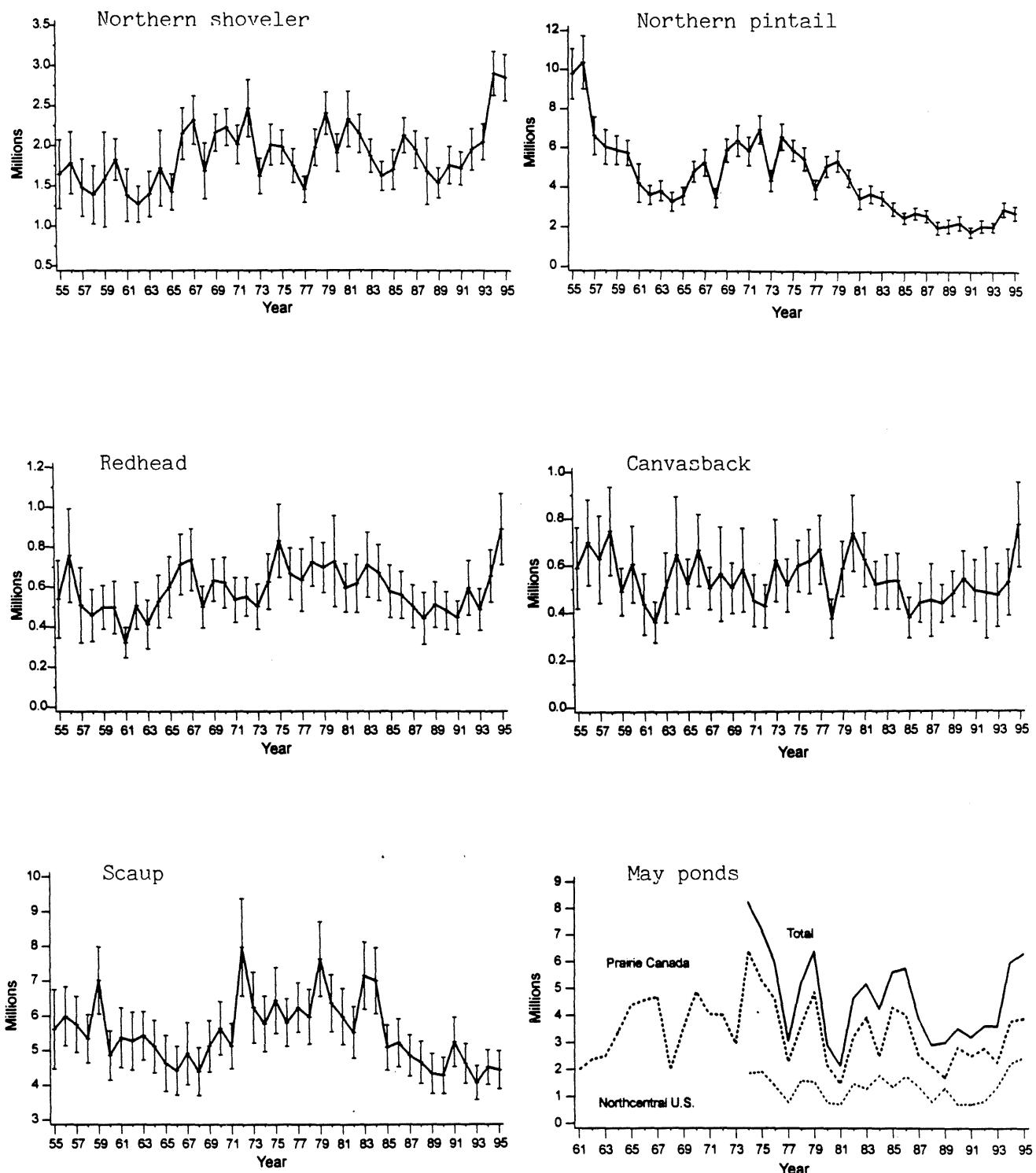


Figure 25. (continued)

Table 31. North American breeding population estimates for 10 species of ducks, 1955-95. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service, 1995. Waterfowl population status, 1995. July 1995. 45pp). In thousands.*

Year	Mallard		Gadwall		American wigeon		Green-winged teal		Blue-winged teal		Northern shoveler		Northern pintail		Redhead		Canvasback		Scaup	
	N	SE*	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE
1955	8355.9	383.5	662.7	56.0	3066.7	269.0	1822.8	265.0	5381.2	368.5	1571.3	108.6	9387.1	554.1	572.1	69.0	599.2	68.3	5608.9	453.3
1956	9841.5	394.6	782.6	51.4	3117.6	321.7	1479.5	153.2	4762.9	308.3	1630.4	86.1	9897.3	605.6	755.1	94.5	695.8	80.5	5733.8	571.9
1957	9151.3	398.9	691.0	75.3	2851.5	296.8	1053.3	143.5	4312.4	263.2	1458.7	110.4	6310.7	421.1	542.2	68.2	614.5	91.8	5745.3	436.9
1958	10993.6	521.8	453.8	36.4	2421.3	244.3	1326.1	223.1	5164.7	386.8	1187.3	143.0	5552.4	363.2	443.1	55.4	742.4	97.0	5285.8	473.0
1959	8746.1	649.3	527.2	59.8	3703.0	386.1	2601.1	505.1	5046.2	483.0	1455.8	288.1	5482.9	383.0	492.8	89.1	480.6	51.4	6961.3	602.3
1960	7164.1	347.5	720.9	54.8	2936.5	411.3	1389.8	349.4	4184.7	296.2	1743.1	124.4	5414.2	288.2	494.7	70.3	599.5	81.2	4825.9	411.8
1961	6912.0	502.3	594.3	66.7	2817.3	240.7	1708.7	272.7	3655.0	322.3	1256.4	127.9	3767.6	265.8	319.1	40.8	427.6	63.7	5335.3	459.6
1962	5139.4	271.7	846.3	77.0	1882.0	142.8	700.3	131.4	2940.2	190.0	1182.5	88.5	3395.4	199.2	503.3	69.1	353.7	41.3	5240.3	404.2
1963	6723.2	418.4	1092.0	91.0	1705.9	142.7	1155.3	199.7	3680.5	307.1	1278.3	120.1	3621.9	205.5	413.0	59.8	499.4	73.1	5396.4	393.2
1964	5740.2	368.6	825.1	61.6	2494.7	311.7	1505.0	256.6	3960.8	306.6	1608.1	233.8	3013.3	184.2	526.5	70.3	649.1	127.1	5057.9	387.4
1965	5101.2	246.1	1269.7	112.7	2312.3	192.6	1237.2	126.6	3569.6	253.7	1372.2	84.8	3549.4	186.8	599.0	76.2	520.2	50.0	4651.5	396.2
1966	6679.7	302.3	1672.3	130.1	2281.9	134.4	1579.6	185.0	3718.3	218.7	2102.8	154.8	4763.7	242.9	712.8	76.5	658.3	76.7	4431.8	320.6
1967	7470.4	334.5	1384.6	97.8	2320.0	139.5	1588.1	164.5	4509.2	310.9	2291.0	155.8	5270.4	327.5	734.2	78.9	500.2	45.0	4931.7	453.8
1968	7018.5	328.0	1947.0	213.7	2281.5	154.4	1405.3	144.3	3459.0	383.2	1645.6	165.7	3469.7	224.7	492.5	51.3	561.3	100.5	4360.3	323.9
1969	7536.0	274.6	1573.0	100.2	2918.6	170.2	1467.5	94.4	4132.7	239.4	2145.2	114.8	5900.2	280.2	632.5	53.5	500.8	53.4	5130.6	360.8
1970	9960.0	616.1	1606.1	123.5	3447.0	317.6	2171.0	133.4	4858.1	372.4	2220.1	116.3	6369.3	395.6	624.2	64.4	577.7	90.3	5633.9	397.4
1971	9305.9	438.2	1602.5	122.9	3281.3	182.3	1881.3	126.6	4606.5	316.9	2005.2	121.4	5873.7	369.3	534.4	56.7	443.8	48.6	5063.1	332.0
1972	9254.9	363.0	1620.5	120.1	3172.4	192.6	1894.9	189.0	4276.5	229.8	2441.4	182.0	7018.1	367.2	550.7	49.4	426.2	46.0	7932.0	721.7
1973	8060.2	372.9	1246.5	90.4	2663.7	200.0	1935.9	132.3	3333.8	220.4	1624.3	111.5	4351.1	266.9	498.2	57.8	617.0	89.3	6221.5	532.6
1974	6681.0	309.5	1591.8	128.1	2665.1	155.9	1839.9	129.8	4968.2	389.8	2006.3	128.6	6583.0	342.8	626.6	70.6	504.2	50.6	5720.4	408.8
1975	7494.0	306.8	1641.0	108.9	2692.0	185.9	1666.5	142.9	5828.8	335.6	1962.1	107.3	5878.1	267.3	828.7	93.3	591.3	49.6	6426.9	481.3
1976	7894.4	306.8	1244.7	85.5	2476.1	145.2	1535.8	131.9	4746.6	288.0	1755.8	106.9	5475.1	299.0	668.4	66.1	609.5	65.0	5778.7	341.0
1977	7395.8	366.4	1311.5	126.8	2559.8	180.9	1290.6	84.9	4589.0	347.9	1475.1	85.9	3935.2	246.7	637.1	79.7	667.0	70.3	6246.8	355.9
1978	7353.4	273.2	1560.5	92.2	3285.5	205.3	2193.9	215.4	4471.0	288.7	1977.6	115.6	5105.5	267.5	737.8	63.4	369.1	32.1	5935.8	399.3
1979	7815.5	295.1	1750.5	121.1	3087.3	193.5	2018.9	198.5	4860.5	291.8	2385.5	134.7	5382.2	274.2	694.7	63.6	572.8	53.5	7540.3	567.5
1980	7570.0	267.9	1390.6	98.7	3557.6	207.6	1993.7	137.5	4884.1	290.8	1901.9	119.3	4513.8	228.5	753.1	118.7	726.7	79.1	6314.2	415.6
1981	6367.1	274.1	1401.5	119.9	2923.5	167.5	1851.4	138.6	3725.9	236.5	2324.7	177.4	3472.3	260.5	595.7	61.8	610.3	52.3	5917.6	410.0
1982	6253.5	262.0	1637.3	126.4	2440.4	160.8	1542.9	143.1	3656.8	193.0	2140.6	121.6	3708.5	226.5	616.8	74.0	510.3	43.6	5468.1	371.8
1983	6312.9	249.8	1517.0	144.2	2605.9	176.9	1835.7	146.2	3366.4	188.1	1870.2	105.2	3506.1	178.0	708.7	83.0	522.7	52.6	7135.6	477.8
1984	5246.6	209.8	1531.6	126.0	2987.0	169.2	1361.0	84.9	3956.2	260.7	1619.5	91.8	2968.7	166.6	673.0	71.7	520.1	51.2	6909.1	477.3
1985	4754.2	184.8	1304.4	98.1	2039.7	137.8	1435.3	95.9	3459.1	231.6	1696.7	125.6	2511.4	142.7	578.6	66.8	373.0	34.0	5038.1	324.0
1986	6835.6	333.6	1539.6	107.5	1731.7	110.4	1681.7	137.1	4463.4	237.8	2117.7	112.4	2736.5	152.1	559.9	60.5	436.8	41.6	5204.3	354.1
1987	5612.8	209.6	1310.8	97.4	1982.3	131.3	2003.1	180.7	3517.6	221.7	1951.1	118.8	2629.2	159.4	502.3	54.9	450.5	77.9	4837.4	305.1
1988	6331.3	311.8	1349.2	120.6	2194.4	140.1	2057.9	189.2	3975.4	292.4	1680.2	210.5	2011.2	163.9	441.1	66.2	436.2	40.6	4683.8	309.1
1989	5649.7	245.8	1415.9	106.9	1973.9	106.1	1842.7	166.5	3128.3	230.7	1539.5	97.0	2112.5	181.3	510.9	58.6	477.9	48.5	4344.3	291.5
1990	5452.1	238.5	1672.0	135.8	1860.2	108.3	1789.7	172.8	2776.4	178.7	1759.4	118.6	2256.7	183.3	480.9	48.2	539.3	60.3	4293.7	265.0
1991	5444.4	206.6	1583.6	111.8	2254.1	139.5	1557.9	111.3	3763.7	270.7	1716.2	104.6	1803.4	131.3	445.6	42.1	491.2	66.4	5255.4	364.7
1992	5976.1	241.0	2032.8	143.4	2208.4	131.9	1773.1	123.7	4333.1	263.2	1954.4	132.1	2098.1	161.0	595.6	69.7	481.5	97.3	4639.2	291.9
1993	5708.3	208.9	1755.2	107.9	2053.0	109.3	1694.5	112.7	3192.9	205.6	2046.5	114.3	2053.4	124.2	485.4	53.1	472.1	67.6	4080.1	249.4
1994	6980.1	282.8	2318.3	145.2	2382.3	130.3	2108.4	152.2	4616.2	259.2	2912.0	141.4	2972.3	188.0	653.5	66.7	525.6	71.1	4529.0	253.6
1995	8269.4	287.5	2835.7	187.5	2614.5	136.3	2300.6	140.3	5140.0	253.3	2854.9	150.3	2757.9	177.6	888.5	90.6	770.6	92.2	4446.4	277.6
1955-94	7217		1356		2634		1697		4169		1859		4494		579		537		5539	
1955-94 Avg.																				
Percent change in 1995 from:																				
1994	+18		+22		+10		+ 9		+11		- 2		- 7		+36		+47		- 2	
1955-94 Avg.	+15		+109		- 1		+36		+23		+54		-39		+53		-44		-20	

* All duck indexes adjusted for visibility bias.

* 95% CI = $N \pm 1.96 \times SE$ Example: for 1992, the Mallard breeding population is estimated to be in a range between 5503.7 - 6448.5, or $5976.1 \pm 1.96 \times 241.0$.
 90% CI = $N \pm 1.645 \times SE$



Figure 26. Woodcock breeding range, singing ground survey coverage, and woodcock management regions (from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

Table 32. Trends (% change per year^a) in number of American woodcock heard in singing-ground survey as determined by route regression technique by management region, state, and province. (from: Bruggink, John G. and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

Management Unit/State	2 year N ^b	(1994-95) % Change	Routes Run ^c	11 year N	(1985-95) % Change	28 year N	(1968-95) % Change
CENTRAL	197	5.6	411	464	- 2.8*** ^d	580	- 1.4***
IL	3	- 0.7	13	14	-17.3	23	3.5
IN	2	0.0	24	13	0.4	38	- 4.0
MB	4	- 7.7	15	6 ^e	2.8		
MI	65	- 2.1	106	128	- 2.3***	140	- 1.1**
MN	34	4.6	73	73	- 2.1**	92	- 1.0
OH	10	- 9.3	37	30	- 1.6	51	- 5.8**
ON	40	2.2	72	120	- 3.2***	135	- 1.1***
WI	39	4.1	72	80	- 4.7***	95	- 1.8***

68

^a Mean of weighted route trends within each State, Province, or Region. To estimate the total percent change over several years, use: $100(\% \text{ change}/100+1)^y - 100$ where y is the number of years.

^b Number of routes comparable in at least two years with one or more counts greater than zero.

^c Total number of routes in 1995 for which data were received prior to 1 June.

^d Indicates slope is significantly different from zero: * $P \leq 0.10$; ** $P \leq 0.05$; *** $P \leq 0.01$; significance levels are approximate for states where $N < 10$.

^e Manitoba began participating in the Singing-ground survey in 1990.

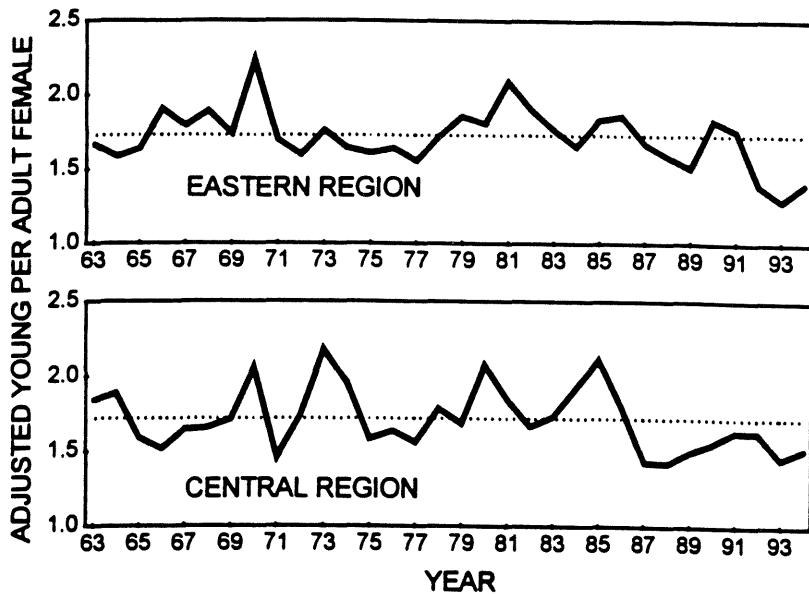


Figure 27. Adjusted index of American woodcock recruitment, 1963-94. Dashed line is the index based on 1963-94 average. (from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

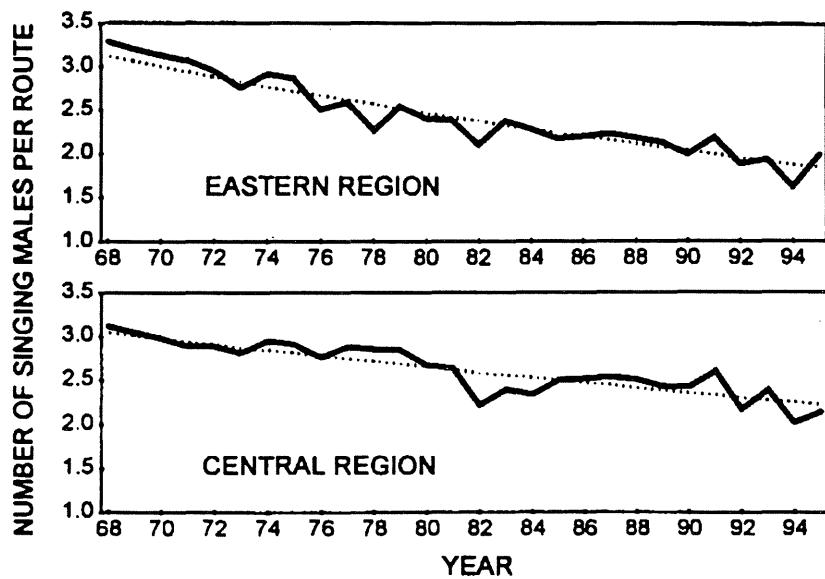


Figure 28. American woodcock singing ground survey long term trends and annual indices, 1968-95. (from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

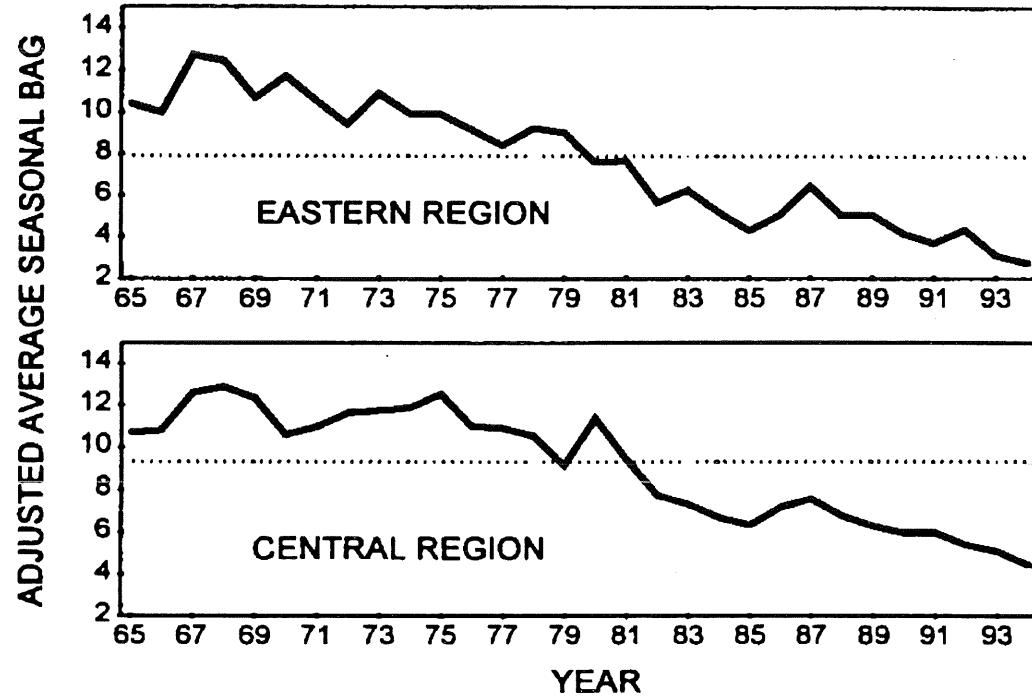
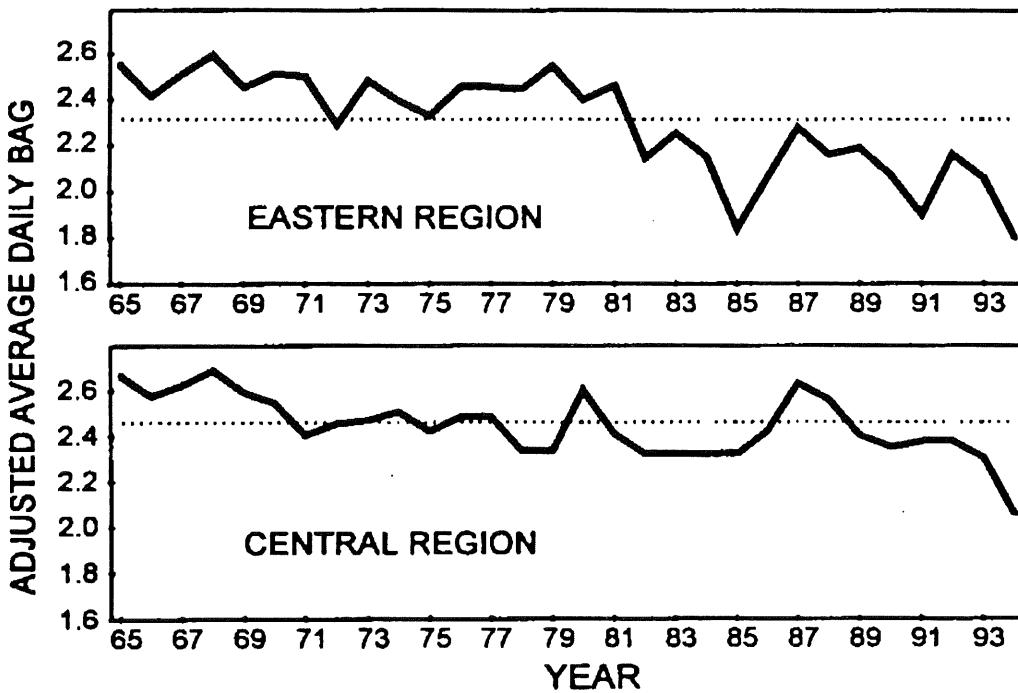


Figure 29. Adjusted indices of daily and seasonal hunting success of American woodcock, 1965-94, Base year is 1969. Dashed line is 1965-94 average. (from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

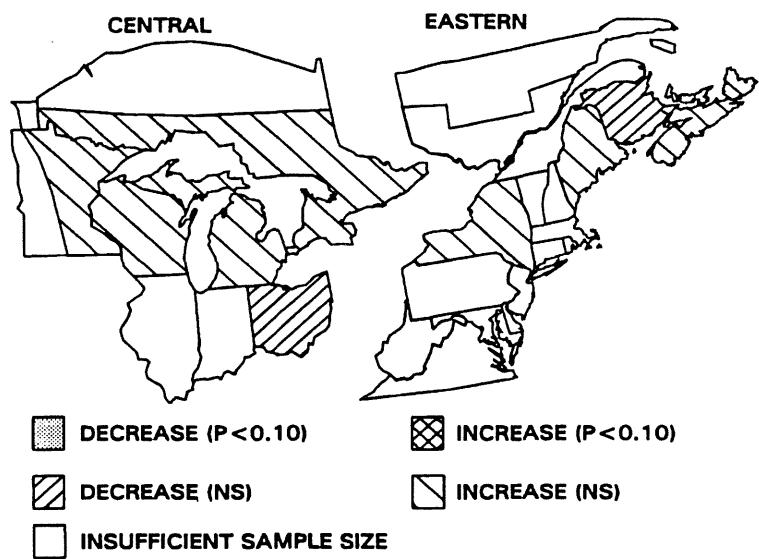


Figure 30. Short-term trends in number of American woodcock heard on the Singing-ground Survey; 1994-95.(from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

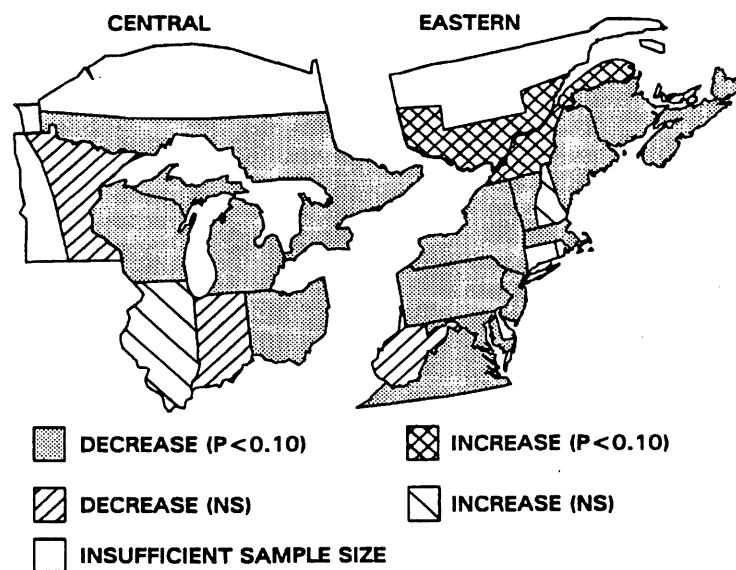


Figure 31. Long-term trends in number of American woodcock heard on the Singing-ground Survey; 1968-95 (from: Bruggink, John G., and William L. Kendall 1995. American woodcock harvest and breeding population status, 1995. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 15pp).

NONGAME WILDLIFE
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Table 33. Minnesota Bald Eagle Nesting Activity in Four Survey Areas, 1994.

Survey Area	Occupied Breeding Areas	Successful Breeding Areas	Percent Successful	Number of Young	Young/Occupied Breeding Area	Average Brood Size
Chippewa NF	188	119	63.3	187	0.99	1.57
Superior NF	91	56	61.5	80	0.88	1.43
Voyageurs NP	22	13	59.0	21	0.95	1.61
"Other Areas"	314	---	---	---	---	---
Minnesota Total	615	---	---	---	---	---

¹ In 1994, occupancy flights were conducted statewide in early spring. Due to budget constraints within the Nongame Wildlife Program, however, productivity flights were incomplete in 1994, and the DNR was unable to determine the number of young produced in some areas of Minnesota outside the national forests, Voyageurs National Park and the national wildlife refuges. As a result, statewide reproductive success is unknown for 1994. However, limited productivity information outside the federally managed areas was obtained by ground checks or during the occupancy flight if the birds were early nesters. If adequate funds are available, productivity flights will be conducted in 1995 and alternate years thereafter, with occupancy flights continuing on a yearly basis.

Table 34. Minnesota Bald Eagle Nesting Data, 1973-1994.

Year	Breeding Areas			Young	
	Occupied ^a	Number	Percent	Per Occupied Breeding Area	Average Brood size
		Successful	Successful		
1973	115	71	62	113	1.59
1974	127	77	61	96	1.25
1975	120	87	73	145	1.67
1976	122	93	76	163	1.75
1977	156	114	73	179	1.57
1978	168	115	68	188	1.63
1979	159	111	70	196	1.77
1980	181	133	73	239	1.80
1981	190	132	69	242	1.83
1982	207	145	70	245	1.69
1983	229	170	74	321	1.89
1984	245	165	67	274	1.66
1985	250	161 ^b	71 ^b	275 ^b	1.71 ^b
1986	266	187 ^c	72 ^c	312 ^c	1.67 ^c
1987	350	227	65	360	1.59
1988	372	250	67	412	1.65
1989	390	261	67	430	1.65
1990	437	300	69	467	1.56
1991	449	322	65	496	1.54
1992 ^d	523				
1993 ^d	568				
1994 ^d	615				

^a Number of occupied breeding areas regardless of outcome.

^b These figures do not include data from 23 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

^c These figures do not include data from 9 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

^d Data incomplete for 1992 and 1993. See Table 33 for explanation.

Bald Eagles 1994

Number of Occupied Breeding Areas by County

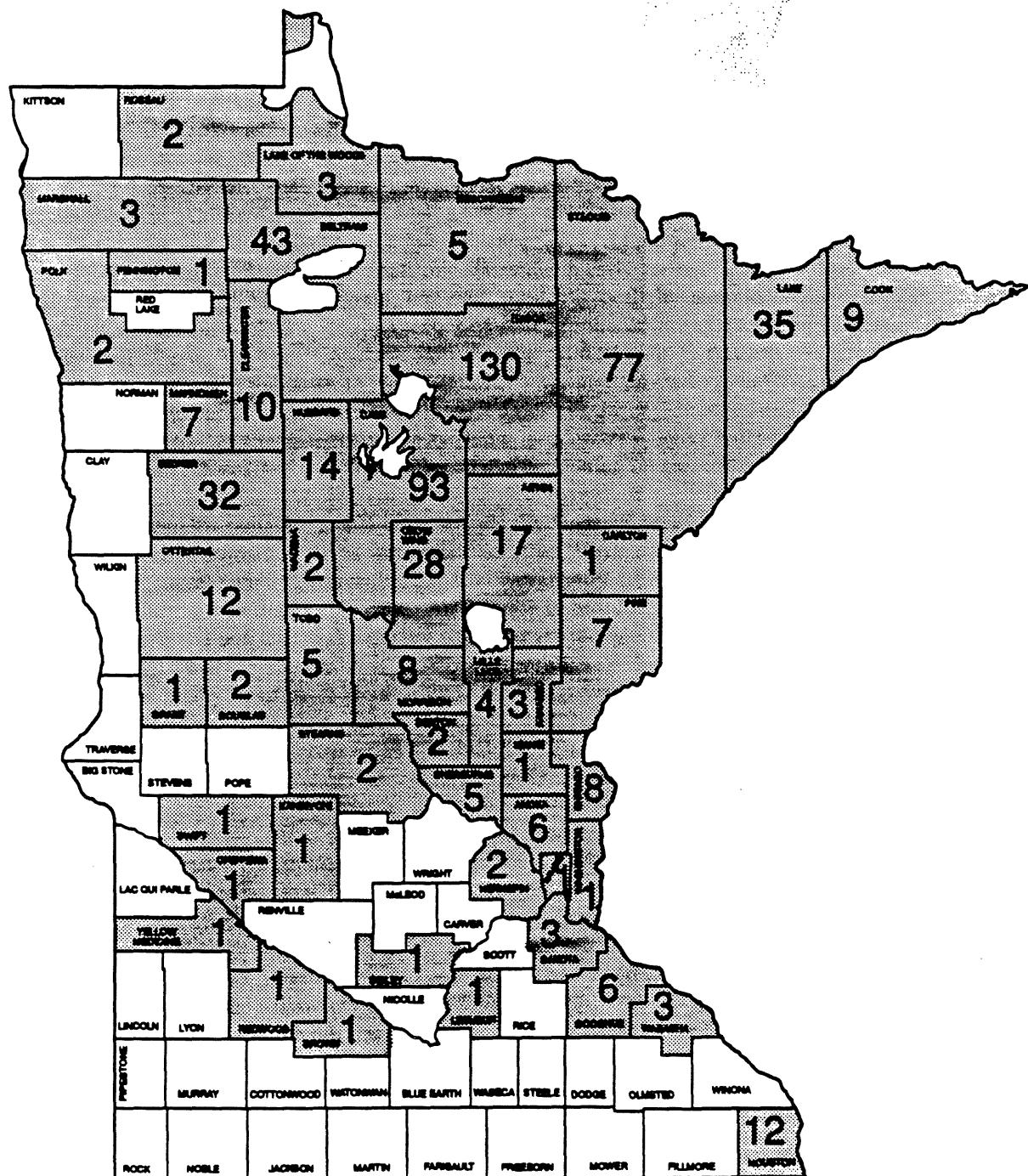


Figure 32. Number of Minnesota bald eagle occupied breeding areas by county, 1994.

HUNTING HARVEST STATISTICS
Section of Wildlife
500 Lafayette Road, Box 7
St. Paul, MN 55155
(612) 296-3344

MINNESOTA HUNTING

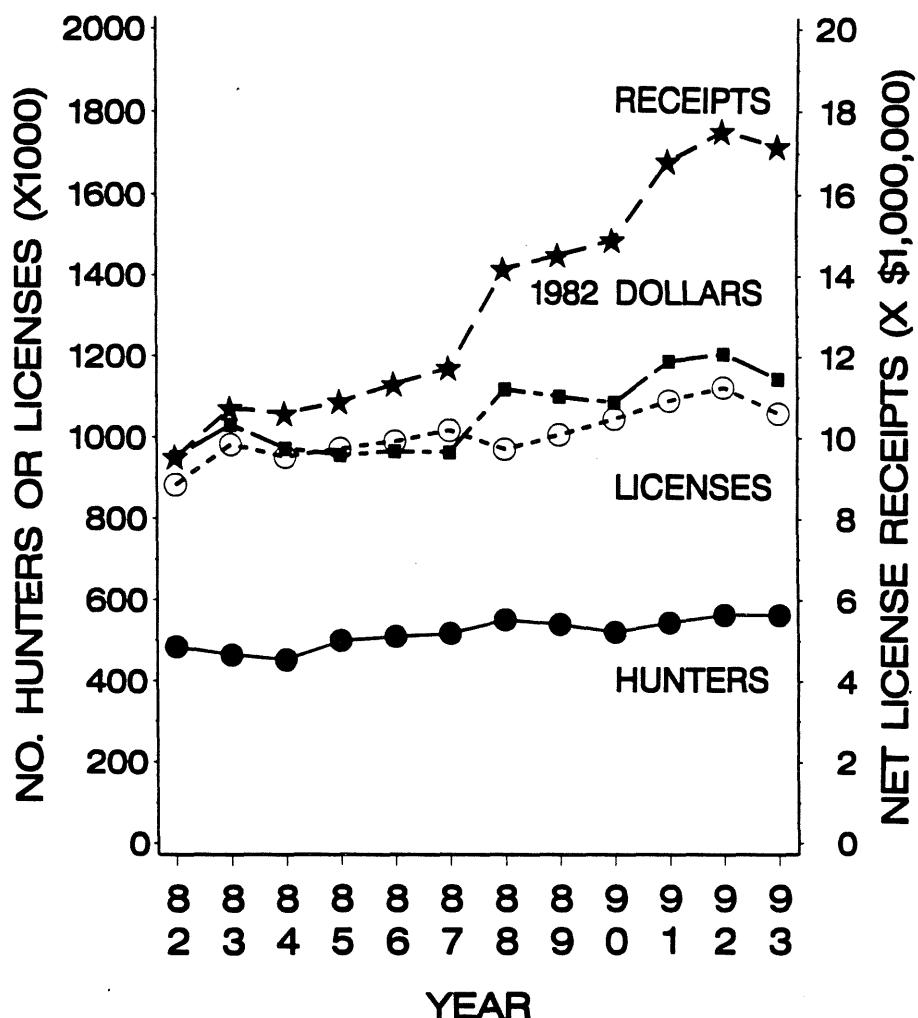


Figure 33. Minnesota hunting trends, 1982-93.

YEAR = license year (March -February)

● HUNTERS are paid license holders. A hunter is one individual regardless of the number of licenses purchased. Source: USFWS Division of Federal Aid.

○ LICENSES are the totals of hunting licenses, stamps and permits sold through the License Bureau, including duplicates but excluding trapping licenses and special goose hunt permits. Source: License Bureau.

★ RECEIPTS to the Game and Fish Fund are for all LICENSES except that bear, moose and turkey lottery licenses are also excluded because there is no good financial record for them over the entire period starting in 1982. Portion of receipts considered hunting licenses is 52.6% for individual sportsmen and 41.1% for combination sportsmen. Source: License Bureau.

■ 1982 DOLLARS are RECEIPTS expressed in constant 1982 dollars, which were calculated with Gross Domestic Product fixed-weighted price indexes of state and local government purchases. Sources: *Business Statistics 1963-91*, and *Survey of Current Business, December 1993*, and *July 1995*, U.S. Dept. of Commerce.

Note: The number of archers included in 1992 and 1993 HUNTERS was calculated by a method also used in the 1980's. Calculations for 1991, 1990 and possibly 1989, were by a different method which gave lower values. The difference is important for federal aid certification, but does not affect the impression one gets from the graph. Plotted values are the same as federal aid certifications submitted to, and on file with, the USFWS Division of Federal Aid.

Table 35. Small game hunter response to mail surveys, 1979-80 through 1994-95.

Year	Number mailed	Number not delivered	<u>Delivered questionnaires completed and returned</u>	
			Number	Percent
1979-80	5,696	443	4,504	85.7
1980-81	6,434	385	4,963	82.0
1981-82	6,656	399	5,419	86.6
1982-83	5,963	266	4,792	84.1
1983-84	4,551	269	3,325	77.7
1984-85	4,096	127	3,280	82.6
1985-86	3,370	157	2,574	80.1
1986-87	4,668	208	3,623	81.2
1987-88	5,513	248	4,191	79.6
1988-89	15,388	857	11,431	78.7
1989-90 ^a	10,893	735	7,790	76.7
1990-91 ^a	5,000	394	3,467	75.3
1991-92 ^a	5,050	387	3,541	75.9
1992-93 ^a	5,000	288	3,625	76.9
1993-94 ^a	5,011	282	3,320	70.2
1994-95 ^a	5,000	387	3,353	72.7

^a Includes resident and non-resident licensees, and excludes duplicate licenses.

Table 36. Use of small game hunter licenses, 1983-84 through 1994-95.

	Returns from mail survey	Projections from license sales
1983-84 Hunted	2,805 (84.4%)	232,973
Did not hunt	<u>520</u> (15.6%)	<u>43,061</u>
	3,325 (100.0%)	276,034
1984-85 Hunted	2,663 (81.2%)	211,740
Did not hunt	<u>617</u> (18.8%)	<u>49,024</u>
	3,280 (100.0%)	260,764
1985-86 Hunted	2,132 (82.8%)	213,883
Did not hunt	<u>442</u> (17.2%)	<u>44,342</u>
	2,574 (100.0%)	258,225
1986-87 Hunted	3,006 (83.0%)	217,504
Did not hunt	<u>617</u> (17.0%)	<u>44,549</u>
	3,623 (100.0%)	262,053
1987-88 Hunted	3,554 (84.8%)	242,875
Did not hunt	<u>635</u> (15.2%)	<u>43,395</u>
	4,189 (100.0%)	286,270
1988-89 Hunted	9,391 (82.2%)	234,833
Did not hunt	<u>2,040</u> (17.8%)	<u>50,852</u>
	11,431 (100.0%)	285,685
*1989-90 Hunted	6,924 (88.9%)	272,307
Did not hunt	<u>866</u> (11.1%)	<u>34,000</u>
	7,790 (100.0%)	306,307
1990-91 Hunted	2,798 (88.5%)	275,327
Did not hunt	<u>363</u> (11.5%)	<u>35,777</u>
	3,161 (100.0%)	311,104
1991-92 Hunted	3,004 (85.3%)	270,972
Did not hunt	<u>519</u> (14.7%)	<u>46,697</u>
	3,523 (100.0%)	317,669
1992-93 Hunted	3,008 (83.9%)	249,973
Did not hunt	<u>576</u> (16.1%)	<u>47,968</u>
	3,584 (100.0%)	297,941
1993-94 Hunted	2,787 (84.0%)	232,365
Did not hunt	<u>533</u> (16.0%)	<u>44,260</u>
	3,320 (100.0%)	276,625
1994-95 Hunted	2,826 (84.6%)	244,654
Did not hunt	<u>516</u> (15.4%)	<u>44,535</u>
	3,342 (100.0%)	289,189

* Previous years included only resident small game hunter information. For 1989 and on includes resident and non-resident information.

Excludes duplicates.

Table 37. Estimated number of hunters (thousands) for various species, 1982-83 through 1994-95.

	Estimated number of hunters (thousands)												
	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Ducks	134	117	134	122	132	114	77	84	88	100	107	109	118
Canada goose	52	41	51	55	58	56	47	50	56	56	61	62	70
Other geese	11	10	9	9	7	9	5	7	6	6	6	9	7
American coot	11	12	9	11	11	8	3	4	5	5	5	6	7
Common snipe	4	6	5	5	5	6	4	5	5	4	3	2	2
Rails/gallinules	1	2	1	1	1	1	1	1	<1	<1	<1	1	1
Crow*								9	13	12	11	10	12
American woodcock	20	16	17	19	21	27	26	30	30	27	21	17	21
Ring-necked pheasant	125	86	65	72	62	86	84	90	105	122	105	88	92
Ruffed grouse	115	78	87	94	107	132	139	163	163	146	124	102	107
Spruce grouse	13	9	12	12	12	16	15	20	19	16	13	11	12
Sharp-tailed grouse	14	9	9	10	9	10	12	14	14	14	10	8	7
Gray partridge	21	15	20	17	23	25	23	24	31	27	17	15	14
Gray squirrel	53	38	39	38	41	40	37	36	41	36	32	32	35
Fox squirrel	39	28	26	29	29	26	26	23	29	23	22	23	24
Eastern cottontail	36	29	22	22	24	26	27	24	32	31	24	21	21
White-tailed jackrabbit	11	7	6	6	4	5	5	6	7	6	5	4	4
Snowshoe hare	15	9	7	7	8	10	9	10	15	12	8	5	6
Raccoon (Sept 94-Feb95)	13	11	12	10	11	13	9	7	10	10	9	9	10
Raccoon [†] (May94- Aug94)													3
Red fox (Sept94-Feb95)	12	11	11	12	11	13	13	9	16	22	19	16	15
Red fox [†] (May94- Aug94)													3
Gray fox	3	2	3	2	2	3	3	2	3	4	3	3	2
Coyote	3	3	3	5	4	5	6	4	9	13	14	14	11
Badger	1	1	1	1	1	1	1	<1	1	<1	1	1	1

* Crow season added in 1989.

[†] Raccoon and red fox season changed to year round beginning May 1994.

Table 38. Estimated take per hunter, for respondents reporting that they hunted a particular species, 1982-83 through 1994-95.

	Estimated take per hunter												
	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Ducks	8.1	10.6	10.8	9.1	9.0	8.2	6.9	6.5	7.0	8.0	8.1	7.6	8.1
Canada goose	1.6	1.6	1.6	1.9	1.8	1.9	2.4	2.1	2.3	2.6	2.5	2.5	2.4
Other geese	0.7	0.7	0.8	1.2	0.5	1.1	0.9	1.2	1.2	1.0	0.9	1.1	0.8
American coot	4.3	4.7	4.9	4.4	5.3	3.6	2.6	2.5	3.6	2.7	4.7	2.7	3.2
Common snipe	3.2	2.8	4.0	3.2	3.9	3.4	3.3	2.5	3.0	3.7	2.9	1.9	1.3
Rails/gallinules	3.1	1.2	1.4	2.3	1.1	3.6	1.8	4.2	1.0	7.6	1.7	1.5	1.3
Crow*								5.9	5.5	7.6	6.2	5.0	9.4
American woodcock	2.7	3.9	4.3	4.3	4.3	4.5	4.0	3.9	3.9	3.5	4.7	4.0	3.5
Ring-necked pheasant	2.1	3.5	2.3	3.0	2.6	3.2	3.9	3.6	4.6	4.6	3.9	3.8	3.5
Ruffed grouse	2.6	2.4	3.7	3.8	4.2	6.3	6.6	7.5	7.1	6.6	4.4	2.8	3.5
Spruce grouse	1.1	1.1	1.7	2.1	1.7	2.3	2.6	2.7	2.4	2.0	1.7	1.2	1.9
Sharp-tailed grouse	1.2	1.1	0.8	1.9	1.5	2.4	2.5	2.5	2.4	2.4	2.0	1.4	1.2
Gray partridge	3.6	2.1	4.3	3.3	3.1	3.8	4.6	3.7	3.7	3.8	2.9	2.4	1.8
Gray squirrel	5.1	5.3	5.3	5.2	5.7	5.6	5.8	5.5	5.8	4.9	4.6	5.5	5.4
Fox squirrel	4.2	4.5	4.1	5.0	5.1	4.7	5.2	5.0	5.1	4.6	4.2	4.5	4.2
Eastern cottontail	3.8	3.4	2.8	3.8	4.2	4.0	4.3	3.8	4.3	4.1	3.1	3.6	3.6
White-tailed jackrabbit	2.6	1.9	1.9	3.0	3.4	2.2	1.8	2.2	1.3	1.7	2.1	2.4	1.5
Snowshoe hare	4.2	2.3	2.3	2.3	3.2	2.6	3.7	4.8	4.6	5.9	3.2	3.2	3.2
Raccoon (Sept 94-Feb 95)	6.3	8.0	9.4	9.4	10.9	13.1	11.4	7.6	9.6	7.5	8.6	8.9	15.9
Raccoon [†] (May 94-Aug 94)													8.0
Red fox (Sept 94-Feb 95)	1.5	2.0	2.3	4.2	1.5	2.5	3.3	2.1	3.4	3.6	3.3	3.6	2.8
Red fox [†] (May 94-Aug 94)													1.4
Gray fox	0.9	0.9	1.4	2.0	0.8	1.3	0.9	1.2	1.4	1.0	1.3	0.8	0.6
Coyote	0.8	0.8	1.8	3.1	1.6	1.1	1.2	1.7	1.6	2.1	1.5	1.3	1.1
Badger	1.9	0.3	3.9	1.8	1.0	1.6	1.5	1.3	1.4	2.2	0.9	0.7	1.4

* Crow season added in 1989.

† Raccoon and Red fox season changed to year round beginning May, 1994.

Table 39. Hunter success rates and mean harvest for successful hunters, 1989-90 through 1994-95.

	Hunter success rate (%)						Mean harvest per successful hunter					
	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Ducks	85.8	88.8	89.7	89.0	87.3	88.5	7.6	7.9	8.7	9.1	8.7	9.2
Canada geese	75.0	71.6	72.2	72.7	74.3	71.9	2.8	3.2	3.6	3.4	3.4	3.3
Other geese	53.7	37.9	47.8	33.3	50.0	32.1	2.2	3.1	2.2	2.5	2.1	2.3
American coot	69.3	73.1	70.9	77.6	71.6	77.5	3.6	4.9	3.8	6.0	3.8	4.1
Common snipe	85.0	90.7	93.8	83.3	65.2	61.9	2.9	3.3	3.9	3.5	2.9	2.2
Rails/gallinules	58.8	40.0	100.0	66.7	62.5	60.0	7.2	2.5	7.6	2.5	2.4	2.2
Crow*	87.1	87.3	83.3	88.8	87.1	89.4	6.8	6.3	9.1	7.0	5.7	10.5
American woodcock	90.6	87.9	85.0	80.5	73.9	74.5	4.3	4.4	4.1	5.8	5.4	4.7
Ring-necked pheasant	76.6	78.6	79.2	73.1	70.6	68.9	4.7	5.9	5.8	5.4	5.3	5.0
Ruffed grouse	87.4	85.1	80.3	72.8	64.7	70.9	8.5	8.3	8.2	6.0	4.3	4.9
Spruce grouse	78.7	66.2	68.3	59.1	48.4	56.6	3.4	3.6	3.0	2.8	2.4	3.3
Sharp-tailed grouse	69.4	62.6	64.5	60.2	46.7	34.5	3.6	3.8	3.7	3.3	3.0	3.5
Gray partridge	80.0	78.2	78.0	71.5	59.7	54.8	4.6	4.7	4.9	4.0	4.0	3.2
Gray squirrel	89.8	91.6	86.1	83.8	86.9	87.1	6.1	6.3	5.7	5.5	6.4	6.2
Fox squirrel	90.2	89.6	84.7	85.3	88.5	82.6	5.6	5.7	5.5	4.9	5.1	5.1
Eastern cottontail	84.6	87.1	83.7	78.0	79.9	79.1	4.5	5.0	4.9	3.9	4.5	4.5
White-tailed jackrabbit	72.7	65.8	70.3	71.0	62.8	61.5	3.0	2.0	2.4	3.0	3.9	2.4
Snowshoe hare	86.3	88.6	85.7	65.6	73.8	59.7	5.6	5.2	6.9	4.8	4.4	5.4
Raccoon (Sept 94 - Feb 95)	93.6	92.6	89.2	91.7	95.3	97.5	8.2	10.4	8.4	9.3	9.3	16.3
Raccoon† (May 94-Aug 94)						88.6						9.1
Red fox (Sept 94 - Feb 95)	71.9	68.0	73.6	58.9	67.5	64.7	3.0	5.0	4.9	5.6	5.4	4.4
Red fox † (May 94-Aug 94)						46.9						3.0
Gray fox	68.2	44.4	40.0	41.5	26.7	23.1	2.3	3.3	2.4	3.1	3.1	2.5
Coyote	69.5	62.1	56.6	50.0	57.1	48.1	2.4	2.6	3.7	3.1	2.3	2.4
Badger	83.3	77.8	100.0	71.4	71.4	85.7	1.6	1.9	2.2	1.2	1.0	1.7

* Crow season added in 1989.

† Raccoon and red fox season changed to year round beginning May, 1994.

Table 40. Statewide small game hunting license sales and estimated hunter harvest, 1984-85 through 1994-95.

	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Small game license sales ^a	260,764	258,225	262,053	286,270	285,685	306,307	311,104	317,669	297,941	276,625	289,189
Federal duck stamp sales	138,820	134,594	139,391	125,831	92,772	97,939	103,971	110,197	108,332	110,738	149,428
State duck stamp sales	131,394	125,559	146,747	120,235	89,228	97,659	102,151	104,051	104,064	104,839	116,346
Pheasant stamp sales	81,587	85,252	81,027	102,944	100,478	108,124	122,260	133,384	117,934	94,443	104,621
Estimated harvest ^b (thousands)											
Ducks ^c	1,443	1,029	1,172	928	531	544	619	784	864	824	955
Canada geese ^c	82	86	101	106	114	103	128	144	150	156	166
Other geese ^c	8	9	3	11	5	9	7	6	5	9	6
American coot ^c	48	41	59	29	9	10	17	13	23	15	22
Common snipe	20	16	21	19	13	12	14	16	9	4	2
Rails/gallinules	1	2	1	5	1	3	<1	3	<1	1	1
Crow					54	70	94	69	51	114	
American woodcock	70	70	87	113	104	118	116	94	100	68	74
Ring-necked pheasant	148	179	159	277	332	325	483	565	411	332	319
Ruffed grouse	320	315	442	817	917	1,218	1,153	963	543	288	371
Spruce grouse	21	21	20	36	39	55	46	34	21	12	23
Sharp-tailed grouse	7	14	13	24	29	36	33	33	20	11	9
Gray partridge	31	77	54	69	95	86	115	102	49	35	26
Gray squirrel	208	186	235	222	217	194	234	174	147	178	187
Fox squirrel	107	140	145	122	134	113	115	109	92	105	99
Eastern cottontail	61	75	102	102	118	92	139	128	73	75	77
White-tailed jack rabbit	11	17	14	12	10	12	9	10	11	9	7
Snowshoe hare	16	12	25	26	32	48	69	70	24	16	19
Raccoon (Sept 94-Feb 95)	114	85	122	170	102	52	93	74	77	79	163
Raccoon ^d (May 94- Aug 94)											24
Red fox (Sept 94- Feb 95)	26	44	15	33	43	19	54	78	63	63	42
Red fox ^d (May 94- Aug 94)											4
Gray fox	4	4	2	4	2	3	5	4	4	2	1
Coyote	5	11	7	6	7	6	14	27	21	18	13
Badger	<1	2	2	<1	2	<1	1	1	<1	<1	1

Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 37, are calculated from different questions on the survey form. The sample used in calculations differs from one estimator to the next. This is because some respondents give specific answers to one question but not to a related one. A formula is used to calculate the total estimated take for each species which appears in this table. In most years the formula produces results rather close to those obtained by multiplying the average take per hunter times the number of hunters. However, in other years (e.g., 1985) results of the two methods are quite divergent, perhaps as a result of an unusual sample. This is being investigated further, and as a result, numbers may change somewhat in future reports. The most current report of survey findings will have the best data available at that time. Beginning in 1989-90 this table was changed from Resident harvest estimates to Statewide harvest estimates, which includes non-resident harvest estimates.

^a Duplicate licenses not included.

^b Estimates based upon response of hunters to questionnaires.

^c U.S. Fish and Wildlife Service harvest estimates for 1994 are:

Ducks	669,525	Other geese	0
Canada geese	162,465	American coot	18,317

^d Raccoon and Red fox seasons changed to year round beginning May, 1994.

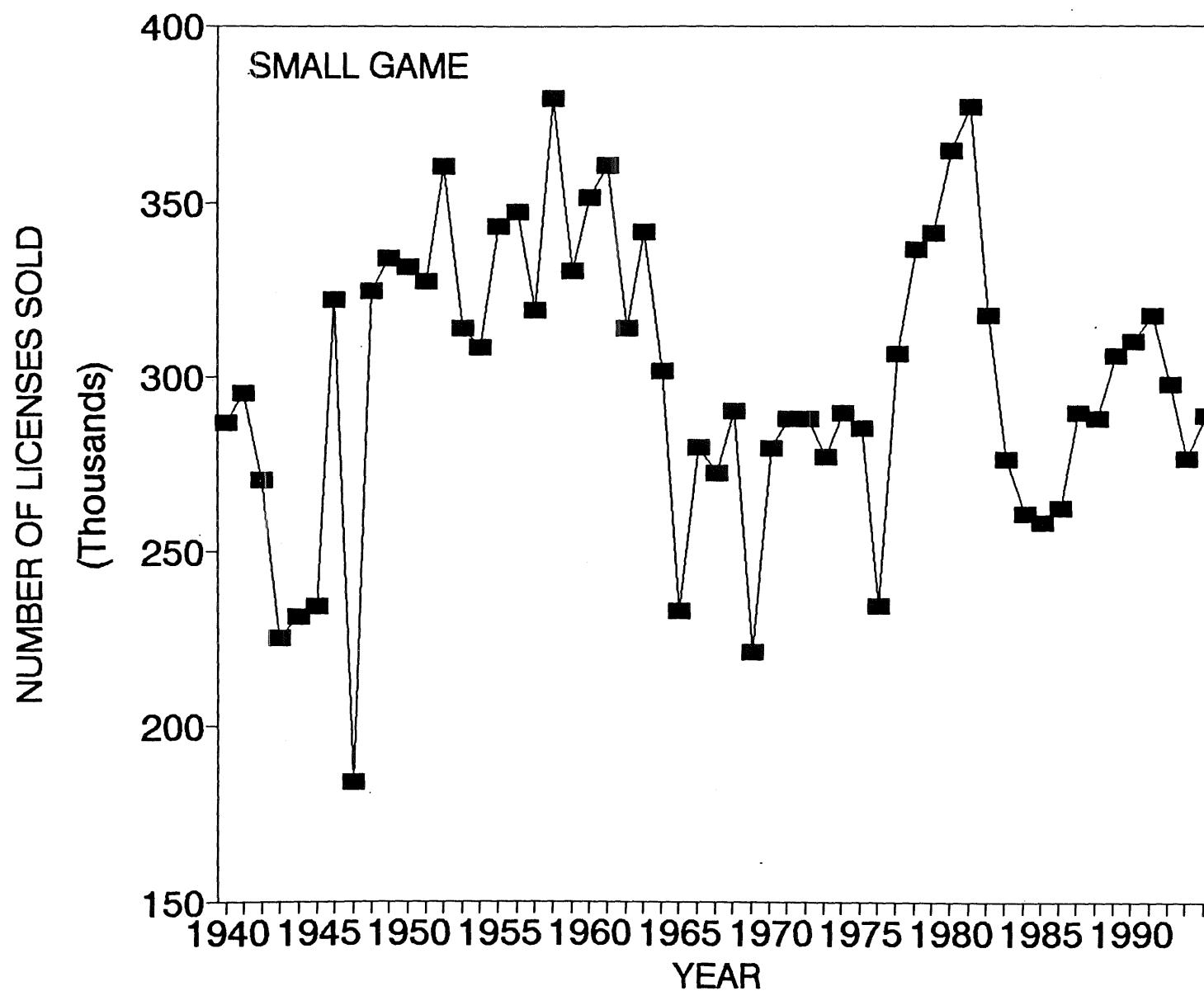


Figure 34. Numbers of Minnesota small game licenses sold, 1940-94.

Table 41. Mail survey results of nonresident small game hunters, 1983-84 through 1994-95.

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Nonresident licenses issued*	2,911	3,060	3,271	3,078	3,596	3,462	4,624	4,932	4,852	4,718	3,809	4,435
Questionnaires:												
Number mailed	384	237	338	406	429	436	553	82	114	170	229	182
Number not delivered	25	13	25	42	19	33	52	7	8	8	21	7
Number (percent) returned	280 (78.0)	192 (86.0)	246 (78.6)	290 (79.7)	328 (80.0)	327 (81.1)	396 (79.0)	54 (72.0)	89 (83.2)	32 (81.5)	149 (71.6)	128 (73.1)
Estimated nonresidents and (percent) of all nonresidents hunting:												
Ducks	1,500 (52)	2,090 (68)	1,900 (58)	1,810 (59)	990 (28)	1,130 (33)	1,521 (33)	1,342 (27)	1,308 (27)	1,751 (37)	1,789 (47)	1,975 (45)
Canada goose	580 (20)	820 (27)	800 (24)	850 (28)	515 (14)	700 (20)	866 (19)	1,074 (22)	491 (10)	1,001 (21)	792 (21)	1,005 (23)
Ruffed grouse	620 (21)	1,000 (33)	1,090 (33)	1,000 (32)	1,000 (28)	1,960 (57)	2,610 (56)	1,789 (36)	2,017 (42)	1,465 (31)	895 (24)	1,421 (32)
Ring-necked pheasant	500 (17)	390 (13)	720 (22)	510 (17)	400 (11)	690 (20)	1,042 (23)	895 (18)	1,743 (36)	894 (19)	741 (20)	832 (19)
Raccoon ^b	170 (6)	130 (4)	70 (2)	85 (3)	80 (2)	42 (1)	59 (1)	0 (0) ^c	55 (1)	0 (0) ^c	26 (1)	0 (0)
Estimated nonresident take:												
Ducks	17,500	24,000	14,400	14,600	6,300	8,000	9,901	5,816	11,340	17,442	13,574	15,696
Canada goose	1,300	1,300	1,400	1,400	900	1,500	1,744	4,205	1,363	3,610	2,122	2,287
Ruffed grouse	1,700	4,200	3,500	3,800	6,100	12,300	20,739	14,852	18,100	10,758	4,985	7,242
Ring-necked pheasant	2,200	1,500	1,900	1,100	1,100	2,600	4,424	3,221	6,324	4,110	3,042	4,366
Raccoon	1,400	1,100	1,400	600	1,200	700	667	0	327	0	26	0

* Excludes duplicate licenses and nonresident shooting preserve licenses.

^b Nonresident raccoon hunters were required to purchase a nonresident raccoon hunting license for the first time in 1979 in addition to the nonresident small game license. The initial season bag limit of 8 was increased to 12 in 1983 and to 20 in 1985.

^c In 1990, 1992 and 1994 small game hunter survey no non-residents reported hunting/harvesting raccoons. * Non-resident raccoon hunting license was not required for 1994.

Raccoon take per hunter

	<u>Resident</u>	<u>Nonresident</u>	<u>Number of nonresident raccoon licenses</u>
1978	6	14	0
1979	6	6	404
1980	4	5	93
1981	7	7	121
1982	6	7	95
1983	8	8	102
1984	9	8	111
1985	9	20	108
1986	11	7	86
1987	13	15	145
1988	11	17	73
1989	8	11	41
1990	11	0	20
1991	8	6	21
1992	9	0	20
1993	9	1	24
1994	16	0	*

Table 42. Species composition of the Minnesota waterfowl harvest, 1993 and 1994 (from: Martin, E.M. and P.I. Padding. 1995. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1994 hunting season. U.S. Fish and Wildlife Service Adm. Rep., Office of Migratory Bird Management, Laurel, Maryland. July 1995. 33pp.). Note: All 1993 estimates are based on final duck stamp sales figures, whereas 1994 estimated are based on reports of duck stamp sales through March 1995. Unaudited duck stamp sales figures (and therefore hunter activity estimates) received prior to publication suggest Minnesota duck stamp sales will be adjusted down by about 14,000 stamps.

Species	1993		1994		Percent change
	Harvest	Pct of harvest	Harvest	Pct of harvest	
Mallard	150,100	30.94	179,000	26.73	+ 19
Domestic mallard	200	0.03	100	0.02	- 50
American black duck	11,000	0.22	900	0.13	- 92
Black x mallard	100	0.02	200	0.03	+100
Gadwall	6,600	1.35	10,100	1.51	+ 53
American wigeon	13,200	2.73	22,200	3.32	+ 68
Green-winged teal	18,800	3.88	41,500	6.20	+121
Blue-winged/cinnamon teal	15,000	3.10	43,300	6.47	+189
Northern shoveler	2,000	0.42	11,500	1.71	+475
Northern pintail	5,600	1.15	9,400	1.40	+ 68
Wood duck	91,100	18.77	144,800	21.63	+ 59
Redhead	11,600	2.40	20,200	3.02	+ 74
Canvasback	100	0.02	11,900	1.77	+11,800
Greater scaup	2,500	0.51	2,300	0.34	- 8
Lesser scaup	27,000	5.56	43,900	6.55	+ 63
Ring-necked duck	107,600	22.18	97,400	14.55	- 10
Goldeneyes	10,500	2.17	6,000	0.89	- 43
Bufflehead	14,000	2.88	15,300	2.29	+ 9
Ruddy duck	16,000	0.33	3,000	0.44	- 81
Scoters	600	0.12	200	0.03	- 67
Hooded merganser	5,500	1.14	5,300	0.79	- 4
Other mergansers	300	0.07	800	0.12	+167
Total	485,111	100.00 ^a	669,525	100.00 ^a	+38

^a Sum of all species does not equal total because of rounding error.

^b No percentage change

Table 43. Top 10 states in number of adult waterfowl hunters, 1994, and number of hunter-days and retrieved duck kill, in each (from: Martin, E.M., and P. I. Padding. 1995. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1994 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, Maryland. July 1995. 33pp.). Note: All 1994 estimated are based on reports of duck stamp sales through March 1995. Unaudited duck stamp sales figures (and therefore hunter activity estimates) received prior to publication suggest Minnesota duck stamp sales will be adjusted down by about 14,000 stamps.

State	Number of active adult waterfowl hunters	Number of hunter-days	Retrieved duck kill	Ducks retrieved per hunter-day
Minnesota	135,570	1,096,046	669,525	0.64
Wisconsin	82,276	642,813	329,015	0.51
Texas	66,787	642,387	696,853	1.08
Louisiana	62,057	774,888	1,005,694	1.30
Michigan	54,182	516,888	248,669	0.48
California	53,282	739,877	499,121	0.67
Illinois	44,605	485,026	205,104	0.42
Arkansas	38,821	525,164	725,233	1.38
Pennsylvania	36,435	264,821	83,052	0.31
New York	30,797	257,434	186,529	0.72
Mississippi Flyway	551,927	5,426,924	4,014,122	0.74
United States	1,138,888	10,653,843	8,369,928	0.74

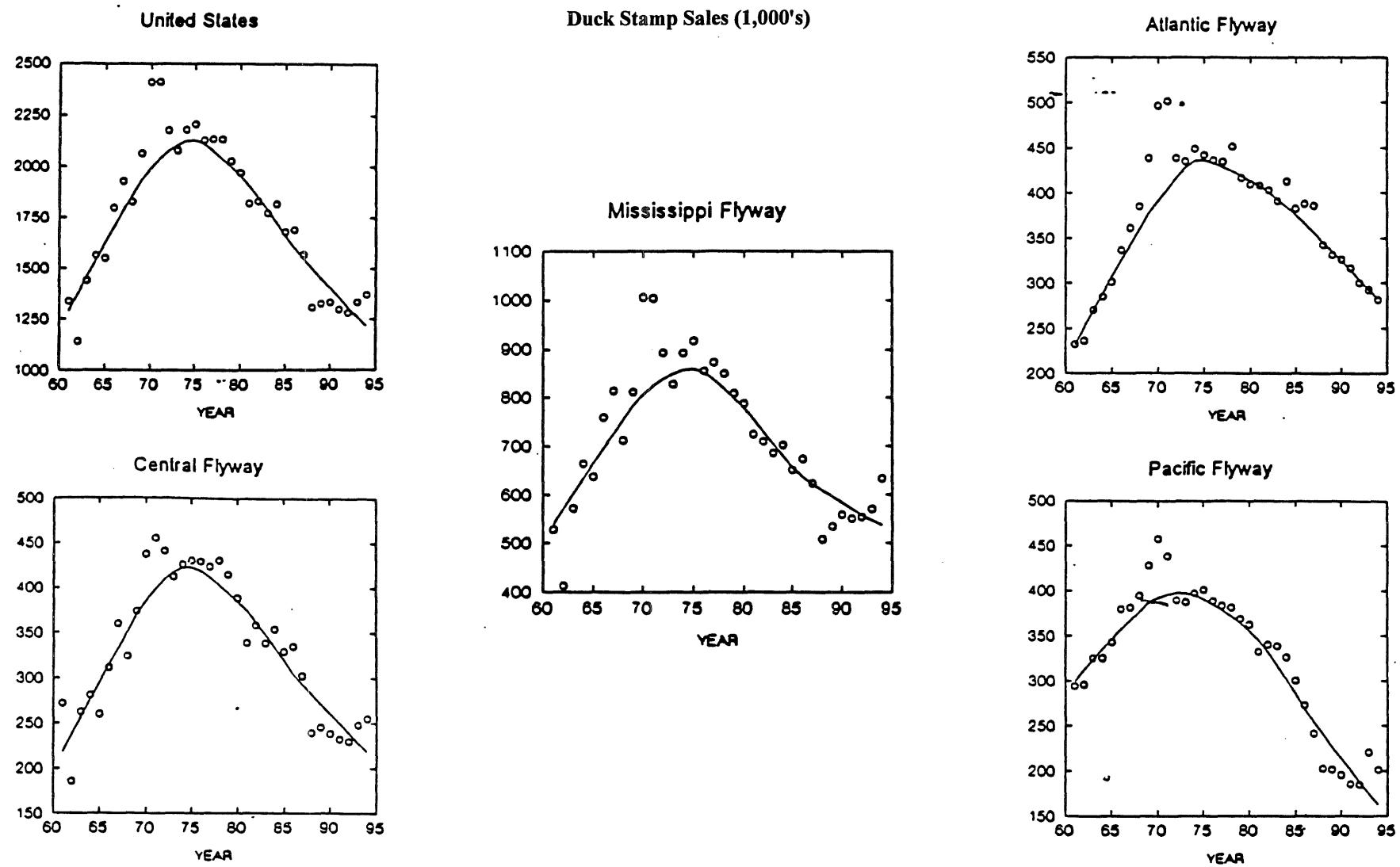


Figure 35. Federal duck stamp sales; Active adult hunters; Adult hunter days, (in 1,000's). The 1961 through 1993 data are final, but the 1994 numbers are estimates. The curves (locally weighted regression [lowess] lines; Cleveland and Devlin 1988, *J. Am. Stat. Assoc.*) fit a pattern to the majority of the estimates and identify estimates that deviate from that pattern (from Martin, E. M., and P.I. Padding. 1994. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1994 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, MD. July 1995. 33pp.).

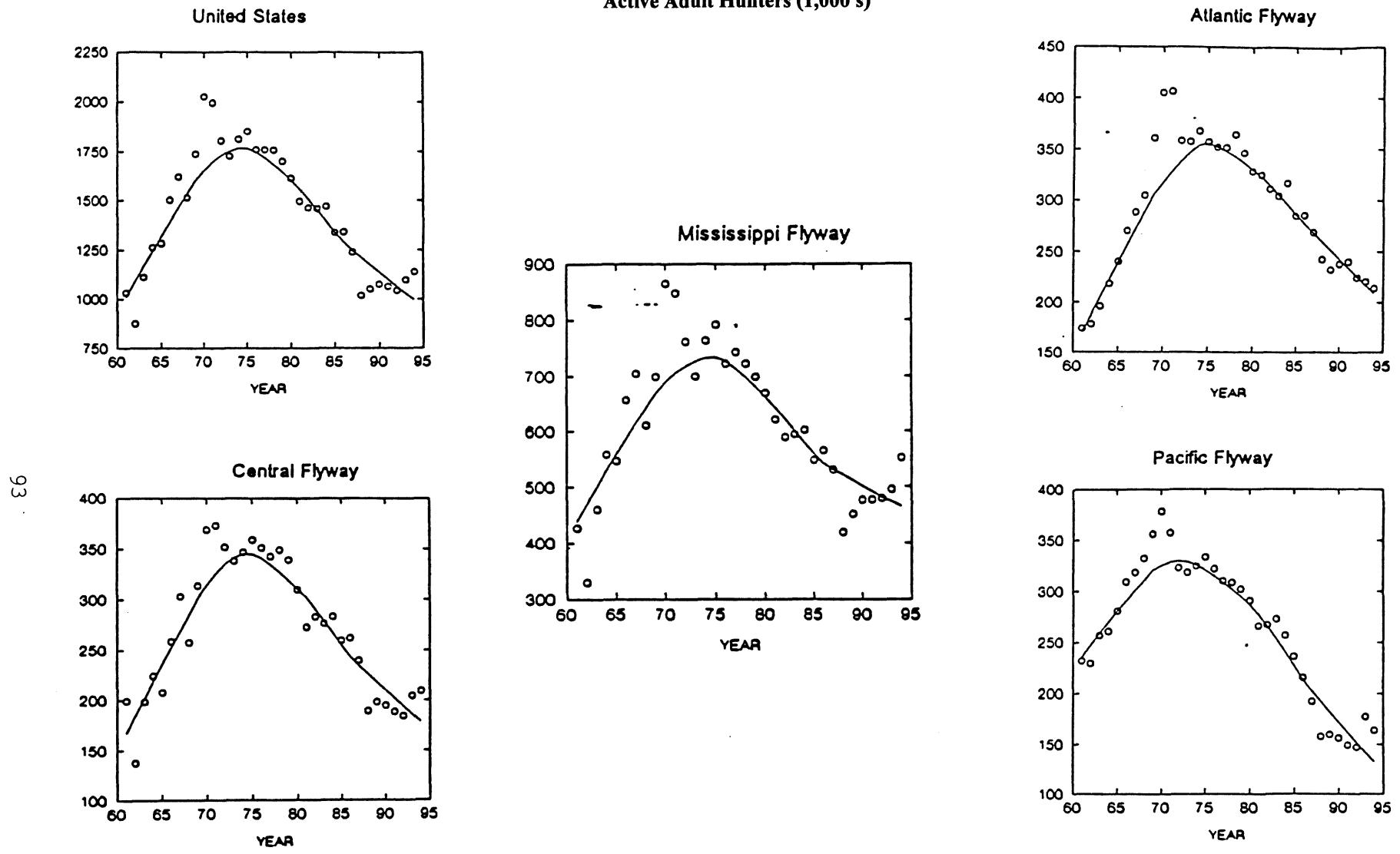


Figure 35. (cont.)

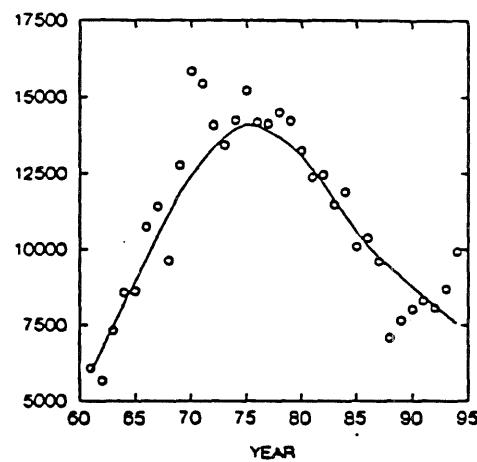
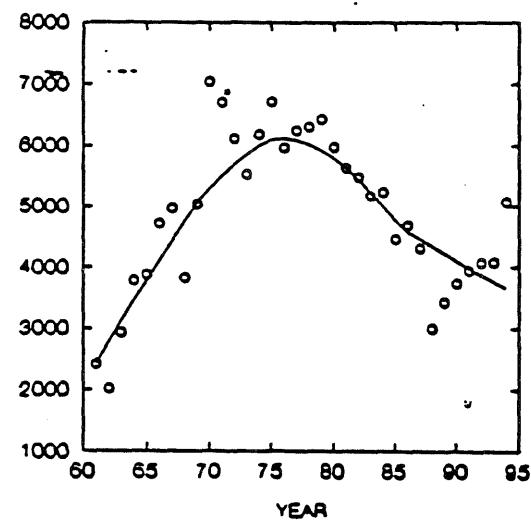
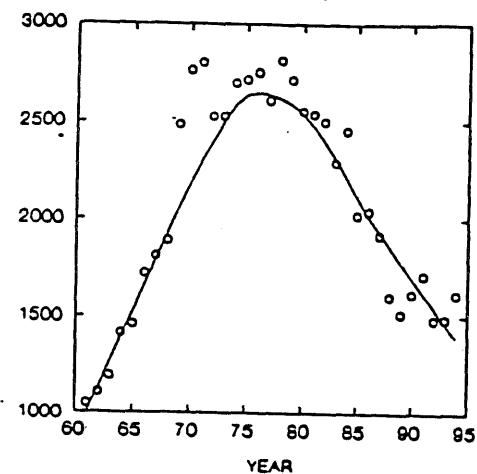
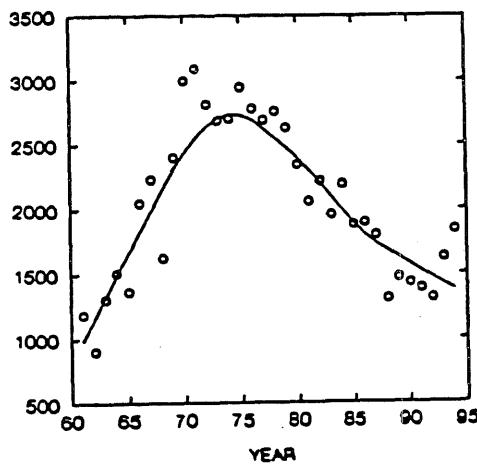
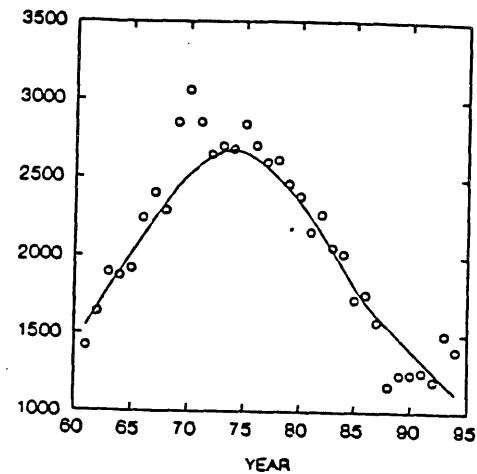
United States**Adult Hunter Days (1,000's)****Mississippi Flyway****Atlantic Flyway****Central Flyway****Pacific Flyway**

Figure 35. (cont.)

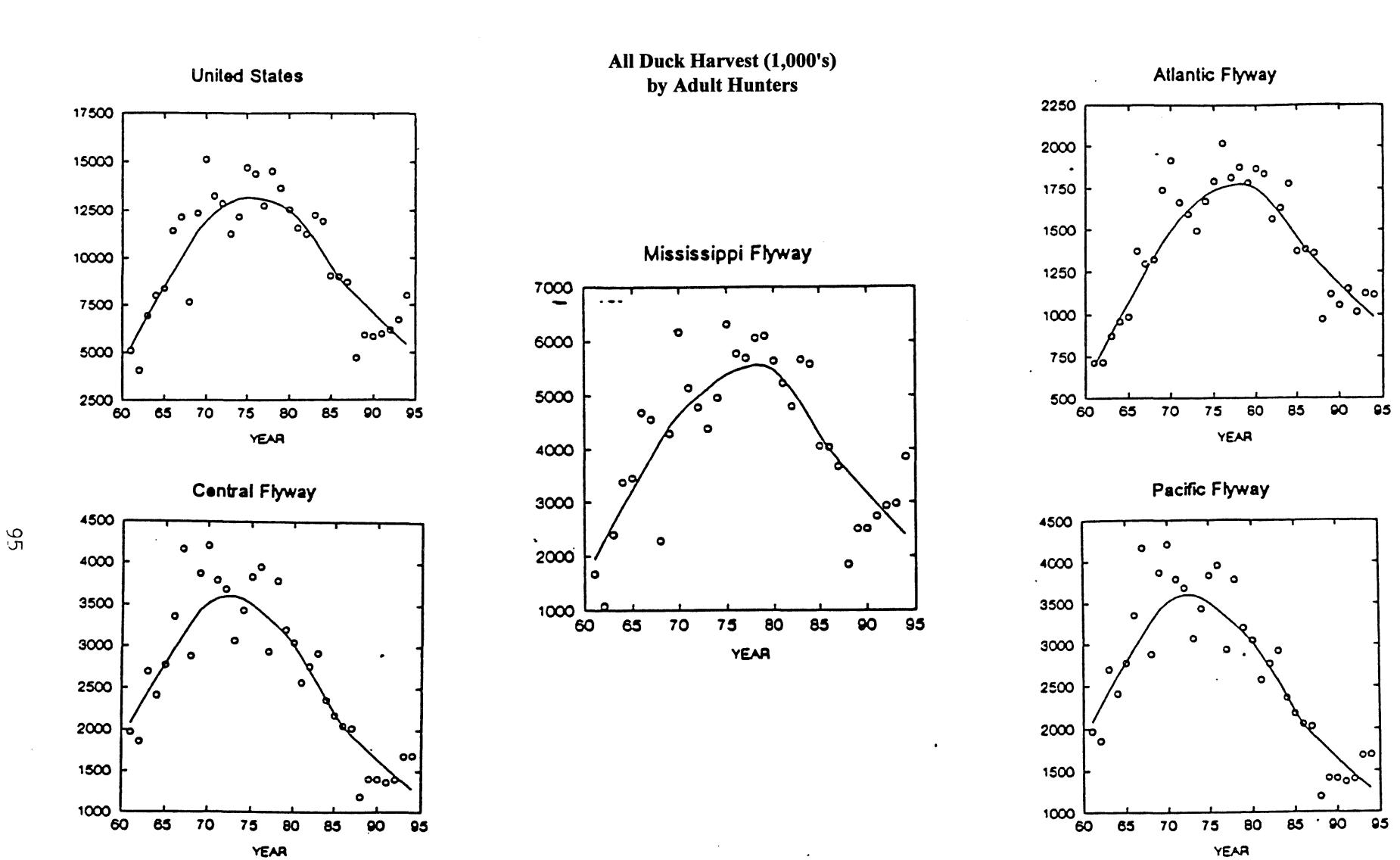
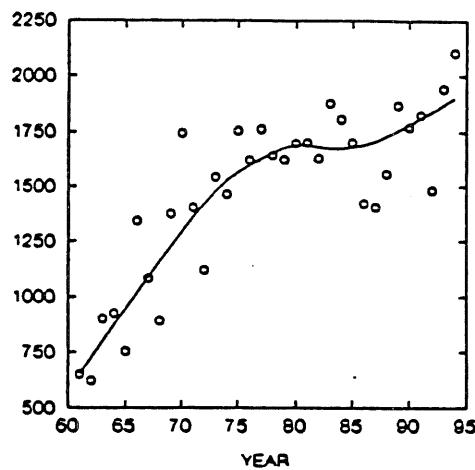
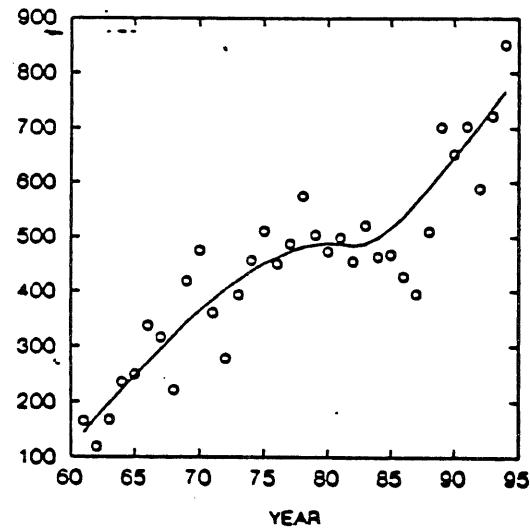
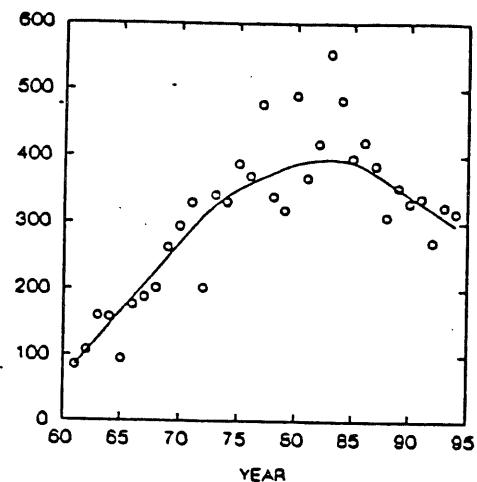
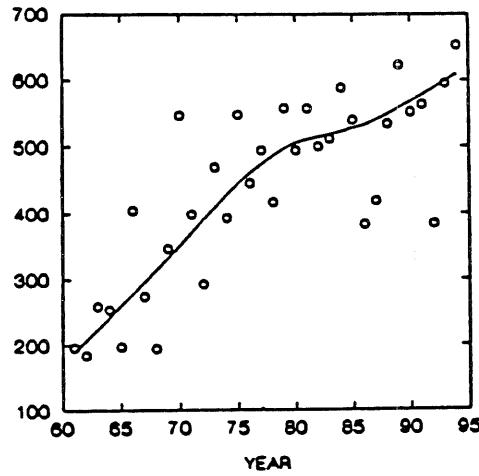
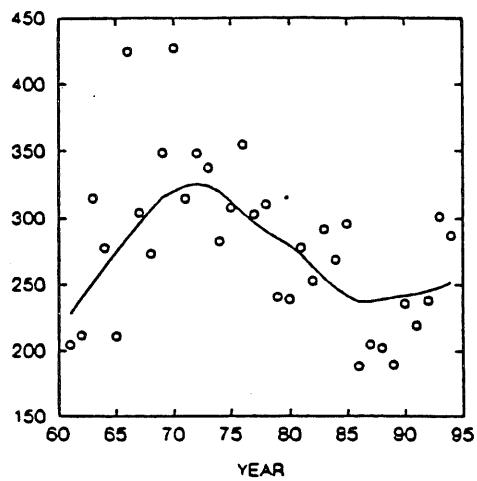


Figure 36. All duck harvest; All goose harvest by adult hunters; Seasonal duck bag; Seasonal Goose bag per adult hunter. The 1961 through 1993 data are final, but the 1994 numbers are estimates. The curves (locally weighted regression [lowess] lines; Cleveland and Devlin 1988, J. Am. Stat. Assoc.) fit a pattern to the majority of the estimates and identify estimates that deviate from that pattern (from Martin, E. M., and P.I. Padding. 1994. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1994 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, MD. July 1995. 33pp.).

United States**All Goose Harvest (1,000's)
by Adult Hunters****Mississippi Flyway****Atlantic Flyway****Central Flyway****Pacific Flyway****Figure 36. (cont.)**

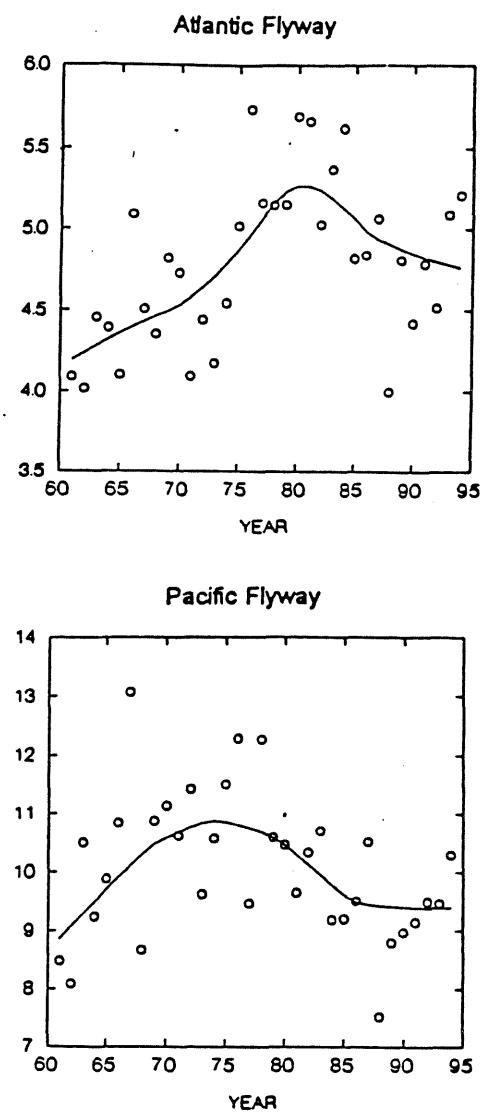
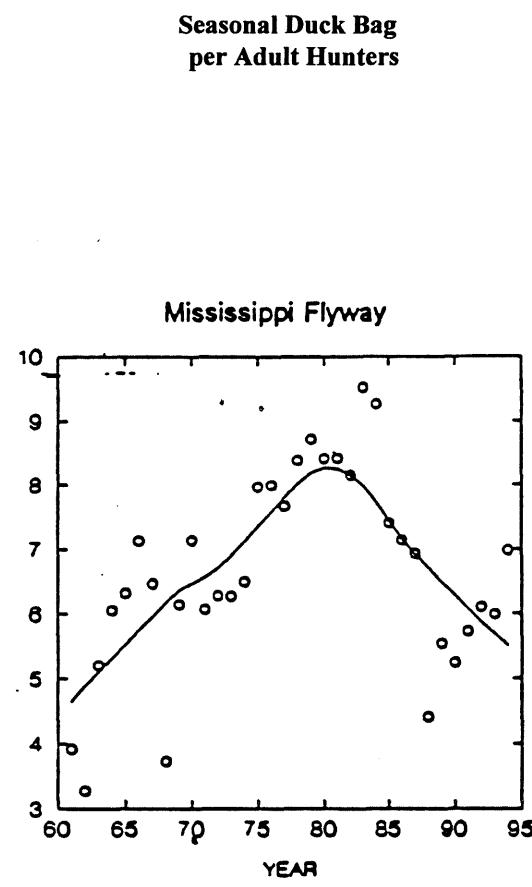
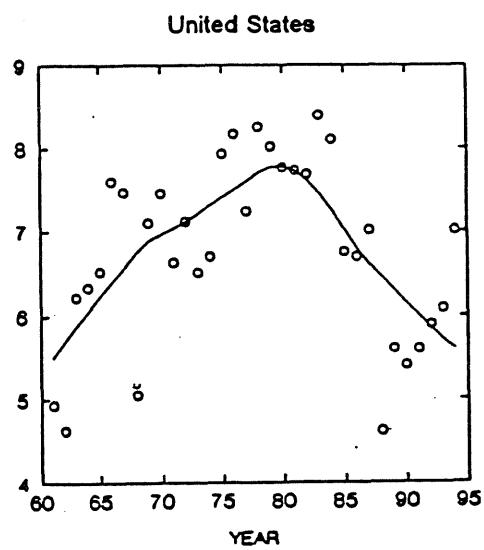
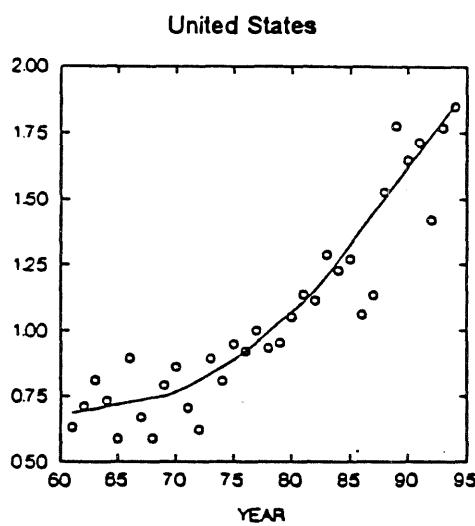
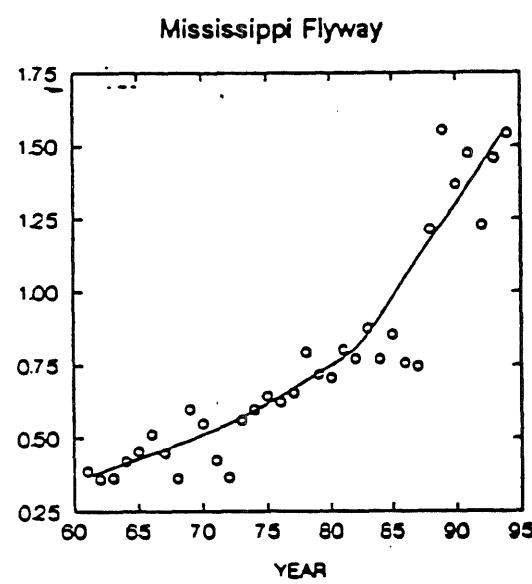


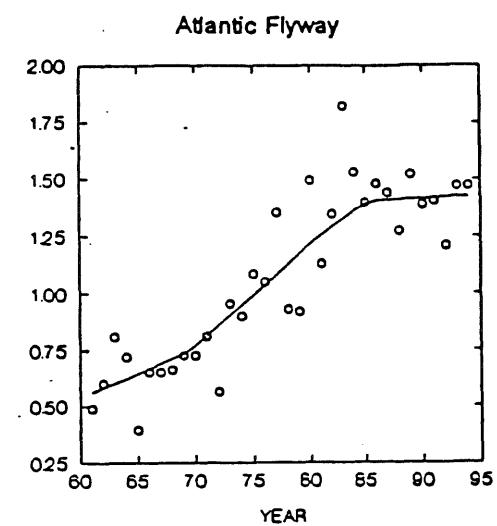
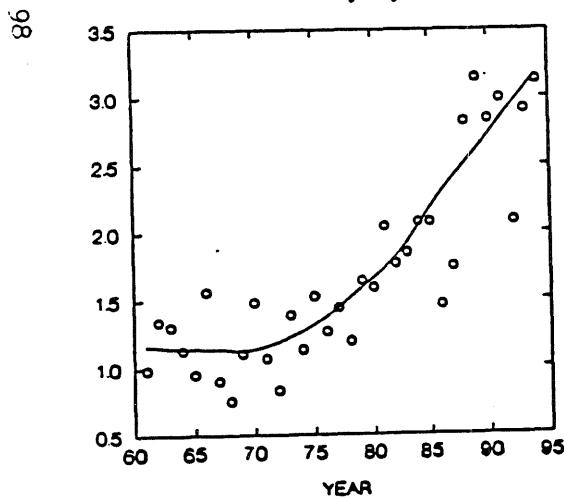
Figure 36. (cont.)



**Seasonal Goose Bag
per Adult Hunters**



Central Flyway



Pacific Flyway

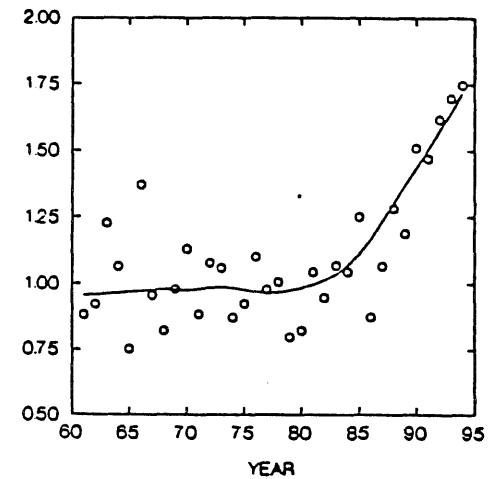


Figure 36. (cont.)

Table 44. Spring turkey hunting summary, 1978-95.

Year	Area of open hunt zone (mi ²)	Number of permit applicants	Number of permits available	Odds of drawing a permit ^a	Number of permits given	Number of persons hunting ^b	Registered turkey harvest	% success ^c
1978	389	10,740	420	25.6:1	411	398	94	23.6
1979	673	11,116	840	13.2:1	827	794	116	14.6
1980	858	9,613	1,200	8.0:1	1,191	1,072	98	9.1
1981	1,242	8,398	1,500	5.6:1	1,437	1,292	113	8.7
1982	1,490	7,223	2,000	3.6:1	1,992	1,625	106	6.5
1983	1,807	8,153	2,100	3.9:1	2,079	1,663	116	7.0
1984	2,061	7,123	3,000	2.4:1	2,837	2,270	178	7.8
1985	2,118	5,662	2,750	2.1:1	2,449	1,959	323	16.5
1986	1,897	5,715	2,500	2.3:1	2,251	1,801	333	18.5
1987	1,747	6,361	2,700	2.4:1	2,520	2,016	520	25.8
1988	1,781	8,402	3,000	2.8:1	2,994	2,395	674	28.1
1989	2,341	13,007	4,000	3.3:1	3,821	3,057	930	30.4
1990	3,819	14,326	6,600	2.2:1	6,126	5,513	1,709	31.0
1991	4,300	15,918	9,170	**	8,607	7,747	1,724	22.0
1992 ^d	4,381	15,896	9,310	**	9,051	8,146	1,691	21.0
1993	4,921	17,224	9,625	**	9,265	8,339	2,082	25.0
1994	5,881	19,424	9,940	**	9,479	8,531	1,975	23.0
1995	7,740	20,849	9,975	**	9,550	8,600	2,339	27.0

^a Calculated with total permits available to be given, and not adjusting for undersubscribed zones and time periods.^b For 1978-82, based on a post-hunt mail survey. Number actually hunting in 1983-89 was estimated at 80% (from last year survey results were tabulated). Beginning in 1991, number actually hunting was estimated at 90% (from preliminary results of 1991 survey).^c Registered turkey harvest divided by number actually hunting, expressed as %.^d Legislation allows NON-RESIDENT hunters.

** Computerized preference drawing began spring 1990.

Table 45. Spring Wild Turkey harvest by zone and season, 1995.

	ZONE															Total
	1	2	3	4	5	6	10	11	12	13	15	20	21	22	30	Total
S 1	57	121	120	35	100	0	7	4	10	7	5	6	3	3	1	479
E 2	46	92	95	36	82	6	6	8	7	4	3	0	5	3	0	393
A 3	40	93	81	22	74	4	5	9	8	3	3	4	6	2	1	355
S 4	25	59	75	20	64	5	4	7	7	2	2	3	1	1	3	278
O 5	27	49	94	16	76	2	7	7	6	5	1	1	3	1	3	298
N 6	18	58	78	18	77	4	3	9	3	1	5	1	5	1	0	281
7	28	64	52	24	66	1	1	6	5	1	1	1	3	1	1	255
Total	241	536	595	171	539	22	33	50	46	23	20	16	26	12	9	2,339

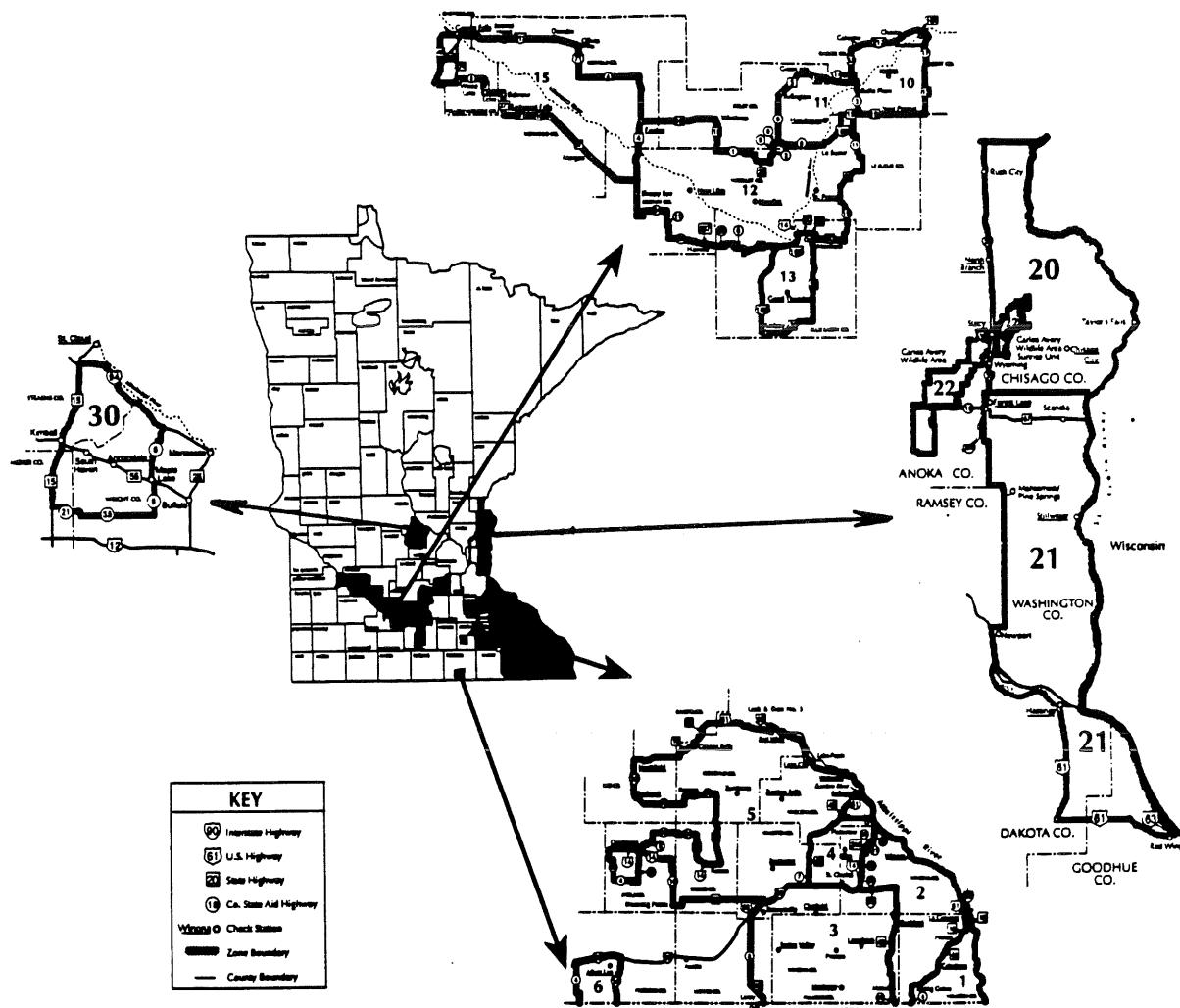


Figure 37. Spring wild turkey hunt zones, 1995.

Table 46. Synopsis of fall wild turkey hunt, Minnesota 1990-1994.

	1990	1991	1992	1993	1994
# of zones	3	4	4	5	5
# of permits available	1,000	2,200	2,200	2,400	2,500
# of permits issued	951	2,020	2,028	2,094	2,106
# turkeys registered					
Female - juvenile	85	211	208	184	210
- adult	91	140	174	196	203
Male - juvenile	67	121	120	110	105
- adult	83	80	86	112	83
Total	326	552	588	602	601
Hunter success (%) ^a	38%	30%	32%	32%	32%

^a Based on 90% of permit holders actually hunting (from mail survey).

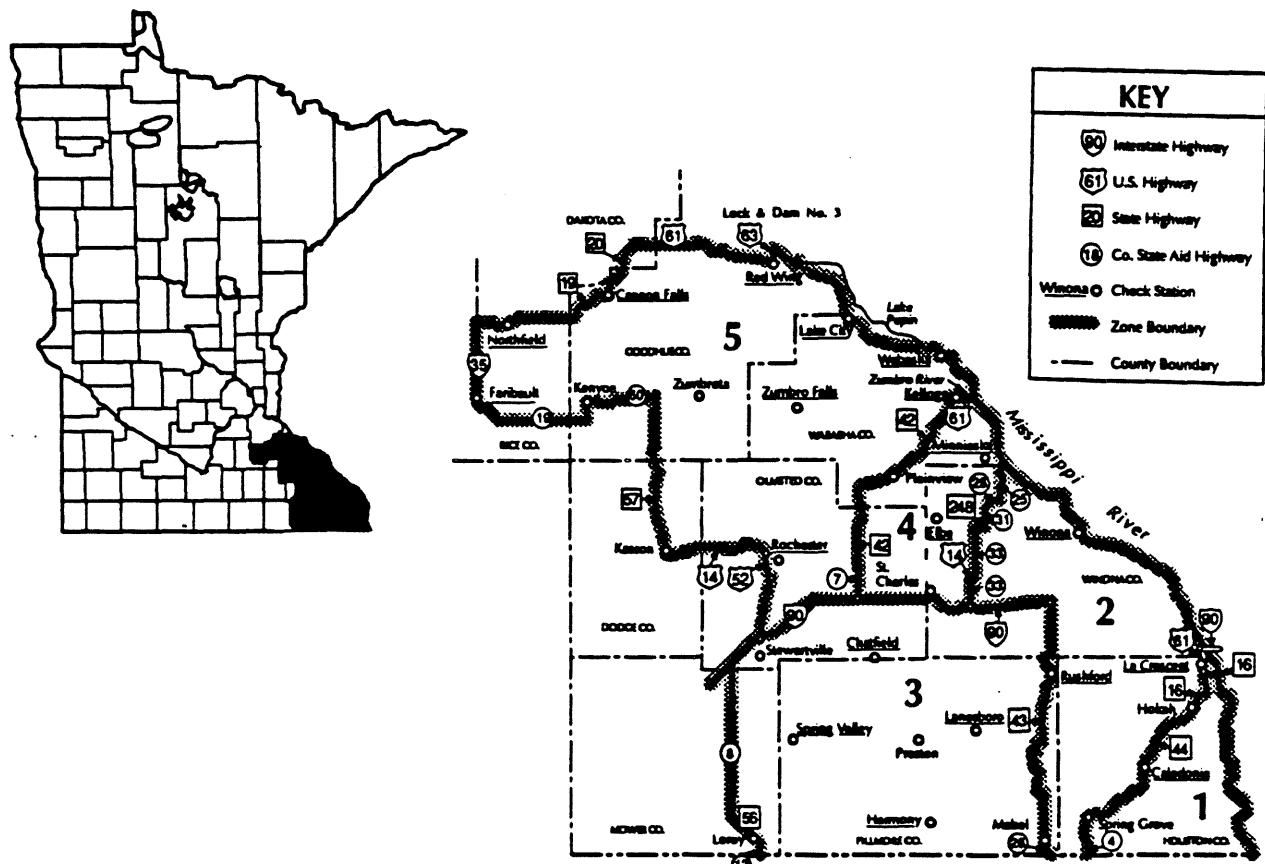


Figure 38. Fall wild turkey hunt zones, 1994.

Table 47. Deer hunting license sales, 1957-94^a.

Year	Firearms License Sales			Archery License Sales			Grand Total
	Resident	Non-resident	Total	Resident	Non-resident	Total	
1957	180,028	488	180,516	10,033	119	10,152	190,668
1958	203,430	552	203,982	10,968	118	11,086	215,068
1959	200,102	530	200,632	11,768	101	11,869	212,501
1960	233,593	621	234,214	11,834	122	11,956	246,170
1961	250,031	632	250,663	13,229	141	13,370	264,033
1962	244,166	676	244,842	11,776	150	11,926	256,768
1963	257,333	771	258,104	11,724	165	11,889	269,993
1964	278,032	1,021	279,053	13,472	193	13,665	292,718
1965	289,918	1,128	291,046	15,628	265	15,893	306,939
1966	284,195	1,287	285,482	17,203	277	17,480	302,962
1967	305,717	1,311	307,028	18,405	289	18,694	325,722
1968	302,216	1,442	303,658	20,188	292	20,480	324,138
1969	253,891	1,168	255,059	15,658	256	15,914	270,973
1970	188,166	334	188,500	12,277	220	12,497	200,997
1971	no firearms season			17,360	111	17,471	17,471
1972	257,998	959	258,957	21,985	326	22,311	281,268
1973	294,349	1,342	295,691	29,169	545	29,714	325,405
1974	296,248	1,747	297,995	30,701	644	31,345	329,340
1975	327,596	1,921	329,517	31,836	804	32,640	362,157
1976	263,868	1,029	264,897	21,773	263	22,036	286,933
1977	287,271	1,430	288,701	29,404	402	29,806	318,507
1978	307,910	1,776	309,686	32,546	476	33,022	342,708
1979	312,754	1,910	314,664	35,657	447	36,104	350,768
1980	344,516	2,378	346,894	41,328	634	41,962	388,856
1981	369,425	2,973	372,398	50,063	906	50,969	423,367
1982	369,018	3,038	372,056	54,084	848	54,932	426,988
1983	391,099	3,611	394,710	55,822	478	56,300	451,010
1984	396,074	4,307	400,381	61,576	583	62,159	462,540
1985 ^b	416,474	4,983	421,457	66,687	589	67,276	488,733
1986 ^b	413,542	4,476	418,018	68,689	547	69,236	487,254
1987 ^b	414,426	4,931	419,357	70,195	604	70,799	490,156
1988 ^b	406,727	5,623	412,350	68,196	716	68,912	481,262
1989 ^b	406,234	6,137	412,371	68,217	714	68,931	481,302
1990 ^b	418,284	6,455	424,739	68,457	742	69,199	493,938
1991 ^b	432,686	6,861	439,547	74,576	800	75,376	514,923
1992 ^b	488,887	8,145	497,032	86,274	935	87,209	584,241
1993 ^b	463,952	8,580	472,532	86,036	1,170	87,206	559,738
1994 ^b	469,843	9,282	479,115	84,118	1,175	85,293	564,408

^a Duplicate licenses not included. Leech Lake licenses are included during years they were issued.^b Numbers include the following bonus deer licenses:

Year	1988	1989	1990	1991	1992	1993	1994
Resident firearms (regular quota areas)	721	436	4,375	7,280	40,303	20,021	15,924
Resident firearms (state parks)	107	325	620	927	168	55	272
Non-resident firearms (regular quota area)	1	-	1	7	112	59	66
Resident archery	-	-	-	3,418 ^c	14,328	15,983	12,783
Resident archery (metro)	1,013	1,223	1,412	-	-	-	-
Non-Resident archery (regular quota area)	-	-	-	-	21	28	23
Totals	1,842	1,984	6,408	11,632	54,932	36,146	29,068

^c For 1991 the metro resident archery bonus permit was abolished. Archery bonus permits are now classified as Resident archery and not broken down by State Parks or Orchard zone.

Table 48. Registered deer harvest and hunter success rates, 1974-94.

	Registered Harvest			Percent Success		
	Regular firearms	Archery	Special Muzzleloader season*	Total	Regular firearms and special muzzleloader seasons	Archery
1974	64,997	2,176	-	67,173	21.8	6.9
1975	63,604	2,265	-	65,869	19.3	6.9
1976	28,613	1,167	-	29,780	10.8	5.3
1977	45,918	2,609	32	48,559	15.9	8.8
1978	47,372	2,608	346	50,326	15.4	7.9
1979	44,340	2,577	318	47,235	14.2	7.1
1980	68,539	3,641	294	72,474	19.8	8.7
1981	93,027	5,535	385	98,947	25.1	10.9
1982	93,045	5,566	441	99,052	25.1	10.1
1983	132,457	5,977	652	139,086	33.6	10.6
1984	132,042	6,390	532	138,941	33.0	10.3
1985	138,065	7,575	563	146,203	33.4	11.3
1986	129,770	7,610	593	137,923	31.2	11.1
1987	135,003	7,535	535	143,073	32.4	10.9
1988	138,946	8,262	686	148,394	33.6	12.0
1989	129,551	9,307	622	139,480	31.4	13.5
1990	166,589	11,106	730	178,425	39.4	16.1
1991	206,275	12,964	961	220,200	46.9	17.5
1992	229,236	13,004	828	243,068	46.1	14.9
1993	188,109	13,722	1,097	202,928	40.0	16.1
1994	178,283	13,818	1,725	193,826	37.5	16.8

* No special muzzleloader seasons were held before 1977.

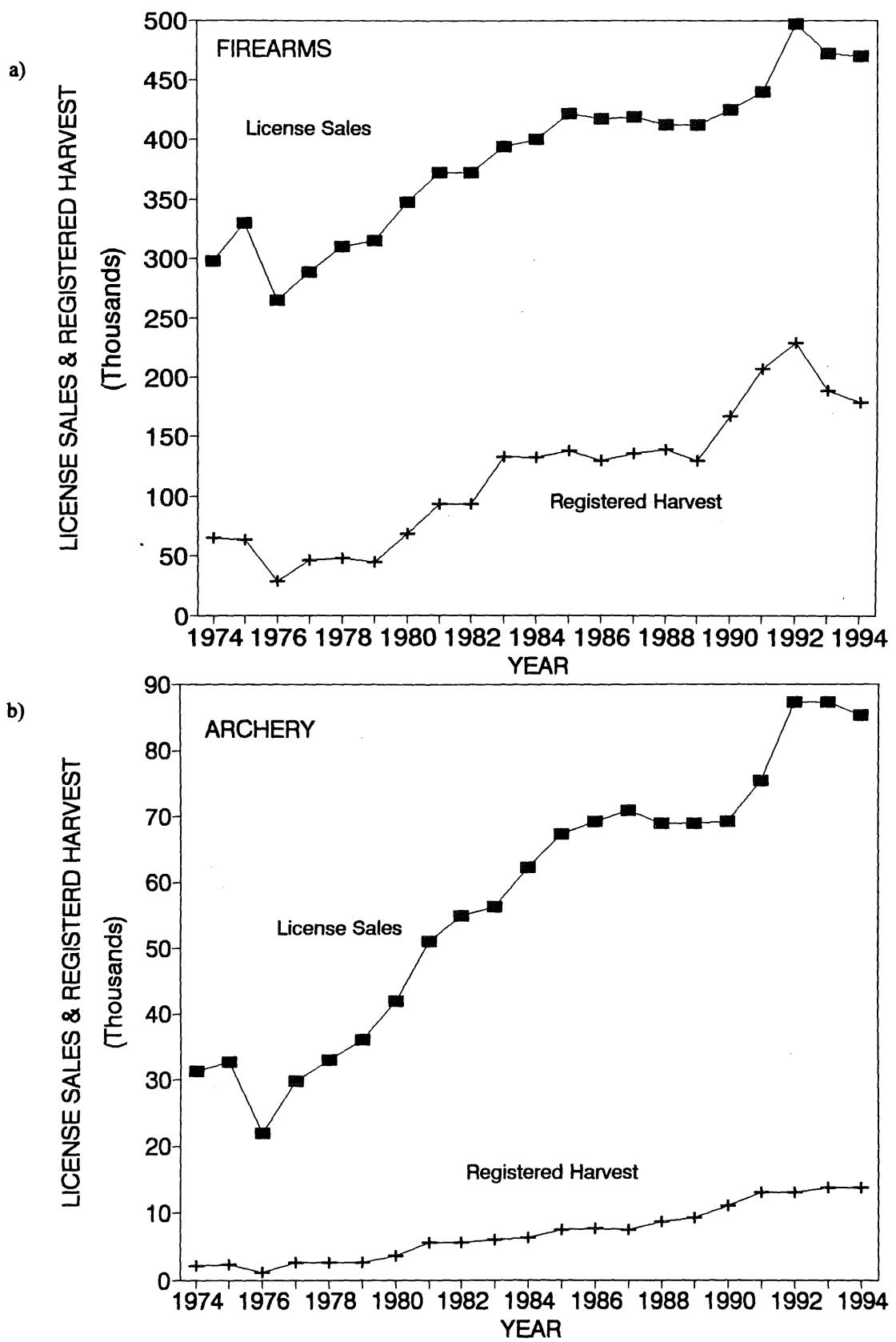


Figure 39.

Numbers of Minnesota deer hunting licenses sold and registered harvest by (a) firearm and (b) archery hunters, 1974-94.

Table 49. White-tailed deer harvest and hunter success rates by DMU and Sub-DMU. 1994*

Unit	Permits Issued	Antlerless Registered	Permit Success	Bucks Registered	Total Registered Kill
Red River West	1,165	637	54.7%	636	1,273
Red River East	6,607	3,739	56.6%	3,463	7,839
RED RIVER Total	7,772	4,379	56.3%	3,463	7,839
AGGASIZ Total	11,184	5,849	52.3%	4,758	10,607
Rainy River West	1,600	1,097	68.6%	1,825	2,922
Rainy River Central	2,400	1,278	53.3%	1,668	2,946
Rainy River East	3,500	1,521	43.5%	2,130	3,651
RAINY RIVER Total	7,500	3,896	51.9%	5,623	9,519
Superior West	3,500	1,266	36.2%	1,760	3,026
Superior Wilderness	600	358	59.6%	603	961
Superior Central	1,000	417	41.7%	642	1,059
Grand Portage I.R.	0	0	.0%	4	4
Superior East	400	137	34.3%	376	513
SUPERIOR Total	5,500	2,178	39.6%	3,385	5,563
Itasca NW	6,000	2,982	49.7%	2,972	5,954
Itasca SW	5,600	3,541	63.2%	4,087	7,628
Itasca NE	3,000	1,674	55.8%	3,127	4,801
Itasca SE	4,000	2,081	52.0%	3,428	5,509
Leech Lake Ind. Res.	900	465	51.6%	873	1,338
Bemidji	6,599	3,947	59.8%	3,940	7,887
ITASCA Total	26,099	14,690	56.3%	18,427	33,117
Mille Lacs West	3,750	3,200	85.3%	3,019	6,219
Mille Lacs Central	10,400	5,685	54.6%	4,754	10,439
Mille Lacs East	5,600	3,306	59.0%	5,145	8,451
White Earth Ind. Res.	500	303	60.6%	756	1,059
MILLE LACS Total	20,250	12,494	61.7%	13,674	26,168
Big Woods North	34,986	17,725	50.7%	11,430	19,155
Big Woods Central	8,915	4,122	46.2%	3,148	7,270
Big Woods Metro N	5,781	1,987	34.4%	1,730	3,717
Big Woods Metro S	2,531	1,285	50.8%	998	2,283
Big Woods SE	14,661	7,921	54.0%	6,684	14,605
BIG WOODS Total	66,874	33,040	49.4%	23,990	57,030
Prairie North	8,157	4,537	55.6%	3,287	7,824
Prairie River	5,363	3,453	64.4%	2,420	5,873
Prairie Southwest	5,850	4,609	78.8%	4,139	8,748
Prairie Southeast	5,488	3,074	56.0%	2,594	5,668
PRAIRIE Total	24,858	15,673	63.1%	12,440	28,113
Special Hunts	-	873	-%	229	1,102
TOTAL	171,437	92,866	54.2%	85,579	178,445

* Includes deer tagged with regular, multi-zone buck, and management permit licenses.

Table 50. Archery deer harvest by Sub-DMU and kill block, 1991-94.

Sub-DMU	Kill Block	1991	1992	1993	1994*
Red River West	401	88	95	79	97
	402	59	105	131	120
Red River East	403	46	37	55	76
	404	44	49	78	48
	405	27	38	27	40
	406	28	24	37	34
	407	67	140	145	114
	408	21	20	62	37
Aggasiz	201	21	15	17	11
	202	18	16	7	16
	203	9	9	3	2
	204	53	42	29	62
	205	72	77	113	151
	206	60	56	32	62
	207	15	18	11	14
	208	21	24	22	33
	209	28	44	57	48
	210	10	12	37	33
Rainy River West	211	76	43	67	96
	212	13	6	11	12
	213	0	1	0	0
	214	4	1	9	11
Rainy River Central	104	6	5	6	9
	105	5	2	2	1
	106	22	20	19	16
	110	20	10	19	11
Rainy River East	107	24	13	9	18
	108	19	10	17	9
	109	1	2	2	6
	195	0	0	0	0
Superior West	119	5	6	5	7
	120	12	4	8	8
	121	11	3	3	6
Superior Wilderness	115	0	1	1	0
	116	1	2	1	1
	117	2	3	3	4
	118	0	1	0	0
Superior Central	122	14	8	9	10
	123	2	2	1	3
	124	5	5	4	6
	125	25	27	13	17
Grand Portage I.R.	194	0	0	0	0
Superior East	126	28	14	16	9
	127	2	1	2	
	128	23	10	6	6
	129	7	1	2	3
	130	1	1	2	1
Itasca North West	167	15	9	12	16
	168	57	20	31	24
	169	68	36	44	46

Table 50 (con't.)

Sub-DMU	Kill Block	1991	1992	1993	1994
Itasca North East	175	23	19	28	36
	176	12	22	15	15
	177	16	8	13	13
	178	15	13	10	15
	179	30	17	20	35
Itasca South East	180	73	65	46	81
	181	34	12	24	29
	182	32	13	21	17
	183	48	22	28	45
	184	19	7	5	25
	199	4	5	5	3
Itasca South West	170	77	34	50	60
	171	56	15	47	49
	172	107	68	55	36
	173	73	40	40	51
	174	35	35	24	31
Leech Lake I.R.	197	17	8	7	15
	198	6	5	5	2
Bemidji	284	106	129	61	143
	285	13	19	18	18
	286	111	146	136	189
	287	5	0	7	3
Mille Lacs West	244	78	123	102	68
	245	85	76	56	67
	251	4	2	11	2
Mille Lacs Central	246	168	244	120	159
	247	236	165	193	208
	248	74	92	55	51
	249	98	135	54	74
Mille Lacs East	152	32	8	3	5
	154	56	58	26	22
	155	49	41	23	19
	156	90	66	30	56
	157	223	123	44	70
	158	242	120	78	96
	159	354	176	121	163
White Earth I.R.	297	5	8	5	5
	298	5	2	10	3
Big Woods North	409	112	158	159	164
	410	120	132	269	227
	411	136	127	231	207
	412	139	173	287	213
	413	165	179	165	243
	414	107	98	112	86
	415	230	199	216	219
	416	106	86	84	65
	417	268	259	245	216
	418	287	318	214	252
	419	254	479	132	123
	429			57	156

Table 50 (con't.)

Sub-DMU	Kill Block	1991	1992	1993	1994
Big Woods Central	221	116	79	83	81
	222	64	31	100	42
	223	187	128	218	307
	224	22	13	16	11
	225	276	356	151	70
	226	235	339	259	263
Big Woods Metro North	227	297	280	381	382
	228				689
	235	94	52	35	35
	236	608	639	626	602
Big Woods Metro South	337	299	405	1,223	861
	338	394	368	195	112
	339	308	335	155	256
Big Woods Southeast	341	114	117	196	134
	342	68	58	118	88
	343	233	350	281	400
	344	124	131	99	91
	345	88	92	148	105
	346	177	221	197	116
	347	68	129	141	208
	348	79	137	153	101
	349	101	89	129	92
Prairie North	420	106	164	160	100
	421	60	105	108	81
	422	35	76	65	53
	423	22	22	49	30
	424	53	47	57	42
	425	40	130	41	44
	426	42	43	48	110
	427	98	87	53	33
	428	142	83	88	101
Prairie River	431	45	53	47	48
	433	195	147	171	174
	435	109	93	86	79
	440	113	109	113	74
	442	238	198	205	191
	443	92	68	82	94
Prairie Southwest	446	33	26	29	16
	447	64	58	48	41
	448	44	49	42	47
	449	128	113	92	78
	450	40	25	26	34
	451	105	73	76	45
	452	50	72	97	39
	453	50	42	46	42
	454	130	117	130	93
	455	30	20	19	21
	456	125	147	79	82
	457	66	79	61	71
	458	77	68	53	84
	459	107	96	71	74

Table 50 (con't.)

Sub-DMU	Kill Block	1991	1992	1993	1994
Prairie Southeast	461	92	118	86	145
	462	116	130	127	143
	463	50	55	43	47
	464	60	59	57	55
	465	91	86	82	85
	466	120	118	122	121
	467	126	113	129	153
Unknown	UNK	128	124	8	0
Camp Ripley		219	158	287	267
TOTAL		12,964	12,999	13,722	13,427

* Includes Regular licesnses, Management permits, Intensive harvest permits, and Special permit areas.

Table 51. Special Muzzleloader Season harvest by block, 1994.
 (Includes Special Permit Areas)

Block Number	Adult		Fawns		Total
	Male	Female	Male	Female	
105	0	0	1	0	1
106	0	0	2	0	2
152	1	7	0	1	9
155	0	2	0	2	4
156	0	2	0	0	2
157	1	3	4	2	10
159	1	8	3	0	12
168	0	1	0	0	1
169	1	1	0	0	2
170	0	1	0	0	1
171	0	0	1	1	2
173	0	2	2	1	5
176	0	1	0	0	1
178	0	0	1	0	1
179	0	0	0	1	1
180	1	3	0	1	5
183	3	1	0	0	4
184	0	1	0	0	1
201	1	2	0	1	4
202	0	2	0	0	2
203	0	1	0	0	1
204	2	3	0	0	5
205	5	15	1	8	29
206	5	4	2	1	12
207	1	0	0	0	1
208	1	6	2	0	9
209	0	0	1	0	1
210	1	2	0	0	3
211	10	17	5	6	38
212	5	5	0	0	10
213	0	1	0	1	1
214	2	0	0	0	2
221	0	1	0	0	1
222	0	1	1	0	2
223	3	1	0	0	4
225	3	2	0	1	6
226	2	1	0	0	3
227	0	1	2	1	4
235	2	2	4	0	8
244	1	0	0	0	1
245	7	16	4	1	28
246	1	4	3	1	9
247	1	5	2	0	8
248	1	0	0	1	2
249	0	1	0	0	1
284	1	1	1	0	3
285	0	2	1	1	4
286	1	2	1	0	4
338	1	3	1	0	5
339	5	5	5	3	18

Table 51. (Cont.)

Block Number	Adult		Fawns		Total
	Male	Female	Male	Female	
341	4	6	1	1	12
342	1	6	10	5	22
343	9	24	11	8	52
344	8	22	12	12	49
345	2	4	1	0	7
346	1	3	0	0	4
347	7	9	10	6	32
348	4	13	6	4	27
349	0	8	0	0	8
401	2	3	2	1	8
402	1	4	1	1	7
403	1	2	0	1	4
404	2	8	3	1	14
405	1	0	0	0	1
406	0	0	0	1	1
407	2	3	0	4	9
408	0	0	1	2	3
409	0	1	1	2	4
410	2	9	8	7	26
411	1	4	0	5	10
412	1	3	2	1	7
413	2	3	2	1	8
414	0	2	0	1	3
415	8	9	2	3	22
416	1	0	2	1	4
417	7	14	9	6	36
418	9	3	1	0	13
419	4	6	2	0	12
420	5	9	3	2	19
421	2	5	5	1	13
422	0	1	2	0	3
423	0	0	1	0	1
424	6	7	1	4	18
425	2	6	6	3	17
426	4	8	9	3	24
427	5	0	2	1	8
428	4	3	0	0	7
429	0	6	3	0	9
431	11	40	17	9	77
433	20	50	21	19	110
434	1	0	0	0	1
435	4	16	2	2	24
440	6	7	3	3	19
442	12	18	10	11	51
443	12	8	5	0	24
446	4	4	1	3	12
447	1	3	0	0	4
448	3	1	1	1	6
449	3	4	4	0	11
450	3	6	3	3	15
451	7	3	4	2	16
452	4	4	5	2	15

Table 51. (Cont.)

Block Number	Adult		Fawns		Total
	Male	Female	Male	Female	
453	9	9	5	4	27
454	7	7	10	7	31
455	0	4	3	0	7
456	4	9	0	0	13
457	3	5	1	2	11
458	5	10	0	5	20
459	13	9	13	8	43
461	8	14	1	1	24
462	7	12	1	2	22
463	2	4	2	0	8
464	7	5	0	2	14
465	3	7	1	1	12
466	11	22	4	4	41
467	0	0	1	0	1
923	2	5	7	7	23
924	1	5	2	4	12
925	0	0	0	0	0
926	0	8	2	4	14
927	0	16	16	13	45
928	6	8	4	2	20
929	0	29	7	17	53
930	0	2	6	1	9
931	0	22	8	4	34
932	0	0	0	0	0
Total	357	733	335	260	1,685

Table 52. Muzzleloader Special Permit Area Data, 1994.

Area	Dates	Permits Issued		Harvest				Total
		Regular	Mgmt Permit	Adult male	Fawn male	Adult Female	Fawn Female	
Crow Wing S.P.(923) (924)	11/28-11/29 12/03-12/04	40 40	No No	2 1	5 2	9 5	7 4	23 12
Garvin County Park (925)	11/26-12/11	20 ^a	No	0	0	0	0	0
Lac qui Parle S.P. (926)	11/26-11/27	15 ^a	Yes	0	2	8	4	14
Lake Louise State Park (927)	11/26-11/28	30 ^a	Yes	0	16	16	13	45
Minnesota Valley S.P. (928)	11/26-11/29	60	Yes	6	4	8	2	20
Myre-Big Islan S.P. (929)	11/26-11/28 12/04-12/04	50 ^a	Yes	0	7	29	17	53
Rice Lake State Park (930)	11/26-11/29	15 ^a	Yes ^b	0	6	2	1	9
Sibley State Park (931)	11/26-11/29	70 ^a	No	0	8	22	4	34
Zipple Bay S.P. (932)	11/26-11/30	40 ^a	No	0	0	0	0	0

a Antlerless-only permits

b Hunters were authorized to take up to 3 deer in these hunts.

Table 53. Black bear registered harvest and hunter success, 1990-1994.

Quota Area	Harvest (success rate)				
	1990	1991	1992	1993	1994
12	79 (29%)	93 (32%)	109 (36%)	90 (27%)	130 (34%)
13	95 (37%)	93 (34%)	111 (36%)	98 (32%)	108 (34%)
22	29 (13%)	39 (18%)	40 (21%)	26 (13%)	33 (16%)
24	137 (30%)	155 (34%)	253 (45%)	199 (32%)	176 (26%)
25	167 (32%)	237 (37%)	331 (47%)	248 (33%)	199 (27%)
26	252 (40%)	337 (38%)	328 (40%)	330 (39%)	260 (30%)
31	323 (38%)	377 (39%)	554 (55%)	342 (34%)	260 (27%)
41	101 (39%)	74 (23%)	95 (28%)	85 (28%)	92 (31%)
44					294 (24%)
45	348 (34%)	234 (24%)	436 (36%)	539 (37%)	91 (14%)
51	433 (39%)	247 (20%)	521 (37%)	585 (35%)	432 (23%)
No Quota	417 (28%)	257 (19%)	397 (27%)	435 (29%)	254 (17%)
Total	2,381 (37%)	2,143 (30%)	3,175 (41%)	2,977 (35%)	2,329 (26%)

Table 54. Minnesota bear permits, licenses, hunters, harvests, and success rates during 1983-94.

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Permit applications	13,617	17,886	22,954	20,694	19,687	25,879	24,096	24,861	25,890	26,428	27,365	30,127
Permits available	3,550	3,880	4,290	4,730	4,810	5,310	5,520	6,370	7,140	7,920	8,630	9,400
Licenses purchased:												
Quota area	3,471	3,489	3,948	4,188	4,213	4,297	4,628	5,568	6,257	6,845	7,528	8,125
No-quota area	--	--	--	--	1,789	1,297	1,145	1,472	1,384	1,460	1,508	1,438
% Permit-holders buying license	97.8	89.9	92.0	88.5	87.6	80.9	83.8	87.4	87.6	86.4	87.2	86.4
Estimated number of hunters	3,100	3,100	3,700	3,900	5,500	5,100	5,400	6,500	7,100 ^a	7,700 ^a	8,400 ^a	8,900 ^a
Harvest	1,038	919	1,340	1,438	1,577	1,509	1,930	2,381	2,143	3,175	2,976	2,329
% Success rate ^b	33	30	36	37	29	30	36	37	30	41	35	26

^a In 1991 thru 1994 No-quota hunters were not surveyed, so the percent of license-holders hunting in the quota areas was used to calculate the total number of hunters. Total number of people hunting was based on a three year average of survey data indicating that 93% of license holders hunt.

^b Based on harvest divided by the estimated number of people hunting.

Table 55. Success rates of Minnesota bear hunters as measured by registered harvest/licenses sold, 1989-94.

Area	1989	1990	1991	1992	1993	1994
12	31	29	32	36	27	34
13	46	37	34	36	32	34
22	16	13	18	21	13	16
24	32	30	34	45	32	26
25	33	32	39	47	33	27
26	47	40	38	40	39	30
31	38	38	39	55	34	27
41	28	39	23	28	28	31
44						24
45		39	34	24	36	37
						14
51	35	39	20	37	35	23
No Quota Areas	-	28	19	27	29	17

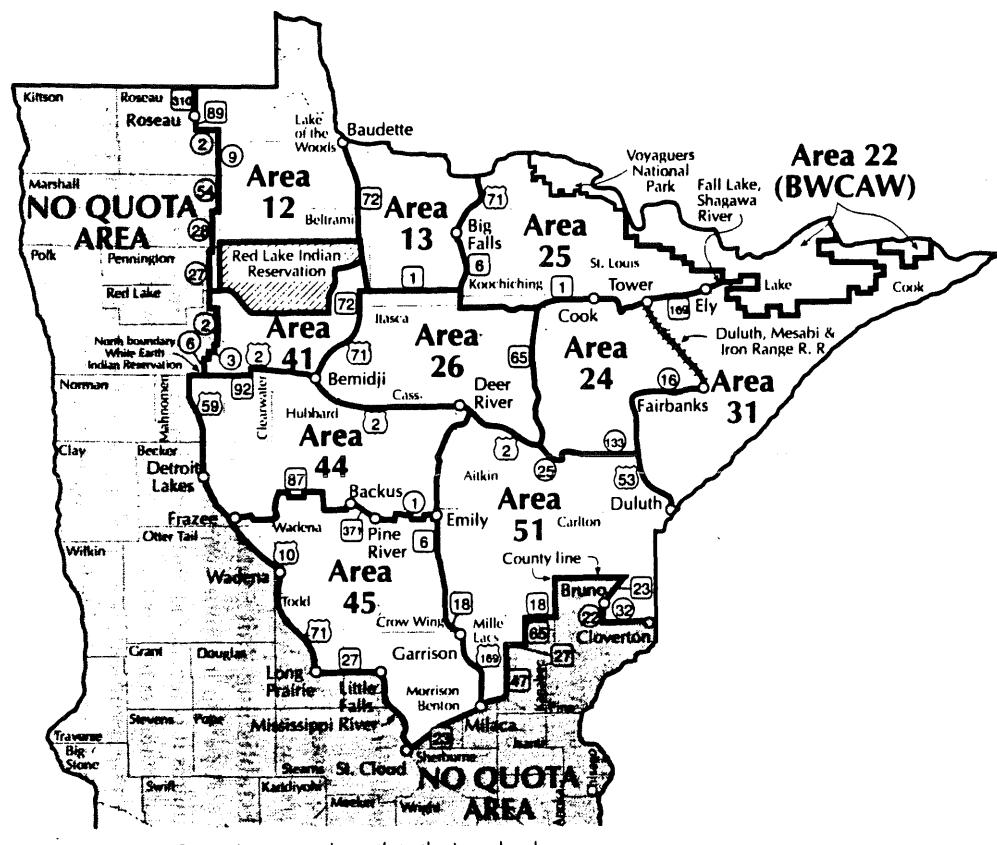


Figure 40. Black bear permit areas, 1994.

Table 56. Moose hunt quota and harvest statistics, 1971-94.

Year	Area	Number of 4-person licenses issued	Number of 4-person license applications	Chances for permit	Harvest	Party success (%)	Sex of Moose	
							Male	Female
1971	NW	250	9,264	1:23	240	96	159 (66%)	81 (34%)
	NE	150			134	89	87 (65%)	47 (35%)
1973	NW	335	13,560	1:26	306	91	213 (76%)	91 (24%)
	NE	185			159	86	131 (83%)	24 (13%)
1975	NW	475	15,792	1:20	449	94	259 (58%)	188 (42%)
	NE	275			227	82	147 (65%)	80 (35%)
1977	NW	630	16,586	1:18	598	95	348 (58%)	250 (42%)
	NE	300			243	81	172 (71%)	71 (29%)
1979	NW	395	19,023	1:28	330	83	196 (59%)	134 (41%)
	NE	290			236	81	158 (67%)	78(33%)
1981	NW	505	20,521	1:23	455	90	283 (62%)	172 (38%)
	NE	375			309	82	218 (71%)	91(29%)
1983	NW	780	17,754	1:14	737	94	493 (67%)	244 (33%)
	NE	523			442	84	273 (62%)	169 (38%)
1985	NW	768	14,772	1:14	718	93	419 (58%)	299(42%)
	NE	300			250	83	165 (66%)	85 (34%)
1987	NW	772	14,234	1:11	727	94	505 (69%)	222 (31%)
	NE	528			436	83	292 (67%)	144 (33%)
1989	NW	449	15,381	1:15	438	98	291 (66%)	147 (34%)
	NE	545			444	81	285 (64%)	159 (36%)
1991	NW	365	5,665	1:16	359	98	258 (72%)	101 (28%)
	NE	0			-	-		
1993	NW	446	9,925	1:13	419	94	317 (76%)	102 (24%)
	NE	315			264	84	200 (76%)	64 (24%)
1994	NW	262	11,351	1:25	245	93	166 (68%)	77 (32%)
	NE	189			155	82	115 (74%)	40 (26%)

TRAPPING HARVEST STATISTICS
Section of Wildlife
Box 7, 500 Lafayette Rd.
St. Paul, MN 55155
(612) 296-3344

Table 57. Trapper response to mail surveys, 1979-80 through 1994-95.

Year	Number mailed	Number not delivered	<u>Delivered questionnaires completed and returned</u>	
			Number	Percent
1979-80	1,011	29	888	90.4
1980-81	1,345	110	1,072	86.8
1981-82	1,345	36	1,167	89.2
1982-83	925	28	794	88.5
1983-84	770	10	663	87.2
1984-85	556	9	495	90.5
1985-86	581	13	506	89.1
1986-87	582	8	514	89.5
1987-88	721	11	607	85.5
1988-89	852	25	727	87.9
1989-90	3,302	120	2,804	88.1
1990-91	2,294	102	1,875	85.5
1991-92	2,643	149	2,062	82.7
1992-93	2,080	76	1,681	83.9
1993-94	2,828	100	2,194	80.4
1994-95	2,382	76	1,876	81.5

Table 58. Use of trapper licenses, 1983-84 through 1994-95.

		Return from mail survey	Projections from license sales
1983-84	Trapped	549 (82.8%)	13,862
	Did not trap	<u>114</u> (17.2%)	<u>2,879</u>
		663 (100.0%)	16,741
1984-85	Trapped	445 (89.9%)	15,136
	Did not trap	<u>50</u> (10.1%)	<u>1,700</u>
		495 (100.0%)	16,836
1985-86	Trapped	420 (83.0%)	12,201
	Did not trap	<u>86</u> (17.0%)	<u>2,498</u>
		506 (100.0%)	14,699
1986-87	Trapped	442 (86.0%)	13,240
	Did not trap	<u>72</u> (14.0%)	<u>2,155</u>
		514 (100.0%)	15,395
1987-88	Trapped	512 (84.6%)	15,777
	Did not trap	<u>93</u> (15.4%)	<u>2,866</u>
		605 (100.0%)	18,643
1988-89	Trapped	582 (80.1%)	9,789
	Did not trap	<u>145</u> (19.9%)	<u>2,432</u>
		727 (100.0%)	12,221
1989-90	Trapped	2,251 (80.3%)	7,314
	Did not trap	<u>553</u> (19.7%)	<u>1,794</u>
		2,804 (100.0%)	9,108
1990-91	Trapped	1,399 (80.6%)	4,972
	Did not trap	<u>337</u> (19.4%)	<u>1,197</u>
		1,736 (100.0%)	6,169 ^a
1991-92	Trapped	1,639 (79.5%)	4,150
	Did not trap	<u>423</u> (20.5%)	<u>1,070</u>
		2,062 (100.0%)	5,220 ^a
1992-93	Trapped	1,438 (85.5%)	4,927
	Did not trap	<u>243</u> (14.5%)	<u>836</u>
		1,681 (100.0%)	5,763 ^a
1993-94	Trapped	1,904 (85.5%)	4,862
	Did not trap	<u>290</u> (13.2%)	<u>739</u>
		2,194 (100.0%)	5,601 ^a
1994-95	Trapped	1,647 (87.8%)	6,054
	Did not trap	<u>228</u> (12.2%)	<u>841</u>
		1,875 (100.0%)	6,895 ^a

^a excludes duplicates.

Table 59. Estimated number of trappers of various furbearers, 1983-84 through 1994-95.

	Estimated number of trappers (thousands)											
	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Muskrat	11	13	9	11	15	7	4	2	2	3	3	4
Mink	8	9	8	9	13	7	5	3	2	3	3	3
Short-tailed weasel	<1	1	<1	1	1	1	<1	<1	<1	<1	<1	1
Long-tailed weasel	<1	1	<1	1	2	1	1	<1	<1	<1	<1	<1
Raccoon (Sept 94-Feb 95)	9	9	8	8	11	6	4	2	2	2	3	3
Raccoon (May 94-Aug 94) ^a												<1
Striped skunk	4	5	4	4	5	3	2	1	1	1	1	1
Eastern spotted skunk	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Badger	1	1	1	1	1	1	<1	<1	<1	<1	<1	<1
Opossum	<1	<1	1	1	2	1	1	1	1	1	1	1
Red fox (Sept 94-Feb 95)	6	6	5	5	6	4	2	2	2	2	2	2
Red fox (May 94-Aug 94) ^a												<1
Gray fox	2	2	2	2	2	1	1	<1	<1	<1	<1	<1
Coyote	2	2	1	2	2	1	1	1	1	1	1	1
Beaver (fall)	4	5	4	6	8	4	3	2	2	2	2	3
Beaver (spring)	4	3	4	4	4	2	2	1	1	1	1	2

^a Raccoon and red fox season changed to year round beginning May, 1994.

Table 60. Estimated take per trapper of various furbearers, 1983-84 through 1994-95.

	Estimated take per trapper reporting that species											
	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Muskrat	75.8	75.1	51.8	72.9	68.7	28.3	26.5	24.3	20.3	35.9	64.1	90.3
Mink	6.8	8.0	7.6	8.7	8.5	8.9	8.8	9.5	8.3	11.6	12.2	11.7
Short-tailed weasel	4.6	3.5	2.6	4.2	4.7	4.2	4.6	3.2	4.3	4.9	6.1	11.5
Long-tailed weasel	4.0	2.1	2.0	5.2	4.4	5.0	4.6	2.8	5.2	3.6	3.6	6.4
Raccoon (Sept 94-Feb 95)	7.8	8.3	11.3	11.4	11.9	12.8	11.6	15.8	14.2	16.1	4.8	20.2
Raccoon (May 94-Aug 94)*												14.6
Striped skunk	8.5	9.4	10.3	10.2	10.2	10.1	9.5	11.8	9.0	8.2	8.7	7.7
Eastern spotted skunk	2.5	1.4	2.5	2.5	1.8	2.0	4.8	7.3	2.7	1.6	5.6	4.3
Badger	2.1	1.6	2.1	1.7	1.9	2.0	1.8	2.4	2.2	1.8	1.8	1.9
Opossum	3.1	2.8	8.7	13.8	6.7	8.2	8.6	10.7	9.1	10.0	8.4	8.5
Red fox (Sept 94-Feb 95)	6.9	9.2	6.1	7.5	8.7	13.3	10.1	18.3	13.7	10.8	11.3	10.6
Red fox (May 94-Aug 94)*												8.8
Gray fox	2.5	2.9	3.5	2.9	2.6	4.1	3.1	3.0	2.0	3.5	3.1	2.1
Coyote	4.8	5.3	4.5	3.8	3.3	3.7	4.3	3.4	3.8	4.7	4.7	4.4
Beaver (fall)	7.3	10.0	9.8	11.5	16.3	11.2	14.6	13.2	15.1	12.5	16.1	17.6
Beaver (spring)	25.4	30.3	21.7	21.7	22.7	14.1	19.9	18.8	26.7	28.7	28.9	36.6

* Raccoon and red fox season changed to year round beginning May, 1994.

Table 61. Minnesota trapper license sales and estimated annual harvest, 1983-84 through 1994-95.*

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Trapper license sales ^b	16,741	16,836	14,699	15,395	18,643	12,221	9,108	6,163	5,220	5,763	5,763	6,895
Estimated harvest^c (thousands)												
Muskrat	865	963	477	826	1,007	185	118	55	45	92	202	355
Mink	58	75	57	77	110	59	40	25	21	32	33	40
Short-tailed weasel	2	3	1 ^d	3	7	3	2	1	1	1	2	6
Long-tailed weasel	1	1	1	3	7	3	2	1	1	1	1	3
Raccoon (Sept 94- Feb 95)	69	78	89	95	134	74	41	34	31	34	56	58
Raccoon (May 94-Aug 94) ^f												1
Striped skunk	36	47	41	42	54	31	17	15	10	7	9	9
Eastern spotted skunk	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Badger	2	2	2	2	3	2	1	1	1	1	1	1
Opossum	2	1	7	14	10	9	6	6	5	6	5	5
Red fox (Sept 94- Feb 95)	42	58	29	40	57	53	25	33	25	23	22	24
Red fox (May 94-Aug 94) ^f												1
Gray fox	5	5	6	6	5	5	2	1	1	1	1	1
Coyote	9	10	7	7	7	3	4	3	3	4	4	5
Beaver (fall season)	30	51	43	71	132	47	48	24	25	22	29	49
Beaver (spring season)	101	103	92	101	26	-	31	20	26	34	32	64
Registered harvest												
Otter	408	529	559	777	1,386	922	1,294	88	855	1,368	1,459	2,445
Lynx ^e	9	closed	closed	closed	closed	closed	closed	closed	closed	closed	closed	closed
Bobcat ^e	208	280	119	160	214	140	129	84	106	168	201	238
Fisher	631	1,289	678	1,068	1,642	1,025	1,243	746	528	778	1,159	1,771
Marten	closed	closed	430	798	1,363	2,072	2,119	1,349	656	1,602	1,438	1,527

* Includes data for all seasons from October through April of years indicated.

^b Separate licenses were issued for juveniles (13-17 years old) and adults (18 and older), beginning in 1982. As of August 1, 1994, 5,601 trapping licenses were sold in 1993, 662 (11.8%) were juvenile licenses and 4,939 (88.2%) were adult licenses. Duplicate licenses excluded.

^c Based upon trappers' responses to mail surveys.

^d I is any number which rounds to 1. <1 is any number which is <0.5.

^e Registered harvest for lynx and bobcat includes animals taken by hunting.

^f Raccoon and red fox seasons changed to year round beginning May 1994.

Table 62. Average price per pelt paid to hunters and trappers in Minnesota, 1980-81 through 1994-95.

Species	Average pelt prices paid hunters and trappers in Minnesota (dollars)														
	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Muskrat	5.62	3.47	2.19	2.24	2.81	1.85	2.89	3.12	2.07	0.80	0.75	1.55	1.35	1.35	1.61
Mink (male)	37.55	34.35	24.43	30.33	28.40	25.29	35.75	40.54	39.76	30.38	23.06	27.30	24.74	21.89	14.90
Mink (female)	16.04	17.22	10.63	14.55	14.04	13.37	18.43	20.25	22.70	17.26	14.73	17.36	15.02	12.18	11.43
S.T. Weasel	0.64	0.59	0.56	0.56	0.77	0.98	0.98	0.89	1.11	1.20	1.55	0.77	1.31	1.72	1.73
L.T. Weasel	0.84	0.96	0.80	0.93	1.10	1.06	1.28	1.02	1.04	1.25	0.58	1.21	1.06	1.05	2.05
Raccoon	27.44	32.35	17.95	12.66	19.91	15.51	21.81	16.67	7.53	4.88	4.19	8.57	7.29	8.26	9.02
Striped Skunk	4.74	3.46	2.58	2.77	2.74	1.58	2.06	2.47	1.90	1.31	1.84	1.47	2.69	3.70	3.52
Eastern Spotted Skunk	6.06	2.58	1.75	N.A.	3.00	6.17	N.A.								
Badger	18.39	18.14	9.04	10.96	9.18	6.45	5.43	5.74	2.99	2.91	4.33	3.51	4.20	4.62	6.12
Opossum	2.52	1.58	0.87	0.71	1.14	0.62	0.97	0.91	0.62	0.76	3.51	0.96	0.78	0.89	0.98
Red Fox	50.81	51.48	31.10	32.81	29.07	17.51	22.07	16.69	9.89	8.58	7.17	10.81	8.88	10.59	13.42
Gray Fox	37.87	26.74	23.48	22.95	21.58	15.00	22.60	22.56	11.45	7.39	5.16	5.22	6.73	6.55	9.69
Coyote	31.37	41.28	25.41	18.79	19.06	18.19	22.03	18.35	8.43	6.42	8.95	14.85	15.55	14.68	13.55
Lynx	94.91	180.33	94.17	125.00	-	-	-	-	-	-	-	-	-	-	-
Bobcat	78.55	73.35	66.40	61.40	75.81	70.00	120.15	101.10	68.31	48.50	42.50	37.44	28.18	43.42	36.36
Beaver ^a (fall-winter)	17.88	14.48	10.69	9.52	12.51	15.03	20.32	16.75	13.84	12.49	9.44	9.00	7.10	11.24	13.80
Beaver ^a (spring)	16.52	12.55	11.60	12.24	16.11	17.90	-	17.12	12.62	10.99	9.66	9.25	7.89	9.41	14.48
Otter	32.78	29.80	25.65	24.79	21.56	20.81	24.15	22.85	22.02	22.01	24.21	24.74	29.90	43.14	47.50
Fisher ^a (male)	89.51	94.42	69.91	70.59	70.26	73.55	84.32	84.36	53.83	26.15	34.85	21.46	15.73	14.17	19.06
Fisher ^a (female)	104.29	110.08	99.08	121.08	121.76	130.47	162.29	170.31	99.63	52.92	46.25	47.93	28.79	28.40	29.93
Marten (male)	No Open Season				30.29	35.68	43.13	50.08	47.90	43.89	39.59	27.87	35.86	34.07	
Marten (female)					27.61	26.58	39.20	43.46	46.88	40.84	27.24	24.96	29.58	28.34	

^a Differences in pelt prices were not calculated before 1979 for beaver, and 1978 for fisher.

REGISTERED FURBEARER HARVEST STATISTICS
Forest Wildlife Populations and Research Group
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Grand Rapids, MN 55744
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Table 63. Registered furbearer harvests and total permits issued, 1985-94^a.

Year	Bobcat		Fisher		Marten		Otter	
	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest
1985	--	119	--	678	746	430	--	559
1986	--	160	3,302	1,607	2,171	798	3,198	777
1987	--	214	4,952	1,642	3,025	1,363	4,708	1,386
1988	--	140	4,419	1,025	3,369	2,072	4,070	922
1989	--	129	3,712	1,243	3,074	2,119	3,549	1,294
1990	--	84	2,385	746	2,090	1,349	2,199	888
1991 ^b	--	106	2,360	528	2,020	686	2,282	855
1992 ^b	--	168	2,420	778	2,050	1,602	3,440	1,368
1993 ^b	--	201	2,299	1,159	1,925	1,438	2,254	1,459
1994 ^b	--	238	2,186	1,771	2,477	1,527	2,964	2,445

^a Prior request tags and permits were required beginning in 1985 for marten and in 1986 for fisher and otter.

No possession tags or permits are required for bobcat.

^b Confiscation and 1854 Authority removed.

BOBCAT 1994-1995

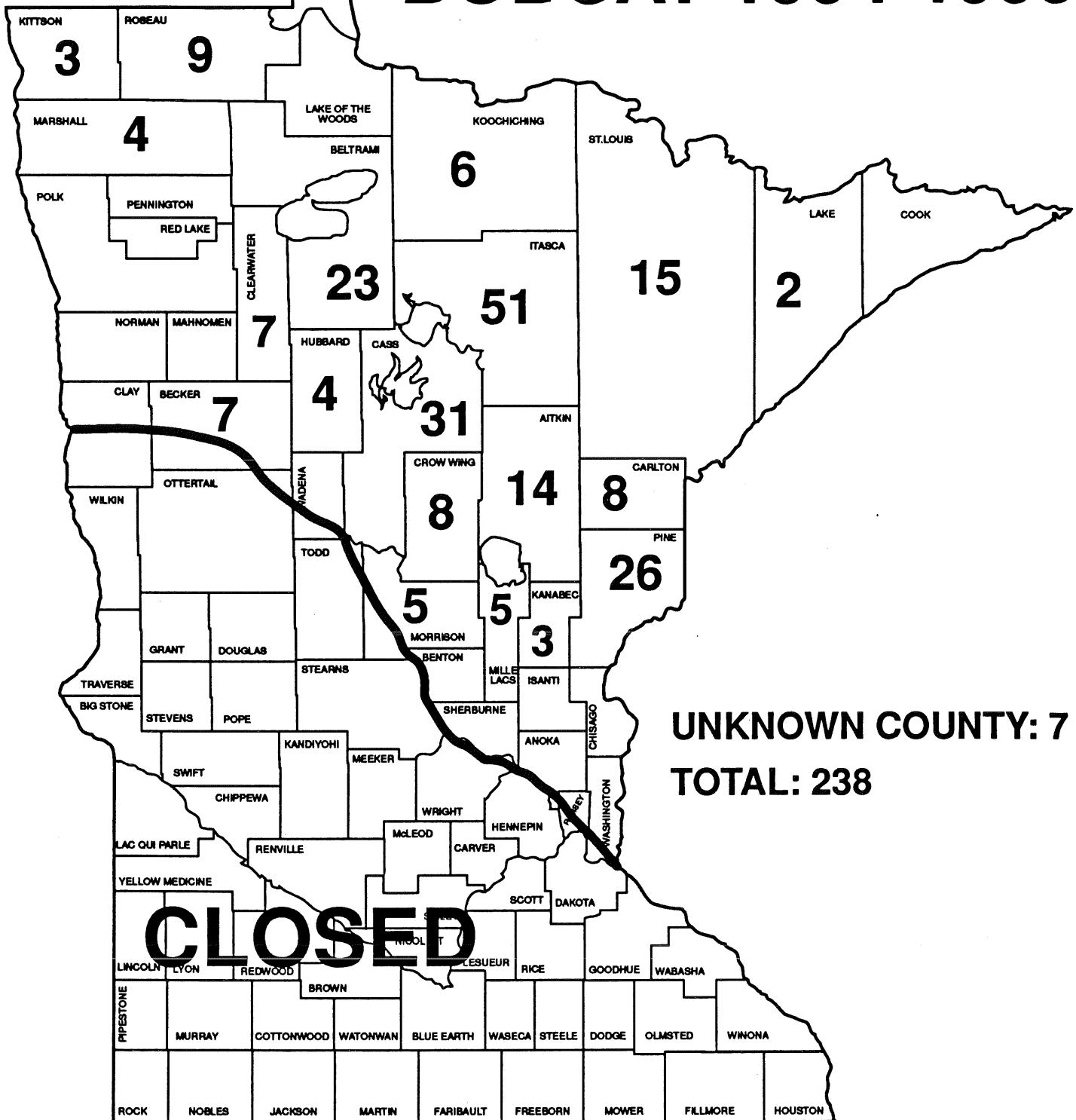


Figure 41. Bobcat harvest by county, 1994-1995

Table 64. Time distribution of bobcat harvest by 5-day increments, 1994-95 season.

Interval	Sex			Total	% of Known Total	Cumulative Percent
	M	F	U			
Dec. 3-7	11	12	-	23	14	14
Dec. 8-12	16	22	-	38	22	36
Dec. 13-17	11	19	-	30	18	54
Dec. 18-22	10	20	-	30	18	72
Dec. 23-27	6	12	-	18	11	83
Dec. 28-Jan 1	6	6	-	12	7	90
Jan. 2-6	4	8	-	12	7	97
Jan. 7-8*	3	2	-	5	3	100
Unknown	9	10	51	70	-	-
Total	76	111	51	238	100	100

* 2-day interval

Table 65. Distribution of bobcat harvest among takers, 1983-84 thru 1994-95.

Number of Takers	Number Taken (%)					
	1	2	3	4	5	Total
1983-84	108 (72.0)	32 (21.3)	6 (4.0)	4 (2.7)	0 (0.0)	150
1984-85	116 (65.2)	39 (21.9)	13 (7.3)	9 (5.1)	1 (0.5)	178
1985-86	70 (78.7)	11 (12.4)	6 (6.7)	1 (1.1)	1 (1.1)	89
1986-87	92 (76.7)	18 (15.0)	9 (7.5)	0 (0.0)	1 (0.8)	120
1987-88	104 (71.7)	23 (15.9)	10 (6.9)	6 (4.1)	2 (1.4)	145
1988-89	88 (81.5)	11 (10.2)	7 (6.5)	1 (0.9)	1 (0.9)	108
1989-90	56 (69.1)	13 (16.0)	5 (6.2)	3 (3.7)	4 (4.9)	81
1990-91	47 (77.0)	9 (14.7)	1 (1.6)	4 (6.5)	0 (0.0)	61
1991-92	42 (63.6)	15 (22.7)	4 (6.1)	3 (4.5)	2 (3.0)	66
1992-93	69 (64)	21 (20)	9 (9)	5 (5)	2 (2)	106
1993-94	90 (70)	17 (13)	13 (10)	7 (5)	2 (2)	201
1994-95	103 (68)	25 (17)	12 (8)	6 (4)	5 (3)	151
Total	985 (67.7)	234 (16.1)	95 (6.5)	49 (3.4)	21 (1.4)	1,456

Table 66. Bobcat harvest by method of take, 1979-1994.

Year	Total Harvest	Trapping				Hunting			
		Harvest	(% of Total)	Takers	Average Take	Harvest	(% of Total)	Takers	Average Take
1979	291	253	(86.9)	--	--	38	(13.1)	--	--
1980	210	177	(84.3)	68	2.6	33	(15.7)	24	1.4
1981	260	219	(84.2)	143	1.5	41	(15.8)	30	1.4
1982	274	239	(87.2)	147	1.6	35	(12.8)	23	1.5
1983	208	168	(80.8).	118	1.4	40	(19.2)	32	1.3
1984	280	252	(90.0)	156	1.6	28	(10.0)	22	1.3
1985	119	83	(69.7)	62	1.3	36	(30.3)	27	1.3
1986	160	119	(74.4)	89	1.3	41	(25.6)	31	1.3
1987	214	177	(82.7)	118	1.5	37	(17.3)	26	1.4
1988	140	94	(67.1)	76	1.2	46	(32.9)	32	1.4
1989	129	90	(69.5)	49	1.8	39	(30.5)	28	1.4
1990	84*	61	(72.6)	43	1.4	22	(26.2)	17	1.3
1991	106*	59	(55.7)	31	1.9	43	(40.6)	33	1.3
1992	168	133	(80.0)	85	1.6	35	(20.0)	23	1.5
1993	201	147	(73.1)	88	1.7	54	(26.8)	41	1.3
1994	238	189	(79.4)	120	1.6	49	(20.6)	31	1.6

* Sum of trapping and hunting harvest is not equal to total harvest due to incomplete method of take data.

Table 67. Comparison of bobcat harvest by county, 1984-85 through 1994-95.

County	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Aitkin	25	14	12	25	18	31	4	3	22	28	14
Becker	9	1	1	3	2	1	3	5	1	1	7
Beltrami	24	5	7	15	7	8	4	6	8	15	23
Benton								1	0	0	0
Carlton	20	6	9	9	4	1	1	2	10	5	8
Cass	42	20	34	28	13	27	11	14	27	16	31
Chisago	0	1	0	0	1	0	0	0	0	0	0
Clearwater	0	0	3	0	1	2	0	0	5	2	7
Cook	1	0	1	2	4	2	3	0	0	1	0
Crow Wing	5	6	5	1	2	0	5	4	6	3	8
Douglas	0	0	Closed								
Hubbard	1	0	0	2	3	1	1	3	3	2	4
Isanti	0	0	1	0	0	1	0	0	0	0	0
Itasca	50	15	28	44	20	19	11	16	35	39	51
Kanabec	6	2	3	0	1	6	1	0	4	7	3
Kittson	0	0	3	6	2	0	3	3	3	1	3
Koochiching	8	8	6	9	13	1	0	5	5	3	6
Lake	1	1	3	4	2	1	0	1	5	1	2
Lake of the Woods	1	0	2	4	0	0	0	0	0	0	0
Marshall	1	1	3	4	0	0	1	5	0	6	4
Mille Lacs	0	4	3	8	2	0	3	7	3	1	5
Morrison	5	4	4	4	2	2	2	2	5	14	5
Ottertail	1	3	2	1	2	1	0	1	0	2	0
Pennington	0	0	0	0	0	0	0	0	0	0	0
Pine	29	14	11	15	23	15	18	16	11	29	26
Polk	1	0	0	0	1	0	0	0	0	0	0
Red Lake	0	1	0	0	0	0	0	0	0	0	0
Renville	1	0	Closed								
Roseau	14	2	2	2	0	2	1	3	5	9	
St. Louis	43	8	19	26	10	7	8	3	8	10	15
Wadena	1	2	0	2	2	2	2	0	2	0	
Unknown	1	0	2	0	0	1	1	6	5	8	7
Total	280	119	160	214	140	129	84	106	168	201	238

FISHER 1994-1995

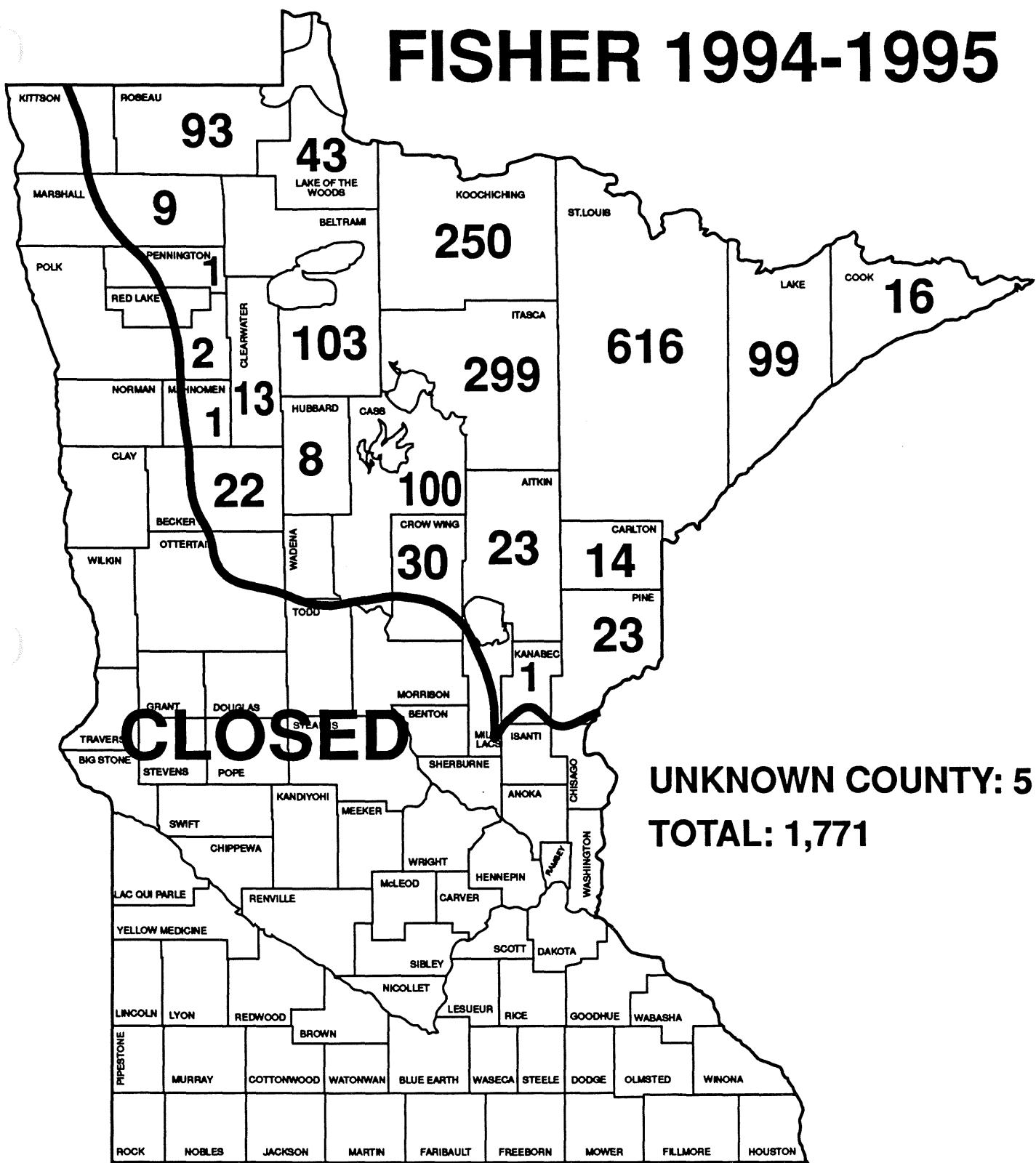


Figure 42. Fisher harvest by county, 1994-1995

Table 68. Fisher harvest by date and sex, 1994-95 season.

Date	Sex			Total	% of known	
	Male	Female	Unknown		Total	Cumulative Percent
Dec. 3	4	6	0	10	1	1
Dec. 4	24	43	0	67	6	7
Dec. 5	62	46	1	109	9	16
Dec. 6	35	48	0	83	7	23
Dec. 7	48	44	0	92	8	31
Dec. 8	43	49	0	92	8	39
Dec. 9	41	48	0	89	8	47
Dec. 10	75	80	0	155	13	60
Dec. 11	38	46	0	84	7	67
Dec. 12	32	28	0	60	5	72
Dec. 13	25	22	0	47	4	76
Dec. 14	39	30	0	69	6	82
Dec. 15	19	29	2	50	4	86
Dec. 16	25	21	0	46	4	90
Dec. 17	42	32	0	74	6	96
Dec. 18	26	28	0	54	4	100
Unknown	194	217	179	590	--	--
Total	772	817	182	1,771	100	100

Table 69. Fisher harvest by county and sex, 1994-95 season.

County	Sex			Total
	Male	Female	Unknown	
Aitkin	15	8	0	23
Becker	14	8	0	22
Beltrami	49	53	1	103
Carlton	9	5	0	14
Cass	52	47	1	100
Clearwater	6	7	0	13
Cook	7	9	0	16
Crow Wing	22	8	0	30
Hubbard	6	2	0	8
Itasca	49	75	175	299
Kanabec	1	0	0	1
Kittson	0	0	0	0
Koochiching	131	119	0	250
Lake	46	53	0	99
Lake of the Woods	28	15	0	43
Mahnomen	1	0	0	1
Marshall	3	6	0	9
Pennington	1	0	0	1
Pine	14	9	0	23
Polk	2	0	0	2
Red Lake	0	0	0	0
Roseau	46	47	0	93
St. Louis	270	345	1	616
Unknown	0	1	4	5
Total	772	817	182	1,771

Table 70. Comparison of fisher harvest by county, 1983-94.

County	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Aitkin	5	10	8	8	24	14	26	17	8	15	17	23
Becker	4	3	1	4	2	4	4	5	4	6	4	22
Beltrami	25	96	27	71	115	68	78	34	34	34	44	103
Carlton	4	3	0	3	6	3	2	3	3	8	12	14
Cass	3	19	17	32	60	24	43	34	30	33	57	100
Clearwater	3	6	4	4	3	1	3	3	2	3	3	13
Cook	18	16	9	15	29	29	10	14	4	17	17	16
Crow Wing	2	11	6	11	14	3	12	12	14	18	23	30
Hubbard	0	7	1	7	9	6	8	4	6	7	6	8
Itasca	72	228	84	183	247	135	184	99	73	76	177	299
Kanabec	0	0	0	0	0	1	0	0	0	2	0	1
Kittson	6	2	1	1	4	2	1	2	1	0	1	1
Koochiching	123	255	157	195	303	128	211	77	96	97	148	250
Lake	37	80	49	81	114	78	80	78	17	57	82	99
Lake of the Woods	32	85	46	58	91	66	58	27	21	26	8	43
Mahnomen	0	0	0	0	0	5	0	0	0	0	1	1
Marshall	13	10	5	2	19	7	4	3	2	3	7	9
Norman	-----closed-----				1 ^a	1 ^a	-----closed-----					
Pennington	0	0	0	0	0	1	0	0	0	0	0	1
Pine	1	1	0	0	1	1	3	2	0	3	17	23
Polk	0	0	0	1	0	1	0	0	0	0	1	2
Red Lake	0	0	0	0	1	0	0	0	1	0	1	0
Roseau	86	111	68	75	90	68	53	32	21	32	68	93
St. Louis	197	345	195	316	509	377	463	279	187	229	463	616
Unknown	0	1	0	0	0	3	0	21	4	112	2	5
Total	631	1289	678	1068	1642	1025	1243	746	528	778	1,159	1,771

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^a The reported harvest is accidental take - Norman County is closed to fisher trapping.

MARTEN 1994-1995

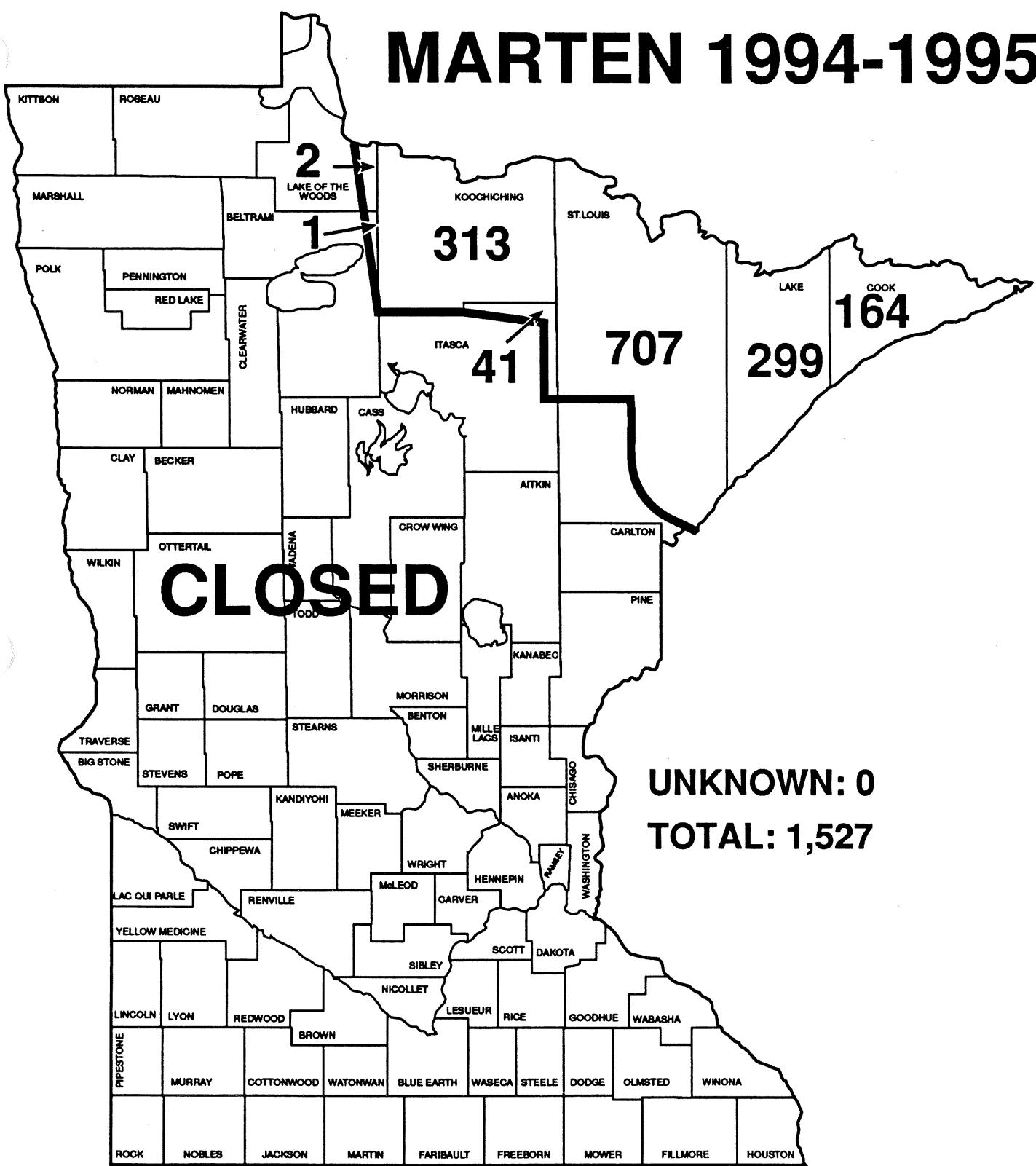


Figure 43. Pine marten harvest by county, 1994-1995.

Table 71. Marten harvest by date and sex, 1994-95 season.

Date	Sex			Total	% of Known Total	Cumulative Percent
	Male	Female	Unknown			
Dec. 3	11	8	0	19	2	2
Dec. 4	104	39	0	143	12	14
Dec. 5	103	40	0	143	12	26
Dec. 6	71	29	0	100	9	35
Dec. 7	70	26	0	96	8	43
Dec. 8	40	23	0	63	5	48
Dec. 9	50	28	0	78	7	55
Dec. 10	96	38	1	135	11	66
Dec. 11	52	43	2	97	8	74
Dec. 12	28	16	0	44	4	78
Dec. 13	32	14	0	46	4	82
Dec. 14	29	13	0	42	4	86
Dec. 15	30	15	0	45	4	90
Dec. 16	11	14	0	25	2	92
Dec. 17	29	20	0	49	4	96
Dec. 18	29	14	0	43	4	100
Unknown	231	108	20	359	-	-
Total	1,016	488	23	1,527	100	100

Table 72. Marten harvest by county and sex, 1994-95 season.

County	Sex			Total
	Male	Female	Unknown	
Beltrami	-	1	-	1
Cook	110	54	-	164
Itasca	28	11	16	41
Koochiching	203	110	-	299
Lake	209	89	1	299
Lake of the Woods	2	-	-	2
St. Louis	478	223	6	707
Unknown	-	-	-	-
Total	1,016	488	23	1,527

Table 73. Comparison of marten harvest by county, 1986-94.^a

County	1986	1987	1988	1989	1990	1991	1992	1993	1994
Beltrami	0	0	0	0	0	0	1	0	1
Cook	75	143	305	288	178	69	180	133	164
Itasca	---closed---		11	18	16	12	28	43	41
Koochiching	159	275	266	204	123	115	206	232	313
Lake	160	270	457	481	446	123	357	252	299
Lake of the Woods	---closed---		1	0	0	0	0	1	2
St. Louis	401	675	1,032	1,123	567	336	666	771	707
Unknown	3	0	0	5	19	1	164	6	0
Total	798	1,363	2,072	2,119	1,349	656	1,602	1,438	1,527

^a No open season on marten prior to 1985.

OTTER 1994-1995

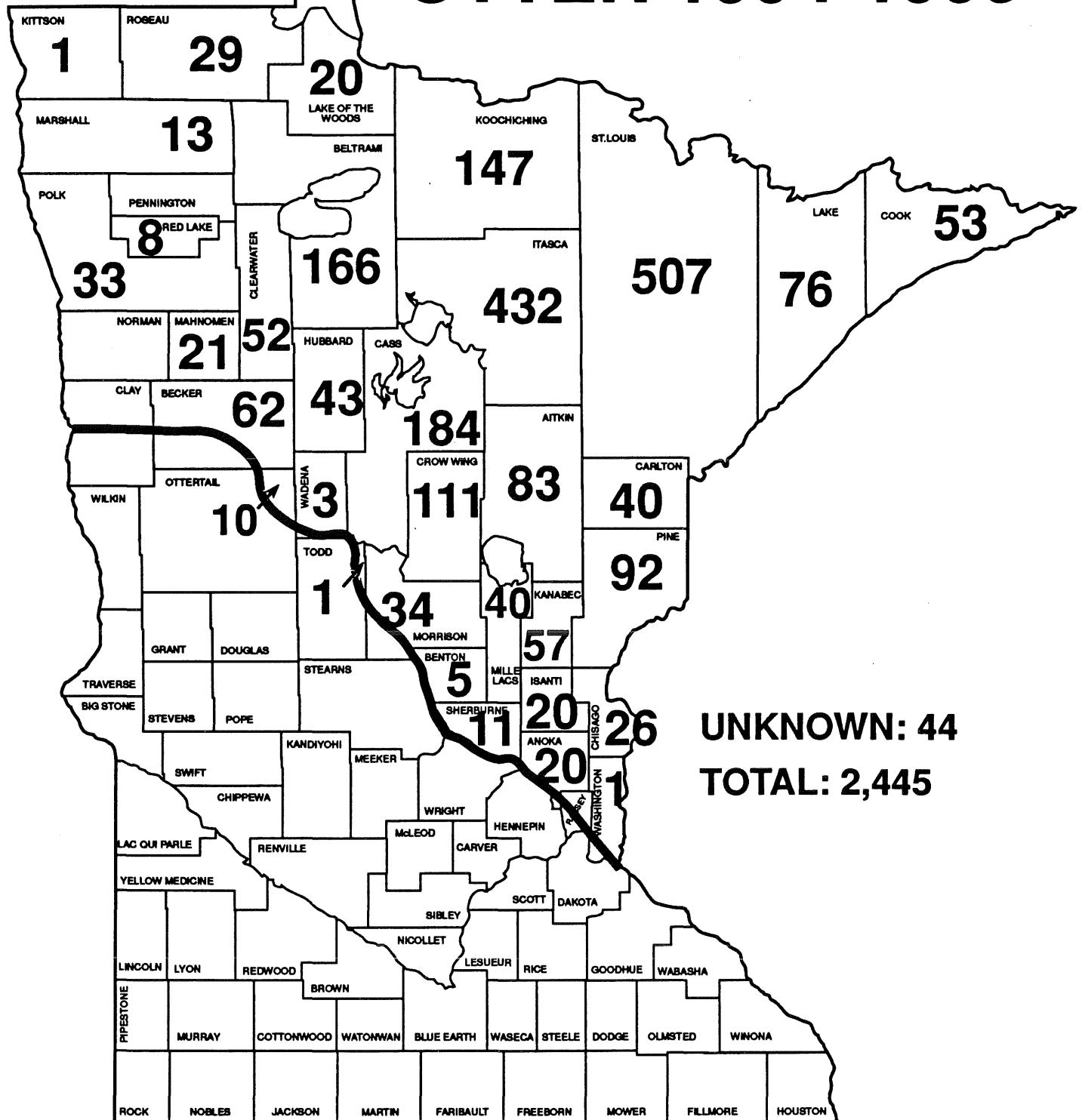


Figure 44. Otter harvest by county, 1994-1995.

Table 74. Otter harvest by 5-day interval and sex, 1994-95 season.

Interval	Sex			Total	% of Known Total		Cumulative Percent
	Male	Female	Unknown		Total	Cumulative Percent	
Oct. 29-Nov. 2	72	61	6	139	8	8	
Nov. 3-7	130	112	4	246	13	21	
Nov. 8-12	134	97	5	236	13	34	
Nov. 13-17	91	72	2	165	9	43	
Nov. 18-22	87	72	3	162	9	52	
Nov. 23-27	71	56	0	127	7	59	
Nov. 28-Dec. 2	74	54	0	128	7	66	
Dec. 3 - 7	57	62	0	119	7	73	
Dec. 8-12	67	61	3	131	7	80	
Dec. 13-17	51	51	2	104	6	86	
Dec. 18-22	37	38	0	75	4	90	
Dec. 23-27	33	40	0	73	4	94	
Dec. 28- Jan. 1	27	33	1	61	3	97	
Jan. 2-6	19	10	0	29	2	99	
Jan. 7-8*	9	4	0	13	1	100	
Unknown	179	107	351	637	-	-	
Total	1,138	930	377	2,445	100	100	

* 2-day interval.

Table 75. Otter harvest by county and sex, 1994-95 season.

County	Sex			Total
	Male	Female	Unknown	
Aitkin	56	27	0	83
Anoka	10	10	0	20
Becker	33	29	0	62
Beltrami	88	78	0	166
Benton	2	3	0	5
Carlton	20	19	1	40
Cass	98	73	13	184
Chisago	13	13	0	26
Clearwater	22	26	4	52
Cook	29	24	0	53
Crow Wing	61	50	0	111
Hubbard	22	21	0	43
Isanti	5	15	0	20
Itasca	70	67	295	432
Kanabec	36	21	0	57
Kittson	1	0	0	1
Koochiching	75	72	0	147
Lake	45	31	0	76
Lake of the Woods	10	10	0	20
Mahnomen	13	8	0	21
Marshall	8	5	0	13
Mille Lacs	22	18	0	40
Morrison	15	19	0	34
Ottertail	4	6	0	10
Pine	55	36	1	92
Polk	21	12	0	33
Red Lake	5	3	0	8
Roseau	21	8	0	29
St. Louis	271	211	25	507
Sherburne	4	7	0	11
Todd	1	0	0	1
Wadena	0	3	0	3
Washington	0	1	0	1
Unknown	2	4	38	44
Total	1,138	930	377	2,445

Table 76. Comparison of otter harvest by county, 1983-1994.

County	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Aitkin	25	34	17	43	55	57	62	49	44	78	70	83
Anoka	-----closed-----			4	2	8	21	14	7	14	18	20
Becker	15	18	24	34	41	55	49	32	21	36	38	62
Beltrami	23	33	46	66	125	87	92	74	93	97	91	166
Benton	-----closed-----			0	0	1	0	1	1	0	4	5
Carlton	5	13	10	13	24	12	13	25	23	39	38	40
Cass	33	49	59	67	147	84	130	73	67	107	114	184
Chisago	-----closed-----			4	11	9	8	10	5	9	17	26
Clearwater	6	11	6	17	19	5	13	6	14	14	27	52
Cook	4	16	5	20	33	25	31	24	30	28	44	53
Crow Wing	13	15	26	27	57	31	65	40	41	83	75	111
Hubbard	15	22	25	27	36	19	39	45	34	44	30	43
Isanti	-----closed-----			12	24	12	17	7	5	10	19	20
Itasca	69	94	96	123	199	141	207	108	110	193	259	432
Kanabec	9	9	4	14	28	31	30	18	11	24	32	57
Kittson	0	0	0	1	0	0	0	0	0	1	0	1
Koochiching	26	34	38	45	77	48	59	31	59	52	65	147
Lake	20	18	25	47	61	33	40	26	21	91	44	76
Lake of the Woods	11	13	5	9	39	16	11	6	21	15	1	20
Mahnomen	2	3	14	6	5	8	13	8	0	0	2	21
Marshall	2	0	1	0	1	1	3	0	2	6	7	13
Mille Lacs	8	8	4	0	28	17	12	7	10	5	16	40
Morrison	-----closed-----			3	17	9	13	12	3	16	13	34
Norman	-----closed-----			0	1	6	1	1	0	0	0	0
Ottertail	1	1	1	4	1	1	3	5	4	5	10	10
Pennington	0	0	1	0	1	0	1	1	1	0	0	0
Pine	14	29	20	21	70	41	64	49	12	76	52	92
Polk	4	5	6	5	7	8	10	7	12	14	28	33
Ramsey	0	0	0	0	0	0	0	1	0	0	0	0
Red Lake	0	0	0	0	1	0	4	0	5	2	5	8
Roseau	3	5	5	7	12	9	13	6	7	14	11	29
St. Louis	96	96	119	145	256	135	248	180	159	187	286	507
Sherburne	-----closed-----			1	1	4	5	0	1	8	7	11
Todd	0	0	0	0	0	0	3	0	0	0	1	1
Wadena	4	2	2	1	4	1	7	5	7	2	4	3
Washington	-----closed-----			0	3	3	4	3	1	3	0	1
Unknown	1	2	0	2	0	5	3	12	24	91	31	44
Total	408	529	559	777	1,386	992	1,294	888	855	1,368	1,459	2,445

