

2004 Minnesota Prairie-chicken Hunting Season and Hunter Survey

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Introduction

Hunting seasons for prairie-chickens (*Tympanuchus cupido pinnatus*) in Minnesota were closed from 1943 through 2002. During October 2003 a limited-entry, 5-day hunting season for prairie-chickens was held within 7 contiguous permit areas in western Minnesota (Figure 1). The format for the 2004 hunting season, which was held 23–27 October, was similar. Permits were awarded through a lottery system, and each hunter could harvest a maximum of 2 prairie-chickens.

Methods

Results of the hunting season came from 2 sources. The Electronic Licensing System (ELS) recorded all permit applications, lottery results, and the mandatory registration of each prairie-chicken that was harvested. I also sent a post-season mail survey to all 90 hunters who purchased a permit.

Results

Eighty-three (11%) of 734 regular applicants were awarded permits (Table 1). An additional 18 permits (72% success) were awarded through a separate lottery to hunters who applied as landowners or tenants of ≥ 40 acres of grassland within a permit area. In 3 instances 1 or 2 more permits were awarded than were available in a permit area because the last hunter selected in the lottery had applied as a member of a hunting party, so other members of the party also were offered permits.

Seventy-two hunters responded to the first mailing of the survey, and 14 responded to the second mailing, so the response rate was 95.6%. The ELS and survey results differ slightly because party hunting is allowed, so a hunter who registered a prairie-chicken may not have been the hunter who reported killing it. In addition, 3.5% of 86 hunters who purchased a permit and responded to the survey reported that they did not hunt.

The number of prairie-chicken hunters, amount of time spent hunting, and hunting methods were similar during 2003 and 2004 (Figures 2, 3 and 4). Hunter harvest of prairie-chickens during 2004, however, was less than during 2003. Hunters killed and retrieved approximately 55 prairie-chickens during 2004 and 129 during 2003 (Table 2). Only 2.4% of hunters ($n = 83$) reported knocking down a prairie-chicken and not being able to retrieve it during 2004. Whereas 46% of hunters harvested at least 1 prairie-chicken during 2004, 68% did during 2003. Hunters also may have flushed fewer prairie-chickens during 2004 (Figure 5). Thirty-three percent of hunters ($n = 86$) commented on poor weather conditions during and prior to the 2004 prairie-chicken hunting season. Many reported heavy rains, and a few mentioned large areas of standing water.

Thirty-five percent of hunters ($n = 83$) hunted only on public land, 25% hunted only on private land, and 33 (40%) hunted on both public and private land. Of the 40 hunters who reported their ease of gaining access to private land and who had not applied for a permit as a landowner or tenant, 48%, 25%, 20%, and 8% reported it being very easy, somewhat easy, somewhat difficult, and very difficult, respectively. This distribution is only slightly different than when landowners themselves were added to the sample (Figure 6).

Hunter satisfaction with the 2004 prairie-chicken hunting season was reported as a median of 8 (mean = 6.8) on a 1–10 scale ($n = 82$, Figure 7), and 95% of hunters reported that they would apply for a prairie-chicken permit again in the future. Seven prairie-chicken hunters (8.4%, $n = 83$) reported being interfered with by other hunters a total of 12 times during 2004.

Acknowledgments

Robin Williams assisted with mailing and entering data from the hunter survey. Wendy Krueger, Richard Kimmel, and others developed and initially implemented the hunter survey for the 2003 prairie-chicken hunt. Wendy also provided the map in Figure 1.

Table 1. Results of the lottery for prairie-chicken hunting permits in Minnesota during 2004.

Permit area	Permit type	Permits avail.	No. of applicants	Lottery winners		Permits purchased	
				no.	prop. ^a	no.	prop. ^a
405 A	Regular	10	116	10	0.09	6	0.60
	Landowner	3	2	2	1.00	2	1.00
407 A	Regular	8	81	8	0.10	7	0.88
	Landowner	3	7	5	0.71	5	1.00
407 B	Regular	12	89	13	0.15	13	1.00
	Landowner	3	5	3	0.60	3	1.00
407 C	Regular	11	54	11	0.20	11	1.00
	Landowner	3	2	2	1.00	2	1.00
420 A	Regular	10	85	10	0.12	10	1.00
	Landowner	3	7	4	0.57	4	1.00
420 B	Regular	18	188	18	0.10	12	0.67
	Landowner	0	0				
421 A	Regular	13	121	13	0.11	13	1.00
	Landowner	3	2	2	1.00	2	1.00
All	Regular	82	734	83	0.11	72	0.87
	Landowner	18	25	18	0.72	18	1.00
	All	100	759	101	0.13	90	0.89

^a Proportion of the previous column (i.e., lottery winners/applicants and purchasers/winners).

Table 2. Hunter harvest of prairie-chickens in Minnesota during 2004.

Permit area	Permit type	No. of hunters ^b	Birds retrieved		Birds / hunter		Success rate ^a	
			ELS ^c	Survey ^d	ELS	Survey	ELS	Survey
405 A	Regular	6	1	1	0.2	0.2	0.17	0.17
	Landowner	2	0	0	0.0	0.0	0.00	0.00
407 A	Regular	5	2	2	0.3	0.4	0.14	0.20
	Landowner	5	1	2	0.2	0.4	0.20	0.40
407 B	Regular	13	9	10	0.7	0.8	0.46	0.54
	Landowner	3	2	2	0.7	0.7	0.33	0.33
407 C	Regular	10	9	10	0.8	1.0	0.45	0.60
	Landowner	2	0	0	0.0	0.0	0.00	0.00
420 A	Regular	10	10	10	1.0	1.0	0.70	0.70
	Landowner	3	0	2	0.0	0.7	0.00	0.67
420 B	Regular	12	10	9	0.8	0.8	0.58	0.58
	Landowner	0						
421 A	Regular	11	7	7	0.5	0.6	0.31	0.36
	Landowner	1	0	0	0.0	0.0	0.00	0.00
All	Regular	67	48	49	0.7	0.7	0.43	0.49
	Landowner	16	3	6	0.2	0.4	0.11	0.31
	All	83	51	55	0.6	0.7	0.37	0.46

^a Proportion of hunters who killed and retrieved at least 1 prairie-chicken.

^b Number of hunters who responded to a mail survey and reported to have hunted. Number of hunters according to the Electronic License System (ELS) is the number who purchased a permit to hunt prairie-chickens (Table 1).

^c Results from the ELS database of registered harvest.

^d Results from a mail survey sent to hunters after the prairie-chicken hunting season.

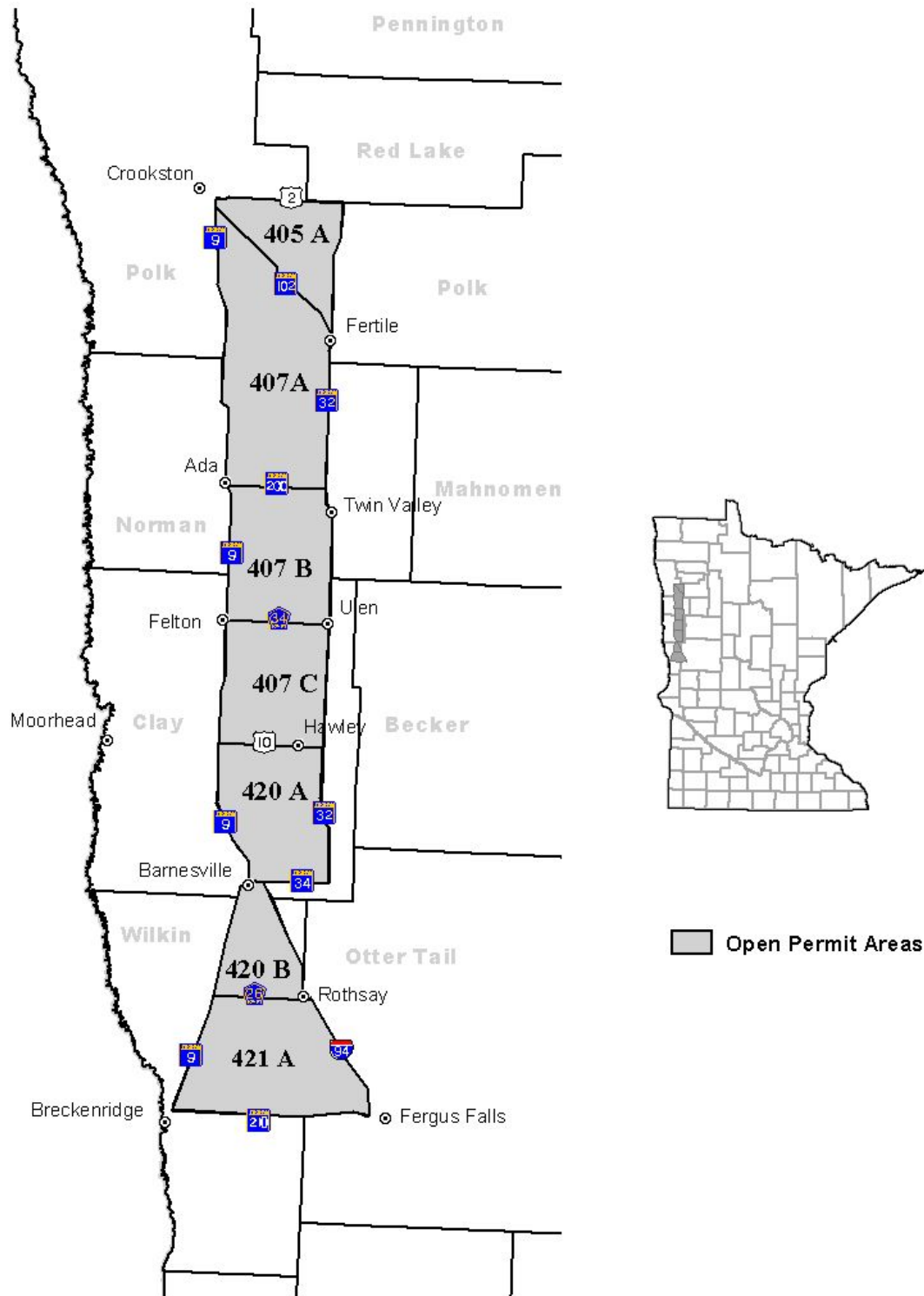


Figure 1. Map of permit areas for prairie-chicken hunting in Minnesota during 2003–2004.

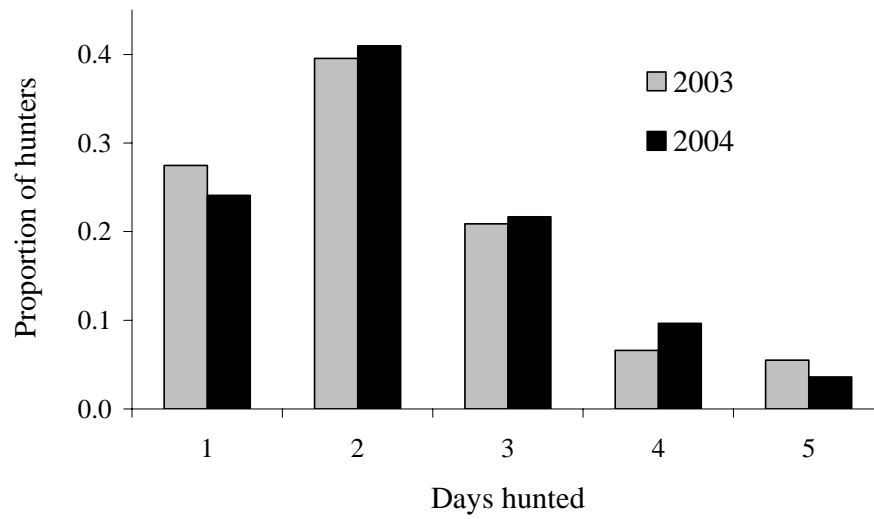


Figure 2. Number of days hunters pursued prairie-chickens in Minnesota during 2003 ($n = 91$ survey respondents) and 2004 ($n = 83$).

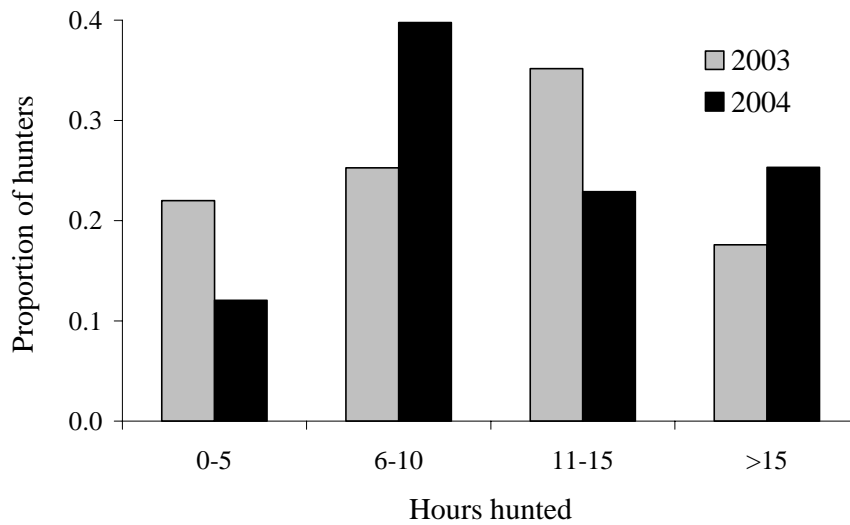


Figure 3. Number of hours hunters pursued prairie-chickens in Minnesota during 2003 ($n = 91$ survey respondents) and 2004 ($n = 83$).

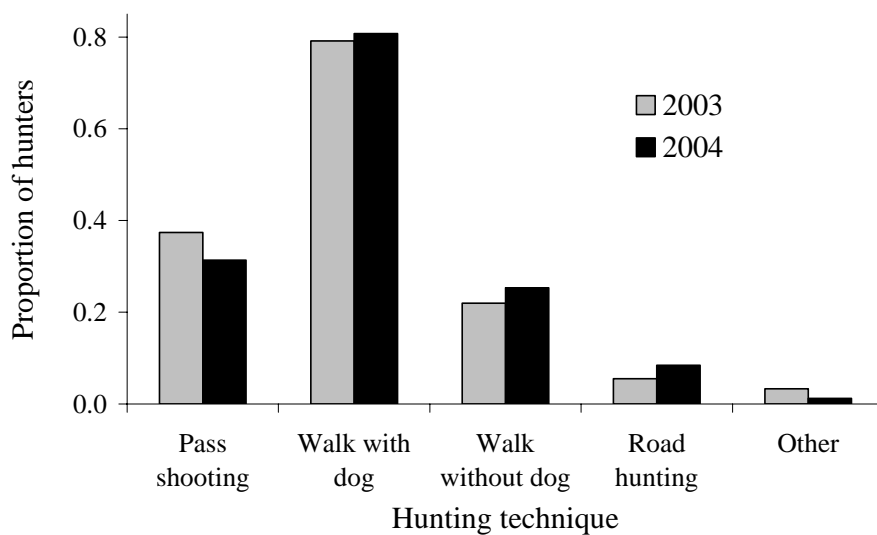


Figure 4. Methods used by prairie-chicken hunters in Minnesota during 2003 ($n = 91$ survey respondents) and 2004 ($n = 83$).

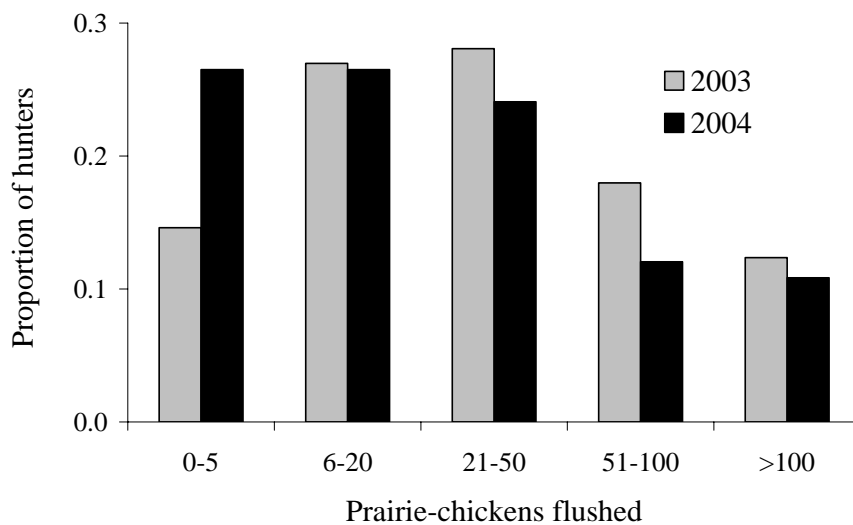


Figure 5. Number of prairie-chickens flushed by prairie-chicken hunters in Minnesota during 2003 ($n = 89$ survey respondents) and 2004 ($n = 83$).

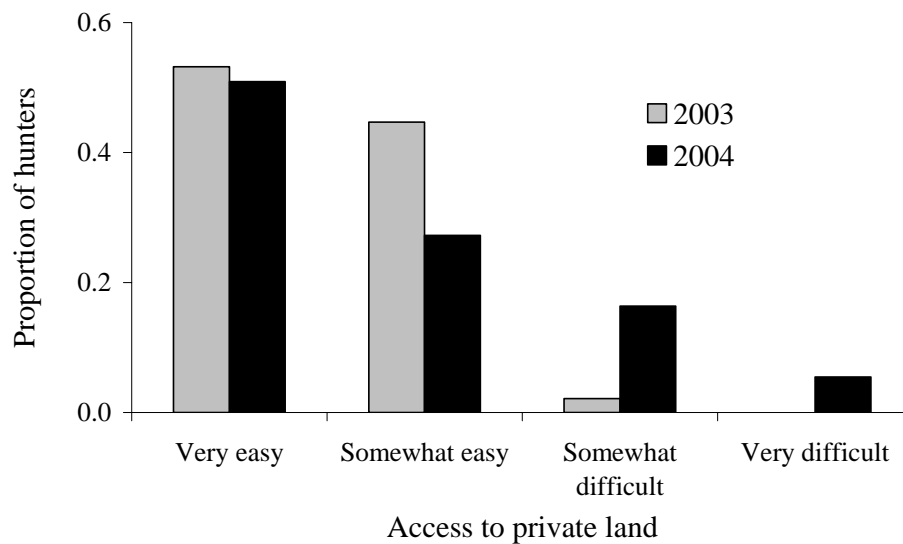


Figure 6. Ease of acquiring permission to access private land for prairie-chicken hunters in Minnesota during 2003 ($n = 47$ survey respondents) and 2004 ($n = 55$).

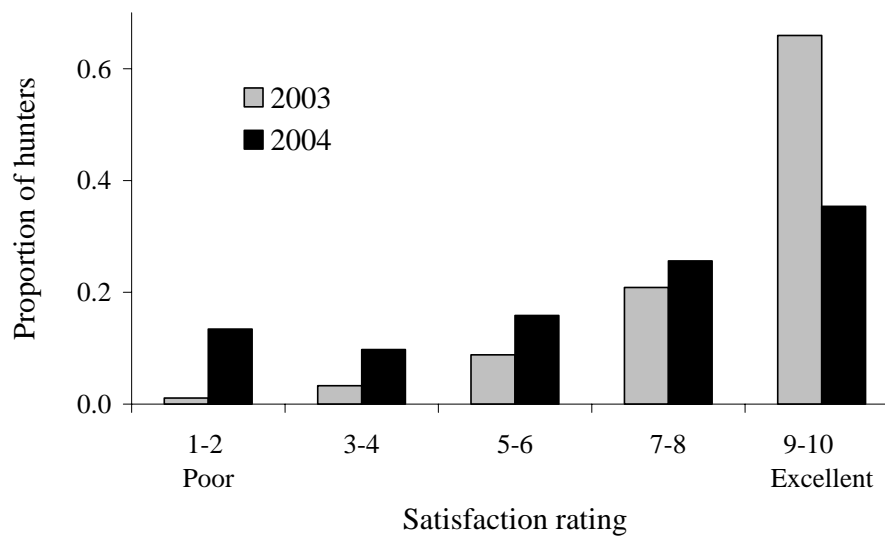


Figure 7. Degree of overall satisfaction of hunters with the prairie-chicken season during 2003 ($n = 91$ survey respondents) and 2004 ($n = 82$).