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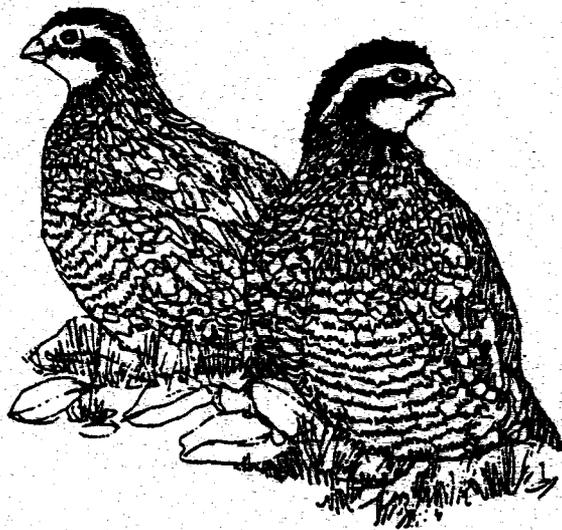
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**RESULTS OF THE 1991-92 ILLINOIS
QUAIL HUNTER SURVEY**

PREPARED BY:

**WILLIAM L. ANDERSON, INVESTIGATIONS & SURVEYS PROGRAM
LARRY M. DAVID, UPLAND WILDLIFE PROGRAM**

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RESULTS OF THE 1991-92 ILLINOIS QUAIL HUNTER SURVEY

William L. Anderson, Investigations and Surveys Program
Larry M. David, Upland Wildlife Program

Abstract: Purchasers of (1989 and 1990) Illinois hunting licenses who hunted quail (bobwhite) were surveyed via mail-letter questionnaire to determine their activities and harvest during the 1991 season, and their attitudes and opinions of quail hunting regulations. The mailing list consisted of 1,716 individuals, 1,312 (76%) of which returned usable questionnaires. Because 462 (35%) of the respondents did not hunt quail in Illinois again in 1991, the effective sample was reduced to 850 active quail hunters. Of these hunters, 99% pursued wild quail (96% of days afield) and 8% pursued game-farm quail (4% of days afield). Hunters of wild quail were afield an average of 8.3 days (94% on private land), and they harvested an average of 16.2 quail; 16% took 0 quail, 29% took 1-5 quail, 17% took 6-10 quail, 16% took 11-20 quail, 7% took 21-30 quail, and 15% took ≥ 31 quail. Wild quail hunters took no birds on 42% of their days afield and ≤ 4 birds on 88% of their days. Of the hunters (34%) who hunted on CRP (U.S. Department of Agriculture's Conservation Reserve Program) land, 63% believed the program helped quail populations. Game-farm quail hunters were afield an average of 4.6 days, and they harvested an average of 13.6 quail. Majorities (>50%) of the hunters thought the opening date for the wild quail season (first Saturday in November) was about right, the closing date (Saturday or holiday closest to 1 January in North Zone and 1 week later in the South Zone) was too early, the daily bag limit should be 6 birds, and it appropriate for the State of Illinois to mandate the wearing of blaze (hunter) orange upper outer garment and cap for hunting quail and other upland game. On the average in 1991, Illinois quail hunters were 37 years of age, had hunted quail for 20 years, traveled 43 miles (round trip) per day afield, and spent \$289 (total \$24.8 million) on their sport; 4% had participated in a field trial, and 45% owned ≥ 1 quail dogs (75% were English pointers, Brittany spaniels, or English setters). The management implications of these findings are discussed.

The northern bobwhite (*Colinus virginianus*), hereafter referred to as *quail*, is a widespread and popular game species in Illinois. Quail occur in every county and are most abundant in

southern and western portions of the state, which are characterized by a mixture of agricultural and forest lands (Preno and Labisky 1971:15). From 1987 to 1991, an average of 86,000 hunters spent an average of 539,000 days afield and harvested an average of 884,000 wild quail in Illinois (Anderson and Campbell 1992). Quail are renowned for the challenging wing shooting and excellent dog work they afford sportsmen.

To properly manage the quail resource and to establish bio-sociologically acceptable hunting regulations, the Illinois Department of Conservation (DOC) must be familiar with the activities and attitudes of quail hunters in the state. Thus, the purpose of the present study was to survey quail hunters to determine when and where they are in the field, characteristics of their quail harvest, and their opinions of current and future quail hunting regulations. Surveys such as this one improve the DOC's understanding of the rank-and-file hunter--i.e., the feelings of the "silent majority"--toward the quail resource and the sport of quail hunting.

This survey is one in a series scheduled for upland game hunters in Illinois. A rabbit hunter survey was conducted following the 1989 season (Anderson and David 1991a), and pheasant hunter surveys were conducted following the 1990 and 1991 seasons (Anderson and David 1991b and 1992). Dove hunters will be surveyed following the 1992 season, and if plans go as scheduled, hunters of "miscellaneous" species (e.g., gray partridge, woodcock, crow, woodchuck) will be surveyed following the 1993 season. Rabbit hunters will be surveyed again in 1994 or 1995.

METHODS AND MATERIALS

A 4-page, 23-question questionnaire was developed specifically for the 1991-92 Quail Hunter Survey (Fig. 1). This questionnaire and a letter of explanation (Fig. 2) were mailed to 1,716 quail hunters on 7 January 1992. Non-respondents were sent 2nd and 3rd copies of the questionnaire, and accompanying letters (Figs. 3 and 4), on 18 February and 27 March, respectively. As of 21 May 1992, 1,312 usable questionnaires were returned for a response rate of 76%.

Names (and addresses) making up the mailing list included those individuals who were identified via the annual Hunter Harvest Survey as having hunted quail in Illinois during the 1989 or 1990 season (Anderson et al. 1990, Anderson and Campbell 1991). The people on the list were notified by letters postmarked 22 October 1991 that they would receive a questionnaire at the close of the hunting season. The notice included a form for keeping records of hunting activity and quail harvested (Fig. 5).

Data were transferred from the filled-out questionnaires to a computer file using a data management program (IBM dBASE III+). The data were analyzed with a statistical program (IBM SPSS/PC+ V2.0). Results were tabulated relative to North Zone, South zone, and the entire.

HUNTING REGULATIONS IN 1991

For purposes of setting the 1991 hunting seasons for wild quail and other upland game species, the state was divided into north and south zones. The line that separated these zones was

route US-36 from the Indiana state line west to Springfield, route IL-29 north to Pekin, and route IL-9 west to the Iowa state line.

The 1991 season for wild quail began on 2 November throughout the state and extended to 1 January in the North Zone and to 5 January in the South Zone. The bag limit was 8 birds per day and 16 in possession. Legal shooting time began at sunrise and ended at sunset.

For game-farm (pen-reared) quail, the season extended (with minor exceptions) from 1 September to 15 April on private licensed preserves. There was no daily bag limit on these areas. The game-farm quail program was suspended on state controlled hunting areas for the 1991 season.

FINDINGS

Of the 1,312 individuals who filled out and returned questionnaires, 93% purchased an Illinois resident hunting license again in 1991, 65% hunted quail again in Illinois in 1991, and 5% hunted quail in another state (Table 1). Thus, the effective sample for this survey was reduced to 850 active quail hunters.

Hunter Activities

Of the 850 active quail hunters, 99% hunted wild quail and 8% hunted game-farm quail during the 1991 season (Table 2). Or, 92% hunted wild quail only, 2% hunted game-farm quail only, and 6% hunted both types of quail. When combined with data from the annual Hunter Harvest Survey (Anderson and Campbell 1992), these

findings indicate that an estimated 78,805 individuals hunted wild quail only, 1,283 hunted game-farm quail only, and 5,476 hunted both wild and game-farm quail in Illinois in 1991-92. For hunters who pursued wild quail, 51.3% were active in the North Zone and 48.7% were active in the South Zone (n=836).

The hunters expended 96% of their days afield pursuing wild quail and 4% of their days shooting game-farm quail (Table 2). Hunters of wild quail devoted an average of 8.3 days to the field during the 1991 season (Table 3). In comparison, the annual Hunter Harvest Survey indicated that (wild) quail hunters spent an average of 6.7 days afield during the 1991 season (Anderson and Campbell 1992). When data in Table 2 and from the Hunter Harvest Survey were combined, the results indicated that 564,866 days afield were devoted to hunting wild quail and 24,764 days were devoted to game-farm quail in Illinois in 1991-92.

The hunters expended 42% of their (wild) quail-hunting days in November, 49% in December, and 9% in January (Table 3). The "use rate" (i.e., days hunted/number of days available to hunt) was greater for January (0.18) than for November (0.12) or December (0.13). This is in contrast to rabbit hunters, whose use rate was greatest in December (Anderson and David 1991a), and to pheasant hunters, whose use rate was greatest in November (Anderson and David 1991b and 1992).

Of the hunters who pursued game-farm quail during the 1991 season, 43% released their own birds, 55% were active on private licensed preserves, and 13% claimed to have utilized state controlled areas (Table 4). These hunters spent an average of 5.1,

2.9, and 5.4 days, engaged in their respective activity. Of the total days devoted to hunting game-farm quail, 49% involved hunters who released their own birds, 35% took place on private licensed preserves, and 16% reportedly occurred on state controlled areas.

Characteristics of Quail Harvest

The hunters of wild quail reported harvesting an average of 16.2 birds in Illinois during the 1991 season (Table 5). The average harvest was appreciably greater in the South Zone (20.6 birds) than in the North Zone (12.0 birds). For the entire state, 16% of the hunters took 0 quail, 29% took 1-5 quail, 17% took 6-10 quail, 16% took 11-20 quail, 7% took 21-30 quail, and 15% took ≥ 31 quail. In comparison, the annual Hunter Harvest Survey indicated that the 1991 wild quail harvest averaged 11.0 birds per hunter; 20% of the hunters took 0 quail, 42% took 1-5 quail, 18% took 6-10 quail, 7% took 11-19 quail, and 13% took ≥ 20 quail (Anderson and Campbell 1992).

Almost one-half (44%) of the wild quail harvest occurred during November (Table 5). An equal percentage of the harvest took place during December, and the remaining 12% of the quail were taken in January. The harvest rate (i.e., quail taken per day afield) was greater in the South Zone (2.34) than in the North Zone (1.52). For the entire state, the harvest rate was slightly greater during November (2.06) than during December (1.85) and January (2.00).

The hunters of wild quail harvested ≤ 4 birds on 88% of their days afield during the 1991 season (Table 6). They harvested 0

birds on 42% of their days afield. At the other extreme, quail hunters managed to harvest 7-8 birds on only 4% of their days afield. These data suggest that the average quail hunter in Illinois obtains his daily bag limit (8 birds) less than once in 25 trips afield, or about 1 day every 3 years.

The hunters of game-farm quail reported harvesting averages of 0.5 to 4.8 birds per day and 2.7 to 13.8 birds for the entire 1991 season (Table 4). Since 93.6% of the quail harvest consisted of wild birds (Table 2) and an estimated 926,411 wild birds were harvested during the 1991 season (Anderson and Campbell 1992), the remaining 6.4% equates to approximately 63,344 game-farm birds. Based on data in Table 4, 26,783 of these birds were released by the hunters who shot them, 34,903 were taken on private licensed preserves, and 1,658 were taken on state controlled areas. The latter estimate should have been zero because the game-farm quail program was suspended on state controlled areas for 1991-92. Apparently, a small number of hunters on the state areas thought they were shooting game-farm quail when in fact the birds were wild. According to DOC records, 50,756 quail were harvested on private licensed preserves in Illinois during the 1991 season (T.L. Musser, pers. commun.).

Attitudes and Opinions

Finding and Leasing Places to Hunt. Virtually all (99%) of the quail hunters were active on private land, whereas only 10% of them were active on public land (Table 7). Similarly, 94% of the hunters' days afield were on private land and 4% were on public

land.

When asked to rate the level of difficulty they experienced in finding a place to hunt quail in Illinois in 1991-92, 38% of the active hunters said "none" (Table 7). At the other extreme, 16% of the hunters indicated they had "much" difficulty finding a place. Hunters were more apt to experience "much" difficulty in the North Zone (18%) than in the South Zone (14%). Statewide, quail hunters apparently had less difficulty than pheasant hunters in finding a place to pursue their sport (Anderson and David 1992).

Three hunters in 10 (29%) expressed a willingness to pay for the right to hunt quail on an owner's land (Table 8). The daily fee these hunters would be willing to pay averaged \$15.88 and was slightly higher in the South Zone (\$16.44) than in the North Zone (\$14.59). In general, quail hunters exhibited a lower level of interest than rabbit hunters or pheasant hunters in paying for the right to hunt (Anderson and David 1991a and 1992).

Utilization and Evaluation of CRP Land. About one-third (34%) of the hunters had pursued quail on CRP (U.S. Department of Agriculture's Conservation Reserve Program) land in Illinois during the 1991 season (Table 9). An additional 46% of the hunters had not hunted quail on CRP land, and the remaining 18% did not know whether they had hunted on CRP land. Of those who knew that they had hunted on CRP land, 63% felt that the program had helped quail populations (Table 9). Only 4% of the hunters were of the opinion that CRP had hurt quail populations. Compared to pheasant hunters, quail hunters were more likely to have hunted on CRP land but were less positive about the benefits of the program (Anderson and David

1992).

Dates for Wild Quail Hunting Season. In recent years, the wild quail hunting season has opened on the first Saturday in November. When asked to express their opinion of this opening date, a majority (60%) of the hunters thought it was about right (Table 10). Another 25% believed the date was too early and 10% believed it was too late.

Similarly, in recent years, the wild quail hunting season has ended on the Saturday or holiday nearest 1 January in the North Zone and 1 week later in the South Zone. The hunters had a different view of this date--56% thought it was too early and 36% thought it was about right (Table 10). Only 5% of the hunters believed the ending date was too late.

Daily Bag Limit. When asked to express their opinion of the number of quail that should be allowed in the daily bag limit, majorities of the hunters statewide (60%) and in both zones (61% and 58%) preferred 6 birds (Table 11). For the entire state, another 34% opted for 8 quail (the current daily bag limit) and the remaining 6% chose 10 quail.

Wearing Blaze Orange Clothing. Two-thirds (65%) of the quail hunters said that they usually or always wear a blaze (hunter) orange upper garment and cap when afield (Table 12). The hunters were more apt (usually or always) to wear blaze orange clothing in the South Zone (69%) than in the North Zone (61%), presumably because vegetation is relatively dense in southern portions of the state. Majorities of the hunters in the North Zone (52%), South Zone (58%), and statewide (55%), considered it appropriate for the

State of Illinois to mandate the wearing of a blaze orange upper outer garment and cap for quail and other upland game hunting (Table 12). In comparison, 69% of the pheasant hunters usually or always wear blaze orange upper outer garment and cap, and 62% of these hunters thought it appropriate to mandate the wearing of such garments (Anderson and David 1992).

Characteristics of Quail Hunters

Quail hunters who participated in the survey were, on the average, 37 years of age (Table 13). Game-farm quail hunters were older (average 40 years) than wild quail hunters (average 37 years). The hunters had hunted quail for an average of 20 years, and 4% had participated in an organized field trial. Hunters of game-farm quail (13%) were much more apt than hunters of wild quail (2%) to have participated in a field trial. 9% of the hunters were members of Quail Unlimited, 6% were members of Pheasants Forever, and 4% belonged to the Illinois Wildlife Federation. Game-farm quail hunters were more likely than wild quail hunters to be members of organizations.

Hunters of wild quail traveled an average of 43 miles (round trip) per day afield (Table 13). Hunters in the North Zone averaged 45.5 miles per trip (n=416), and hunters in the South Zone averaged 41.0 miles per trip (n=388). Two-thirds (67%) of the wild quail hunters hunted in only 1 county; 25% hunted in 2 counties and 8% hunted in ≥ 3 counties (n=837). The vast majority (82%) of the hunters were active in their county of residence, and one-half (52%) of them hunted only in their county of residence (n=837).

Quail hunters appear to be somewhat more mobile than rabbit hunters and somewhat less mobile than pheasant hunters (Anderson and David 1991a, 1992).

Slightly less than one-half (45%) of the hunters owned ≥ 1 quail dogs (Table 13). A higher proportion of game-farm quail hunters (73%) than wild quail hunters (45%) were dog owners. The owners averaged 1.5 dogs each, with 65% of them owning a single dog. An additional 25% owned 2 dogs and 6% owned 3 dogs. The English pointer, Brittany spaniel, and English setter ranked 1st, 2nd, and 3rd in popularity among the various breeds of quail dogs (Table 14). These 3 breeds accounted for 75% of all quail dogs in the state. German shorthaired pointers accounted for 10%. The Labrador retriever was the most common breed of "non-pointing" quail dog.

Economics of Quail Hunting

According to data provided by the respondents, active quail hunters spent an average of \$289 to pursue their sport in Illinois during the 1991 season (Table 15). Almost one-half (44%) of the hunters spent $< \$100$ and only 3% spent $> \$1,000$. Hunters who pursued both wild and game-farm quail spent an average of \$641, which was much higher than the average expenditures for hunters who hunted wild birds only (\$267) and those who hunted game-farm birds only (\$246). When the averages were applied to the total number of quail hunters in the state, expenditures for quail hunting totaled \$24.8 million for the 1991 season (Table 15). In comparison, rabbit hunters spent a total of \$25.4 million (average of \$156) in

1989 and pheasant hunters spent a total of \$30.8 million (average of \$294) in 1990 (Anderson and David 1991a and 1991b). In a 1985 national survey, small game hunters reported spending \$168 each for their sport (U.S. Department of the Interior 1989).

Of the \$24.8 million spent for quail hunting in 1991-92, an estimated \$22.8 million (92%) was directed toward wild quail and \$2.0 million (8%) was directed toward game-farm quail (Table 16). Wild quail hunters (including those who also hunted game-farm birds) spent an average of \$271 per hunter, \$40 per day afield, and \$25 per quail harvested. Averages for game-farm quail hunters (including those who also hunted wild birds) were \$293 per hunter, \$80 per day afield, and \$31 per quail harvested.

DISCUSSION

To develop the mailing list for this survey, it was necessary to select individuals who indicated on the annual Hunter Harvest Survey that they had hunted quail in Illinois during the 1989 or 1990 season. Thus, the mailing list was 1-2 years old at the time the survey was conducted, and many (35%) of the respondents did not hunt quail again in 1991-92. Because the on-again-off-again quail hunters were eliminated, the sample was biased in favor of the more ardent, more dedicated hunters. In this context, it is noteworthy that active hunters in the present survey spent 24% more days afield pursuing wild quail (Table 3) and harvested 47% more wild quail (Table 5), on the average, than quail hunters in the 1991 Hunter Harvest Survey (Anderson and Campbell 1992).

In contrast to rabbit and pheasant hunters (Anderson and David 1991a, 1991b, and 1992), the few days available in January appear relatively more important to (wild) quail hunters than the months of November and December. The quail hunters made greater use of the days available to hunt in January than during the other 2 months (Table 3). However, they did not harvest quail at a higher rate in January than earlier in the season (Table 5).

Although the hunters reported harvesting an average of 16.2 wild quail in 1991-92, they took ≤ 4 quail on 88% of their days afield and no birds on 42% of their days (Tables 5 and 6). At the other extreme, the hunters harvested 7-8 quail on only 4% of their days. Based on these data, it appears that most wild quail hunters harvest relatively few (0-2) quail during most of their days afield. For many quail hunters, the emphasis while afield is on working with their dogs rather than killing birds *per se*.

Although they were satisfied with the traditional opening of the quail season on the first Saturday in November, most of the hunters would like to see the closing date extended past the first week in January (Table 10). It is reasonable to expect avid quail hunters to opt for extending the season later into a period when quail are more vulnerable to hunting (Roseberry and Klimstra 1984). Because harvest rates often increase in late season, wildlife biologists who are responsible for protecting game populations usually oppose extending the closing dates. Other reasons for caution with late-season hunting include high fall non-hunting mortality, declines in quantity and quality of habitat, and the likelihood of severe weather (Edwards 1988).

Based on the findings of this survey, the current opening date for the quail season in Illinois should continue unchanged into the mid-1990's. The reasons for selecting the dates for closing the season should be fully explained to the hunting public via an educational program. The impact of late-season hunting on quail movements and survival should be more thoroughly investigated in Illinois.

The hunters supported, by a margin of almost 2 to 1, changing the bag limit for quail from 8 to 6 birds per day in Illinois (Table 11). This obvious sentiment for a reduction in bag limit is rarely observed among the ranks of hunters. Whether upland game or other species, a majority of the hunters almost always vote for maintaining the existing bag limit. However, in the case of quail, hunters apparently have exceptionally strong feelings regarding the subject of bag limit. This expressed sentiment, coupled with the fact that the average hunter rarely harvests 7-8 quail in a day (Table 11), constitutes grounds for reconsidering the daily bag limit for quail in Illinois.

Blaze orange, or other brightly-colored, clothing is widely used to enhance the safety of hunters while they are in the field. Firearms deer hunters have universally accepted the wearing of blaze orange, and many upland game hunters wear it voluntarily. The present study indicates that 40% of Illinois' quail hunters always wear a blaze orange upper garment and cap, and another 25% usually employ these safety features. In addition, a majority (55%) of the quail hunters consider it appropriate for the State of Illinois to mandate the wearing of a blaze orange upper outer

garment and cap for hunting quail and other game species. Pheasant hunters also support mandatory use of blaze orange clothing (Anderson and David 1992). The possibility of requiring blaze orange clothing for upland game hunters should be more fully explored.

More quail hunters (34%) hunted on CRP land than wild pheasants hunters (26%), but fewer quail hunters believed that CRP had a positive impact on quail populations than did pheasant hunters on pheasant populations (Anderson and David 1992). A 1990 survey of 127 quail hunters from southern and west-central Illinois found that 46.5% thought CRP helped quail, 14.2% hurt, 20.5% no effect, and 18.9% didn't know (Roseberry 1992). The current CRP and earlier (and similar) cropland acreage diversion programs have been shown to benefit pheasants (Joselyn and Warnock 1964, Berthelsen and Smith 1990). However, quail studies have not shown such strong positive benefits from CRP (Burger et al. 1990) or from the earlier Soil Bank Program (Klimstra and Roseberry 1975).

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LITERATURE CITED

- Anderson, W.L., L.K. Campbell, and C.M. Zielske. 1990. Hunter harvest survey, 1989-90. Ill. Dep. Conserv., P-R Project W-99-R, Study XV, Job 1, Job Completion Rep. 66pp.
- _____, and L.K. Campbell. 1991. Hunter harvest survey, 1990-91. Ill. Dep. Conserv., P-R Project W-112-R-1, Study 101, Job 1, Job Completion Rep. 81pp.
- _____, and _____. 1992. Hunter harvest survey, 1991-92. Ill. Dep. Conserv., P-R Project W-112-R-2, Study 101, Job 1, Job Completion Rep. 65pp.
- _____, and L.M. David. 1991a. Results of the 1989 Illinois rabbit hunter survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. (3 May 1991). 35pp.
- _____, and _____. 1991b. Results of the 1990 pheasant hunter survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. (17 October 1991). 36pp.
- _____, and _____. 1992. Results of the 1991-92 pheasant hunter survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. (15 December 1992) 37pp.
- Berthelsen, P.S., and L.M. Smith. 1990. Ring-necked pheasant nesting and production on CRP lands in the Texas southern high plains. Trans. North Am. Wildl. Conf. 55:46-56.
- Burger, L.W., Jr., E.W. Kurzejeski, T.V. Dailey, and M.R. Ryan. 1990. Structural characteristics of vegetation in CRP fields in northern Missouri and their suitability as bobwhite habitat. Trans. North Am. Wildl. Conf. 55:74-83.
- Edwards, W.R. 1988. Realities of "population regulation" and harvest management. Pages 307-335 in D.L. Hallett, W.R. Edwards, and G.V. Burger (eds.), Pheasants: symptoms of wildlife problems on agricultural lands. North Central Section of the Wildl. Soc., Bloomington, IN. 345pp.
- Joselyn, G.B., and J.E. Warnock. 1964. Value of federal feed grain program to production of pheasants in Illinois. J. Wildl. Manage. 28:547-551.
- Klimstra, W.D., and J.L. Roseberry. 1975. Nesting ecology of the bobwhite in southern Illinois. Wildl. Monogr. 41. 37pp.
- Preno, W.L., and R.F. Labisky. 1971. Abundance and harvest of doves, pheasants, bobwhites, squirrels, and rabbits in Illinois, 1956-69. Ill. Dep. Conserv. Tech. Bull. 4. 76pp.

Roseberry, J.L. 1992. Status of bobwhite populations in Illinois, 1991-92. Ill. Dep. Conserv. Ann. Rep. 8pp.

_____, and W.D. Klimstra. 1984. Population ecology of the bobwhite. Southern Ill. Univ. Press, Carbondale. 259pp.

U.S. Department of the Interior. 1989. 1985 national survey of fishing, hunting, and wildlife associated recreation. U.S. Dept. Inter., Fish and Wildl. Serv., Washington, D.C. 167pp.

Table 1. Percentage of respondents to the 1991-92 Quail Hunter Survey who purchased a resident Illinois hunting license, hunted quail in Illinois in 1991-92, and hunted quail in another state in 1991-92 (n = 1,312).

Activity	Number	Percentage
Purchased resident Illinois hunting license	1,221	93.1
Hunted quail in Illinois	850	64.8
Hunted quail in another state	68 ^a	5.2 ^a

^aOf the 850 respondents who hunted quail in Illinois, 53 (6.2%) also hunted quail in another state.

Table 2. Relative quail harvest and hunter activity for wild quail and for game-farm quail in Illinois in 1991-92 (n = 850).

Type of Quail Hunted	Percentage		
	Hunters	Days Afield	Quail Harvest
Wild	98.5 ^a	95.8	93.6
Game-Farm	7.9 ^a	4.2	6.4

^a92.1% of the hunters hunted wild quail only, 1.5% hunted game-farm quail only, and 6.4% hunted both types of quail.

Table 3. The number of days afield by respondents who hunted wild quail in Illinois in 1991-92. The season extended from 2 November to 1 January in the North Zone and from 2 November to 5 January in the South Zone. Sample sizes are in parentheses.

Parameter	North Zone	South Zone	Entire State
	(429)	(407)	(837) ^a
		<u>November</u>	
Mean days	3.3	3.7	3.5
Percentage of days	42	42	42
Use rate ^b	0.11	0.13	0.12
		<u>December</u>	
Mean days	3.9	4.1	3.9
Percentage of days	49	47	47
Use rate	0.13	0.13	0.13
		<u>January</u>	
Mean days	0.7 ^c	1.0	0.9
Percentage of days	9	11	11
Use rate	---	0.20	0.18
		<u>Entire State</u>	
Mean days	7.9	8.8	8.3 ^d
Percentage of days	100	100	100
Use rate	0.13	0.14	0.13

^aIncludes 1 respondent not identified as to zone.

^bMean days divided by number of days available to hunt.

^cValue is inflated, apparently because some respondents who hunted mostly in the North Zone also hunted in the South Zone in January.

^d49.6% hunted 1-5 days, 21.7% hunted 6-10 days, 13.6% hunted 11-15 days, and 15.1% hunted 16-60 days.

Table 4. Type of area or condition, number of days afield, and number of quail harvested by respondents who hunted game-farm quail in Illinois in 1991-92 (n = 67).

Type of Area or condition	Percentage of Hunters	Days Afield per Hunter ^a	Quail Harvested	
			Per Day ^a	Per Hunter ^a
Released own birds	43.3	5.1	2.6	13.5
Private licensed preserve	55.2	2.9	4.8	13.8
State controlled area	13.4	5.4	0.5	2.7
All area/conditions		4.6	3.0	13.8

^aFor hunters who were active in the respective area or condition.

Table 5. The number of quail harvested by respondents who hunted wild quail in Illinois in 1991-92. Sample sizes are in parentheses.

Parameter	North Zone (429)	South Zone (407)	Entire State (837) ^a
		<u>November</u>	
Mean quail	5.1	9.5	7.7
Percentage of harvest	42	46	44
Harvest rate ^b	1.55	2.57	2.06
		<u>December</u>	
Mean quail	5.6	9.0	7.2
Percentage of harvest	47	44	44
Harvest rate	1.44	2.20	1.85
		<u>January</u>	
Mean quail	1.3	2.1	1.8
Percentage of harvest	11	10	12
Harvest rate	1.86	2.10	2.00
		<u>Entire State</u>	
Mean quail	12.0	20.6	16.2 ^c
Percentage of harvest	100	100	100
Harvest rate	1.52	2.34	1.95

^aIncludes 1 respondent not identified as to zone.

^bMean quail harvested divided by mean days hunted.

^c16.2% of the hunters harvested 0 quail, 29.2% harvested 1-5 quail, 17.0% harvested 6-10 quail, 16.2% harvested 11-20 quail 6.9% harvested 21-30 quail, and 14.5% harvested 31-328 quail.

Table 6. The number of days respondents who hunted wild quail harvested 0, 1-2, 3-4, 5-6, or 7-8 quail in Illinois in 1991-92. Sample sizes are in parentheses.

Number of Quail	North Zone		South Zone		Entire State	
	Mean	Percentage	Mean	Percentage	Mean	Percentage
	(429)		(407)		(837) ^a	
0	3.9	49	3.1	35	3.5	42
1-2	2.0	25	2.4	27	2.2	27
3-4	1.3	17	1.9	22	1.6	19
5-6	0.5	6	0.9	10	0.7	8
7-8	.2	3	0.5	6	0.3	4

^aIncludes 1 respondent not identified as to zone.

Table 7. The type of lands hunted by quail hunters, and the level of difficulty they experienced in finding a place to hunt, in Illinois in 1991-92. Sample sizes are in parentheses.

Subject	Percentage of Hunters		
	North Zone	South Zone	Entire State
Type of land	(426)	(407)	(834) ^a
Private-hunters	98.6	98.5	98.8
-days afield	95.8 ^b	92.2 ^b	93.9 ^b
Public-hunters	7.0	12.0	9.5
-days afield	4.2 ^b	7.8 ^b	6.1 ^b
Level of difficulty	(426)	(407)	(834) ^a
None	36.6	39.3	37.9
Little	21.6	23.1	22.3
Moderate	23.5	23.3	23.4
Much	18.3	14.3	16.4

^aIncludes 1 respondent not identified as to zone.

^bPercentage of days.

Table 8. Attitudes of quail hunters toward paying a landowner for the right to hunt quail in Illinois. Sample sizes are in parentheses.

Subject	Percentage of Hunters		
	North Zone	South Zone	Entire State
Willing to pay a landowner	(421)	(402)	(824) ^a
Yes	29.2	28.6	29.0
No	47.0	50.7	48.8
No Opinion	23.8	20.6	22.2
Amount willing to pay per day	(123)	(115)	(239) ^a
\$10-\$15	83.1	83.5	83.3
\$16-\$30	11.3	10.4	10.8
\$31-\$50	3.2	2.6	2.9
>\$50	0.5	3.5	2.5
Mean	\$14.59	\$16.44	\$15.88

^aIncludes 1 respondent not identified as to zone.

Table 9. Utilization and evaluation of CRP (U.S. Department of Agriculture's Conservation Reserve Program) land by quail hunters in Illinois in 1991-92. Sample sizes are in parentheses.

Subject	Percentages of Hunters		
	North Zone	South Zone	Entire State
Hunted quail on CRP land	(427)	(406)	(834) ^a
Yes	32.6	36.5	34.4
No	46.4	45.8	46.2
Don't know	21.1	17.7	19.4
Effect of CRP land on quail populations	(161)	(171)	(332)
Helped	62.7	64.0	63.4
Hurt	3.1	4.7	3.9
None	11.2	11.6	11.4
Don't know	23.0	19.2	21.3

^aIncludes 1 respondent not identified as to zone.

Table 10. Attitudes of quail hunters toward the dates used for the wild quail hunting season in Illinois. Sample sizes are in parentheses.

*Responses to the question, "In recent years, the wild Illinois bobwhite quail season has opened on the first Saturday in November. In your opinion, is that date:"

	<u>North Zone</u> (424)	<u>South Zone</u> (406)	<u>Entire State</u> (831)*
About right	63.9%	56.7%	60.4%
Too early	17.2	32.3	24.5
Too late	13.2	6.7	10.0
No opinion	5.7	4.4	5.1

*Responses to the question, "In recent years, the Illinois wild bobwhite quail season has ended on the Sunday or holiday nearest to January 1 in the North Zone and one week later in the South Zone. In your opinion, is that date:"

	<u>North Zone</u> (427)	<u>South Zone</u> (406)	<u>Entire State</u> (834)*
About right	37.7%	34.5%	36.1%
Too early	54.8	56.7	55.8
Too late	4.2	5.4	4.8
No Opinion	3.3	3.4	3.4

*Includes 1 respondent not identified as to zone.

Table 11. Attitudes of quail hunters toward the number of quail that should be allowed in the daily bag limit in Illinois. Sample sizes are in parentheses.

Number of Quail	Percentage of Hunters		
	North Zone	South Zone	Entire State
	(418)	(400)	(819) ^a
6	61.2	58.0	59.7
8	34.7	34.5	34.6
10	4.1	7.5	5.7

^aIncludes 1 respondent not identified as to zone.

Table 12. Attitudes of quail hunters toward wearing blaze orange clothing when afield in Illinois. Sample sizes are in parentheses.

*Responses to the question, "How frequently do you wear a blaze (hunter) orange upper outer garment and cap when hunting quail?"

	<u>North Zone</u> (427)	<u>South Zone</u> (405)	<u>Entire State</u> (833) ^a
Never	11.9%	5.4%	8.8%
Only during firearm deer season	26.9	25.7	26.3
Usually	24.6	24.7	24.6
Always	36.5	44.2	40.3

*Responses to the question, "In opinion would it be appropriate or inappropriate for Illinois to mandate the wearing of a blaze (hunter) orange upper outer garment and cap for bobwhite and other upland game hunters?"

	<u>North Zone</u> (419)	<u>South Zone</u> (399)	<u>Entire State</u> (819) ^a
Appropriate	52.0	57.6	54.8
Inappropriate	48.0	42.4	45.2

^aIncludes 1 respondent not identified as to zone.

Table 13. Some characteristics of quail hunters in Illinois in 1991-92.
Sample sizes are in parentheses.

Characteristics	Type of Quail Hunted		
	Wild	Game-Farm	Combined
Mean age in years	(823) 37.3	(67) 40.0	(836) 37.4
Mean years hunted quail	(829) 20.2	(67) 21.9	(842) 20.2
Mean miles traveled (round trip) per day	(805) 43.3 ^a	---	---
Own ≥1 quail hunting dogs	(837) 45.3%	(67) 73.1%	(850) 45.4 ^b
Participated in field trial in Illinois in 1991	(837) 1.9%	(67) 13.4%	(850) 3.5%
Membership in organizations	(837)	(67)	(850)
Quail Unlimited	7.5%	16.4%	9.1%
Illinois Wildlife Federation	3.1%	3.0%	3.9%
Pheasants Forever	4.4%	10.4%	5.7%
Other organizations	8.5%	16.4%	8.8% ^c

^a47.0% of the hunters drove 1-10 miles, 19.7% drove 11-20 miles, 18.1% drove 21-30 miles, and 15.2% drove 31-800 miles.

^bThe owners averaged 1.53 dogs each; 65.0% owned 1 dog, 25.4% owned 2 dogs, 6.0% owned 3 dogs, and 3.6% owned 4-10 dogs.

^cIncludes local sportsmen's clubs (38.9%), Ducks Unlimited (22.2%), National Rifle Association (12.5%), National Wild Turkey Federation (8.3%), and 12 miscellaneous organizations (18.1%).

Table 14. Breeds of dogs used for hunting quail in Illinois in 1991-92.

Breed	In Sample		Estimated Total Quail Dogs
	Number	Percentage	
English pointer	169	32.3	19,209
Brittany spaniel	116	22.2	13,203
English setter	105	20.1	11,954
German shorthaired pointer	51	9.8	5,828
Labrador retriever	32	6.1	3,628
Springer spaniel	9	1.7	1,011
Drathaar	8	1.5	892
Mixed	8	1.5	892
Golden retriever	6	1.1	654
Irish setter	6	1.1	654
Cocker spaniel	5	1.0	595
Gordon setter	3	0.6	357
Beagle	1	0.2	119
Blue healer	1	0.2	119
Chesapeake Bay retriever	1	0.2	119
Flat-coated retriever	1	0.2	119
Red setter	1	0.2	119
Total	523	100	59,472

Table 15. Estimated expenditures by quail hunters in Illinois in 1991-92. Sample sizes are in parentheses.

Money Spent	Percentage of Hunters			
	Wild Only	Game-farm Only	Wild and Game-farm	All Quail
	(779)	(13)	(54)	(846)
<\$100	47.1	15.4	7.4	44.1
\$100 - \$250	22.7	53.8	22.2	23.2
\$251 - \$500	16.3	23.1	33.3	17.5
\$501 - \$1,000	11.2	7.7	22.2	11.8
\$1,001 - \$2,000	1.5	0.0	9.3	2.0
>\$2,000	1.2	0.0	5.6	1.4
Mean	\$267	\$246	\$641	\$289
Total *(in millions)	\$21.0	\$0.3	\$3.5	\$24.8

*Based on an estimated 84,281 wild quail hunters in Illinois in 1991 (Anderson and Campbell 1992). The 84,281 hunters included 78,805 who hunted wild quail only and 5,476 who hunted both wild and game-farm quail. An additional 1,283 hunters hunted game-farm quail only.

Table 16. Estimated expenditures for hunting wild and game-farm quail in Illinois in 1991-92.

Parameter	Wild Quail	Game-Farm Quail	All Quail
Hunters	84,281 ^{a,b}	6,759 ^{b,c}	85,564 ^b
Days afield	564,866 ^a	24,764 ^c	589,630
Quail harvested	926,411 ^a	63,344 ^c	989,755
Total expenditures	\$22.8 M ^d	\$2.0 M ^d	\$24.8 M ^d
Per hunter	\$271	\$293	\$290
Per day afield	\$ 40	\$ 80	\$ 42
Per quail harvested	\$ 25	\$ 31	\$ 25

^aEstimates from Anderson and Campbell (1992).

^bIncludes 5,476 individuals who hunted both wild and game-farm quail.

^cBased on estimates for wild quail and percentages in Table 2.

^dCalculated from data in Tables 2 and 15.

1991-92 ILLINOIS QUAIL HUNTER SURVEY

INSTRUCTIONS

Please answer the questions on the following pages for your bobwhite quail hunting activities in Illinois during the 1991-92 season.

If you did not hunt bobwhite quail in Illinois in 1991-92, answer only the questions that apply to you (PART I and PART IV). Your opinions are important even if you did not hunt.

Report only your kill. DO NOT report the kill of others with whom you may have hunted. Your responses are strictly confidential and will never be associated with your name. Since you are a part of a small, randomly selected group, your participation is very important.

If you can't remember exact figures, give your best estimate. When completed, insert questionnaire into the self-addressed envelope and mail. Comments are welcome but please write them on a separate sheet of paper to receive proper attention.

PART I:

1. Did you purchase a resident Illinois hunting license for the 1991-92 season?
(circle number of appropriate answer)

Yes.....1 No.....2

2. How many quail hunting dogs do you own? _____

What breed(s)? _____

3. Did you participate in an organized field trial in Illinois with your quail hunting dog or other "bird" dog that you own or handle in 1991?
(circle number of appropriate answer)

Yes.....1 No.....2

4. Did you hunt bobwhite quail in another state during the 1991-92 season?
(circle number of appropriate answer)

Yes.....1 No.....2

5. Did you hunt bobwhite quail in Illinois during the 1991-92 season?
(circle number of appropriate answer)

Yes.....1 No.....2

Figure 1. The questionnaire used for the 1991-92 Illinois Quail Hunter Survey (continued).

IF YOU DID NOT HUNT BOBWHITES IN ILL. DURING THE 1991-92 SEASON, SKIP TO PART IV.

PART II. The following questions apply only to the hunting of wild free-living bobwhite quail. If you hunted only game-farm or hand-reared released quail, skip to Part III.

6. If you answered "yes" to question 5, please answer the following questions about the number of different days you hunted wild bobwhite quail in Illinois and the number of wild bobwhites you harvested for each month of the 1991-92 season? (write in the number of days and number of bobwhites that apply)

Number of days in Nov. 1991 _____ Number of wild bobwhites harvested _____

Number of days in Dec. 1991 _____ Number of wild bobwhites harvested _____

Number of days in Jan. 1992 _____ Number of wild bobwhites harvested _____

Total number of days....._____ Total number of wild bobwhites....._____

7. On how many different days during the 1991-92 season did you bag (kill and retrieve):

a. no wild bobwhite quail? _____ days

b. 1-2 wild bobwhite quail? _____ days

c. 3-4 wild bobwhite quail? _____ days

d. 5-6 wild bobwhite quail? _____ days

e. 7-8 wild bobwhite quail? _____ days

8. In which county, or counties, did you hunt wild bobwhites most in Illinois in 1991-92?

	<u>County</u>	<u>Number of Days</u>
Hunted most	_____	_____
Second most	_____	_____
Third most	_____	_____

9. Please rate the level of difficulty you experienced in finding a place to hunt wild bobwhite quail in Illinois in 1991-92?

(circle number of appropriate answer)

No difficulty.....1 Little difficulty.....2

Moderate difficulty....3 Much difficulty.....4

10. On what type(s) of lands did you hunt wild bobwhite quail in Illinois in 1991-92 and on many days did you hunt on each type of land?

(circle number of all that apply and write in the number of days)

Privately owned lands?....1 Number of days _____

Publicly owned lands?.....2 Number of days _____
(State and Federal)

11. Did you hunt bobwhite quail in 1991-92 on farmland that was enrolled in the U. S. Dept. of Agriculture's Conservation Reserve Program (CRP)?
(circle number of appropriate answer)

Yes.....1 No.....2 Don't know.....3

11a. If you answered "yes" to question 12, in your opinion, what effect did the land management on the CRP fields that you hunted have on wild bobwhite quail populations? (circle number that best represents your opinion)

helped.....1 hurt.....2
no effect...3 don't know..4

12. How many miles did you travel (round trip) on a typical bobwhite quail hunting trip in Illinois in 1991-92?

Number of miles _____

PART III. The following questions (13 and 14) apply to game-farm or hand-reared released bobwhite quail hunting only.

13. Did you hunt game-farm or hand-reared released bobwhite quail in Illinois in 1991-92? (circle number of appropriate answer)

Yes.....1 No.....2

14. If you answered "yes" to question 13, on how many days did you hunt hand-reared bobwhite quail and how many hand-reared bobwhite quail did you kill under the following conditions?

(circle number of all that apply and enter number of days and birds)

- a. Released your own birds.....1 No. of days _____ No. harvested _____
- b. Private licensed preserve.....2 No. of days _____ No. harvested _____
- c. State Controlled Hunting Area.....3 No. of days _____ No. harvested _____

PART IV. Opinion Questions. Please answer even if you did not hunt in 1991-92.

15. Would you be willing to pay a landowner in Illinois for the right to hunt wild bobwhites? (circle number of appropriate answer)

Yes.....1 No.....2 Undecided.....3

If you answered "yes" to question 15, about how much would you be willing to pay per day?

(circle number of appropriate answer)

\$10-15....1 \$16-30....2 \$31-50....3 over \$50....4

16. In your opinion, how many bobwhite quail should be allowed in the daily bag limit in Illinois next season (1992-93)?

(circle number of limit that best represents your opinion)

6 per day.....1 8 per day.....2 10 per day.....3

17. In recent years, the wild Illinois bobwhite quail season has opened on the first Saturday in November. In your opinion, is that opening date:
 (circle number that best represents your opinion)
 about right?....1 too early?.....2 too late?.....3 No opinion.....4

18. In recent years, the Illinois wild bobwhite quail season has ended on the Sunday or holiday nearest to January 1 in the North Zone and one week later in the South Zone. In your opinion, is that closing date:
 (circle number that best represents your opinion)
 about right?....1 too early?.....2 too late?.....3 No opinion.....4

19. About how much money do you think you spent for bobwhite quail hunting in Illinois during the 1991-92 season (or the last season you hunted)? Include license fees, travel and gasoline, lodging, food and drink, dogs and their maintenance, guns, ammo, clothing, boots, and other equipment purchased for the 1991-92 season.
 (circle number of appropriate answer)

Less than \$100.....1	\$501 to \$1000.....4
\$100 to \$250.....2	\$1001 to \$2000.....5
\$251 to \$500.....3	More than \$2000....6

20. How frequently do you wear a blaze (hunter) orange upper outer garment and cap when hunting bobwhite quail?

Never.....1	Only during the firearm deer seasons....2
Usually.....3	Always.....4

20a. In your opinion would it be appropriate or inappropriate for Illinois to mandate the wearing of a blaze (hunter) orange upper outer garment and cap for bobwhite and other upland game hunters?

Appropriate.....1	Inappropriate.....2
-------------------	---------------------

21. How many years have you hunted bobwhite quail? Number of years _____

22. How old were you on your last birthday? Years of age _____

23. Are you a member of a sportsmen's organization that represents your bobwhite quail hunting interest in Illinois?
 (circle number of appropriate answer for each organization listed)

	<u>Yes</u>	<u>No</u>
Quail Unlimited.....1.....2	1	2
Illinois Wildlife Federation.....1.....2	1	2
Pheasants Forever.....1.....2	1	2

Other (write in)_____

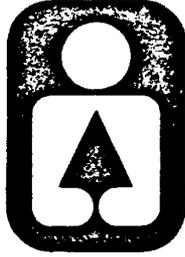
Thank you for your cooperation.
 POSTAGE IS PREPAID

Brent Manning
Director

John W. Comerio
Deputy Director

Bruce F. Clay
Assistant Director

Illinois



Department of Conservation
life and land together

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601

Dear Fellow Sportsman:

You are one of a select group of Illinoisans asked to furnish information on your bobwhite quail hunting activities during the past hunting season.

The information supplied by you and other selected hunters is vital to the management of the Illinois bobwhite. Our goals are to safeguard quail populations, to grant maximum quail hunting opportunity to licensed hunters, and to maintain an attractive level of hunter success.

The information you provide will be used to better understand the characteristics of our bobwhite population and our bobwhite quail hunters. It also will help us understand how quail hunters view their sport.

Your reply is very important, even if you did not hunt bobwhites or were not successful. Only a limited number of quail hunters can be contacted, therefore, your response is urgently needed.

Please take a few minutes to fill out the parts of the questionnaire that apply to you. If you do not remember exact figures, please give your best estimate.

Drop the completed questionnaire in the mail. Postage is prepaid.

Sincerely,

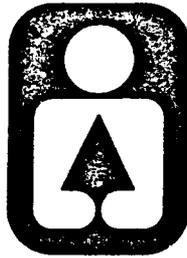
Jeffrey M. Ver Steeg
Chief
Division of Wildlife Resources

JMV:LD:lg

Enclosure

Figure 2. The letter that accompanied the first mailing of the questionnaire.

Illinois



Department of Conservation

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Brent Manning
Director

John W. Comerio
Deputy Director

Bruce F. Clay
Assistant Director

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601

Dear Fellow Sportsman:

Recently we mailed you a Quail Hunter Questionnaire, and requested that you fill it out and return it as soon as possible. We have not received your form at this time. Perhaps you have misplaced the questionnaire or haven't found time to complete it.

We are enclosing another questionnaire which we hope you will complete and return to us. If you have already returned a questionnaire, please discard this one. The information supplied by you and other bobwhite quail hunters being sampled will be of great value to the Department of Conservation in better directing the management of our bobwhite resources.

Please fill out the questionnaire completely and return it even if you did not hunt bobwhite quail or were not successful.

Please drop the completed questionnaire in the mail. Postage is prepaid. Your prompt attention will be sincerely appreciated.

Thank you.

Sincerely,

Jeffrey M. Ver Steeg
Chief

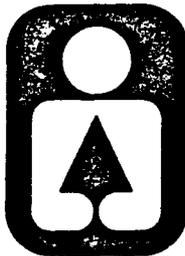
Division of Wildlife Resources

JMV:LD:lg

Enclosure

Figure 3. The letter that accompanied the second mailing of the questionnaire.

Illinois



Department of Conservation

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Brent Manning
Director

John W. Comerio
Deputy Director

Bruce F. Clay
Assistant Director

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601

Dear Fellow Sportsman:

This letter is to remind you that we still would like to receive a report of your bobwhite quail hunting activities for the past season. We don't like to keep bothering you, but this information is very important and only you can supply it.

Another copy of the questionnaire is enclosed. We hope you will complete it and return it as soon as possible. If you have already returned a questionnaire, please discard this one. Your response is needed, even though you did not hunt quail or had an unsuccessful season.

Postage is prepaid for returning the questionnaire. Please drop the completed questionnaire in the mail. Your prompt attention will be greatly appreciated.

Thank you.

Sincerely,

Jeffrey M. Ver Steeg
Chief

Division of Wildlife Resources

JMV:LD:lg

Enclosure

Figure 4. The letter that accompanied the third mailing of the questionnaire.

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