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JOB COMPLETION REPORT
RESULTS OF THE 1992-93 ILLINOIS
BOWHUNTER SURVEY

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RESULTS OF THE 1992-93 ILLINOIS BOWHUNTER SURVEY

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Abstract: Holders of 1992-93 archery deer hunting permits were surveyed via mail-letter questionnaire to determine characteristics of their activities and harvest, obtain their opinions of present and future hunting regulations, and compile their profiles. For the 1992-93 season, 90,043 individuals received a total of 128,366 (110,150 paid and 18,216 free landowner) permits. The mailing list included 4,329 of these permit holders, 3,317 (77%) of which returned usable questionnaires. The respondents included 3,223 (97.2%) Illinois residents and 94 (2.8%) non-residents. For resident respondents, 96% of the paid permit holders and 82% of the free landowner permit holders bowhunted for deer on ≥ 1 days during the 1992-93 season. Paid permit holders hunted an average of 26 days, and free landowner permit holders hunted an average of 22 days. Deer bowhunting activity peaked between 16 October and 15 November. The number of bowhunters per 100 acres of forest was highest in the northeastern one-fourth of the state (4.92) and lowest in the west-central (1.28) and most southern counties (1.05). 87% of bowhunting activities occurred on private property. The bowhunters reported harvesting an average of 0.32 deer per hunter, with 74% of the hunters taking 0 deer and 21% taking 1 deer. 72% of the bowhunters passed up ≥ 1 opportunities to shoot at deer. 95% of the bowhunters used compound bows (mean pull 66 lbs) and 92% used aluminum arrows. For resident respondents, 7% had a fall archery turkey permit and 6% hunted turkeys. The turkey hunters spent an average of 18 days afield, 89% of which was in conjunction with deer hunting. The bowhunters harvested an estimated 64,570 game animals (primarily squirrels and rabbits) of species other than deer and turkeys. Majorities of the deer bowhunters supported the check station requirement, as well as the opening date (1 October), closing date (14 January), and legal shoot hours (1/2 hour before sunrise to 1/2 hour after sunset) used for the 1992-93 season. Bowhunters were strongly against legalizing crossbows for deer hunting in Illinois. The bowhunters were generally supportive of the Department of Conservation's deer management policies. The "typical" Illinois Bowhunter was male (97%), 36 years of age, and resided in a rural area or small town (78%); 5% were members of the Illinois Bowhunter Society. 59% of the bowhunters had hunted deer for ≤ 5 years, 46% had never harvested a deer, and 5% ventured to another state or country to bowhunt. The bowhunters spent an average of \$412 (total \$34.0 million) to bowhunt for deer in Illinois during the 1992-93 season. The management implications of these findings are discussed.

Bowhunting is a popular and growing outdoor sport in Illinois. Although the factors contributing to the rapid growth in the use of archery for hunting are many and complex, two stand out--a phenomenal increase in the white-tailed deer herd and almost universal acceptance of the compound bow. In 1957, when Illinois held its first modern-day deer hunt, 2,617 archery permits were issued and bowhunters harvested 220 deer. The number of archery deer permits surpassed 10,000 in 1967, 20,000 in 1974, 40,000 in 1984, and 80,000 in 1990. For the 1992-93 season, 128,366 archery permits were issued and bowhunters harvested 19,427 deer. In comparison, firearms hunters were issued 10,050 permits in 1957 and 238,378 in 1992, which resulted in harvests of 1,735 and 83,799 deer, respectively (J.H. Kube, unpubl. data--excludes muzzleloader/handgun permits and harvests).

Although the principle of the compound bow dates back to 1966 (Combs 1984), production models were not perfected until the early 1970s. Since the compound bow contrasted greatly with traditional longbows and recurves, the bowhunting fraternity was slow to accept this radical new design. However, the relative ease with which the compound bow could be drawn back and held in the drawn position afforded an advantage over traditional bows (Combs 1984). When it became apparent that most hunters could comfortably shoot powerful bows, the compound grew quickly in popularity. By the 1980s, most bowhunters had converted to the compound bow (Hansen and Olson 1989), and the number of bowhunters have continued to grow.

To make biologically sound management decisions and to develop socially acceptable hunting regulations, the Illinois Department of

Conservation (DOC) must have information on the activities, attitudes, and other characteristics of bowhunters in the state. Thus, the present survey was conducted to improve the DOC's understanding of the rank-and-file bowhunter and his feelings toward the white-tailed deer resource and the sport of bowhunting.

METHODS AND MATERIALS

The DOC Permit Office issued 90,043 individuals a total of 128,366 permits for the archery deer hunting season in Illinois in 1992-93. These permit holders included 55,743 individuals (62%) who received 1 paid permit, 21,582 individuals (24%) who received 2 paid permits, and 3,694 individuals (4%) who received 3 paid permits (Table 1). In addition, 8,872 individuals (10%) received 2 or 4 free landowner permits, and 152 (0.2%) individuals received both paid and free landowner permits. The mailing list for the 1992-93 Illinois Bowhunter Survey included 4,329 individuals who were systematically selected (i.e., every 20th name) from these permit holders. This represents a 5% sampling rate.

A questionnaire was developed specifically for surveying bowhunters (Fig. 1). A copy of the questionnaire and a letter of explanation (Fig. 2) were initially mailed to each individual on the mailing list on 12 January 1993. Non-respondents were sent 2nd and 3rd copies of the questionnaire, and accompanying letters (Figs. 3 and 4), on 24 February and 2 April, respectively. As of 30 June 1993, 3,317 useable questionnaires were returned for a response rate of 77%.

Data were transferred from the questionnaires to a computer file using a data management program (Ashton-Tate dBASE III+). The data were then analyzed with a statistical program (SPSS Inc. SPSS/PC+ V2.0). The results were tabulated and interpreted relative to type of permit (paid or free landowner) held by the respondents. Bowhunter activity and deer harvest were also examined according to geographical area.

BOWHUNTING REGULATIONS DURING 1992-93 SEASON

Illinois' archery deer season extended from 1 October 1992 to 14 January 1993 in Cook, DuPage, Kane, and Lake counties. The same season dates also applied to the other 98 counties with the exception that archery hunting was suspended during the firearms deer seasons (20-22 November and 2-6 December). Bowhunting was allowed during the muzzleloader season (11-13 December). Shooting hours for the entire archery deer season were 1/2 hour before sunrise to 1/2 hour after sunset. Legal archery equipment included bows (long, recurve, or compound) with a minimum pull of 40 pounds at some point within a 28-inch draw, and arrows with a minimum length of 20 inches and with a metal barbed broadhead that could not pass through a 7/8-inch diameter hole. All other bows and arrows, including electronic arrow tracking systems, were illegal, except that crossbows could be approved for use by qualifying handicapped persons. For the 1992-93 season, deer hunters were eligible to receive 1 paid either-sex archery permit, 1 antlerless-only archery permit, and ≥ 1 firearms permits; or they could receive 2 either-sex archery permits, 1 antlerless-only archery permit, and

no firearms permit.

The season dates and shooting hours for the fall archery turkey season coincided with the regulations for the archery deer season. However, turkeys were legal game for archers in only 45 counties. The DOC Permit Office issued 4,736 archery turkey permits (4,226 paid and 510 free landowner) to 4,736 individuals for the fall 1992-93 season. For other forest game species and for all upland game, the hunting regulations for bowhunters were the same as those for firearms hunters.

FINDINGS

State of Residence and Permits Received

Of the 3,317 individuals who participated in the 1992-93 Illinois Bowhunter Survey, 3,223 (97.2%) were Illinois residents and 94 (2.8%) were non-residents. Of the 3,223 Illinois residents, 54% received 1 paid archery deer permit, 31% received 2 paid permits, 6% received 3 paid permits, and 9% received 2 or 4 free landowner permits (Table 2). Of the 5,084 permits received by the Illinois residents, 77% were for either-sex deer and 23% were for antlerless-only deer. With minor exception, these percentages mirror the DOC Permit Office's records of the types and numbers of permits issued for the 1992-93 season (Table 1).

The data in Table 2 suggest that, of the 90,043 individuals who received archery deer permits for the 1992-93 season, 87,522 were residents and 2,521 were non-residents. They purchased an average of 1.7 and 1.5 archery deer permits, respectively. Among the non-residents, 56% received 1 paid archery deer permit, 31%

received 2 paid permits, 4% received 3 paid permits, and 9% received 2 free landowner permits. The 94 non-residents included 26% who were from Missouri, 18% from Wisconsin, 9% from Indiana, 7% from Michigan, and 40% from 18 other states.

Deer Bowhunting Activities

Among residents, 96% of the paid permit holders and 82% of the free landowner permit holders bowhunted for deer on ≥ 1 days in Illinois during the 1992-93 season (Table 3). These percentages, combined with the data in Table 2, indicate that 82,573 resident bowhunters (75,722 paid permit holders and 6,851 free landowner permit holders) were active in Illinois in 1992-93.

Among non-residents, 96% (n=86) of the paid permit holders and 75% (n=8) of the free landowner permit holders bowhunted for deer on ≥ 1 days in Illinois during the 1992-93 season. There was an estimated 2,360 non-resident deer bowhunters who were active in the state in 1992-93.

Unless stated otherwise, all future references to "bowhunters", "paid permit holders", and "free landowner permit holders" refer to Illinois residents who bowhunted for deer on ≥ 1 days in Illinois during the 1992-93 season.

Days Afield. Deer bowhunters spent an average of 26 days afield in Illinois during the 1992-93 season (Table 4). The average number of days afield was greater for paid permit holders (26 days) than for free landowner permit holders (22 days). 56% of the days afield occurred between 1 October and 15 November, after which bowhunting activity progressively decreased to the end of the

season. Bowhunting activity was at its peak during the last half of October and the first half of November, when deer were heavily engaged in breeding behavior.

The decreases in bowhunting activity during the last half of November and the first half of December were caused, in part, by the firearms deer seasons, which took place during those periods. Bowhunting was suspended during the 7 days of firearms deer hunting. Harsh winter weather and the fact that successful bowhunters were no longer afield contributed to the decreases in activity in December and the first half of January.

In the 4 counties in northeastern Illinois (Region NE), where bowhunting was not interrupted by firearms deer seasons, the average number of days afield and the temporal distribution of hunting activity were much the same as for the entire state (Table 4). Interestingly, dips in bowhunting activity also occurred in these counties during the last half of November and the first half of December. Because the majority of bowhunters also firearms deer hunted (Table 3), many of the bowhunters in the northeastern counties probably ventured elsewhere in the state to pursue deer with firearms during these periods.

Non-resident deer bowhunters spent an average (\pm SE) of 11.8 ± 1.03 (n=89) days afield in Illinois during the 1992-93 season.

Geographical Distribution of Bowhunting. When examined relative to Illinois' Deer Management Regions, the greatest percentage of bowhunters (22%) and days afield (23%) took place in Region 7 (Table 5, Fig. 5). The second greatest percentages occurred in Region 2 (15% and 14%), which was followed by Region 8

(11% and 12%). The lowest percentages of bowhunters and days afield were in Region NE (5% and 4%) and Region 5 (6% and 6%).

In terms of total land area, the highest densities of bowhunters (0.37 per 100 acres) and days afield (10.39 per 100 acres) occurred in Region 8 (Table 5). Densities were also relatively high in Region 1 (0.30 and 7.50 per 100 acres). The densities of bowhunters and days afield were relatively low in Region 5 (0.16 and 4.07 per 100 acres) and Region 2 (0.19 and 4.48 per 100 acres). Statewide, there were averages of 0.24 bowhunters and 6.22 days afield per 100 acres of land area during the 1992-93 season.

However, when viewed in terms of forest area, the picture was much different. Region 8, where the Shawnee National Forest is located, ranked lowest for density of bowhunters (1.05 per 100 acres) and days afield (29.18 per 100 acres). Region 4, or west-central Illinois, also ranked relatively low (1.28 and 32.45 per 100 acres). The highest densities occurred in Region 2 (4.92 and 117.81 per 100 acres) and Region NE (4.91 and 123.71 per 100 acres). Statewide, there were averages of 2.00 bowhunters and 52.23 days afield per 100 acres of forest during the 1992-93 season.

Ownership of Land Where Hunted. Among paid permit holders, 81% bowhunted for deer mostly on private land in Illinois during the 1992-93 season (Table 6). Another 10% hunted mostly on public land, and the remaining 9% spread their hunting activities about evenly between private and public lands. Almost all (98%) of the free landowner permit holders bowhunted for deer mostly on private

land.

Time of Day When Afield. A majority (55%) of the deer bowhunters split their hunting time about evenly between mornings and afternoons (Table 5). However, bowhunters were more apt to be afield in the evening (28%) than in the morning (20%). The disparity between evenings and mornings was more evident among free landowner permit holders than among paid permit holders.

Deer Harvested. The bowhunters reported harvesting an average of 0.32 deer per hunter in Illinois during the 1992-93 season (Table 7). The success rates for paid permit holders (0.32 deer) and for free landowner permit holders (0.33 deer) were essentially the same. Bowhunters with paid permits harvested deer proportional to the number of permits held, and hunters with paid antlerless-only permits harvested more deer, on the average, than those who had only paid either-sex permits (Table 8).

Three-fourths (74%) of the bowhunters reported harvesting 0 deer and 21% reported harvesting 1 deer (Table 7). Only 5% of the bowhunters said they harvested ≥ 2 deer in 1992-93. Non-residents (n=89) claimed an average (\pm SE) success of 0.39 ± 0.09 deer per hunter. Based on these data, a total of 26,563 deer (0.21 per permit) were harvested by resident and non-resident bowhunters in Illinois during the 1992-93 season. In comparison, DOC records show that 19,427 deer (0.15 per permit) were checked at county check stations during the season. These data suggest that participants in the present survey inflated the number of deer they harvested by 37% or there was a 37% noncompliance in bringing deer to check stations.

Distribution of the deer harvest among Illinois' Deer Management Regions closely paralleled the distribution of bowhunters and their days afield (Table 5). In terms of total land area, the highest density of deer harvest occurred in Region 8 (0.14 per 100 acres), and the lowest occurred in Region 5 (0.5 per 100 acres). However, in terms of forest area, the highest density of deer harvest took place in Region 2 (1.48 per 100 acres), followed closely by Region 5 (1.31 per 100 acres); the lowest density occurred in Region 8 (0.38 per 100 acres).

Deer Passed Up. Almost three-fourths (72%) of the bowhunters reported passing up at least 1 opportunity to shoot at deer in Illinois during the 1992-93 season (Table 9). A higher percentage of bowhunters passed up does/fawns (67%) than bucks (45%). Of the bowhunters who passed up bucks, 71% had 1-3 opportunities and 4% passed up >10 opportunities. Similarly, of the bowhunters who passed up does/fawns, 44% had 1-3 opportunities to shoot and 20% had >10 opportunities.

Equipment Used. Almost all (95%) of the bowhunters reported using a compound bow for deer hunting in Illinois during the 1992-93 season (Table 10). Among the remaining hunters, those using recurve bows (4.1%) were much more prevalent than those using longbows (0.6%) or crossbows (0.7%). Crossbows, which were limited to physically handicapped people, were more prevalent among free landowner permit holders (2.0%) than among paid permit holders (0.6%). The mean pull of all bows was 66 lbs; 73% of the bows ranged from 51 to 70 lbs and 20% were \geq 70 lbs.

Nearly all (92%) of the deer bowhunters used aluminum arrows during the 1992-93 season (Table 10). About 5% of the bowhunters used carbongraphite arrows, 2.1% used wooden arrows, and 1.5% used fiberglass arrows.

One-half (49%) of the bowhunters reported using a mechanical release (Table 10). Most of the remaining bowhunters used a finger glove (24%) or finger tab (17%) to hold, draw, and release arrows. In addition, majorities of the bowhunters used unlighted sight pins (72%), string peep sight (57%), camouflage clothing (95%), rubber boots (76%), portable tree stand (68%), deer call (58%), buck/deer lure (57%), and human scent cover (52%). 18% of the bowhunters had an overdraw system on their bows. The use of a string tracker (2.5%), retracting broadhead (4.3%), tie-on steps (8.5%), rangefinder (6.0%), or deer decoy (2.9%) was uncommon among Illinois bowhunters.

Not surprising, a higher percentage of free landowner permit holders (68%) than paid permit holders (46%) used permanent tree stands (Table 10). The same holds for permanent tree steps--31% versus 22%. In scanning down Table 8, one gains the impression that free landowner permit holders were less inclined than paid permit holders to utilize bowhunting accessories. Perhaps free landowner permit holders were not as ardent about bowhunting as paid permit holders, or possibly the free landowner permit holders were more pragmatic about the need for "gadgets".

Turkey Bowhunting Activities

For resident permit holders, 7% had a fall archery turkey

permit and 6% hunted turkeys in Illinois during the 1992-93 season (Table 3). These data suggest that 5,251 resident fall turkey bowhunters were active in Illinois in 1992-93. In comparison, DOC records show that 4,736 individuals received archery turkey permits for the fall 1993 season.

Days Afield. The turkey bowhunters reported spending an average of 18 days afield in Illinois during the 1992-93 season (Table 11). However, only 11% of these days were devoted exclusively to pursuing turkeys. The remaining 89% were in conjunction with deer bowhunting. In other words, most of the bowhunters who purchased an archery turkey permit did so in anticipation of a turkey coming within shooting range of their deer stands.

Turkeys Harvested. The turkey bowhunters reported harvesting an average of 0.037 turkeys (Table 11). Since they were limited to 1 permit each, a successful turkey bowhunter could take only a single bird in Illinois during the fall 1992-93 season. These data suggest that 194 turkeys (0.041 per permit) were harvested during the fall 1993 archery season. However, DOC records show that bowhunters reported a harvest of 102 birds (0.022 per permit) via a mandatory mail-in envelope.

Other Game Harvested by Bowhunters

Approximately 13% of the bowhunters reported harvesting ≥ 1 game animals of species other than deer and turkey in Illinois during the 1992-93 season (Table 12). The "species" most frequently taken, and also taken in greatest numbers, was squirrels

(fox and gray combined). The second most frequently taken was rabbits; third was coyotes; and fourth was groundhogs. For all species combined, the bowhunters harvested an estimated 64,570 animals of species other than deer and turkey during the 1992-93 archery season.

Out-of State Bowhunting

An estimated 5% of the resident archery permit holders ventured to another state or country to bowhunt during the 1992-93 season (Table 3). Wisconsin was the state most frequently visited, followed in descending order by Michigan, Missouri, Colorado, and Indiana. The white-tailed deer was, by a wide margin, the species most frequently pursued; it was followed in descending order by elk, turkey, and bear.

Firearms Deer Hunting

Almost two-thirds (62%) of the resident archery permit holders participated in firearms deer hunting in Illinois during the 1992 season, which may partially explain why most of them purchased only 1 or 2 archery deer permits (Table 2). A higher percentage of free landowner permit holders (74%) than paid permit holders (60%) firearms deer hunted (Table 3).

Opinions and Attitudes of Bowhunters

Bowhunting Regulations. The vast majority (80%) of the bowhunters agreed with the regulation that requires bowhunters to check their deer into a check station (Table 13). Similarly,

majorities (65-93%) of the bowhunters supported the opening date, closing date, and legal shooting hours used for the 1992-93 season. Free landowner permit holders were slightly less supportive of these regulations than paid permit holders.

More than one-half (57%) of the bowhunters thought the DOC should make no changes in current regulations governing new archery equipment (e.g., laser sights, electronic arrow tracking systems, etc.) (Table 13). Strong majorities (63-71%) of the bowhunters were against legalizing crossbows for deer hunting in Illinois. The negative feelings about crossbows prevailed for the entire archery season, for 1 month of the archery season, for 1 week of the archery season, and for the firearms seasons. Free landowner permit holders appeared somewhat less negative toward crossbows than paid permit holders.

Knowledge of Selected Regulations. There were 4 questions on the questionnaire that were designed to measure bowhunters' knowledge (interpretations) of certain deer hunting regulations. The first question asked whether the bowhunters thought it was legal or illegal to obtain an antlerless-only archery permit in addition to an either-sex archery permit in Illinois; 86% responded with the correct ("legal") interpretation (Table 14).

The second question asked about the legality of having bows unlocked (or not in cases) when hunters are in the field before and after legal shooting time. For this issue, 55% of the hunters gave the correct ("illegal") interpretation. When asked about the legality of bowhunters selling antlers and hides from deer they had harvested, 37% responded with the correct ("legal") interpretation

(deer parts must be sold to licensed retail or wholesale fur buyers). The fourth question, which asked whether the bowhunters thought it was legal or illegal to pick up shed deer antlers in Illinois, elicited an 86% correct ("legal") interpretation as currently defined by DOC policy (the picking up of sheds is technically illegal).

Based on these data, it appears that Illinois bowhunters are relatively knowledgeable about the rules governing archery deer permits and the act of picking up shed deer antlers. However, they appear to be poorly informed about the legality of transporting unlocked (uncased) bows in the field and the selling of antlers and hides from harvested deer.

Density of bowhunters. When asked to express their opinions of the number of hunters in the area where they archery deer hunted most, the vast majority (74%) of the bowhunters responded with "about right" (Table 15). Another 20% checked "too many" and 6% checked "too few". Surprisingly, this trend prevailed in all Deer Management Regions throughout the state and in spite of the fact that hunter density varied by nearly 5-fold in these regions.

Deer Management Policies. The bowhunters were asked how many deer they would be willing to harvest in 1 year, assuming the permits cost \$15 each. A plurality (47%) said 2 deer, and 82% said 1-3 deer (Table 16). Only 18% of the bowhunters would be willing to harvest ≥ 4 deer. Collectively, the bowhunters indicated they would be willing to harvest an average of 2.6 deer.

More than one-half (58%) of the bowhunters agreed with the DOC's policy of issuing Nuisance Deer Removal Permits to farmers

and landowners with deer damage problems (Table 16). As might be expected, free landowner permit holders were more likely to agree (74%) with this policy than paid permit holders (57%).

When asked whether they were supportive or unsupportive of increasing the fees for archery deer and turkey permits for the purpose of financing bowhunter education programs in Illinois, two-thirds (69%) of the bowhunters checked the latter (Table 16). Both paid permit holders (69%) and free landowner permit holders (60%) were unsupportive of this idea.

The vast majority (73%) of the bowhunters rated the DOC's deer management program in Illinois as "excellent" or "good" (Table 16). Only 23% of the bowhunters rated the program as "fair" or "poor". Free landowner permit holders appeared slightly less inclined to give the program high marks than paid permit holders.

Profile of Bowhunters

Personal Characteristics. During the 1992-93 season, the "typical" Illinois bowhunter was male (97%), 36 years of age, and probably was a rural (37%) or small town (41%) resident (Table 17). Free landowner permit holders were more apt to be female (12%) and live in rural areas (74%) than paid permit holders (2% and 33%). For all bowhunters, 5% were members of the Illinois Bowhunters Society, 4% were members of Whitetails Unlimited, Inc., and 3% belonged to the National Wild Turkey Federation. Membership in each of the other organizations, excluding local bowhunting and archery clubs, claimed <1% of Illinois' bowhunters.

Bowhunting Characteristics. Illinois bowhunters reported that they had hunted deer an average of 7 years and that they had harvested an average of 2.3 deer during their lifetime (Table 18). However, 59% of the bowhunters had hunted deer for ≤ 5 years, and 46% of them had never harvested a deer. Another 27% of the bowhunters had taken 1 or 2 deer, and an additional 26% had taken ≥ 3 deer.

The "typical" bowhunter drove 39 miles (round trip) per day to pursue deer in Illinois during the 1992-93 season (Table 18). Not surprising, free landowner permit holders drove less (22 miles), on the average, than paid permit holders (39 miles). For all bowhunters, 59% traveled ≤ 20 miles and 24% traveled ≥ 41 miles.

About 5% of the bowhunters paid a landowner for the privilege of archery deer hunting during the 1992-93 season, and 17% said they archery deer hunted during the muzzleloader season (Table 18). One-fourth (24%) of the bowhunters participated in 3-D archery events in 1992, 77% practiced with broadheads attached to their arrows, and 42% had taken a hunter education class. The class most frequently taken was the one sponsored by the DOC. Only 4% of the bowhunters had taken a bowhunter education class.

Economics of Bowhunting

The paid permit holders indicated that they spent an average of \$424 each on archery deer hunting in Illinois during the 1992-93 season (Table 19). The free landowner permit holders spent much less--an average of only \$238 each. Expenditures for both groups combined totaled an estimated \$34.0 million statewide. In

comparison, an estimated 15,000 spring turkey hunters spent an average of \$184 each and a total of \$2.76 million in Illinois in 1990 (Anderson and Garver 1991).

DISCUSSION

Illinois' modern-day bowhunters are currently enjoying the benefits of a large white-tailed deer population and an extended archery deer season. The 1992-93 season was 99 days in length in most of the state. It began in early fall (1 October), continued through the fall and early winter months (except during the firearms deer seasons), and ended in mid-winter (14 January). Hunters could afford to pick the dates and weather conditions they most preferred for going afield. In addition, legal shooting hours embraced nearly every minute of available light, extending from 1/2 hour before sunrise to 1/2 hour after sunset.

The bowhunters took advantage of the liberal deer hunting regulations by going afield an average of 26 days, harvesting an average of 0.32 deer, and passing up numerous opportunities to shoot at deer in 1992-93 (Tables 4, 7, and 9). No other group of hunters spends as many days afield as do deer bowhunters (Anderson and Campbell 1993). Illinois' bowhunters have every right to be highly satisfied with the current status of their sport, and that satisfaction was reflected in their attitudes toward existing archery deer hunting regulations and DOC deer management policies (Tables 13 and 16).

The number of active deer bowhunters in Illinois increased from 62,166 in 1989 (Anderson and Kube 1990) to 82,573 in 1992-93.

This represents an annual increase of 6,800 hunters which, if continued, will result in approximately 115,000 active bowhunters by 1997 and 150,000 bowhunters by 2002. During the 1992-93 season, there was an average of 2.00 active bowhunters per 100 acres of forest in the state (Table 5), a density that most bowhunters thought was about right (Table 15). However, if projections hold, there will be an average of 2.80 bowhunters per 100 acres of forest in 1997 and 3.60 bowhunters per 100 acres of forest in 2002. Since these hunter densities are currently exceeded in 4 of the 9 deer management regions (Table 5), the additional bowhunters presumably could be accommodated, at least in some regions. Unfortunately, the quality of bowhunting may be compromised in those regions where hunter densities are already high.

Because bowhunters purchased an average of 1.7 archery deer permits for the 1992-93 season and expressed a willingness to harvest an average of 2.6 deer per year, the demand for archery permits may not have been fully met. Thus, had archery permits been available in 1992 without restrictions, the bowhunters may have purchased as many as 80,000 additional permits. With additional permits in hand, fewer bowhunters probably would have passed up opportunities to shoot at deer (Table 9), and more deer would have been harvested. In this context, it is noteworthy that bowhunters harvested deer in proportion to the number of paid permits held, and that hunters with paid antlerless-only permits harvested more deer than hunters without such permits (Table 8). It appears that one way to increase the bowhunter harvest of deer in Illinois is via the issuance of unrestricted, or minimally

restricted, archery permits, especially those for antlerless deer.

Almost one-half (45%) of Illinois bowhunters were unaware of, or did not understand, the requirement for having bows locked (or cased) when transporting them in the field before and after legal shooting time (Table 14). Similarly, 63% of the bowhunters did not realize that current law permits them to legally sell antlers and hides from deer they harvest. These findings suggest that more effort should be placed on educating the state's bowhunters with regards to the laws that govern their outdoor sport.

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LITERATURE CITED

- Anderson, W.L., and L.K. Campbell. 1993. Hunter harvest survey, 1991-92. Ill. Dep. Conserv. P-R Project Rep. W-112-R, Study 101, Job 1. Job Completion Report. 65pp.
- _____, and J.K. Garver. 1991. Results of the 1990 spring turkey hunter survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. dated 23 August 1991. 44pp.
- _____, J.H. Kube. 1990. Results of the 1989 Illinois deer hunter survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. dated 14 September 1990. 42pp.
- Combs, R., ed. 1986. Archer's digest, 4th edit. DBI Books, Inc., Northbrook, IL. 256pp.
- Iverson, L.R., R.L. Oliver, D.P. Tucker, P.G. Risser, C.D. Burnett, and R.G. Rayburn. 1989. Forest resources of Illinois. Ill. Nat. Hist. Surv. Spec. Publ. 11. 181pp.
- Hansen, L.P., and G.S. Olson. 1989. Survey of archery hunters, 1987. Mo. Dep. Conserv., Wildl. Res. Sect. Photocopied report dated 25 June 1989. 17pp.
- Morgan, G.W., C.M. Nixon, J.C. van Es, J.H. Kube. 1992. Attitudes of Illinois farmers regarding deer and deer hunters, 1990. Ill. Dep. Conserv. Tech. Bull. 6. 24pp.

Table 1. The number of archery deer permits issued in Illinois for the 1992-93 season and the number of persons who received these permits (DOC Permit Office records). Percentages are in parentheses.

Number and Type of Permits Received	Number of Permit Holders	Number of Permits				Total
		PES	PAO	FLES	FLAO	
1 Paid either-sex	53,146 (59.0)	53,146				53,146
2 Paid either-sex	7,398 (8.2)	14,796				14,796
1 Paid antlerless-only	2,597 (2.9)		2,597			2,597
1 Paid either-sex and 1 Paid antlerless-only	14,184 (15.7)	14,184	14,184			28,368
2 Paid either-sex and 1 Paid antlerless-only	3,694 (4.1)	7,388	3,694			11,082
1 Free landowner either-sex and 1 free landowner antlerless-only	8,791 (9.8)			8,791	8,791	17,582
2 Free landowner either-sex and 2 free landowner antlerless-only	81 (0.1)			162	162	324
Combinations of paid and free landowner	152 (0.2)	61	100	155	155	471
Total	90,043	89,575 (69.8)	20,575 (16.0)	9,108 (7.1)	9,108 (7.1)	128,366

Table 2. The number of archery deer permits reported by residents who participated in the 1992-93 Illinois Bowhunter Survey. Percentages are in parentheses.

Number and Type of Permits Received	Number of Permit Holders	Number of Permits				Total
		PES	PAO	FLES	FLAO	
1 Paid either-sex	1,725 (53.5)	1,725				1,725
2 Paid either-sex	335 (10.4)	770				770
1 Paid antlerless-only	5 (0.2)		5			5
1 Paid either-sex and 1 Paid antlerless-only	655 ^a (20.3)	655	655			1,310
2 Paid either-sex and 1 Paid antlerless-only	195 ^a (6.0)	390	195			585
1 Free landowner either-sex and 1 Free landowner antlerless-only	266 (8.3)			266	266	532
2 Free landowner either-sex and 2 Free landowner antlerless-only	22 (0.7)			44	44	88
Combinations of paid and Free landowner	19 (0.6)	12	11	23	23	69
Total	3,222 ^b	3,552 (70.0)	866 (17.0)	333 (6.5)	333 (6.5)	5,084

^a91.9% of these permittees purchased their paid antlerless-only permit prior to harvesting their first deer (n=837). For those who successfully harvested ≥1 deer, the percentage was 84.6% (n=428).

^bOne additional resident respondent did not disclose the type(s) of permit(s) he received.

Table 3. Hunting activities in which resident archery deer permit holders participated in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Activity	Paid Permit Holders	Free Landowner Permit Holders	All Permit Holders
In Illinois	(2,934)	(307)	(3,223)
Had archery deer permit(s)	100%	100%	100%
Archery deer hunted	95.6	82.4	94.3
Had archery turkey permit	6.7	6.6	6.6
Archery turkey hunted	6.0	6.2	6.0
Firearm deer hunted	60.4	73.9	61.6
Bowfished	8.7	4.0	8.2
In other states or countries	(2,804)	(253)	(3,039)
Archery hunted	5.0%	5.9%	5.0%
State or country visited	(160)	(16)	(170)
Wisconsin	31.3%	12.5%	30.0%
Michigan	17.5	0.0	16.5
Missouri	8.8	18.8	8.8
Colorado	6.9	31.3	8.8
Indiana	5.6	0.0	5.3
22 other states	23.7	31.1	24.1
Canada	5.6	6.3	5.9
Mexico	0.6	0.0	0.6
Species pursued	(180)	(20)	(193)
White-tailed deer	65.0%	40.0%	64.8%
Elk	8.9	25.0	10.4
Turkey	7.2	15.0	7.3
Bear	4.4	0.0	4.1
Mule deer	2.8	10.0	3.6
Wild boar/javelina	3.3	0.0	3.1
Pronghorn	2.2	0.0	2.1
Others	6.2	10.0	4.6

Table 4. Days afield by resident deer bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Parameter	Paid Permit Holders	Free Landowner Permit Holders	All Hunters	
			Statewide	Region NE ^a
Mean (\pm SE) days afield	(2,804) 26.4 \pm 0.4	(253) 21.6 \pm 1.0	(3,039) 26.0 \pm 2.6 ^b	(163) 25.6 \pm 1.9
Temporal distribution	(2,804)	(253)	(3,039)	(163)
October 1-15	17.4%	16.5%	17.1%	15.3%
October 16-31	18.8	18.1	18.5	17.3
November 1-15	19.5	18.9	19.2	16.9
November 16-31	14.3	14.6	15.4	14.0 ^c
December 1-15	10.8	12.2	10.8	13.3 ^d
December 16-31	10.8	10.9	10.7	12.7
January 1-14	8.4	8.8	8.3	10.5

^aCook, Dupage, Kane, and Lake counties.

^b11.9% were afield 1-5 days, 15.2% were afield 6-10 days, 13.1% were afield 11-15 days, 11.4% were afield 16-20 days, 17.0% were afield 21-30 days, 10.7% were afield 31-40 days, 7.9% were afield 41-50 days, and 12.8% were afield 51-99 days.

^c5.5% of the hunters were afield 13-15 days.

^d7.4% of the hunters were afield 12-15 days.

Table 5. Distribution of resident bowhunters, days afield, and deer harvest among Illinois Deer Management Regions during the 1992-93 season. Sample sizes are in parentheses.

Characteristic or Activity	Deer Management Region ^a								State-wide	
	1	2	3	4	5	6	7	8		NE
Total land area (acres x 100)	(316)	(466)	(368)	(301)	(193)	(259)	(648)	(328)	(138)	(3,039) ^b
Percent in forests	28,522	67,710	43,968	33,350	33,600	34,701	67,444	23,822	14,421 ^c	347,538
	8.0	3.8	13.2	19.2	4.0	10.6	15.1	35.6	5.3 ^c	11.9
Percent of:										
Hunters	10.5	15.4	12.2	10.0	6.4	8.6	21.5	10.9	4.5	100
Days afield	9.9	14.0	12.0	9.6	6.3	9.5	22.8	11.5	4.4	100
Deer harvest	10.0	14.3	11.8	11.1	6.6	11.6	19.0	12.2	3.4	100
Per 100 acres of land area										
Hunters	0.30	0.19	0.23	0.25	0.16	0.20	0.26	0.37	0.26	0.24
Days afield	7.50	4.48	5.91	6.23	4.07	5.89	7.30	10.39	6.56	6.22
Deer harvested	0.09	0.06	0.07	0.09	0.05	0.09	0.07	0.14	0.06	0.08
Per 100 acres of forest										
Hunters	3.76	4.92	1.72	1.28	3.90	1.91	1.72	1.05	4.91	2.00
Days afield	93.79	117.81	44.75	32.45	101.69	55.54	48.36	29.18	123.71	52.23
Deer harvested	1.17	1.48	0.54	0.46	1.31	0.83	0.50	0.38	1.17	0.65

^aAfter Morgan et al. (1992), except that Carroll and Jo Daviess counties were included in Region 1 (Fig. 5).

^bThis value is greater than the sum of the regional values because a few bowhunters could not be identified as to region.

^cData from Iverson et al. (1989).

Table 6. Ownership of land where hunted, and time of day when afield, by resident deer bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Category	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Ownership of land where hunted	(2,803)	(253)	(3,038)
Mostly on private	80.8%	98.4%	82.1%
Mostly on public	10.5	0.0	9.7
About evenly between private and public	8.7	1.6	8.2
Time of day when afield	(2,802)	(253)	(3,038)
Mostly in morning	17.1%	20.2%	17.3%
Mostly in evening	27.4	36.4	28.1
About evenly between mornings and evenings	55.5	43.5	54.6

Table 7. Number of deer harvested by resident bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Parameter	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Mean (\pm SE) deer harvested	(2,804) 0.32 \pm 0.01	(253) 0.33 \pm 0.04	(3,039) 0.32 \pm 0.01
Distribution of harvest among hunters	(2,804)	(253)	(3,039)
0 deer	73.5%	74.3%	73.6%
1 "	21.5	20.2	21.4
2 "	4.0	4.0	4.0
3 "	0.9	1.2	0.9
4 "	0.1	0.3	0.1

Table 8. Mean deer harvested in relation to number and type of permits held by resident bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Number and Type of Permits	Mean Deer Harvested
1 Paid either-sex	0.13 (1,614)
2 Paid either-sex	0.39 (325)
1 Paid antlerless-only	0.00 ^a (4)
1 Paid either-sex and 1 Paid antlerless-only	0.53 (647)
2 Paid either-sex and 1 Paid antlerless-only	1.13 (195)
1 Free landowner either-sex and 1 Free landowner antlerless-only	0.29 (217)
2 Free landowner either-sex and 2 Free landowner antlerless-only	0.28 ^a (18)
Combinations of paid and Free landowner	0.79 ^a (19)
Total	0.32 (3,039)

^aBased on small sample size.

Table 9. The frequency that opportunities to shoot at deer were passed up by resident bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Parameter	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Percentage of hunters who passed up ≥ 1 opportunities to shoot:			
	(2,796)	(252)	(3,031)
At bucks	45.3%	46.0%	45.2%
At does/fawns	66.5	69.0	66.6
At all types of deer	71.6	73.0	71.6
Frequency hunters passed up bucks			
	(1,266)	(116)	(1,376)
1 opportunity	29.1%	30.2%	29.4%
2 opportunities	27.2	28.4	27.1
3 "	14.5	6.9	14.0
4 "	9.2	10.3	9.3
5 "	5.0	5.2	5.0
6-10 "	10.7	12.1	10.9
≥ 11 "	4.3	6.9	4.3
Frequency hunters passed up does/fawns			
	(1,858)	(174)	(2,029)
1 opportunity	11.2%	16.1%	11.7%
2 opportunities	19.4	14.9	19.2
3 "	12.7	12.1	12.7
4 "	9.8	9.8	9.6
5 "	6.9	6.9	7.0
6-10 "	19.5	19.0	19.5
≥ 11 "	20.5	21.2	20.3

Table 10. Types of bows, arrows, and other equipment used by resident deer bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Type of Equipment	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Type of bow	(2,801)	(249)	(3,032)
Longbow	0.6%	1.2%	0.6%
Recurve	4.1	5.2	4.1
Compound	94.7	91.6	94.6
Crossbow	0.6	2.0	0.7
Mean pull (maximum poundage) of bow	(2,770) 66.1±0.2	(241) 65.8±1.0	(2,994) 66.1±0.2
Type of arrow	(2,797)	(248)	(3,027)
Wood	2.0%	3.6%	2.1%
Fiberglass	1.3	4.4	1.5
Aluminum	91.8	87.1	91.5
Carbon graphite	5.0	4.9	4.9
Other equipment usually used	(2,804)	(253)	(3,039)
Mechanical release	49.3%	48.2%	49.2%
Finger tab	16.7	17.4	16.7
Finger glove	24.2	20.6	24.0
Unlighted sight pins	71.9	66.0	71.5
Lighted sight pins	11.4	11.1	11.4
String peep sight	57.2	48.2	56.5
Overdraw system	17.9	16.6	17.6
String tracker	2.6	1.2	2.5
Retracting broadhead	4.0	6.7	4.3
Camouflage clothing	96.2	83.8	95.2
Rubber boots	76.5	70.8	76.0

Table 10 - continued.

Table 10. - Continued Page 2.

Portable tree stand	69.5	46.2	67.7
Permanent tree stand	45.9	68.0	47.5
Ground blind	19.2	25.3	19.6
Screw-in steps	41.2	27.3	40.1
Tie-on steps	8.8	4.7	8.5
Permanent steps	21.9	31.2	22.6
Rangefinder	6.2	4.3	6.0
Face paint	22.7	13.0	21.9
Face net	48.5	33.6	47.3
Deer call	58.7	47.0	57.8
Buck/deer lure	57.6	49.8	56.9
Human scent cover	52.9	39.1	51.8
Ultraviolet shield	14.4	6.7	13.7
Deer decoy	2.9	2.8	2.9

*7.0% were ≤ 50 lbs, 26.3% were 51-60 lbs, 46.7% were 61-70 lbs, and 20.0% were ≥ 71 lbs.

Table 11. Days afield by resident turkey bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Parameter	Mean or Percentage
Mean (\pm SE) days afield	(193) 17.8 \pm 1.3
Percentage of days:	
Exclusively for turkeys	10.7%
In conjunction with deer hunting	89.3
Mean (\pm SE) turkeys harvested	(193) 0.037 \pm 0.014
Distribution of harvest among hunters	(193)
0 turkey	96.4%
1 "	3.6

Table 12. Harvest of game species other than deer and turkey by resident bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Species	Harvested ≥ 1 Animals			Estimated Statewide Harvest
	Paid Permit Holders	Free Landowner Permit Holders	All Hunters	
	(2,804)	(253)	(3,039)	
Squirrels	9.1%	6.3%	8.8%	29,510
Rabbits	5.2	4.3	5.1	12,440
Coyote	4.1	3.6	4.0	6,790
Groundhog	1.8	1.6	1.8	5,790
Crow	0.3	0.4	0.3	3,100
Raccoon	1.4	1.6	1.4	2,230
Pheasant	0.9	0.0	0.8	2,040
Opossum	0.9	1.2	0.9	1,470
Red fox	0.8	0.8	0.8	870
Gray fox	0.4	0.0	0.4	330
All Species	13.7	9.9	13.3	64,570

Table 13. Attitudes of resident deer bowhunters toward archery deer hunting regulations in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Responses to the following questions:

*Do you agree or disagree with the regulation that requires Illinois bowhunters to check their deer into a check station within 48 hours?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,782)	(251)	(3,015)
Agree	80.8%	69.3%	79.8%
Disagree	9.9	17.5	10.6
No opinion	9.3	13.2	9.6

*Illinois' 1992-93 archery deer season opened on October 1 and ended on January 14. What is your opinion of these season dates?

	<u>Paid Permit Holders</u>		<u>Free Landowner Permit Holders</u>		<u>All Hunters</u>	
	<u>Oct.1</u>	<u>Jan.14</u>	<u>Oct.1</u>	<u>Jan.14</u>	<u>Oct.1</u>	<u>Jan.14</u>
	(2,771)	(2,898)	(252)	(243)	(3,005)	(2,925)
Too early	6.8%	23.5%	8.7%	19.8%	7.0%	23.1%
About right	79.4	65.5	75.8	61.3	79.1	65.2
Too late	12.3	7.6	10.7	12.3	12.1	8.0
No opinion	1.5	3.4	4.8	6.6	1.8	3.7

*Legal shooting times for Illinois' 1992-93 archery deer season were 1/2 hour before sunrise to 1/2 hour after sunset. What is your opinion of these times?

	<u>Paid Permit Holders</u>		<u>Free Landowner Permit Holders</u>		<u>All Hunters</u>	
	<u>1/2 Hour -Sunrise</u>	<u>1/2 Hour +Sunset</u>	<u>1/2 Hour -Sunrise</u>	<u>1/2 Hour +Sunset</u>	<u>1/2 Hour -Sunrise</u>	<u>1/2 Hour +Sunset</u>
	(2,774)	(2,742)	(251)	(248)	(3,007)	(2,972)
Too early	1.1%	10.8%	2.0%	10.5%	1.2%	10.7%
About right	93.1	83.9	90.4	80.2	92.8	83.6
Too late	5.0	4.4	5.2	6.9	5.0	4.7
No opinion	0.8	0.9	2.4	2.4	1.0	1.0

Table 13 - continued.

Table 13. Continued - Page 2.

*Do you feel that the Department of Conservation should be more restrictive, less restrictive, or make no changes in the current regulations for new archery hunting equipment (e.g., laser sights, electronic arrow tracking systems, etc.) in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,761)	(250)	(2,993)
More restrictive	17.4%	17.6%	17.4%
Less restrictive	24.5	32.8	25.2
No change	58.1	49.6	57.4

*Do you agree or disagree with the idea of legalizing crossbows for deer hunting in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
For entire archery season	(2,522)	(230)	(2,734)
Agree	23.3%	34.8%	24.2%
Disagree	71.3	55.7	70.1
No opinion	5.4	9.5	5.7
For 1 month of archery season	(2,187)	(170)	(2,343)
Agree	20.7%	22.9%	20.9%
Disagree	71.5	63.5	70.9
No opinion	7.8	13.6	8.2
For 1 week of archery season	(2,152)	(177)	(2,315)
Agree	24.5%	27.1%	24.7%
Disagree	66.0	57.6	65.4
No opinion	9.5	15.3	9.9
For firearms season only	(2,151)	(169)	(2,306)
Agree	25.8%	24.3%	25.7%
Disagree	62.9	63.3	63.0
No opinion	11.3	12.4	11.3

Table 14. Knowledge of selected hunting regulations by resident deer bow hunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Responses to the following questions:

*In your opinion, is it legal or illegal for hunters to obtain an antlerless-only archery deer permit in addition to an either-sex archery permit in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,775)	(251)	(3,008)
Legal ^a	85.5%	87.3%	85.7%
Illegal	3.9	4.0	3.9
Don't know	10.6	8.7	10.4

*In your opinion, is it legal or illegal for bows to be unlocked (or not in cases) when hunters are in the field before and after legal shooting times in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,774)	(252)	(3,008)
Legal	39.5%	44.4%	40.0%
Illegal ^a	55.5	49.2	54.9
Don't know	5.0	6.4	5.1

*In your opinion, is it legal or illegal for bowhunters to sell the antlers and hides from deer they harvest in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,787)	(252)	(3,021)
Legal ^a	36.8%	39.3%	37.1%
Illegal	44.9	47.2	45.1
Don't know	18.3	13.5	17.8

*In your opinion, is it legal or illegal for individuals to pick up shed deer antlers in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,792)	(252)	(3,026)
Legal ^a	85.5%	85.3%	85.5%
Illegal	5.2	5.2	5.2
Don't know	9.3	9.5	9.3

^aThe correct interpretation.

Table 15. Opinions of resident deer bowhunters as to the density of bowhunters in Illinois Deer Management Regions during the 1992-93 season. Sample sizes are in parentheses.

	Deer Management Region ^a								State-wide	
	1	2	3	4	5	6	7	8		NE
Responses to the following question:										
*What is your opinion of the number of hunters that were in the area where you archery deer hunted most in Illinois during the 1992-93 season?										
Too few	(315)	(461)	(365)	(294)	(189)	(258)	(640)	(324)	(135)	(3,005)
	9.5%	5.2%	5.8%	4.8%	3.2%	5.4%	4.7%	6.5%	5.9%	5.7%
About right	74.6	72.9	76.4	77.9	66.1	67.4	74.8	80.2	71.1	74.2
Too many	15.9	21.9	17.8	17.3	30.7	27.2	20.5	13.3	23.0	20.1
Hunters per 100 acres of forest ^b	3.76	4.92	1.72	1.28	3.90	1.91	1.72	1.05	4.91	2.00

^aSee fig. 5.

^bFrom Table 5.

Table 16. Opinions of resident deer bowhunters towards Illinois Department of Conservation deer management policies during the 1992-93 season. Sample sizes are in parentheses.

Responses to the following questions:

*How many deer would you be willing to harvest with bow and arrow in 1 year, assuming the permits cost \$15 each?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,778)	(242)	(3,002)
1	11.6%	24.4%	12.5%
2	46.9	46.3	46.9
3	23.1	13.6	22.4
4	11.0	10.3	10.9
5	4.3	2.9	4.2
6-10	3.1	2.5	3.1

*Do you agree or disagree with the Department of Conservation's policy of issuing *Nuisance Deer Removal Permits* to farmers and landowners with deer damage problems?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,782)	(251)	(3,015)
Agree	56.9%	73.7%	58.2%
Disagree	35.2	21.9	34.2
No opinion	7.9	4.4	7.6

*Are you supportive or unsupportive of increasing the fees for archery deer and turkey permits for the purpose of financing bowhunter education programs in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,786)	(251)	(3,019)
Supportive	15.2%	19.9%	15.4%
Unsupportive	69.4	59.8	68.7
Undecided	15.4	20.3	15.9

Table 16 - continued.

Table 16. Continued - Page 2.

*Overall, how do you rate the Department of Conservation's deer management program in Illinois?

	<u>Paid Permit Holders</u>	<u>Free Landowner Permit Holders</u>	<u>All Hunters</u>
	(2,782)	(250)	(3,014)
Excellent	21.0%	15.6%	20.4%
Good	52.9	50.0	52.7
Fair	17.8	23.6	18.3
Poor	4.7	6.4	4.9
No opinion	3.6	4.4	3.7

Table 17. Some personal characteristics of resident deer bowhunters in Illinois during the 1992-93 season. Sample sizes are in parentheses.

Characteristic	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Residence	(2,789)	(253)	(3,024)
Rural	33.4%	74.3%	36.6%
Small town	46.3	19.4	41.1
Urban	20.3	6.3	19.3
Sex	(2,795)	(253)	(3,030)
Male	97.9%	88.1%	97.1%
Female	2.1	11.9	2.9
Mean (\pm SE) age	(2,793) 35.5 \pm 0.2	(250) 39.1 \pm 1.0	(3,025) 35.8 \pm 0.2 ^a
Membership in organizations	(2,804)	(253)	(3,039)
Illinois Bowhunters Society	5.3%	1.6%	5.1%
Illinois Archery Association	0.7	1.2	0.7
Professional Bowhunter Society	0.4	0.0	0.4
National Archery Association	0.8	0.8	0.8
National Field Archery Association	0.8	0.4	0.8
Whitetails Unlimited, Inc.	4.1	2.4	3.9
National Wild Turkey Federation	3.1	5.1	3.2
Local Bowhunting or Archery Club	13.5	5.1	12.8

^a3.4% were 11-15 years of age, 7.2% were 16-20 years, 24.4% were 21-30 years, 32.6% were 31-40 years, 20.3% were 41-50 years, 8.2% were 51-60 years, 1.4% were 61-64 years, and 1.5% were 65-79 years.

Table 18. Some bowhunting characteristics of resident deer bowhunters in Illinois in 1992-93. Sample sizes are in parentheses.

Characteristic	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
Years Archery deer hunted	(2,767)	(252)	(3,001)
Mean (\pm SE)	7.0 \pm 0.1	5.5 \pm 0.4	6.9 \pm 0.1
Distribution			
1 year	13.8%	16.7%	14.0%
2-3 years	25.8	34.9	26.6
4-5 "	18.1	19.8	18.2
6-10 "	21.3	16.7	20.8
11-20 "	17.0	9.5	16.4
\geq 21 "	4.0	2.4	4.0
Deer harvested during lifetime	(2,804)	(253)	(3,039)
Mean (\pm SE)	2.3 \pm 0.1	1.8 \pm 0.2	2.3 \pm 0.1
Distribution			
0	45.4%	53.8%	46.2%
1	17.2	14.6	17.0
2	10.2	12.6	10.4
3	5.9	3.6	5.7
4	4.4	4.3	4.4
5	3.4	2.8	3.3
\geq 6	13.5	8.3	13.0
Miles driven (round trip) per day	(2,652)	(253)	(2,797)
Mean (\pm SE)	39.4 \pm 1.3	21.8 \pm 3.3	38.5 \pm 1.2
Distribution			
\leq 5 miles	18.9%	48.2%	20.5%
6-10 miles	17.8	18.3	17.7
11-20 "	21.3	13.4	20.9
21-30 "	10.8	6.7	10.6
31-40 "	6.8	3.0	6.6
\geq 41 "	24.4	10.4	23.7
Paid to archery deer hunt	(2,789)	(253)	(3,024)
	5.1%	0.4%	4.7%

Table 18 - continued.

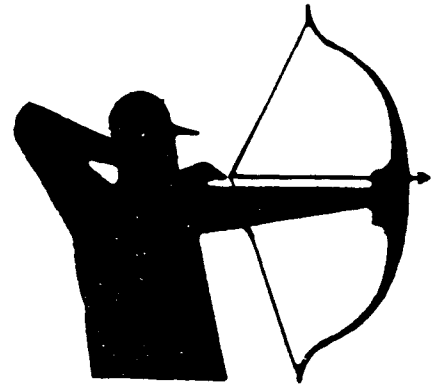
Table 18. Continued - Page 2.

Archery deer hunted during muzzleloading season	(2,770) 17.6%	(252) 12.3%	(3,004) 17.1%
Participated in 3-D archery event	(2,787) 24.9%	(253) 14.6%	(3,022) 24.0%
Practiced with broadheads	(2,788) 77.5%	(252) 68.7%	(3,022) 76.8%
Took hunter education class	(2,789) 41.6%	(251) 40.6%	(3,023) 41.6%
Type of Class	(1,165)	(101)	(1,261)
Ill. Dept. Conservation	70.4%	73.3%	70.7%
Other in Illinois	18.4	20.8	18.5
In another state	11.2	5.9	10.8
Took bowhunter education class	(2,767) 4.4%	(250) 2.4%	(3,000) 4.3%

Table 19. Expenditures by resident deer bowhunters in Illinois during the 1992-93 seasons. Sample sizes are in parentheses.

Expenditure	Paid Permit Holders	Free Landowner Permit Holders	All Hunters
	(2,790)	(251)	(3,023)
<\$100	15.4%	37.8%	17.3%
\$101-\$250	29.1	27.5	28.9
\$251-\$500	29.3	21.5	28.7
\$501-\$1,000	20.3	10.8	19.5
\$1,001-\$2,000	4.9	1.2	4.6
>\$2,000	1.0	1.2	1.0
Mean	\$424	\$283	\$412
Total	\$32.1 M	\$1.9 M	\$34.0 M

1992-93 ILLINOIS BOWHUNTER SURVEY



INSTRUCTIONS

To properly manage the Illinois white-tailed deer population, the Department of Conservation needs information about archery hunters, their hunting experiences, and their opinions of selected issues.

Please answer all questions beginning with PART A (PERMITS) below.

Your responses are strictly confidential and will never be associated with your name. Since you are part of a small, randomly selected group, your participation and your opinions are very important.

When completed, insert your questionnaire into the self-addressed envelope and mail. POSTAGE IS PREPAID.

YOUR COMMENTS ARE WELCOME BUT PLEASE WRITE THEM ON A SEPARATE SHEET OF PAPER TO RECEIVE PROPER ATTENTION.

PART A: PERMITS

1. How many archery (bow and arrow) permits did you have for hunting deer in Illinois during the 1992-93 season? (circle all numbers that apply)

Paid either-sex permits. 12
Paid antlerless-only permits 12
Free landowner either-sex permits. 12
Free landowner antlerless-only permits . . 12

2. If you purchased an antlerless-only archery deer permit for the 1992 season, when did you make this purchase? (circle number for appropriate answer)

Prior to harvesting your first deer.....1
After harvesting your first deer.....2

Figure 1. The questionnaire used for the 1992-93 Illinois Bowhunter Survey.
Figure 1 - continued.

3. Did you have an archery permit for hunting turkeys in Illinois during the fall-winter 1992-93 season? (circle number for appropriate answer) Yes.....1 No.....2
4. Did you archery hunt for deer and/or turkeys in Illinois during the fall-winter 1992-93 season? (circle number for appropriate answer for deer and for turkeys)
- | | <u>Yes</u> | <u>No</u> |
|-------------------|-------------|-----------|
| Deer | 1 | 2 |
| Turkeys | 1 | 2 |

PART B: DEER HUNTING

1. On how many different days did you archery hunt for deer in Illinois during the 1992-93 season?

Days from October 1 to October 15 _____
 Days from October 16 to October 31. _____
 Days from November 1 to November 15 _____
 Days from November 16 to November 30. _____
 Days from December 1 to December 15 _____
 Days from December 16 to December 31. _____
 Days from January 1 to January 14 _____

2. On average, how many miles did you travel by vehicle per day (round trip) for your archery deer hunting activities in Illinois during the 1992-93 season? _____ miles

3. Did you archery hunt for deer mostly in the morning, mostly in the evening, or split your hunting time about evenly between mornings and evenings? (circle number for appropriate answer)

Mostly in morning 1
 Mostly in evening 2
 About evenly between mornings and evenings . . . 3

4. In which county, or counties, did you archery hunt for deer in Illinois during the 1992-93 season?

County hunted most _____
 Second most _____
 Third most. _____

5. Did you archery hunt for deer primarily on private land, primarily on public land, or split your time about evenly between private land and public land? (circle number for appropriate answer)

Primarily private land 1
 Primarily public land. 2
 About evenly between private and public land . . . 3

6. How many deer did you retrieve and check at a check station in Illinois during the 1992-93 archery season? . . _____
7. Did you pass up any opportunities to shoot at deer in Illinois during the 1992-93 archery season? (circle number for appropriate answer)
 Yes.....1 No.....2
- 7a. If YES, how many at antlered bucks? _____
 7b. how many at does or fawns? _____
8. What type of bow did you use most for deer hunting in Illinois during the 1992-93 season? (circle number for appropriate answer)
 Longbow....1 Recurve...2 Compound...3 Other _____
9. What was the pull (maximum poundage) of this bow? _____ lbs
10. What type of arrow shaft did you use most for deer hunting in Illinois during the 1992-93 season? (circle number for appropriate answer)
 Wood.....1 Fiberglass.....2
 Aluminum...3 Carbon graphite...4
11. Which of the following equipment did you usually use when archery hunting for deer in Illinois during the 1992-93 season. (check [✓] the items you usually used)
- | | |
|--|---|
| a. Mechanical release . . . <input type="checkbox"/> | n. Ground blind. <input type="checkbox"/> |
| b. Finger tab. <input type="checkbox"/> | o. Screw-in steps. <input type="checkbox"/> |
| c. Finger glove <input type="checkbox"/> | p. Tie-on steps. <input type="checkbox"/> |
| d. Unlighted sight pins . <input type="checkbox"/> | q. Permanent steps <input type="checkbox"/> |
| e. Lighted sight pins . . <input type="checkbox"/> | r. Rangefinder <input type="checkbox"/> |
| f. String peep sight. . . <input type="checkbox"/> | s. Face paint. <input type="checkbox"/> |
| g. Overdraw system. . . . <input type="checkbox"/> | t. Face net. <input type="checkbox"/> |
| h. String tracker <input type="checkbox"/> | u. Deer call <input type="checkbox"/> |
| i. Retracting broadhead . <input type="checkbox"/> | v. Buck/deer lure. <input type="checkbox"/> |
| j. Camouflage clothing . <input type="checkbox"/> | w. Human scent cover . . . <input type="checkbox"/> |
| k. Rubber boots <input type="checkbox"/> | x. Ultraviolet shield. . . . <input type="checkbox"/> |
| l. Portable tree stand. . <input type="checkbox"/> | y. Deer decoy. <input type="checkbox"/> |
| m. Permanent tree stand . <input type="checkbox"/> | |
12. Did you archery deer hunt during the 1992 muzzleloader deer season in Illinois? (circle number for appropriate answer)
 Yes.....1 No.....2
13. Did you hunt deer with a firearm in Illinois during the 1992-93 firearms season? (circle number for appropriate answer)
 Yes.....1 No.....2

Figure 1. Continued - page 3.

PART C: HUNTING TURKEYS AND OTHER SPECIES

1. If you had an archery turkey permit, on how many different days did you archery hunt for turkeys in Illinois during the fall-winter 1992-93 season?

Days spent hunting exclusively for turkeys. . . . _____
 Days spent hunting both turkeys and deer. _____

2. How many turkeys did you retrieve and report to the Department of Conservation during Illinois' fall-winter 1992-93 archery season? _____

3. What other species of game animals did you harvest with bow and arrow in Illinois from February 1992 to January 1993?

<u>Species</u>	<u>Number</u>	<u>Species</u>	<u>Number</u>
Rabbits	_____	Coyotes.	_____
Squirrels	_____	Opossums	_____
Groundhogs. . . .	_____	Pheasants.	_____
Raccoons.	_____	Crows.	_____
Red fox	_____	Others _____	_____
Gray fox.	_____		_____

4. Did you archery hunt in a state other than Illinois during the 1992-93 season? (circle number for appropriate answer)

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

If YES, in which state(s) and what species did you hunt?

State _____ Species _____, _____
 State _____ Species _____, _____
 State _____ Species _____, _____

5. Did you go bowfishing in Illinois in 1992?

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

PART D: YOUR OPINIONS

1. What is your opinion of the number of hunters that were in the area where you archery deer hunted most in Illinois during the 1992-93 season? (circle number for appropriate answer)

Too few..1 About right...2 Too many...3

2. Do you agree or disagree with the regulation that requires Illinois bowhunters to check their deer into a check station within 48 hours? (circle number for appropriate answer)

Agree...1 Disagree...2 No opinion...3

3. Illinois' 1992-93 archery deer season opened on October 1 and ended on January 14. What is your opinion of these season dates? (circle number for appropriate answer for each date)

	<u>Too Early</u>	<u>About Right</u>	<u>Too Late</u>	<u>No Opinion</u>
October 1	1	2	3	4
January 14	1	2	3	4

4. Legal shooting times for Illinois' 1992-93 archery deer season were 1/2 hour before sunrise to 1/2 hour after sunset. What is your opinion of these times? (circle number for appropriate answer for each time)

	<u>Too Early</u>	<u>About Right</u>	<u>Too Late</u>	<u>No Opinion</u>
1/2 before sunrise	1	2	3	4
1/2 after sunset	1	2	3	4

5. How many deer would you be willing to harvest with bow and arrow in 1 year, assuming the permits cost \$15 each? (circle number for appropriate answer)

1 2 3 4 5 6 7 8 9 10

6. Do you feel that the Department of Conservation should be more restrictive, less restrictive, or make no changes in the current regulations for new archery hunting equipment (e.g., laser sights, electronic arrow tracking systems, etc.) in Illinois? (circle number for appropriate answer)

More restrictive...1 Less restrictive...2 No changes...3

7. Do you agree or disagree with the idea of legalizing crossbows for deer hunting in Illinois? (circle number for appropriate answer for each category)

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
For entire archery season	1	2	3
For 1 month of archery season	1	2	3
For 1 week of archery season	1	2	3
For firearms season only	1	2	3

8. In your opinion, is it legal or illegal for hunters to obtain an antlerless-only archery deer permit in addition to an either-sex archery permit in Illinois? (circle number for appropriate answer)

Legal.....1 Illegal.....2 Don't know.....3

9. In your opinion, is it legal or illegal for bows to be unlocked (or not in cases) when hunters are in the field before and after legal shooting times in Illinois? (circle number for appropriate answer)

Legal.....1 Illegal.....2 Don't know.....3

10. In your opinion, is it legal or illegal for bowhunters to sell the antlers and hides from deer they harvest in Illinois? (circle number for appropriate answer)
- Legal.....1 Illegal.....2 Don't know.....3
11. In your opinion, is it legal or illegal for individuals to pick up shed deer antlers in Illinois? (circle number for appropriate answer)
- Legal.....1 Illegal.....2 Don't know.....3
12. Do you agree or disagree with the Department of Conservation's policy of issuing *Nuisance Deer Removal Permits* to farmers and landowners with deer damage problems? (circle number for appropriate answer)
- Agree.....1 Disagree.....2 No opinion.....3
13. Are you supportive or unsupportive of increasing the fees for archery deer and turkey permits for the purpose of financing bowhunter education programs in Illinois? (circle number for appropriate answer)
- Supportive...1 Unsupportive...2 Undecided....3
14. Overall, how do you rate the Department of Conservation's deer management program in Illinois? (circle number for appropriate answer)
- Excellent.....1 Good.....2 Fair.....3
 Poor.....4 No opinion...5

PART E: BACKGROUND INFORMATION

1. How old were you on your last birthday? . . . _____years
2. Are you (circle one): Male.....1 Female.....2
3. In what type of community do you now live? (circle number)
- Rural (country, farm, town less than 500 residents) . . . 1
 Small town (500 to 20,000 residents). 2
 Urban (over 20,000 residents, suburban, city) 3
4. How many years have you archery deer hunted in Illinois? _____years
5. How many deer have you successfully harvested (killed and retrieved) in Illinois with bow and arrow during your lifetime? _____
6. Did you pay someone for the right to archery deer hunt on their land in Illinois during the 1992-93 season?
- Yes.....1 No.....2

Figure 1. Continued - page 6.

7. About how much money do you think you spent for archery deer hunting in Illinois during the 1992-93 season? Include license and permit fees, travel and gasoline, lodging, food and drink, cost of leases, and bows, arrows, clothing, boots, tree stands, steps, and any other equipment purchased for the 1992-93 season. (circle number for appropriate answer)
- | | |
|-----------------------|------------------------|
| Less than \$100.....1 | \$501 - \$1,000.....4 |
| \$101 - \$250.....2 | \$1,001 - \$2,000....5 |
| \$251 - \$500.....3 | More than \$2,000...6 |
8. Did you participate in 1 or more target or 3-D archery events in 1992? (circle number for appropriate answer)
- Yes.....1 No.....2
9. Did you target practice with broadheads on your arrows prior to archery deer hunting in Illinois during the 1992-93 season? (circle number for appropriate answer)
- Yes.....1 No.....2
10. Have you ever taken a hunter education safety class? (circle number for appropriate answer)
- Yes.....1 No.....2
- 10a. If YES, what type of class? (circle number for appropriate answer)
- | |
|---|
| Illinois Department of Conservation.....1 |
| Sponsored by other agency in Illinois...2 |
| Taken in another state.....3 |
11. Have you ever taken an organized bowhunter education class such as the International Bowhunter Education Class? (circle number for appropriate answer)
- Yes.....1 No.....2
12. Are you a member of any of the following organizations? (check [✓] the organizations that apply to you)
- a. Illinois Bowhunters Society.
 - b. Illinois Archery Association
 - c. Professional Bowhunter Society
 - d. National Archery Association
 - e. National Field Archery Association .
 - f. Whitetails Unlimited, Inc.
 - g. National Wild Turkey Federation. . .
 - h. Local Bowhunting or Archery Club . .

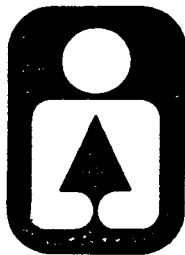
Thank you for your cooperation

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 about your bowhunting activities during the recent hunting season.

The popularity of bowhunting in Illinois has increased dramatically in the last 21 years. In 1970, 12,828 archery deer permits were issued and 590 deer were harvested. During the 1991 season, 109,015 permits were issued which resulted in a harvest of 18,155 deer.

With expanding deer populations, increasing numbers of bowhunters and increasing hunting opportunities, your reply is extremely important, even if you did not bowhunt this past season or you were unsuccessful. Only a limited number of bowhunters can be contacted, therefore, your response is urgently needed.

The information you and others provide will be used to better manage the Illinois deer herd. Our goals are to safeguard deer populations, to grant bowhunting opportunities to the maximum number of license holders, and to maintain an attractive level of hunter success.

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

Drop completed questionnaire in the mail. Postage is prepaid.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey M. Ver Steeg".

Jeffrey M. Ver Steeg
Chief, Wildlife Resources

JMV:WLA
Enclosure
B1

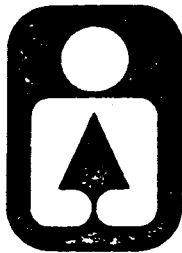
Figure 2. The letter that accompanied the first mailing of the questionnaire.

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:

Recently, we mailed you a bowhunter 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.

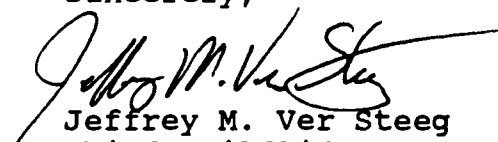
We are providing another questionnaire which we hope you will complete and return to us. If you have already returned the first questionnaire, disregard this one. The information supplied by you and other bowhunters being sampled will be of great value to the Conservation Department in better directing the management of our white-tailed deer resources.

Please fill out the questionnaire completely and return it even if you did not bowhunt, or were not successful, during the recent hunting season.

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

Thank you.

Sincerely,



Jeffrey M. Ver Steeg
Chief, Wildlife Resources

JMV:WLA
Enclosure
B2

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

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:

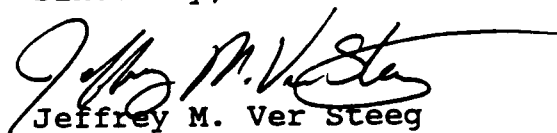
This letter is to remind you that we still would like to receive a report of your bowhunting activities for the past season. We don't like to keep bothering you, but this information is very important which only you can supply.

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 destroy this one. Your response is needed--even though you did not bowhunt or you had an unsuccessful season.

Postage is prepaid for returning the questionnaire. Just fill it out and drop in the mail. Please help us complete this survey by sending your questionnaire now. Your prompt attention will be greatly appreciated.

Thank you.

Sincerely,



Jeffrey M. Ver Steeg
Chief, Wildlife Resources

JMV:WLA
Enclosure
B3

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

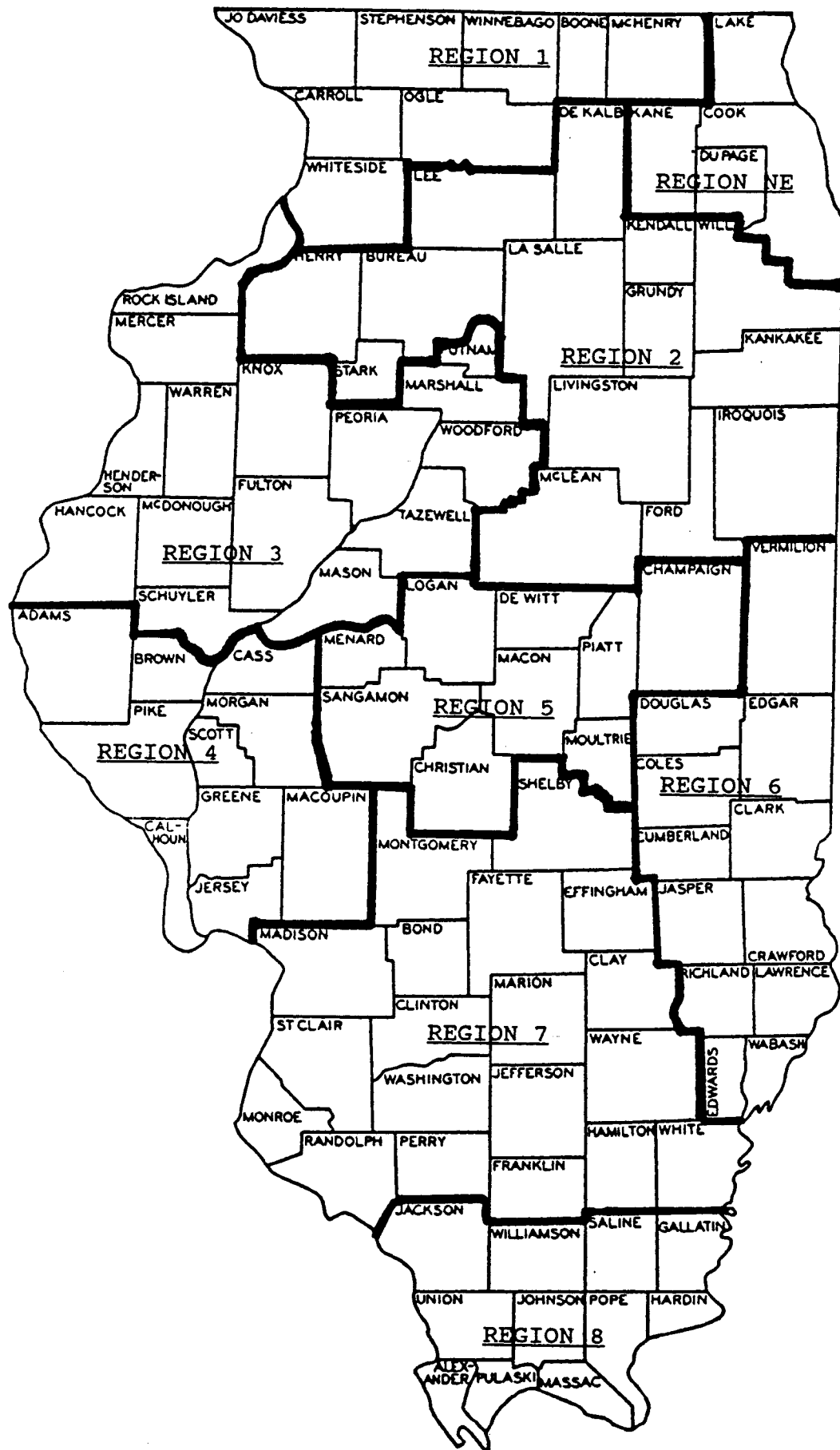


Figure 5. Illinois deer management regions.

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