SOME OF THE CHARACTERISTICS AND ATTITUDES OF MICHIGAN DEER HUNTING VIOLATORS

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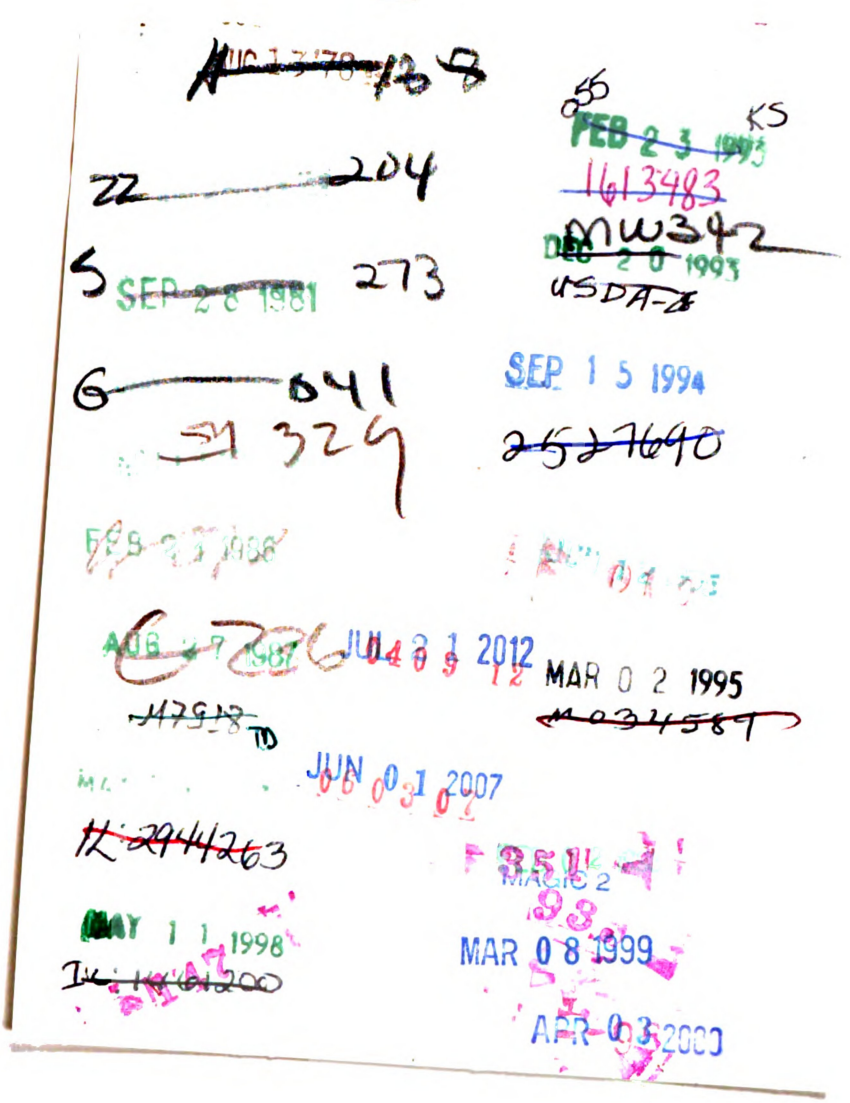
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ABSTRACT

SOME OF THE CHARACTERISTICS AND ATTITUDES OF MICHIGAN DEER HUNTING VIOLATORS

By

James Alan Kesel

In this study the opinions, attitudes, and characteristics of Michigan deer hunting violators were compared with legal deer hunting sportsmen.

Data was gathered through the use of a questionnaire sent to a systematic sample of convicted deer hunting violators and legally licensed Michigan deer hunters. A return of 52 percent of the total delivered questionnaires was received. Violators responded differently for 21 of the 36 questions that comprised the questionnaire.

Michigan deer hunting violators were characterized by being younger (20-29 years of age) and more likely to live in the northern lower or upper peninsula, to hold an unskilled job, and earn less annual income than the sportsmen. The violator is also more likely than a sportsmen to spend more time deer hunting, be more in favor of antlerless deer hunting, to own older models of automobiles, and less likely to own a snowmobile. He is more likely than sportsmen to know the name of his local conservation

officer, not to like that officer, to feel there should be fewer officers in the field, to be contacted much more often by conservation officers, and to feel he is contacted because of violator activity or because someone had informed on him. Violators as opposed to sportsmen also feel that game laws are well enforced, that there are too many game laws, no opposition towards those who break game laws, that they would not report an observed violation, that poaching is not detrimental to the deer herd, that only a small amount of deer violating is taking place near where they live or hunt, and that the cause of most violations comes from the want or need for meat.

Sportsmen and violators both exhibited some interesting similarities in attitudes and characteristics. For example, violators and sportsmen expressed many of the same types of feelings towards the operational characteristics of violators. Both groups felt female deer are more often to become the targets of violator's shots than males. All respondents agreed that the highest level of violation activity took place at night during the first 15 days of November, just before the opening of the firearm deer season. Respondents feel that a ~~deer~~ rifle is the most common weapon used in violations. Three-fourths of all respondents felt DNR personnel were doing a good job and earning their pay, but 75 percent of all violators and sportsmen were against the DNR policy of antlerless deer hunting. Both violators and sportsmen felt that seven violators out of every one

hundred are caught and prosecuted by DNR law enforcement officers.

Results of this violator and sportsmen survey suggest several hypotheses. If tested further, they may yield useful distinctions between violators and non-violators of deer hunting laws and give some interesting answers to the question: The violator, who is he, why is he? These hypotheses are:

1. The highest number of illegal deer kills take place during the fifteen days preceding the opening of the Michigan firearm deer season;

2. The probability of being a deer hunting violator is correlated with the region of the state in which an individual lives;

3. The probability of being contacted by a conservation officer is much greater for violators than it is for legally hunting sportsmen;

4. The probability that the target of violators is eight times more likely to be a female deer than a male;

5. The probability that most violators and sportsmen feel that the sport of deer hunting is over-regulated by too many of what they feel are unimportant laws.

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INTRODUCTION

One of the goals of Michigan's deer program is to maintain high animal population levels which will provide the maximum recreation for the general public. Only through a program of sound wildlife management will these goals be achieved. Laws that regulate the annual deer harvest are an important part of any management program. Because deer law violators are a serious problem, there is a real need to understand the differences between legal and illegal deer hunters. Attitudes and characteristics of the people involved in the taking of an illegal deer must first be determined before adequate programs are designed to reduce the number of deer violations.

Cain (1960) has recognized the need for research into the user-orientated studies.

> In successful business ventures, marketing study is as important as product research and development. Could this also be the case in various non-business fields? In wildlife management--in fact, in the entire field of public natural-resource management--it is in my opinion that more attention devoted to the customer would ease many a difficult situation and speed the application of science in practice.

> Man is more complex than a fish or deer. It is more difficult to make the human behavioral sciences scientific and the results more predictable than it is to examine the ethology of non-humans, but a strong effort in that direction should help wildlife managers and others to diagnose their problems and approach their solutions.

W. Winston Mair (1960), in his critique of the 25th North American Wildlife Conference, had this to say:

> I am disturbed too at the apparent complete lack of research into the social and cultural aspects of the wildlife conservation field. We are spending significant sums of money on wildlife now and plan to spend much more in the future, particularly with respect to the allied field of recreation. But there has been at this conference no mention of research into the mores of our people, their notivation and their real needs.

As wildlife managers have become more aware of the importance of the user, many new studies have been conducted. Sportsmen have been surveyed many times attesting to the widespread interest in their attitudes and characteristics (Peterle, 1967; Palmer, 1967; Bevins, 1968; and U.S., 1972).

The technique of questionnaire surveying has also proved useful in determining the characteristics and attitudes of natural resource law breakers. In New York a survey was conducted in order to compare the characteristics of violators and non-violators of deer hunting laws (Shafer et al., 1968). Although some significant differences were noted no general differences were found and researchers have concluded that additional research was needed. Vilkitis (1968) surveyed big game violators and sportsmen

in Idaho as to their personal character and attitudes towards that state's laws and law breakers. It was concluded that in general there were few or no significant differences between groups.

In both studies researchers felt that knowing the characteristics and attitudes of these resource users could lead to the development and implementation of an effective program of information and education that would be designed to reduce the number of big game violations.

In Michigan, as of yet, no similar studies have been conducted. The violators and sportsmen of this state may in fact be different in character and attitude than those of New York and Idaho. The primary objective of this study is to ascertain and compare some of the attitudes and characteristics of Michigan's deer hunting sportsmen with those of illegal deer hunting violators.

METHODS

Questionnaires were mailed to 500 convicted deer hunting violators and to an equal number of legal firearm deer hunters. Violators were individuals that had been convicted of either illegally possessing a deer or of attempting to shine and shoot a deer after sunset. Names and addresses of violators were selected according to violation type from 1971 and 1972 Department of Natural Resources (DNR) prosecution reports. It is assumed that this sample correctly represents a fair cross section of Michigan's deer hunting violators. No distinction was made between individuals that were arrested during the deer season and those apprehended during the non-season. Names of legal hunters (sportsmen) selected from 1973 firearm deer hunting license files were drawn systematically with every 100th name selected. It was assumed that there were no unconvicted violators among the sportsmen sampled.

Several steps were involved in the preparation of the final questionnaire. A literature review was conducted and upon completion a list of possible questions was compiled. Questionnaire rough drafts were submitted to

graduate thesis committee members, DNR statistics and survey section, and to the research section of the DNR law enforcement division for review.

A pre-test of the questionnaire was conducted using 100 sportsmen license holders who had previously answered a DNR fishing survey. The objectives of the pre-test were: (1) to determine if individual question formats were clear and easy to understand; (2) to test the ease in answering questions; (3) to determine if the proposed cover letter was an acceptable explanation of the questionnaire's purpose. Ninety-one percent of the pre-test questionnaires were returned. After analysis, changes were made to meet pre-test and questionnaire objectives.

Whenever possible respondents were simply asked to check appropriate boxes. However, several questions could best be answered if respondents were not influenced by several predetermined alternatives. These were designed as open-ended questions.

Cover letters and questionnaires were similar for both sportsmen and violators; green questionnaires were sent to convicted violators while white ones were sent to sportsmen. The questions and their order of presentation were identical for both groups (Appendix A).

The questionnaire was divided into four sections with section one dealing with general recreational characteristics and attitudes. The second and third sections were concerned with the attitudes towards the Department of

Natural Resources and its policies on wildlife law enforcement in an effort to gather additional information on the characteristics of violators and illegal hunting activities. Section four contained personal and general background questions to obtain a profile of the respondents' characteristics.

A cover letter was used to introduce the questionnaire. It was printed on Michigan State University stationery in an effort to give the survey added prestige and thereby elicit a higher level of response. An attempt to impress upon the respondent the importance of his opinion and of returning the completed questionnaire (Appendix B), was made.

RESULTS

One thousand questionnaires were mailed to violators and sportsmen on May 1, 1974. One hundred fifty nine questionnaires (136 violators and 23 sportsmen) were returned as undeliverable because of incomplete addresses. A follow-up letter, reminding respondents to fill out and return the questionnaire, was mailed to non-respondents two weeks after the original mailing on May 13, 1974. Of the 831 violators and sportsmen who received questionnaires, 435 (52%) responded, 178 (20.2%) were violators and 257 (31.8%) were sportsmen. Shafer et al.(1972) in a similar study received a 59 percent return. Vilkitis (1968) received a 51.5 percent return in a study on violators in Idaho. The 52 percent total return in this violator-non-violator study seems to be comparable to that of similar studies and should be considered when interpreting the data as to similarities and differences.

Questionnaire responses were coded and then transferred to computer keypunch cards (Appendix C). The data was analyzed by the University of Michigan MIDAS system of pre-designed computer programs. A Chi-Square analysis

was used to determine whether response patterns of sportsmen and violators were significantly different for categorical questions.

Students T-test was used on questions which had continually distributed answer data to determine if there are any significant differences in open-end response patterns between violators and sportsmen. All tests for Chi-Square and students T-test were made at the 95 percent level (alpha = 0.05).

Personal and Family Characteristics

The following are the results of responses from the fourth section of the questionnaire which was designed to gather information about violators and sportsmens' characteristics.

Occupation

Questionnaire responses indicate that there are significant differences in the occupations held by sportsmen and violators. Sportsmen (17.1%) hold more professional and management positions than violators (4.3%). Conversely, violators (21.9%) appear to hold more jobs in labor and transportation than do sportsmen (10.6%). Unemployment was about the same for all respondents, averaging about 7.2 percent (Table 1).

TABLE 1.--Occupations of all Respondents.

Occupation	Violators (%)	Sportsmen (%)
Professional or technical	3.6	11.5
Managers or administrators	.7	5.8
Sales	7.3	6.7
Clerical	1.5	1.9
Craftsmen or foremen	20.4	20.2
Manufacturing	14.6	16.3
Transportation	9.5	5.8
Labor	12.4	4.8
Farmer	5.8	5.3
Services	13.1	11.1
Construction	4.4	2.9
Unemployed, students or other	6.6	7.7

90 respondents did not answer.
Chi-Square = 20.682, D.F. = 11, P > .0368

Family Income

Three hundred ninety eight of the 435 questionnaire respondents answered the question concerning family income. Sportsmen earned considerably more money than did violators. Seventy-nine percent of all respondents had incomes of $8,000.00 or more. In contrast, only 65 percent of the violators earned above this amount while 88.3 percent of the sportsmen were earning at or above $8,000.00 (Table 2).

TABLE 2.--The Distribution of Respondents Among Income Classes in 1974.

Income Class	Violators (%)	Sportsmen (%)
Under $3,000	4.2	.9
$3,000-$5,999	15.5	4.8
$6,000-$7,999	13.7	6.1
$8,000-$9,999	9.5	16.5
$10,000-$14,999	36.3	37.0
$15,000-$24,999	15.5	28.3
$25,000 and over	5.4	6.5
Total	100.0	100.0

37 respondents did not answer
Chi-Square = 33.321, D.F. = 6, P > .0001

Education

Respondents were asked to check the highest grade of education they had completed. Questionnaire data indicates that there is no significant difference in the level of education achieved between sportsmen and violators. Seventy-two percent of all respondents completed high school, with 11 percent having four years or more of college (Figure 1).

Marital Status and Number of Dependents

Four hundred and thirty of the 435 respondents indicated their present marital status. No significant differences were noted between violators and sportsmen,

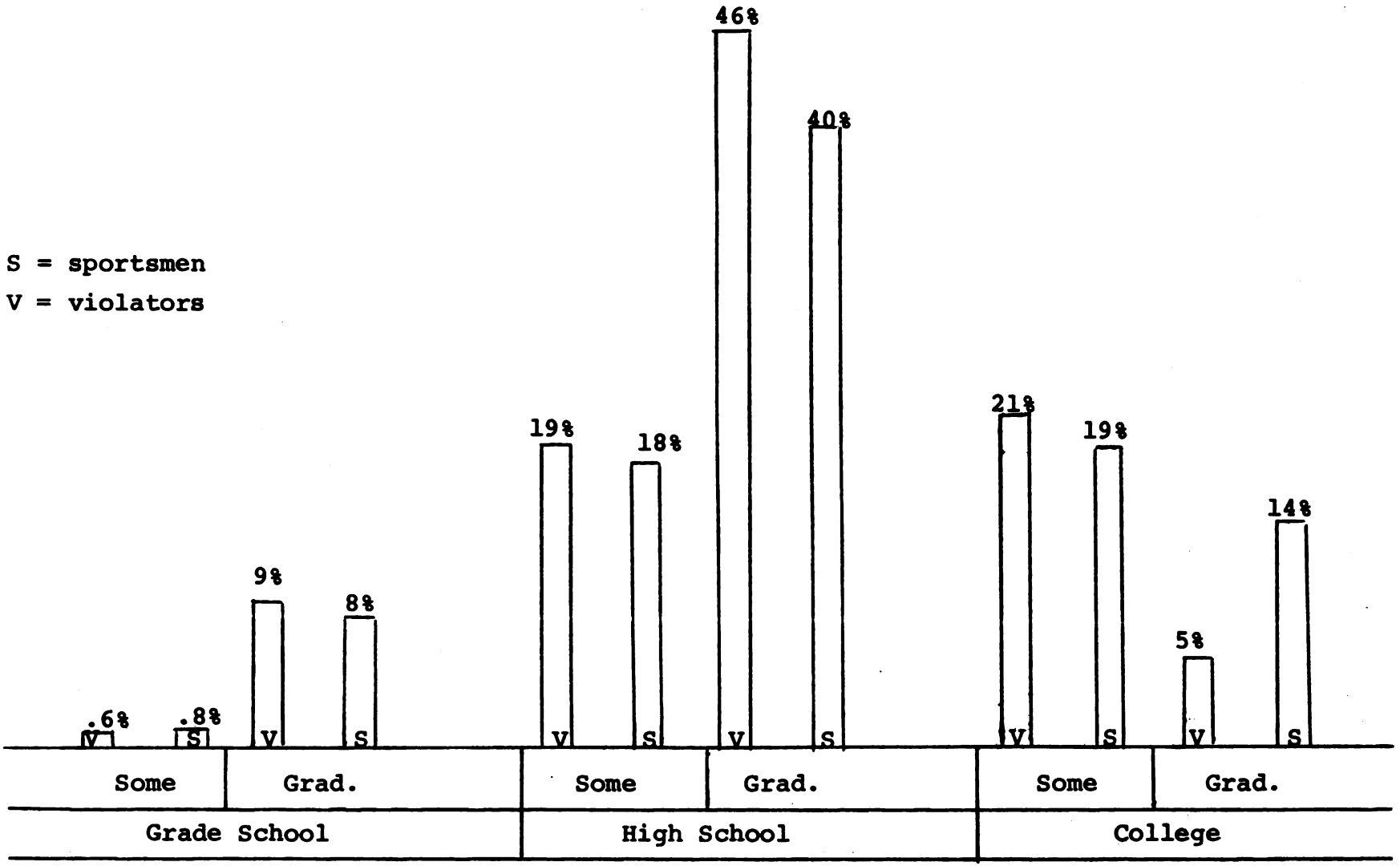

Figure 1.--Educational (highest) attainment of respondents in 1974.

with 77.2 percent of all respondents being married. Only 3.3 percent of all respondents indicated that they were either separated or divorced (Table 3). The average number of dependents for all respondents appears to be 3.34. No significant difference was noted between violators with 3.33 dependents and sportsmen with 3.35.

TABLE 3.--Marital Status of all Respondents.

Marital Status	Violators (%)	Sportsmen (%)
Single	17.5	20.9
Married	80.2	75.1
Separated	1.7	1.2
Divorced	.6	2.8
Total	100.0	100.0

Age

The average age for all respondents was 31.68 years. Violators were considerably younger than the average sportsmen, with 65 percent being between the ages of 20 and 35 years of age. In contrast sportsmen were more evenly distributed in age with a larger portion of older individuals (Table 4).

State Residency

The average time of residency for all respondents is 30.75 years, which, when compared with the average age

TABLE 4.--Age distribution of all Respondents.

Age Class (years)	Violators (%)	Sportsmen (%)
14-19	3.9	8.6
20-24	27.0	15.3
25-29	21.9	14.5
30-34	15.7	12.5
35-39	8.4	11.0
40-44	7.9	12.5
45-49	3.9	9.4
50-54	1.7	7.5
55-59	6.2	5.9
60-64	.6	2.4
65 +	2.8	.4
Total	100.0	100.0

2 respondents failed to answer
Chi-Square = 35.216, D.F. - 10, P > .0001

of all respondents (31.68 years) indicates that a majority of both violators and sportsmen have been residents of Michigan most of their life (Table 5).

Place of Residency

Questionnaire data indicate that 59 percent of all respondents live in the southern half of Michigan's lower peninsula. Significantly more responding violators live in the upper and northern lower peninsula (Table 6).

TABLE 5.--Length of State Residency.

Statistic	Violator	Sportsmen	Total
Mean	28.039	32.642	30.759
Variance	163.68	190.14	---
N (size)	178	257	

Student T-test = 3.5248, D.F. = 433, P > .0005

Thirty-one percent of all respondents reside in urban areas with populations greater than 5,000 people. No significant differences were noted between violators and sportsmen as to residency in urban or rural locations; however, slightly more violators live in rural areas and slightly more sportsmen live in cities with population levels of 5,000 or less (Table 7).

TABLE 6.--The Geographical Distribution of all Respondents.

Location	Violators (%)	Sportsmen (%)	Total (%)
Upper Peninsula	20.2	12.2	15.2
Northern Lower Peninsula	32.0	20.5	25.2
Southern Lower Peninsula	47.8	67.3	59.3
Total (%)	100.0	100.0	100.0

3 sportsmen did not reply
Chi Square = 16.638, D.F. = 2, P > .0002

TABLE 7.--Distribution of Respondents as to Urban-Rural Location.

Location	Violators (%)	Sportsmen (%)
Rural	62.5	52.8
City (5000 or less)	8.5	15.0
City (5000 or less)	29.0	32.3

General Recreational Characteristics

The first portion of the questionnaire was designed to solicit information from the respondents about their general recreational attitudes and characteristics.

Preferred Outdoor Activity

Respondents were asked to indicate their most preferred activity of hunting, fishing, hiking, camping or other. Fifty eight percent of all respondents indicated hunting. No significant differences were noted between violators and sportsmen, although slightly more violators than sportsmen preferred to hunt. Also slight more sportsmen (15%) than violators (11%) preferred camping (Figure 2).

Violators averaged significantly more time deer hunting than sportsmen. All respondents averaged 7.7 days of hunting, with sportsmen averaging 7.08 days and violators 8.6 days (Table 8).

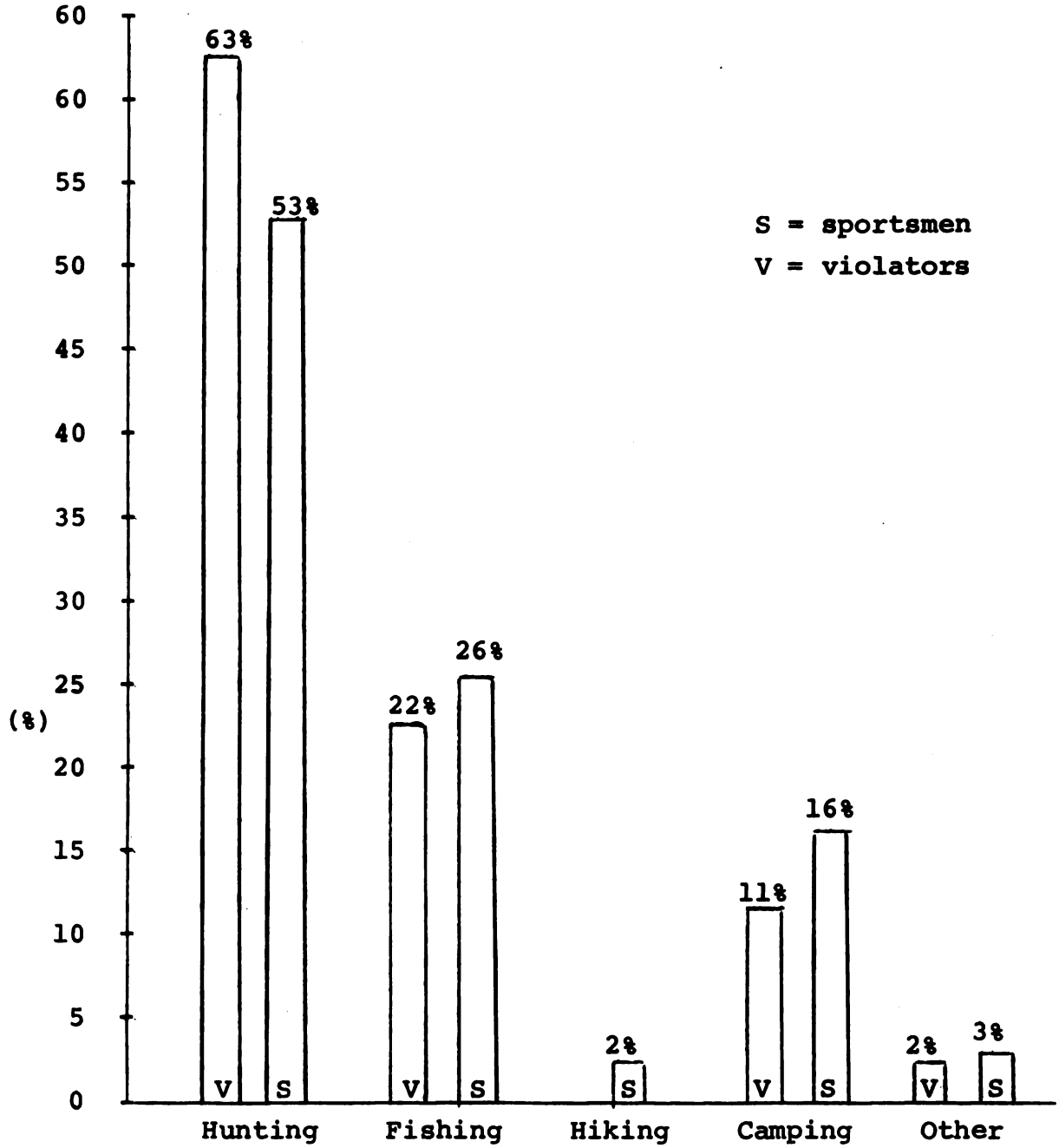

Figure 2.--The most preferred outdoor activity of the respondents.

TABLE 8.--The Number of Days Spent Deer Hunting by Violators and Sportsmen.

Statistic	Violators	Sportsmen	Total
Mean	8.6067	7.0856	7.7080
Variance	42.884	21.891	---
N (size)	178	257	435

Student T = 2.8258, D. F. = 433, P > .0049

Except for snowmobiles there appears to be no significant difference between the type and number of cars, trucks and recreational vehicles owned by violators and sportsmen. The data indicates that sportsmen own newer and a greater number of snowmobiles than violators. Sportsmen also own newer models of automobiles.

Antlerless Deer Hunting

Analysis showed a significant difference in attitudes towards antlerless deer hunting by sportsmen and violators. Seventy percent of the violators and 79 percent of the sportsmen were against antlerless hunting (Table 9). The controversy over this policy has raged on for many years in Michigan.

TABLE 9.--Attitudes Towards Antlerless Deer Hunting.

Respondents	Favored (%)	Not Favored (%)	Total
Violators	30.2	69.8	172
Sportsmen	20.6	79.4	252

11 respondents did not answer the question.
Chi-Square = 5.0867, D.F. = 1, P > .05

Attitudes Towards the Department of Natural Resources and Its Policies

The second portion of the questionnaire was designed in a way so as to ascertain attitudes towards the Department of Natural Resources (DNR) and its policies.

DNR Employees

The data received showed no significant differences between sportsmen and violators in their attitudes towards how well Department of Natural Resources employees are doing their job. Seventy-five percent of all respondents felt that employees (foresters, biologists, and conservation officers) are earning their pay.

Attitudes Towards Conservation Officers

Respondent data indicates that violators (69.6%) were more inclined to know the name of their local conservation officer than were sportsmen (40.9%). The fact that violators were probably apprehended by their local conservation officer would account for this difference.

Sportsmen checked by C. O.'s are not as likely to remember the officer's name if they are contacted less often and have not received a citation (Table 10).

TABLE 10.--Respondents Knowledge of Their Local Conservation Officer's Name.

Respondent	Knew Name (%)	Did Not Know Name (%)	Total
Violator	69.6	30.4	100% 171
Sportsmen	40.9	59.1	100% 254

10 respondents did not answer the question.
Chi-Square = 33.627, D.F. = 1, P > .001

How the public perceives a conservation officer may relate to attitudes and actions that may be directed towards all officers. Violators were significantly more different than sportsmen in their attitudes as to the character of their local conservation officer (Table 11). Twenty-seven percent of all respondents had no opinion.

Good community relations are required if any acceptable level of law enforcement is to be obtained. A strong rapport with local people allows an officer to obtain information on illegal activities and maintains respect for himself and what he represents. Violators (58%) were significantly more different than sportsmen (76%) in their attitudes as to how well their Conservation

Officer was liked in the community where he worked and resided (Table 12).

TABLE 11.--Attitude Towards What Type of Person the Conservation Officer Is.

Attitudes	Violators (%)	Sportsmen (%)
Likes people and job	41.5	52.2
Just a person with a job	29.2	18.9
Hates people	5.1	.4
Don't know	25.1	28.5

15 respondents did not answer
Chi-Square = 14.814, D.F. = 3, P > .002

TABLE 12.--How Well is Conservation Officer Liked in Community?

Response	Violators (%)	Sportsmen (%)
Liked	57.7	75.7
Disliked	42.2	24.3

99 respondents did not answer
Chi-Square = 12.063, D.F. = 1, P > .0005

Conservation Officers like all police officers have certain inherent dangers that people in other occupations do not have. The attitudes of people vary in respect to the amount of perceived danger and accordingly they may acknowledge a certain amount of respect and admiration in proportion to that level of hazard or danger. Sportsmen

and violators are similar in their attitudes with 71 percent of all respondents feeing that the job of Conservation Officer is hazardous or dangerous to some degree.

The number of Conservation Officers on duty in the state is directly related to the amount of enforcement available for the protection of Michigan's natural resources. Questionnaire data show a significant difference in the attitude sportsmen and violators have towards the desired number of officers. Only a few violators (2.9%) and none of the sportsmen felt that there should be no Conservation Officers. Sixty-five percent of the responding sportsmen and 54.4 percent of the violators felt there should be more officers. More violators than sportsmen felt there should be fewer officers than there are now (Table 13).

TABLE 13.--Attitude Toward the Number of Conservation Officers.

Number	Violators (%)	Sportsmen (%)
None	2.9	0.0
Same number	32.2	32.2
Less officers	10.5	3.2
More officers	54.4	64.8
Total	100.0	100.0

14 respondents did not answer
Chi-Square = 17.954, D.F. = 3, P > .0004

Respondents Contact with Conservation Officers

Respondents were asked to list the number of times they were contacted by a Michigan Conservation Officer in the last three years. Questionnaire data indicates that all respondents were contacted an average of two times. Violators averaged significantly more contacts (2.65) than sportsmen (1.7). Four respondents reported that they had not been contacted including three violators who had been apprehended during the past three years (Table 14).

TABLE 14.--Analysis of the Difference in the Average Number of Conservation Officer Contacts Experienced by Respondents.

Statistic	Violators	Sportsmen	Total
Mean	2.6517	1.7082	2.0943
Variance	2.4656	1.1450	---
N (size)	178	257	435

Student T = 7.4543, D.F. = 433, P > .0001

When respondents were asked what they felt was the reason for the contact, most sportsmen (84%) felt it was routine or through a regular check. Most violators felt that it was a combination of two reasons, with 36 percent believing it was suspicion of violator activity and 34 percent believing it was just routine. None of the sportsmen and 6 percent of the violators felt that someone had informed on them (Table 15).

TABLE 15.--Perceived Reasons for Being Checked by Conservation Officers by all Respondents.

	Violators (%)	Sportsmen (%)
Regular check	33.6	53.0
Just conversation	15.7	31.3
Someone reported you	5.7	0
Suspicion of violator activity	36.4	8.7
To get information	5.7	4.3
Don't know	2.9	2.6

38 violators and 115 sportsmen did not answer the question.
Chi Square = 39.515, D.F. = 5, P > .0001

Attitudes Towards Game Laws

In section three an attempt is made to ascertain the attitudes sportsmen and violators have in relation to game laws and their administration. This section also questioned respondents as to violators' operational characteristics.

Game Laws

Most respondents (81%) felt that present game laws were beneficial. Only 23 percent of the violators and 16 percent of the sportsmen felt that game laws had no benefit. Violators may have some animosity towards the law as a result of conviction but the sportsmen should have have these feelings and should have generally answered this question in the affirmative.

Significantly more violators (46%) than sportsmen (32%) felt that present game laws were well enforced by law enforcement personnel. More sportsmen (41.7%) than violators (37%) felt that laws were poorly enforced. Twenty three percent of all respondents replied that they did not know how well laws were enforced (Table 16).

TABLE 16.--Respondents Opinion as to How Well Game Laws are Enforced.

Opinion	Violators (%)	Sportsmen (%)
Well enforced	46.0	31.7
Poorly enforced	36.8	41.7
Don't know	17.2	26.6
Total	100.0	100.0

9 respondents failed to appear
Chi-Square = 10.118, D.F. = 2, P > .007

When asked about the number of game laws, most sportsmen (94%) felt there were enough, with 6 percent in the opinion that there were too many laws. Significantly more violators (26%) felt that there were too many game and wildlife laws; also, fewer violators than sportsmen felt that there were not enough laws on the books (Table 17).

Attitudes Towards Those Who Break Game Laws

Vilkitis (1968) stated that most residents of Idaho condoned illegal big game hunting. Questionnaire data

TABLE 17.--Attitudes Towards the Number of Game Laws.

Attitude	Violators (%)	Sportsmen (%)
Too numerous	26.0	6.0
Enough	62.7	78.9
Not enough	11.2	15.1
Total	100.0	100.0

15 respondents did not answer
Chi-Square = 33.705, D.F. = 2, P > .0001

indicates this is not the case in Michigan. Ninety percent of all respondents either opposed or strongly opposed persons breaking present hunting laws. Violators' attitudes differed significantly from that of sportsmen as to the degree of opposition. Only 2 percent of the sportsmen as opposed to 18 percent of the violators did not oppose those who broke game laws (Table 18).

TABLE 18.--Attitude Towards Those that Break Game Laws.

Attitude	Violator (%)	Sportsmen (%)
Strongly oppose	28.2	58.9
Oppose	54.1	37.9
Don't oppose	17.6	3.2

17 respondents did not answer
Chi-Square = 49.430, D.F. = 2, P > .0001

Many violators go unpunished because sportsmen refuse to be involved and report individuals involved. Significantly more sportsmen (73.0%) than violators (57%) would report a stranger that they had witnessed killing an illegal animal. Eighteen percent of the violators and 9 percent of the sportsmen would not report the incident, while 21 percent of all respondents would approach the individual involved and discuss the violation (Table 19).

TABLE 19.--Attitudes Towards a stranger Illegally Killing a Deer or Bear.

Attitude	Violator (%)	Sportsmen (%)
Report him	56.6	73.0
Not report him	17.9	9.3
Discuss it with him	25.4	17.7
Total	100.0	100.0

14 respondents did not answer
Chi-Square = 12.926, D.F. = 2, P > .002

If a friend or neighbor is observed killing a deer illegally both violators and sportsmen (74%) would either not report the incident or discuss it with the individual involved. Only 26 percent of all respondents would report the incident to a Conservation Officer.

When asked if violating hurts the deer herd, 30 percent of the violators and 11 percent of the sportsmen answered no. Significantly more sportsmen (89%) than

violators (70%) felt that illegal deer hunting did hurt the deer herd. It is interesting to note the high number of violators that admit to damaging Michigan's deer herd by their activities (Table 20).

TABLE 20.--Attitude Towards the Effect of Violating on the Deer Herd.

Attitude	Violator (%)	Sportsmen (%)
Hurts deer herd	70.3	89.2
Does not hurt herd	29.7	10.8
Total	100.0	100.0

14 respondents did not answer
Chi-Square = 23.839, D.F. = 1, P > .0001

Violator Operational Characteristics

When respondents were asked how much illegal deer hunting was going on in the area they hunted, 31 percent of the violators and 29 percent of the sportsmen replied that they felt that there was a high level of violating. Only 5 percent of all respondents felt that there were no incidents of illegal hunting where they lived or hunted (Table 21).

Time of Highest Violation Activity

When respondents were asked in what month do most big game violations occur, violators (36%) and sportsmen (34%) felt that November was the most active. October was

the second choice with 27 percent of all respondents choosing it (Table 22).

TABLE 21.--Amount of Violating Respondents Felt Occurred in the Area Where They Hunt or Live.

Amount	Violator (%)	Sportsmen (%)
High	30.9	28.7
Some	32.0	46.7
Little	30.9	21.3
None	6.3	3.3

16 respondents did not answer
Chi-Square = 11.308, D.F. = 3, P > .0102

TABLE 22.--Month in Which Respondents Felt that Violating Was the Highest.

Month	Violator (%)	Sportsmen (%)
September	7.5	7.1
October	30.1	25.1
November	35.8	34.1
December	6.9	7.5
January	2.3	2.7
February	1.7	1.6
March	0.0	2.0
April	.6	2.7
Other or Don't Know	15.0	17.3
Total	100.0	100.0

Both violators (46%) and sportsmen (45%) concurred that during the closed season the most active time for violations was at night. A total of 67 percent of all respondents felt that most violations occurred after dark (Table 23).

TABLE 23.--Respondents Choice of Time When Most Violations Occur.

Time	Violator (%)	Sportsmen (%)
Night		
Closed season	45.6	44.8
Open season	18.1	23.8
Day		
Closed season	6.4	9.9
Open season	29.8	21.4
Total	100.0	100.0

Sex of Illegally Killed Deer

Eighty-two percent of all respondents (83% of the violators and 82% of all sportsmen) felt that female deer were most often taken by violators.

Number of Cripples

Most of the illegal deer hunting in Michigan takes place at night or during the day under less than ideal conditions. Consequently a large portion of the deer that are hit by violators' shots are lost as cripples. When

questionnaire respondents were asked to estimate this loss, both violators and sportsmen felt that for every 100 animals hit an average of 29 were lost as cripples.

Number of Arrests

When asked how many violators were apprehended for every 100 illegally killed deer, respondents indicated an average of 7.69. No significant difference was noted between violators (8.87%) and sportsmen 6.78%) as to the number of violators arrested. Department of Natural Resources law enforcement figures indicate a 2.4 percent detection and arrest rate (Hussain, 1974), which is considerably lower than estimates made by respondents.

Hunting Weapon

There appears to be no significant difference in the opinion of violators and sportsmen as to what illegal deer hunting weapon is most preferred. All respondents agreed that deer rifles (41%) were used most, followed by .22 caliber rifles (31%) and hostguns (23%). Only 2 percent felt hand guns were used most and 3 percent indicated bow and arrow (Table 24).

Reason for Breaking Big Game Laws

Sportsmen and violators apparently have different views as to why people break game laws. A majority of the violators (67%) felt that the need for meat was the primary

TABLE 24.--Weapon Respondents Felt was Most Likely Used by Violators.

Weapon	Violator (%)	Sportsmen (%)
Deer rifle	35.7	45.1
.22 Caliber rifle	34.5	29.3
Shotgun	26.3	19.9
Handgun	1.2	2.8
Bow and arrow	22.3	2.8
Total	100.0	100.0

motivation for illegal hunting, while sportsmen felt it was a combination of the need for meat (44%), for kicks or thrill (18%), for dislike of the Department of Natural Resources (18%), and because of bad judgment (11%) Table 25).

TABLE 25.--Respondents Opinion of the Cause of Game Law Violations.

Cause	Violator (%)	Sportsmen (%)
Profit	1.6	6.0
Meat	67.4	44.0
Kicks	13.4	17.9
Poor judgment	5.8	10.7
Dislike for Department of Natural Resources	5.8	17.5
Disrespect for law and order	3.5	2.4
Influence of alcohol	2.9	1.6
Total	100.0	100.0

11 respondents did not answer

Chi-Square = 32.563, D.F. = 6, P > .0001

DISCUSSION

It was suggested at the beginning of this study by a few conservation officers and biologists that perhaps the only difference between violators and sportsmen is that violators are the ones that get caught. Considering the fact that response analysis shows so many significant differences, raises some doubts as to the validity of this statement. This is especially evident in the attitudes of violators towards hunting regulations. Violator respondents felt that their actions of illegal deer hunting had no harmful effect on the deer herd. Violators also appear to take many more female deer than males, yet they are against antlerless deer hunting. Also they probably would not report an observed game law violation. All these examples lead me to conclude that violators in general have a lack of understanding of the purpose of game laws and the fundamentals of game management. Moncrief (1970) found that the general distrust of state government by upper and northern lower peninsula hunters was directly associated with the lack of support for Michigan's antlerless deer management policies. Questionnaire data indicates

that most violators reside in the upper and northern lower peninsula. The distrust for government described by Moncrief may also be associated with the lack of confidence in the purpose of game laws and the cause of deer hunting violations.

This situation can be changed, however, with laws that are sound and accompanied by good programs of required hunter education. Perhaps an expansion of the present hunter safety program might fill this role. Research is needed to develop and administer future educational programs that would explain and educate people about the basis and purpose of wildlife management programs and their resultant regulations. In the future these programs could reduce the number of Michigan deer hunting violations.

As with any study of this type there are certain inherent weaknesses. There are many reasons why using an artificial testing device failed to measure the true characteristics and attitudes of violators and sportsmen. Some of these limitations are discussed.

The sample containing sportsmen who had supposedly not been convicted of law violations obviously contained some violators who had never been apprehended. Their inclusion in this group may have significantly influenced some of the similarities between the responses of the two groups.

With little more than half of the total sampling frame available, one needs to interpret cautiously any reported differences or similarities between the two groups.

In future surveys, a further stratification by violator type seems necessary. Unknowingly any one segment of violators could be over-represented in the results. The sample should be broken down into four basic types as to time of operation: diurnal; nocturnal; closed-season; and open-season.

The fact that some violators have been apprehended may be cause for a significant difference in attitude towards many of the questionnaires topics. This could mean there are significant differences between convicted violators and non-convicted violators.

Reliability of responses is not known; however, three violators that had been apprehended in 1972 or 1971 replied that they had not been contacted by a conservation officer in the last three years. This represents less than two percent of all the violators who responded. Personal interviews, telephone interviews, or further mail inquiries could all yield some measure of reliability. A small percentage of interviewed respondents and non-respondents could reveal some significant inconsistencies in the results.

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APPENDIX A

QUESTIONNAIRE USED IN SURVEY

DO NOT SIGN YOUR NAME

I. RECREATIONAL ACTIVITIES AND GENERAL ENVIRONMENTAL ATTITUDES

1. What type of outdoor activity do you enjoy most?

CHECK ONLY ONE

- ☐ Hunting
- ☐ Fishing
- ☐ Hiking
- ☐ Camping
- ☐ Other (Be Specific) _____

2. How many days did you deer hunt last year? (Count each part of a day spent hunting as a whole day)

_____

3. Do you own an automobile or a recreational vehicle? ☐ Yes ☐ No

Type	How Many?	Vehicle Year
☐ Car	_____	_____
☐ Truck	_____	_____
☐ Camper	_____	_____
☐ Jeep or 4WD	_____	_____
☐ Motorcycle	_____	_____
☐ Snowmobile	_____	_____

4. Are you in favor of anterless deer hunting? ☐ Yes ☐ No

II. ATTITUDES TOWARD THE DEPARTMENT OF NATURAL RESOURCES

1. Do you think DNR employees, that is Biologists, Conservation Officers, and Foresters are earning their pay?

☐ Yes ☐ No

2. Do you know the name of your local Conservation Officer? ☐ Yes ☐ No

3. What type of person do you think the Conservation Officer is?

CHECK ONLY ONE

- ☐ Likes people and his job
- ☐ Hates people
- ☐ Just a person with a job
- ☐ Don't know

4. To your knowledge, is the Conservation Officer ☐ liked or ☐ disliked in your community?

5. Do you think that a Conservation Officer's job is hazardous or dangerous?

☐ Yes ☐ No

6. Do you feel that there should be:

- ☐ No Conservation Officers
- ☐ Less Conservation Officers
- ☐ The same number of Officers
- ☐ More Conservation Officers

7. How many times have you been contacted by a Conservation Officer in the last three years while hunting?

☐ None ☐ Two ☐ Four

☐ One ☐ Three ☐ More than four (No.___)

8. If you were contacted, what was the purpose of the last contact?

☐ Regular check ☐ Suspicion of violator activity

☐ Just friendly conversation ☐ To get information

☐ Someone reported you ☐ Don't know

III. ATTITUDES TOWARD HUNTING AND FISHING LAWS

1. Do you feel that present game laws are beneficial?

☐ Yes ☐ No

2. From your experience would you say that game laws are:

☐ Well enforced ☐ Poorly enforced ☐ Don't know

3. Do you feel that the number of game laws are:

☐ Too numerous ☐ Enough ☐ Not enough

4. How do you feel towards those who break game laws?

☐ Strongly oppose ☐ Oppose ☐ Don't oppose

5. In your opinion do you feel that violating hurts the deer herd? ☐ Yes ☐ No

6. From conversations with friends and local people living near where you hunt, how much deer violating is going on?

☐ A lot ☐ Some ☐ Little ☐ None

7. For every 100 animals shot by violators, how many do you think get away as cripples? _____

8. In what month do you feel most big game violations occur?

CHECK ONLY ONE

☐ September ☐ December ☐ March

☐ October ☐ January ☐ April

☐ November ☐ February ☐ Don't know

9. When do you feel most violations occur?

CHECK ONLY ONE

☐ During hunting (firearm) season during daytime

☐ During hunting (firearm) season at nighttime

☐ During closed season during daytime

☐ During closed season at nighttime

10. If you saw a stranger illegally kill a deer or bear would you:

☐ Report him ☐ Not report him ☐ Discuss it with him

11. If you saw a friend or neighbor illegally kill a deer or bear would you:

☐ Report him ☐ Not report him ☐ Discuss it with him

12. From conversations with local residents and friends in the area where you deer hunt, which do you feel is most often taken by violators?

1)☐ Male 2)☐ Female

13. Which do you feel is most often used by a violator in taking deer illegally?

CHECK ONLY ONE

☐ Deer rifle ☐ Handgun
☐ 22 caliber rifle ☐ Bow and arrow
☐ Shotgun

14. Why do you think people break game laws?

CHECK ONLY ONE

☐ For profit ☐ Dislike for DNR
☐ For meat ☐ Disrespect for law and order
☐ For kicks ☐ Because of the influence of alcohol
☐ Poor judgement

IV. GENERAL INFORMATION

1. What is your main occupation?

2. What is your family's total income?

☐ Under $3,000 ☐ $8,000 - $9,999 ☐ $25,000 and over
☐ $3,000 - $5,999 ☐ $10,000 - $14,999
☐ $6,000 - $7,999 ☐ $15,000 - $24,999

3. What year did you complete in school?

☐ 6 years or less ☐ Finished high school ☐ Some graduate work
☐ 7th-9th grades ☐ Some college ☐ Finished graduate degree
☐ Some high school ☐ Finished college

4. Where do you presently live?

☐ Rural or country ☐ City (population under 5,000)
☐ City (population over 5,000)

5. How many dependents do you have?

☐ None ☐ Two ☐ Four
☐ One ☐ Three ☐ More than four

6. At the present time are you:

☐ Single ☐ Married ☐ Separated ☐ Divorced

7. How long have you lived in Michigan? _____ Years

8. What age class do you fall under?

- ☐ 14 years - 19 years
- ☐ 20 years - 24 years
- ☐ 25 years - 29 years
- ☐ 30 years - 34 years
- ☐ 35 years - 39 years
- ☐ 40 years - 44 years
- ☐ 45 years - 49 years
- ☐ 50 years - 54 years
- ☐ 55 years - 59 years
- ☐ 60 years - 64 years
- ☐ 65 and older

9. Where do you live?

☐ Upper Peninsula ☐ N. Lower Peninsula ☐ S. Lower Peninsula

10. For every 100 deer killed illegally, how many violators do you feel are arrested?_____

Use the space below for comments you may have.

APPENDIX B

INTRODUCTORY COVER AND REMINDER LETTERS

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF FISHERIES AND WILDLIFE
NATURAL RESOURCES BUILDING

EAST LANSING • MICHIGAN • 48824

Dear Sportsman:

Michigan is blessed with an abundance of woods, clean waters, and beautiful wildlife. As a result of more leisure time and higher incomes more people are using these natural resources. Everyone is becoming more aware and interested in the wise uses of these irreplaceable resources.

Researchers at Michigan State University are conducting a survey of the uses to which our natural resources are being put. We are interested in the people who are making regular use of the State's resources. Attitudes and ideas these people have are important in formulating resource management programs.

Your name was chosen from a list of people who have purchased a hunting or fishing license in the past ten years. If everyone selected takes the time to thoughtfully answer this questionnaire, the University will have a valid, meaningful sample. If you find any questions that you do not care to answer, please leave them blank. Naturally, all information will be held in strict confidence.

In taking a few moments to answer this questionnaire and to return it, you will be helping Michigan State University design a plan for the future uses of our natural resources.

Sincerely,

James A. Kesel

James A. Kesel
Graduate Researcher

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

DEPARTMENT OF FISHERIES AND WILDLIFE • NATURAL RESOURCES BUILDING

Dear Sportsman:

About two weeks ago, a sportsman's questionnaire was mailed to you. Perhaps you have already completed and returned it? If not, will you please fill it out and mail it back today?

I realize that it will take some time and effort, but it is important that we have your reply. Returning this questionnaire will be an important step in helping to formulate a plan for the future use of Michigan's natural resources.

Thank you,

James A. Kesel

James A. Kesel
Graduate Researcher