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## B760: Characteristics of Maine's Resident and Non-Resident Hunters

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# **CHARACTERISTICS OF MAINE'S RESIDENT AND NON-RESIDENT HUNTERS**

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**LIFE SCIENCES AND AGRICULTURE EXPERIMENT STATION  
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CHARACTERISTICS OF MAINE'S  
RESIDENT AND NON-RESIDENT HUNTERS

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# CHARACTERISTICS OF MAINE'S RESIDENT AND NON-RESIDENT HUNTERS

R. Frederick Faunce<sup>1</sup>, Alan S. Kezis<sup>2</sup>, and Gregory K. White<sup>3</sup>

## INTRODUCTION

The Maine Department of Inland Fisheries and Wildlife has direct responsibility for freshwater fish and wildlife in the state:

The Department . . . was established to ensure that all species of wildlife and aquatic resources in the State of Maine are maintained and perpetuated for their intrinsic and ecological values, for their economic contribution and for their recreational, scientific, and educational use by the people of the State (1).

For the Department to properly administer its program and funds, it requires knowledge of the needs and desires of the citizenry it serves. With such information, the Department can better fulfill the governmental mandate that public funds be put to their highest and best use.

As implied in the Department's mandate, wildlife in the State of Maine is to be maintained, in part, for its economic and recreational value. It follows, therefore, that the Department is charged with ensuring an adequate wildlife population to support these purposes, among others. It is not enough to concentrate efforts on population size. Species health, variety, and distribution are as important as amount of wildlife. Although fish and wildlife populations cannot be allocated as can other publicly-provided goods, habitat alterations and game management laws can be used as tools to encourage numbers and species distribution that will most benefit the citizenry. It is, therefore, imperative that the preferences of the target groups be known so that specific programs to satisfy these can be developed and implemented.

This bulletin reports some of the findings of a recent survey of residents and non-residents who purchased a 1976 Maine hunting license. It summarizes important characteristics of this group so that wildlife managers may better understand the attitudes and preferences of the state's hunters and, therefore, more effectively carry out the Department's mandate.

## Objective

This study is designed to compare the activities, socio-economic attitudes, and antecedent characteristics of Maine's resident and non-resident hunters.

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## Methodology

The target population for this study consisted of approximately 160,000 resident hunters and 29,000 non-resident hunters who purchased hunting licenses in Maine in 1976, the latest year for which complete data were available. A stratified random sample was obtained with the help of the Department of Inland Fisheries and Wildlife. In total, 8,000 mail questionnaires were sent out.

Chi square analysis was used to determine the significant relationships in socio-economic characteristics and the nature of participation using the following formula:

$$X^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(f_{ij} - e_{ij})^2}{e_{ij}}$$

(r-1) (k-1) = d.f.

Where:

r = rows

k = columns

$f_{ij}$  = observed frequency of the ith row and jth column

$e_{ij}$  = theoretical frequency of the ith row and jth column

A Z - statistic was used to determine significantly different means for different segments of the population using the formula:

$$Z = \frac{\bar{G}_1 - \bar{G}_2}{\sqrt{\frac{SD_1^2}{n_1} + \frac{SD_2^2}{n_2}}}$$

Where:

$\bar{G}_1$  = mean of group 1

$\bar{G}_2$  = mean of group 2

$SD_1$  = standard deviation of group 1

$SD_2$  = standard deviation of group 2

$n_1$  = number of observations in group 1

$n_2$  = number of observations in group 2

## CHARACTERISTICS OF RESIDENT AND NON-RESIDENT HUNTERS

Comparisons of participants in recreational activities are generally based upon characteristics which, by their nature, fall into easily differentiable categories. The categories pertinent to recreational hunting in Maine are:

1. Antecedent conditions
2. Activity characteristics
3. Attitudes and preferences
4. Socio-economic characteristics

The ensuing discussion of differences and similarities between resident and non-resident hunters in Maine will be conducted with this general classification as the structural framework.

### **Antecedent Conditions**

Antecedent conditions are customarily interpreted as factors present in one's past that exert a causal relationship on present behavior. These factors may be significant predictors of observable behavior or situation response. Detailed analysis of past activity is, therefore, necessary for interpretive recreational studies.

A prevalent criticism by resident hunters in Maine of non-resident hunters is that they are infrequent or inexperienced hunters. In fact, non-resident hunters were found to be more experienced in the number of years they had hunted and more consistent in purchase of a hunting license (Table 1). The mean number of years hunted by non-residents was 24.7. This was significantly greater than the mean value of 23.5 years for resident hunters. When respondents were asked the number of years in which they obtained a hunting license in Maine or another state or country during the period 1970 to 1976, non-residents demonstrated that they were significantly more consistent, purchasing a mean of 6.4 licenses during that period, compared to 6.2 for resident hunters.

Residents started hunting at an earlier age and were more likely to be introduced to the activity by a parent or spouse whereas non-residents mentioned "friend" comparatively more often (Tables 1 and 2). These results may be due to the individual's perceptual interpretation of the activity. Residents appeared to view hunting, at least initially, as a family-oriented activity. It was, therefore, more likely that

an individual's introduction to hunting would be by a member of the immediate family. Non-residents may have perceived the activity apart from familial ties and participated in the initial recreational activity as a social function to be carried out with friends.

TABLE 1

Resident and Non-Resident Mean Values for Selected Characteristics, 1978

Characteristic	Mean Value		Z-statistic	Significance at .05 Level
	Resident	Non-Resident		
No. of Yrs. Hunted	23.46	24.72	2.10	Yes
Yrs. Hunting License Purchased in Period 1972-1977	6.20	6.37	2.59	Yes
Age Started Hunting	14.90	15.87	3.69	Yes
No. of Club Memberships	1.33	1.42	1.25	No
No. of Sportsman's Magazine Purchases	1.44	1.89	7.31	Yes
No. of Recreational Activities	5.50	5.51	0.07	No
No. of Recreational Vehicles	1.70	1.62	1.20	No
Population of Town of Residence	8,681.54	155,878.63	4.34	Yes
Population of Town Where Raised	33,243.68	340,057.50	5.82	Yes
Days Hunted in Maine	14.42	9.35	11.93	Yes
Hrs. Hunted Per Day	5.96	8.09	24.84	Yes
Hunting Expenditures (dollars)	179.51	383.94	12.98	Yes
Expenditures Per Day (dollars)	15.95	46.83	19.91	Yes
Dollar Value of an Average Day of Hunting	49.19	62.18	2.30	Yes
Age	39.33	41.55	3.62	Yes

TABLE 2

Party Responsible for Respondent's First Hunting Experience, 1978

	Resident	Non-Resident
	(Percent)	
Parent	48.7	40.8
Brother, Sister	5.9	5.9
Spouse	4.2	0.6
By Self	23.6	20.9
Friend	13.7	25.7
Other	3.9	6.1
Total	100.0	100.0



Two criteria employed in this study to measure other forms of recreational participation of hunters were sportsmen's club membership and sportsmen's magazine purchases. These traits reflect the willingness to expend time or money to pursue recreation-related interests. Non-resident hunters were much more likely to be club members or magazine purchasers (Table 3 and 4). When these subgroups were further refined to include only those who purchased magazines or were club members, it was determined that club members in both subgroups belonged to the same number of clubs, but that non-resident magazine purchasers bought significantly more magazines than their resident counterparts (Table 1). When resident and non-resident hunters were compared for type of clubs or magazines, it was found that residents were relatively more interested in general sports magazines and clubs

TABLE 3

Resident and Non-Resident Club Membership, 1978

Response	Resident	Non-Resident
Yes	37.2	68.0
No	62.8	32.0
Total	100.0	100.0

$X^2 = 202.92$ , 1 d.f.; significant at .05

TABLE 4

Resident and Non-Resident Magazine Purchasing, 1978

Response	Resident	Non-Resident
Yes	16.5	48.2
No	83.5	51.8
Total	100.0	100.0

$X^2 = 276.11$ , 1 d.f.; significant at .05

whereas non-residents were more inclined towards hunting-fishing and sports-lobbying magazines and hunting-fishing clubs (Tables 5 and 6).

The singularity of hunting in the overall recreational construct of hunting participants was examined by determining the range of recreational interests of respondents. Although resident and non-resident hunters participated in a similar number of non-hunting recreational activities, the popularity of individual engagement categories varied (Tables 1 and 7). Fishing was the most popular alternative to hunting for both groups. Non-residents appeared to show a greater interest in

TABLE 5

Club Affiliations, Resident and Non-Resident Hunters, 1978

Club Type	Resident	Non-Resident
	(Percent)	
Hunting-Fishing	10.9	15.8
Target Shooting	2.0	6.0
General Sports	37.0	30.0
Environmental	19.1	16.4
Sports-Lobbying	21.4	22.2
Snowmobile	5.1	0.6
Archery	1.1	1.9
Other	3.4	7.1
Total	100.0	100.0

TABLE 6

Type of Magazines Purchased by Resident and Non-Resident Hunters, 1978

Magazine Type	Resident	Non-Resident
	(Percent)	
Hunting-Fishing	7.1	12.6
Target Shooting	3.0	1.0
General	62.2	52.0
Environmental	15.9	15.6
Sports-Lobbying	9.1	13.3
Archery	0.9	1.8
Other	1.8	3.7
Total	100.0	100.0

swimming, golf, target and skeet shooting, and team sports while residents preferred canoeing, snowmobiling, and snowshoeing. The differences may be partly attributable to the more rural environment of Maine residents which is better able to support such activities. The greater urban character of the non-resident population (discussed in greater detail later in this bulletin) encourages the area-intensive activities preferred by them.

The character of non-hunting recreational activities was further examined by comparing recreational vehicle ownership patterns (Table 8). Snowmobiles were much more popular with resident hunters while non-residents had a preference for camping trailers and pickup campers. Both groups exhibited a similar high interest in motorboats, four-wheel-drive vehicles and canoes. The total number of vehicles owned for both groups was very nearly the same (Table 1).

TABLE 7

Percent of Respondents Participating in Selected Recreational Activities, 1978

Type of Recreational Activity	Resident	Non-Resident
	(Percent)	
Swimming	45.0	58.8
Boating	52.2	52.6
Canoeing	35.6	30.9
Camping	53.6	50.8
Snowmobile	43.6	20.7
Jogging	11.9	13.0
Golf	15.6	21.9
Target Shooting	30.8	53.3
Skeet Shooting	14.7	30.7
Skating	18.7	16.9
Team Sports	19.0	28.3
Water Skiing	18.8	17.4
Downhill Skiing	11.4	15.0
Cross-country Skiing	7.5	4.9
Snowshoeing	29.7	14.7
Fishing	79.9	81.2
Trapping	6.0	8.3
Hiking-Mountain Climbing	22.2	22.3
Horseback Riding	7.5	11.1
Other	5.8	7.8

TABLE 8

Percent of Respondents Owning Selected Recreational Vehicles, 1978

Type of Recreational Vehicle	Resident	Non-Resident
	(Percent)	
Sailboat	3.1	3.7
Motorboat	33.8	33.4
Snowmobile	35.4	12.3
Motor Home	1.4	1.4
Camping Trailer	8.2	12.0
Pickup Camper	8.2	16.5
Motorcycle	11.7	11.4
Trailbike	6.5	8.3
Four-wheel Drive	26.7	28.1
Canoe-Duck Boat	32.1	32.9
Other	2.2	2.0

Resident hunters were more likely to have resided in rural areas than non-residents (Table 1). The mean population of the town of residence for Maine resident hunters was 8,682, compared to 155,879

for non-residents. Respondents were also asked to list the population of the towns where they were raised. Although the same relationship persisted for both groups, it was clear that resident hunters were raised in relatively larger towns and then migrated to smaller population areas (Table 1). This same pattern was evident for non-resident hunters who were brought up in towns that were considerably larger than those in which they currently reside.

### **Activity Characteristics**

There are many recreational activities that require permits before participation is allowed. Although the rate structure may vary for resident and non-resident recreationists, the basic permits generally allow similar activities to be pursued. In Maine, resident and non-resident hunters may purchase full-privilege permits that allow them to hunt both big and small game. Many small game seasons, however, do not coincide with big game seasons. Non-resident hunters appear to engage in shorter, more intensive hunting campaigns in Maine (discussed in detail later in this section). They may concentrate their efforts during the open season of their preferred game and would not be in a position to hunt the same range of species as their resident counterparts. This factor may exert a subtle, yet important influence on the type of species hunted by residents and non-residents and should, therefore, be considered when comparisons between such groups are made.

Non-resident hunters were relatively more attracted to major timber company and state-owned hunting lands while residents tended to choose their own or other private land (i.e., not part of major timber company holdings) comparatively more often (Table 9). Overall, other private land was the most popular hunting land for both groups combined. The attraction for timber company and state-owned hunting lands by non-resident hunters may be explained in part by the problems expressed by non-residents in acquiring permission to hunt on other private land (Table 10).

The average resident hunter spent almost 14.5 days hunting in Maine in 1977 (Table 1). This contrasts to 9.4 days spent by non-resident hunters. Non-residents, however, hunted for a significantly longer time period per day than residents (Table 1). These results may be, in part, due to the nature of the non-resident's stay in Maine. They must travel relatively greater distances to Maine hunting grounds than residents and they incur food and lodging expenses that would be



TABLE 9

Type of Land Most Frequently Hunted on by Respondents, 1978\*

Land Type	Resident	Non-Resident	All
Own	15.7	6.1	12.7
Other Private	65.7	49.1	60.5
Company-owned	30.7	52.2	37.4
State-owned	13.4	21.9	16.0
Other	1.2	1.6	1.3

\*Total greater than 100% due to more than one land type indicated by some individuals

TABLE 10

Degree of Problem with Obtaining Permission to Hunt, 1978

Degree of Problem with Permission	Resident	Non-Resident
None	74.8	64.4
Some	11.3	9.7
Difficult	0.9	1.9
Very Difficult	0.7	1.2
Other	12.3	22.8
Total	100.0	100.0

$X^2 = 52.68$ , 4 d.f.; significant at .05

significantly larger than those they would face at home. These circumstances contribute to a "hunting vacation" phenomenon in which shorter hunting trips are accompanied by a more intense hunting effort. This would also help to explain the greater average seasonal hunting expenditures for non-residents (Table 1), which were roughly two times those of resident hunters. These differences were further magnified when expenses were allocated on a per-diem basis (Table 1). Non-residents spend an average of 47 dollars per day compared to 16 dollars for residents.

Although the most popular hunting areas for both resident and non-resident big game hunters were in the central and southwest sections of the state, non-residents were relatively more attracted to the more remote northern and northwestern areas of Maine (Table 11 and Figure 1). This may be a function of two factors. Non-resident hunters generally resided in the more urban areas of the country and may have been attempting to achieve a very different hunting experience in Maine. This can best be found in the unique, uninhabited territory in the northern section of Maine. Non-residents are also more likely

TABLE 11  
Area Hunted for Big Game, 1978

Area Number	Resident	Non-Resident	All
		(Percent)	
1	7.2	8.2	7.5
2	8.9	22.4	12.5
3	7.4	14.0	9.2
4	27.5	25.5	27.0
5	6.8	9.6	7.6
6	7.8	6.1	7.3
7	12.4	7.5	11.0
8	22.0	6.7	17.9
Total	100.0	100.0	100.0

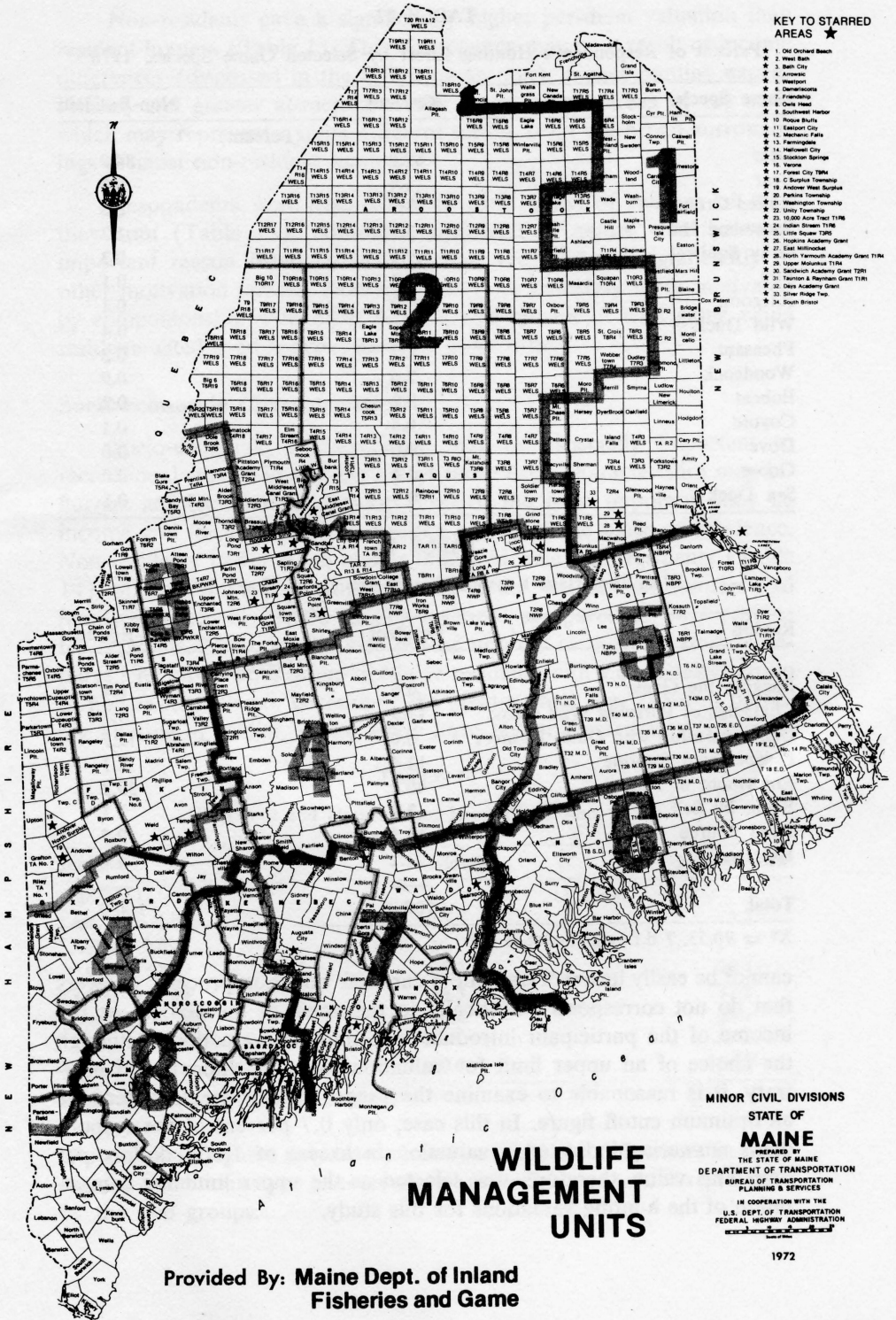
$X^2 = 168.44$ , 7 d.f.; significant at .05.

to combine deer and bear hunting or to concentrate entirely on bear. The prime bear habitat in Maine is in this same northern section. Resident hunters were more likely to be deer or small game enthusiasts and might, therefore, tend to concentrate their hunting effort in areas where these types of game are more plentiful. This would be in the southern and central sections of Maine. In addition, those resident hunters opting to hunt before or after work would necessarily have to hunt close to home. Because the population in Maine is concentrated in the southern and central sections, this component of hunting pressure would be exerted in those areas.

Respondents were asked about the hunting effort they expended on each species of game in Maine (Table 12). For both groups, deer was the most popular species. Residents, in addition, exerted significant effort on ruffed grouse, wild ducks, pheasant, snowshoe hare, and woodcock while non-residents hunted bear and, to a lesser extent, ruffed grouse.

### Attitudes and Preferences

As a measure of the value received by hunters from the hunting experience in Maine, respondents were asked to place a dollar value on a typical day of hunting (Table 1). Before discussing these valuations in detail, it must be noted that a question of this type may provide a number of different answers (Table 13). Twenty-five percent of the respondents chose not to answer this question on the survey. Although an answer of "priceless" (the response of 8.8 percent of the sample) may have interesting implications in a recreational study, it



KEY TO STARRED AREAS ★

- ★ 1 Old Orchard Beach
- ★ 2 West Bath
- ★ 3 Bath City
- ★ 4 Arrowsic
- ★ 5 Westport
- ★ 6 Carletonville
- ★ 7 Friendship
- ★ 8 Chair Head
- ★ 9 Southeast Harbor
- ★ 10 Chase Brook
- ★ 11 Eastport City
- ★ 12 Hecatic Falls
- ★ 13 Farmington
- ★ 14 Westport City
- ★ 15 Stockton Springs
- ★ 16 Naum
- ★ 17 Forest City TWP
- ★ 18 Carleton Township
- ★ 19 Andover West Surbiton
- ★ 20 Perkins Township
- ★ 21 Washington Township
- ★ 22 Unity Township
- ★ 23 Upper Middlesex TWP
- ★ 24 Indian Stream TWP
- ★ 25 Little River TWP
- ★ 26 Higgins Academy Grant TWP
- ★ 27 Upper Middlesex TWP
- ★ 28 North Yarmouth Academy Grant TWP
- ★ 29 South Yarmouth Academy Grant TWP
- ★ 30 Sandwich Academy Grant TWP
- ★ 31 Tarrant & Hayman Grant TWP
- ★ 32 Deer Academy Grant
- ★ 33 Silver Ridge Trap
- ★ 34 South Shore

# WILDLIFE MANAGEMENT UNITS

MINOR CIVIL DIVISIONS  
STATE OF MAINE

PREPARED BY  
THE STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF TRANSPORTATION  
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IN COOPERATION WITH THE  
U.S. DEPT. OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

Provided By: Maine Dept. of Inland Fisheries and Game

TABLE 12

Percent of Respondent's Hunting Effort by Selected Game Species, 1978

Game Species	Resident	Non-Resident
	(Percent)	
Deer	69.8	84.9
Bear	1.4	8.9
Ruffed Grouse	11.7	2.6
Snowshoe Hare	5.2	1.2
Gray Squirrel	0.6	0.2
Fox	0.3	0.1
Raccoon	1.0	0.1
Wild Duck	3.3	0.4
Pheasant	2.7	0.2
Woodcock	2.6	0.9
Bobcat	0.2	0.2
Coyote	0.3	0.1
Dove	0.0	0.0
Goose	0.4	0.0
Sea Duck	0.9	0.1

TABLE 13

Most Important Reasons Why Respondents Hunt, 1978

Reason	Resident	Non-Resident
	(Percent)	
Bagging the Game	6.6	6.4
Challenge of Pursuing Wild Game	17.9	23.2
Companionship with Other Hunters	6.0	12.7
Escape from Routine	11.4	12.1
Enjoyment of Nature	40.2	39.2
Being by Self	3.2	2.1
Food Source	13.5	2.7
Exercise	1.2	1.6
Total	100.0	100.0

$X^2 = 90.53, 7 \text{ d.f.}; \text{ significant at } .05$

cannot be easily incorporated into a cardinal valuation process. Answers that do not correspond realistically to the value of the activity or the income of the participant introduce bias into the valuation. Although the choice of an upper limit for valuations may be difficult and arbitrary, it is reasonable to examine the range of response to determine an optimum cutoff figure. In this case, only 0.7 percent of the respondents answering indicated a valuation in excess of 1,000 dollars per day. This value, therefore, was selected as the upper limit for computation of the hunting valuations for this study.



Non-residents gave a significantly higher per-diem valuation than resident hunters (Table 1). This discrepancy may be a result of income differences (discussed in the following section), higher hunting expenditures, and greater attraction to the more remote areas of the state which may represent a quite different setting from the urban surroundings of most non-resident hunters.

Respondents were also asked to rank a list of reasons of why they hunt (Table 13). Although enjoyment of nature was the most important reason listed by both groups, they differed significantly in other motivation factors. Non-residents were relatively more motivated by companionship with other hunters and pursuit of wild game while residents cited food source relatively more often.

### Socio-economic Characteristics

Socio-economic characteristics may be especially important to recreational studies in that certain of these basic characteristics may influence activity-related behavior. Two of the most important may be income and the rural-suburban-urban nature of the place of residence. Non-residents had a much higher family income than residents (Table 14). Sixty-two and four-tenths percent of the non-resident hunters had family incomes of 15,000 dollars or more compared to 34.7 percent for residents. These results may not be unusual in that this study compares a heterogeneous group of Maine residents with a more select group of non-residents who, because of the greater costs they faced in pursuing hunting in Maine, would likely have higher discretionary incomes.

TABLE 14  
Resident and Non-resident Hunter's Income, 1978

Income	Resident	Non-Resident
(Dollars)		(Percent)
Less than 5,000	15.5	3.2
5,000 - 9,999	24.1	10.3
10,000 - 14,999	25.7	24.1
15,000 - 24,999	26.3	37.3
Over 24,999	8.4	25.1
Total	100.0	100.0

$X^2 = 237.97$ , 4 d.f.; significant at .05

These income figures may also partially explain the differences in hunting day valuations, type of recreational activities, and vehicles preferred by the two groups.

As discussed earlier in this study, non-resident hunters were more likely to have been raised in larger population areas than residents. Just as important as the actual population figures is the perception of the environment in which the respondents grew up. Non-residents were significantly more likely to describe the type of area where they were raised as suburban or city compared to resident hunters, although both groups mentioned rural surroundings most often (Table 15). The more urban character of the non-resident hunter may have exerted an in-

TABLE 15

Description of Type of Area Where Respondent Grew Up, 1978

Area Description	Resident	Non-Resident
	(Percent)	
Rural	69.2	47.2
Suburban	18.1	22.2
City	12.7	19.6
Total	100.0	100.0

$X^2 = 106.36$ , 2 d.f.; significant at .05

fluence on his hunting motivations, employment opportunities, availability of alternative activities, and per-diem valuations. Hunting motivations and valuations may reflect a need for a change of atmosphere or skill development not available in most urban surroundings. The type of alternative activities and employment opportunities are a function of the physical limitations of the residential setting of such sportsmen.

TABLE 16

Respondent's Employment, 1979

Type	Resident	Non-Resident
	(Percent)	
Professional-Technical	13.0	15.7
Managerial-Administrative	7.6	16.3
Sales-Clerical	6.4	3.4
Service	8.4	12.8
Operatives-Transport	7.1	7.7
Craftsman-Foreman	21.8	24.5
Laborers	10.2	7.1
Farm-Fish-Woodsman	5.8	2.2
Retired-Disabled	10.7	7.7
Other	9.0	2.6
Total	100.0	100.0

$X^2 = 114.52$ , 9 d.f.; significant at .05

Non-resident hunters were more likely to be employed in professional, service, or business-related fields whereas residents had a relatively greater representation in some of the lower paying professions or were retired or disabled (Table 16). This pattern of differences extended to education in that non-residents had a significantly greater educational attainment than their resident counterparts (Table 17). It must be remembered that education, income, and employment are interrelated and each may be a cause or a result of one or more of the others.

Resident hunters were significantly younger, and less likely to be married or have children (Tables 1, 18, 19). Residents did have a larger representation of female hunters in the sample and this may reinforce the tendency for residents to regard hunting as more of a family activity than non-resident hunters (Table 20).

TABLE 17  
Respondent's Education, 1978

Grade	Resident	Non-Resident
	(Percent)	
8 or Less	8.6	5.0
9 - 11	12.4	11.7
12	51.9	49.6
13 - 15	11.9	14.7
16	9.8	12.7
Over 16	3.4	5.0
Other	2.0	1.3
Total	100.0	100.0

$X^2 = 27.58$ , 6 d.f.; significant at .05

TABLE 18  
Marital Status of Resident and Non-Resident Hunters, 1978

Marital Status	Resident	Non-Resident
	(Percent)	
Married	77.5	81.8
Single	22.5	18.2
Total	100.0	100.0

$X^2 = 5.47$ , 1 d.f.; significant at .05

TABLE 19

Households with Children of Resident and Non-Resident Hunters, 1978

Children	Resident	Non-Resident
	(Percent)	
Yes	73.2	77.3
No	26.8	22.7
Total	100.0	100.0

 $X^2 = 4.36$ , 1 d.f.; significant at .05

TABLE 20

Sex of Resident and Non-Resident Hunters, 1978

Sex	Resident	Non-Resident
	(Percent)	
Male	93.4	99.2
Female	6.6	0.8
Total	100.0	100.0

 $X^2 = 39.59$ , 1 d.f.; significant at .05

## SUMMARY

The results of this survey indicate that there are significant differences between resident and non-resident hunters with regard to hunting activity, attitudes and preferences, antecedent conditions, and socio-economic characteristics.

On the average, resident hunters were over one year less experienced in hunting (23.5 years), first hunted a year younger (14.9), and were raised in smaller population areas (33,244 versus 340,057) than their non-resident counterparts. Non-resident hunters were older (41.5 versus 39.3), had higher incomes (see Table 15), spent \$204 more to hunt, but hunted fewer days (9.3 versus 14.4) than residents. Residents preferred to hunt in the southern part of the state and preferred a wider range of species. Six game species received over two percent of the resident hunter's effort as compared to only two species for non-residents. Deer received the greatest proportion of hunting effort by both groups (69.8 percent and 84.9 percent) but ruffed grouse was the next most preferred species by residents (11.7 percent of hunting effort) while non-residents concentrated on bear (8.9 percent of hunting effort). Non-residents preferred hunting in the northern and eastern portions of the state. Non-resident hunters were more likely to



have had some college education, to be married and have children. Finally we should note that 6.6 percent of the resident hunters are females as compared to only 0.8 percent of the non-resident hunters.

These differences and the others discussed in this report demonstrate that the resident and non-resident hunting populations in Maine are quite different and that management policies aimed at providing the best possible hunting experiences for these two populations must be reconciled with the diverse nature of the resident and non-resident hunter.

## REFERENCES

1. Maine Department of Finance and Administration, "Maine State Government: Annual Report 1976-1977." Augusta: Maine Department of Finance and Administration, 1977.
2. Newmann, Herbert E., *An Introduction to Public Finance*. New York: John Wiley and Sons, Inc., 1968.