

# A Market Segmentation Analysis of Desired Ecotourism Opportunities

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1997

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*Funding for this report has been provided through the  
Northern Ontario Development Agreement's Northern Forestry Program.*

Twynam, G. David

A market segmentation analysis of desired ecotourism opportunities

(NODA/NFP technical report; TR-34

Includes bibliographical references.

"Funding for this report has been provided through the Northern Ontario Development Agreement's Northern Forestry Program."

ISBN 0-662-24953-4

DSS cat. no. Fo29-42/34-1997E

1. Ecotourism—Ontario, Northern.
2. Tourist trade—Ontario, Northern.
3. Market segmentation.
4. Market surveys.
- I. Robinson, David W.
- II. Great Lakes Forestry Centre.
- III. Title.
- IV. Series.

HC117.05T89 1997      380.1'45917131      C97-900035-1

©Her Majesty the Queen in Right of Canada 1997  
Catalogue No. Fo29-42/34-1997E  
ISBN 0-662-24953-4  
ISSN 1195-2334

*Copies of this publication are available at no charge from:*

Publications Services  
Natural Resources Canada  
Canadian Forest Service  
Great Lakes Forestry Centre  
P.O. Box 490  
Sault Ste. Marie, Ontario  
P6A 5M7

*Microfiche copies of this publication may be purchased from:*

Micro Media Inc.  
Place du Portage  
165, Hotel-de-Ville  
Hull, Quebec J8X 3X2

The views, conclusions, and recommendations contained herein are those of the authors and should be construed neither as policy nor endorsement by Natural Resources Canada or the Ontario Ministry of Natural Resources. This report was produced in fulfillment of the requirements for NODA/NFP Project No. 4052 "A market segmentation analysis of desired ecotourism opportunities".

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Twynam, G.D.; Robinson, D.W. 1997. A market segmentation analysis of desired ecotourism opportunities. Nat. Resour. Can., Canadian Forest Service, Great Lakes Forestry Centre, Sault Ste. Marie, ON. NODA/NFP Tech. Rep. TR-34. 52 p. + appendices.

## ABSTRACT

This study was designed to identify ecotourism opportunities desired by visitors and potential visitors to northern Ontario. The purpose of the study was to develop segmentation profiles of potential ecotourists, and to identify specific sectors that would provide a demand for northern Ontario ecotourism.

The study was conducted using two surveys. The first survey focused on summer travelers, visitors to the area, and residents. In total, 1 008 surveys were distributed to people intercepted randomly at different visitor information centers across northern Ontario during July and August 1995. Of these, 556 useable questionnaires were returned, resulting in a 55 percent response rate. The second survey, conducted by mail, focused on people who have an interest in outdoor recreation as indicated by their membership in recreational organizations. Two thousand (2 000) questionnaires were mailed to Canadians (1 000 members of the Mountain Equipment Co-operative) and Americans (1 000 members of Recreation Equipment Incorporated). This mailing was also stratified by residency, with particular concentration on areas adjacent to or in the near vicinity of northern Ontario. The 799 usable questionnaires returned resulted in a 43 percent response rate. As responses differed between the two survey groups, the two questionnaires were studied separately.

Principal component analysis and cluster analysis identified five different market segments in the group of *intercept* survey respondents. Three of the five groups show a potential demand for ecotourism in northern Ontario. **Enthusiasts** are eager to try almost any activity, from the relaxing to the daring and adventurous. This group enjoys almost all settings except those having evidence of extensive human (especially industrial) interference. **Adventurers** crave active, challenging, and physically demanding outdoor sports. They prefer remoteness and the ruggedness of a natural environment. **Naturalists** enjoy nature activities; visiting natural areas; unique landscapes; and seeing varieties of plants, birds, and wildlife. They also enjoy a pristine natural environment.

The same statistical analysis was performed on the data of *mail* survey respondents. Analysis of these questionnaire results identified six different market segments. Of the six, four emerged as good targets for ecotourism



in northern Ontario. Three are described with similar characteristics to the intercept survey: namely, the **Enthusiasts**, the **Adventurers**, and the **Naturalists**. The fourth segment to emerge from this sample group, and one likely to contribute to ecotourism demand in northern Ontario, were the **Escapists**. The **Escapists** enjoy remoteness, unaltered nature; and a number of physically demanding and challenging activities such as climbing, canoeing, and kayaking. This group places importance on solitude, knowledge, and learning while they are involved in an ecotourism trip.

The objective of benefit segmentation was to divide a relatively heterogeneous group of actual and potential ecotourists into more homogeneous groups having similar product and service needs. The segments that have been identified will allow operators and marketers in the tourism industry to identify specific target markets and to develop the product and service packages that best suit each of the segments.

### RÉSUMÉ

Cette étude avait pour objet de cerner les souhaits des visiteurs, y compris des visiteurs potentiels, en matière d'écotourisme dans le Nord de l'Ontario. Elle visait à établir des profils des différents segments de marché parmi eux et à déterminer les secteurs précis qui fourniraient la demande pour l'écotourisme dans cette région.

L'enquête a comporté deux volets. Le premier a consisté à distribuer des questionnaires aux personnes (voyageurs, visiteurs et résidents) interceptées au hasard à différents centres d'information pour visiteurs dans le Nord de l'Ontario en juillet et août 1995. Sur 1 008 questionnaires remis, 556 utilisables nous ont été retournés, pour un taux de réponse de 55%. Le deuxième volet a ciblé les personnes paraissant intéressées à pratiquer des activités récréatives de plein air d'après leur inscription à de telles activités. Nous avons envoyé 2 000 questionnaires par la poste, au hasard, à 1 000 membres de la Mountain Equipment Co-operative au Canada et à 1 000 membres de Recreation Equipment Incorporated aux États-Unis. Par ailleurs, nous avons effectué une certaine stratification en fonction de la résidence, en particulier en envoyant plus de questionnaires dans les régions proches du Nord de l'Ontario. Dans ce deuxième volet, nous avons reçu 799 questionnaires remplis utilisables, pour un taux de réponse de 43% (150 questionnaires non livrés ont été retournés). Les réponses des deux groupes étant très différentes, nous les avons étudiées séparément.

Les réponses du premier volet ont été soumises à une analyse en composantes principales et à une analyse typologique qui nous ont permis de cerner 5 segments de marché parmi les répondants. Trois des groupes représentent une demande potentielle pour l'écotourisme dans le Nord de l'Ontario; ils sont définis comme suit : (1) les «enthousiastes», qui sont



avides d'essayer à peu près tout, tant les activités touristiques relaxantes que les audacieuses, et qui apprécient de nombreux cadres différents, sauf les plus affectés par l'activité humaine (industrielle surtout); (2) les «aventuriers», qui recherchent les sports de plein air physiquement exigeants ≤ les défis ≤ et qui préfèrent les paysages reculés et sauvages; (3) les «naturalistes», qui aiment les activités dans la nature, c'est-à-dire visiter des lieux naturels, admirer des paysages spéciaux et observer une grande variété de plantes et d'animaux (oiseaux notamment), et qui apprécient les milieux naturels vierges.

Les données de l'enquête postale ont été soumises aux mêmes analyses statistiques. Celles-ci ont indiqué 6 segments de marché différents parmi les répondants. Parmi eux, 4 paraissent de bonnes cibles pour l'écotourisme dans le Nord de l'Ontario. Trois sont définis avec les mêmes termes que dans le premier volet : enthousiastes, aventuriers et naturalistes. Le quatrième segment est formé par ceux qui recherchent l'évasion et qui aiment les lieux reculés, la nature sauvage et certaines activités physiquement exigeantes représentant un défi, comme l'escalade, le canotage et le kayak. Dans les excursions écotouristiques, ce groupe juge importants les aspects solitude, acquisition de connaissances et apprentissage.

Cette segmentation par avantages avait pour objectif de diviser un ensemble relativement hétérogène d'écotouristes en groupes plus homogènes ayant des besoins similaires en produits et services. Elle aidera les voyageurs de l'industrie touristique à cerner les marchés cibles et à élaborer les meilleurs ensembles de produits et de services pour chacun des segments.

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# A MARKET SEGMENTATION ANALYSIS OF DESIRED ECOTOURISM OPPORTUNITIES

## INTRODUCTION

### The Changing Role of Canada's Forests

In northern Ontario<sup>1</sup> and across Canada generally, the traditional view of forests as a source of timber and timber industry related employment is expanding to include public use and noncommodity values. With such evolving perceptions come changes in the definition of appropriate forest use and, indeed, the nature of the relationship between society and forests. The future success of forest managers in northern Ontario will be judged by how well they develop policies that fulfil both timber and nontimber values. In northern Ontario, three major issues contribute to the complexity of this task.

First, northern Ontario has traditionally been a timber industry oriented region. However, it is now recognized that past forest management practices have resulted in unanticipated changes to the environment. These changes are expected to cause growing hardship, and society is now struggling to redress or cope with these concerns. Associated with this, the Canadian public's attitude toward resource use is changing, but traditional management practices have not adequately responded to these changes. It should be remembered that three of four Canadians view the forest as a national treasure to be held in trust for future generations (Scace et al. 1992). Public opinion researchers have argued that the historically dominant utilitarian and anthropocentric management paradigm is becoming more ecosystem oriented and biocentric (Stankey and Clarke 1992, Shindler et al. 1993).

Second, it is recognized that the sustainability of Canada's forests encompasses three components: namely, environmental sustainability, economic sustainability, and social sustainability. To achieve sustainability, forest managers are required to acknowledge that since the benefits derived from Canada's forests should be diverse and multiple, forest management systems must adopt a multivalued approach. Such an approach must reflect the values and priorities of the public owners of Canada's forests. And while the largest share of forest revenue in northern Ontario and Canada comes from timber, Carrow (1993) has argued that a greatly increased revenue base could

come from nonextractive people-related activities in the forest, and that successful forest management must adopt a truly integrated resource management approach which seeks to substantially increase the contact between people and the forest.

Third, the forest also comprises a major part of the Canadian landscape, which is a backdrop for a multimillion dollar industry in tourism and outdoor recreation. Ecotourism<sup>2</sup> is now recognized as a viable, long-term use of Canada's forests that can contribute to the development of sustainable forestry policies which build upon the concepts of integrated resource management (Scace et al. 1992). Ecotourism is seen as an alternative means of providing local economic benefits and generating employment in local communities. It can also contribute to the conservation and management of natural areas (Lindberg 1994). Nature-based tourism, or ecotourism, is now the fastest growing sector of both the Canadian and international tourism markets. Proponents of this concept have suggested that the region's abundance of natural settings is ideal for the development of ecotourism products. Ecotourism is perceived as having minimal negative social, ecological, and economic impacts, and this makes it compatible with the concept of sustainable development.

Marshall et al.'s (1992) assessment of Ontario's specialty outdoor tourism products suggests that ecotourism is a major market which awaits development. The Ecotourism Opportunity Identification Study (Development Consulting Limited 1991) also indicates that ecotourism in Ontario has experienced a significantly higher growth rate than have other areas of tourism, has been comparatively recession resilient, and has a potentially higher value-added component than does conventional tourism.

If efficient marketing strategies are devised to accurately target appropriate segments of the ecotourism market, the potential exists for forest-based ecotourism in northern Ontario to become a significant contributor to the tourism industry. Information on the size and growth rate of ecotourism or nature-based tourism is limited. Vickland (1989) cited in Blamey (1995) estimated that special interest tourism is growing at a rate of 10 to 15 percent per year worldwide, compared to 7 to 8 percent annually for

<sup>1</sup> Northern Ontario is based on the electoral district, and residents of northern Ontario are defined as those Canadians living north of Huntsville, Ontario and east of the Manitoba border.

<sup>2</sup> Ecotourism is defined as the use of an area for outdoor recreation travel experiences that conserve the natural environment and improve the welfare of the local people. Outdoor recreation is "all those activities of a recreational nature resulting from our interest in the environment and our relationship to its elements" (Sessoms 1984, p. 238).



all tourism products and services. In 1989 the World Tourism Organization (WTO) estimated that 7 percent of all tourism expenditures internationally were attributed to nature-based tourism (Lindberg 1994). Interest in Ontario's protected areas is indicated by a large number of studies. Between 1981 and 1991 there was an 8 percent increase in nonconsumptive wildlife tourism (Filion et al. 1993). Ontarians spend three times as many days in non-consumptive wildlife activities, such as bird watching, nature photography, wildlife feeding, and nature study, than they do in consumptive activities such as hunting. In 1992, visitors to Ontario provincial parks spent \$14.5 million in park fees and a total of \$299.5 million on their trips (Ontario Ministry of Natural Resources 1992). From May to September 1994, the Temagami area experienced 500 paddlers on average per day on various rivers and lakes (Johnson 1994). These figures indicate that ecotourism could have a major impact on local economies and generate employment opportunities which may not otherwise exist. Traditionally, the forests of northern Ontario have been managed predominantly for timber extraction. This study was premised on the understanding that the use of one resource—in this case the forest—will have implications on all other competing land uses.

### Study Objectives

This project seeks to assess the viability of ecotourism as a multipurpose, nonconsumptive, alternative use of northern Ontario's forests versus their traditional single use as a source of timber. To develop a strategy that can successfully promote northern Ontario as a suitable destination for the ecotourist, it is necessary to identify and quantify the demand for ecotourism in northern Ontario. This demand is defined as the desired ecotourism opportunities of the region's latent (i.e., untapped) ecotourism market.

Focusing on forest based ecotourism activities, the purposes of this study are:

1. To identify ecotourism opportunities desired by those visitors who make up the latent ecotourism market for northern Ontario, and
2. To develop a visitor segmentation profile that, for marketing purposes, identifies the desired ecotourism opportunities of benefit based segmentation sectors of the latent ecotourism market of northern Ontario.

Equipped with this information, it is then possible to match desired opportunities (i.e., demand) to the supply side of the ecotourism demand-supply relationship. Supply consists of the region's existing ecotourism opportunities.

### Ecotourism

To date, literature has provided little in terms of a clear or accepted definition of ecotourism. Scace et al. (1992) have identified a broad range of terms from the current literature. These range from its ecological roots, by referring to it as bio-tourism, to its broader connection to the natural environment, by referring to it as wilderness tourism. Bottrill and Pearce (1995) suggested that although the term has become increasingly popular and its use both in the literature and the marketplace has become widespread, its continued usage has done little to clarify the concept. Wall (1994) suggests that ecotourism is defined on the bases of the characteristics of the destination, such as a relatively natural setting. Valentine<sup>3</sup> states that nature-based tourism is primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature. According to Fennell and Eagles (1990), ecotourism has three components: namely, the attraction of tourists to a unique and natural area, the use of tourism as a tool in nature conservation through education, and the provision of employment for local people. Boo (1992) proposed that ecotourism is a nature travel experience that advances conservation and sustainable development efforts, while Epler Wood (1993) defined ecotourism as responsible travel that conserves the environment and sustains the well-being of local people.

In light of the above discussion, a working definition is proposed for this project. For the purposes of this study ecotourism is defined as "the use of an area for outdoor recreation travel experiences that conserve the natural environment and improve the welfare of the local people".

### Conceptualizing Desired Ecotourism Opportunities

There are several questions regarding the nature of ecotourism/outdoor recreation opportunities. Among these is why do people choose to recreate? Other questions include: why do individuals select a particular activity; why do they select a particular type of setting in which to pursue their chosen activity, and what kind of experience do they wish to gain from pursuing a given activity in a preferred setting? If one understands what individuals seek from resource-based tourism and recreation, then managers can better provide for these desired opportunities and manage for these choices.

As a specific example, knowing what attributes people look for in a forest-based recreation setting would allow managers to better match desired ecotourism opportunities with an existing land base. It would also be easier to predict the potential for conflict between these desired

<sup>3</sup>Valentine, P.S. 1992. The business of packaging adventure travel and ecotours. Paper presented at the Fourth World Congress on National Parks and Protected Areas. 10-21 February 1992, Caracas, Venezuela. World Conservation Union, Caracas, Venezuela.



recreational values and other resource management activities, such as timber or mineral extraction. More importantly, this knowledge could be used to identify solutions or to avoid conflicts before they develop (McCool et al. 1985).

To find answers to these types of questions, researchers need a framework or approach that can be used to structure appropriate questions and guide research. The traditional view of recreation has focused specifically on the recreationists' choice of activities (Manning 1986, Christensen et al. 1991). However, this activity approach to the study of recreation cannot answer questions such as how the quality of the experience could be improved (Manning 1986).

Because of such limitations, a new framework called the *behavioral approach* was identified. This approach conceptualizes recreation as more than just an activity; it defines recreation as *an experience obtained from recreation participation*. The behavioral approach is based on a psychological theory that suggests that human behavior is goal directed and motivated by the realization of benefits (Rollins and Rouse 1991). If one applies the behavioral approach to ecotourism behavior, the choice to visit a given area to participate in a chosen activity is made on the assumption that the ecotourist will derive desired benefits from such participation.

As research into recreation choice evolved, the behavioral approach expanded to consider recreation opportunities as a combination of three components: namely, the activity, the setting, and the experience. "People engage in activities in specific settings to realize a group of psychological outcomes which are known, expected, and valued" (Manning 1986). Examples of ecotourism activities could include hiking or bird watching, examples of settings could include remote wilderness regions or rural areas, and examples of experiences could include solitude or social interaction with family and friends. Consequently, ecotourism can be conceptualized as participation in an activity within a particular setting to obtain experiences that ultimately lead to benefits for the participant.

The behavioral approach also suggests that there is a hierarchy of demand for the three recreation components (Christensen et al. 1991, Rollins and Rouse 1991). There is a demand for activities, a demand for settings, and a demand for experiences. Thus, preferences for experiences are contingent on preferences for settings, which in turn are contingent on preferences for activities. For example, an individual planning a forest-based recreation vacation may first consider the activity and then select an appropriate setting and experience for this activity. If this

individual cannot find the preferred activity within a particular setting, the behavioral approach suggests that they will keep searching until they find a setting in which to participate in the chosen activity.

In summary, the planning and management of ecotourism/outdoor recreation opportunities has evolved into a consideration of the recreation activities, the resource settings, and the expected psychological outcomes or benefits of the experience. These concepts form the basis of the "behavioral approach", which suggests that recreation choices can be explained in terms of goal directed, human behavior (Driver and Tocher 1970). "People engage in activities in specific settings to realize a group of psychological outcomes which are known, expected, and valued" (Manning 1986). In this study, desired ecotourism opportunities are conceptualized as being of three interrelated types:

1. Preferences for particular forest-based activities (for example, nonconsumptive activities such as back-country hiking, canoeing, or bird watching; or cultural/heritage activities such as traditional native community events);
2. Preferences for particular forest settings/environments (for example, an unmodified pristine forest setting or a anthropocentric modified forest setting); and
3. Preferences for particular forest-based experiences (for example, enjoying the scenic beauty of nature or getting away from civilization).

## RESEARCH METHODOLOGY

### Survey Sample and Process

Information for this project was collected from two different groups of potential and actual visitors to northern Ontario. For the first group, a mail survey was sent to random members on the mailing lists of the Mountain Equipment Co-operative (MEC) and Recreation Equipment Incorporated (REI). For the second group, an intercept survey was conducted at a number of visitor information centers in northern Ontario. This questionnaire is reproduced in Appendix A.

Although one may argue that users and nonusers of visitor information centers are different types of people, past research has been inconclusive on this issue. In a study in Oregon, Howard and Gitelson (1989) found no difference between the two groups. However, Cadez and Hunt (1978) noted significant differences between users and nonusers of visitor centers in Utah. This study used visitor information centers to distribute surveys because of safety concerns and convenience.



### ***Response to the Intercept Survey***

A random intercept survey of 1 008 people was conducted at various northern Ontario information centers over 4 weeks during July and August of 1994. The participants included traveling residents and visitors to northern Ontario. Questionnaires were distributed randomly by research assistants at the Pigeon River, Terry Fox, Kakabeka Falls, Fort Frances, and Rainy River travel information centers.

Each participant was provided with a survey package that included an introductory cover letter, the survey, and a self-addressed return envelope with appropriate postage for Canadian or American participants. By allowing participants to complete the survey at their leisure, the number of surveys distributed and received was much higher than if participant interviews took place on site.

Participants were asked to provide their name and mailing address so that future contact could be made with nonrespondents. Very few (only 85 of 1 008 participants) refused to provide this information. This surveying approach also had the advantage of creating a verbal agreement between the research assistant and the potential respondent to complete the survey.

To encourage a response to the survey, participants also had the option of providing their name and address on a ballot inserted in the questionnaire for inclusion in a draw for twenty \$100 gift certificates. The ballots were immediately separated from the questionnaires to insure anonymity of participants and confidentiality of the results.

One month after initial contact, the participants who had not yet returned their questionnaires and who had provided their name and address were sent a postcard reminder encouraging them to complete the survey. A follow-up letter and new survey were mailed to nonrespondents 1 month following the postcard reminder. Of the 1 008 people contacted, 556 usable surveys were returned, resulting in a response rate of 55.2 percent. The follow-up reminders with nonrespondents were quite successful, as only 27.1 percent of the 85 participants who did not provide their name for future contact returned completed surveys.

Americans (60.2 percent response rate) were more likely to complete and return surveys than were Canadians (50.7 percent response rate). No difference existed between the response rates of Canadian visitors or northern Ontario residents. Of the usable surveys, 55 percent were from American visitors to northern Ontario, 31 percent were from Canadian visitors, and 13 percent were from northern Ontario residents. The remaining 1 percent came from the handful of European visitors contacted.

### ***Response to the Mail Survey***

A mail survey of 2 000 potential ecotourists (random visitors associated with either MEC or REI) was undertaken in May of 1994. These nature oriented recreation cooperatives were selected because they represent a potential market for ecotourism. The random selection of participants from the mailing lists of MEC was based on a stratified sample of members in the provinces of Ontario, Quebec, and Manitoba. Recreation Equipment Inc. submitted a random selection of member names based on those states that are in the vicinity of the Great Lakes.

Four weeks after the initial contact was made a postcard reminder was sent to each participant. A follow-up letter and a copy of the survey questionnaire were sent to nonrespondents 3 weeks later.

The questionnaire contained a self-addressed envelope with appropriate postage for Canadian or American respondents. To encourage response to the survey, participants were also given the option of including their name in a draw for twenty \$100 gift certificates. If the respondents opted to include their names, the ballot was immediately separated from the questionnaire to ensure that the survey information remained anonymous. Of the 2 000 surveys forwarded (1 000 surveys respectively to United States and Canadian respondents) 150 were returned to sender and 799 usable responses were received. This resulted in a response rate of 43 percent.

### ***Data Analysis Techniques***

For consistency, data for both the intercept survey and the mail survey were analyzed using the same techniques. This also allowed the researchers to compare information between the group of respondents intercepted at visitor information centers in northern Ontario and those respondents belonging to a recreation-oriented cooperative.

### ***Descriptive Tools***

Basic descriptive statistics were employed to describe the information from the two surveys. As well, chi-squares of cross tabulated nominal data were used to uncover many differences between groups. Paired sample t-tests were employed to examine differences between ratings of various attributes by the same sample. Independent sample t-tests and Mann-Whitney U-tests were used to establish any differences between rated responses of mail and intercept survey respondents. Finally, analysis of variance (ANOVA) tests were conducted to compare ratings between the various market segments.

### ***Principal Component Analyses***

Questions concerning activities, settings, and outcomes (measured by likert scales) were reduced into similar



groups through principal component analysis (PCA). PCA attempts to reproduce a similarity matrix (usually based on Pearson's Product Moment Correlation Coefficient) using fewer components than there are variables. The analyses here employed significant breaks in the eigenvalue slope to determine the appropriate number of components. The components were then rotated (varimax orthogonal rotation) to provide meaningful components. Identification and labeling of the components were facilitated by examining rotated component loadings greater than 10.401 and especially those greater than 10.701. Finally, component regression scores were computed for each individual and each component. Component regression scores have the useful properties of being independent (with orthogonal rotations), being standardized to means of zero and standard deviations of one, and usually being normally distributed. These properties allow the component scores to be effectively used by other techniques, including cluster analysis.

### **Cluster Analyses**

Cluster analyses were conducted on the component regression scores from the PCA on outcomes. Cluster analysis attempts to group together similar cases (individuals) on the basis of the independent variables selected (in this case component regression scores on outcomes). To conduct a proper cluster analysis the data must be standardized and the variables should be independent of each other (i.e., no multicollinearity), both of which are satisfied when using PCA component scores. The choice of the clustering algorithm and distance measure can significantly alter the groups produced by cluster analysis. For this study, a K-Means cluster analysis was chosen for each grouping exercise because it provides fast results compared to more time-consuming hierarchical clustering techniques. Selection of the appropriate number of clusters is also variable when using cluster analysis. For this study, several potential solutions were examined before choosing the appropriate number of clusters.

### **Benefit Segmentation**

To provide market segments from the survey responses, benefit segmentation, a technique coined by Haley (1968), was employed. It works on the common sense principal that segmenting markets by desired outcomes from a product or, as here, an outdoor recreation/ecotourism trip is better than arbitrarily choosing a segmenting variable, e.g., income, education, or age. Since all individuals within a segment seek the same outcomes from an experience, marketing campaigns can be directed toward desired outcomes and not toward ones that are unimportant.

The approach used here for creating the benefit segments followed the outline provided in McCool et al. (1994).

First, a principal components analysis was conducted on the importance ratings for the 37 outcomes that may be achieved through a trip to northern Ontario. Next, the component regression scores for each outcome were cluster analyzed to create market segments. These were then labeled by examining the mean score each segment had for each outcome component. By examining these means, it became quite apparent which segments find what outcomes relatively more or less important.

It should be pointed out that benefit segmentation is only one of many possible segmenting techniques that can be employed in tourism research. Indeed, it is expected that sociodemographic and nationality segmentations would be useful in understanding the behavior of the respondents. As well, whether the respondent had been to northern Ontario or had ever been on an overnight ecotourism/outdoor recreation trip would also provide useful segments for analysis. However, due to limitations associated with the size of this report, these important ancillary differences were, for the most part, omitted so as to allow a greater focus on the benefit segments created.

### **DATA ANALYSIS-INTERCEPT SURVEY**

Since distinct differences exist between the intercept survey and the mail survey samples on many questions relating to ecotourism/outdoor recreation, the two were analyzed independently. As well, market segments were derived separately for each survey. A later section discusses the differences identified between the two survey samples. This section highlights important results from the intercept survey; the following section highlights findings from the mail survey. Responses to the intercept survey represent the opinions and preferences of current visitors to northern Ontario. The respondents to the mail survey more or less represent the present demand for ecotourism and outdoor recreation products from northern Ontario.

The intercept survey was conducted to contact actual visitors to northern Ontario. Mainly, these included individuals from Canada and the United States, but residents of northern Ontario were also considered. Northern Ontario residents were included in this sample because they constitute membership in a large percentage of the outdoor recreation and ecotourism trips taken in northern Ontario, and quite often behave similarly to other respondents when recreating over night in this region. Significant differences between the group of travelers from northern Ontario and the remaining sample will be identified in a later subsection.

The results are discussed in detail in two different subsections. The first part contains the sociodemographics, past and future trips, activities and accommodations, settings,



and outcomes. Here the results are left in aggregated form to provide a description of the preferences and past behaviors of the respondents. The second part examines the market segments created for these survey respondents. In addition to describing the market segments, differences in behavior are highlighted and prospects for enticing these groups to visit northern Ontario for ecotourism or outdoor recreation pursuits are explored.

### **Sociodemographics**

In Table 1, basic sociodemographic and background information on the intercept survey respondents are presented by nationality and aggregated levels. All statistically significant differences are indicated by (\*\*) in the table and are referred to in the text.

#### *Sex*

Table 1 illustrates that 54 percent of the respondents were male. A greater percentage of the males sampled (58 percent to 49 percent) were American.

#### *Marital status*

The vast majority of respondents (82 percent) were either married or lived with common-law partners. Only 13 percent of the respondents indicated that they were single. No differences existed between American and Canadian respondents.

#### *Age*

The majority of respondents (53 percent) were between 30 and 49 years of age, showing that the baby-boom generation is important to northern Ontario's tourism industry. As well, 21 percent of the respondents were greater than 60 years of age, indicating the importance also of the senior population to northern Ontario. American respondents appeared to be older than Canadian respondents (44 percent of the Americans compared to 34 percent of the Canadians were greater than 50 years of age).

#### *Educational attainment*

Overall, the respondents were highly educated. Over 48 percent had completed college and university; only 23 percent of the respondents had attained a high school diploma or less. Statistical analysis indicates that American respondents had higher education attainment levels than did Canadians. Whereas 71 percent of the Canadian respondents had achieved greater than a high school diploma, 83 percent of the Americans had completed studies beyond high school.

#### *Occupational status*

With knowledge of the respondents' age and educational attainment, it is not surprising to find that most had either white-collar (51 percent) or retired (25 percent) occupational status. However, blue-collar workers (12 percent)

and homemakers (7 percent) were also important sources of visitors to northern Ontario. Canadian and American respondents had similar occupations (except for a higher segment of retired American respondents, 27 percent compared to 23 percent).

#### *Family income*

When examining income information offered by the respondents, consideration should be made for the difference in value between Canadian and American dollars (at the time of this study \$1.00 American equaled \$1.30 Canadian). Thirteen percent of Canadians were in the \$30,001 to \$40,000 income bracket, 16 percent were in the \$40,001 to \$50,000 income bracket, and 15 percent were in the \$50,001 to \$60,000 income bracket. There was also a significant percentage of Canadians (18 percent) in the \$80,000+ income bracket.

American family incomes were more widely distributed. The two most commonly cited income brackets, incorporating almost 40 percent of the American responses, were \$30,001 to \$40,000 (18 percent) and \$40,001 to \$50,000 (20 percent). Thirty-two percent of the American respondents indicated salary ranges exceeding \$60,000.

#### *Residence*

The visitors that were surveyed arrived from areas in close proximity to the interview sites. Minnesota, Wisconsin, Illinois, Iowa, and southern Ontario all provide important numbers of tourists to northern Ontario. Northern Ontario residents also take many trips within this area, and thus are an important target for developing ecotourism opportunities. Despite the importance of the areas stated above, it is clear from Table 1 that visitors to northern Ontario are diverse and that they arrive from throughout Canada and the United States.

#### *Home environment*

Most respondents have lived much of their lives in a city (49 percent) or a small town (30 percent). Only 21 percent have lived most of their lives in rural areas. Statistical analysis revealed that Canadian respondents were much more likely to have lived most of their lives in cities (58 percent) than were American respondents (42 percent).

#### *Membership in groups/clubs*

Environmental organization (e.g., World Wildlife Fund) membership was at 18 percent for respondents; outdoor recreation club (e.g., a canoeing association) membership was slightly lower at 11 percent. American respondents had a statistically significant, higher membership rate in environmental organizations (22 percent) than did Canadian respondents (13 percent). No significant nationality difference existed on the basis of outdoor recreation club membership.



**Table 1.** Sociodemographics and background information about respondents.

Attribute	Percentage			Attribute	Percentage		
	Cdn	US	Total		Cdn	US	Total
<b>Sex</b>				<b>Income</b>			
Male	49.4	57.6	53.6	< \$10,000	1.4	2.1	1.6
Female	50.6	42.4	46.4	\$10,000–\$20,000	4.6	4.6	5.2
				\$20,001–\$30,000	12.0	12.0	12.3
<b>Marital status</b>				\$30,001–\$40,000	18.3	18.3	15.9
Married/common-law	82.0	81.8	81.5	\$40,001–\$50,000	20.4	20.4	18.3
Single	11.8	13.2	12.9	\$50,001–\$60,000	11.3	11.3	12.9
Divorced	4.1	4.3	4.3	\$60,001–\$70,000	12.0	11.6	11.9
Widowed	2.0	0.7	1.3	\$70,001–\$80,000	6.7	6.5	6.5
				> \$80,000	12.7	17.6	14.7
<b>Age (years)</b>				<b>Residency</b>			
20–29	8.6	6.3	7.3	Minnesota			18.0
30–39	25.4	17.9	21.6	Northern Ontario			12.9
40–49	31.1	30.8	30.9	Southern Ontario (exc. Toronto)			11.3
50–59	16.4	20.9	18.7	Wisconsin			7.4
60–69	13.1	19.2	16.5	Metro Toronto			5.9
70+	4.9	4.3	4.5	Illinois			4.7
<b>Educational attainment **</b>				Iowa			4.3
Some high school	13.4	3.3	7.7	Alberta			4.3
High school diploma	15.9	14.0	14.9	Michigan			4.1
Trade or vocational qualification	12.1	22.9	11.2	Manitoba			3.9
Some university/college	4.7	29.9	18.0	British Columbia			2.2
University/college graduate	12.1	19.3	32.2	Texas			2.0
Postgraduate studies	11.7	10.6	16.0	Others			19.0
<b>Occupational status</b>				<b>Home environment **</b>			
White-collar	47.8	52.9	51.1	City	57.9	42.0	49.2
Retired	22.6	27.1	24.8	Small town	26.2	32.8	29.8
Blue-collar	13.4	10.2	11.5	Rural area	15.9	25.3	21.1
Homemaker	10.2	4.9	7.2	<b>Environmental organization **</b>			
Student	4.3	3.6	3.9	Yes	13.1	21.5	17.6
Service	0.5	1.3	1.0	<b>Outdoor organization</b>			
Unemployed	1.1	0.0	0.5	Yes	9.0	12.6	10.9

\*\* Denotes statistical significance at the 95 percent level.



### *Sociodemographic summary*

To summarize the information above, it appears that visitors to northern Ontario are highly educated, financially secure, married individuals with an active interest in the environment. The respondents either belong to the baby-boom generation and are employed in white-collar occupations or they are elderly, retired individuals.

### **Past Trips**

To gain insight on the revealed preferences of past trips for ecotourism/outdoor recreation activities and for northern Ontario in general, respondents were asked to provide details of their previous travel. The first question asked about past ecotourism/outdoor recreation trips taken anywhere (81 percent of respondents had indicated that they had taken a past overnight trip for ecotourism/outdoor recreation), while the second question focused on northern Ontario trips that were based on any activities. The results of these two questions are compared in Table 2.

As can be seen from this table, fishing and camping were

the two most popular activities undertaken on overnight ecotourism/outdoor recreation trips. Although fishing and camping had also been frequently undertaken in northern Ontario (20 percent and 11 percent, respectively) sightseeing, stopping in the area as part of a longer trip, and a basic relaxing holiday were all cited as important activities. Canoeing and hiking comprised a smaller segment of both ecotourism/outdoor recreation trips and northern Ontario trips. Families were revealed as the most popular traveling companions for both past ecotourism/outdoor recreation trips (65 percent) and past northern Ontario trips (68 percent). Friends were companions on about one-fifth of all trips; organizations and family and friends were less often cited as companions. A surprisingly large percentage of respondents stated that their past trips for either ecotourism/outdoor recreation or to northern Ontario were of greater than seven nights in duration (28 percent and 25 percent, respectively). Few differences existed between trip duration and either of the two types of trips described above.

**Table 2.** Comparison of ecotourism/outdoor recreation trips to northern Ontario.

<b>Past ecotourism/outdoor recreation trips</b>		<b>Past trips to northern Ontario</b>	
<b>Activity</b>		<b>Activity</b>	
Fishing	20.7	Sightseeing	29.8
Camping	20.7	Fishing	20.2
Sightseeing	16.9	Traveling through	11.9
Hiking	9.9	Camping	11.4
Canoeing	4.5	Holiday	5.2
		Canoeing	3.5
		Hiking	3.2
<b>Companionship</b>		<b>Companionship</b>	
Family	65.4	Family	68.2
Friends	21.9	Friends	19.4
Organization	6.0	Organization	5.4
Family and friends	3.3	Family and friends	2.4
Other	3.4	Other	4.7
<b>Length of stay</b>		<b>Length of stay</b>	
One night	5.6	One night	7.9
Two nights	14.6	Two nights	12.8
Three nights	12.6	Three nights	10.7
Four nights	9.5	Four nights	10.4
Five nights	9.9	Five nights	11.0
Six nights	7.0	Six nights	9.0
Seven nights	13.0	Seven nights	13.6
More than seven nights	27.9	More than seven nights	24.6



Two additional questions were asked about ecotourism/ outdoor recreation trips taken during the past 5 years. Inquiries regarding the trip destination revealed that one-half of all ecotourism/ outdoor recreation trips took place in northern Ontario. Minnesota was the only other destination that had greater than 5 percent of all ecotourism/ outdoor recreation trips. Southern Ontario, Wisconsin, Michigan, British Columbia, and Alberta were targeted on 2 percent to 5 percent of the trips. The second question asked about the type of accommodation used during the ecotourism/ outdoor recreation trip. As Figure 1 reveals, organized campgrounds<sup>4</sup>, including tent (19 percent) and recreational vehicle (rv) (17 percent) types, were used most often. Hotels and basic lodge/huts were also used quite extensively (18 percent and 16 percent, respectively). Primitive campgrounds were used much less (12 percent) by respondents than were organized campgrounds. Luxury lodges and bed and breakfast establishments were used infrequently.

*Summary of past trips*

Most respondents have taken past ecotourism/ outdoor recreation trips of at least one night's duration. While on these trips the respondents usually traveled with family, went fishing or camping, and stayed in organized campgrounds or hotels. Quite often these trips took place in northern Ontario. Past, general, northern Ontario trips by respondents also involved traveling with families, but fishing and camping activities were secondary to sight-seeing trips.

**Potential Northern Ontario Ecotourism or Outdoor Recreation Trips**

This section asked respondents to state their preferences for a number of different attributes regarding a potential ecotourism/ outdoor recreation trip to northern Ontario. Table 3 displays the stated preferences of respondents for a potential northern Ontario trip.

*Length of trip*

Two-thirds (67 percent) of the respondents indicated that their trip would last between three and seven nights. Only 13 percent of the respondents stated they would take a trip of two nights or less in northern Ontario. This is lower than the percentage of respondents who have taken past ecotourism/ outdoor recreation trips of such duration. However, 25 percent of the respondents would take a trip lasting in excess of seven nights. This is comparable to the percentage found for this duration for both past northern Ontario trips and past ecotourism/ outdoor recreation trips.

*Accommodations*

When asked about preferred accommodation on a northern Ontario trip, the most popular response was a hotel or motel (43 percent of all responses). A tent was cited second (16 percent of the respondents) followed by a recreational vehicle (13 percent of the respondents). A trailer was the accommodation choice of 8 percent of the respondents, while a lodge and pickup camper were stated by 4 percent and 3 percent of the respondents, respectively.

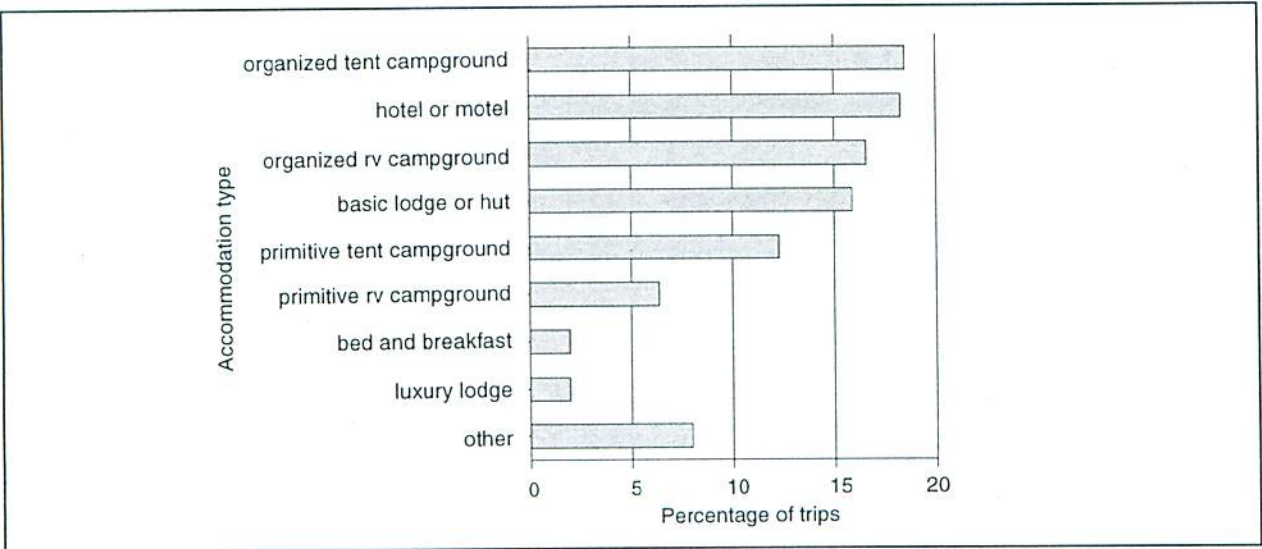


Figure 1. Types of accommodation on past ecotourism trips.

<sup>4</sup> Organized campgrounds have some type of human waste facility, possibly showers, possibly designated rv or tent sights, and charge a fee for using the grounds. Primitive campgrounds have no facilities, no check-in point, and no fees. A basic lodge or hut has basic facilities and may have electricity. A luxury lodge has full, modern facilities and services.



**Table 3.** Stated preferences for a potential northern Ontario trip.

Length of trip	Percent of respondents	Accommodations	Percent of respondents
One night	7.1	Motel	42.8
Two nights	6.1	Tent	16.0
Three nights	14.0	Trailer	8.2
Four nights	11.4	Lodge	3.6
Five nights	14.2	Pick up camper	3.2
Six nights	7.9		
Seven nights	14.6	<b>Trip organizer</b>	
More than seven nights	24.7	Self	85.5
		Another member of group	9.0
<b>Companionship</b>		Commercial tour agency	2.9
Family	61.9	Commercial outfitters	2.1
Friends and family	25.0	Club	0.5
Friends	11.0		
Alone	1.1		
Organization	0.6		
Other	0.4		

With a high percentage of responses indicating a motel, it appears that a large economic impact would be felt in northern Ontario from increased ecotourism and outdoor recreation.

#### *Companionship*

The companionship preferences for a potential, northern Ontario ecotourism/outdoor recreation trip differed slightly from the distribution from both the past northern Ontario trips and past ecotourism/outdoor recreation trips taken by respondents. Over 60 percent of the respondents indicated their family would be their most preferred companion on such a trip. However, 11 percent of respondents would travel solely with friends and 25 percent of the respondents would travel both with friends and family. Additionally, 1 percent of the respondents indicated that they would travel alone on such a trip.

#### *Trip organization*

When asked who they would rely on to organize a trip to northern Ontario, 86 percent of the respondents answered that they would organize their trip. Only 9 percent of the respondents indicated that another member of their group would organize such a trip. As well, commercial tour agencies (3 percent) and commercial outfitters (2 percent) were less preferred by respondents.

#### *Time needed to organize a trip*

As Figure 2 displays, respondents begin planning an outdoor recreation trip approximately 3 to 5 months in

advance. As well, many respondents begin planning their trips 1 to 2 months or 6 to 11 months in advance (24 percent and 23 percent, respectively). Very few respondents indicated that they would take greater than 12 months to begin planning a trip.

#### *Information sources likely to be used*

Respondents were asked what types of information they most often used for trip planning—in part to help find mediums that could be used to contact these people. Figure 3 summarizes the sources of information. The most popular source of information was a recommendation by friends or relatives (70 percent). Tourist offices (54 percent), travel magazines (33 percent), magazines in general (25 percent), and books (22 percent) were also important information sources for respondents. Newspapers were the only other source that was likely to be used greater than 10 percent of the time.

#### *Travel months preferred*

Figure 4 illustrates the preferred months of travel for an ecotourism/outdoor recreation trip to northern Ontario. Not surprisingly, because these respondents were contacted in July and August, the vast majority would travel to northern Ontario during this period. A significant percentage of the respondents also indicated that they would be willing to travel to northern Ontario in June or September, although the majority would not. The winter months were not indicated as very popular travel times, but it appears that seasonal transition months (i.e., November

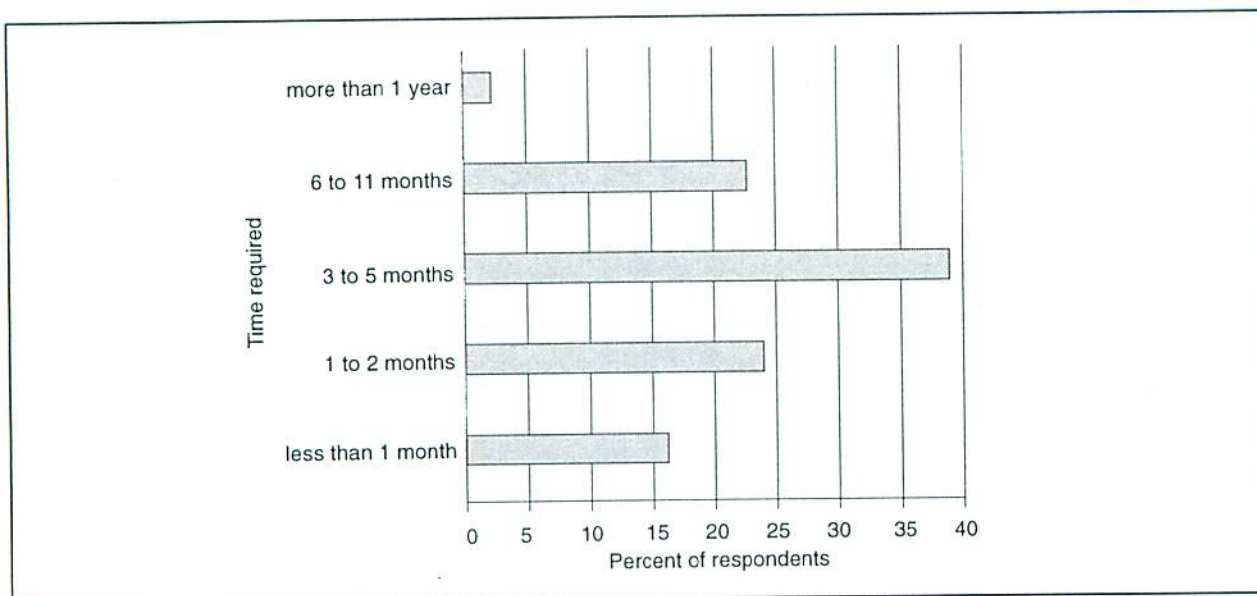


Figure 2. Time required to organize a potential northern Ontario trip.

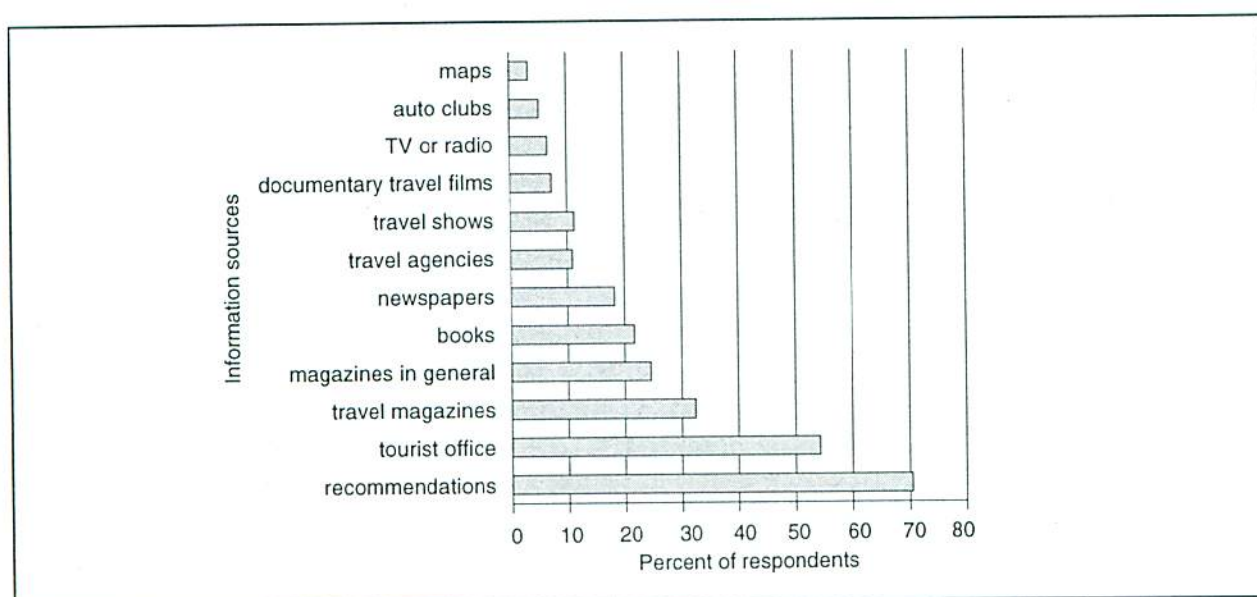


Figure 3. Information resources for a potential northern Ontario trip.

and April) were the least desired. It could be that during these months neither winter nor traditional summer recreation can be undertaken.

#### *Summary of preferences for a potential northern Ontario trip*

The respondents indicated that on a northern Ontario trip they would: stay for three to seven nights; use hotel or tent accommodations; travel with family members or family members and friends; and plan their trip 3–5 months in advance. The respondents would also use recommendations, travel offices, and magazines as sources of

information; and would definitely travel in July and August and possibly between May and October.

### **Activities and Accommodations**

#### **Activities**

Participants were asked to rate 59 different activities currently available in northern Ontario according to their level of interest on a three-point likert scale with one (1) representing not at all interested, two (2) representing somewhat interested, and three (3) representing very interested. The majority of respondents showed some



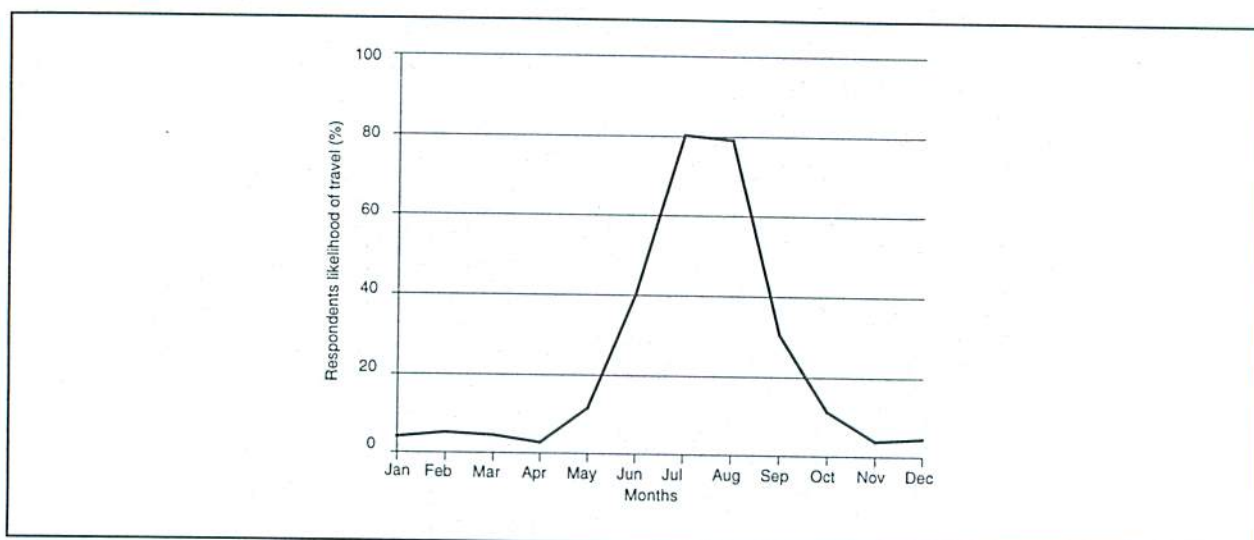


Figure 4. Preferred months for a potential northern Ontario trip.

level of interest in 38 of the 59 different activities. For a complete list of interest ratings for all activities see Table B1 in Appendix B.

To reduce the 59 activities into fewer groups concentrating on similar themes and interest levels, a principal component analysis (PCA) was conducted. The results from the PCA, with a varimax rotation, yielded 12 groups accounting for 66 percent of the data set variation. The components were labeled: *biking, winter snow sports, human-powered watercraft, mechanized water and winter sports, tours, adventure sports, fishing and hunting, nature appreciation, tourist activities, parks and interpretive services, horseback riding, and hiking*. Table 4 details the twelve components and variables that contained rotated component loadings greater than 10.401.

The highest rated activities were from the *parks and interpretive services* and *tourist activity* groups. All members of the *parks and interpretive services* group, including visiting provincial or national parks, visiting waterway parks, and using interpretive services, were ranked in the top six of all activities (with means ranging from 2.53 to 2.18). Visiting provincial or national parks was the highest rated. Within the *tourist activity* group, viewing roadside attractions (mean 2.24), viewing local activities (mean 2.16), viewing human works (mean 2.11), and viewing local native culture (mean 2.10) were among the top ten rated activities. Acquiring artifacts and crafts and interacting with local native culture were less interesting to respondents than were the other variables of the *tourist activities* group. Still, they were ranked 14th and 16th, respectively, with means barely under two on the three-point scale.

The *nature appreciation* group was also rated highly in importance among all activities. Indeed, wildlife viewing was rated as the second most popular activity (mean 2.43), while nature photography and bird watching were 12th (mean 2.00) and 13th (mean 1.97), respectively.

The *hiking* group contained day hiking/walking, which was the 5th most popular activity (mean 2.19). The multiple-day hiking counterpart was less interesting (22nd ranking, mean 1.64).

Within the *fishing and hunting* group a split occurred in the interest levels associated with the different activities. Although fishing to catch within limit and fishing to catch-and-release were important in the 11th (mean 2.02) and 17th (mean 1.84) positions, respectively, hunting and ice fishing were only moderately important with means under 1.5 (34th and 35th rankings, respectively).

The *tours* and *horseback riding* groups were the next most important activity groups rated by respondents. The *tours* group consisted of participating in educational nature tours and/or guided nature tours, which ranked in the 15th (mean 1.89) and 20th (mean 1.66) positions, respectively. Single day horseback riding was rated 23rd in importance (mean 1.60); the multiple-day counterpart was less interesting (41st ranking, mean 1.37).

The *human-powered watercraft activities* and *mechanized water and winter sports* groups were the next most popular activities, although much variation existed within the interest of these. Whereas swimming was seen as the 10th most popular activity (mean 2.04), wind surfing was not very interesting to respondents (53rd ranking, mean 1.24). Most interest ratings for the activities in these two



**Table 4.** Components and variables component loadings for activities' questions.

<b>Biking</b>		<b>Adventure sports</b>	
.798	Multiple-day tour on gravel and paved road	.706	Ice climbing
.777	Multiple-day tour on paved road	.657	Mountain and rock climbing
.688	Day trip on paved road	.618	Spelunking and caving
.676	Day trip on gravel road	.516	Scuba diving
.660	Multiple-day trip mountain biking	.460	Snorkeling
.612	Day trip mountain biking	.403	Winter camping
<b>Winter snow sports</b>		<b>Fishing and hunting</b>	
.663	Multiple-day dog sledding	.839	Fishing catch and keep
.617	Day trip dog sledding	.796	Fishing catch and release
.562	Multiple-day snow shoeing	.744	Ice fishing
.511	Multiple-day snowmobiling	.721	Hunting
.430	Multiple-day cross country skiing	<b>Nature appreciation</b>	
<b>Human-powered watercraft</b>		.741	Bird watching
.768	Multiple-day sea kayaking	.739	Wildlife viewing
.725	Day trip sea kayaking	.591	Nature photography
.709	Multiple-day flatwater canoe	<b>Tourist activities</b>	
.667	Multiple-day whitewater canoe or kayak	.795	Viewing local native culture
.654	Day trip flatwater canoe	.762	Acquiring arts and crafts
.651	Multiple-day sailing	.742	Viewing human works
.579	Day trip whitewater canoe or kayak	.723	Interacting with local native culture
.557	Day trip sailing	.694	Viewing roadside attractions
<b>Mechanized water and winter sports</b>		.691	Viewing local activities
.682	Water skiing	<b>Parks and interpretive services</b>	
.617	Individual sports	.718	Visiting provincial or national parks
.607	Motorized water activities	.689	Visiting waterway parks
.590	Skating	.632	Using interpretive services
.541	Tobogganing	<b>Horseback riding</b>	
.500	Swimming	.792	Multiple-day trip horseback riding
.500	Downhill skiing	.757	Day trip horseback riding
.496	Day trip snowmobiling	<b>Hiking</b>	
.459	Wind surfing	.514	Day trip hiking/walking
<b>Tours</b>		.440	Multiple-day trip hiking
.711	Participating in a guided nature tour		
.635	Participating in educational nature tours		

groups fell between mean scores of 1.6 to 1.4 or 23rd to 39th in importance.

The final three groups, *biking*, *adventure sports*, and *winter snow sports*, contained some of the least preferred

activities. Snorkeling rated highest at 37th (mean 1.41) and ice climbing last with a mean score of only 1.09. Although interest ratings were low for most of these activities, some interest was expressed in pursuing them.



Another interesting aspect about the respondents' interest for various activities was the apparent difference between single-day and multiple-day activities. Through paired t-test analyses, it was revealed that single-day activities were considered much more interesting than were their multiple-day counterparts.

In a different question, participants were asked to list, in order of preference, up to five different outdoor recreational or ecotourism activities that they would pursue on a northern Ontario ecotourism/outdoor recreation trip. The top five activities ranked in order of preference were: hiking (31.4 percent), fishing (21.5 percent), swimming (17.1 percent), canoeing (16.4 percent), and sightseeing (13.2 percent). These results were somewhat surprising as they do not mimic the results from the interest ratings for activities.

### Accommodations

Respondents who showed interest in an activity were also asked to identify their preferred type of accommodation for that particular activity from a list of nine types, or to state a different type. Overall, the most popular accommodation (preferred by 22 percent of the respondents) was a hotel or motel. The second most preferred accommodation type was an organized rv campground, indicated as their first choice by 16 percent of the respondents. Third was a basic lodge or hut, preferred by 15 percent of the respondents. Organized tent campgrounds were preferred by 14 percent of the respondents. The remaining accommodation types were preferred by 10 percent or fewer of the respondents.

The order of preference for accommodations changed, somewhat, depending on the activity with which the respondent was involved. There were 16 different activities where respondents indicated a hotel or motel accommodation and an organized rv campground as their first and second choices. These activities included the majority of activities in the *tourist activities* group.

Those respondents who indicated an interest in fishing and hunting preferred basic lodge or hut accommodations. Their second choice of accommodation varied slightly, summer anglers preferred organized rv campgrounds, hunters preferred primitive tent campgrounds, and ice fishers preferred hotel or motel accommodations.

Respondents interested in winter activities, such as tobogganing, snowmobiling, snowshoeing, ice skating, and downhill and cross-country skiing; some water activities, such as motorized water activities, sailing, water skiing, and water sports; and individual sports activities preferred hotel or motel accommodations. All respondents of these, with the exception of downhill skiing and individual sports activities, preferred a basic lodge or hut as

their second choice for accommodation. For the two cited above the second choice was a luxury lodge. Those that were interested in these activities for a multiple-day trip indicated a basic lodge or hut accommodation as their first choice.

Accommodation preferences for warm weather activities that involved physical exertion, such as *human-powered watercraft* and *biking* groups, were an organized or primitive tent campground for single-day trips and a primitive tent campground for multiple-day trips.

### Settings

Respondents were asked to evaluate 77 different attributes that would form the type of environmental setting they would desire for their potential northern Ontario outdoor recreation or ecotourism trip. The respondents answered questions about settings using a five-point likert scale, from very undesirable (1) to very desirable (5). The mean desirability scores for each attribute can be found in Table B2 in Appendix B.

As with the questions on activities, a principal component analysis (PCA) was conducted to reduce the numerous settings into fewer, more manageable components. From a significant break in the eigen value slope, seven components, accounting for 52 percent of the data set variation, were selected from the PCA. These seven components were labeled *natural settings*, *remote*, *rod and gun*, *mechanized*, *impacted forest*, *alternative travel*, and *limited campsites*. The varimax rotated component loadings greater than 10.401 can be found in Table 5.

The most desirable component group rated was *natural settings*. All settings in this group had mean ratings above four on the five-point scale, and nine of the top ten rated settings belonged to this group (mean ratings from 4.81 to 4.42). Settings in this group included such things as presence of: lakes, rivers and streams, and rock outcroppings; variety of: wildlife, birds, and plants and trees; and rare species of: wildlife, birds, and plants. Paired t-tests, (see Table B3 in Appendix B), were conducted to detect whether ratings for a variety of species rather than a selection of rare species were significantly different. Although most participants placed a high level of importance on both these setting features, a variety of species was preferred to a selection of rare species in the cases of plants, trees, birds, and wildlife.

Settings concentrating on forms of travel other than an automobile comprised the *alternative travel* component. These settings were rated somewhat lukewarm with a high of 4.18 for an area with developed side trails to a low of 2.65 for travel using hydro right-of-ways. The other settings belonging to this component were, in order of



**Table 5.** Components and variables component loadings for settings' questions.

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<b>Natural settings</b>		<b>Alternative travel settings</b>	
.760	Rare species of wildlife	.713	Travel using hydro right-of-ways
.752	Variety of birds	.684	Travel on high standard trails
.751	Rare species of birds	.569	Travel on lake/river systems
.749	Variety of wildlife	.548	Travel on low-standard trails
.722	Rare species of plants and trees	.504	An area with developed side trails
.706	Large trees		
.705	Views of gorges	<b>Limited campsites settings</b>	
.697	Presence of rivers and streams	.670	An area where camping is restricted
.677	Undisturbed natural scenery	-.593	Access to good swimming
.660	Presence of lakes	.573	An area where no fires are allowed
.613	Variety of plants and trees	.548	An area where no overnight camping is allowed
.552	Presence of rock outcrops	-.530	Presence of beaches
.546	Views of waterfalls		
.518	Area with interpretive signs explaining features	<b>Mechanized settings</b>	
<b>Remote settings</b>		.796	Hearing sounds of vehicles
.822	Area with no facilities	.791	Hearing all-terrain vehicles
.769	Area remote from emergency assistance	.753	Seeing all-terrain vehicles
.521	Area where trails have no bridges	.739	Hearing powered watercraft
.655	Area remote from food, equipment, and supplies	.733	Seeing powered watercraft
-.582	Travel on paved roads	.689	Hearing sounds of logging
.567	Meeting no other people	.687	Encountering industrial vehicles
-.556	Area where human waste facility is provided	.661	View industrial and commercial development
.545	No signs in the area	.659	Seeing evidence of logging
-.537	Area that has interpretive nature programs	.606	Seeing evidence of mining
-.500	Access to area by paved roads	.580	Seeing gravel pits
.494	Travel on low maintenance gravel roads	.571	Seeing hydro lines
.446	Access to area by boat	.522	Being in a logged area
		.512	View of residential development
		.475	Seeing dams in the area
<b>Rod and gun settings</b>		<b>Impacted forest settings</b>	
.610	Hearing gunshots from hunting	.699	Relatively small forested area
.592	Encountering hunters	.603	Mostly recent clear-cut forest
.551	Encountering anglers	.582	Mostly selective cut forest
.488	Relatively large forested area	.493	Moderate forest size
.439	Mostly undisturbed old-growth forest	.477	Recently naturally occurring forest fire forest
.427	Access to good fishing	.452	Mostly second growth forest
		.443	Past naturally occurring forest fire forest
		.423	Recreating on a dammed lake

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desirability: traveling on high-standard trails, traveling on lake and river systems, and traveling on low-standard trails.

The setting group labeled *rod and gun* is quite diverse in both ratings provided by respondents and setting items identified by PCA. While settings such as mostly undisturbed old-growth forest, access to good fishing, and a relatively large forested area all had mean ratings between 4.16 and 3.75; settings such as encountering hunters and hearing gunshots from hunting were considered undesirable, with means of 1.88 and 1.71, respectively. The final setting, encountering anglers, was given a neutral rating by respondents (mean 3.05).

*Impacted forest* settings involve forested sites that have been altered in some form. Surprisingly, most settings in this group were rated between 3.48 and 2.71, including in order of desirability: moderately forested area; mostly second growth, single species younger forest; (exception to group label) recreating on a dammed lake; relatively small forested area; area with a past, naturally occurring forest fire; and mostly selective cut forest. Undesirable settings did exist in this group, however, including an area with a recent, naturally occurring forest fire (mean 2.46), and mostly recent clear-cut forest (mean 1.99).

In terms of desirability, the next most desirable group is the *limited campsites* component. This component contains settings that restrict campsite opportunities or are absent of prime campsite features. The highest rated (3.28) setting of this group is an area where camping is restricted to certain designated sites. This was followed by an area where no fires are allowed (2.45) and finally an area where no overnight camping is allowed (2.16). Although the remaining settings grouped on this component are quite desirable, presence of beaches (mean 4.36) and access to good swimming (mean 4.13), the sign of the component loadings for both of these settings is negative. For interpretation of the component, it is suffice to say that a negative component loading/correlation can be viewed as a positive correlation to the opposite meaning of the variable in question. For example, the negative loading for presence of beaches can be interpreted as a positive correlation between this component and areas without beaches.

The component group labeled *remote* also contains positive and negative component loadings. On average, this component was rated as undesirable by respondents. Settings included: no signs in the area, travel on low maintenance gravel roads, areas where trails have no bridges, an area remote from emergency assistance or rescue, and an area with no facilities at all (means between 2.58 and 2.03). Negative component loadings are associated with the desirable features of: access by paved

roads, areas with human waste facilities, areas with interpretive nature and cultural programs, and traveling in areas with paved roads. These ranged from mean ratings of 4.36 to 3.97.

*Mechanized* settings were the least desired, with only seeing dams in the area receiving a mean rating above the mid-point of three. All other settings, such as hearing and seeing all-terrain vehicles, logging, and mining, received very low desirability ratings by respondents. Here, mean ratings ranged from 2.44 to 1.58. Further paired sample t-tests revealed that audible disturbances were less desirable than were visual disturbances for all items (see Table B4 in Appendix B for these results).

In summary, natural settings were most preferred, with landscape features appearing to be more desirable than flora- and fauna-based settings. Conveniences were also seen as desirable by respondents, especially for accessing northern Ontario. On average, settings with a presence of machine equipment or remote settings were seen as undesirable by respondents.

### Outcomes of Experience

Participants were asked to respond to questions concerning their feelings about the personal experiences and expectations of a trip to northern Ontario. These outcomes were measured using a five-point likert scale ranging from one to five, with one (1) being not at all important and five (5) being extremely important. All but two outcomes (i.e., chancing risky situations and being daring and adventurous) were given importance scores of approximately 3.5 or higher. Table B5 in Appendix B displays the means associated with each outcome desired from a northern Ontario ecotourism/outdoor recreation trip. Again a PCA was conducted to reduce the 37 outcomes into a common set of themes. From the PCA, eight components emerged, explaining 64 percent of the data set variation that concentrated on the themes of *adventure, personal well-being, relaxation, nature, physical health, risk taking, interaction, and independence*. The varimax rotated component loadings greater than 10.401 can be found in Table 6.

*Nature*-based and *relaxation*-oriented outcomes appeared to be most important to the respondents. In the *nature*-based group, settings such as enjoying the scenic beauty; enjoying the sights, sounds, and smells of nature; and preserving the natural environment were among the most important outcomes (mean ratings between 4.65 and 4.23). The *relaxation* group includes relaxing mentally; feeling an emotional release from work; and avoiding the hustle and bustle of daily activities. Comprising the 5th, 6th, and 7th most important outcomes, respectively, these ranged in mean ratings from 4.38 to 4.30.



**Table 6.** Components and variables component loadings for outcomes' questions.

<b>Adventure</b>		<b>Nature</b>	
.718	Experiencing new and different things	.744	Enjoy the sights, sounds, and smells of nature
.687	Travel to and exploring new places	.698	Learn about and appreciate nature
.679	Expanding one's interests	.631	Enjoy the scenic beauty
.671	Adding variety to daily routine	.457	Experience a feeling of freedom
.617	Having a stimulating and exciting experience	.400	Preserving the natural environment
.585	Experiencing new and different things	.501	Helping safeguard forests
.575	Relaxing physically		
<b>Personal well-being</b>		<b>Physical health</b>	
.676	Sharing skill and knowledge with others	.717	Being physically active
.645	Learn about local community	.655	Being self reliant
.636	Think about personal and spiritual value	.534	Keeping physically fit
.615	Learn about native culture		
.602	Meet new and interesting people	<b>Risk taking</b>	
.605	Understand self better	.784	Chancing, risky situations
.523	Do something creative	.758	Being daring and adventurous
<b>Relaxation</b>		<b>Interaction</b>	
.717	Experience an emotional release	.777	Being with people one enjoys
.626	Avoiding the hustle and bustle of daily activity	.499	Sharing experiences with others
.625	Relax mentally	.485	Do something with friends and family
.488	Get away from civilization		
		<b>Independence</b>	
		.861	Experiencing a feeling of control
		.503	Feeling safe and secure
		.488	Making one's own decisions
		.427	Feeling competent

*Adventure*-based and *interaction*-oriented outcomes were the next most important outcome groups rated by respondents. *Adventure*-based outcomes include traveling to and exploring new places, experiencing new and different things, and adding some variety to daily routines. These outcomes ranged between a mean rating of 4.07 to 4.44. *Interaction*-oriented outcomes had slightly more variable mean ratings. Outcomes such as doing something with one's family and being with people who enjoy the same things had mean ratings above 4.25; sharing experiences with others had a mean rating of 3.82.

The next two groups of outcomes in order of importance were *physical health* and *independence*. The *physical health* group ranged from a mean of 4.05 to 3.94 and included being physically active, keeping physically fit, and being self-reliant. The *independence*-based group ranged from a high mean rating of 4.08 for feeling safe and secure to a low of 3.54 for experiencing a feeling of control.

The group with the second lowest outcome importance ratings (although still above a mean of 3.5) was the *personal well-being* group. This group was comprised of outcomes such as doing something creative, learning about local native culture, and meeting new and interesting people.

Finally, the outcomes from the *risk taking* group include the two with mean scores under 3.5. These outcomes, being daring and adventurous and chancing risky situations, were seen as unimportant to the majority of respondents.

#### **Market Segmentation Analysis**

The market segmentation technique chosen for this report, referred to as benefit segmentation, was previously discussed in the methodology section. The benefit segmentation technique works on the principle of grouping people with similar outcome preferences and then developing marketing strategies that focus on the desired outcomes of the groups.



Two stages are necessary to conduct a benefit segmentation. First, a principal components analysis should be conducted on the outcomes desired from a trip so as to reduce the data set into meaningful and independent components of the benefits sought by respondents. The results for the PCA on the outcomes from the intercept survey respondents were described in the last section. The second stage for producing market segments is to group together respondents with similar outcomes (benefits sought), usually by cluster analyzing the outcome component scores for each respondent. In this study, a K-Means cluster analysis was employed with a five-cluster solution chosen. To assist in identifying appropriate labels for the segments, the mean scores for each segment and each component for the PCA outcomes were examined. From these means, identification of the segments was facilitated.

Figure 5 shows the relative differences for each segment's importance for each outcome component (i.e., the mean component scores). **Vacationers** were named because of their desire for *nature* outcomes. They also did not desire *relaxation*, *personal well-being*, or *adventure* outcomes, and they were not interested in many physical activities. The **enthusiasts** label was given to the second segment because this group had positive importance scores for all outcomes except *interaction* and *risk taking*. **Adventurers** were labeled because most important to them were the *risk taking* and *adventure* outcomes, followed by *independence*. Surprisingly, *physical health* outcomes were less important to this group than they were to others. **Naturalists** was chosen as the label to define the fourth

segment. They had the highest score for *nature*-based outcomes and low mean scores for *independence* and *adventure* themes. **Urbanists** were so labeled because they had an above average score for *independence* and below average scores for *nature* and *adventure*. Also, they wished to avoid most physical activities.

Before the profiles for each market segment are generated, two brief relative analyses focus on differences between the segments. First, the components created through the PCA on activities are examined for each market segment, (see Table 7). Next, attention turns to examining the components created by the PCA on settings for each market segment (see Table 8). Analysis on the activity components is kept very brief here; only comments on differences in activity interest are highlighted for each market segment.

Urbanists rated *adventure sports*, *human-powered watercraft*, and *tourist* activities as less interesting than did the average respondent. As well, this group appeared to have less interest than did the average respondent in *parks* and *interpretive* activities.

Naturalists rated *nature appreciation* and *hiking* activities as more interesting than did the average respondent.

Adventurers rated *adventure sports* and *human-powered watercraft* activities as more interesting, and *nature appreciation* activities as less interesting, than did the average respondent. As well, this group appeared to have less interest than did the average respondent in *parks* and

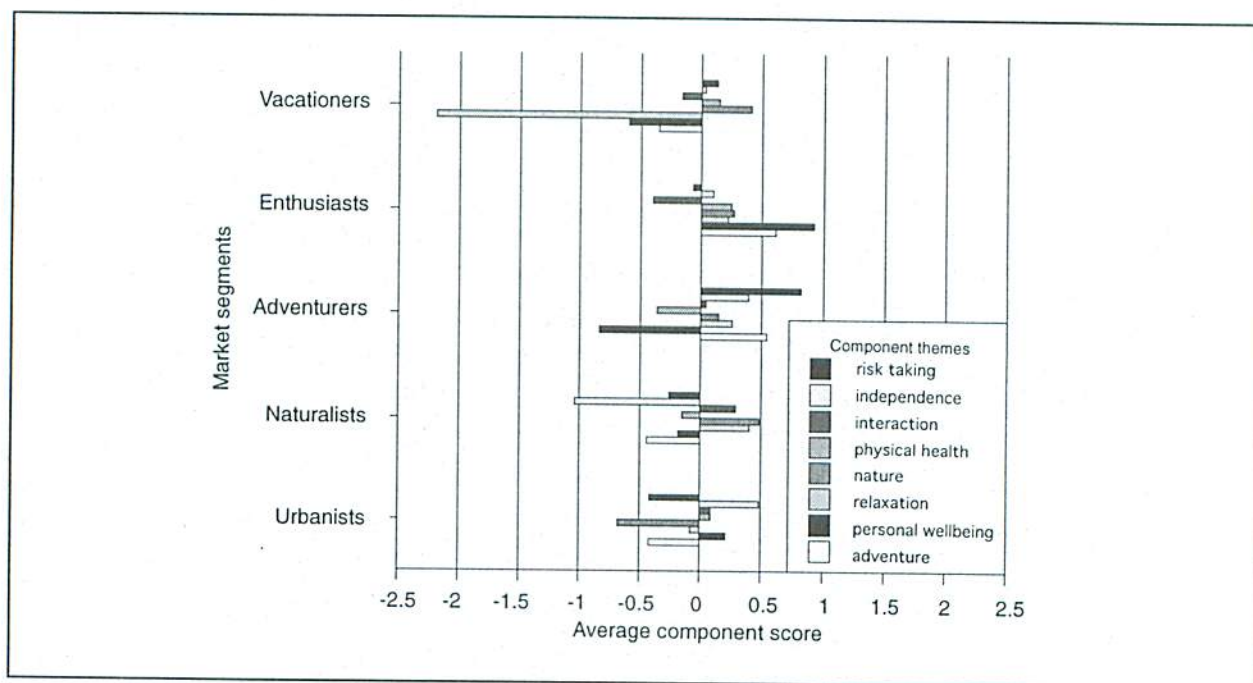


Figure 5. Market segmentation cluster analysis for the intercept survey.



**Table 7.** Mean market segment scores on each activity component.

Activity component	Urbanists	Naturalists	Adventurers	Enthusiasts	Vacationers
Biking	0.05	0.06	0.03	-0.03	-0.08
Adventure sports **	-0.14	-0.23	0.29	0.24	-0.22
Human-powered watercraft **	-0.29	0.11	0.27	0.11	0.12
Mechanized winter and water sports	-0.09	-0.07	0.24	0.04	-0.04
Winter snow sports	-0.06	-0.14	-0.11	0.25	-0.21
Fishing and hunting	-0.03	-0.11	0.23	0.13	-0.16
Nature appreciation **	-0.20	0.25	-0.14	0.35	0.02
Tourist **	-0.20	-0.01	-0.14	0.53	-0.29
Parks and interpretive	-0.18	0.09	0.02	-0.01	0.32
Horseback riding	-0.01	0.07	0.13	0.03	-0.36
Hiking **	-0.11	0.28	0.15	-0.03	-0.38
Tours	0.08	0.03	-0.22	0.12	-0.30

\*\* Denotes statistical significance between groups at the 95 percent confidence level.

**Table 8.** Mean market segment scores on each setting component.

Setting component	Urbanists	Naturalists	Adventurers	Enthusiasts	Vacationers
Natural settings **	-0.48	0.29	0.01	0.44	-0.39
Mechanized	0.21	-0.23	-0.04	0.02	-0.08
Remote	-0.28	0.08	0.32	0.08	-0.13
Impacted forest	0.05	-0.17	0.12	0.00	0.19
Rod and gun	-0.17	-0.14	0.41	-0.02	0.08
Alternative travel	-0.16	-0.17	0.12	0.14	0.48
Limited campsites	-0.11	0.02	-0.11	-0.12	0.62

\*\* Denotes statistically significant difference between groups at the 95 percent confidence level.

*interpretive* activities and more interest in *mechanized water*, *winter sports*, and *fishing and hunting* activities.

Enthusiasts rated *adventure sports*, *nature appreciation*, and *tourist* activities as more interesting than did the average respondent. As well, this group appeared to have more interest than did the average respondent in *winter snow sports*.

Finally, vacationers rated *adventure sports*, *nature appreciation*, *tourist*, and *hiking* activities as less interesting than did the average respondent. This group also appeared to have less interest than did the average respondent in *winter snow sports*, *fishing and hunting*, *horseback riding*, and *tour* activities and more interest in *parks and interpretive services* than did the average respondent.

Table 8 displays the means of each market segment and each component score from the PCA on settings. As well, the statistical tests associated with each setting component are indicated, but again the analysis is very brief.

Urbanists rated *natural* settings as less desirable than did the average respondent. They also appeared to rate *remote*, *rod and gun*, and *alternative travel* settings as less desirable than did the average respondent. Finally, this group appeared to find *mechanized* settings less undesirable than the average respondent.

Naturalists rated *natural* settings as more desirable than did the average respondent. They also appeared to rate *mechanized*, *impacted forest*, *rod and gun*, and *alternative travel* settings as less desirable than did the average respondent.

Adventurers rated *remote* and *rod and gun* settings as more desirable than did the average respondent.

Enthusiasts rated *natural* settings as more desirable than did the average respondent.

Vacationers rated *natural* settings as less desirable than did the average respondent. Vacationers appeared to rate *impacted forest*, *alternative travel*, and *limited campsite* settings as more desirable than others.



Profiles for the various market segments identified from analysis were created next. These profiles attempt to describe who the market segments are and answer the following questions for each market segment: what activities are interesting, what settings are desirable, what outcomes are important, what are the past trip behaviors, and what preferences exist for related aspects of a potential northern Ontario trip? Finally, the likelihood of targeting each market segment for an ecotourism trip to northern Ontario is discussed. The profiles are also displayed in order of their likelihood to contribute to the demand for ecotourism in northern Ontario.

### **Profile of Enthusiasts**

The enthusiast label was given to this group because of their enthusiasm for all outcomes. They are interested in many activities and enjoy nature. While the enthusiast group contains a wide array of people with different socio-demographic backgrounds, it appears that baby-boomers and Americans are found in the greatest concentrations in this group. Enthusiasts represented 22 percent of the survey sample.

#### **Demographics**

- 52 percent are female (only segment with more females than males)
- 75 percent are married (lowest percentage of all segments)
- 17 percent are single (this segment has the highest percentage of divorced respondents)
- 54 percent have children living at home
- 55 percent are baby-boomers between 30 and 49 years of age, only 9 percent are under the age of 30
- 29 percent have a university or college education, 20 percent have some university or college education
- has the highest percentage of respondents with a trade or vocational qualifications
- 46 percent are employed in the white-collar sector and 24 percent are retired
- 63 percent are Americans (highest percentage of any segment)

#### **Activities of interest (analysis relative to the average respondent)**

- high level of interest for *adventure sports* (e.g., mountain climbing)
- high level of interest for *nature appreciation* activities (e.g., bird watching)
- high level of interest for *tourist* activities (e.g., viewing local native culture)
- for all other activities, the interest level is similar to

the average. There is, however, a possibly higher interest for *winter snow sports* (e.g., dog sledding)

#### **Preferred setting characteristics (analysis relative to the average respondent)**

- find *natural* settings (e.g., presence of lakes) more desirable
- for other settings, the desirability level is similar to the average

#### **Desired outcomes (analysis relative to the average respondent)**

- high level of importance for all outcomes except *interaction* (e.g., being with people who enjoy the same things) and *risk taking* (e.g., chancing risky situations)

#### **Accommodation preferences**

- 28 percent prefer tent accommodations, 19 percent a hotel or motel, 17 percent a basic lodge or hut, and 15 percent an organized rv campground

#### **Other relevant information**

- 87 percent plan their own trips
- 37 percent take 3 to 5 months and 27 percent take either 1 to 2 months or 6 to 11 months to plan a trip
- 67 percent use recommendations by friends or family as a source for information
- 60 percent use tourist offices and 44 percent use travel magazines as sources of information (highest percentages of any segment)
- prefer to travel in July and August
- 43 percent will travel in June and 28 percent will travel in September
- 63 percent prefer family for company on trips, and 22 percent prefer both family and friends
- 79 percent have been on past overnight ecotourism or outdoor recreation trips

#### **Likelihood of success in targeting this group for ecotourism**

Enthusiasts may represent the best target for ecotourism in northern Ontario. By their nature they are willing to try many different activities, including adventure- and nature-based activities. They prefer to recreate in nature-based settings and are likely to use tent accommodations. They can be contacted at tourist offices or through advertisements in travel magazines.

### **Profile of Adventurers**

Adventurers were labeled because they rated the outcomes of *adventure* and *risk taking* the highest of any segment. This group is ambitious and aggressive and



prefers to be active in their leisure time. Adventurers prefer those activities that involve much risk, physical challenge, and mental concentration. This group prefers remote areas for outdoor recreation activities. The typical adventurer is a young baby-boomer, married, male, well educated, and employed in a white-collar occupation. Adventurers represented 20 percent of the survey sample.

#### *Demographics*

- 61 percent are male
- 80 percent are married, 16 percent are single, and 55 percent have children living at home
- the majority are baby-boomers (65 percent are between the ages of 30 and 49)
- less than 6 percent are over 60 years of age
- 43 percent have completed a university degree or college diploma, 16 percent have completed post-graduate studies, and 18 percent have some university or college education
- 59 percent have a white-collar occupation, 14 percent have a blue-collar occupation, and 9 percent are students (highest percentage of students for all of the segments)
- 13 percent have a membership with an outdoors club
- 56 percent are Americans

#### *Activities of interest (analysis relative to the average respondent)*

- high level of interest for *adventure sports* (e.g., mountain climbing)
- high level of interest for *human-powered watercraft* activities (e.g., canoeing)
- low level of interest for *nature appreciation* activities (e.g., bird watching)
- for all other activities, the interest level is similar to the average. There is, possibly, a higher interest for *mechanized water and winter* (e.g., water skiing) and *fishing and hunting* activities, and a lower interest for *tour* activities (e.g., participating in a guided nature tour)

#### *Preferred setting characteristics (analysis relative to the average respondent)*

- find *remote* settings (e.g., an area with no facilities) more desirable
- find *rod and gun settings* (e.g., hearing gunshots) more desirable
- for other settings, the desirability level is similar to the average

#### *Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *risk taking* outcomes (e.g., chancing risky situations)
- high level of importance for *adventure-based* outcomes (e.g., experience new and different things)
- low level of importance for *personal well-being* outcomes (e.g., sharing skills and knowledge with others)
- high level of importance for *relaxation* outcomes (e.g., avoid everyday hustle and bustle)
- low level of importance for *physical health* outcomes (e.g., being physically active)

#### *Accommodation preferences*

- 30 percent prefer primitive tent accommodations or organized tent campgrounds
- 18 percent prefer a hotel or motel, 15 percent an organized rv campground, and 14 percent a basic lodge or hut

#### *Other relevant information*

- 87 percent would plan their own trips
- between 27 percent and 30 percent take 1 to 2 months, 3 to 5 months, and 6 to 11 months to plan a trip
- 67 percent use recommendations as an information source; other popular sources are tourist offices, travel magazines, and magazines in general
- over 80 percent prefer to travel in July and August
- 40 percent were willing to travel in September; 14 percent in both February and October; 8 percent in December, January, and March; and 7 percent in April (highest percentages of any segment)
- 55 percent prefer to travel with family (lowest percentage of any segment)
- 13 percent prefer to travel with friends and 30 percent with both friends and family (highest percentages of any segment)
- 88 percent have been on past overnight ecotourism or outdoor recreation trips (highest percentage of any segment)

#### *Likelihood of success in targeting this group for ecotourism*

Adventurers are a solid candidate for ecotourism in northern Ontario. This group enjoys remote settings as well as physically challenging and demanding activities. They also prefer very simple accommodations, such as primitive tent campgrounds, for most of their activities. Adventurers appear to be a good target for remote adventure trips in true nature settings, and they are more willing



than other segments to travel during off-peak times of the year. However, adventurers are not good targets for nature tours or nature appreciation forms of ecotourism.

### **Profile of Naturalists**

Naturalists have a strong relation with *nature*-based outcomes. They prefer activities that bring them in close contact to nature and dislike settings that alter nature from its intended form. Members of this group are married, late-aged baby-boomers, well educated, and employed in white-collar occupations. Naturalists represented 22 percent of the survey sample.

#### **Demographics**

- 55 percent are male
- 82 percent are married and 59 percent have at least one child living at home
- 60 percent are in the 40–59 age cohort, 25 percent are between 20 and 30 years of age, and 15 percent are over 60 years of age
- 39 percent have a university degree or college diploma, and 25 percent have completed postgraduate studies (highest percentage of any segment for both above educational categories)
- 64 percent have a white collar occupation, and 17 percent are retired
- 3 percent belong to an outdoors club
- 55 percent are Americans

#### **Activities of interest (analysis relative to the average respondent)**

- high level of interest for *nature*-based activities (e.g., bird watching)
- high level of interest for *hiking* activities
- low level of interest for *adventure sports* (e.g., mountain climbing)
- for all other activities, the interest level is similar to the average

#### **Preferred setting characteristics (analysis relative to the average respondent)**

- find *natural* settings (e.g., presence of lakes) desirable
- find *impacted forest* settings (e.g., mostly selective cut forest) less desirable
- find *rod and gun* settings (e.g., hearing gunshots) less desirable
- find *alternative travel* settings (e.g., travel on hydro right-of-ways) less desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) undesirable

- for other settings, the desirability level is similar to the average

#### **Desired outcomes (analysis relative to the average respondent)**

- high level of importance for *nature appreciation* outcomes (e.g., enjoy scenic beauty)
- high level of importance for *interaction* outcomes (e.g., being with people who enjoy the same things)
- low level of importance for *independence* outcomes (e.g., experiencing a feeling of control)
- low level of importance for *risk taking* outcomes (e.g., chancing risky situations)
- low level of importance for *adventure*-based outcomes (e.g., experience new and different things)

#### **Accommodation preferences**

- 27 percent prefer tent accommodations
- 22 percent prefer a hotel or motel
- 18 percent prefer a basic lodge or hut

#### **Other relevant information**

- 84 percent would prefer to organize their own trip
- 24 percent require less than 1 month to organize their trip (highest percentage of any group)
- 32 percent require 3 to 5 months, and 25 percent require 6 to 11 months to organize their trip
- as information sources, recommendations are used by 69 percent, tourist offices by 54 percent, travel magazines by 33 percent, and magazines in general by 28 percent
- over 80 percent of the respondents prefer to travel in July and August; the winter months from October to April are very unpopular travel times for this group
- 63 percent prefer to travel with family, and 29 percent enjoy traveling with both family and friends
- 82 percent have been on an overnight ecotourism/ outdoor recreation trip

#### **Likelihood of success in targeting this group for ecotourism**

This group appears to be a good one to target for ecotourism in northern Ontario. They have a strong appreciation for unaltered nature, and enjoy activities that are nature-based and settings that have been unaltered by humans. This group is also easy to accommodate as many prefer tent sites. They can be contacted through tourist offices or advertisements in travel magazines. Naturalists, however, are not very interested in adventure and are not well suited to that subset of ecotourism.



### **Profile of Vacationers**

Vacationers desire *nature* outcomes and less demanding activities (e.g., using interpretive services). They enjoy the outdoors while preferring the luxuries of a commercial vacation or tourism area. Vacationers are often senior, married, male, and retired. Vacationers represented 8 percent of the survey sample.

#### **Demographics**

- 70 percent are male
- 89 percent are married
- 39 percent have children living at home (lowest percentage of any segment)
- mainly senior population, with 52 percent between 50 and 69 years of age
- 33 percent have a university degree or college diploma, and 25 percent have some university or college education
- 47 percent of this segment are retired (highest percentage of any segment)
- 34 percent are employed in a white-collar occupation
- 5 percent belong to an outdoors club
- 60 percent are Americans

#### **Activities of interest (analysis relative to the average respondent)**

- low level of interest for *adventure sports* (e.g., mountain climbing)
- low level of interest for *nature*-based activities (e.g., bird watching)
- low level of interest for *tourist* activities (e.g., viewing local native culture)
- low level of interest for *hiking* activities
- for all other activities, the interest level is similar to the average. Possibly there is a lower interest for *winter snow sports* (dog sledding), *fishing and hunting*, *horseback riding*, and *tours* (e.g., participating in a guided nature tour), and a higher interest level for *parks and interpretive* activities (e.g., visiting provincial parks)

#### **Preferred setting characteristics (analysis relative to the average respondent)**

- find *natural* settings (e.g., presence of lakes) less desirable
- find *impacted forest* settings (e.g., mostly selective cut forest) more desirable
- find *alternative travel* settings (e.g., travel on hydro right-of-ways) more desirable

- find *limited campsite* settings (e.g., area where camping is restricted) more undesirable
- for other settings, the desirability level is similar to the average

#### **Desired outcomes (analysis relative to the average respondent)**

- high level of importance for *nature appreciation* outcomes (e.g., enjoy scenic beauty)
- low level of importance for *personal well-being* outcomes (e.g., sharing skills and knowledge with others)
- low level of importance for *release* outcomes (e.g., avoiding daily hustle and bustle)
- low level of importance for *adventure*-based outcomes (e.g., experience new and different things)

#### **Accommodation preferences**

- 28 percent prefer hotels or motels (highest percentage of any segment)
- 19 percent prefer an organized rv campground

#### **Other relevant information**

- 87 percent prefer to plan their trip themselves
- need the most time for planning a trip: 30 percent require 6 to 11 months, 35 percent require 3 to 5 months, and 27 percent require 1 to 2 months
- most often use recommendations as information sources, followed by a tourist office and travel magazines
- prefer July and August for traveling to northern Ontario; 43 percent would travel in June, 30 percent in September, and 14 percent in October
- 69 percent prefer to travel with family (highest percentage of any segment)
- 77 percent have been on an overnight ecotourism or outdoor recreation trip

#### **Likelihood of success in targeting this group for ecotourism**

This group would be more receptive to recreating in northern Ontario than would the urbanists. However, vacationers prefer altered nature settings and the conveniences and luxuries of civilization. Although they enjoy park and interpretive activities, almost all other activities are seen as less interesting to this group. Vacationers also prefer hotel or motel accommodations. This group has the largest proportion of retired respondents and respondents in older age brackets. Vacationers are a sightseeing group and have ample time to travel to northern Ontario.



### **Profile of Urbanists**

Urbanists have a high tolerance for mechanized settings and a low level of interest in outdoor recreation activities. The segment consists of elderly, married individuals who have lower educational attainment levels. They are interested in *independence*-based and *personal well-being* outcomes. Nature-based, risk taking, and adventure-based outcomes are not as important to this group as to others. Urbanists represented 29 percent of the survey sample.

#### **Demographics**

- 53 percent are male
- 87 percent are married, and 55 percent have children living at home
- 53 percent are in the 40–59 age cohort; less than 4 percent are younger than 30 years of age
- this segment has the highest percentage of respondents over 60 years of age
- 27 percent have a university degree or college diploma
- this group had the highest percentage of respondents with high school education or less
- 50 percent are employed in the white-collar sector, and 27 percent are retired
- 16 percent belong to an outdoors club
- 52 percent are Americans

#### **Activities of interest (analysis relative to the average respondent)**

- low level of interest for *adventure sports* (e.g., mountain climbing)
- low level of interest for *human-powered watercraft* activities (e.g., canoeing)
- low level of interest for *tourist* activities (e.g., viewing local native culture)
- for all other activities, the interest level is similar to the average. Possibly there is a lower interest in *parks and interpretive* activities (e.g., visiting provincial parks)

#### **Preferred setting characteristics (analysis relative to the average respondent)**

- find *natural* settings (e.g., presence of lakes) less desirable
- find *remote* settings (e.g., an area with no facilities) less desirable
- find *rod and gun* settings (e.g., hearing gunshots) less desirable
- find *alternative travel* settings (e.g., travel on hydro right-of-ways) less desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) less undesirable

- for other settings, the desirability level is similar to the average

#### **Desired outcomes (analysis relative to the average respondent)**

- high level of importance for *independence* outcomes (e.g., experiencing a feeling of control)
- high level of importance for *personal well-being* outcomes (e.g., sharing skills and knowledge with others)
- low level of importance for *nature appreciation* outcomes (e.g., enjoy scenic beauty)
- low level of importance for *risk taking* outcomes (e.g., chancing risky situations)
- low level of importance for *adventure*-based outcomes (e.g., experience new and different things)

#### **Accommodation preferences**

- 26 percent prefer hotel or motel accommodations
- 22 percent prefer to stay in an organized rv campground (highest percentage of any segment)

#### **Other relevant information**

- 84 percent would prefer to organize their trip themselves
- 25 percent need 1 to 2 months, 38 percent need 3 to 5 months, and 19 percent require more than 5 months to organize their trip (lowest percentage of any group)
- recommendations were used as an information source 78 percent of the time (most often of any segment), a tourist office was used 58 percent of the time, and travel magazines were used 31 percent of the time
- similar to all groups, 80 percent prefer to travel to northern Ontario in July and 77 percent prefer August
- 47 percent were interested in traveling to northern Ontario in June (highest percentage of any segment)
- 64 percent prefer to travel with family, and 26 percent with both family and friends
- 74 percent have been on an overnight ecotourism/ outdoor recreation trip (lowest percentage of any group)

#### **Likelihood of success in targeting this group for ecotourism**

This group is a poor target for ecotourism in northern Ontario. Urbanists are not keen on undertaking numerous activities and, therefore, are indifferent to many northern Ontario settings. Combining this information with their age, it appears that this group is better suited to traditional, mass tourism activities than to ecotourism activities in northern Ontario.



## **Northern Ontarians**

The following section identifies those demographic characteristics, activities of interest, preferred setting characteristics, and desired outcomes that are statistically different between northern Ontarians and the remaining sample of respondents.

### ***Demographic Characteristics***

Northern Ontarians were younger than the rest of the respondents in the sample. In this group 14 percent were under 30 years of age and 49 percent were between the ages of 30 and 49. Possibly due to this difference in age, a higher percentage (66 percent) of respondents had children living at home.

Fewer northern Ontarians were employed in the white-collar sector. While more than 50 percent of the remaining sample had white-collar occupations, only 34 percent of northern Ontarians were similarly employed. Twenty percent of northern Ontarians, double the percentage of the remaining sample, were employed in the blue-collar sector. The northern Ontarian subset also continued a larger percentage of students (11 percent) than did the remaining sample.

For the most part, northern Ontarians had lower family income brackets than did the other respondents. The three most commonly cited income brackets were: \$20,001 to \$30,000 (15 percent), \$30,001 to \$40,000 (19 percent), and \$40,001 to \$50,000 (17 percent).

Significantly fewer northern Ontarians were members of an environmental group. Only 6 percent held a membership with this type of organization.

### ***Past and Future Trips***

#### ***Past trips***

The only significant difference between northern Ontarians and the remaining sample with respect to past outdoor recreation or ecotourism trips was the preferred length of stay. Northern Ontarians preferred shorter trips than the rest of the Canadians and Americans. Forty-five percent of northern Ontarians preferred a trip of two or three nights' duration.

#### ***Potential northern Ontario trips***

When planning a potential northern Ontario trip, northern Ontario respondents preferred a shorter travel time than did the remaining sample. They also required less time than did other respondents to organize their trip; 41 percent needed less than 1 month to prepare.

Northern Ontarians used different sources for information than did others although both used recommendations most often. Tourist offices and travel magazines were

less popular with northern Ontarians than with others. Newspapers, radio, and television were used most frequently by northern Ontarians.

For all respondents, July and August were the most popular times to travel to northern Ontario. Northern Ontarians, however, were more willing to travel in the cooler spring (April and May) and fall months (September and October) than were the remaining respondents.

### ***Activities and Accommodations***

#### ***Activities***

Northern Ontarians enjoyed fishing, ice fishing, snowmobiling, and tobogganing more than other respondents.

#### ***Accommodations***

Northern Ontarians preferred tent campgrounds or basic lodges or huts. They were less interested in luxury accommodations and preferred more natural settings. This group was more tolerant of rugged accommodation conditions than were other respondents.

#### ***Settings***

Northern Ontarians were more tolerant of hearing and seeing powered watercrafts and all-terrain vehicles than were other respondents. They were also more tolerant of hearing sounds of gunshots and encountering hunters and anglers than were respondents from the remaining sample.

When asked about alterations to areas, northern Ontarians preferred unaltered terrain, access by low-standard gravel or forest roads, and areas with no signs or bridges. They were also more tolerant of being in areas remote from towns, food, and emergency assistance than were other respondents.

#### ***Outcomes***

The only differences between northern Ontarians and the remaining sample on outcomes were the importance given to chancing risky situations and being daring and adventurous. Northern Ontarians were more open to risk and adventure than were other respondents.

In summary, northern Ontarians were younger, less wealthy individuals than were other respondents. They also preferred shorter duration trips, fishing, remoteness, and adventure. As well, settings that were industrial or disturbed by machinery or other intrusions were tolerated more by northern Ontarians.

## **DATA ANALYSIS—MAIL SURVEY**

The following section explores results from the mail survey. Data for this survey were collected from 799 respondents—members of either the Mountain Equipment



Cooperative or Recreation Equipment Incorporated. As with the intercept survey, results from the mail survey will be discussed by demographic characteristics, past and future trip behavior, activities of interest, preferences for settings, and importance of outcomes. Finally, the market segments developed are defined, examined, and profiled.

### **Sociodemographics**

Basic sociodemographic and background information on the mail survey respondents are presented by nationality and aggregated levels in Table 9. All statistically significant differences are indicated by (\*\*) in the table and are referenced in the text.

#### **Sex**

Males dominated the sample, and comprised almost two-thirds (64 percent) of the respondents. Both Canadian and American respondents were very similar, with males comprising 65 percent of the Canadians and 64 percent of the Americans.

#### **Marital status**

Compared to the intercept survey results, there was a large percentage of single respondents (37 percent). However, the majority of respondents were married (58 percent), and few were divorced or widowed (4 percent and 1 percent, respectively). Statistically significant differences were, however, discovered between Canadian and American respondents, as a greater percentage of Canadians were single (42 percent compared to 33 percent) and divorced (6 percent compared to 4 percent).

#### **Age**

Respondents belonged to younger age cohorts; 59 percent were less than 40 years old. Few respondents (5 percent) were over 60 years of age. The age distribution of Canadian and American respondents statistically differed from one another. Respondents 20 to 29 years of age (i.e., Generation X) were far more represented among Canadians (28 percent) compared to Americans (18 percent). Respondents aged 40 to 49 years of age (i.e., the late aged baby-boomer generation) were far more represented among Americans (32 percent) than among Canadians (20 percent).

#### **Educational attainment**

Respondents were very well educated, with 72 percent having at least received a college diploma or university degree. In fact, 31 percent of the respondents had completed postgraduate studies. Only 7 percent of the respondents had high school education. Statistical differences revealed that a larger percentage of American respondents had attained postgraduate studies (41 percent) than had Canadian respondents (20 percent).

#### **Occupational status**

Even a larger percentage (70 percent) of mail survey respondents had white-collar occupations than did intercept survey respondents. Students, comprising 16 percent of the respondents, was the second largest occupation. Blue-collar workers and retired individuals each accounted for only 5 percent of the respondents. American respondents were more likely to have white-collar occupations than were Canadians (74 percent and 64 percent, respectively). Canadian respondents were more likely to be students than their American counterparts (24 percent and 9 percent, respectively).

#### **Family income**

Respondents had diverse income levels, with a slightly larger percentage belonging to upper income levels (21 percent less than \$30,000, 34 percent between \$30,000 and \$60,000, and 45 percent greater than \$60,000). Canadian and American respondents did not differ significantly by income, although a slightly higher percentage of Canadians indicated incomes in excess of \$60,000 than did Americans (47 percent and 43 percent, respectively).

#### **Residency**

Although the mail survey was conducted as a stratified sample to areas adjacent to northern Ontario, the residency of the respondents does provide useful information. Southern Ontario residents comprised 38 percent of all respondents. Many were from the Census Metropolitan Area of Toronto (18 percent). Minnesota residents were second in importance and accounted for 16 percent of all respondents. Other American states encompassing the Great Lakes area that were sources for respondents included: Illinois (9 percent); New York (8 percent); Michigan (6 percent); Pennsylvania (6 percent); Ohio (3 percent); and Wisconsin (2 percent). Quebec and Manitoba accounted for 4 percent and 2 percent of the respondents, respectively. All remaining areas accounted for only 5 percent of the respondents.

#### **Home environment**

The majority of respondents (66 percent) had lived most of their lives in a city; towns were cited by 23 percent of the respondents and rural areas by only 11 percent of the respondents. Canadians were statistically more likely to have lived in a city for most of their lives than were Americans (74 percent and 59 percent, respectively). Considering the large percentage of Canadian respondents from the Toronto area, this finding should not be too surprising. Conversely, American respondents were much more likely to have come from small town backgrounds than were Canadian respondents (28 percent and 17 percent, respectively).



**Table 9.** Sociodemographics and background information about respondents.

Attribute	Percentage			Attribute	Percentage		
	Cdn	US	Total		Cdn	US	Total
<b>Sex</b>				<b>Income</b>			
Male	64.6	63.9	64.2	< \$10,000	5.5	2.2	3.6
Female	35.4	36.1	35.8	\$10,000–\$20,000	8.8	7.7	8.2
				\$20,001–\$30,000	7.0	11.6	9.6
<b>Marital status **</b>				\$30,001–\$40,000	8.8	9.9	9.4
Married/common-law	51.8	61.7	57.6	\$40,001–\$50,000	11.6	14.3	13.1
Single	42.0	33.1	36.8	\$50,001–\$60,000	11.2	11.1	11.2
Divorced	5.5	3.6	4.4	\$60,001–\$70,000	10.6	8.7	9.6
Widowed	0.7	1.6	1.2	\$70,001–\$80,000	6.7	6.8	6.7
				> \$80,000	29.8	27.6	28.6
<b>Age (years)**</b>				<b>Residency</b>			
16–20	6.9	1.1	3.5	Southern Ontario (exc. Toronto)			19.2
20–29	27.8	17.5	21.7	Metro Toronto			18.3
30–39	34.0	33.6	33.7	Minnesota			16.1
40–49	19.6	32.0	26.9	Illinois			9.0
50–59	8.2	10.2	9.4	New York			8.0
60–69	2.9	3.9	3.5	Michigan			5.7
70+	0.7	1.8	1.3	Pennsylvania			5.5
<b>Educational attainment **</b>				Quebec			3.8
Some high school	4.8	0.7	2.5	Ohio			3.3
High school diploma	5.9	3.0	4.3	Wisconsin			2.4
Trade/vocational qualification	19.2	12.3	15.3	Manitoba			1.6
Some university/college	45.6	36.6	40.6	Other			5.1
University/college graduate	20.0	40.5	31.3				
Postgraduate studies	4.5	6.6	5.7	<b>Home environment **</b>			
<b>Occupational status</b>				City	73.8	59.3	65.8
White-collar	64.3	74.2	70.0	Small town	17.4	28.2	23.4
Student	24.3	9.2	15.8	Rural area	8.7	12.5	10.8
Retired	3.7	6.3	5.2	<b>Environmental organization **</b>			
Blue-collar	5.1	5.2	5.2	Yes	21.4	48.7	36.2
Homemaker	0.4	3.7	2.3				
Service	1.1	0.6	0.8	<b>Outdoor organization</b>			
Unemployed	0.7	0.9	0.8	Yes	19.6	22.4	21.2

\*\* Denotes statistical significance at the 95 percent confidence level.

#### *Membership in groups/clubs*

More mail respondents belonged to environmental organizations (37 percent) and outdoor recreation clubs (21 percent) than did intercept survey respondents. A significantly greater percentage of American respondents

(49 percent) belonged to environmental organizations than did Canadian respondents (21 percent). Little difference, however, exists between the nationality of the respondent and the likelihood of belonging to an outdoor recreation club.



*Sociodemographic summary*

To summarize the information above, it appears that mail survey respondents (i.e., potential demand for northern Ontario) differ depending on nationality.

The typical Canadian respondent was: male; either married or single; between 20 to 39 years of age; a university or college graduate; employed in a white-collar occupation or as a student; financially secure; interested in environmental organizations and outdoor recreation clubs; from a city; and from southern Ontario.

The typical American respondent was: male; married; between 30 to 49 years of age; well educated; employed in a white-collar occupation; with a \$40,000+ income level; a member of an environmental organization and interested in membership in an outdoor recreation club; from a city or small town; and from the Great Lakes area.

**Past Trips**

To gain insight on the revealed preferences of past trips for ecotourism/outdoor recreation activities and for

northern Ontario in general, respondents were asked to provide details of their previous travel. The first question asked about past ecotourism/outdoor recreation trips taken anywhere (93 percent of the respondents indicated that they had taken an overnight trip for ecotourism/outdoor recreation at one time). The second question focused on northern Ontario trips (49 percent of the respondents had previously taken a trip to northern Ontario for various reasons) that were based on any activities. The results of these two questions are compared in Table 10.

Respondents indicated that camping (22 percent), hiking (20 percent), and canoeing (17 percent) were the activities pursued most often during past ecotourism/outdoor recreation trips. During past northern Ontario trips, respondents indicated that canoeing (23 percent), camping (19 percent), and fishing (11 percent) were most popular. Families were the most popular trip companions for past northern Ontario trips (41 percent), and the second most popular companions for ecotourism/outdoor recreation trips (36 percent). Friends were companions most often

**Table 10.** Comparison of ecotourism/outdoor recreation trips to northern Ontario.

Past ecotourism/outdoor recreation trips		Past trips to northern Ontario	
Activity		Activity	
Camping	21.7	Canoeing	23.1
Hiking	20.1	Camping	18.5
Canoeing	16.7	Fishing	11.3
Fishing	6.7	Sightseeing	10.2
Biking	4.9	Traveling through	6.1
		Hiking	5.0
Companionship		Companionship	
Friends	41.6	Family	40.9
Family	35.8	Friends	37.5
Friends and family	6.6	Friends and family	6.6
Organization	6.1	Organization	4.3
Other	9.9	Other	10.7
Length of stay		Length of stay	
One night	8.2	One night	4.6
Two nights	20.9	Two nights	12.5
Three nights	16.3	Three nights	18.7
Four nights	12.1	Four nights	14.6
Five nights	9.2	Five nights	11.2
Six nights	6.3	Six nights	8.8
Seven nights	8.5	Seven nights	10.9
More than seven nights	18.5	More than seven nights	18.7



during ecotourism/outdoor recreation trips (42 percent) and on 38 percent of the northern Ontario trips. Past trips (64 percent) to northern Ontario ranged between three and seven nights in duration. A large percentage (29 percent) of ecotourism/outdoor recreation trips were less than two nights in duration.

Two other questions were asked about ecotourism/outdoor recreation trips taken during the past 5 years. Respondents cited a variety of areas where such trips took place, with northern Ontario (25 percent), Minnesota (10 percent), southern Ontario (9 percent), Wisconsin (6 percent), and New York (4 percent) leading the way. The next question asked about the type of accommodation used during the ecotourism/outdoor recreation trip. As Figure 6 reveals, primitive and organized tent campgrounds were used most often during 37 percent and 22 percent of all trips, respectively. Basic lodge/huts and hotels were of secondary importance for accommodation, with usage rates at 13 percent and 10 percent, respectively. Recreational vehicle (rv) campgrounds, bed and breakfast establishments, and luxury lodge establishments were used infrequently by respondents during past ecotourism/outdoor recreation trips.

#### Summary of past trips

Although less than one-half of the respondents have taken a trip to northern Ontario, this group appears to contain the untapped demand for ecotourism/outdoor recreation trips to this area. Almost all respondents have undertaken an ecotourism/outdoor recreation trip of at least one night's duration and, given the close proximity of these respondents, it is likely that many could be enticed to

northern Ontario. The respondents also have traditionally undertaken nonconsumptive activities while on their trips and use tents as a major accommodation choice. The respondents appear equally willing to travel with friends or with family when undertaking an ecotourism/outdoor recreation trip or a northern Ontario trip in general.

#### Potential Northern Ontario Ecotourism or Outdoor Recreation Trips

Respondents were also asked to state their preferences for a number of different attributes regarding a potential ecotourism/outdoor recreation trip to northern Ontario. Table 11 illustrates some of the stated preferences associated with such a potential trip.

#### Length of Trip

Respondents indicated that they would most likely (70 percent) take a trip of between three and seven nights in duration. Few respondents (6 percent) stated that they would take a trip of less than three nights. However, this percentage is much smaller than that for respondents who have taken past ecotourism/outdoor recreation trips of fewer than three nights.

#### Accommodations

The most popular accommodation for a potential trip to northern Ontario for ecotourism/outdoor recreation was a tent (38 percent). Motels, favored by 32 percent of the respondents, were the second most preferred accommodation. They were followed by a combination of both tents and motels at 7 percent. Bed and breakfast establishments and lodge accommodations were preferred by only 3 percent and 2 percent of the respondents, respectively.

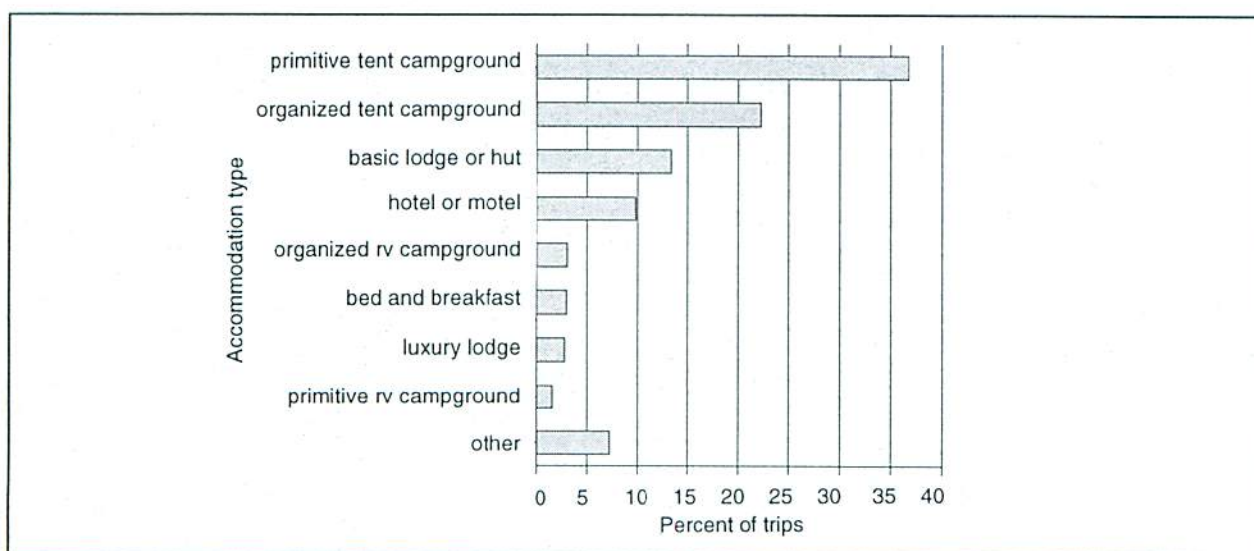


Figure 6. Types of accommodation on past ecotourism trips.



**Table 11.** Stated preferences for a potential northern Ontario trip.

	Percent of respondents		Percent of respondents
<b>Length of trip</b>		<b>Accommodations</b>	
One night	2.1	Tent	38.3
Two nights	4.3	Motel	31.6
Three nights	12.7	Motel and tent	7.4
Four nights	12.8	Bed and breakfast	2.6
Five nights	18.7	Basic lodge	2.1
Six nights	10.5		
Seven nights	14.8	<b>Trip organizer</b>	
More than seven nights	24.0	Self	79.9
		Another member of group	9.7
<b>Companionship</b>		Club	4.3
Friends	33.4	Commercial outfitters	3.5
Family	31.4	Commercial tour agency	2.7
Friends and family	26.8		
Alone	2.6		
Other	5.8		

*Companionship*

Respondents preferred friends (33 percent), family (31 percent), and both friends and family (27 percent) as trip companions.

*Trip organization*

Most respondents (80 percent) indicated they would organize the trip themselves. Another member of the group was cited 10 percent of the time, and clubs were cited 4 percent of the time. Organizers that would be paid made up a small but important segment of the respondents choices, with 4 percent preferring commercial outfitters and 3 percent preferring commercial tour agencies.

*Time needed to organize a trip*

As Figure 7 displays, respondents begin planning an outdoor recreation trip between 1 to 5 months in advance. As well, many respondents (20 percent) begin planning their trips 6 to 11 months in advance. Very few respondents indicated that they would take greater than 12 months to begin planning a trip.

*Information sources likely to be used*

Recommendations from friends and family (74 percent) were stated as the most popular source for obtaining information when planning a trip. Books (45 percent), tourist offices (42 percent), magazines in general (37 percent), and travel magazines (30 percent) were also important information sources (Fig. 8). Newspapers and travel agents were cited less often by respondents (14 percent

for each), but were still important sources. Next in importance were travel shows (8 percent), documentary travel films (7 percent), and maps (5 percent). Television or radio and automobile clubs were unimportant sources for information.

*Travel months preferred*

August was stated as the most popular month (73 percent) to undertake an ecotourism/outdoor recreation trip to northern Ontario (Fig. 9). This was followed by July (61 percent). Respondents also had strong preferences for traveling during June (41 percent) or September (48 percent). May and October were indicated much lower than the peak months, but still 18 percent of the respondents thought these would be good months to travel to northern Ontario. January to March was the next most likely travel time. As stated in the intercept survey, it appears that respondents wish to avoid traveling during seasonal transition months (i.e., November and April).

*Summary of preferences for a potential northern Ontario trip*

The respondents indicated that on an ecotourism/outdoor recreation trip to northern Ontario they would stay for three to seven nights in duration; use a tent, a hotel, or both for accommodations; travel with friends, family members, or both; and plan their trip 1 to 5 months in advance. Respondents would also use recommendations, books, travel offices, and magazines as sources of information. Finally, respondents would travel between May and October with the highest preference for traveling in August.



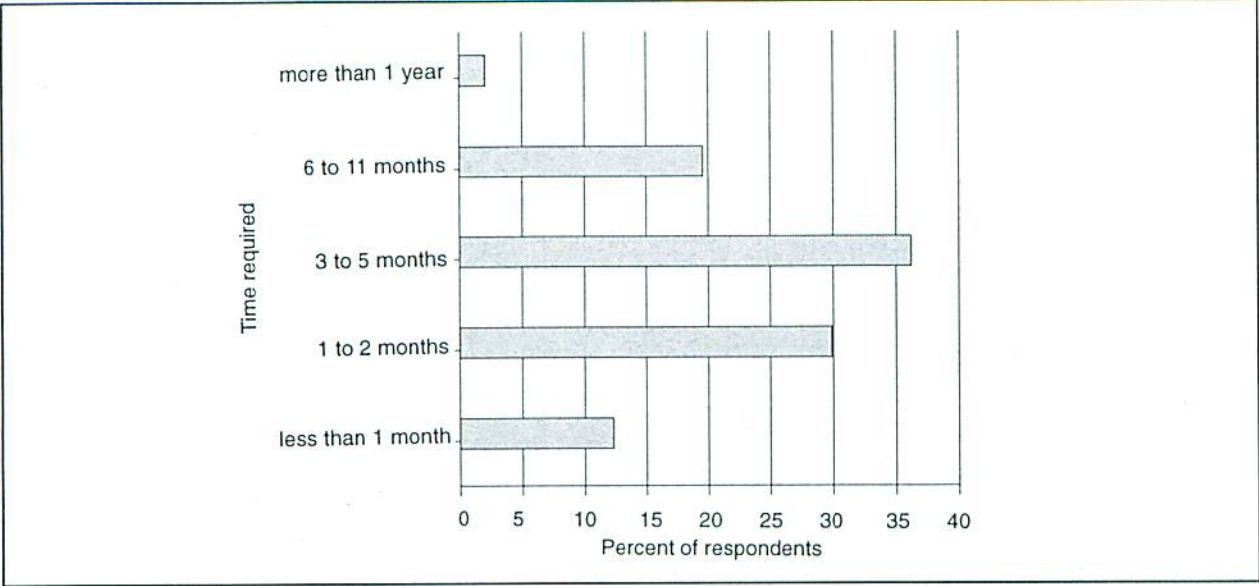


Figure 7. Time required to organize a potential northern Ontario trip.

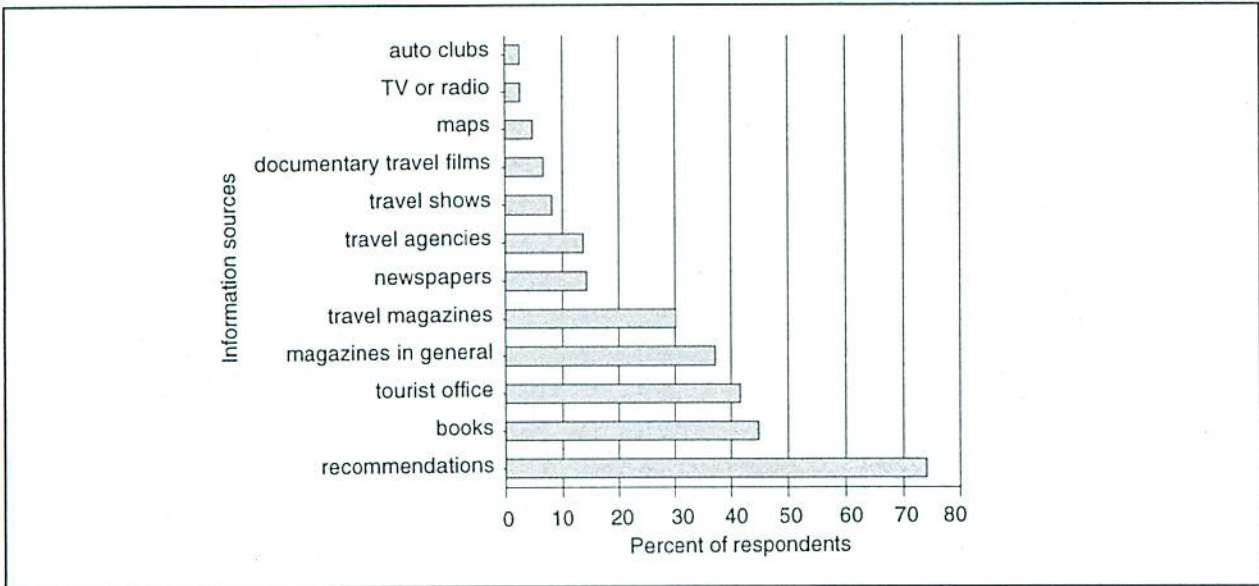


Figure 8. Information resources for a potential northern Ontario trip.

Activities and Accommodations

Activities

The majority of respondents stated that they were somewhat interested or very interested in 40 of the 59 different activities. Table C1 in Appendix C provides a detailed inventory of all activities and the mean interest rating associated with each. A principal components analysis (PCA) was conducted to reduce the data set, and 14 components, accounting for 69 percent of the data set variation, were found. These components were labeled *biking*,

*adventure sports*, *small human-powered watercraft*, *sailing*, *individual sports*, *motorized water and winter sports*, *fishing and hunting*, *physical winter activities*, *hiking*, *tourist activities*, *park related*, *nature appreciation*, *horse-back riding*, and *unique winter sports*. Table 12 details the 14 components and variables containing rotated component loadings greater than 10.401.

The two most popular groups of activities belonged to the *hiking* and *park-related* components. Day-trip hiking was given a mean of 2.41 (2nd ranking); multiple-day



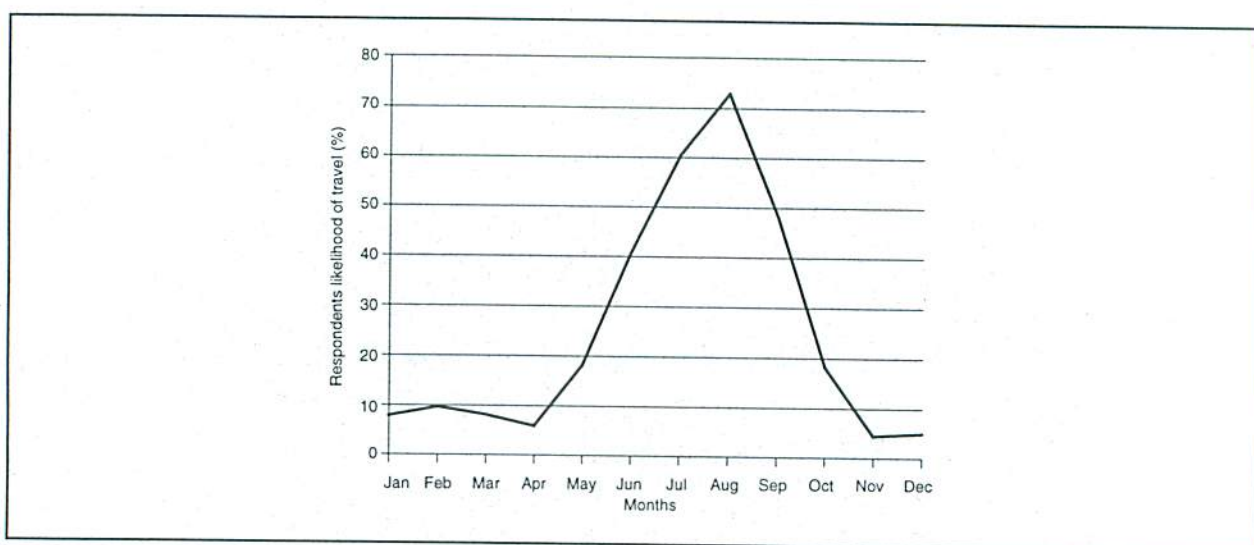


Figure 9. Preferred months for a potential northern Ontario trip.

hiking had a mean of 2.32 (4th ranking). In the *park-related* group, visiting provincial/national parks was rated highest by all respondents at 2.56. Closely following in interest were visiting water parks (mean 2.32, rank 4th) and using interpretive services (mean 2.08, rank 11th). This group also contained participating in educational nature tours and in guided nature tours, but these were much lower in interest ratings (1.88 and 1.62, respectively).

Following in importance were the *small human-powered watercraft* and *physical winter* groups. The water-based group consisted of single-day and multiple-day flat and whitewater canoe and sea kayak activities. These activities ranged from single-day flatwater canoeing with a mean of 2.33 (3rd rank) to multiple-day sea kayaking with a mean of 1.78 (29th rank). Within the winter group, cross-country skiing was given ratings of 2.23 (7th rank) and 2.05 (14th rank), respectively, for single-day and multiple-day trips. Although ice skating was also part of this group, it had a mean of only 1.65 (44th rank).

The *tourist activities* group and *nature appreciation* group were the next most interesting to the respondents. The *tourist activities* group ranged from a mean of 2.06 (12th ranking) for viewing local native culture to a mean of 1.82 (24th ranking) for acquiring artifacts and crafts. However, viewing roadside attractions had a lower mean of 1.73 (35th ranking). The *nature appreciation* group was more variable in interest, with wildlife viewing having a mean of 2.20 (8th ranking), nature photography a mean of 1.92 (21st ranking), bird watching a mean of 1.76 (31st ranking), and outdoor art a mean of 1.35 (55th ranking).

*Biking* and *individual sports* also received interest. *Biking* activities that concentrated on paved roads or mountain biking received ratings ranging from 2.05 (13th ranking) for single-day paved road biking to 1.79 (28th ranking) for multiple-day mountain biking. Gravel road biking was seen as less interesting, with means of 1.75 (34th ranking) and 1.73 (37th ranking), respectively, for single-day and multiple-day trips. *Individual sports* received more variable ratings, with downhill skiing having a mean of 1.98 (18th ranking) and wind surfing a mean of 1.50 (51st ranking).

The next three activity groups, in order of importance, were *sailing*, *horseback riding*, and *unique winter sports*. Single-day and multiple-day sailing trips were given mean ratings of 1.80 (27th ranking) and 1.72 (40th ranking), respectively. The *unique winter sports* group ranged from a high rating of 1.82 (25th ranking) for single-day snowshoeing to a low rating of 1.51 (50th ranking) for multiple-day dog sledding trips. Finally, single-day and multiple-day horseback riding trips were less favored, with mean ratings of 1.67 (41st ranking) and 1.55 (49th ranking), respectively.

The final set of groups, in order of interest, include *adventure sports*, *motorized water and winter sports*, and *fishing and hunting*. *Adventure sports* included mountain climbing (mean 1.73, rank 36th), spelunking and caving (mean 1.60, rank 47th), scuba diving (mean 1.59, rank 48th), and ice climbing (mean 1.32, rank 57th). The *motorized water and winter sports* were ranked near the bottom, from water skiing at 1.49 (52nd ranking) to multiple-day snowmobiling at 1.29 (58th ranking). Finally, hunting was the least interesting activity for respondents at a mean of 1.25. Ice fishing was not far



**Table 12.** Components and variables component loadings for activities' questions.

<b>Biking</b>		<b>Physical winter activities</b>	
.860	Multiple-day biking, gravel and paved roads	.702	Single-day cross country skiing
.837	Single-day biking, gravel roads	.608	Multiple-day cross country skiing
.789	Multiple-day biking, paved roads	.472	Ice skating
.730	Single-day biking, paved roads		
.718	Multiple-day mountain biking	<b>Hiking</b>	
.701	Single-day mountain biking	.669	Single-day hiking/walking
		.641	Multiple-day hiking
<b>Adventure sports</b>		<b>Tourist activities</b>	
.724	Ice climbing	.833	Viewing local native culture
.701	Mountain and rock climbing	.784	Interacting with local native culture
.645	Spelunking and caving	.775	Acquiring artifacts and crafts
.454	Scuba diving	.660	Viewing human works
		.608	Viewing local activities
		.530	Viewing roadside attractions
<b>Small human-powered watercraft</b>		<b>Park related</b>	
.786	Multiple-day flatwater canoeing	.763	Using interpretive services
.718	Single-day flatwater canoeing	.736	Visiting provincial and national parks
.670	Multiple-day whitewater canoeing	.693	Participating in educational nature tours
.653	Multiple-day sea kayaking	.666	Visiting waterway parks
.649	Single-day sea kayaking	.596	Participating in a guided nature tour
.624	Single-day whitewater canoeing		
<b>Sailing</b>		<b>Nature appreciation</b>	
.825	Multiple-day sailing	.627	Bird watching
.787	Single-day sailing	.560	Outdoor art
		.557	Wildlife viewing
		.549	Nature photography
<b>Individual sports</b>		<b>Horseback riding</b>	
.631	Downhill skiing	.846	Single-day horseback riding
.496	Wind surfing	.815	Multiple-day horseback riding
.494	Tobogganing		
.430	Individual sports	<b>Unique winter sports</b>	
		.729	Multiple-day dog sledding
<b>Motorized water and winter</b>		.711	Multiple-day snowshoeing
.794	Multiple-day snowmobiling	.656	Single-day dog sledding
.786	Single-day snowmobiling	.625	Single-day snowshoeing
.735	Motorized water activities	.511	Winter camping
.618	Water skiing		
<b>Fishing and hunting</b>			
.880	Fishing catch and keep		
.859	Fishing catch and release		
.630	Ice fishing		
.574	Hunting		



behind at 1.32 (56th ranking). Summer fishing activities, however, were rated much higher at 1.73 and 1.72, respectively, for fishing catch within limit and catch-and-release fishing.

Finally, it should be mentioned that swimming and snorkeling were not correlated with any of the above components. Swimming was given a mean rating of 2.16 (9th ranking), while snorkeling was less interesting with a mean of 1.76 (34th ranking).

### Accommodations

Respondents to the mail survey were asked to indicate their accommodation preferences for each activity in which they showed some level of interest. Overall, the most popular type of accommodation was a primitive tent campground, as 26 percent of the respondents indicated this as their preference. A basic lodge or hut was popular with 17 percent of the respondents. Seventeen percent also indicated they would prefer to stay at an organized tent campground. The next most popular types of accommodations were bed and breakfasts, preferred by 11 percent of the respondents, and hotels or motels, preferred by only 9 percent of the respondents.

Some types of accommodation were more popular than others, depending on the activity with which the respondents were involved. The most commonly cited accommodation preferences were first, a primitive tent campground; second, an organized tent campground; and third, a basic lodge or hut. This accommodation order was preferred by respondents for 20 of the 59 activities. These activities were mountain climbing, mountain biking, hiking, whitewater and flatwater canoeing, sea kayaking, sailing, swimming, outdoor art, bird watching, wildlife viewing and nature photography, winter camping, spelunking or caving, and visiting waterway parks. Although many of the above activities were presented to respondents with single-day and multiple-day options, the respondents' order of accommodation preference remained unchanged. However, a higher percentage of respondents chose primitive tent campgrounds more often for multiple-day trips than for single-day trips.

There were several activities where a basic lodge or hut was the preferred accommodation type, followed by a hotel or motel. These included scuba diving, motorized water activities, tobogganing and snow play, ice skating, ice fishing and snowmobiling, for both single-day and multiple-day trips.

There were three winter activities (dog sledding, cross-country skiing, and snowshoeing) where respondents indicated a basic lodge or hut as their first choice for accommodation for both single-day and multiple-day activities. Those respondents undertaking single-day trips

indicated bed and breakfast establishments as their second accommodation choice. Individuals engaged in multiple-day trips selected primitive tent campgrounds as their second accommodation choice.

Respondents with an interest in biking preferred staying in tent campgrounds. Those traveling on paved roads preferred an organized tent campground first and a primitive tent campground second. Those traveling on gravel roads preferred primitive tent campgrounds to organized tent campgrounds. Both groups of respondents indicated that a bed and breakfast would be their third choice of accommodation.

Hunters and anglers preferred similar types of accommodations. Hunters chose a basic lodge or hut first, followed by a primitive tent campground. Anglers preferred a primitive tent campground first, followed by a basic lodge or hut. Both groups selected an organized tent campground as their third choice of accommodation.

Those respondents interested in tourist activities, such as visiting provincial or national parks, participating in educational or guided nature tours, and using interpretive services, preferred an organized tent campground first, a primitive tent campground second, and a basic lodge or hut third. Individuals interested in viewing local activities, local native culture, human works, roadside attractions, interacting with local native culture, and acquiring arts and crafts preferred a hotel or motel or a bed and breakfast for their first or second choice of accommodation.

Overall, for most activities, respondents of this survey preferred basic, rugged accommodations rather than luxurious ones. They chose accommodation in tents for most activities and a basic lodge or hut for several winter activities.

### Settings

Respondents were asked to evaluate 77 different factors that would form the type of environmental setting they would prefer for their potential northern Ontario outdoor recreation or ecotourism trip. The respondents answered questions about settings using a five-point likert scale, from very undesirable (1) to very desirable (5). The mean desirability scores for each attribute can be found in Table C2 in Appendix C.

As with the activities questions, a principal component analysis was conducted to reduce the number of settings into a more manageable number of significant components. Four components, accounting for 37 percent of the data set variation, were selected from the PCA. These components were labeled *mechanized*, *natural settings*, *remote*, and *altered nature*. The varimax rotated component loadings greater than 10.401 can be found in Table 13.



Respondents most preferred settings that belonged to the *natural settings* component. Of the 14 highest rated settings only three were not part of this group. Within the group, it appears that landscape settings are more desirable than flora and fauna settings. As well, a variety of flora and fauna received higher ratings of desirability than did encountering rare species.

*Altered nature* settings were rated as second most important by the respondents. Rated highest in this somewhat mixed set were bridges over dangerous waters (mean 4.34, rank 12th), an area with developed side trails (mean 4.23, rank 15th), traveling on high-standard trails (mean

4.16, rank 18th), and an area with interpretive signs (mean 4.03, rank 24th). Between ratings of 3.86 (28th ranking) and 3.12 (43rd ranking) were the following settings (in order of desirability): an area with historic buildings, an area with interpretive natural and cultural programs, an area with a human waste facility, access by paved roads, traveling on gravel roads, traveling on paved roads, and an area where camping is restricted.

The *remote* settings received, on average, slightly lower desirability scores than did *altered nature* settings. Highly desirable (i.e., with a mean in excess of 4.0) remote settings included an area remote from towns, a relatively

**Table 13.** Components and variables component loadings for settings' questions.

<b>Mechanized settings</b>		<b>Remote settings</b>	
.751	Hearing all-terrain vehicles	.766	Area with no facilities
.726	Seeing all terrain vehicles	.736	Area remote from food
.711	Hearing powered watercraft	.711	Area remote from emergency assistance
.699	Hearing sounds of vehicles	.602	Meeting no other people
.695	Seeing evidence of logging	.600	Travel in area on low-standard trails
.693	Seeing powered watercraft	.561	Area where trails have no bridges
.673	Encountering industrial vehicles	.541	No signs in area
.654	Hearing sounds of logging	.526	Area remote from towns
.641	Area with view of industrial development	.511	Area with past, naturally occurring forest fire
.639	Seeing gravel pits in the area	.498	Relatively large forested area
.628	Seeing hydro lines	.416	Area with recent, naturally occurring forest fire
.619	Seeing evidence of mining	.413	Travel in area on lakes and rivers
.597	Area with view of residential development		
.581	Seeing dams in the area		
.575	Being in a logged area		
.562	Recreating on dammed lakes		
.539	Encountering hunters		
.529	Hearing gunshots from hunting		
<b>Natural settings</b>		<b>Altered nature</b>	
.735	Rare species of wildlife	.703	Interpretive signs explaining natural features
.727	Variety of wildlife	.690	Area with developed side trails
.715	Variety of birds	.624	Area with interpretive nature programs
.710	Rare species of birds	.580	Area with human waste facility
.692	Rare species of plants and trees	.557	Travel in area on paved roads
.639	Large trees	.518	Area with historical buildings
.633	Variety of plants and trees	.517	Travel in area on high standard trails
.616	Presence of lakes	.505	Area where camping is restricted
.572	Presence of rivers and streams	.483	Area where trails have bridges
.510	Presence of rock outcrops	.452	Travel in area on gravel roads
.501	View of waterfalls	.404	Access to area by paved road
.470	View of gorges	.400	Trails having bridges over dangerous waters
.456	Area with undisturbed natural scenery		



large forested area, and traveling on lake and river systems. These were ranked 16th, 19th, and 20th, respectively. Settings from this group with moderate desirability (i.e., with means between 3.0 and 4.0) included meeting no other people, traveling on low-standard trails; an area remote from food, equipment, and supplies; no signs in the area; and areas with past, naturally occurring forest fires. Finally, four settings from this group were viewed as being somewhat undesirable (i.e., with a mean between 2.0 and 3.0). These included an area with trails having no bridges; an area with no facilities; an area with a recently occurring, natural forest fire; and an area remote from emergency assistance.

The lowest rated settings concentrate on those defined as part of the *mechanized* component. Only two settings from this component have means greater than 2.0 (i.e., recreating on a dammed lake and seeing dams in the area). Of the 16 lowest rated settings, 15 belong to the *mechanized* component. Disturbances that are audible appear less desirable than do the same disturbances having only visual contact. Again, hearing sounds of logging is the most undesirable setting, with a mean of only 1.28.

Many settings were not correlated to any of the components identified by the PCA. Of these, very desirable settings included access to drinking water; mostly undisturbed, old-growth forest; access to good swimming; presence of beaches; and access by a gravel road. Very undesirable settings included mostly recent, clear-cut forest and areas where no overnight camping is allowed.

In summary, natural-based settings are most preferred, especially if they concentrate on landscape features. Although some alterations to natural settings for convenience received desirable ratings, a surprisingly large group of respondents prefer remote settings that are void of conveniences. Settings that are marred by industry or mechanized equipment were rated as very undesirable by respondents.

### Outcomes

Respondents of the mail survey were asked to rate their importance toward many different experiences and personal outcomes available from an ecotourism or outdoor recreation trip. These outcomes were measured using a five-point likert scale, with (1) being not at all important and (5) being extremely important. All outcomes but one (i.e., chancing risky situations) were given importance scores greater than 3.0. Table C3 in Appendix C displays the means associated with each outcome desired from a northern Ontario ecotourism/outdoor recreation trip. Again a PCA was conducted to reduce the 37 outcomes into a common set of themes. From the PCA, five components emerged, explaining 51 percent of the data set

variation that concentrated on the themes of *personal enhancement*, *relaxation*, *adventure*, *nature*, and *interaction*. The varimax rotated component loadings greater than 10.401 are provided in Table 14.

*Nature*-based outcomes were rated as most important by the respondents. Included in this group are the top three ranked outcomes of: enjoying the sights, sounds, and smells of nature; enjoying the scenic beauty; and getting away from civilization. All had means greater than 4.54. The other three outcomes of this group were rated slightly less important with learning about and appreciating nature at 4.35, contributing to the preservation of the natural environment at 4.28, and helping to safeguard the forests at 4.22.

Outcomes concentrating on the *relaxation* theme were considered to be the next most important. Highly rated in this group were feeling an emotional release, relaxing mentally, traveling to and exploring new places, and avoiding the hustle and bustle of daily activities. All were rated between 4.47 and 4.29. Slightly less important outcomes within this component were making one's own decisions, feeling competent, and relaxing physically. All of these had means between 4.08 and 3.98.

*Adventure*-based outcomes encompassed both the next most important outcomes and the least important outcomes. The subgroup containing the important outcomes included experiencing a feeling of freedom, being physically active, having a stimulating and exciting experience, keeping physically fit, being self-reliant, and developing skills and abilities. All had mean ratings between 4.44 and 4.05. The second subgroup contained the two lowest rated outcomes: namely, being daring and adventurous and chancing risky situations. However, only chancing risky situations had a mean below the midpoint of 3.0, and it is still almost neutral in importance rating.

The *interaction* component, which was next most important to respondents, also contains two subgroups. The outcomes of doing something with one's family and being with people who enjoy the same things were given mean ratings of 4.42 and 4.32, respectively. The second subgroup was given lower scores for importance, between 3.78 and 3.51. It included sharing experiences with others, feeling safe and secure, and experiencing a feeling of control.

The final component, *personal enhancement*, was given relatively low mean importance scores. Receiving mean scores above 4.0 in this group were experiencing new and different things, expanding one's interests, and doing something new and different. Lower rated outcomes on this component included doing something creative,



thinking about personal and spiritual values, understanding oneself better, learning about local native culture, and meeting new and interesting people.

Overall, almost all outcomes were seen as somewhat important and many were seen as very important to respondents. Nature-based outcomes, followed by relaxing outcomes, were most important for individuals. Adventure outcomes were split in importance; those that were somewhat dangerous received much lower importance ratings by the respondents. Interaction and personal enhancement outcomes, while important, were relatively subservient to the others.

### Market Segmentation Analysis

As completed in the intercept survey analysis, a benefit-based segmentation was conducted on the component scores from the PCA on outcomes. Again, to create homogeneous groups the component scores for the outcomes were cluster analyzed using a K-Means clustering algorithm. After careful inspection of several solutions, it was decided that six segments encompass the mail survey respondents. Figure 10 displays the mean scores each segment had with each component. (Note that the overall mean for any component is zero with a standard deviation of one.)

From the mean component scores on outcomes, each segment was defined according to the relative benefits sought. It is imperative to point out that Figure 10 is based on the relative importance that each segment places on each outcome.

The six market segments were labeled **adventurers, weekenders, enthusiasts, naturalists, urbanists, and escapists**. Adventurers were so named because of the high relative importance they attached to *adventure*-based outcomes. They also assigned a low relative importance to *nature appreciation* and *personal enhancement* outcomes. Weekenders describes a segment that had a low importance for *adventure* and *personal enhancement* outcomes and a high importance for *relaxation*. This group can be thought of as individuals who head to the country for weekends—hence, the name. All outcomes were relatively important for enthusiasts. Enthusiasts, as their name would suggest, were willing to try many new and repeated things. With a high positive score for *nature* outcomes, the fourth segment was labeled naturalists. Naturalists also had very low scores for *relaxation*-based outcomes. Urbanists were so named because of their high score for *personal enhancement* and low relative score for *nature*-based outcomes. They are believed to conduct traditional, mass tourism-based activities. Finally, escapists had high relative positive scores for all outcomes except *interaction*. Since, compared to other groups,

**Table 14.** Components and variables component loadings for outcomes' questions.

<b>Personal enhancement</b>	
.799	Learn about local communities
.713	Meet new and interesting people
.679	Learn about native culture
.559	Expand one's interests
.527	Understand myself better
.521	Do something creative
.509	Share skills and knowledge
.496	Experience new and different things
.454	Think about personal and spiritual values
.451	Do something new and different
<b>Relaxation</b>	
.693	Relax mentally
.687	Feeling an emotional release
.618	Avoiding the hustle and bustle of daily activity
.574	Relax physically
.490	Making my own decisions
.477	Feeling competent
.404	Traveling to and exploring new places
<b>Adventure</b>	
.752	Being daring and adventurous
.704	Chancing risky situations
.620	Developing skills and abilities
.561	Being self-reliant
.507	Keeping physically fit
.485	Having a stimulating and exciting experience
.484	Being physically active
.442	Experiencing a feeling of freedom
<b>Nature</b>	
.674	Learn about and appreciate nature
.671	Enjoy the scenic beauty
.645	Enjoy sights, sounds, and smells of nature
.635	Help safeguard forests
.631	Contribute to the preservation of nature
.497	Get away from civilization
<b>Interaction</b>	
.583	Share experiences with others
.563	Be with people one enjoys
.537	Do something with family
.509	Feel safe and secure
.456	Experience a feeling of control



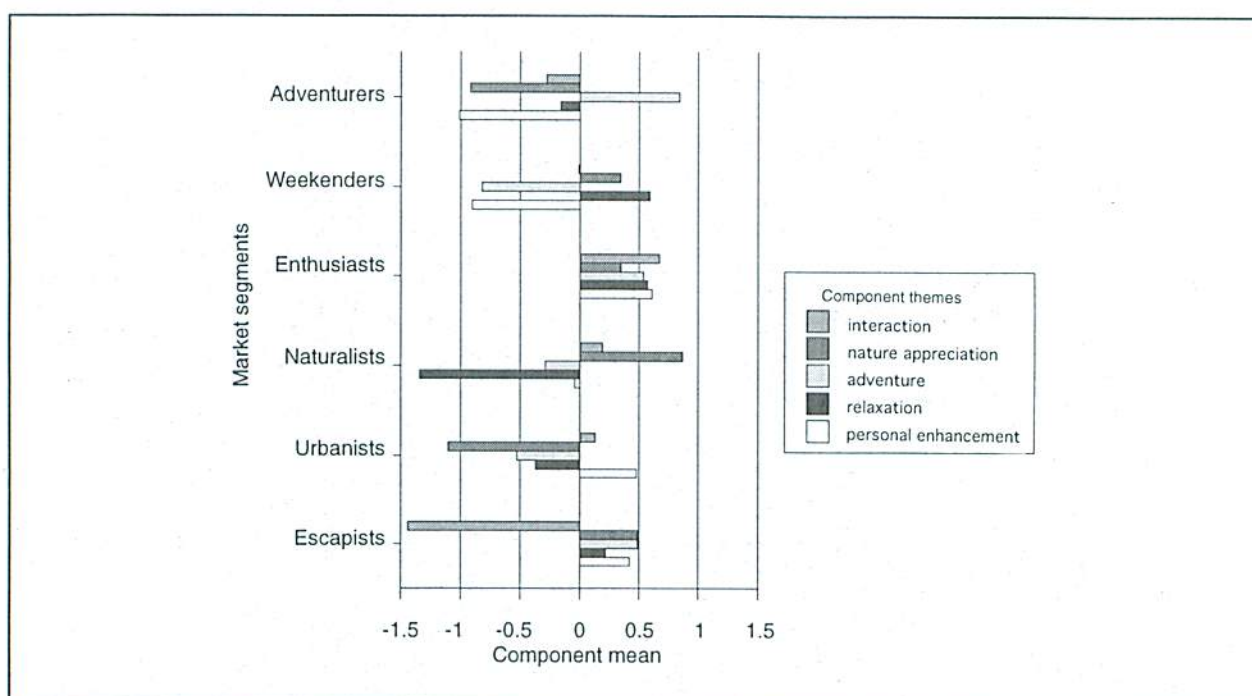


Figure 10. Market segmentation cluster analysis for the mail survey.

escapists avoid contact with others they had very different requirements for an ecotourism/outdoor recreation trip.

Before the profiles for each market segment are generated, two brief relative analyses focus on differences between the segments. First, the components created through the PCA on activities are examined for each market segment (see Table 15). Next, examination turns to reviewing the market segments and their relative desirability for the components created with the PCA above on settings (see Table 16). The analysis presented here is brief, and only comments on significant differences are made on a market segment by market segment basis.

Escapists placed higher interest on pursuing *biking*, *tourist*, *human-powered watercraft*, *park-related*, and *adventure* activities than did the average respondent.

Urbanists had lower interests in *biking*, *human-powered watercraft*, *unique winter*, *adventure*, and *nature-based* activities than did the average respondent.

Naturalists indicated a higher importance for *park-related*, *nature*, and *hiking* activities than did the average respondent. They also placed a lower importance on *individual sports* and *sailing*.

Enthusiasts had a higher interest for pursuing many activities, including *biking*, *tourist*, *unique winter*, *individual sports*, *nature*, *sailing*, and *hiking*, than did the average respondent.

Weekenders attached a lower interest to *biking*, *tourist*, *unique winter*, *individual sports*, and *sailing* activities.

Finally, adventurers rated *biking*, *human-powered watercraft*, *adventure*, and *individual sports* activities as more interesting than did the average respondent. As well, this group placed lower interest on *visiting and touring*, *park-related*, *nature*, and *hiking* activities.

Table 16 displays the means of each market segment and each component score from the PCA on settings. As well, the statistical tests associated with each setting component are indicated, but the text highlights only significant findings.

Escapists rated *nature-based*, *remote*, and *altered nature* settings as more desirable, and *mechanized* as less desirable settings compared to the average respondent.

Urbanists did not rate *nature* and *remote* settings as desirable as did the average respondent. Urbanists also saw *mechanized* settings as less undesirable.

Naturalists rated *nature* and *remote* settings as more desirable than did the average respondent. They also rated *mechanized* and *altered nature* settings as less desirable.



**Table 15.** Mean market segment scores on each activity component.

Activity component	Escapists	Urbanists	Naturalists	Enthusiasts	Weekenders	Adventurers
Biking **	0.13	-0.14	0.02	0.23	-0.25	0.13
Tourist **	0.31	0.07	0.06	0.24	-0.15	-0.65
Human-powered watercraft**	0.30	-0.25	0.17	0.04	-0.07	0.16
Park related **	0.18	-0.06	0.13	0.09	0.08	-0.51
Motorized winter and water	-0.22	0.16	-0.23	0.02	-0.05	0.16
Unique winter **	-0.03	-0.19	0.04	0.28	-0.16	-0.05
Adventure **	0.50	-0.31	-0.11	0.02	-0.17	0.47
Individual sports **	0.10	0.01	-0.31	0.27	-0.25	0.19
Fishing and hunting	-0.10	-0.12	0.00	0.24	0.02	-0.04
Nature **	0.06	-0.12	0.18	0.18	0.04	-0.43
Sailing **	0.03	0.04	-0.26	0.25	-0.17	-0.08
Horseback	-0.11	0.06	-0.12	0.17	-0.09	0.01
Physical winter	-0.05	-0.15	-0.12	0.12	0.11	-0.29
Hiking **	0.08	-0.15	0.26	0.20	0.08	-0.25

\*\* Denotes statistical significance between groups at the 95 percent confidence level.

**Table 16.** Mean market segment scores on each setting component.

	Escapists	Urbanists	Naturalists	Enthusiasts	Weekenders	Adventurers
Mechanized settings **	-0.21	0.55	-0.44	-0.05	-0.15	0.06
Natural settings **	0.28	-0.53	0.20	0.38	-0.00	-0.56
Remoteness **	0.37	-0.50	0.13	0.25	-0.14	0.30
Altered nature **	0.21	0.03	-0.23	0.24	-0.02	-0.64

\*\* Denotes statistical significance between groups at the 95 percent confidence level.

Enthusiasts rated *nature*, *remote*, and *altered nature* settings as more desirable than did the average respondent. *Mechanized* settings were rated similarly to the average respondent's rating.

Weekenders saw *mechanized* and *remote* settings as less desirable than did the average respondent. They rated *nature* and *altered nature* settings similar to the average respondent.

Adventurers rated *remoteness* as more desirable than did the average respondent. On average, *nature* and *altered nature* settings were seen as less desirable by this group. It should not be surprising that, on average, this group desires *remote* settings more than settings that have been altered with conveniences.

Attention turns now to developing profiles. These profiles attempt to describe the various market segments and answer the following questions for each: what activities are interesting, what settings are desirable, what outcomes are important, what are the past trip behaviors, and what

preferences exist for related aspects of a potential northern Ontario trip? Finally, the likelihood of targeting each market segment for an ecotourism trip to northern Ontario is discussed. The profiles are also displayed in order of the segment's likelihood to contribute to the demand for ecotourism in northern Ontario.

#### **Profile of Enthusiasts**

Enthusiasts, as the name suggests, are willing to undertake many activities. They are split between married and single males and females who do not have children at home, and belong to either the Generation X or baby-boom generations. Enthusiasts tend to be well educated individuals. Either they have white-collar occupations or they are students. They also exhibit a strong desire to learn and have a sense of adventure.

#### **Demographics**

- 46 percent are females (highest percentage of any segment)
- 53 percent are married, and 40 percent are single



- 36 percent have children living at home (lowest percentage of any segment)
- 52 percent are middle-aged (30 to 49 years of age), and 29 percent are between 20 and 29 years of age
- 69 percent are well educated, having completed at least a university degree or college diploma
- since many are students, a significant percentage have not completed college or university
- 66 percent are white-collar workers
- 23 percent are students (highest percentage of any group)
- 38 percent are members of an environmental organization
- 62 percent are American

*Activities of interest (analysis relative to the average respondent)*

- high level of interest for *biking* activities
- high level of interest for *viewing* and *tourist* activities (e.g., viewing local native culture)
- high level of interest for *unique winter* activities (e.g., dog sledding)
- high level of interest for *individual sports* activities (e.g., downhill skiing)
- high level of interest for *nature* activities (e.g., bird watching)
- high level of interest for *sailing* activities
- high level of interest for *hiking* activities
- for all other activities, the interest level is above average, but is not significant

*Preferred setting characteristics (analysis relative to the average respondent)*

- find *natural* settings (e.g., presence of lakes) desirable
- find *remote* settings (e.g., an area with no facilities) desirable
- find *altered nature* settings (e.g., an area with developed side trails) desirable
- for other settings, they place a higher desirability than do other segments for accessing areas by boat or float plane, having access to good swimming, and occasionally meeting other people

*Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- high level of importance for *adventure*-based outcomes (e.g., being daring and adventurous)

- high level of importance for *relaxation*-based outcomes (e.g., relax mentally)
- high level of importance for *personal enhancement*-based outcomes (e.g., learn about local communities)
- high level of importance for *interaction*-based outcomes (e.g., share experiences with others)

*Accommodation preferences*

- 27 percent prefer a primitive tent campground, 17 percent a basic lodge or hut, and 14 percent an organized tent campground

*Other relevant information*

- 77 percent would plan their own trip
- this group requires less time than others: 31 percent require 1 to 2 months and 37 percent require 3 to 5 months
- this group uses recommendations by friends and family 87 percent of the time (highest percentage of any segment)
- this group prefers to travel during summer (June, July, August, or September)
- travel the most of any group with both family and friends
- 94 percent have been on an overnight ecotourism/ outdoor recreation trip
- 46 percent have taken a trip to northern Ontario

*Likelihood of success in targeting this group for ecotourism*

Due to the high level of interest that enthusiasts have for all activities, this group would be a very good one to target for an ecotourism trip in northern Ontario. This group is fond of many different natural settings, and of remote or altered nature-based settings. Generally enthusiasts have no children living at home and many are single; therefore, they are less restricted in choosing travel activities, settings, or accommodations. Considering that only 46 percent of enthusiasts have previously visited northern Ontario, it appears that this group may be a growth segment for future ecotourism.

*Profile of Adventurers*

Adventurers have a keen sense of adventure and receive satisfaction from pushing their limits and meeting new challenges. This group prefers rugged, natural settings and activities that test their skills and abilities or pose a degree of risk and chance. Adventurers are largely single males from the Generation X and baby-boomer generations. As with the other groups, adventurers are highly educated and employed in white-collar occupations.



### *Demographics*

- 90 percent are males (highest percentage of any group)
- 43 percent are married (lowest percentage of any group)
- 49 percent are single (highest percentage of any group)
- 46 percent have at least one child living at home
- Generation X and young baby-boomers comprise a large percentage of this group (34 percent are between 20 and 29 years of age, and 40 percent are between 30 and 39 years of age)
- 70 percent have a university degree, college diploma, or postgraduate education; 19 percent of the respondents have some university or college education
- 68 percent are employed in the white-collar sector, and 19 percent are students
- 32 percent are members of an environmental organization
- 52 percent are Canadian (highest percentage of any group)

### *Activities of interest (analysis relative to the average respondent)*

- high level of interest for *biking* activities
- high level of interest for *human-powered water* activities (e.g., canoeing)
- high level of interest for *unique winter* activities (e.g., dog sledding)
- high level of interest for *adventure-based* activities (e.g., mountain climbing)
- high level of interest for *individual sports* activities (e.g., downhill skiing)
- low level of interest for *viewing and tourist* activities (e.g., viewing local native culture)
- low level of interest for *park related* activities (e.g., visiting provincial parks)
- low level of interest for *nature* activities (e.g., bird watching)
- low level of interest for *hiking* activities
- for all other activities, the interest level is about average

### *Preferred setting characteristics (analysis relative to the average respondent)*

- find *remote* settings (e.g., an area with no facilities) desirable
- find *natural* settings (e.g., presence of lakes) less desirable

- find *altered nature* settings (e.g., an area with developed side trails) less desirable
- for other settings, they place a lower desirability for areas with views of rural landscape and areas where overnight camping is not allowed

### *Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *adventure-based* outcomes (e.g., being daring and adventurous)
- low level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- low level of importance for *personal enhancement-based* outcomes (e.g., learn about local communities)
- low level of importance for *interaction-based* outcomes (e.g., share experiences with others)

### *Accommodation preferences*

- 41 percent prefer a primitive tent campground accommodation

### *Other relevant information*

- 80 percent rely on themselves to organize their trip
- 76 percent use recommendations as information sources
- 38 percent take 1 to 2 months to plan a trip, and 35 percent take 3 to 5 months. This is the least amount of time required by any of the groups
- although there was a higher preference for traveling in June, July, and August, many would travel during cooler months: 14 percent in February, 15 percent in March, and 19 percent in October
- 42 percent traveled just with friends (highest percentage of any group)
- 96 percent have been on an overnight ecotourism/ outdoor recreation trip (highest percentage of any group)
- 54 percent have taken a trip to northern Ontario

### *Likelihood of success in targeting this group for ecotourism*

Adventurers are a good group to target for an ecotourism adventure trip in northern Ontario. They are younger, mostly single, men. This group enjoys a challenge from the activity they are engaged in and the settings where they are recreating need to be remote. Adventurers can be attracted by portraying opportunities in northern Ontario as remote, with plenty of opportunities for highly challenging activities. Adventurers also indicate a greater willingness to travel to northern Ontario during off-peak times than do other segments.



### **Profile of Naturalists**

Naturalists have the highest affinity for nature and unaltered natural settings. They typically consist of married males from the baby-boomer generation or senior age cohorts with high education levels. They are employed in either white-collar occupations or are retired, and take a strong interest in the environment. They enjoy being with others, and doing activities that relate to nature or which can be done in a wilderness setting.

#### **Demographics**

- large majority are male (65 percent)
- most (58 percent) are married and 37 percent are single
- 46 percent have one or more children living at home
- mostly baby-boomers; 55 percent are between 30 to 49 years of age
- 12 percent are over 60 years of age (highest percentage of any group)
- 71 percent have graduated from university or college or completed postgraduate studies
- 15 percent are retired (highest percentage of any group)
- 61 percent work in white-collar occupations
- has the highest percentage of respondents holding an environmental organization membership
- 62 percent are American

#### **Activities of interest (analysis relative to the average respondent)**

- high level of interest for *park*-related activities (e.g., visiting provincial parks)
- high level of interest for *hiking* activities
- low level of interest for *individual sports* activities (e.g., downhill skiing)
- low level of interest for *sailing* activities
- for all other activities, the interest level is similar to the average with perhaps a lower interest level for motorized water and winter activities

#### **Preferred setting characteristics (analysis relative to the average respondent)**

- find *natural* settings (e.g., presence of lakes) desirable
- find *remote* settings (e.g., an area with no facilities) desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) undesirable
- find *altered nature* settings (e.g., an area with developed side trails) less desirable

- for other settings, they rate desirability quite similar to the average respondent

#### **Desired outcomes (analysis relative to the average respondent)**

- high level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- low level of importance for *adventure*-based outcomes (e.g., being daring and adventurous)
- low level of importance for *relaxation*-based outcomes (e.g., relax mentally)

#### **Accommodation preferences**

- 43 percent prefer to stay in a tent at either an organized or a primitive tent campground

#### **Other relevant information**

- 76 percent prefer to organize their own trip
- recommendations by friends and tourist offices are popular sources of information
- take longer to plan a trip: 41 percent need 3 to 5 months and 24 percent need 6 to 11 months
- the most popular travel month is August, and to a lesser extent July and September
- travel as often with their friends as they do with their family
- 96 percent have been on an overnight ecotourism/outdoor recreation trip
- 53 percent have taken a trip to northern Ontario

#### **Likelihood of success in targeting this group for ecotourism**

Naturalists are well suited for an ecotourism/outdoor recreation trip to northern Ontario. They prefer relaxing activities that allow them to appreciate nature. They also prefer natural, rugged terrain without evidence of civilization or human interference. This would be a good group to target for nature-based activities in pristine settings where there is a considerable variety in landscape, flora, and fauna.

### **Profile of Escapists**

Escapists are people who want to get away and avoid interacting with other people, aside from their families and friends. They have a high affinity for many outcomes: including, nature appreciation, adventure, relaxation, and personal enhancement. The group mainly consists of baby-boomer generation males who are highly educated, white-collar workers who belong to environmental organizations. The escapist segment also has a flare for physically demanding activities.



#### *Demographics*

- 66 percent are male
- 55 percent are married and 41 percent are single; 41 percent have at least one child living at home
- 39 percent are between 40 and 49 years of age, 30 percent are between 30 and 39 years of age, and only 11 percent are over 50 years of age
- 80 percent have completed at least a university degree or college diploma
- 34 percent have completed graduate studies
- 73 percent work in the white-collar sector
- 40 percent belong to an environmental organization
- 57 percent are American

#### *Activities of interest (analysis relative to the average respondent)*

- high level of interest for *biking* activities
- high level of interest for *viewing and tourist* activities (e.g., viewing local native culture)
- high level of interest for *human-powered watercraft* activities (e.g., canoeing)
- high level of interest for *park-related* activities (e.g., visiting provincial and national parks)
- high level of interest for *adventure* activities (e.g., mountain and rock climbing)
- for all other activities, the interest level is similar to the average

#### *Preferred setting characteristics (analysis relative to the average respondent)*

- find *natural* settings (e.g., presence of lakes) desirable
- find *remote* settings (e.g., an area with no facilities) desirable
- find *altered nature* settings (e.g., an area with developed side trails) desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) undesirable
- for other settings, they place a higher desirability than do other segments on accessing areas by gravel roads; being in mostly dense, bush-covered areas; and accessing good swimming. They do not desire to be in areas where overnight camping is restricted.

#### *Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- high level of importance for *adventure-based* outcomes (e.g., being daring and adventurous)

- high level of importance for *relaxation-based* outcomes (e.g., relax mentally)
- high level of importance for *personal enhancement-based* outcomes (e.g., learn about local communities)
- low level of importance for *interaction-based* outcomes (e.g., share experiences with others)

#### *Accommodation preferences*

- 36 percent prefer tent accommodation at a primitive campground

#### *Other relevant information*

- 85 percent would organize their own trip
- use both recommendations and tourist offices more than any other segments for information sources
- need less time to plan a trip than do other groups
- travel almost equally with friends or family and to a lesser extent with both
- prefer to travel in the late summer months of July, August, and September
- has the highest percentage of respondents that are city dwellers
- 94 percent have been on a past overnight ecotourism/outdoor recreation trip
- 54 percent have previously been on a trip to northern Ontario

#### *Likelihood of success in targeting this group for ecotourism*

This group contains the classic individual wanting to escape from the hustle and bustle of everyday city life. They express an interest in physically demanding, adventure, and more retained viewing activities. They desire natural, remote settings more than do most other groups. This group would be an excellent one to target as they are middle-aged, predominantly single, and a large proportion have no children living at home.

#### *Profile of Weekenders*

Weekenders want to get away to relax and release stress from their regular daily routines. They have an appreciation for nature and prefer altered nature settings to rugged settings. Weekenders are typically married males with children, belong to the baby-boom generation, are well educated, and employed in the white-collar sector.

#### *Demographics*

- 65 percent are male
- 69 percent are married (highest percentage of any group)
- 63 percent have children living at home (highest percentage of any group)



- most are middle-aged; 43 percent are between 30 and 39 years of age and 28 percent are between 40 and 49 years of age
- 76 percent have completed university, college, or postgraduate studies
- has the highest percentage of respondents in the white-collar sector
- 23 percent belong to an environmental organization (lowest percentage of any segment)
- 55 percent are American

*Activities of interest (analysis relative to the average respondent)*

- low level of interest for *biking* activities
- low level of interest for *viewing and tourist* activities (e.g., viewing local native culture)
- low level of interest for *unique winter* activities (e.g., dog sledding)
- low level of interest for *adventure*-based activities (e.g., mountain climbing)
- low level of interest for *individual sports* activities (e.g., downhill skiing)
- low level of interest for *sailing* activities
- for all other activities, the interest level is about average

*Preferred setting characteristics (analysis relative to the average respondent)*

- find *remote* settings (e.g., an area with no facilities) less desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) undesirable
- for other settings, they rate the desirability of settings quite similar to the average respondent.

*Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- high level of importance for *relaxation*-based outcomes (e.g., relax mentally)
- low level of importance for *adventure*-based outcomes (e.g., being daring and adventurous)
- low level of importance for *personal enhancement*-based outcomes (e.g., learn about local communities)

*Accommodation preferences*

- 25 percent prefer a primitive tent campground
- 20 percent prefer a basic lodge or hut

*Other relevant information*

- 86 percent prefer to organize their own trips
- recommendations are used 74 percent of the time and tourist offices are used 47 percent of the time
- this group is average with respect to the time they require for organizing a trip; 38 percent require 3 to 5 months, 26 percent require 1 to 2 months, and 22 percent require 6 to 11 months
- the most popular month for travel is August, followed by July and September
- 23 percent wish to travel in October (highest percentage of any segment)
- 45 percent would travel with their family (highest percentage of any segment)
- 96 percent have been on an overnight ecotourism/outdoor recreation trip
- 48 percent have taken a trip to northern Ontario

*Likelihood of success in targeting this group for ecotourism*

Weekenders are a family-oriented group. This group enjoys the outdoors, wildlife, and relaxation. They have an appreciation for nature, but are less interested in vigorous outdoor adventures than are other groups. Weekenders have been on ecotourism/outdoor recreation trips more than any other group, but are best suited to short duration travel with amenities present.

**Profile of Urbanists**

Urbanists enjoy tourist attractions and learning about local and native culture. The majority of urbanists are married, baby-boomers, highly educated, and employed in white-collar occupations. They prefer to interact with others in an urban setting. This group places lower interest levels in most activities than do the other groups.

*Demographics*

- 59 percent are male
- 58 percent are married and 37 percent are single; 50 percent have children living at home
- baby-boomers dominate, with 32 percent aged 30 to 39 years and 33 percent aged 40 to 49 years
- 76 percent have attained at least a university degree or college diploma
- 26 percent have completed graduate studies
- 74 percent are employed in the white-collar sector
- 66 percent are American (highest percentage of any group)



*Activities of interest (analysis relative to the average respondent)*

- low level of interest for *biking* activities
- low level of interest for *human-powered watercraft* activities (e.g., canoeing)
- low level of interest for *unique winter* activities (e.g., dog sledding)
- low level of interest for *adventure* activities (e.g., mountain and rock climbing)
- low level of interest for *nature-based* activities (e.g., bird watching)
- low level of interest for *hiking* activities
- for all other activities, the interest level is similar to the average. Perhaps, motorized winter and water activities receive relatively higher interest levels

*Preferred setting characteristics (analysis relative to the average respondent)*

- find *natural* settings (e.g., presence of lakes) less desirable
- find *remote* settings (e.g., an area with no facilities) less desirable
- find *mechanized* settings (e.g., hearing the sounds of logging) less undesirable
- for other settings, they place a higher desirability than do other segments on continually meeting other people and being in areas with views of residential development

*Desired outcomes (analysis relative to the average respondent)*

- high level of importance for *personal enhancement-based* outcomes (e.g., learn about local communities)
- low level of importance for *nature appreciation* outcomes (e.g., enjoying the scenic beauty)
- low level of importance for *adventure-based* outcomes (e.g., being daring and adventurous)
- low level of importance for *relaxation-based* outcomes (e.g., relax mentally)
- low level of importance for *interaction-based* outcomes (e.g., share experiences with others)

*Accommodation preferences*

- has the highest percentage of respondents preferring hotels or motels, bed and breakfasts, or basic lodge or hut accommodations
- tents are preferred by many as a last alternative

*Other relevant information*

- 75 percent organize their own trips

- recommendations by friends and family are important sources of information, and this group uses travel agents the most of any group
- more respondents in this group take longer to plan a trip: 43 percent take 3 to 5 months and 20 percent take 6 to 11 months
- this group travels more with family than friends
- prefer to travel in July and August and to a lesser extent in June and September
- 85 percent have been on an overnight ecotourism/outdoor recreation trip (lowest percentage of any segment)
- 43 percent have taken a trip to northern Ontario (lowest percentage of all groups)

*Likelihood of success in targeting this group for ecotourism*

Urbanists tend to have a lower interest in activities than do other groups. They do not desire natural settings and remote settings as much as other groups, and they are also more tolerant to mechanized settings. Considering this group consists of the smallest percentage of respondents who have undertaken past ecotourism/outdoor recreation trips or trips to northern Ontario, this segment would be very difficult to attract to northern Ontario for ecotourism or outdoor recreation travel. However, since this group is more tolerant to settings that are mechanized, it may be possible to target it for activities that are set in disturbed areas.

## COMPARISONS BETWEEN SURVEYS

This section examines the differences between the results of the mail and intercept surveys. Sociodemographic differences are highlighted, as are variations between the two groups of survey respondents for past trips and a potential northern Ontario trip. Next, the activities, settings, and outcomes are compared. Finally, the market segments extracted from the two samples are examined.

### Sociodemographic Differences

Most sociodemographic characteristics differed statistically between the two sample groups. These differences included sex, marital status, age, education, occupation, income, residency, and group memberships.

Figure 11 compares both the sex and marital status of respondents. It is apparent from the data that intercept survey respondents were more likely to be females and married than were mail survey respondents.

Intercept survey respondents were much older than were mail survey respondents. In fact, 40 percent of the intercept survey respondents were over 50 years of age. This



compared to only 14.2 percent for the mail survey respondents.

Mail survey respondents reached higher education attainment than did their intercept counterparts, with 72 percent of the mail survey respondents having at least a college diploma or university degree. This compared to 48 percent for the intercept survey respondents.

Although the majority of all respondents had white-collar occupations, 70 percent of the mail survey respondents were employed in white-collar occupations. This compared to 51 percent for the intercept survey respondents. Intercept survey respondents were also more likely to be retired (25 percent compared to 5 percent), more likely to be blue-collar workers (12 percent compared to 5 percent), and less likely to be students (4 percent compared to 16 percent) than were their mail survey counterparts.

Intercept survey respondents had a higher percentage (29 percent) of individuals who indicated that they had family incomes in excess of \$80,000. For mail survey respondents the corresponding level was 15 percent.

Intercept survey respondents were more likely to have lived in a city (66 percent compared to 49 percent). Conversely, mail survey respondents were both more likely to have lived in a small town (30 percent compared to 23 percent) or in rural areas (21 percent compared to 11 percent) than were intercept survey respondents.

Finally, mail survey respondents were more likely to have membership in an environmental organization (37 percent compared to 18 percent) and an outdoor club (21 percent compared to 11 percent) than were intercept survey respondents.

### Past and Future Trip Differences

Respondents to the mail and intercept surveys also differed in their revealed preferences of past ecotourism/outdoor recreation trips and past trips to northern Ontario, and their stated preferences for a potential northern Ontario trip.

While on past ecotourism/outdoor recreation trips, mail and intercept survey respondents differed on travel companionship, primary activities, trip destinations, and accommodations. Intercept survey respondents were more likely (66 percent) to travel with families than were mail survey respondents (36 percent). However, mail survey respondents were more likely to travel with friends (42 percent) than were intercept survey respondents (22 percent). Intercept survey respondents were more likely to pursue fishing (21 percent) and sightseeing (17 percent) on their trips, while mail survey respondents preferred canoeing (17 percent) and hiking (20 percent). Although northern Ontario was a destination for 50 percent of the intercept survey respondents' trips, this was the case for mail survey respondents only 25 percent of the time. More rugged accommodations were used by mail than by intercept survey respondents. Mail survey respondents used tents 57 percent of the time; rv's (4.7 percent) and hotels (10 percent) were used less frequently. Intercept survey respondents, however, used tents 31 percent of the time, rv's 23.3 percent of the time, and hotels 18 percent of the time.

The differences noted above also hold for differences between the two sets of respondents for past northern Ontario trips. Again, the intercept survey respondents

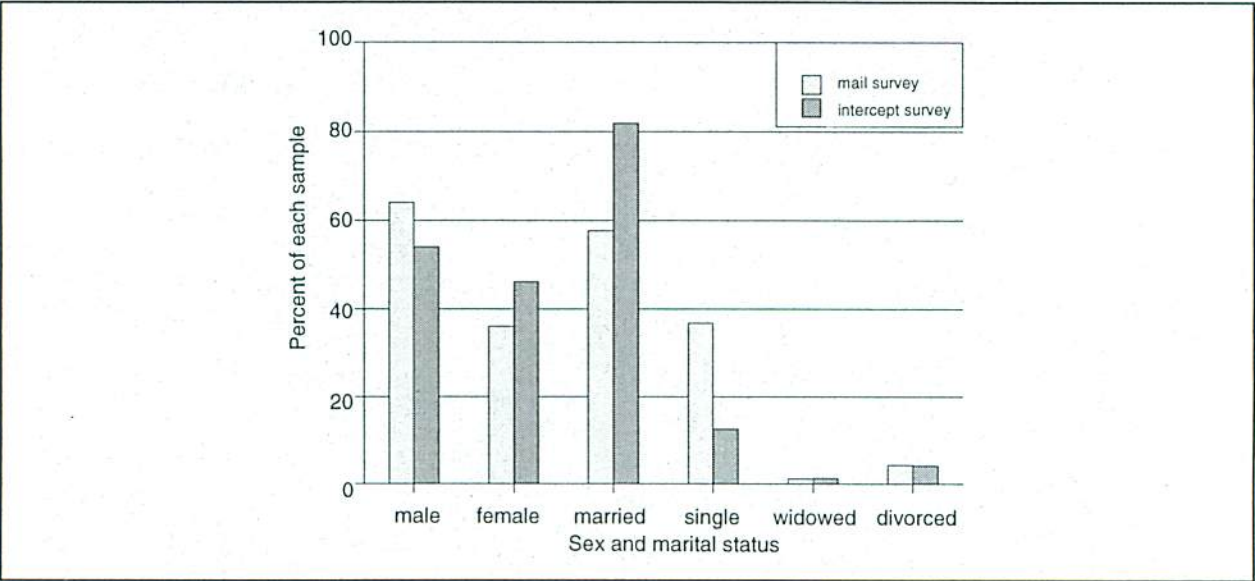


Figure 11. Sex and marital status of the intercept and mail survey respondents.



were more likely to travel with family (68 percent compared to 41 percent) and less likely to travel with friends (19 percent compared to 38 percent) than were mail survey respondents. Fishing (20 percent compared to 11 percent) and sightseeing (30 percent compared to 10 percent) were more popular for the intercept survey respondents. Canoeing (23 percent compared to 4 percent) and camping (19 percent compared to 12 percent) were more popular with by the mail survey respondents.

Differences between mail and intercept survey respondents to a potential northern Ontario trip correlated with the past behavior revealed by the two groups. Again intercept survey respondents were more likely to travel with their family (62 percent compared to 31 percent) and more likely to use convenient accommodations (for motel 43 percent compared to 32 percent; for rv 13 percent compared to 2 percent; and for tent 16 percent compared to 38 percent) than were their mail survey counterparts. As well, the mail survey respondents indicated that they would be more willing to travel from January to May and in September and October than were intercept survey respondents. Intercept survey respondents were more willing to travel during July and August. Television (7 percent compared to 3 percent), newspapers (19 percent compared to 14 percent), and tourist offices (54 percent compared to 42 percent) were all more likely sources of information for the intercept survey respondents. Finally, books (45 percent compared to 22 percent) and magazines in general (37 percent compared to 25 percent) were more likely to be used as information sources by the mail survey respondents.

## **Activities and Accommodations**

### **Activities**

Mann-Whitney U-tests were conducted (since activities were only based on a three-point scale) to compare the differences between mean scores of each activity for the mail and intercept survey respondents. There were several significant differences.

Bicycling activities held interest for 50 percent of the mail survey respondents, compared with only 25 percent of the intercept survey respondents. Over 80 percent of the mail survey respondents indicated an interest in flatwater and whitewater canoeing or kayaking; 55 percent stated they were interested in sailing and sea kayaking. Only 20 percent to 40 percent of the intercept survey respondents stated any interest in these same activities. Other adventurous activities, such as snorkeling, scuba diving, spelunking or caving, and mountain or rock climbing, held more interest for participants of the mail survey than they did for participants of the intercept survey.

Winter sports were also more appealing to respondents of the mail survey than to respondents of the intercept survey. Activities such as ice skating, tobogganing, dog sledding, snowshoeing, cross-country skiing, downhill skiing, winter camping, and ice climbing held more interest for the mail survey respondents.

Hunting and fishing activities, including ice fishing and snowmobiling, were more popular among the intercept survey respondents. So also were tourist and visiting activities, such as wildlife viewing, bird watching, viewing roadside attractions, viewing human works, and viewing local activities.

Overall, respondents to the mail survey were more interested in adventurous and physically challenging activities than were respondents to the intercept survey. Intercept survey respondents preferred quiet, relaxing activities and activities where they learned about people, cultures, and the surrounding area. Intercept survey respondents also indicated an interest in consumptive recreational activities (e.g., fishing).

### **Accommodations**

Mail survey respondents preferred more rugged accommodations than did the intercept survey respondents (Fig. 12). The most popular type of accommodation for the mail survey respondents was a primitive tent campground. The most popular type of accommodation for the intercept survey respondents was a hotel or motel.

### **Setting Differences**

Independent sample t-tests were used to identify significant differences between the mean ratings of setting characteristics for the mail and intercept survey respondents. Although both groups identified a preference for natural, unaltered settings and settings that were water landscaped, there were significant differences in the level of desirability for some setting characteristics. All respondents identified settings that were altered by mechanization as being undesirable. There were, however, significant differences between the groups with respect to their tolerance level for such mechanized settings.

Respondents from the mail survey preferred areas remote from food, towns, and emergency assistance and areas with no facilities more so than did the intercept survey respondents. Mail survey respondents also indicated a higher level of desire for more rugged terrain. They enjoyed access to and traveling in areas on low-maintenance gravel or forest roads. Respondents from the mail survey also preferred areas with low-standard trails and areas with no bridges or signs.



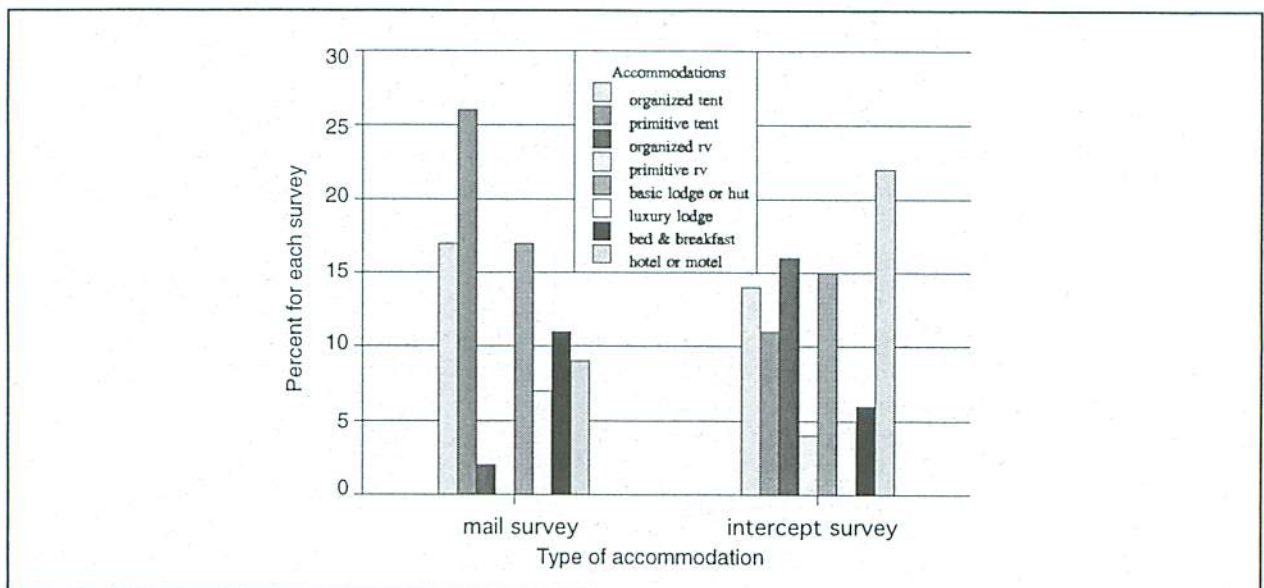


Figure 12. Accommodation differences between surveys.

Respondents from the intercept survey preferred areas with human waste facilities, as well as access to and traveling in areas on paved roads or on well maintained gravel roads. The intercept survey respondents also preferred areas with bridges, interpretive signs, interpretive nature programs, and historic sights.

Intercept survey respondents were more tolerant of meeting other people on a continual or occasional basis than were mail survey respondents.

Mail survey respondents enjoyed mostly dense, bush covered areas or relatively large forested areas and areas with undisturbed old-growth forest more than did the intercept survey respondents. Mail survey respondents were also more tolerant of areas affected by recent forest fires. Intercept survey respondents preferred relatively small forested areas, and were more tolerant of selective and clear-cutting views and of second-growth forests than were participants of the mail survey.

With respect to mechanized settings, the intercept survey respondents were more tolerant of seeing and hearing industrial vehicles; powered watercraft; all-terrain vehicles; and evidence of logging, mining, and gravel pits than were the mail survey respondents. Intercept survey respondents were also more tolerant of areas with views of rural, residential, industrial, and commercial development. Respondents to the intercept survey were more tolerant of encountering hunters and anglers than were the mail survey respondents.

Overall, the mail survey respondents preferred unaltered, rugged, natural settings. The intercept survey respondents

were more tolerant of urban development, terrain alteration, and evidence of industrialization than were the mail survey respondents.

### Outcome Differences

The importance of desired outcomes was rated similarly by respondents of both surveys. Independent sample t-tests were conducted to identify any significant differences between the mean ratings for the importance of outcomes. Several differences were noted.

Mail survey respondents placed more importance on getting away from civilization, feeling an emotional release, and experiencing a feeling of freedom than did respondents of the intercept survey. The respondents of the mail survey also enjoyed being physically active, being daring and adventurous, and chancing risky situations.

Intercept survey respondents enjoyed interaction more than did the mail survey respondents. They also preferred to do things with family and friends, to meet new and interesting people, and to relax physically.

In general, mail survey respondents enjoyed adventure and physical activity, whereas intercept survey respondents preferred to relax and enjoy their surroundings and their company.

### Differences Between Market Segments

The purpose of this study was to identify desired ecotourism opportunities. Principal component analyses and cluster analyses revealed five market segments for the intercept survey and six market segments for the mail



survey. Although the two survey groups were different with respect to their demographic characteristics, activities of interest, and some of the experiential outcomes, the market segments that emerged from the two surveys were similar.

In each survey sample there was a group of adventurous respondents who were keen on challenges, new and exciting things, and activities where they were physically active. This group was interested in remote settings and the rugged terrain and challenge of a natural environment.

The second group that appeared in both surveys was the enthusiast. These people were interested in many activities, from the relaxing to the mind expanding and from quiet water to climbing and winter sports. This group enjoyed the outdoors in a variety of settings, from remote wilderness characteristics to altered nature where trails are maintained and interpretive signs and programs are available.

Naturalists were the third group to emerge from both surveys. This group favored outdoor activities that were less physically demanding, and where they could enjoy and appreciate the scenic beauty of an area. They preferred relaxing and escaping from daily routines and enjoying the company of family, friends, and people with similar interests.

The next common market segment between the two survey results was the urbanists. This group contains people who prefer areas with development. They are not interested in outdoor recreation activities, and prefer conventional mass tourism activities to ecotourism or outdoor recreation. This group finds nature-based outcomes lower in importance than do the other groups.

The last matching pair of market segments were the weekenders from the mail survey and the vacationers from the intercept survey. These individuals were, generally, less interested in most activities. A possible exception was visiting parks and using interpretive services. They placed a high importance on nature-based outcomes and a low importance on adventure-based outcomes. Although similar in many respects, weekenders did not desire remote nor mechanized settings. Vacationers found natural settings to be less desirable.

The escapist group was the sixth to emerge from the mail survey. The escapists were similar to the adventurers in that they had a desire for adventure, but were different in that they had a greater sense of appreciation for nature and enjoying the natural beauty of an area. This group preferred remoteness for its solitude rather than the extra challenge it provided.

## Summary of Differences

From the above analyses it is apparent that there are many significant differences between the intercept and mail survey respondents. These differences occur in sociodemographic characteristics, past trip behavior, stated behavior for future trips, interest in activities, desirability of settings, and importance of outcomes. Although many market segments are similar across the two survey groups, nevertheless, some are different. From the evidence provided here, the respondents of the two surveys should be and were analyzed separately. Indeed, the principal components analyses on activities, settings, and outcomes differ to a large extent, and support treating these two samples separately.

## CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to identify desired ecotourism opportunities and ecotourist market segments. The two survey populations, the travelers who were intercepted in northern Ontario and the outdoor recreationists (mail survey) who were members of MEC or REI, were different with respect to their demographic characteristics, activities of interest, desirability of settings, and experiential outcomes. However, the resulting market segments that emerged were similar.

The mail survey had four market segment groups that indicated a demand for ecotourism in northern Ontario. The intercept survey results identified only three segments that indicated such a demand. The segment labeled **escapists** was found only in the mail survey analysis. The other three segments, common between the two data sets, were:

- **enthusiasts**
- **adventurers**
- **naturalists**

Understanding the market for ecotourism in northern Ontario has been shown to involve the potential ecotourist, the desired settings or natural environments, the activity preferences, and the desired outcomes.

The objective of benefit segmentation was to divide a relatively heterogeneous group of actual and potential ecotourists into more homogeneous groups with similar product needs. The segments that have been identified will allow operators and marketers in the tourism industry to identify specific target markets and to design the packaging and product development that is best suited to each.

Ecotourism can act as an important pillar of economic stability for many rural areas of the world. Unfortunately, studies have shown that many communities and regions



wait until other sectors are suffering or failing before turning to tourism as a solution to their economic problems (Hill 1995). In reality, for many areas of the world and most probably for northern Ontario, ecotourism on its own does not or will not provide a panacea for economic growth or stability. Rather, tourism development can act as an additional support to an existing economy by diversifying the economic base of communities that are largely dependent on forest or mineral extraction, agriculture, or manufacturing. Communities that are dependent on a single industry or activity invariably suffer decline in the long term.

The tourism industry itself is cyclical, and those businesses that depend on the changes of market preferences are particularly vulnerable. Rarely does tourism succeed as the only economic sector in a community or region. Those communities that have economic diversity are better positioned for long-term economic stability and hence community well-being.<sup>5</sup> However, due to its labor intensive nature and large number of small businesses and entrepreneurs, tourism can be an excellent vehicle for economic development and diversification. By encouraging the local development of tourism businesses and supporting enterprises, economic developers can significantly magnify the economic impact to an area (Hill 1995).

Ecotourism, theoretically, has the added benefit of contributing to the sustainable use of a community's or region's resources in that it supports the preservation and conservation of the natural environment. In northern Ontario, traditionally a timber industry oriented region, it is now being recognized that past forest management practices have resulted in unanticipated changes to the environment. These are expected to cause growing hardship, and society is now struggling to redress or cope with these changes. In this light, ecotourism could play an important role as a part of integrated forest management in this region.

The reality of the relationship between ecotourism and sustainable forestry will depend very much on how forest managers, economic developers, and tourism businesses coordinate and implement their policies and programs. Forest managers are required to see ecotourism opportunities as an integral part of forest management, and not merely as an "add-on" to the traditional business of timber harvesting. This will require of them a far broader approach to the use of northern Ontario's forests than has traditionally been adopted. It should be remembered, for example, that three of four Canadians view the forest as a national treasure to be held in trust for future generations (Carrow 1993).

Economic developers must also acknowledge that planning for ecotourism at the local level is seldom adequate. Rather, a "regional vision" is required that identifies ecotourism opportunities and coordinates tourism development with existing industries in a broad, regional economic development/diversity plan. Economic developers are also required to accept that tourism can be overdeveloped in an area. This leads to communities attempting to control tourism after social and environmental impacts have already occurred. To this end, the Ecotourism Society and the World Tourism Organization have prepared guides to assist planners in the development and coordination of sustainable tourism projects.

Ecotourism businesses have an obligation to promote viable and "honest" ecotourism experiences: those which conserve the natural environment and improve the welfare of the local people. As Hill (1995) states, some traditional tour operators have expanded into the nature-based market because it seems to be a profitable exercise; they are likely to be experts at marketing, but may lack the commitment to those clientele desiring a trip that meets their educational, cultural, and ecological expectations. Thus, while the profiles generated in this study may assist ecotourism businesses to better market their products, it is paramount that these ecotourism enterprises never become merely "eco-sell", where business and profit concerns overshadow environmental ethics and clientele needs.

## ACKNOWLEDGMENTS

The authors wish to recognize and thank a number of individuals for their assistance and contributions to this project. Thanks are extended to Dr. Wolfgang Haider, Ontario Ministry of Natural Resources, Center for Northern Ecosystem Research, for his collaboration on the project, for his assistance in the development of the survey instrument, and for his initiation of academic debate on a number of issues related to ecotourism in northern Ontario. Thanks are also extended to the following research assistants: Susan Cole, who patiently edited 12 versions of the survey instrument, assisted in the review of literature, and coordinated all aspects of the mail survey; Len Hunt, who was responsible for the data entry and data analysis of the two samples, the initial identification of key dimensions of the segmentation analysis, the coordination of the intercept survey, and the final editing of this report. A thank you also to Tanya Hamber who formatted, edited, and contributed to the first drafts of this report.

<sup>5</sup>Field, D.R. 1986. Community and natural resource development: Another look at tourism. Paper presented at the 18<sup>th</sup> IUFRO World Congress. 7-21 September 1986, Ljubljana, Yugoslavia.



Special thanks are extended to Mr. Harry Jääskeläinen, Development Officer, and to Mr. Brian Sykes, Senior Development Officer, Natural Resources Canada, Canadian Forest Service, Great Lakes Forestry Centre, whose advice and support throughout this project were invaluable.

Our sincere appreciation to Jan Chow, List Administrator of Recreational Equipment, Inc., Sumner, Washington and to JoyLynn Jordan of Mountain Equipment Co-op, Vancouver, British Columbia for arranging access to their membership lists in order to conduct the mail survey portion of this study.

Funding for this project was provided by the Northern Ontario Development Agreement, Northern Forestry Program.

## LITERATURE CITED

- Blamey, R.K. 1995. The nature of ecotourism. Bureau of Tourism Research, Canberra, Australia. Occasional Paper No. 21.
- Boo, E. 1992. The ecotourism boom: Planning for development and management. World Wildlife Fund, Washington, DC. Wildlands and Human Needs Technical Paper No. 2.
- Bottrill, C.G.; Pearce D.G. 1995. Ecotourism: Towards a key elements approach to operationalising the concept. *Journal of Sustainable Tourism* 3(1):45-54.
- Cadez, G.; Hunt, J.D. 1978. A comparison between port-of-entry visitor center users and non-users. Utah State University, Institute for the Study of Outdoor Recreation and Tourism, Logan, UT.
- Carrow, R. 1993. Integrated resource management in Canada—A case study of unrealized potential. *For. Chron.* 70(1):19-21.
- Christensen, J.E.; Heywood, J.L.; Stankey, G.H. 1991. The relationship between biophysical and social setting factors in the recreation opportunity spectrum. *Leisure Sciences* 13(3):239-246.
- Development Consulting Limited. 1991. Ecotourism opportunity identification study. A Report submitted to the Policy and Program Development Branch of the Ontario Ministry of Northern Development and Mines. Sudbury, ON.
- Driver, B.L.; Tocher, R.C. 1970. Toward a behavioural interpretation of recreational engagements, with implications for planning. p. 9-31 in B.L. Driver, ed. *Elements of Outdoor Recreation Planning*. University Microfilms, Ann Arbor, MI.
- Epler Wood, M. 1993. Foreword. in P.F.J. Eagles, S.D. Buse and G.T. Hvenegaard, eds. *Ecotourism: An Annotated Bibliography for Planners and Managers*. The Ecotourism Society, North Bennington, VT.
- Fennel, D.; Eagles, P.F.J. 1990. Ecotourism in Costa Rica: A conceptual framework. *Journal of Parks and Recreation Administration* 8(1):23-34.
- Filion, F.L.; DuWors, E.; Boxall, P.; Bouchard, P.; Reid, R.; Gray, P.A.; Bath, A.; Jacquemont, A.; Legare, G. 1993. The importance of wildlife to Canadians: Highlights of the 1991 Survey. Environment Canada, Canadian Wildlife Service, Ottawa, ON.
- Haley, R.I. 1968. Benefit segmentation: A decision-oriented research tool. *Journal of Marketing* 32:30-35.
- Hill, B. 1995. A guide to adventure travel. *Parks and Recreation*. September. 56-65.
- Howard, D.R.; Gitelson, G. 1989. An analysis of the differences between state welcome center users and non-users: A profile of Oregon vacationers. *Journal of Travel Research* 27(4):38-40.
- Johnson, L. 1994. Temagami economic impact study: Park and crown land recreational canoeing. Ontario Ministry of Natural Resources, North Bay, ON.
- Lindberg, K. 1994. Quantifying ecotourism—Are reliable statistics in sight? *The Ecotourism Society Newsletter* 4:1-7.
- Manning, R.E. 1986. *Studies in outdoor recreation*. Oregon State University Press, Corvallis, OR.
- Marshall, Macklin & Monaghan Limited. 1992. Ontario's specialty outdoors product: Strategic directions for its development, management and marketing background report. Produced in association with Canada Market Research, Toronto, ON.
- McCool, S.F.; Menning, N.; Spettigue, B. 1994. Segmenting the wildlife viewing market. A paper presented at the Fifth International Symposium on Society and Resource Management. 7-10 June 1994. Fort Collins, Colorado. Colorado State University, College of Natural Resources, Human Dimensions in Natural Resources Unit, Fort Collins, CO.
- McCool, S.F.; Stankey, G.H.; Clarke, R.N. 1985. Choosing recreation settings: Processes, findings, and research direction. p. 1-8 in G.H. Stankey and S.F. McCool, comps. *Proceedings—Symposium on Recreation Choice Behavior*. 22-23 March 1984, Missoula, Montana. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, UT. General Technical Report INT-184.



- Ontario Ministry of Natural Resources. 1992. Economic impact of provincial parks in Ontario: A summary report. North Bay, ON.
- Rollins, R. B.; Rouse, J. 1991. Segmenting backcountry visitors by setting preferences. *in* J. H. Martin Willison, S. Bondrup-Neilsen, C. Drysdale, T.B. Herman, N.W.P. Munro and T.L. Pollack, eds. Science and the Management of Protected Areas. Proceedings of a Conference. 14-19 May 1991, Acadia University, Wolfville, Nova Scotia. Organized by the Science and Protected Areas Association, Nova Scotia, Canada. Elsevier Science Publishers, Amsterdam, the Netherlands.
- Scace, R.C.; Grifone, E.; Usher, R. 1992. Ecotourism in Canada. Report to the Canadian Environmental Advisory Council. Environment Canada, Hull, QC.
- Sessoms, D. 1984. Leisure services. Prentice Hall, Englewood Cliffs, NJ.
- Shindler, B.; List, P.; Steel, B.S. 1993. Managing federal forests: Public attitudes in Oregon and nationwide. *Journal of Forestry* 7:36-42.
- Stankey, G. H.; Clarke, R.N. 1992. Social aspects of new perspectives in forestry. Greytowers Press, Milford, PA.
- Wall, G. 1994. Ecotourism: Old wine in new bottles? *Trends* 31(2):4-9.



**Appendix A. Questionnaire used in both mail and intercept surveys.**



# A SURVEY ON OUTDOOR RECREATION AND ECOTOURISM IN NORTHERN ONTARIO



LAKEHEAD  
 UNIVERSITY





If you wish to be entered in the Prize Draw for a \$100 gift certificate, please write your name and address below:

**NAME:**

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**ADDRESS:**

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Please return completed survey in the stamped, addressed envelope included.  
Address correspondence to:

Dr. Dave Twynam  
School of Outdoor Recreation, Parks and Tourism  
Lakehead University - **THUNDER BAY**  
Ontario CANADA P7B 5E1



**A SURVEY ON OUTDOOR RECREATION AND ECOTOURISM  
IN NORTHERN ONTARIO**

*We appreciate the time you are taking to answer these questions. Your help in completing this research is important. Please give us your considered responses after you have completed your most recent trip.*

1. Have you ever taken an overnight trip for outdoor recreation or ecotourism purposes?

\_\_\_ Yes

\_\_\_ No (If no, please continue to Question 2)

If yes, please list in the table below the details of trips you have taken *for outdoor recreation or ecotourism purposes within the last five years*. Please begin with the most recent trip.

DATE OF TRIP (mm/yy)	MAIN DESTINATION (nearest town)	PRIMARY ACTIVITY	WHO WITH (family, friends, organization)	LENGTH OF TRIP (# of nights)	ACCOMMODATION TYPE (refer to list in box on next page)

2. Please list in the table below the details of your last three trips to northern Ontario.  
Please begin with your most recent trip.

DATE OF TRIP (month/year)	MAIN DESTINATION	PRIMARY ACTIVITY	WHO WITH (family, friends, organization)	LENGTH OF TRIP (# of nights)



3. The following is a list of different types of outdoor recreation/tourist activities that are available in northern Ontario. Please indicate your interest in each activity by completing TASK (1), and TASK (2) where this applies.

TASK (1) - *check how interested* you would be in participating in each activity.

If you check "*somewhat interested*" (2) or "*very interested*" (3) in an activity, then please complete

TASK (2) - *select your most preferred type of accommodation* while engaged in this activity from the list of accommodation types found in the shaded box to the right (1 - 9).

ACCOMMODATION TYPE  
(Select only your most preferred type)  
1. organized campground (fee) - tent  
2. organized campground (fee) - RV/trailer  
3. primitive campground - tent  
4. primitive campground - RV/trailer  
5. basic lodge/hut  
6. luxury lodge  
7. bed and breakfast  
8. hotel/motel  
9. other (please specify in last column)

ACTIVITY	TASK 1			TASK 2
	1 not at all interested	2 somewhat interested	3 very interested	ACCOMMODATION TYPE (1 - 9) (select from box above)
Bicycling (day trip - paved road)				
Bicycling (day trip - gravel road)				
Bicycling (multiple day tour - paved road)				
Bicycling (multiple day tour - paved and gravel road)				
Mountain Biking (day trip)				
Mountain Biking (multiple day tour)				
Mountain climbing/rock climbing				
Spelunking/caving				
Hiking/walking (day trip)				
Hiking (multiple day tour)				
Horseback riding (day trip)				
Horseback riding (multiple day tour)				
Individual sports participation (e.g., tennis, golf)				
Wildlife viewing				
Bird watching				



ACTIVITY	1 not at all interested	2 somewhat interested	3 very interested	ACCOMMODATION TYPE(1-9) (select from box above)
Whitewater canoeing or kayaking (day trip)				
Whitewater canoeing or kayaking (multiple day tour)				
Flatwater canoeing or kayaking (day trip)				
Flatwater canoeing or kayaking (multiple day tour)				
Sailing (day trip)				
Sailing (multiple day tour)				
Sea/Lake Kayaking (day trip)				
Sea/Lake Kayaking (multiple day tour)				
Outdoor art (painting, sculpture, recording)				
Nature photography				
Hunting				
Swimming (in lakes or rivers)				
Fishing (catch within limit)				
Fishing (catch and release)				
Diving (snorkelling)				
Diving (scuba )				
Wind surfing				
Motorized water activities				
Water skiing and water sports				
Tobogganing and snow play				
Dog sledding (day trip)				
Dog sledding (multiple day tour)				
Cross country skiing (day trip)				
Cross country skiing (multiple day tour)				
Downhill skiing				
Snowshoeing (day trip)				



ACTIVITY	1 not at all interested	2 somewhat interested	3 very interested	ACCOMMODATION TYPE(1-9) (select from box above)
Snowshoeing (multiple day tour)				
Winter camping				
Ice skating				
Ice fishing				
Ice climbing				
Snowmobiling (day trip)				
Snowmobiling (multiple day tour)				
Visiting provincial or national parks				
Visiting waterway parks				
Using interpretative services (e.g., nature centres at park offices)				
Participating in educational nature tours (non-profit organization)				
Participating in a guided nature tour (private tour company)				
Viewing local activities (e.g., tourism events, festivals)				
Viewing local native culture				
Interacting with local native culture				
Acquiring artifacts and crafts (of native and local artists)				
Viewing human works (e.g., arts and crafts, museums, theatre etc.)				
Viewing roadside attractions				

Other Activities (please list):

(1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_



THE REMAINING QUESTIONS REFER TO A FUTURE "POTENTIAL" TRIP WHICH YOU MAY WISH TO TAKE TO NORTHERN ONTARIO.

4. Please list, in order of preference, up to five outdoor recreation/tourism activities which you would be interested in pursuing *on this future trip to northern Ontario*. Also, please estimate the percentage of time that you would spend during your trip on each of these activities.

1. \_\_\_\_\_ %
2. \_\_\_\_\_ %
3. \_\_\_\_\_ %
4. \_\_\_\_\_ %
5. \_\_\_\_\_ %

Total Time for all activities = 100%

5. Please describe this potential trip to northern Ontario in more detail by responding to the following questions:

- a) How many nights would you likely spend on this trip?

- \_\_\_\_\_ none, would do a day trip(s)  
\_\_\_\_\_ one night  
\_\_\_\_\_ more than one night (please specify the number) \_\_\_\_\_

- b) While you were travelling to your chosen destination in northern Ontario, what would be your preferred type of accommodation?

- |                                    |                    |
|------------------------------------|--------------------|
| _____ motel/hotel                  | _____ motorhome/RV |
| _____ trailer                      | _____ tent         |
| _____ pickup camper                | _____ in open      |
| _____ other (please specify) _____ |                    |

- c) Please indicate who would most likely accompany you on this trip.

- \_\_\_\_\_ family  
\_\_\_\_\_ friends  
\_\_\_\_\_ family and friends  
\_\_\_\_\_ club/organization  
\_\_\_\_\_ alone  
\_\_\_\_\_ other (please specify) \_\_\_\_\_



d) Please indicate who you would most likely rely on to organize this trip?

- ☐ self  
☐ club (e.g.; naturalist organization)  
☐ commercial outfitter  
☐ another member of your group  
☐ commercial tour agency (e.g.; travel tour operator)

e) Please check the month(s) during which you would most likely visit northern Ontario for a recreational trip.

☐ January ☐ February ☐ March ☐ April ☐ May ☐ June  
☐ July ☐ August ☐ September ☐ October ☐ November ☐ December

f) Please check the main sources of information you generally use for the purpose of planning an outdoor recreation or touring trip?

- |  |   |
|--|---|
| <input type="checkbox"/> Travel agents   | <input type="checkbox"/> Books                    |
| <input type="checkbox"/> TV/radio  | <input type="checkbox"/> Magazines in general     |
| <input type="checkbox"/> Newspapers  | <input type="checkbox"/> Documentary travel films |
| <input type="checkbox"/> Travel magazines  | <input type="checkbox"/> Tourist office           |
| <input type="checkbox"/> Airline or other commercial carrier                     | <input type="checkbox"/> Travel shows             |
| <input type="checkbox"/> Recommendations of friends, relatives, or acquaintances |   |
| <input type="checkbox"/> Other (please specify) _____                            |   |

g) How far ahead do you usually begin planning an outdoor recreation or touring vacation?

- |  |   |
|--|---|
| <input type="checkbox"/> less than 1 month | <input type="checkbox"/> 6 to 11 months   |
| <input type="checkbox"/> 1 to 2 months     | <input type="checkbox"/> more than 1 year |
| <input type="checkbox"/> 3 to 5 months     |   |

6. In this question, we want to find out about the type of environmental setting you would prefer during your potential trip to northern Ontario for outdoor recreation/ecotourism purposes. Please indicate how desirable each of the following setting characteristics is, when pursuing the preferred activities you listed in Question 4. Put an 'X' in the appropriate box to the right of each item in the table below.

SETTING CHARACTERISTICS	-2 very undesirable	-1 somewhat undesirable	0 neither desirable nor undesirable	+1 somewhat desirable	+2 very desirable	not a consideration
Access to the area by float plane						
Access to the area by boat						
Access to area by gravel/forest road						



SETTING CHARACTERISTICS	-2 very undesirable	-1 somewhat undesirable	0 neither desirable nor undesirable	+ 1 somewhat desirable	+ 2 very desirable	not a consideration
Access to the area by paved road						
Mostly undisturbed old growth forest						
Mostly second growth, single species younger forest						
Mostly dense, bush-covered areas						
Mostly recent clear-cut forest						
Mostly selective cut forest						
Relatively small forested area (up to 100 square km/40 square miles)						
Moderate forested area (100 - 500 square km/40 - 200 square miles)						
Relatively large forested area (over 500 square km/200 square miles)						
Variety of plants/trees						
Rare plants/trees						
Variety of wildlife						
Rare species of wildlife						
Variety of birds						
Rare species of birds						
Large trees (red and white pine)						
Presence of lakes						
Presence of rivers or streams						
Presence of beaches						
Presence of rock outcrops						
Views of gorges						
Views of waterfalls						
Access to drinking water						
Access to good fishing						
Access to good swimming						



SETTING CHARACTERISTICS	-2 very undesirable	-1 somewhat undesirable	0 neither desirable nor undesirable	+ 1 somewhat desirable	+ 2 very desirable	not a consideration
Being in a logged area						
Seeing evidence of logging in the area						
Seeing evidence of mining in area						
Seeing a gravel pit in the area						
Recreating on dammed lakes						
Seeing dams in the area						
Seeing hydro lines in the area						
Being in an area that has had a recent naturally-occurring forest fire						
Being in an area that has had a naturally-occurring forest fire in the past (more than 10 years ago)						
Hearing sounds of logging (chainsaws, machinery)						
Encountering industrial vehicles on secondary roads (logging trucks, mining trucks)						
Hearing sounds of vehicles						
Hearing powered water craft						
Seeing powered water craft						
Hearing all-terrain vehicles						
Seeing all-terrain vehicles						
Hearing gunshots from hunting						
Encountering hunters						
Encountering anglers						
Meeting no other people in the area						
Occasionally meeting other people in the area						
Continually meeting other people in the area						



SETTING CHARACTERISTICS	-2 very undesirable	-1 somewhat undesirable	0 neither desirable nor undesirable	+1 somewhat desirable	+2 very desirable	not a consideration
An area with historic sites and buildings						
An area with views of undisturbed natural scenery						
An area with views of rural landscape						
An area with views of residential development						
An area with views of industrial or commercial development						
Travel in the area on paved roads						
Travel in the area on gravel/forest roads (well maintained)						
Travel in the area on gravel/forest roads (low maintenance--4 wheel drive)						
Travel in the area on lake/river systems (boat, canoe, kayak)						
Travel in the area on high standard trails (marked and maintained)						
Travel in the area on low standard trails (not marked or maintained)						
Travel using hydro right-of-ways						
An area that has developed side trails to unique landscape features						
An area that has interpretive signs explaining natural features or early history						
An area that has interpretive nature and cultural programs						
No signs in the area						
An area where trails have no bridges						
An area where trails have bridges over creeks/rivers						



SETTING CHARACTERISTICS	-2 very undesirable	-1 somewhat undesirable	0 neither desirable nor undesirable	+ 1 somewhat desirable	+ 2 very desirable	not a consideration
An area where trails have bridges over rivers that are dangerous to wade						
An area that is remote from towns or cities (more than 10 Km/6 miles)						
An area that is remote from food, equipment and supplies						
An area that is remote from emergency assistance or rescue						
An area that has no facilities whatsoever						
An area where no fires are allowed (only the use of personal stoves)						
An area where camping is restricted to designated sites						
An area where no overnight camping is allowed						
An area where a human waste facility is provided						

7. Please indicate how important each of the following experiences is to the enjoyment of your potential trip to northern Ontario for outdoor recreation/ecotourism purposes.  
*Put an 'X' in the appropriate box to the right of each item in the table below.*

OUTCOMES	-2 not at all important	-1 unimportant	0 neither important nor unimportant	+ 1 important	+ 2 extremely important
experiencing a feeling of control					
enjoying the sights, sounds, smells of nature					
chancing risky situations					
getting away from civilization for a while					
developing my skills and abilities					



OUTCOMES	-2 not at all important	-1 unimportant	0 neither important nor unimportant	+1 important	+2 extremely important
learning about and appreciating nature					
doing something new and different					
keeping physically fit					
experiencing a feeling of freedom					
helping to safeguard forests and wilderness areas					
being daring and adventurous					
enjoying the scenic beauty					
being with people who enjoy the same things I do					
feeling an emotional release from my work and/or other everyday commitments					
doing something creative					
meeting new and interesting people					
learning about local communities					
understanding myself better					
relaxing mentally					
adding some variety to my daily routine					
sharing skill and knowledge with others					
thinking about personal or spiritual values					
making my own decisions					
having a stimulating and exciting experience					
expanding my interests					
relaxing physically					
travelling to and exploring new places					
feeling competent					
feeling safe and secure					
learning about the native culture					



OUTCOMES	-2 not at all important	-1 unimportant	0 neither important nor unimportant	+1 important	+2 extremely important
being physically active					
being self-reliant					
sharing experiences with others					
avoiding the hustle and bustle of daily activities					
experiencing new and different things					
contributing to the preservation of the natural environment					
doing something with my family or with close friends					

## 8. QUESTIONS ABOUT YOU

People's participation in outdoor recreation/ecotourism is often influenced by their ages, the number and ages of their children, their incomes and so on. In this question we would like to know a little more about you and your family.

a) Are you: male \_\_\_\_ female \_\_\_\_

b) Are you: single \_\_\_\_ married/living common-law \_\_\_\_ divorced \_\_\_\_ widowed \_\_\_\_

c) If you have children, how many live at home now?

0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ 5 \_\_\_\_ 5+ \_\_\_\_

d) How old are you?

16-20 \_\_\_\_ 20-29 \_\_\_\_ 30-39 \_\_\_\_ 40-49 \_\_\_\_ 50-59 \_\_\_\_ 60-69 \_\_\_\_

70 + \_\_\_\_



e) What is your educational background?

some high school	_____	high school diploma	_____
some university/college	_____	university/college graduate	_____
post-graduate studies	_____	trade or vocational qualification	_____

other (please specify) \_\_\_\_\_

f) What is your family income (before taxes)?

under \$10,000	_____	\$10,000-\$20,000	_____	\$20,001-\$30,000	_____	\$30,001-\$40,000	_____
\$40,001-\$50,000	_____	\$50,001-\$60,000	_____	\$60,001-\$70,000	_____	\$70,001-\$80,000	_____
\$80,001 +	_____						

g) What is your occupation? \_\_\_\_\_

h) Where do you live? (City) \_\_\_\_\_ (Prov/State) \_\_\_\_\_

i) How many vacations (more than 1 night away) do you normally take each year? \_\_\_\_\_

j) Do you belong to any conservation or environmental organizations?

\_\_\_\_\_ no  
\_\_\_\_\_ yes (if yes, which one(s)) \_\_\_\_\_

k) Do you belong to an outdoor recreation club?

\_\_\_\_\_ no  
\_\_\_\_\_ yes (if yes, which one(s)) \_\_\_\_\_

l) Where have you lived most of your life?

\_\_\_\_\_ in a city      \_\_\_\_\_ in a small town      \_\_\_\_\_ in a rural area

Thank you for your cooperation. Your time and effort are appreciated. We welcome any thoughts that you may have on this topic and encourage you to send in any additional comments.



For more information about this survey, please contact one of the following:

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Appendix B. Intercept survey rank of mean scores.

The following are the mean scores of variables in Questions 3, 6, and 7 for the intercept survey. They are ranked from highest to lowest.

Table B1. Intercept survey rank of means for activity variables.<sup>a</sup>

Activities	Rank	Mean
Visiting provincial or national parks .....	1	2.53
Wildlife viewing .....	2	2.43
Visiting waterway parks .....	3	2.33
Viewing roadside attractions .....	4	2.24
Hiking, single-day trip .....	5	2.19
Using interpretive services .....	6	2.18
Viewing local activities .....	7	2.16
Viewing human works .....	8	2.11
Viewing local native culture .....	9	2.10
Swimming .....	10	2.04
Fishing, catch within limit .....	11	2.02
Nature photography .....	12	2.00
Bird watching .....	13	1.97
Acquiring artifacts and crafts .....	14	1.90
Participating in educational nature tours .....	15	1.89
Interacting with local native culture .....	16	1.87
Fishing, catch and release .....	17	1.84
Flatwater canoeing, single-day trip .....	18	1.82
Cross-country skiing, single-day trip .....	19	1.71
Participating in guided nature tour .....	20	1.66
Individual sports participation (tennis, golf,) .....	21	1.65
Hiking, multiple-day trip .....	22	1.64
Horseback riding, single-day trip .....	23	1.60
Bicycling, paved roads, single-day trip .....	24	1.60
Tobogganing and snow play .....	25	1.59
Whitewater canoeing, single-day trip .....	26	1.59
Flatwater canoeing, multiple-day trip .....	27	1.58
Motorized water activities .....	28	1.56



Snowmobiling, single-day trip .....	29	1.54
Sailing, single-day trip .....	30	1.52
Ice skating .....	31	1.51
Downhill skiing .....	32	1.50
Snowshoeing, single-day trip .....	33	1.48
Ice fishing .....	34	1.47
Hunting .....	35	1.45
Water skiing and water sports .....	36	1.42
Snorkeling .....	37	1.41
Spelunking/caving .....	38	1.41
Whitewater canoeing, multiple-day trip .....	39	1.37
Dog sledding, single-day trip .....	40	1.37
Horseback riding, multiple-day trip .....	41	1.37
Winter camping .....	42	1.36
Mountain biking, single-day trip .....	43	1.36
Cross-country skiing, multiple-day trip .....	44	1.35
Snowmobiling, multiple-day trip .....	45	1.32
Sea kayaking, single-day trip .....	46	1.32
Outdoor art .....	47	1.32
Sailing, multiple-day trip .....	48	1.31
Mountain/rock climbing .....	49	1.31
Scuba diving .....	50	1.28
Bicycling, paved road, multiple-day trip .....	51	1.27
Bicycling, gravel road, single-day trip .....	52	1.26
Wind surfing .....	53	1.24
Sea kayaking, multiple-day trip .....	54	1.22
Mountain biking, multiple-day trip .....	55	1.21
Dog sledding, multiple-day trip .....	56	1.19
Snowshoeing, multiple-day trip .....	57	1.19
Bicycling, gravel and paved road, multiple-day trip .....	58	1.16
Ice climbing .....	59	1.09

<sup>a</sup>Activities of the intercept survey are ranked in order of overall level of interest from highest to lowest according to the mean value for each variable. Variables were evaluated on a likert scale from 1 to 3, with 1 being not at all interested, 2 being somewhat interested, and 3 being very interested.



**Table B2.** Intercept survey rank of means for setting variables.<sup>a</sup>

Setting characteristics	Rank	Mean
Presence of lakes .....	1	4.81
Presence of rivers and streams .....	2	4.79
Access to drinking water .....	3	4.73
Area with views of undisturbed natural scenery .....	4	4.71
Variety of wildlife .....	5	4.65
View of waterfalls .....	6	4.64
View of gorges .....	7	4.51
Large trees .....	8	4.46
Variety of birds .....	9	4.45
Variety of plants and trees .....	10	4.42
Presence of beaches .....	11	4.36
Access by paved road .....	12	4.36
Rare species of wildlife .....	13	4.32
Presence of rock outcrops .....	14	4.30
Area that has interpretive signage .....	15	4.27
Area with historic sites and buildings .....	16	4.24
Area with human waste facilities .....	17	4.24
Areas with views of rural landscape .....	18	4.19
Area with developed side trails .....	19	4.18
Rare species of birds .....	20	4.18
Mostly undisturbed old growth forest .....	21	4.16
Access to good swimming .....	22	4.13
Access to good fishing .....	23	4.13
Area where trails have bridges over creeks and rivers .....	24	4.08
Rare plants .....	25	4.06
Area with interpretive nature and cultural programs .....	26	4.06
Area where trails have bridges over dangerous rivers .....	27	4.05
Travel in the area on high standard trails .....	28	4.02
Area remote from towns or cities .....	29	3.97
Travel in the area on paved roads .....	30	3.97
Occasionally meeting other people .....	31	3.76
Travel in the area on lake or river systems .....	32	3.76
Relatively large forested area .....	33	3.75
Travel in the area on gravel or forest roads .....	34	3.75
Access by gravel or forest roads .....	35	3.67
Access by boat .....	36	3.63
Moderate forested area .....	37	3.48
Area where camping is restricted to designated sites .....	38	3.28
Mostly second growth, single species younger forest .....	39	3.25



Meeting no other people .....	40	3.23
Access by float plane .....	41	3.13
Recreating on a dammed lake .....	42	3.12
Relatively small forested area .....	43	3.10
Seeing dams in the area .....	44	3.09
Encountering anglers .....	45	3.05
Area with past, naturally occurring forest fire .....	46	2.90
Mostly dense, bush-covered areas .....	47	2.80
Area remote from food, equipment, and supplies .....	48	2.72
Mostly selective cut forest .....	49	2.71
Travel on low standard trails .....	50	2.68
Travel using hydro right-of-ways .....	51	2.65
Continually meeting other people .....	52	2.63
No signs in the area .....	53	2.58
Area with a recent, naturally occurring forest fire .....	54	2.46
Area where no fires are allowed .....	55	2.45
Seeing hydro lines in the area .....	56	2.44
Seeing evidence of mining .....	57	2.44
Travel in the area on low maintenance gravel roads .....	58	2.36
Area where trails have no bridges .....	59	2.35
Area with views of residential development .....	60	2.30
Seeing powered watercraft .....	61	2.24
Seeing evidence of logging .....	62	2.23
Seeing a gravel pit .....	63	2.23
Area with no overnight camping .....	64	2.16
Being in a logged area .....	65	2.13
Area remote from emergency assistance or rescue .....	66	2.13
Hearing powered watercraft .....	67	2.05
Area with no facilities .....	68	2.03
Mostly recent, clear-cut forests .....	69	1.99
Encountering hunters .....	70	1.88
Hearing sounds of vehicles .....	71	1.88
Area with view of industrial or commercial development .....	72	1.80
Seeing all-terrain vehicles .....	73	1.80
Hearing all-terrain vehicles .....	74	1.72
Hearing gunshots .....	75	1.71
Encountering industrial vehicles .....	76	1.71
Hearing sounds of logging .....	77	1.58

<sup>a</sup>Setting characteristics of the intercept survey are ranked in order of desirability from highest to lowest according to the mean value of each variable. Variables were evaluated on a five-point likert scale with 1 being very undesirable, 2 being somewhat undesirable, 3 being neither desirable nor undesirable, 4 being somewhat desirable, and 5 being very desirable.



**Table B3.** Intercept survey t-test results.<sup>a</sup>

Rare occurrences versus variety of flora and fauna			
<i>Variables</i>	<i>t value</i>	<i>Significance</i>	<i>n</i>
Variety of plants and trees Rare plants and trees	8.41	.000	401
Variety of wildlife Rare species of wildlife	9.34	.000	427
Variety of birds Rare species of birds	8.86	.000	419

<sup>a</sup>Paired sample t-tests were conducted to identify relationships between variables representing variety and rare occurrences of flora and fauna. Results show that in all cases settings with variety are more desirable than are settings with rare occurrences of flora and fauna.

**Table B4.** Intercept survey t-test results.<sup>a</sup>

Audible versus visual settings			
<i>Variables</i>	<i>t value</i>	<i>Significance</i>	<i>n</i>
Hearing powered watercraft Seeing powered watercraft	-7.74	.000	419
Hearing all-terrain vehicles Seeing all-terrain vehicles	-3.84	.000	426
Hearing sounds of logging Seeing evidence of logging	-14.21	.000	386
Hearing sounds of logging Being in a logged area	-11.54	.000	381
Hearing gunshots Encountering hunters	-6.28	.000	418

<sup>a</sup> Paired sample t-tests were conducted to identify the level of tolerance for hearing versus seeing evidence of mechanization. The table below shows that respondents were less tolerant of hearing disturbances than they were of seeing evidence of the same disturbances.



**Table B5.** Intercept survey rank of means for outcome variables.<sup>a</sup>

Outcomes ranked	Rank	Mean
Enjoying the scenic beauty .....	1	4.65
Enjoying the sights, sounds, smells of nature .....	2	4.58
Doing something with family or close friends .....	3	4.52
Traveling to and exploring new places .....	4	4.44
Relaxing mentally .....	5	4.38
Feeling an emotional release from work .....	6	4.36
Avoiding hustle and bustle of daily activities .....	7	4.30
Being with people who enjoy the same things .....	8	4.25
Experiencing a feeling of freedom .....	9	4.24
Preserving the natural environment .....	10	4.23
Relaxing physically .....	11	4.23
Learning about and appreciating nature .....	12	4.22
Helping to safeguard forests and wilderness areas .....	13	4.22
Experiencing new and different things .....	14	4.21
Getting away from civilization for a while .....	15	4.16
Adding some variety to daily routines .....	16	4.14
Having a stimulating and exciting experience .....	17	4.09
Doing something new and different .....	18	4.09
Feeling safe and secure .....	19	4.08
Expanding one's interests .....	20	4.07
Being physically active .....	21	4.05
Keeping physically fit .....	22	3.98
Feeling competent .....	23	3.96
Making one's own decisions .....	24	3.95
Being self-reliant .....	25	3.94
Sharing experiences with others .....	26	3.82
Doing something creative .....	27	3.78
Learning about the native culture .....	28	3.75
Thinking about personal or spiritual values .....	29	3.70
Learning about local communities .....	30	3.66
Meeting new and interesting people .....	31	3.62
Understanding oneself better .....	32	3.61
Experiencing a feeling of control .....	33	3.54
Sharing skill and knowledge with others .....	34	3.52
Developing one's skills and abilities .....	35	3.45
Being daring and adventurous .....	36	2.73
Chancing risky situations .....	37	2.29

<sup>a</sup>Outcomes of the ecotourism experience were ranked in order of importance from highest to lowest according to the mean value of each variable. Variables were evaluated on a five-point likert scale with 1 being not at all important, 2 being somewhat important, 3 being neither important nor unimportant, 4 being somewhat important, and 5 being very important.



Appendix C. Mail survey rank of mean scores.

The following are the mean scores of variables in Questions 3, 6, and 7 for the mail survey ranked from highest to lowest.

Table C1. Mail survey rank of means for activity variables.<sup>a</sup>

Activities	Rank	Mean
Visiting provincial parks .....	1	2.56
Hiking, single-day trip .....	2	2.41
Flatwater canoeing, single-day trip .....	3	2.33
Visiting water parks .....	4	2.32
Hiking, multiple-day trip .....	5	2.32
Flatwater canoeing, multiple-day trip .....	6	2.29
Cross-country skiing, single-day trip .....	7	2.23
Wildlife viewing .....	8	2.20
Swimming .....	9	2.16
Whitewater canoeing, single-day trip .....	10	2.11
Using interpretive services .....	11	2.08
Viewing local native culture .....	12	2.06
Biking, paved road, single-day trip .....	13	2.05
Cross-country skiing, multiple-day trip .....	14	2.05
Whitewater canoeing, multiple-day trip .....	15	2.02
Interacting with local native culture .....	16	2.00
Viewing human works .....	17	1.99
Downhill skiing .....	18	1.98
Biking, paved road, multiple-day trip .....	19	1.93
Viewing local activities .....	20	1.92
Nature photography .....	21	1.92
Mountain biking, single-day trip .....	22	1.92
Participation in educational nature tours .....	23	1.88
Acquiring artifacts and crafts .....	24	1.82
Snowshoeing, single-day trip .....	25	1.82
Sea kayaking, single-day trip .....	26	1.81
Sailing, single-day trip .....	27	1.80
Mountain biking, multiple-day trip .....	28	1.79
Sea kayaking, multiple-day trip .....	29	1.78
Tobogganing .....	30	1.78
Bird watching .....	31	1.76
Winter camping .....	32	1.76
Snorkeling .....	33	1.76
Biking, gravel road, single-day trip .....	34	1.75



Viewing roadside attractions .....	35	1.73
Mountain and rock climbing .....	36	1.73
Biking, gravel road, multiple-day trip .....	37	1.73
Fishing, catch within limit .....	38	1.73
Fishing, catch and release .....	39	1.72
Sailing, multiple-day trip .....	40	1.72
Horseback riding, single-day trip .....	41	1.67
Dog sledding, single-day trip .....	42	1.66
Ice skating .....	43	1.65
Participation in guided nature tour .....	44	1.62
Individual sports participation (tennis, golf) .....	45	1.62
Snowshoeing, multiple-days .....	46	1.60
Spelunking or caving .....	47	1.60
Scuba diving .....	48	1.59
Horseback riding, multiple-days .....	49	1.55
Dog sledding, multiple-days .....	50	1.51
Wind surfing .....	51	1.50
Water skiing .....	52	1.49
Snowmobiling, single-day trip .....	53	1.41
Motorized water activities .....	54	1.39
Outdoor art .....	55	1.35
Ice fishing .....	56	1.32
Ice climbing .....	57	1.32
Snowmobiling, multiple-day trip .....	58	1.29
Hunting .....	59	1.25

<sup>a</sup>Activities of the mail survey are ranked in order of interest from highest to lowest according to the mean value for each variable. Variables were evaluated on a three-point likert scale with 1 being not at all interested, 2 being somewhat interested, and 3 being very interested.

**Table C2.** Mail survey rank of means for setting variables.<sup>a</sup>

Setting characteristics	Rank	Mean
Presence of lakes .....	1	4.83
Presence of rivers and streams .....	2	4.82
Area with views of undisturbed natural scenery .....	3	4.73
Access to drinking water .....	4	4.67
View of waterfalls .....	5	4.63
Variety of wildlife .....	6	4.59
View of gorges .....	7	4.55
Large trees .....	8	4.50
Variety of plants .....	9	4.47
Mostly undisturbed, old-growth forest .....	10	4.46
Variety of birds .....	11	4.38
Bridges over dangerous rivers .....	12	4.34
Presence of rock outcrops .....	13	4.34
Rare species of wildlife .....	14	4.23
Area with developed side trails .....	15	4.23
Area remote from towns .....	16	4.22
Access to good swimming .....	17	4.17
Travel on high-standard trails .....	18	4.16
Relatively large forested area .....	19	4.14
Travel on lake and river systems .....	20	4.12
Presence of beaches .....	21	4.12
Rare plants .....	22	4.11
Rare species of birds .....	23	4.10
Area with interpretive signs .....	24	4.03
Access by gravel road .....	25	4.00
Areas with views of rural landscape .....	26	3.90
Area with trails over bridges .....	27	3.89
Area with historic sites .....	28	3.86
Occasionally meeting other people .....	29	3.82
Area with interpretive nature and cultural programs .....	30	3.81
Access by boat .....	31	3.79
Area with human waste facility .....	32	3.78
Access to good fishing .....	33	3.75
Access by paved road .....	34	3.69
Travel on gravel roads .....	35	3.65
Meeting no other people .....	36	3.59
Moderate forested area .....	37	3.55
Travel on low-standard trails .....	38	3.37
Mostly second growth .....	39	3.36



Access by float plane .....	40	3.31
Area remote from food .....	41	3.28
Travel on paved roads .....	42	3.19
Area where camping is restricted .....	43	3.12
No signs in area .....	44	3.05
Mostly dense, bush-covered areas .....	45	3.03
Area with past, naturally occurring forest fire .....	46	3.01
Relatively small forested area .....	47	2.89
Travel on low maintenance gravel roads .....	48	2.86
Encountering anglers .....	49	2.78
Area where trails have no bridges .....	50	2.77
Area with no facilities .....	51	2.72
Travel using hydro right of ways .....	52	2.68
Area with a recent forest fire .....	53	2.64
Area where no fires are allowed .....	54	2.58
Area remote from emergency assistance .....	55	2.56
Recreating on a dammed lake .....	56	2.54
Mostly selective cut forest .....	57	2.51
Seeing dams in area .....	58	2.43
Continually meeting other people .....	59	2.15
Seeing hydro lines in area .....	60	1.94
Area with no overnight camping .....	61	1.83
Area with view of residential development .....	62	1.83
Being in a logged area .....	63	1.80
Seeing powered watercraft .....	64	1.79
Seeing evidence of mining .....	65	1.75
Seeing evidence of logging .....	66	1.75
Seeing a gravel pit .....	67	1.73
Hearing powered watercraft .....	68	1.66
Encountering hunters .....	69	1.63
Mostly recent, clear-cut forest .....	70	1.58
Hearing sounds of vehicles .....	71	1.54
Seeing all-terrain vehicles .....	72	1.51
Encountering industrial vehicles .....	73	1.47
Hearing gunshots .....	74	1.47
Hearing all-terrain vehicles .....	75	1.46
Area with views of industrial or commercial development .....	76	1.37
Hearing sounds of logging .....	77	1.28

<sup>a</sup>Setting characteristics for the mail survey are ranked in order of desirability from highest to lowest according to the mean value of each variable. Variables were evaluated on a five-point likert scale with 1 being very undesirable, 2 being somewhat undesirable, 3 being neither desirable nor undesirable, 4 being somewhat desirable, and 5 being very desirable.

**Table C3.** Mail survey rank of means for outcome variables.<sup>a</sup>

Outcomes	Rank	Mean
Enjoying the sights, sounds, and smells of nature .....	1	4.73
Enjoying the scenic beauty .....	2	4.61
Getting away from civilization .....	3	4.54
Feeling an emotional release .....	4	4.47
Relaxing mentally .....	5	4.46
Experiencing a feeling of freedom .....	6	4.44
Doing something with my family .....	7	4.42
Traveling to and exploring new places .....	8	4.41
Learning about and appreciating nature .....	9	4.35
Being physically active .....	10	4.34
Being with people who enjoy the same things .....	11	4.32
Avoiding the hustle and bustle of daily activities .....	12	4.29
Preserving the natural environment .....	13	4.28
Having a stimulating and exciting experience .....	14	4.27
Keeping physically fit .....	15	4.25
Helping to safeguard forests .....	16	4.22
Experiencing new and different things .....	17	4.22
Adding some variety to my routine .....	18	4.13
Being self-reliant .....	19	4.09
Making one's own decisions .....	20	4.08
Expanding one's interests .....	21	4.07
Feeling competent .....	22	4.05
Developing one's skills and abilities .....	23	4.05
Doing something new and different .....	24	4.04
Relaxing physically .....	25	3.98
Doing something creative .....	26	3.86
Thinking about personal or spiritual values .....	27	3.82
Sharing experiences with others .....	28	3.78
Feeling safe and secure .....	29	3.77
Understanding oneself better .....	30	3.76
Sharing skills and knowledge .....	31	3.65
Learning about native culture .....	32	3.60
Experiencing a feeling of control .....	33	3.51
Meeting new and interesting people .....	34	3.45
Learning about local communities .....	35	3.40
Being daring and adventurous .....	36	3.16
Chancing risky situations .....	37	2.76

<sup>a</sup>Outcomes of the ecotourism experience of the mail survey were ranked in order of importance from highest to lowest according to the mean value of each variable. Variables were evaluated on a five-point likert scale with 1 being not at all important, 2 being somewhat important, 3 being neither important nor unimportant, 4 being somewhat important, and 5 being very important.