The Mountain Land Recreationist in New Zealand

Robert Aukerman • Jenny Davison
THE MOUNTAIN LAND RECREATIONIST
IN NEW ZEALAND
For some, recreation is found in the solitude of the most remote mountain land areas. A mountaineer crosses the Ngapunatoru Plateau in the Darran Mountains, Fiordland National Park (1).
THE MOUNTAIN LAND RECREATIONIST IN NEW ZEALAND

The first of three volumes on the current status and future direction of mountain land recreation in New Zealand

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PREFACE TO THE FIRST OF THREE VOLUMES OF STUDIES ON THE CURRENT STATUS AND FUTURE DIRECTION OF MOUNTAIN LAND RECREATION IN NEW ZEALAND

Some ten years ago, some of us in the Institute had enjoyed the experience of mountains in other parts of the world and were conscious of both the problems and opportunities that recreation presented in the management of mountain lands. We were eager to promote a more formal understanding of recreation in our New Zealand mountains but were frustrated in that ambition by financial restrictions and shortage of skills in personnel. Both limitations were gradually overcome. A grant of six thousand dollars from the Department of Lands and Survey, spread over four years, allowed us to begin the first tentative studies that would eventually furnish guidelines for the recreational management of mountain lands. The development of Park and Recreation studies at Lincoln College brought Professor Art Wilcox and Dr Howard Alden here on the Fulbright Program. When Dr Robert Aukerman became available for a full-time fellowship at Lincoln College, the Department of Lands and Survey gave further financial support and encouragement to ensure the full development of our research programme in this field.

Jenny Davison, who had joined to her mountain recreation and park experience in New Zealand and the Americas the fruits of patient post-graduate study in Natural Resources, proved a dedicated collaborator with Bob Aukerman. The panel of consultants which was established for this first major study gave liberally from the pool of each one's experience. It was for Bob Aukerman to conceive the scope and character of the study as a whole. It was for Jenny Davison to piece together the fragmentary user studies in the available literature, to conduct most of the discussion groups and to analyse their outcomes.

Under Bob Aukerman's conception, the work of inventory of New Zealand mountain land resources for recreation was carried out by Jaquetta Smith, Jenny Davison and Bruce Geden. This is to be published as the second volume of these studies. Bob Aukerman himself made a major contribution to the third volume on management.

This volume concentrates on the needs, behaviour, and wants of New Zealand
mountain recreationists. In this context eight particular recreational activities are analysed in some detail. Although this study is concentrated on indigenous recreation, its contribution to the service of mountain recreation activities by visitors from overseas will be no less than its value for New Zealanders themselves. Its concentration on the indigenous element should help ensure for the overseas visitor a genuinely New Zealand recreational experience. This vexed issue of tourism's interaction with mountain recreation in New Zealand is more thoroughly examined in the third volume of these studies.

I commend this first volume as a thoughtful and spirited beginning to a new and important dimension of mountain land management in New Zealand. Recreational use of our mountains has almost as long a history as their European occupation. Their future management demands that recreation be kept in focus along with other uses.

As with other publications of this Institute, the authors themselves assume full responsibility for the opinions expressed in this work.

KEVIN F. O'CONNOR
Director,
Tussock Grasslands and Mountain Lands Institute.
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INTRODUCTION

Barring love and war, few enterprises are undertaken with such abandon, or by such diverse individuals, or with so paradoxical a mixture of appetite and altruism, as that group of avocations known as outdoor recreation. It is by common consent, a good thing for people to get back to nature. But wherein lies the *goodness*, and what can be done to encourage its pursuit? (Leopold 1949).

In 1949 Aldo Leopold asked this question. It is the basic and essential question which must be answered in order to serve the recreational needs of people. The question remains unanswered. The "goodness" lies hidden somewhere in a variety of needs which people have, needs which, when fulfilled, help make life rich and satisfying. In our report we have not attempted to answer Leopold's question. We have attempted to show just how close we are today in identifying "wherein lies the goodness and what can be done to encourage its pursuit" for people seeking recreation in New Zealand's mountain lands.

More specifically, this report sets out to present the following:

- What is known and what information is available in New Zealand.
- A critical review of selected aspects of the information and how it is being used.
- What information is not available.
- The implications for planners, management and the public recreationist of having or not having the information available.
- What needs to be known.
- The present trend toward obtaining the information.
- Some tested and suggested methods of obtaining the more critically needed information.

In general we have found the task of identifying what is known about New Zealand mountain land recreationists far too easy, because little such knowledge is available. While this was a relatively easy, albeit time-
consuming, task for us, the implication is that those who must plan and manage for New Zealand's mountain land recreationists are faced with a very difficult task. For the less one knows about the recreational requirements of the people for whom one is planning and managing, the greater are the chances for mistakes.

A fuller knowledge of the recreationist and his requirements also fits into the broad scale of land-use planning. We can then balance what needs to be provided to meet the recreationists' requirements (which may be simple rather than extravagant) and what can be provided. Some recreational activities may be damaging to a fragile mountain environment, even destructive of the very experience sought. Thus the physical resource itself is a real constraint.

Again, recreation may compete or conflict with other valued land uses such as nature preservation, soil and water conservation practices, forestry and farming. However, individual recreation activities may be co-ordinated and integrated to some degree with these uses in multiple-use practices. Other very real limitations are the money and manpower available.

This report is presented to clarify what is known and what needs to be known about mountain land recreationists in an attempt to help planners and managers at all levels in their task of helping people enjoy life. If any part of this report contributes to this endeavour we consider ourselves truly lucky. For we too are in love with the New Zealand mountain lands and seek them for our recreation.
CHAPTER ONE
Defining Mountain Lands and Mountain Land Recreation

1.1 MOUNTAIN LANDS DEFINED

We define mountain lands as any terrain of high relief and valleys enclosed therein. We have chosen this broad definition because most recreation in mountain lands is not limited to any specific elevation, slope, or vegetation type. The mountainous terrain itself is the feature which attracts and meets the basic needs of most mountain land recreationists. We have also chosen this broad definition because of the range of individual differences in how people perceive and define mountain lands; from stark craggy peaks and alpine chains, with winter or permanent snow, to bush-clad tussock-topped hilly ranges and even rolling hills. An element of possessiveness appears in definitions that people give. Avid trampers, using the high Southern Alps, see this country as their own. Any attempt to define mountain lands as anything less than "the Alps" may be seen by them as an attempt to degrade the quality of "their mountains". On the other hand, the urban residents of Auckland see the Waitakeres as "their mountains", which hold for them what the Southern Alps hold for others. Therefore, what is important is that people see the land as mountain land and reap the satisfaction which "their mountains" hold. This implies that we keep our definition as broad as the range of people's perceptions of mountain lands. This same definition is used in the companion volume to this study, The Public Mountain Land Resource for Recreation in New Zealand (Smith, Davison & Geden 1980), which inventories the mountain land recreation resource and designations under which it is administered by the Department of Lands and Survey and the New Zealand Forest Service.
1.2 MOUNTAIN LAND RECREATION DEFINED

Defining mountain land recreation is much more difficult. We found other generic terms confining or too embracing. "Forest recreation" is limited by the bush edge, and "wilderness recreation" implies rugged, distant activities, often limited to designated wilderness areas. "Outdoor recreation" includes activities that are normally found within the city and "mountain land recreation" acknowledges the nature of the dominating terrain of New Zealand. Therefore, to define mountain land recreation we asked managers and users of mountain lands from around the country for their definitions. It is now apparent from our discussions with both the users and the managers that most see mountain land recreation as one or more activities such as tramping, hunting, skiing, fishing, mountaineering and sight-seeing. This definition is not unusual, for recreation is normally defined in terms of leisure-time activities, when man is free to choose the activity. Most managers further defined mountain recreation in terms of the relative number of users participating in each activity. For example, it was often pointed out that mountain recreation for a specified mountain region (such as a national park) was mainly tramping, followed by hunting or some other activity. This may be true if use figures were available and accurate, but most of the time they are not. More importantly, this would be true only if one defines mountain recreation solely in terms of activities and numbers of users.

On the other hand, not all recreation users of mountain lands think of recreation in terms of activities and numbers. In our study, an important definition of mountain land recreation emerged from the users themselves. Some defined mountain land recreation in terms of a need which the mountains and related activities fulfilled for them. For example: the needs for solitude, for variety and exploration, for sympathy, to prove a skill, to meet a challenge, to escape everyday life, for some sort of enrichment through experiencing the beauty of the mountains and the need for physical exercise. All of these are expressions of basic needs which mountain land recreation serves. In his excellent presidential address Forestry and Society, P.J. McKelvey (1976), of the New Zealand Institute of Foresters, identified some needs which can be provided for in forestry;
Some of these human needs are beyond the influence of forest management and we need not concern ourselves with them. But there appears to be a great deal of common ground, in the identification by authorities I have consulted, of human needs which can be provided, at least in part, by forestry, and these should demand our attention. It is possible, with some subjective manipulation, and without any implications of priority, to summarise them as security, stimulus, aesthetic satisfaction, and creative activity. These are presented as relevant individual human needs ...*

Aukerman (1975), in a major study of mountain land recreationists in the United States, found that there was an overriding need in all mountain recreationists no matter what activity they were involved in - the need for what McKelvey called "aesthetic satisfaction". These types of needs form the foundation of the true definition of what mountain land recreation is. Mountain land recreation is, therefore, much more than activities. Activities are merely the means of meeting needs. Several activities may be the means of meeting the same needs, while several needs may be met by any given activity. Mountain land recreation is people using mountain lands in their leisure time to fulfil their human needs.

Thus, individuals do not have to be actively using the mountains nor even be in them, to be mountain land recreationists. They may be merely sightseers observing the mountains from some distance in order to meet their need for beauty and inspiration. They may be persons not even in view of the mountains, but deriving pleasure in some inspiration mountain lands hold for them.

We have now selected the broadest possible definition of both mountain lands and mountain land recreation. In this context, what is mountain land recreation in New Zealand today?

* One of the most influential statements of the fulfilment of needs as the basic motivating force is by Maslow (1943). The basic human needs are arranged into a hierarchy of relative prepotency: physiological needs, safety needs, love and belongingness needs, esteem needs, self-actualisation needs. Only when the needs at one level are satisfied do the needs at the next level become the basic motivating force. Recreation begins to play an important role in the satisfaction of needs at the upper levels.
1.3 MOUNTAIN LAND RECREATION IN NEW ZEALAND TODAY

Needs, basic motivating factors, as outlined on page 2, are an integral part of our definition of mountain land recreation. A basic theme of this report is that the basic human needs of recreationists must be understood by those managing mountain lands for recreation.

It is necessary to know how people behave in seeking to fulfil their needs, the activities they undertake, where, when and how often. Different people will undertake different activities to satisfy different needs, or one activity performed at different levels of intensity will satisfy different dominating needs. Behaviour is the strongest indicator of needs and tells us how people fulfil them.

It is also necessary to know what people want by way of opportunity, land and water resources, facilities and management practices for recreation. These are generally framed in terms of likes, dislikes, preferences, perceptions, demands, attitudes, etc. In surveys these are often presented as "wish lists", the respondents being asked to record their preferences for certain facilities, for more or less of them, etc. Without reference back to needs of different groups of recreationists it can be seen that this approach alone may lead to extravagances, misallocations and even frustration of unidentified needs.

Therefore, what we know about the needs, behaviour, and wants of mountain land recreationists forms a foundation for making informed and sound planning and management decisions for recreational use of mountain lands.

What then do we know about the needs, behaviour and wants of mountain land recreationists? In other words, what is mountain land recreation in New Zealand today?

Using our definition of mountain land recreation, we found it impossible to say with any degree of validity what mountain land recreation is at present in New Zealand. We have said with some degree of confidence that the information necessary to answer the question does not exist and until it does exist, management and planning of New Zealand mountain lands for recreation will be handicapped. The greatest problem facing mountain land
recreation planners, managers, and the recreationist himself is a lack of information on the recreation user, and more importantly, on the potential recreation user. The greatest requirement is to know about these people.

Our attempt to put the problem and requirements in perspective follows.

1.3.1 Needs

(a) Current Status

Our literature searches and discussions with managers, planners, researchers and educators indicate that there is only one study which makes a deliberate attempt to explore the question of the basic needs of people met in mountain land recreation, while another makes the beginnings of a contribution to knowledge of these needs. Most studies are concerned with a limited range of behavioural information and wants, expressed for the most part in terms of wish lists and attitudes (see Chapter Two for recreationist studies and analyses of content matter).

(b) Trends

We have had little indication in our discussions with managers and planners that they have even thought about the value of studying the needs of people in relation to mountain land recreation. When surveys are carried out the information sought is still confined to the behaviour and wants of existing users.

(c) Implications

There are a number of implications stemming from the basic needs of recreationists and from the present lack of attempts to gather such information.

1. Serving the wants of existing users without reference to needs may lead to self-perpetuating excess, luxury and the diversion of resources from other potential users.

The wants, or "wish lists" supplied for users to check, can be long and
extravagant. A list of items has the power of persuasion and people tend to select more than is necessary to fulfil their needs. A wish list, while presenting an opportunity for public input, can be a stimulus to demand for these items. By trying to provide for all of the wants of people by means of a check list of wants, managers may create an even greater demand for things that often are not needed in the first place. Information on wants is essential but must be tempered by information on needs.

All this may sound academic or philosophical to managers who are faced with the everyday practical decisions of trail maintenance or hut replacement, but we cannot over-emphasise the fact that understanding human needs is essential to everyday recreation management. It is becoming common practice to replace six bunk back-country huts with huts accommodating 20 or even 40 people. The decision to replace the smaller hut with a larger one is most often based upon numbers of users (actual or projected). This can be a major mistake. Again, numbers mean little. The old hut may not have accommodated all, especially in peak periods, but, although the new hut may accommodate many more, the needs of many trampers may now be unfulfilled. It will not make one bit of difference how big the hut is or how many stoves or toilets or other amenities there are, if the tramper's basic need is to be alone with a small group. Solitude does not mean 20, 40, or 100 people in a hut. The replacement or loss of the smaller hut may also mean for the tramper the replacement or loss of a symbol of skill, hardship, simplicity and even aesthetic quality. With the large huts the smell of smoke, a few close friends, the dirt floor, the warmth of the open fire, the stories of shared exploits of days past may be lost to many trampers and so it is likely these trampers will be lost to that hut and track. This is happening throughout New Zealand today. These trampers are moving on to the next valley or to places where their needs can and must be met. Granted, the new hut may be full, but full of whom? Full of a different, perhaps new breed of tramper with new and different needs. Perhaps these new needs are fostered by the larger hut itself, or the easier track. Perhaps the larger hut fulfills needs for social contact, for less demanding exploits, for comfort. These needs must also be met.
Knowing that there are different groups of trampers and knowing their basic needs gives us a sound base for making intelligent planning and management decisions. In fact, knowing the basic needs of any group of recreationists is the first, but not the only, stage in determining what should be provided for that group. Should we provide for social experience or solitude? Should we provide easy, safe tracks, or difficult, self-testing tracks? Should we provide the comforts and luxuries of bars and restaurants or merely basic safety facilities? Should large concentrations of animals be assured for hunters, or should a sparse animal population be spread over a large area? Is there a need to shoot animals, to prove stalking skills, to obtain physical exercise, or for some combination of these? When these needs are known then we can determine how they should be provided for within the limits of ecological viability, competing uses, available manpower and finance.

2. Serving the needs of the most vocal and organised users leads to neglect of other users and potential recreationists.

We know what people may choose any one recreational activity to fulfil various needs. The primacy of different needs helps distinguish different groups of recreationists within that activity. If one group of recreationists is more organised and vocal than others, we will continue to have this one type of recreationist asserting his needs and overriding the needs of others. This can be seen in all types of recreationist but it becomes most pronounced in those who already have what they want and see others with differing demands as a threat to themselves.

In New Zealand, this is illustrated by some of the avid back-country trampers and mountaineers who have developed their skills through pitting themselves against the most rugged country and feel they have earned the right to tell others that they must do the same or else keep away from mountain lands. We believe that the real needs of other users are not understood by these trampers and climbers. Therefore, the others are seen as a threat and feared. These fears are expressed in name-calling and opposition. Tourists are called "loopies" and off-road vehicle users are ignored or opposed. Those who have other needs, who do not want to be hard, rugged individuals, are looked down upon. Dr A.T. Wilcox (1974) describes this:
Some recreationists use mechanical means of transport. Sightseers are flown on to the Tasman Glacier, (2), or take a cruise on Doubtful Sound (3).
Huts on popular routes are built to house large parties. The Routeburn concessionnaire’s hut at Lake Mackenzie provides extra comforts (4). Huts built for noxious animal control and research, serve trampers in less frequented areas. A hut in the Harper catchment of Craigieburn State Forest Park (5).
One can almost detect a pecking order, where the climber looks down on the skier, who in turn looks down on the tramper, and he in turn on the walker. This leaves little time for the stroller, the sightseer, and the auto-driver. The bird watcher and the photographer are tolerated, but everyone disdains the tour bus passenger. So pity the little old lady in tennis shoes, the city matron who forgets to leave her high-heels at home and the bloke who wears a business suit and patronizes T.H.C.!

The avid tramper and mountaineer is often found "on top of the mountain" in more ways than one. They are influential members of some of New Zealand's finest recreation clubs and traditionally have had representation on national park boards and forest park advisory committees through their national organisation. Their role as prime movers in the creation of national parks and forest parks is undisputed (Thomson 1976; Heine & Molloy 1977), but through this they have placed themselves in power as the voice of mountain land recreationists. Historically they have used their power well for their own needs, and historic accident has served them well. The development of huts and tracks for noxious animal control over the last 20 years has opened up the tramping resource considerably, attracting the increasing numbers of tramper's of all types. Yet today some of these avid tramper's, claiming weight of numbers and traditional rights of use, pose one of the greatest threats to the expansion of mountain land recreation in New Zealand. They are a threat because they do not understand or know the needs of those they oppose and even some of those they represent. They are a threat because they represent the thinking and needs of only one small and proportionately diminishing segment of mountain land recreationists. They are a threat because they have the power to thwart the efforts of other recreationists to achieve their needs. Thus, while most tramper's and mountaineers can appear to support the activities of other mountain land recreationists, we find in their writings, discussions and policy statements, subtle and not-so-subtle expressions of their fears and disdain, particularly towards tourists and off-road vehicle users.

This is not to say that the fine clubs of which these avid tramper's and mountaineers are members are a danger. We are implying that, because of their power, the clubs have an obligation to be aware of the self-centered attitudes of some of their members and to guard against their becoming con-
strued as club policy. This means that particularly those mountain land recreationists who are organised in clubs should make every effort to identify and understand the needs of all other recreational users of mountain lands. It is these clubs who should best appreciate the need for support since many of them originated through a need to support their causes. The experience and knowledge of the mountain land resource of many club members could and should be used to help find a proper place in the mountain lands for those less fortunate.* Molloy (1977) suggests:

In future I hope that our recreation resource management will not be solely in the hands of bright young men with degrees from a landscape architecture school, but rather a partnership involving both hardheaded field rangers and active recreational users from the public. There is a wealth of amateur experience in tramping, mountaineering, deer-stalking, canoeing and caving clubs that government could do much more to tap. For far too long sections of central government have looked askance at us as "recreational pressure groups".

The real question here is: how does anyone know for whom he is managing or how to manage, if he does not know what the needs of all the people are? Furthermore, conflicts between trampers and tourists and trail-bike riders, or between any other recreationists, may well be founded in perceived misconceptions, especially where the real needs of people are not known. If the real conflicts between recreationists lie in conflicting needs, then we cannot resolve the conflicts, except by chance, without knowing the basic needs of those involved.

3. If we do not know the needs of different groups of recreationists we will continue to be subject to every whim of the commercial recreation industry.

The private entrepreneur will tell us that people really need international hotels, golf courses, swimming pools, fancier bars or playground equipment in some of our pristine mountain country. Is this what people really need? Can we prove or disprove this? Or are we really hearing from the entrepreneur his wants, in order to influence people to stay longer at his establishment to meet his own goals of profit or power? Such is the operation of the tourist industry in using mountain land

* The extent to which some of these avid trampers are a threat can be balanced by continued club support of measures such as the New Zealand Walkway System and many hours of voluntary bushcraft and mountaineering instruction. Public safety and conservation of fragile environments are key points in genuine concern for appropriate use of mountain land by other groups of recreationists.
scenery to attract customers to whom it sells hotel accommodation, meals, souvenirs and travel tickets. "After all, helping people spend their money is what it is all about," stated one tourist operator. The questions we should be asking are: What are the real needs of the tourist? Which needs can be met only in the mountain lands and which needs can be met just as well outside the mountain lands? Can we provide them with new, environmentally sound, satisfying experiences and still meet satisfactory standards of profitability? These questions can only be answered when we know what the needs of the tourists are.

4. Without knowing the needs of recreationists, managers and planners will continue to impose their own beliefs as to other people's needs.

The public manager in New Zealand is often just as self-centred in his attitudes as is the tourist industry. There is a strong element in the public management sector which sees tourists as undesirables in mountain lands. Such managers do not just ignore the needs of one of the largest user groups of the mountain lands, they are actively attempting to impede this group's use of the mountain lands. Unlike some private entrepreneurs these public managers honestly believe that what they are doing is best for the mountain lands. They are actually imposing their own biases and needs for solitude and preservation on those whom they are supposedly serving. The overseas visitor who comes with intentions of skiing, hunting or climbing mountains is regarded as a skier, hunter or mountaineer, whether or not he uses commercial facilities or guiding services. Most come with more passive intentions and are sightseers, or day visitors to parks and forests, depending heavily on the services of the tourist industry. If the real needs of these tourists were known, we believe that we would find that tourists have less potential for physical impact on the mountain lands than most other users. Furthermore, tourists probably have the political and economic potential to support substantially the conservation of mountain lands when the threat to conservation ideals is greatest and such support is most needed. Support will come through experiencing the mountain lands, not closing them.

Managers often believe that their needs are the same as those of the recreationist, or that they, as managers, know best. Our investigations convince us that these are common beliefs of recreation managers in New
Zealand. When J.J. Kennedy and W.R.J. Sutton (1978) suggested to foresters that: "The New Zealand public has as much right as forest managers to decide the goals and objectives for which state forests are managed", more than half of the forest managers agreed but 38% totally disagreed. These attitudes might be explained through the writings of Bultena and Taves (1961) and White (1966). Part of a person's image of the world is the belief that his image is shared by other people, a phenomenon known as the 'concept of unshared images'. In the case of natural resources it has been suggested that some managers believe that what other people should prefer coincides with preferences they themselves hold. Such a bias has been called a "selective perception" and is common among "in groups" of a variety of organisations and professions.

Managers also impose their own needs because they believe that it is in the best interest of the physical resource. This is in itself a value judgment based upon their need to have the resource take a certain form or provide for a certain need. Twight and Catton (1975) suggest that: 'Some political scientists have gone even further and stated that foresters have an 'elitist tendency to ignore democratic processes' in order to dictate what is best for the land'.

It also seems that some mountain land recreation managers continue under appalling conditions of underpay and overwork in New Zealand just so that they can remain in a position to dictate or, as expressed by Dr Wilcox (1974), "to ride their own hobby and get paid for it". We formed the distinct impression that some of these managers see themselves as appointed guardians, preserving the mountains because of some moral obligation to "their" mountains. Should we preserve mountains for the sake of the mountains or for the needs which people have to preserve mountain lands?

The mountains have become living entities and spiritual obsessions to some managers. This may fulfil the needs of some managers. However, should these needs be imposed on others? It has been pointed out in two major studies by Burch (1964) and Lucas (1964) that managers and recreationists do indeed have different images of the same resource. We are the first to admit that we must dictate at times, but this should
only be done after careful consideration of the needs of all people.

One of the best examples of unilateral dictation by managers is their attempt to control "wild animals" (formerly "noxious animals").* We will not speculate here on which basic human needs were being met in initial attempts to control "noxious animals". However, it is relevant here to speculate as to why managers continue to support all-out wild animal control programmes when they themselves say the animals are already controlled nationwide and to the brink of extinction in some cases. Why do some managers even support programmes of total extermination? Clearly not because people have a basic need to exterminate animals, clearly not because the public sees the damage animals do to vegetation or the animals' contribution to soil and water erosion and clearly not because recreationists need the animals eliminated for a satisfying experience. In fact, our studies of mountain land recreationists show support and desire for management (not extinction) of wild animals in mountain lands for both aesthetic and sport purposes. Whose needs are being met by the continuance of existing practices? We can only conclude they are the needs of some managers to pursue their chosen profession, to continue to prove their skill, to feel wanted, to perpetuate a self-nourished hatred for these animals, to make sure that there will not be a recurrence of the past situation, to use wild animals as the scapegoats for their failures against soil erosion and the uncontrollable forces of nature in a young mountain environment and to dictate what they believe to be best for the land.

The needs of the managers are complemented by and/or in turn complement, those of some politicians who need to justify expensive programmes and who need to promote overseas earnings. This last is shown in the support of a meat-hunting and export industry which is controlling animals to the point of shooting itself out of business, while producing a short-range economic boost to the country. A real concern of many managers today is how to keep these game recovery operations economically feasible, in order to help pursue their objective of wild animal elimination in given areas.

* This requirement is embedded in statutory law and may have its grounds in New Zealand's natural ecology. The National Parks Act 1952 specifies "extermination as far as possible" of introduced species, while the Noxious Animals' Act 1956 (superseded by the Wild Animal Act 1977) required eradication or control.
Supporting and benefiting from all of this is a relatively small but vocal and politically powerful group of environmental preservationists. This group does outstanding work in environmental protection and is needed to offset the actions of those who exploit the environment. However, the preservationists may have gone far beyond offsetting environmental exploitation by their wild animal "control" and extermination policies.

In summary, then, we can review the questions raised above: Whose needs are being fulfilled by continued all-out control and programmes of eliminating wild animals? Those of the preservationist? Those of the politician? Those of the commercial meat hunter? Those of the manager himself? We have raised the question of the needs of the public. What are the needs of the recreating public? Do they really matter when faced with organised political pressure, economics, and/or the personal needs of land managers? Yes, the needs of the public do matter, for it is in cases such as this that the public suffers most from managers not knowing, or caring to know, about its needs.

The implication is that some recreationists may eventually, through organised power groups, actively oppose those who are supposedly managing for them. The recreationists may eventually withdraw their political support from existing managing agencies and direct their support elsewhere.

The recent Wild Animal Control Act in New Zealand (1977) is certainly a step toward managing wild animals to meet what we perceive to be the future needs of the recreationist. Hopefully we will soon find out just what the needs of hunters and other recreationists are.

1.3.2 Behaviour

(a) Current Status

Behavioural information covers, to mention a few examples, the activities people undertake, how many people are involved, where, when and how often they are involved and how the activity is undertaken. Personal characteristics of recreationists, including demographic and socio-economic data are also used in conjunction with behavioural data.
Behavioural information is necessary to locate facilities, design tracks, zone use areas, assure user safety, position rangers and protect the resource, to mention only a few of its uses. This type of information is essential for competent management of people. Information can be collected by scientifically structured observations of people and by asking users what they are doing, when and where. In New Zealand today, little is known about the behaviour of recreationists in mountain lands because there have been few surveys of use and even fewer structured observations of users.

The most basic behavioural information - the numbers of users - is collected by park managers. The total numbers are important to managers as they believe their reward system is based on numbers. Some may reason: "The more numbers, the more demanding my job, therefore I need more funds for more staff and facilities. As I have more responsibility this should also mean more promotion and pay for me."

Managers themselves have pointed out to us further examples of the inconsistency and unreliability of existing use figures for years in which there were changes in managers. Substantial rises and even substantial falls in use are shown at these times, reflecting the methods used by different managers. We do not believe for a minute that we are telling managers anything new. In many cases the first people to recognise the inadequacy of their own use figures are the managers themselves. Yet they continue to collect what they know are useless and often ridiculous figures because they are required to do so and because, as we pointed out earlier, more figures are hoped to result in more help for an already overworked and underpaid staff. To managers these figures are useless, not just because of how they are collected as from what the managers can ascertain, the figures are in fact not used. Their concern about the accuracy of figures diminishes accordingly. Because figures are perceived as worthless, their worthlessness becomes assured. Admittedly, the managers should see the value of use figures for planning and managing their own park, but they need help in this. The best help could come from examples at the highest levels within the planning and management structure of both the New Zealand Forest Service and the Department of Lands and Survey.
The figures we have spoken of are mainly for forest parks and national parks. We have found even fewer applicable mountain land recreationist figures in surveys of national, regional and urban populations which go beyond questions such as: "What is the main age group of trampers? Do they tramp with friends or family? How often do they go tramping? What are their socio-economic characteristics?" From some of the above literature, however, it is not even clear if hunters are big game hunters, or small game or water-fowl hunters. Only a few detailed studies focus on one activity, such as fishing or skiing.

(b) Trends
Our study of the behavioural information available in New Zealand today shows that there is a growing data bank of information. However, most use information that is being collected and filed is virtually useless, except in showing some trends in the broadest and most unreliable sense. The most consistent and reliable information comes from the tourist industry. Except for tourist figures, there is no consistency in the way data is collected. Furthermore, the existing behavioural data is dispersed in files and libraries of both public and private individuals and agencies.

Many managers, particularly those involved with planning at head office level, see the importance of user figures. User studies have demonstrated that informal users may be the numerical majority of visitors to the park, yet little has been done to investigate who they are and their behaviour patterns, let alone their wants and needs. They are, according to one manager, the "forgotten people". As shown above (1.3.1 Needs), however, some managers do not feel that sociological and psychological information is necessary. These managers are the strongest believers that they and their staffs know best. They believe they can continue to manage their areas competently, without scientific data from sociological and psychological surveys, using their own judgment and experience. This is the attitude of not just some field managers, but has been strongly expressed by at least one Conservator of the New Zealand Forest Service.

Fortunately, this attitude is not shared by most park managers. A number have instigated small surveys in their own parks but suffer from limi-
tations of trained staff and finance. Some studies have been conducted as university theses or projects. The New Zealand Forest Service is currently surveying or developing user surveys for many forest parks. These surveys seek mainly behavioural information and represent a major step forward in the management of people. Several national park boards have sponsored major studies of high use areas. The Department of Lands and Survey has also shown concern for collecting user data but we found no evidence of planning for future surveys. Funds and the professional staff to do the work are lacking. Priority is currently given to the development of management plans for reserves over the next five years as required under the Reserves Act 1977. This is a monumental task which will require extensive resources and effort by the Department. However, are the priorities right? It is interesting to see these management plans being developed without any sociological data on the reserves users and potential reserves users for whom the resource is to be managed and who will need to be managed themselves.

There is as yet no co-ordination between government agencies in the collection of behavioural data. Much information that does exist is in files and libraries, and knowledge of this information may be by hearsay. It is thus difficult to learn about the experience of others and to apply this to similar management situations. It is imperative that more importance be placed upon the collection and use of reliable behavioural data. It makes no difference how much information we have to help direct planning and management, if we do not know where the information is.

An encouraging sign is two bibliographic publications providing a basic guide to leisure and recreation research in New Zealand. They are Recreation and Leisure: a Bibliography and Review of the New Zealand Literature by M. Jorgenson (1974) and Recreation Studies in New Zealand, a Bibliography compiled by D.S. Neave (1977). Details and acknowledgement of these publications are given in Chapter Two.

(c) Implications

1. Behavioural information must be collected on a systematic structured basis to be reliable.

Without basic accurate information on the behaviour of mountain land
recreationists we are not in a position to manage people. Nor are we in a position to manage mountain lands for recreation. Very simply, this means, that until there is a concerted effort to collect this information, planning and management for mountain land recreation in New Zealand will remain basically guesswork.

2. Without this information misallocation of funds and manpower will occur. Facilities will be improperly designed and located. Demand will often be created rather than met. Unnecessary environmental damage will occur. Social carrying capacity will be surpassed. If guesses are wrong, areas will be zoned incorrectly, facilities improperly designed and located etc.

3. Inability to show trends in use patterns will make it impossible to predict with any accuracy the future behaviour of recreationists. The ability to predict user behaviour and meet it is the ultimate aim and true measure of the success of people management. Our ability to predict behaviour will continue to be minimal until we start looking beyond the behaviour of users of a specific area (such as a national or forest park) to the behaviour of identifiable user groups. For example, we must consider the different types of trampers identified by the behavioural traits displayed in expression of their differing needs, as well as considering trampers as a whole. Furthermore, it is necessary to identify behavioural traits which are common to groups of users and have a high probability of occurring under given circumstances (e.g. given management practices).

1.3.3 Wants

(a) Current Status

Many of the same studies which deal with behaviour are also attempts to gather data on what it is that mountain land recreationists want. By wants, we refer to the preferences of a group of recreationists for specific facilities, programmes, land uses, resource types and management practices. Wants are often discussed and measured in terms of interests,
demands, wishes, likes, dislikes, agreement, disagreement, satisfaction, desires, motivations or opinions.

Most New Zealand information on wants comes from public participation in decision-making and from surveys. By far the greatest amount of information comes from organised groups and clubs, through board and committee involvement and from written statements. The real problem with information from these sources has been the narrow range of views heard and the lack of voice from less organised groups and individuals. It has been brought to our attention repeatedly that the tramping and mountaineering fraternity is over-represented on these boards and committees and can virtually dictate their decisions by their strong representation. Recent changes in national park board and forest park advisory committee appointment procedures should help give more general public representation, but it can be asked if these measures are adequate.

Most surveys of wants in New Zealand rely heavily on "wish lists", the limitations of which have been outlined under 1.3.1 Needs. Surveys of wants can contribute considerably to understanding recreationists, as it is often said that the most direct way to find out what recreationists want is to ask them. However, even sophisticated surveys of wants have distinct limitations. In the United States the National Academy of Sciences (1975) has pointed out several limitations:

First, it is difficult to elicit expressions of interest in an activity that has not been experienced. Second, respondents may incorrectly state their preference for new programs or resources if no clear cost is associated with the choice. Third, the image conjured up by different people in response to the same verbal description could vary significantly. Fourth, there may often be a discrepancy between what people say and what they do, not due to deliberate falsification, but to inaccurate perceptions, especially of the future. (This discrepancy has yet to be empirically demonstrated with regard to recreation behaviour; it is a good topic for research.) Finally, deciding whom to survey is also an important problem; for example, which age groups should be questioned or what residential locations should be covered.

The mountain lands themselves do not appear to be under great pressure except in some specific locations during brief seasonal periods. However,
there is no place for extravagance in New Zealand mountain lands, because experience has shown that recreationists as a whole want as much as they can get. Barring a change in human nature (which is not likely), we forsee no change in these wants for the future. The existing wants of recreationists will most certainly continue to require more than 100% of our resources. These wants include: flash huts and old huts, well-maintained tracks and unmaintained tracks, undeveloped back country and wilderness, hunting areas, more animals and fewer animals, access for trampers, fishermen, hunters, four-wheel drivers, trail-bike riders and skiers, aeroplane sightseeing and transport, interpretive facilities and devices, tourist facilities, paved sightseeing roads and four-wheel drive roads, trail-bike tracks and horse tracks, undeveloped areas and developed areas, camping sites and caravan sites, picnic and family areas, school camps and outdoor education areas, scenic rivers and reservoirs, canoe rivers and jet-boat rivers, docking facilities, more fish and fewer eels, downhill ski areas and ski mountaineering areas, safety assurances and the prospect of danger, cut firewood, garbage and refuse disposal, provisions of food, and more. If we depend solely then on the wants of recreationists to guide our planning, development and management of mountain lands, there will almost always be an over-demand with little information to help decide who gets what, when and where. This demonstrates the futility of knowing and using wants by themselves to make decisions.

Most of the efforts to identify wants of users have been in forest parks and national parks. Again we must point out that these areas represent only part of the mountain lands. There has been little effort to identify wants of users of reserves, unoccupied Crown lands, high-country runs, production forests and other forest areas other than forest parks.

Nor has there been any effort to identify needs and wants of people who are not already using the mountain lands. This is a major omission. While there are the New Zealand Recreation Survey, one regional study and several urban-based studies, surveys tend to deal with users of existing sites. This means that what little we do know is about those people who are already using these sites. What about the persons who are not using the sites because of some undesirable aspects of the sites or some management practices which do not meet their needs or wants? Little or nothing is
known about these people. While there are indications of why people choose to recreate at specific sites in mountain lands, there is still little indication of the reasons why others do not. Mckelvey (1974) has already identified this problem:

It is a curious thing but rarely is the community as a whole consulted about its environmental needs and preferences. Certainly, questionnaire forms are handed out to forest users, but seldom, if ever, to the people who rarely use forests for recreation, or who are not using the forests at the time of the surveys. Some of these people may use forests more for recreation if certain requirements they consider important are met. We should at least know about such constraints.

There has also been little effort to co-ordinate data collection, not only between agencies but also within agencies. There must be an identifiable set of questions which will elicit comparable information on recreational wants, no matter what agency, area, or user group. Again, there is no systematic way of discovering where the information that does exist on wants is located. Therefore, it is difficult to learn from the knowledge and experience of others.

Finally, where surveys of wants have been undertaken, it is sometimes difficult to see how the data have been used in planning and management of mountain lands. One sad example of failure to ensure the use of existing data is a complex behavioural and wants study completed in 1976 on summer users in Tongariro National Park (32)*. The study is one of the most scientific and thorough user studies so far done in New Zealand. However, the park managers admit that as yet they do not have a copy of this study to help plan and manage their park.

(b) Trends

The trends in understanding and knowing the wants of recreationists are encouraging. There is increasing awareness and expression of the need for such information and some surveys of the wants of users are being done and others planned. If these surveys are done systematically and scientifically, if they address the right people and questions and if the information obtained is used in conjunction with information on recreationists' **

* This refers to the numbered bibliographic list in Chapter Two.
behaviour and needs, the future chances of providing a high quality
recreation experience for all those seeking mountain lands in New Zealand
should be greatly enhanced. Nevertheless, there is need for continuing
vigilance to ensure that the wants of different groups of recreationists
are fairly and properly assessed in relation to one another and to the
resources available.

That national park boards and forest park advisory committees are part of
the policy-making, planning and management system in New Zealand mountain
lands is proof that there is widespread concern for the views and input of
the public recreationist. Yet we have also pointed out that historically
one of the major weaknesses of the boards and committees is that they have
not necessarily been widely representative of the views of the general
public. The problem here, as discussed under 1.3.1 Needs, is the narrow
range of views heard and the lack of voice from less organised groups and
individuals. This is not to say that trampers should not be represented
on such boards and committees but it does mean that others should have more
representation than they have at present.

The inclusion of a Tourist Hotel Corporation appointee on national park
boards was an important step to involve one segment of the public - the
tourist industry. In spite of initial reservations regarding this move,
the benefits of opening this channel of understanding between the Corpora-
tion and national park boards involved are now recognised. However, it
has also been pointed out on several occasions that the Tourist Hotel
Corporation is not representative of the tourist industry in New Zealand
today. From our own observations, we suspect that the Corporation only
imperfectly knows and represents the needs and wants of tourists. We
cannot say this for sure, as there is little information on the needs and
wants of tourists. We can say for sure, however, that the Tourist Hotel
Corporation does represent the business interests of the Tourist Hotel
Corporation! With the implied responsibility of being the voice of
tourist interests (entrepreneurs and tourist recreationists) and being
itself a producer of revenue the Tourist Hotel Corporation has become
influential and powerful on the national park scene and influential in
government. The question remains: Is the Tourist Hotel Corporation re-
representing the needs and wants of tourists? It appears that the tourist
industry and its clientele are both under-represented and misrepresented on national park boards. We are not aware of tourist representation on forest park advisory committees.

Recent changes in national park board and forest park advisory committee appointment procedures, by which the public submit names for board and committee positions, should widen representation further. But is this enough? The legacy of catering to the wants of avid back-country recreationists is still evident in the deployment of manpower and budget resources. In several parks as much as 90% is estimated to be devoted to servicing the wants of traditional back-country users. This leaves only a token amount left for the tourist, off-road vehicle user, family group, picnicker, older people, the handicapped, campers and others. Some managers have recognised this problem and are broadening their perceptions of mountain land recreation beyond the hard-effort activities of tramping, hunting and mountaineering and are now considering other sectors of users and even non-users. One district manager talked of the "forgotten people" and "average Joe Citizen". But who are these people? What are their wants? Such questions cannot be answered by confining studies to present users of park resources.

(c) Implications

1. Catering to wants alone can lead to errors of excess and omission.

The futility of knowing and using wants alone to make decisions has already been strongly expressed in discussing needs earlier in this chapter. Although essentially uncrowded and under-used, the resource is nonetheless limited. Even more limited are the economic and human resources to develop and manage mountain lands for recreation. The recreationist, as experience often shows, wants as much as he can get and lacks understanding of the wants and needs of others.

Conversely, the recreationist can find himself at the whim of the manager whose decisions may be based on other areas of his mandate. One example is the provision of fuel, usually coal or LPG gas, in huts where high use has severely depleted surrounding wood supplies. The decision to provide fuel may have been based on the manager's mandate to preserve the natural
environment. To the recreationist it becomes a service that is expected. Where it is feasible for a resident warden to collect hut fees, the practice can be self-supporting. But, where low usage does not warrant a resident warden and varied access to the park does not encourage head­quarter visitations, the cost of maintaining such services is prohibitive. The alternative has been to phase out supplies and encourage users to carry their own cooking apparatus and fuel. There could be no better example of the interrelation of needs, behaviour and wants than the effect on behaviour patterns in the presence or absence of such facilities on the often-expressed need to show self-reliance (in providing one's own cooking requirements, tenting, etc).

2. Without knowledge of the true wants of recreationists, the manager may impose his own perception of these wants.

In the absence of knowledge of his true wants, the recreationist is at the mercy of the managers' or entrepreneurs' perception of these wants. Again, this problem has been discussed in 1.3.1 Needs.

An example in relation to wants is a recent study of visitors to Milford Sound (30). Only 13.5% felt there was any overcrowding (of facility points, not in the open space area) at any time, whereas 10 of the 11 managers interviewed (representing the Tourist Hotel Corporation, Department of Civil Aviation, an entrepreneur and Fiordland National Park) considered the facility area crowded. The visitors' expectations before their visit were in general confirmed by their experiences at Milford Sound, thus indicating satisfaction. The author of this study notes, however, that an equivalent sample of wilderness enthusiasts "may have been disgusted at the quality of the experience".

Managers can also unknowingly force their own beliefs on the existing structure of public input by supporting the appointment of, for example, more hardy trampers to boards or committees. These trampers are seen as the voice of the public and may subsequently push their own wants. Thus managers can be reinforced in their own belief that the key to successful management of their areas is to meet the wants of hardy trampers.
With reliable information on who is using or would like to use mountain lands for recreation and what they want (and need), such biases can be avoided. This is particularly relevant to the new procedure of accepting nominations to national park boards and forest park advisory committees from the public and the subsequent appointment process.

3. Through not knowing the wants and needs of those they represent, boards and committees often appear weak.

Some boards and committees, whether they be advisory or policy-making, often do not realise the power they have and they fail to use their power as a voice for the public. It has repeatedly been pointed out to us by managers that some of their boards and committees are "afraid to act". "They are weak, and avoid controversial issues." It is hardly conceivable that they are appointed for this trait. Do they avoid "rocking the boat" because they do not know enough about those they represent to feel secure in their support? We suspect this. It is imperative that board and committee members be strong, influential supporters of mountain land recreationists. Their potential strength lies in a knowledge of public wants and needs and in the active voicing of these wants and needs. Managers and planners must therefore be knowledgeable and skilled in political processes.

Many years of practising what he now preaches demonstrates the power that just one man can have. Lance McCaskill (1978) has stated, concerning the issues that emerge in park management, that: "If there is any lesson in this study it is that even one person can achieve much, provided his facts are right and he has the urge". Imagine the power of an entire board or committee, given accurate information on the park and the recreationists whose interests they represent.

4. The power and dual role that Commissioners of Crown Lands play as chairmen of national park boards can hinder the boards in their responsibility of representing the wants of people.

Most Commissioners appear quite interested in their parks and people and are outstanding leaders in mountain land recreation. However, our impressions are that not all are equipped to deal with recreation matters. Because of the nature of their responsibilities, such Commis-
sioners seem to place agricultural production ahead of recreation, to the point, according to their own park and reserves staffs, of being incompetent in administering their recreation responsibilities. A lack of knowledge, poor preparation and misplaced limitations priority have, in the opinion of some of their own staffs, led to embarrassing public appearances, loss of disputes with other agencies, reduced funding and similar disabilities. These same Commissioners can be highly influential in determining who will be appointed to park boards. Even an outstanding Commissioner can have an inhibiting role as head of a park board. Because the image of the Commissioner is one of such great power, he may not have ready access to public viewpoints. Moreover, some board members can be dominated by his image and fail to represent the real wants and needs of the recreationists. On the assumption that what we have been told is correct, we can only conclude that, in the best interests of mountain land recreation, the Commissioner of Crown Lands should not be chairman *ex officio* of a national park board.

Even the National Parks Authority has problems as a representative of the recreating public. There is real concern at all levels within the national parks structure with the sectional interest of some members of the Authority. The only legitimate interests of Authority members should be with representing the interests of preservation of park resources and with representing the interests of public enjoyment, consistent with the true objectives of the national park concept. Furthermore, the best interests of the public are not served by deputies who, from time to time, take the place of designated and continuing National Park Authority representatives. This substitution is a reflection upon the importance or lack of it that a designated representative places upon national parks and people's pursuit of recreation in them.*

* Since this was written a major re-organisation of national parks and reserves administration has been proposed in a Government Caucus Committee Report (1979). The report recommends that the administration and management of national parks and reserves of national and international importance be undertaken by the Department of Lands and Survey. (Control of regional and local reserves will be vested in local or regional authorities.) Areas of national and international significance will be overseen by national parks and reserves boards functioning at Land District level and a National Parks and Reserves Authority at national level. While proposing a wide representation of interests on the Authority and Boards (government departments are not represented, although the Department of Lands and Survey has observer status), there has been considerable public reaction to down-grading their role from that with executive powers to advisory only.
5. Wants information must be considered with needs and behavioural information in recreation planning and management.

Wants cannot be considered in isolation. The real problem occurs when insufficient of the appropriate wants are provided to meet the needs of the recreationist and the real test is when a person actually perceives that the recreation experience is diminishing. The most obvious and strongest indicator of a person's needs is his behaviour. Therefore, needs, behaviour and wants are all interrelated. It is essential to know and use all three categories of information in planning and managing for mountain land recreation.

So far in this report we have discussed, in broad terms, what is known and what is not known about New Zealand mountain land recreationists and what the implications are to planners, managers and the public of knowing or not knowing. We have emphasised the importance of what has to be known and have attempted to convince you of the critical need for this information. If we have failed to convince you, or at least create some apprehension on your part, then the remainder of our presentation will be of little value to you. If your curiosity is aroused, then let us look now at exactly what literature and information is available, or is in the process of being gathered on mountain land recreationists in New Zealand today.
CHAPTER TWO

Studies of Mountain Land Recreationists in New Zealand

The studies reviewed in this chapter all contribute to the current state of our knowledge of the mountain land recreationist measured against the criteria of needs, behaviour and wants and the place of mountain land recreation in New Zealand life. The list may not be exhaustive but we believe that the most relevant surveys have come our way.

We would like to acknowledge two bibliographies which were prepared to identify all aspects of recreation and leisure-time activities in New Zealand. They are:


This includes a critical review of the available literature at the time of publication and an extensive appraisal of surveys of recreation activities of residents of major urban areas.

and:


This is a bibliographic listing under major subject headings. Our report is limited to recreationist studies but we recommend the use of these bibliographies as a source of supporting information on recreation resources, history and management.
2.1 ORIGIN OF STUDIES

Studies of recreationists are conducted by various agencies, institutions and individuals. Organisations with responsibilities for recreation management and research have been reviewed by Gresham and Goodrich (1977) and in the Marlborough Pilot Study (see 9 below: all studies in the bibliographic list and analyses beginning on page 37 are subsequently referred to by number).

The studies in our list can be categorised according to origin as follows:

1. A study may be conducted or commissioned by a government department, or a regional or local body. The Wellington Regional Planning Authority's outdoor recreation survey (13) and the New Zealand Recreation Survey (21) are examples of this.

2. Government agencies at district level, or park managers, may conduct surveys seeking information for planning and day-to-day running of a park or recreation area. Many of these studies relating to specific areas and problems remain as internal documents, although the information may be made public in various ways. A published example of one of these studies is the Coromandel Forest Park User Survey (39). With increasing sophistication and expertise in the conduct of these studies it is hoped that more will be published in the future.

3. Although manpower, time and finance may be limiting factors, university theses, projects and dissertations at honours and masters levels are contributing increasingly to the knowledge of the behaviour and wants of mountain land recreationists. Such studies are generally conducted by geography, sociology, forestry or resource management students. While we have given the example of one major thesis not being available to park managers, it must also be noted that one major study was conducted specifically for another national park board. This trend is continuing with support currently being given to several projects studying specific high-use areas in national parks.
There is also a number of small studies done at minor project level, but because of their limited scope and sample as well as the difficulty in locating them, they have not been considered.

4. Some relevant studies are directed by academic staff at universities, such as the investigation of the impact of tourism on Queenstown, sponsored by the New Zealand National Commission for UNESCO (4). A study of skier capacity on a major skifield was conducted by university staff at the request of the national park board concerned (52).

5. A number of studies have been commissioned to professional consultants such as the one commissioned by the Wellington Regional Planning Authority on the environmental impact of off-road vehicle recreation (1) and the study of fishermen (19) commissioned by the North Canterbury Acclimatisation Society. These are in effect "managers'" studies and usually come under Category 1 or 2. The Tourist and Publicity Department regularly makes use of professional research agencies in its studies.

2.2 ORIENTATION OF STUDIES

We have termed studies that take a population or segment of the population as their base, whether national, regional or local, **general population studies**.

Studies of actual users at a recreation site are termed **user studies**.

2.2.1 **General Population Studies**

Some general population studies, such as the New Zealand Recreation Survey (21) set out to show how New Zealanders spend *all their leisure time not just in mountain land recreation*. A number of local authorities have also taken this approach in Auckland, Palmerston North and Dunedin (2, 7 and 20). Other studies are concerned with the gamut of outdoor recreation from sports ground activities, driving for pleasure, picnicking, boating, hunting,
tramping, etc., such as the Marlborough study (9) and general population surveys in major urban areas such as Auckland, Wellington and Christchurch (3, 13 and 17).

Only a small proportion of leisure-time and outdoor recreation activities are necessarily oriented to mountain lands and, in the absence of detailed information, we are generally left to guess if participation involves the mountain lands at all, e.g. freshwater fishing, power-boating, etc. These studies, however, serve to put mountain land recreation in the perspective of both all leisure-time activities and all outdoor recreation activities. The weight of information is generally demographic and a number of these surveys give important recreationist "profiles" and basic behavioural data for individual recreations. A few general population surveys deal with participants in a specific recreation activity. Two are concerned with fishermen in different regions (19 and 25) and one with recreational motorcycle riders (1). Several surveys of tourists conducted by the Tourist and Publicity Department also come into this category (23 and 24). Two studies which deal with attitudes of the local population to recreation developments are included - the attitudes of Queenstown residents to tourism (4) and Methven residents to the development of the Mt Hutt skifield (14).

Twenty-five general population studies are reviewed in 2.3.

2.2.2 User studies

The majority of studies are concerned with existing users of a specific site, e.g. a national park or forest park. The simpler studies give participation rates for individual activities but do not analyse data by recreation activity, though some may make the distinction between day and overnight visitors and seasonal users. While this is of limited value in researching specific recreations, it must be noted that some of the more recent surveys, such as the Tararua Forest Park User Survey currently under way (49), have particular potential for more detailed analysis of user behaviour and wants.
TABLE 1: Origin, Date and Orientation of New Zealand Mountain Land Recreation Studies

<table>
<thead>
<tr>
<th>Year</th>
<th>1/5. Government Agency, Regional or Metropolitan Authority</th>
<th>2. District Office and Park Managers</th>
<th>3. Theses, etc.</th>
<th>4. University Research</th>
<th>Gen. Pop.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>24* (since 1949)</td>
<td></td>
<td>29 (unpublished 1972)</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1969</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1970</td>
<td>2 11</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1972</td>
<td></td>
<td>38</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1973</td>
<td>3</td>
<td>16</td>
<td></td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>1974</td>
<td>10 12</td>
<td>42</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1975</td>
<td>53</td>
<td>28 40</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1976</td>
<td>5 18 19 22 23 50</td>
<td>9 13 27 32 34</td>
<td></td>
<td></td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>1977</td>
<td>1 8 20 21</td>
<td>31 41 44</td>
<td></td>
<td></td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>1978</td>
<td>4 15 17* 35 46*</td>
<td>33 45 47 48</td>
<td>Several in preparation</td>
<td>49</td>
<td>3 8</td>
<td></td>
</tr>
</tbody>
</table>

Sub-total 19 4 11 4 10 2 3 25 28

Total 23 11 14 5 53

Numbers refer to Studies in bibliographic list and analysis beginning on p35.
General population study numbers are typed in sans serif.
User study numbers are typed in italic.
Underlined numbers deal with one recreation activity only.
* Annual or regular publication.
MAP 1

Location of Mountain Land Recreationist Studies

NATIONWIDE STUDIES (not located on map)
5 Outdoor education
6 Outdoor education
8 Waterfowl shooting (all Acclimatisation Districts)
11 Fishing (all Acclimatisation Districts)
16 Australians
21 New Zealand Recreation Survey
22 Australians in New Zealand
23 North Americans in New Zealand
24 Visitors to New Zealand
46 State Forests

LEGEND
□ General Population Studies
○ User Studies
A number of studies are concerned with one recreation activity only, e.g. skiing, or the site may lend itself to homogeneity of activity, such as the Routeburn and Heaphy Tracks for tramping.

Twenty-eight user studies are reviewed in 2.3.

TABLE 1 on page 33 illustrates the origin and date of the studies reviewed at the end of this chapter. More than anything, this table shows the recency of New Zealand recreation research. The majority of studies have been completed in the last three or four years. The first studies, mostly conducted by local and regional authorities, sought to elicit basic recreation patterns. There were also several basic user studies. Over half the studies were conducted by government agencies at head office or local level. A notable trend is the increasing number of university theses and dissertations on aspects of outdoor recreation. In addition to those listed a further five or more theses or dissertations are known by the authors to be underway.

MAP 1 on pages 34-35 indicates the geographic location of the 53 studies reviewed. Fifteen are located in the North Island, 28 in the South Island and 10 apply to locations throughout the country generally.
2.3 MOUNTAIN/LAND RECREATIONIST STUDIES IN NEW ZEALAND:
BIBLIOGRAPHIC LIST AND ANALYSIS BY NEEDS, BEHAVIOUR AND WANTS

Bibliographic details of each study and its scope are noted in the first column if it is part of a larger study, e.g. a resource availability or impact study, this context is also noted.

Under Area/Recreationist or Activity the geographical area covered is noted along with any relevant description of the sample, e.g. residents or clubs. Individual recreationists or recreations are underlined. Generally the recreationist or activity is described as in the survey, e.g. freshwater fishermen or fishermen (we have avoided "anglers") and refer to Heaphy Track and Milford Track users as trampers, rather than "walkers", as they are described in the actual studies. The reader is left to extrapolate trail-bike riders from motor biking for pleasure, scramble biking or motorcycles. Leisure-time activities, outdoor recreation activities and general range of mountain land recreation activities are terms used to describe a large number of activities (five to 20 or more) relevant to the survey. As analysis generally does not go beyond participation rates, the individual activities are not detailed in these cases.

Under Behaviour and Wants, we have not attempted to evaluate studies in terms of quality or validity of sample. There has however been an attempt to indicate the quantity of information elicited by the survey. Thus the words brief (possibly only one point is explored, in which case this may be noted specifically), basic and detailed are used. Demographic data is noted under Behaviour. As Needs information is virtually non-existent it is noted under the bibliographic reference rather than in a separate column.
1. APPLIED GEOLOGY ASSOCIATES 1977
   Off-road vehicle recreation study; characteristics, demand and impact on the social and physical environment. Wellington. Wellington Regional Planning Authority 115p
   Resource impact study with participant survey. Indicates some NEEDS fulfilled in off-road vehicle recreation.

2. AUCKLAND REGIONAL AUTHORITY 1971
   Recreation patterns in Auckland. Auckland, Auckland Regional Authority 34p

3. AUCKLAND REGIONAL AUTHORITY 1973
   Outdoor recreation in Auckland, a survey of activity patterns. Auckland, Auckland Regional Authority 32p

4. CANT, R.D. 1978
   Tourism in Queenstown; an invitation to dialogue. Prepared for the New Zealand National Commission for UNESCO. Christchurch, Department of Geography, University of Canterbury 43p

5. CHAPMAN-TAYLOR, R. 1976
   Education and national parks, Wellington, Department of Lands Survey for the National Parks Authority. 129p National Parks Series 1976/1

Area/Recreationist or Activity
Wellington Region
Four-wheel drive vehicles
Motorcycles
Five Auckland urban areas
All leisure-time activities
Auckland
General range of outdoor recreation activities grouped as Urban-based, Rural passive and Rural active.
Selected activities are considered individually, including:
Camping
Tramping
Driving for pleasure
Queenstown
Tourism
New Zealand
Outdoor education for school children (study and recreation)
**Behaviour**

Basic behavioural and demographic information with description of activity organisation.

Participation rates and latent demand. Age and sex analysis for broad categories such as Indoor Sports, Outdoor Recreation, "Arts" and Hobbies, etc.

Demographic data based on these categories. Participation rates for individual recreations e.g. freshwater fishing.

Basic demographic and brief behavioural information for selected activities.

**Wants**

Some preferences are identified.

Detailed survey of residents' attitudes to tourism and its impact on life in Queenstown.
<table>
<thead>
<tr>
<th>General Population-Oriented Studies</th>
<th>Area/Recreationist or Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellington, Department of Education 73p Christchurch Teachers' Training College Research Leave</td>
<td>Outdoor education</td>
</tr>
<tr>
<td>Report No. 1</td>
<td></td>
</tr>
<tr>
<td>7. CRAWFORD, P. 1969 Trends in recreation preference.</td>
<td>Palmerston North</td>
</tr>
<tr>
<td>Palmerston North, Palmerston North City Council Town Planning Office 40p Report No. 13</td>
<td>All leisure-time activities including:</td>
</tr>
<tr>
<td></td>
<td>Driving, Fishing, Walking, Tramping, hunting and skiing</td>
</tr>
<tr>
<td>8. DEPARTMENT OF INTERNAL AFFAIRS. WILDLIFE SERVICE Summary of the waterfowl shooting season.</td>
<td>New Zealand</td>
</tr>
<tr>
<td>Annual</td>
<td>Waterfowl shooting</td>
</tr>
<tr>
<td>9. DEPARTMENT OF LANDS AND SURVEY 1977 Outdoor-recreation planning;</td>
<td>Marlborough</td>
</tr>
<tr>
<td>Marlborough pilot study.</td>
<td>Residents and outdoor recreation clubs (Marlborough and non-Marlborough)</td>
</tr>
<tr>
<td>Wellington, Department of Lands and Survey. 144p Information Series No. 3</td>
<td>General range of outdoor recreation activities grouped as User-oriented, Intermediate and</td>
</tr>
<tr>
<td></td>
<td>Resource-based.</td>
</tr>
<tr>
<td>Pilot resource and demand study with projections to 1991, including visitors from other areas.</td>
<td></td>
</tr>
<tr>
<td>10. FORREST, D.J. 1978 The impact of hydro-electric development in small urban communities.</td>
<td>Kurow and Otematata</td>
</tr>
<tr>
<td>University of Otago, Dunedin 134p</td>
<td>Brief survey of leisure-time activities of house-owners, mostly outdoor related.</td>
</tr>
</tbody>
</table>
**Behaviour**

Overall view of outdoor education according to questionnaire replied to by teachers and available literature

Brief demographic data for individual activities or groups of activities.

Bag statistics calculated from diary returns for each acclimatisation district.

Brief behavioural information for residents based on these categories. Residents' participation in 34 activities is related to geographic location.

**Wants**

Teachers' attitudes to facilities, practices and programmes for outdoor education.

General problems expressed by clubs are noted. Specific improvements or management practises desired by clubs and individuals are listed.

Brief behavioural and basic demographic information.

Attitudes to recreation facilities and further development are noted.
<table>
<thead>
<tr>
<th>General population-Oriented Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.</strong> GREYNOTH, E. 1974</td>
</tr>
<tr>
<td>New Zealand angling 1947-68;</td>
</tr>
<tr>
<td>an assessment of the national</td>
</tr>
<tr>
<td>angling diary and postal</td>
</tr>
<tr>
<td>questionnaire schemes. Wellington,</td>
</tr>
<tr>
<td>Fisheries Management Division,</td>
</tr>
<tr>
<td>Ministry of Agriculture and</td>
</tr>
<tr>
<td>Fisheries 70p Fisheries Technical</td>
</tr>
<tr>
<td>Report No. 135</td>
</tr>
<tr>
<td>Resource study relating fish stocks</td>
</tr>
<tr>
<td>to angling effort, given the</td>
</tr>
<tr>
<td>limitations of the diary scheme.</td>
</tr>
<tr>
<td>See also: Fisheries Technical Reports</td>
</tr>
<tr>
<td>Nos 88, 89, 93, 94, 100, 102, 103,</td>
</tr>
<tr>
<td>114, 115, 119, 120 and 127.</td>
</tr>
<tr>
<td><strong>12.</strong> HAMILTON CITY COUNCIL 1971</td>
</tr>
<tr>
<td>Study of regional recreation activity. Hamilton, Hamilton City Council 18, 127p</td>
</tr>
<tr>
<td><strong>13.</strong> HENDERSON, E. and STAGPOOLE, J. 1974</td>
</tr>
<tr>
<td>Regional recreation and conservation study. Part 1, Participation, attitudes and aspirations in regional recreation. Wellington, Wellington Regional Planning Authority 106p</td>
</tr>
<tr>
<td><strong>14.</strong> HENDERSON, G.D. 1976</td>
</tr>
<tr>
<td>The impact of skifield development on Methven. Unpublished M.A. thesis (geography), University of Canterbury 165p</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area/Recreationist or Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
</tr>
<tr>
<td>Freshwater fishing</td>
</tr>
<tr>
<td>Individual acclimatisation districts</td>
</tr>
<tr>
<td>Hamilton</td>
</tr>
<tr>
<td>Outdoor recreation activities</td>
</tr>
<tr>
<td>Wellington</td>
</tr>
<tr>
<td>General range of outdoor recreation activities</td>
</tr>
<tr>
<td>Activities considered individually include:</td>
</tr>
<tr>
<td>Driving for pleasure</td>
</tr>
<tr>
<td>Trips/picnics to rivers, bush</td>
</tr>
<tr>
<td>Walking/rambling</td>
</tr>
<tr>
<td>Fishing (sea/river)</td>
</tr>
<tr>
<td>Camping/caravaning</td>
</tr>
<tr>
<td>Boating (all kinds), water skiing</td>
</tr>
<tr>
<td>Tramping/mountain climbing</td>
</tr>
<tr>
<td>Horseriding</td>
</tr>
<tr>
<td>Cycling for pleasure</td>
</tr>
<tr>
<td>Hunting</td>
</tr>
<tr>
<td>Motorbiking for pleasure</td>
</tr>
<tr>
<td>Scramble biking</td>
</tr>
<tr>
<td>Methven</td>
</tr>
<tr>
<td>Methven residents</td>
</tr>
<tr>
<td>Skiers (Mt Putt)</td>
</tr>
</tbody>
</table>
Brief behavioural information relating to angling effort. Summarises results and conclusions from studies of individual acclimatisation districts.

Brief demographic and behavioural data mostly relating to local opportunities.

Basic behavioural information with demographic analysis.

Basic demographic and basic behavioural information is given for each of these activities.

Brief behavioural note relating to accommodation.

Replies to an open-ended question eliciting wants are recorded.

Methven residents' attitudes to the Mt Hutt skifield development.
General Population-Oriented Studies

15. JOHNSTON, D.C., PEARCE, D.G. and CANT, R.G. 1978
   Canterbury holidaymakers: a preliminary study of internal
   tourism. In Canterbury at Leisure: studies in internal
   Tourism (ed. by R.G. Cant)
   New Zealand Geographical Society
   Canterbury Branch Publication No. 4 5-19pp

16. McNAIR ANDERSON ASSOCIATES PTY 1978
   Australians' perception of New Zealand as a holiday destination;
   a report on a group discussion study by M.E.C. Larbalestier.
   Wellington, New Zealand Tourist and Publicity Department 31p
   Only survey to date using group discussion technique.

17. NEIGHBOUR, A.M. 1973
   Outdoor recreation in Christchurch, a survey of activity patterns.
   Christchurch, Department of Geography, University of Canterbury
   92p

   See also: A. POLLOCK (nee NEIGHBOUR) 1976
   Outdoor recreation; a survey of activity patterns and Driving
   for pleasure. In Canterbury at Leisure; studies in internal
   tourism and recreation (ed. by R.G. Cant) New Zealand Geo-
   graphical Society Canterbury Branch Publication No. 4
   20-46pp which presents some of
   this material excluding individual activity profiles.
Behaviour

Basic behavioural information on activity participation, destination, accommodation and holiday expenditure.

Wants

Detailed information of perception of New Zealand as a holiday destination.

Basic behavioural information with demographic analysis based on these categories.

Demographic and basic behavioural information is given for each of these activities.
18. **NEW ZEALAND FOREST SERVICE 1976**  
Recreation surveys, West Coast beech project area. Unpublished draft

19. **OCTA ASSOCIATES 1976**  

20. **PANNETT, P. 1977**  
Dunedin's recreational preferences. Dunedin, Dunedin Metropolitan Regional Planning Authority and Dunedin City Council 65p

New Zealand recreation survey; preliminary report. Wellington, New Zealand Council for Recreation and Sport 34p

22. **TOURIST AND PUBLICITY DEPARTMENT 1976**  
Australians holiday/vacation visitors to New Zealand; a study of motivating information, attitudes and behaviour, September 1975 to March 1976. Wellington, Tourist and Publicity Department Development and Research Division 59p
<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Wants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic behavioural information.</td>
<td>Attitudes to developments, recreational conflicts, etc. individual comments listed.</td>
</tr>
<tr>
<td>Detailed behavioural and basic demographic information.</td>
<td>Summarises attitudes to recent changes in fishing regulations.</td>
</tr>
<tr>
<td>Demographic and brief behavioural information for each of these activities.</td>
<td></td>
</tr>
<tr>
<td>Demographic data is given and discussed for these broad categories.</td>
<td></td>
</tr>
<tr>
<td>Method of planning trip to New Zealand and mode of travel within the country are analysed by age and sex.</td>
<td>Prior expectations and impressions are measured against 29 statements also analysed by age, sex and mode of travel.</td>
</tr>
<tr>
<td>General Population-Oriented Studies</td>
<td>Area/Recreationist or Activity</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>23. TOURIST AND PUBLICITY DEPARTMENT 1976</td>
<td>North America</td>
</tr>
<tr>
<td>North American holiday/vacation visitors to New Zealand; a study of motivating information, attitudes and behaviour, September 1975 to March 1976. Wellington, Tourist and Publicity Department Development and Research Division</td>
<td>Tourists</td>
</tr>
<tr>
<td>24. TOURIST AND PUBLICITY DEPARTMENT 1977</td>
<td>All visitors to New Zealand</td>
</tr>
<tr>
<td>New Zealand visitor statistics 1976/77. Wellington, New Zealand Tourist and Publicity Department Development and Research Division</td>
<td>Tourism/holidays</td>
</tr>
<tr>
<td>Annual publication since 1949</td>
<td></td>
</tr>
<tr>
<td>25. TOYNBEE, P.G. 1974</td>
<td>Nelson</td>
</tr>
<tr>
<td>Trout fishing in Nelson; a study in recreation geography. Unpublished M.A. thesis (geography), University of Canterbury</td>
<td>Fishing</td>
</tr>
<tr>
<td>26. BEAMISH, S.F. 1977</td>
<td>Routeburn Track, Mt Aspiring and Fiordland National Parks</td>
</tr>
<tr>
<td>The Routeburn Track; an application of environmental impact analysis. A report prepared for the Mt Aspiring National Park Board. Unpublished M.A. thesis (geography) University of Otago, Dunedin</td>
<td>Trampers</td>
</tr>
<tr>
<td>Resource impact/user study</td>
<td></td>
</tr>
</tbody>
</table>

USER STUDIES
<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Wants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of planning trip to New Zealand and mode of travel within the country are analysed by age and sex.</td>
<td>Prior expectations and impressions are measured against 29 statements also analysed by age, sex and mode of travel.</td>
</tr>
<tr>
<td>Basic behavioural and demographic statistics.</td>
<td>Brief consideration of desirable attributes of fishing waters.</td>
</tr>
<tr>
<td>Detailed behavioural and demographic information.</td>
<td>User perceptions of the walk experience, track conditions, etc.</td>
</tr>
<tr>
<td>User Studies</td>
<td>Area/Recreationist or Activity</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **27. BIGNELL, A.W. 1976**  
Pilot resource/recreationist planning study testing several survey techniques with limited samples. | **Lake Tekapo region**  
**General range of mountain land recreation activities**, Largely, **Campground users** |
| **28. BUNCKENBURG, M.L. 1975**  
**General range of mountain land recreation activities** |
| **29. CATTON, W.R. 1972**  
Summarises Mt Cook visitor survey conducted by G. Snaddon 1967/68 15-19pp | **Mt Cook National Park**  
**Mountaineers**  
**Trampers**  
**Campers**  
**Hotel guests**  
**Motel guests** |
| **30. CHAPMAN, B.T. 1977**  
Parks, people and preservation; an analysis of recreational pressure in the Milford area, Fiordland. Unpublished B.A. (Hons) dissertation (geography), University of Otago, Dunedin | **Milford Sound**  
**Tourists** |
| **31. DEPARTMENT OF LANDS AND SURVEY, Dunedin Macetown 1977**  
Macetown Historic Reserve; report on 1976/77 ranger activities and future management. Unpublished report | **General range of mountain land recreation activities** |

*The data collected by G. Snadden is held by the Department of Sociology, University of Canterbury and apart from this article has not been presented. In this study only the results extracted by Catton have been cited as time did not permit an examination of the detailed data.*
<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Wants</th>
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</thead>
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<tr>
<td>Brief behavioural and demographic information.</td>
<td>Attitudes to facilities</td>
</tr>
<tr>
<td>Basic behavioural and demographic information broken down between over-night and day users. Participation rates for individual activities.</td>
<td>Attitudes to crowding developments, etc., also analysed by overnight and day user categories.</td>
</tr>
<tr>
<td>Basic behavioural and demographic information.</td>
<td>Visitor expectations, perceptions of visit experience and views on future developments. Comparison with managers' perceptions of problems.</td>
</tr>
<tr>
<td>Basic behavioural and demographic information.</td>
<td>Attitudes to facilities and developments.</td>
</tr>
<tr>
<td>Area/Recreationists or Activity</td>
<td>User Studies</td>
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</tr>
<tr>
<td>Tongariro National Park</td>
<td>32. DEVLIN, P.J. 1976 The characteristics, motivations and impact of summertime visitors to Tongariro National Park. Unpublished M.A. thesis (sociology) University of Canterbury, Christchurch 256p In-depth study of motivations for visiting Tongariro National Park; reasons give high ranking to NEEDS that are met in the course of the visit.</td>
</tr>
<tr>
<td>Hanmer State Forest</td>
<td>36. GRESHAM, P.H. 1977 The development of recreational facilities and services on high country runs of the South Island. Unpublished M.Sc. thesis (resource management), Joint Centre for Environmental Sciences, University of Canterbury-Skifields bury and Lincoln College 106p General range of mountain land recreation opportunities, but outlining specifically: Safari hunting Tourist-oriented operations Horse trekking Camping</td>
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<td>High-country runs</td>
<td>52</td>
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<td>Behaviour</td>
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</tr>
<tr>
<td>Detailed demographic and behavioural information with separate analysis</td>
<td>A preservationist/environmentalist/wilderness attitude scale is cross-tabulated with demographic information. Attitudes to specific</td>
</tr>
<tr>
<td>for summer programme visitors and hut users.</td>
<td>questions such as crowding, etc. elicited.</td>
</tr>
<tr>
<td>Brief behavioural and demographic information.</td>
<td>Attitudes to specific points concerning the walk experience.</td>
</tr>
<tr>
<td>Basic demographic and brief behavioural information.</td>
<td>Visitors' impressions of the physical environment, development and facilities.</td>
</tr>
<tr>
<td>Basic demographic and brief behavioural data. Participation rates for</td>
<td>Attitudes to current facilities. Reason for visiting forest.</td>
</tr>
<tr>
<td>individual activities.</td>
<td>Motivations and circumstances of runholder development/involvement in recreation are discussed. Some such as social contact opportunities fall into the NEEDS category.</td>
</tr>
<tr>
<td>User Studies</td>
<td>Area/Recreationists or Activity</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
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<tr>
<td>Recreation in the Waimakariri Basin; an introductory study with special</td>
<td>General range of mountain land recreation activities</td>
</tr>
<tr>
<td>reference to the Broken River region. Lincoln, Lincoln College Press for</td>
<td></td>
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<tr>
<td>the Tussock Grasslands and Mountain Lands Institute 139p Lincoln Papers</td>
<td></td>
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<tr>
<td>in Resource Management No. 3</td>
<td></td>
</tr>
<tr>
<td>Resource/recreational use study, basically descriptive.</td>
<td></td>
</tr>
<tr>
<td>38. HULL, M. 1977</td>
<td>Tararua Forest Park</td>
</tr>
<tr>
<td>(sociology), Victoria University of Wellington 111p</td>
<td></td>
</tr>
<tr>
<td>Park, New Zealand Journal of Forestry 17:43-51</td>
<td>General range of mountain land recreation activities</td>
</tr>
<tr>
<td>40, MARKS, G.P. 1975</td>
<td>Mt Hutt skifield</td>
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<tr>
<td>Mount Hutt ski area survey. Unpublished B.Sc.Ad. project</td>
<td>Skiers</td>
</tr>
<tr>
<td>University of Canterbury, Christchurch</td>
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<td>41. MOUNT ASPIRING NATIONAL PARK 1977</td>
<td>Mount Aspiring National Park</td>
</tr>
<tr>
<td>People survey, summer 1976/77, Aspiring hut. Unpublished survey conducted</td>
<td>General range of mountain land recreation activities</td>
</tr>
<tr>
<td>by hut warden.</td>
<td></td>
</tr>
<tr>
<td>42. MOUNT COOK NATIONAL PARK 1973</td>
<td>Mt Cook National Park</td>
</tr>
<tr>
<td>Summary of 110 questionnaires taken over a 12 month period, 1973/74.</td>
<td>Mountaineers</td>
</tr>
<tr>
<td>Unpublished, but available on request.</td>
<td></td>
</tr>
<tr>
<td>Behaviour</td>
<td>Wants</td>
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</tr>
<tr>
<td>Brief description of individual activities and opportunities.</td>
<td>Developments and facilities desired/not desired according to &quot;wish list&quot;. Attitude to exotic forests.</td>
</tr>
<tr>
<td>Basic behavioural and demographic information. Participation rates for individual activities.</td>
<td>Attitudes to facilities and services</td>
</tr>
<tr>
<td>Basic behavioural and demographic information. Activities ranked by percentage participating.</td>
<td></td>
</tr>
<tr>
<td>Basic behavioural and demographic information analysed by weekend and mid-week skiers.</td>
<td></td>
</tr>
<tr>
<td>Basic behavioural and demographic information recorded but not (yet) analysed.</td>
<td>Main purpose of survey was to elicit preferences and attitudes to hut facilities and fees in the park.</td>
</tr>
<tr>
<td>Brief behavioural information.</td>
<td></td>
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</tbody>
</table>
43. NEW ZEALAND FOREST SERVICE 1974 Heaphy Track user survey. Unpublished report 5p

44. NEW ZEALAND FOREST SERVICE 1977 Coromandel State Forest Park user survey. Unpublished report 10p

Duplicates 1970/71 survey by Kelly and Black (see 39)

45. NEW ZEALAND FOREST SERVICE 1978 Questionnaire, Heaphy Track, 1977/78. Unpublished (interim) report 2p

46. NEW ZEALAND FOREST SERVICE Summary of recreational use of state forests.

Internal statistical returns for each state forest compiled quarterly and annually for each Conservancy and total state forests.

47. NEW ZEALAND FOREST SERVICE (survey in progress) Stewart Island recreation survey.

Stewart Island

General range of mountain land recreation activities

48. NEW ZEALAND FOREST SERVICE (survey in progress) Tararua State Forest Park recreational user survey.

Tararua Forest Park

General range of mountain land recreation activities

Area/Recreationists and Activity

Heaphy Track, Northwest Nelson Forest Park.

Trampers

Kauaeranga Valley, Coromandel Forest Park

General range of mountain land recreation activities

Heaphy Track, Northwest Nelson Forest Park

Limited range of mountain land recreation activities

All state forests

General range of mountain land recreation activities, including:

Hunting permits issued

Stewart Island

General range of mountain land recreation activities

Tararua Forest Park

General range of mountain land recreation activities
**Behaviour**

Brief behavioural and demographic information, some based on rangers' observations.

Basic behavioural and demographic information. Activities ranked by percentage participating.

Basic behavioural and demographic information.

Statistics for participating collected by various methods.

Hunting permit returns analysed.

**Wants**

Users' comments on facilities, track condition and proposed Heaphy Road are listed.

Developments and facilities desires/not desired according to a "wish list". Attitudes to forest types and exotic logging.

Users' comments listed. Perceptions of experience elicited.

Attitudes to development/non-development for recreation and satisfaction with experience of visit to Stewart Island.

User attitudes to developments/non-development solicited from a list of facilities and open-ended questions.
49. O'CONNOR, K.F., SMITH, J. and TAN, E.S. (in publication) Recreational use of high country runs. Lincoln, Tussock Grasslands and Mountain Lands Institute

Recreational use and resource survey of 224 high country runs.

49. O'CONNOR, K.F., SMITH, J. and TAN, E.S. (in publication) Recreational use of high country runs. Lincoln, Tussock Grasslands and Mountain Lands Institute

Recreational use and resource survey of 224 high country runs.

49. O'CONNOR, K.F., SMITH, J. and TAN, E.S. (in publication) Recreational use of high country runs. Lincoln, Tussock Grasslands and Mountain Lands Institute

Recreational use and resource survey of 224 high country runs.

Area/Recreationists and Activity

High country runs of the South Island

General range of mountain land recreation activities, including

Tramping and climbing

Hunting deer

Hunting game birds

Flying or gliding

Swimming and picnicking

Motoring (including 4-wheel drive vehicles and trail bikes)

Skiing

Skating

Camping

Fishing

Boating

50. PALMER, W.L. 1976 Public use of Orongorongo Valley, Wellington. Wellington, New Zealand Department of Scientific and Industrial Research 47p Information Series No. 113

Orongorongo Valley, Rimutaka Forest Park

Hut owners and users


Whakapapa skifield, Tongariro National Park

Skiers

52. TONGARIRO NATIONAL PARK BOARD (survey in progress) Traffic survey of visitors to Tongariro National Park, August/ September 1977.

Tongariro National Park

Winter visitors

Skiers


Queenstown

Tourists

58
Frequency of use of runs for individual activities related to physical and environmental attributes and available facilities.

Detailed behavioural and demographic information; emphasis on hut details.

Behavioural information obtained by observation to assess physical and social carrying capacity for ski-field management.

Detailed demographic and behavioural information.

Basic behavioural and demographic information analysed by origin (North Island, South Island and overseas visitors).

Elicits attitudes to specific points concerning the Valley.
2.3.1 Additional Studies

The following studies were not available or only at an early preparatory stage at the time of compiling the bibliographic list and conducting the pilot study reported in Chapter Three. As some studies are not yet completed, a full analysis has not been carried out.


General population study. Characteristics, recreational activities and destinations of Dunedin holidaymakers.


User study. Detailed behaviour study; user perception of Waitakeres.


3.1 METHODOLOGY

Recreationists for eight recreation activities carried out in mountain lands were studied - trampers, mountaineers, skiers, hunters, fishermen, canoeists representing traditional activities, and four-wheel drive and motorcycle recreationists representing more recent vehicle recreation activities.

3.1.1 Literature Review

Using the studies surveyed in Chapter Two of this report, we examined critically the known information and data covering the needs, behaviour and wants of recreationists for a number of recreation activities that are carried out in mountain lands. Appendix I contains the matrix formulated to review this information.

3.1.2 From the Recreationists

As both time and manpower were limited, we recognised that we could not conduct a comprehensive scientific study. Therefore, a pilot study was undertaken with the following objectives in mind:

1. To learn from recreationists themselves their needs, behaviour patterns and wants.
2. To test and demonstrate a technique for studying recreationists.
3. To establish that concerns do exist and what some of these are.
4. To support some of the concerns and impressions gathered from discussions with managers and perusal of available literature.
5. To show the need for and give direction to future study.
In order to meet these objectives we asked recreationists themselves what their needs, behaviour patterns and wants were. Groups ranging from two to eight for individual activities were assembled in Christchurch and Wellington and a mixed panel in Dunedin. Participation was invited first by telephone explaining the broad nature of the study, then confirmed by letter stating the date and place set for the discussion. Participants were selected through clubs, organisations, sports stores, interested parties and personal contacts. The distribution thus varied according to the recreation activity. For example, it is easy to contact ski clubs, tramping clubs and alpine clubs, but it was not so easy within the limitations of our manpower and time to search out representatives of the large number who ski, tramp and climb without belonging to a club. Personal contact was used more in contacting hunters and fishermen. The composition of each group is described at the beginning of the appropriate section. Discussions, which were held in the evening in a relaxed atmosphere, usually lasted a little over two hours. They were taped and later transcribed for future study. A semi-formal interview structure (see Appendix II) allowed free-flowing conversation, frequently covering many points without prompting.

In addition to group interviews, we have added contributions which we actively sought from many informal discussions with recreationists as well as our own observations and experience during the course of research for this report.

3.2 THE RECREATIONISTS

3.2.1 TRAMPERS

Introduction

Tramping has traditionally been considered one of the major recreational uses of mountain lands. More energy and resources have been spent on tramping by land-managing agencies than on any other mountain land recreation activity. More people are venturing into the bush and mountain lands to tramp, to the extent that, in some areas, crowding and over-use are perceived by managers and sections of the tramping public alike.
From the Literature

(a) Needs

No study specifically explores the subject or the needs of trampers only. However, in response to an open-ended question, the Routeburn trampers (26)* overwhelmingly attribute satisfaction to views of mountains, scenery variety and lakes and waterfalls. People and camping are mentioned by only 3%.

Latent Demand

A number of studies investigate recreation activities people would like to take part in, but either do not participate in or participate in less than they would like. Tramping was mentioned as a recreational ambition by 12.5% in the earlier Auckland survey (2). Tramping received 4.8% of the mentions in Christchurch (17) and 4.2% in Auckland (3) as an activity that city residents would like to undertake (organised sport received 21.5% and 14.7% mentions respectively). In Wellington (13), 7% of the respondents would like to participate in tramping and climbing, while only 2.6% in Dunedin (20) stated tramping as a recreational ambition. Lack of time is given as the main inhibiting factor, as reported by 51% of the Wellington respondents and 67% of the Christchurch respondents. Home and family responsibilities were listed as the next inhibiting factor by 14.5% and 12% respectively.

(b) Behaviour

How Many? (Participation)

* The number of the study as given in Chapter Two is recorded when that study is first mentioned for the recreation activity under consideration. If there are two studies that could be confused, e.g. Recreation Patterns in Auckland (2) and Outdoor Recreation in Auckland (3) both by the Auckland Regional Authority, these numbers are maintained to avoid confusion.
General population studies: The preliminary report of the New Zealand Recreation Survey (21)* indicates that 1.8% of New Zealanders consider tramping one of their three most preferred leisure-time activities. In the survey of leisure-time activities of the Dunedin population, tramping ranks 22nd out of 98 activities mentioned, with participation by 5% of the population sampled. In an earlier Auckland study (2) 4% went tramping. As a holiday activity "tramping and climbing" scored only 14 participations or approximately 2% of the 446 activity participations reported by Canterbury residents (15). Overall, a very small number of New Zealanders tramp.

Surveys relating to outdoor recreation activities of residents of major urban areas reveal that 10% of the Auckland population (3), 9% in Christchurch and 11% in Wellington participated in tramping. The Wellington percentage includes climbers with trampers and must be considered slightly high, although it can be assumed that many climbers, having a tramping background, also continue to tramp.

The Marlborough study (17) records 4 007 participations against a similar range of outdoor recreation activities - roughly 2% of the total participations recorded as against nearly 10% for picnicking at beaches or reserves, which scored highest. It can be noted that this 2% aligns with the survey of holiday activities of Canterbury residents mentioned above, which also bases its activity analysis on the number of times that participation in a recreation activity took place.

User Studies: In the Tongariro National Park summer visitor survey (32), 73% of the hut users gave tramping as their main activity (for the remainder, nature observation and leisurely walking accounted for 14% and photography and natural history for 11%). In the same study, half of the headquarters' respondents gave tramping as their main activity. On the other hand, owing to the nature of the 40 km Routeburn Track straddling

* See Table 4 for a summary of participation in individual recreation activities.
a low subalpine pass between Mount Aspiring and Fiordland National Parks, all users are labelled "trampers" (26). Similarly, although Fiordland National Park (33)* refers to Milford Track users as "walkers", the recreationists are surely "trampers".

Other surveys at specific sites indicate only the numbers or percentages of users undertaking the activity they define as "tramping". These surveys, usually taken at focal or access points, indicate that participants in tramping, hunting and climbing, the traditional mountain land recreation activities, are far fewer than participants in passive or "fringe" area activities such as picnicking, sightseeing, swimming, camping, walking, etc. Weighting the three most important values, tramping ranked 16%, or third equal, in the 1970/71 Coromandel Forest Park survey (39) and 25%, or first, of the 1976/77 survey (44), a significant increase. Of a Tararua Forest Park sample (38), 32.5% went tramping, while 65% of the overnight users at the Holdsworth Lodge entrance to the Park (28) were trampers. Twenty-seven percent of the Holdsworth Lodge day-users recorded their activity as hiking. At Craigieburn Forest Park (35), 19% listed tramping as their activity. Well over half of the Aspiring Lodge (41) visitors recorded tramping or "tramping and climbing" as their activity. As stated previously in this report, user surveys reflect the specific attractions of the site, or its particular circumstances, such as ease of access, and should be used cautiously in extrapolating information on the mountain land recreationist. A further caution in administering questionnaires was noted by Simmons (pers. com.) during recent work on summer visitors to Arthur's Pass National Park (work in progress). "Tramping" was, in fact, applied to a wide range of activities by respondents and it was necessary to limit "trampers" to those who forayed into the Park with pack and equipment for at least a one-night stay, while others, who usually took short trips on tracks near the Headquarters were redefined as "walkers".

* The Milford Track has been traditionally operated by a government tourist agency since the turn of the century. Currently the Tourist Hotel Corporation provides full accommodation and guide service for a substantial charge. This survey (33) is limited to those who carry their own food and sleeping bags, using huts built by the Fiordland National Park Board and paying only a track plus normal hut fees.
**Who? (Demographic and Socio-economic Data)*

**Age:** The Auckland sample (3) showed that 31% of the 16-24 age group, 16% of the 25-44 age group and 6% of those over 45 years, had tramped during the previous year. In the Wellington study, 20% of the trampers were in the 12-15 age group, 42% were aged 16-24, only 3% were aged 25-34, while the 35-44 and 45-54 age groups accounted for 10% and 11% respectively.

The Christchurch survey assigns tramping almost exclusively to the under-24 age group, while in Dunedin 64% of the trampers fell into the 15-24 age group.

The preponderance of younger ages among the bulk of trampers is confirmed in several user surveys at specific areas. The Routeburn Track study shows an interesting divergence between "independent" trampers and those on a concessionnaire's guided walk:

<table>
<thead>
<tr>
<th>Age</th>
<th>Independent %</th>
<th>Concessionnaire %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>6.5</td>
<td>10</td>
</tr>
<tr>
<td>16-25</td>
<td>63.0</td>
<td>25</td>
</tr>
<tr>
<td>26-45</td>
<td>21.0</td>
<td>26</td>
</tr>
<tr>
<td>45+</td>
<td>9.0</td>
<td>39</td>
</tr>
</tbody>
</table>

From this, the author suggests that the guided walks are favoured by family groups and older people. A survey of Milford Track trampers using national park board huts can be compared to the Routeburn independent trampers, with two-thirds being under 30 years of age. The Tongariro National Park summer hut users repeat the pattern: some 10% were under 16, 28.9% aged 16-19 years and 26.7% aged 20-25 years, the total for 0-25 years being 65.2%. The remainder is made up of the 26-30 years age group (11.2%), the 31-44 age group (13.9%) and the over-45s (9.1%). The Heaphy Track survey (45) shows a similar trend.

* Demographic data for the eight types of recreationist in this pilot study is presented in graph form in Figure 1.
Sex: While the Wellington study records only one-third of the participants as women, the Christchurch study notes, "tramping has equal appeal to both sexes". The Dunedin study shows that slightly more males than females go tramping.

At Mount Cook National Park during the summer of 1967/68 (29), just over two-thirds of the trampers were male. Other user studies show the following sex ratios:

<table>
<thead>
<tr>
<th>Routeburn Track</th>
<th>Milford Track</th>
<th>Tongariro National Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>M %</td>
<td>F %</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

Marital Status: In Auckland (3) 20% of the single people tramped while only 6% of those married went tramping. It is noted in the Wellington survey that an increase in trampers over 35 years of age is due to more freedom as family responsibilities lessen. In the Christchurch survey "most people appear to participate in tramping before they are married".

Of the Tongariro National Park summer hut users, 66.8% were single and 26.2 married. In the Mount Cook survey, 72% of the trampers were unmarried. Other user surveys do not record this information.

Education: Twenty-six percent of Aucklanders with degrees had tramped the previous year (3). The Christchurch study notes that persons with degrees were more likely to go tramping than those with primary qualifications only. Of the Tongariro National Park summer hut users, 50% had a university degree or part degree, with about 11.2% more holding some other qualification above secondary schooling. The Mount Cook study shows that 55% of the trampers had "some university" or higher education. Participation in tramping is thus shown to increase with educational qualification.

Occupation: Following the pattern noted under education, the professional occupations had the highest participation rates in Auckland. In Christchurch 18% of the professional or managerial occupations, 11% of non-workers (students, housewives and school pupils) and 8% of the manual workers
participated in tramping. In Dunedin 38% of the tramping population were students. Students were also over a third of those nominating tramping as a recreational ambition.

Of the Tongariro National Park summer hut users, 55% of the males and 72.7% of the females recorded "no occupation", indicating high student participation. Of the remainder, the professional and managerial classes are best represented. At Mount Cook, just over half of the trampers were in the professional and technical occupations.

Nationality: The well-known tramping tracks are heavily used by overseas visitors. Thirty-two percent of the Tongariro National Park summer hut users are from other countries, mostly Australia, and are often students or schoolteachers who have long summer holidays. Of the Routeburn Track trampers, only 41% were of New Zealand origin. Australians made up 39%, 9% were from the United States, 6% from Canada, 6% from Great Britain and 3% from Western Europe and elsewhere. On the Milford Track, New Zealanders were roughly two-thirds of the park board hut users, the rest being 208 Australians, 117 from the United States and 152 from other countries.

How Often?

In Wellington, 32% of the trampers spent only one to four days a year tramping, indicating participation on a casual basis; 30% tramped five to 14 days and 37% over 15 days. In Christchurch, half the tramping sample had been away only one to four times during the year, with 60% going for one day only, indicating that "the number of keen trampers who spent several days in the bush is comparatively small". In Dunedin, tramping participation is reported as relatively infrequent.

When?

Most user studies were conducted over the summer, the major holiday period and therefore the peak season. For example, on the Routeburn Track the mean number of trampers each night was about 35 in November, 140 in January and below 40 in April.
With Whom?

Friends are tramping companions for 44% of the Wellington trampers and mountaineers, although other members of the family also rank as important companions. In Tongariro National Park, 26.1% of the summer hut users travelled with one companion and 38.5% with a larger group of friends. Groups of friends made up 24% of the Milford Track park board hut users and husband and wife combinations made up 17% of these Milford trampers. Of the 214 groups recorded on the Heaphy Track in 1973/74 (37), 45% were groups of friends. On the Routeburn Track, 37% of the parties were groups of two, 13.5% groups of three and 10% groups of four. Instances of larger groups are also noted.

Another feature of these well-known tracks is the number of solo trampers - 8.6% were travelling alone in Tongariro National Park and 7% on the Milford Track, but on the Routeburn Track the percentage of solo trampers was as high as 17%. Many of these may be young overseas travellers "exploring" New Zealand alone. At peak seasons, the numbers on these tracks ensure a "social experience". The incidence of solo trips in other tramping areas where tracks and other facilities are less developed is not yet known.

Families also make up a considerable proportion of trampers on these tracks - 24% of the Tongariro sample and 23% of the Milford Track trampers. Thirty percent of the groups on the Heaphy Track in 1973/74 were family groups.

Club parties are a characteristic group, but only 4.3% of the Tongariro sample fell into this category (yet half acknowledged membership of an outdoor club). On the Milford Track, group and club trips account for 29% of the park board hut trampers, although these groups are not necessarily just tramping clubs. Fourteen percent of the groups on the Heaphy Track were club trips. Again, no published study has yet demonstrated the club party factor in tramping participation (this is further discussed below under From the Trampers).
The **guided walk** is a further group type. Two thousand and thirty-five Milford Track trampers in 1977/78 used Tourist Hotel Corporation accommodation as against the 2,020 independent or park board hut trampers. Concessionnaires providing hut accommodation and meals also operate on the Routeburn Track, guiding 18% of the estimated 5,100 trampers over the 1975/76 season in groups of up to 20. (Other guided walks operate on the Hollyford Track and along the Wanganui River). Owing to the more even age distribution of guided trampers, the author of the Routeburn study suggests that family groups as well as older people may favour this type of experience.

**Outdoor Education Group:** School outdoor education trips may occupy one day or two days to a week or more, and vary in emphasis on school curriculum studies, socialisation experiences and recreation skills. A study of outdoor education in New Zealand schools (6) shows that tramping is the form of activity at 71% of 276 outdoor education centres or sites. This is the most frequent form of activity, with biology coming second (54%) and orienteering third (42%). This may well reflect that tramping is easily combined with other purposes such as nature appreciation, visiting a site for biological or earth science studies, etc. It was not possible to calculate the numbers of school children who participate in outdoor education courses of whatever kind, as satisfactory centralised or district records are not available. However, the phenomenal growth of outdoor education is demonstrated. An example is the increase from 564 pupils taking part in eight camps organised in the Otago Education District in 1965/66 to an estimated 2,935 children attending 62 camps in 1974/75. An education district with established accommodation may programme two week-long visits for each class during its secondary education years.

**Where?**

Information on tramping destinations in general population surveys is minimal. The Auckland study (3) indicates that the Waitakeres are the most popular tramping ground, with the Hunua Ranges second. Similarly, the Tararua Range and the Orongorongo Valley, and Arthur's Pass and Lewis Pass areas are known as the local tramping grounds for Wellington and Christchurch trampers respectively.
User surveys indicate how far people go, where and when. For example, 34.1% of the New Zealand-only summer hut user sample in Tongariro National Park came from Auckland, 50% from other North Island locations and 15.9% from Wellington. The author notes that the low percentage on a pro-rata population basis for Wellington is that Wellingtonians can equally well cross Cook Strait to the South Island. On the Routeburn Track, South Island trampers outnumbered North Island trampers in a 5:3 ratio. It is interesting to note a significantly more even age distribution among South Island trampers on the Routeburn Track than among trampers from the North Island, a large proportion of whom are in the 16-25 age group, aligning with the age distribution pattern of the overseas trampers. Over twice as many South Islanders (668) walked the Milford Track using park board huts as North Islanders (307).

An increase in use can be attributed to ease of access, as illustrated by the construction of the Dart Bridge in 1973, resulting in an almost 50% increase in numbers on the Routeburn Track (2,963 in 1973/74 to 4,438 in 1974/75). A bus service from Queenstown to the beginning of the Routeburn Track at the head of Lake Wakatipu and an exit on the Milford Road, also served by buses, enhance this as a hitch-hikers' shortcut to Fiordland. Although numbers using the Routeburn Track reached 5,050 in 1975/76, a slight decrease ensued the following season. The author of the Routeburn study attributes this to unusually bad weather during the summer. A similar decrease has been experienced on the Milford Track. It can also be asked if some of these trampers, or certain sections of them, are not travelling to such extreme corners of New Zealand for holiday tramping as a reaction to less favourable economic circumstances.

A considerable number may tramp only part of a track - such as the 118 who walked the coastal stretch of the Heaphy Track and returned to Kohaihai. A similar phenomenon was recorded by the hut warden at Welcome Flat in the Copland Valley. Half of the visitors tramped the twelve miles to the hot springs and returned to the road rather than undertake the alpine crossing to Mount Cook. (Westland National Park summer warden at Welcome Flat, pers. com., 1978).
About 45% of Milford Track trampers planned (or had done) other similar tramps, the Routeburn being favoured by over half of them. The studies do not indicate whether these were to be undertaken immediately, due to the convenience of being in the area, or at some later date. Twenty-four percent of the Routeburn trampers had done similar tramps or planned to do them in the near future, the Milford Track featuring high on the list. The lower percentage of Routeburn trampers with prior or planned trips would reflect its earlier-mentioned role as a hitch-hikers' route. Other tramps planned by both the Milford and Routeburn trampers were in Fiordland and Otago (the Hollyford, Rees-Dart and Greenstone Tracks and others). While most of those planning other trips were New Zealanders, the growing number of Australians and Americans on these less well-known routes is a trend noted by the author of the Routeburn study.

**Source of Information:** Word-of-mouth, friends and acquaintances were by far the greatest source of knowledge about the Heaphy (37), Routeburn (70% of those who answered this question) and Milford (50%) Tracks. New Zealanders also "just know about it". Publications attracted a markedly higher number of overseas trampers to the Milford Track, but played a comparatively small role for the Routeburn trampers. Commercial advertising played a small role for Routeburn trampers, but was more important in attracting concessionnaire trampers, to whom friends and acquaintances played a lesser role as a source of information.

Ten percent of the Routeburn trampers, mostly New Zealanders, had tramped on this track before, matched by a similar percentage of Milford Track trampers with previous experience. Most of these were South Islanders and, one conjectures, trampers "guiding" family and friends to enjoy an experience from which they had gained great satisfaction themselves.

**Tramping Practices**

With its emphasis on user impact on the environment, the Routeburn study investigates several tramping practices.

Very few of the trampers actually leave the main track, even for noted viewing points such as Conical Hill.
Fifty-eight percent carried a tent in their party and 40% used their tents. Hut accommodation was thus used when available and most camping took place in the vicinity of the huts. Tents were used more in the height of the season, and in May (when expectation of numbers on the Track was low) tents were not carried at all by any of the respondents. (Tent carrying could also reflect a hitch-hiking/camping holiday, of which tramping the Routeburn was only part of the experience).

Sixty-five percent of the sample washed their dishes or themselves in the rivers or lakes along the track. Thirty-four percent used hut facilities almost exclusively for washing, including almost all of the concessionnaire trampers. The investigation of this point reflects the managers' concern for the effect of soap, food scraps, etc. in a concentrated shore area of several sub-alpine lakes.

(c) Wants

Facilities

Facilities required by trampers are not detailed in any studies, i.e. types of track, hut, hut facilities, etc. However, their opinions of existing facilities have been solicited in several user studies.

Track condition was a cause of dissatisfaction to a small number of Routeburn trampers but 81% were not in favour of a less-prepared track. Most of the Milford Track trampers rated track condition as good or very good. Specific muddy sections generally received comment in the Heaphy (1977/78) and the Routeburn studies.

Most of the Milford trampers reported the huts in good condition. Open-ended questions in the user surveys brought in individual responses of appreciation as well as shortfalls in the hut facilities: comments called for clean toilets, toilet paper, lamps, gas cookers, good-sized pots and pans, running water, etc. No survey has asked the type or degree of sophistication different trampers expect from a hut.
Management Practices

On the Milford Track, paper rubbish bags are provided by the Park Board for carrying out refuse, a practice well-established in North America but new to New Zealand. This was approved by over two-thirds of the trampers.

Routeburn users were almost equally divided on the question of limiting numbers of trampers on the track, indicating a delicate balance between a "considerable number of users who hold the freedom to enter a national park at will as an important right, in the face of environmental costs" and those "favouring limitation indicating a strong sympathy with the need to conserve the physical and/or social environment by means of formal control". Thirty-five percent of the respondents felt that the Track was crowded and 80% reported they would not be happy with any increase in numbers.

Services

A specific problem is highlighted by users of one track; Milford trampers stated a strong preference for a bus service from Milford on the same day as the trip ended. Currently, the park board hut trampers experience accommodation problems at Milford and the lack of a suitably scheduled bus to Te Anau on the day the trip finishes is keenly felt.

Other Perceptions

Although 86% of the Routeburn trampers had little criticism of evidence of human activity, they recorded littering as the cause of greatest concern. Nearly 100% of the Routeburn trampers reported that they were satisfied or very satisfied with their experience. Views of the mountains and landscape variety were the dominant reasons for satisfaction.

Most of the Milford trampers rated the track as good or average value for the money spent, although a number of comments on cost of boat fees at either end of the Track and objections to track fees in a national park were registered.
Perception of National Parks: All the trampers on the Mount Cook survey conducted in 1967/68 (reported by Catton (29)) affirmed prior knowledge of the area as a national park. Sixty-nine percent saw recreation as a major purpose of a national park, which can be compared with the lower percentages of motel occupants (33%), campers (44%) and hotel guests (31%) who also saw recreation as a major purpose. Interestingly, preservation was mentioned least by trampers (69%) but by 81% of the hotel sample. Since this survey was conducted, however, the growth and consolidation of the conservation movement has been a nationwide feature of some significance, and many trampers, as noted in From the Trampers below, have allied themselves to this movement or share its sentiments.

From the Trampers

The nine participants in tramper discussion groups were drawn wholly from tramping clubs (see Table 3).* In spite of this bias, a range of ages attitudes and orientation of activities were represented. Four came from long-established, traditional tramping clubs, two from clubs with a family or social orientation, one from a university tramping club and one from an "occupational" club (in this case hospital employees) and one from a club specifying "over-35" as the age qualification. Two were in their early 20s, two in their 30s continuing or coming back to tramping as family responsibilities permitted, and the remaining five were over 40. All were male. The dominance of males and the older age group is out of balance with the proven numerical superiority of the under-25 age group. However, these people were in a position to give a longer range view of tramping trends. Points of concern raised informally by trampers as we met them in the field are also noted.

(a) Needs

Trampers were asked what they felt were the basic human needs met in

* Table 2 summarises participation in discussion groups for the eight recreations studied.
their recreation activity.

First and foremost came an expression of change from everyday working and city life. Next, the opportunity of physical exercise and getting tired was important, while others emphasised the complete physical challenge. Using and developing initiative and skill were also stressed. In addition, younger trampers and older trampers recalling their youth mentioned the thrill of exploration off the beaten track. Others stressed the simplicity of lifestyle and heightened sensitivity derived in the tramping experience. Companionship was discussed in several connections: the young "gun" tramper out to prove himself seeks the "in group" in a spirit of competitiveness, whereas the company of friends or "people like us" is sought more by the slightly older, more experienced trampers. The club trip provides a social milieu - "it is difficult to say how much the trip is for the club and company and how much for the hills", a sentiment expressed by the different groups more than once. Friendships and family bonds are strengthened in an environment uncluttered by the trappings of civilisation and strangers come together more easily in natural surroundings. Solitude offered by the mountain lands for the individual or small group of friends is highly valued.

The "natural environment" or "being in nature" were mentioned only in passing as needs fulfilled in tramping by either of the discussion groups, or simply taken for granted. It must be remembered, however, that the groups were small, not representative of all trampers. For this reason, the needs have not been ranked, but it can be noted that, for all, the prime need fulfilled was contrast to, or escape from everyday working or urban life. The only suitable substitute activity was felt to be sailing. Beyond this, it is suggested that trampers fall into three main groups according to the needs that are the most important to them:

1. Those for whom challenge and the chance to use initiative and skill rank highest.
2. Those for whom being in the natural environment ranks highest.
3. Those for whom the tramping activity is a social experience.
This does not mean to say that the social experience is not important to the first group. On the contrary, companions of a like mind and ability are generally carefully selected. The skilful exercise of bushcraft knowledge contributes to the pleasure of the second group and the natural environment enhances that of the third. Similarly, different needs may dominate at different stages in the life cycle, e.g. after meeting physical challenge in early adulthood, enjoying the natural environment may dominate in middle life.

(b) Behaviour

Trampers noted the following behavioural trends:

How Many?

To the long experienced tramper, the most obvious trend is the phenomenal increase in numbers going into the hills to tramp. Areas where a party could once expect sole occupation are now visited by several parties and huts may be crowded.

Who?

School and youth group parties are frequently encountered, particularly where large huts can accommodate a sizeable party (of up to 30 or more). The aim may be to learn bushcraft skills or the expedition may simply be one of a number of experiences provided by a youth club which has no particular orientation to tramping and outdoor activities.

Apart from the above groups, the general youth of the tramping population is significant, particularly the number still at secondary school. This mirrors the introduction of outdoor education courses in schools as well as earlier maturation.

A higher proportion of young females are tramping, roughly half the trip participants in one club. All-female groups have been observed on several occasions.
Once it was considered that tramping club membership could be equated with the tramping population. Now, the number of people without tramping club affiliation is considered by far the majority. The school, albeit the school tramping club or youth group, may be an adequate milieu. On leaving school "they simply don't need us", said one older club member. Equally, the number of people not in tramping clubs may be a reflection of the fact that tramping is an activity undertaken by people of adequate competence only a few times a year. These trampers do not feel that the extent of their participation warrants club affiliation. Again, a few companions or a family may make a point of "doing" one of the well-established routes such as the Routeburn, Heaphy or Wangapeka Tracks as part of their summer holiday. As such, the trip may be the one and only tramping experience undertaken. More "non-tramper" New Zealanders are seeking mountain land experience using guided or commercially organised trips. Huts or camps, meals and guides are provided. While the historic and famous Milford Track is a well-known goal, a number of more recently established guided tramps, one in the North Island, are finding a ready clientele.

New Avenues of Introduction to Tramping: Traditionally, tramping clubs have offered bushcraft instruction courses for aspiring trampers and members and the novice learnt through tramping with experienced members. The significant trend is that far greater numbers are receiving basic bushcraft instruction through school and special youth groups organised for that purpose. The Mountain Safety Council organises similar instruction for interested members of the public. Both schools and the Mountain Safety Council draw heavily on volunteer instructors, many of whom are recruited from clubs. Interest stimulated through school courses can also encourage family trips. Some former hunters are turning to tramping as a substitute activity now that deer numbers have been drastically reduced.

Tramping Clubs: The tramping club population has not been counted, as not all clubs are affiliated to Federated Mountain Clubs of New Zealand, which accounts for some 15 000 trampers, hunters, skiers, mountaineers and others. A large club may have over 500 on its membership list, a small
club may muster 50, but less than half may be active trampers at any point in time. Some clubs have noted a drop in membership, while others are experiencing an influx of younger people. Attendance at meetings and participation in club trips by numbers of non-club members, usually in the younger age group, emphasises a casual approach. In recent years a number of new clubs have been formed, e.g. in the outer urban areas of Auckland and Wellington, by special groups such as hospital employees, or police, or the over-35s, and in medium population centres such as Timaru, some are particularly oriented to family activities.

Members of the larger clubs can choose every weekend from trips graded "fit", "medium", "easy", or "Sunday tramps", as well as longer trips to more remote areas over the long holiday period. A club trip may field from 20 to 30 or more. In joining a club, a trapper not only commits himself to a degree of participation, but finds a social milieu for his recreation. With a regular (sometimes weekly) meeting, a strong social forum is established - friendships and partnerships for non-club tramps develop. Marriage between club members is not uncommon, and inter-generational continuity is reflected in children growing up with strong outdoor interests as well as joining the club in their own right.

Where?

Where trampers go, and which trampers go where, are the basic indicators of tramping behaviour patterns. The fit and skilled trapper seeks and reaches remote areas using untracked ridges and valley systems. He or she is the most frequent visitor to designated Wilderness areas. Known high-use areas such as the Heaphy and Routeburn Tracks are avoided. Such keen trampers seek to extend the range of their activity particularly to more remote and difficult areas on long trips. Some of the keen young trampers are seen to have a competence and assurance previously not acquired by older trampers for some years: "We used to say 'I can do this, I think', but now they (the young trampers) say 'I can do it', and they do".

The less able but nonetheless regular general trapper has the ability and skill to tramp competently on established and known tracks and routes. He may or may not choose to depend on facilities such as huts.
The casual tramper, less able and experienced, uses established and well-known tracks, relying on huts and, as a rule, does not normally penetrate far into the interior of the park. High usage in areas of easy access, in traditional "local" tramping areas throughout the year, e.g. the Tararuas for Wellingtonians or Arthur's Pass for Christchurch people, and of the Heaphy, Routeburn and Milford Tracks in the summer holiday period, illustrate this point. Other groups using the same areas are the family trampers and guided trampers, although the longstanding family tramper will have detailed knowledge of suitable less-frequented places to go.

Keen and regular trampers seek to extend the range of activity and a noticeable trend has been an increasing number of trips beyond the local or home ranges. This trend, however, has been counteracted to some extent by rising travel costs. For example, the increase in inter-island car ferry rates has caused a drop in frequency of weekend trips to the Nelson district by Wellington trampers. Where car transport is involved, keen trampers are now considering parties of four instead of two in travelling to distant areas, and hinting at reducing frequency of distant travel. One club with a strong novice and family membership has reduced the circumference of activities, restricting them to local grounds, due to increases in travel costs.

Tramping Practices

Tramping practices reflect the increasing numbers of trampers. Tents are carried more frequently, particularly by regular trampers as the expectation of bunk space in huts is diminished, and remote unhutted areas are explored. More trampers are carrying a primus or camping gaz for cooking. This is now being accepted by hard-core trampers, particularly for quickness and efficiency in view of difficulty in finding firewood at well-used hut and camp sites. Some trampers, particularly in high-use areas, are adopting the practice of carrying out their rubbish, rather than adding to the accumulations in rubbish pits at hut sites. Such practices are actively encouraged by the Federated Mountain Clubs' Minimum Impact Code (197). One national park issues paper bags for the purpose of taking out rubbish.
Airdrop supplies in remote areas has been a long established practice, now occurring more frequently. More recently, tramping parties are using light aircraft and helicopters to reach remote areas, thus avoiding a three-or four-day walk-in over difficult terrain. Such ease of access has led to cases where inexperienced and ill-prepared trampers have required rescue after being deposited in difficult terrain.

Tramping Clubs and Managing Agencies

Clubs point to a long history of promoting the national and forest park movements. As agencies are now turning to cater for the less easily identified or quantifiable casual tramper and general user, the clubs have lost mana as representatives of mountain land recreationists. Club representation through Federated Mountain Clubs has now been discarded by forest park advisory committees. Clubs tend to be regarded as pushy and selfish because they are an organised body of users, the very reasons that have made them easy to consult in the past. Unease and suspicion of agencies stand alongside instances of co-operation and assistance.

On the other hand, club committees are spending an increasing amount of time answering surveys and requests from agencies for information, e.g. the West Coast beech scheme recreation survey conducted by the New Zealand Forest Service and the Mid-Southern Alps Reconnaissance Study by the Department of Lands and Survey. Such requests can come at inappropriate times, such as before the Christmas holiday period, and the time allowed for comment often means that the matter does not filter down to the average club member. State forest park management plans available for public comment are as prolific as the creation of new forest parks and there are also national park management plans. One club makes a particular effort to comply with all requests and opportunities on the grounds that "if we don't act now, we won't be asked again". Some clubs are eager policemen or critics of an agency's stated policy and management objectives. Clubs also concern themselves with general and particular conservation land use and environmental issues.
The Tramping Resource

Even where the increasing numbers of trampers are seen as a deluge or invasion, the discussion groups felt that there are sufficient areas in New Zealand to accommodate the future tramping population in the foreseeable future, particularly as a total stable population of five or six million is forecast. The more people learning to love the hills and use them, the stronger would be the case of the recreationist (and conservationist) against exploitation of mountain land resources such as timber and minerals.

Access

Access is an important adjunct of available tramping areas. Physical access to tramping areas in the form of a road up to (but not into) the tramping area, with a car park or space to park a car, is one of the prime requirements of trampers. Legal access across private land, whether on a formed road or by foot, is also essential. A hostile landholder can cut off a considerable tramping area by refusing to allow entry. A parallel is drawn: if homeowners in the route of a proposed motorway can be forced to move, why cannot landholders be compelled to accept a right-of-way for recreationists, e.g. poles to mark the route and stiles over fences?

Facilities

The basic facilities required by trampers are access points, tracks, huts, bridges or walkways, and wires across rivers and creeks. On the questions of: where? how many: how big? and in some cases if at all? there are varied views reflecting different perceptions of how basic needs are met.

Huts: Huts, particularly in remote or little used areas, may be simple structures of a timber frame, walled and roofed with corrugated iron over a beaten earth floor, and with a chimney and fireplace. Many of the early huts were built by clubs. Since 1956, the noxious animal control campaign operated by the New Zealand Forest Service has placed 650 huts of two-to eight-bunk capacity throughout mountain lands, almost all open to recreationists.
More recently, national parks and forest parks have provided larger huts of stout construction catering for 20-40 people in high-use areas.

For some, there are too many huts. Tramping from hut to hut is deplored - if people depend on reaching a hut, how can they survive an emergency if they are not prepared to meet such conditions? An extreme view wants no huts at all, another concedes basic shelter, a three-sided structure for emergency use. On the other hand, a club with a large family and novice membership has reacted against a recent management plan to rationalise (i.e. reduce) the number of huts - indeed the "rationale" aligns very much to the needs of a fit tramper. Two huts close together are not seen as duplication for the young fit tramper but serving the needs of slow family parties, spreading rather than concentrating use. The hut is a place of arrival, somewhere to stay and dry out in wet weather. To remove a hut only a few hours from the road may remove a target of vandalism but it may also frustrate the local practice of tramping for several hours on Friday night on a weekend tramp.

For long-standing trampers the new large huts, usually constructed in areas of high use, may be an anathema to the whole rationale of their tramping experience. Prefabricated and built for durability, the new huts represent suburbia transplanted into the natural environment. Mattresses, kerosene or LPG cookers, chain-sawn firewood or coal lifted in by helicopter may be provided. And as for the lino on the floor and aerosol can in the loo! Aesthetic sensitivity can be bruised by poor design, bad siting or obvious damage to the surrounding bush during construction. Their capacity not only caters for the increase in numbers of trampers and large parties, but attracts more, frustrating the need for solitude. It is feared that young trampers will grow up accustomed to the large huts and miss out on the experience of being in a small group. There are also safety problems in managing a large group. Smaller huts would require smaller school parties. In addition, facilities in smaller huts tend to be simpler so that a person is nearer nature, fetching water from a stream rather than turning on a tap above a stainless steel sink. An open fire is preferred for similar reasons, although a good closed stove is acceptable. Fewer numbers at a small hut would hopefully conserve firewood supplies, although the necessity of alternative fuels is regretfully admitted where firewood supplies are now short.
For others, a sound hut in good condition is welcome. A comfortable night's sleep means more enjoyment the following day for an older tramper. To another, the large modern hut is forgotten and wilderness regained once the corner on the track is turned.

Who should provide huts? National parks? the New Zealand Forest Service? Clubs? The current scene is endorsed. Through building and maintaining club huts, the tramper feels he is making a contribution to his recreation: "You've got to put something into it, have a stake in it". The hut is a focal point of club activity in its construction phase and a symbol of its identity. This can also be expressed in terms of holding out against bureaucratic government departments - freedom from manifestation of bureaucratic regulation is to be preserved. As a rule, club huts are open to all members of the public. On the other hand, such is the extent of usage by non-club members that at least one keen tramper has observed: "In these days it would be better for Forest Service (in this case) to provide all the huts".

Tracks: For the keen trampers capable of reaching the interior of a park, the track need only be wide enough for a "tramper and pack". According to them high grade tracks, like high grade huts, are "all right" in the appropriate places, i.e. not more than three or four hours in, or in specific places like the Heaphy Track. Casual and family trampers, in particular, look for tracks of good quality suited to day and weekend tramps, or even short tramps in remote holiday areas. To date they feel poorly provided for in this respect.

Some trampers have called for a unified track marking system, e.g. venetian blind strips of red or orange, as white is difficult to see in the snow. Some have also objected violently to signposting in certain traditional tramping areas as an affront to their skill and "the way it should be done". Signposting, on the other hand, is acceptable to the tramper who is less of a "wilderness purist".

Bridges, walkways and wires are accepted as part of tracking systems, being essential for safety in times of flooding.
The discussion groups agree that developments for the casual tramper are mostly appropriate in the right places, e.g. fringe developments and easy weekend tramping tracks, and endorsed the principle of zoning mountain land resources to cater for different groups of recreationists.

Management Practices

Entry without Payment: All trampers interviewed emphatically agreed that entry to public lands should be without payment, confirming a traditional right assumed by New Zealand mountain land recreationists. This is not to be confused with payment for use of facilities, which has wider acceptance.

Restriction of Numbers: Similarly, some trampers are totally opposed to restricting numbers in any area at any time. Others see that it may be necessary during times of heavy use in certain areas, such as during the summer season on the Heaphy and Routeburn Tracks.

Zoning: Zoning for different recreation activities and degrees of specialisation is desirable but the plea by the discussion groups is for a unified system. Both national parks and Forest Service have differing classifications and terms or differing definitions of the same term which are confusing to the public. "Wilderness" is a case in point. For Federated Mountain Clubs a wilderness area is in a natural state without man-modification or facilities such as huts and tracks, implying that only those capable of dealing with the totally natural environment should go there. In the National Parks Act foot track access may be allowed in a wilderness area and in the Forests Act, facilities necessary for management purposes, are allowed.* Forest park management plans are seen to be straining to include a wilderness area in every forest park, often proposing to take out huts and allow existing tracks to grow over. These latter "pseudo-wilderness" areas are condemned, particularly as several national parks have demonstrated problems of over-use in inappropriately designated wilderness areas. One club with a strong family and novice membership has objected to such a "pseudo-wilderness" proposed in its local tramping ground - the more

* Since this was written, a joint policy statement for the management of wilderness areas set aside under the National Parks, Forests and Reserves Acts has been agreed upon by the National Parks Authority, Department of Lands and Survey and the New Zealand Forest Service.
so, since petrol costs have forced it to limit the radius of its trips and they require both tracks and hut facilities. Wilderness, then, for both genuine wilderness area users and those who keep to natural environment areas, has to be a real wilderness of adequate size and with appropriate protection, such as a little developed buffer zone.

Those seeking the physical challenge and solitude of remote undeveloped places thus place a high value on wilderness areas, accepting the consequent restrictions of no airdrops, and foot access only. There are trampers who are unwilling as yet to acknowledge this restriction on their use of access by air. Some fear that the "wilderness" label attracts use and suggest that a simple "no development" policy be applied to certain areas. The same term could be applied to areas not meeting wilderness requirements, i.e. areas with some cut-over forest. Other trampers, those not likely to use designated wilderness areas, feel that the widespread application of wilderness designation is not so desirable, pointing out that huts and tracks impinge on only a fraction of the total environment and that distance and moderation in development will protect the remote areas.

Conflicts

With other Trampers: Some keen trampers do not want the casual and less experienced in the hills. They feel that many of them are not aware of basic bushcraft skills and are potential accident cases. Their skill gives them a sense of proprietorship of mountainlands and a "right" to say how tramping should be done. They are also concerned that instruction (outside the clubs) may not always be adequate. They may hold that all future trampers should be able to meet the same difficulties and challenges they themselves have encountered. Often meeting such a challenge has been a crucial point in development of personal identity, setting them apart from their workday companions. Moreover, the fear may be that continued development, i.e., more and bigger huts, more tracks leading to the interior, etc., will vitiate the challenge for themselves and others. The clubs base their case for representation on park boards and committees on the fact that they are the committed users of the interior and wilderness areas.
Other keen trampers agree that the casual tramper has a right to be provided for and the plea is that consideration be given to the factors (basic needs) they themselves value highly, so that a wider segment of the population may appreciate them, e.g. small, unsophisticated huts. Easy sections in relatively undeveloped areas can also be training grounds. In practice, it is often the hardy trampers who like the solitude of a large area, who will give up time to instruct bushcraft courses both within their club or for outside groups, in the belief that others should have the same opportunities that they themselves enjoy. The trampers who like solitude for themselves may actually enjoy meeting other groups en route (although they may be disappointed to have to share an area). Meeting people like themselves (but not too many) is linked to expectations of solitude. Numerous encounters with various types of trampers are tolerated in fringe areas, known popular routes - but not where isolation is expected.

With Other Recreationists: Trail bikes and four-wheel drive vehicles are on top of the trampers' list of activities inappropriate to mountain lands, as representing the urban traffic scene the tramper is seeking to avoid. They are disliked as disturbers of peace and solitude. It is also disconcerting for trampers to watch a trail bike travel in minutes the miles it has taken them several hours to walk. While a bush track beside a vehicle road may serve the needs of some for enjoyment of nature without much effort, the point of tramping is to get away from the last evidence of normal civilisation. Trampers on the whole would like to see trail bikes confined to particular areas, if they are to be allowed in the mountains at all.

Commercial tourist activities, such as constant helicopter, or light aircraft flights and jetboat trips are an annoyance to trampers seeking a wilderness experience. A helicopter service transporting tourists to a high point for views and a downhill walk is criticised for a potential accident situation in ferrying ill-prepared and inexperienced walkers.

With Other Land Uses: Although the tramping territory is deemed large enough in general to sustain a larger tramping population, trampers on the whole are opposed to encroachments on their tramping
grounds by mining, timber supply and hydro-electric projects which may flood tramping areas.

Other Perceptions

Environmental Awareness: Trampers are becoming increasingly critical of insensitive management practices, such as clearing large areas of bush for helicopter landing during hut or bridge construction, indiscriminate slashing or use of herbicides in clearing tracks, aesthetically unpleasing or poorly designed huts and badly planned tracks. Tramping clubs in particular have aligned themselves with the conservation movement and sentiments. A decision to build a road over an old mining track is regarded as destruction of historical evidence, drawing anti-development sentiments, and the "altruistic" aim of the manager to open up the area to the more general user receives harsh criticism. In other cases, tracks for the general public are praised.

Trampers also show a readiness to respond to practices such as carrying out their own rubbish as a norm, rather than relying on refuse pits or helicopter lifts as disposal methods. The inconsiderate behaviour in littering and abusing facilities is attributed to a few misfits only.

Wildlife: Contact with wildlife added to variety on the tramping experience. Rare native fauna or introduced big game species were mentioned in this context.

Managing Agencies: Rather than differentiating between practices of the major agencies, trampers first distinguished management by personnel of different individual parks, regardless of national park or forest park status. Staff were commended for helpfulness in giving information and general friendliness, or criticised for aloofness or unsympathetic outlook. In general, national parks are seen to have accomplished their developmental phase, whereas Forest Service is showing new beginnings. A number of trampers commented on competition between the Department of Lands and Survey and Forest Service for control and administration of land, and noted that recreation had become part of the struggle, making for ambiguities and confusion.
Summary

From the Literature: On the whole, few New Zealanders go tramping (1.8%), yet it is one of the most pursued active resource-based recreation activities. Regional and urban outdoor recreation studies show a uniformity in participation (9-11%). As users of a specific park or area, trampers are generally a minority (16-35%) in the available studies, depending on the attractions, access and other facilities, compared to "fringe" area recreationists. The literature (and respondents to surveys) may not always clearly distinguish other related activities that may be described as hiking, rambling or day trips.

The weight of information on trampers is behavioural and demographic. The younger age groups (under-24) dominate but increased participation by the older age group after family responsibilities diminish is noticeable. There are nearly as many females tramping as males. Single people dominate. At least half of the trampers had or were undertaking tertiary education. Apart from the large number of students, professional and managerial occupations contribute a significant number of trampers.

Casual rather than frequent participation is indicated, and most activity takes place in summer. Friends are the most frequent companions, but family groups are also significant. Several user surveys highlight a significant overseas element on a number of well-known tracks such as the Milford (one third) and Routeburn (nearly 60%) tracks. Concessionnaire guided walks are attracting an older clientele, largely among the 45-plus age group. Other trampers, rather than committing themselves to a longer trip, are tramping from the road to an overnight hut and returning the next day.

There is no information on the wants and needs of trampers as such, although one or two user studies have solicited attitudes to existing facilities and management practices, i.e. condition of track or hut, and whether or not numbers should be limited on the Routeburn Track.

While basic information is given in the general population studies, only
user studies of one or two of well-known popular tracks and parks have attempted in-depth analyses and the results are particular to the park or track in question. These all have the characteristic of a high overseas component among their users. The results of the current Stewart Island study (47) may repeat this pattern.

A general population study of New Zealand trampers, their needs, behaviour and wants, is, to date, lacking.

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**General population studies relating to trampers are:**

| New Zealand basis | no 6 21 |
| Urban or regional basis | nos 2 3 9 13 15 17 20 |

**User studies relating to trampers are:**

| nos 26 28 29 32 33 35 38 39 44 45 |

**User studies in progress are:**

| nos 47 48 |

Studies containing information beyond participation rates are underlined.

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**From the Trampers:** The discussion groups consisted mostly of experienced and longstanding trampers from tramping clubs. For all, tramping provides a contrast to everyday life. For some, the needs met are the challenge, and chance to use initiative and skill ranks highest; for others it is being in the natural environment. Other trampers place great value on the social experience of the group.

The most notable behavioural trend is the greatly increased numbers participating, and emphasis on youth, almost half of whom are female. Organised school and youth parties, and on certain tracks commercial guided tramps, are a significant proportion of the tramping population. Clubs may now represent a small proportion of people who go tramping, although they may contain the keenest and most able. There are many more, however, whose participation is casual or do not feel the need to join a club. Many of these keep to the well-known routes and tracks only. The trend for trampers to travel long distances is to some extent being countered by rising fuel costs. On the other hand, some trampers are using light aircraft to reach remote areas. Regular trampers often carry tents to avoid
hut congestion and primuses or other portable cookers for quick cooking as against searching for firewood in popular areas where it had been depleted by constant use. A greater consciousness of the environment is illustrated by practices such as carrying out rubbish.

The increasing numbers of people in the hills is accepted as most trampers would like others to enjoy the same experiences. On the question of facilities, the different needs and abilities of different trampers begin to emerge clearly, on the degree of sophistication of huts, tracks and bridges or walkways over streams and rivers. Management techniques of zoning areas for development or amount of wilderness are questioned by some. Access without payment to public land is regarded as a right and the possibility of restriction of numbers on popular tracks at certain times (reluctantly) agreed upon.

Vehicle recreation (four-wheel drive vehicles and trail-bikes) and light aircraft are deemed disturbances of "wilderness" and solitude values and for this reason regarded as inappropriate mountain land recreations. However, such statements are generally accompanied by the admission that these recreations are legitimate and should be provided for by zoning suitable areas for them. Whereas trampers once "managed" for their own activity, through clubs, the land managing agencies are now seen as responsible for provision of opportunities.

Implications

1. The number of trampers is likely to continue increasing. Devlin (32) has explored the theme that exposure to outdoor situations early in life increases a person's likelihood of pursuing "wilderness" to at least the same degree if not more, in adulthood. An implication of bushcraft courses for school children is an increasing proportion of the population seeking tramping and other outdoor experiences as an integral part of their lives.

2. There will also be more trampers at all levels of ability.
These trampers will have different needs, behaviour patterns and wants in terms of facilities, management practices and places to go. "Tramping" now covers a broad spectrum of activities and there are incompatibilities to be accommodated by zoning and other management techniques. Without adequate information on the needs, behaviour patterns and wants of different groups of trampers, mistakes can be made in planning.

3. The use of part of well-known tracks such as the Heaphy and Copland Tracks indicates a current lack of tracks for older, less able, casual and family trampers. Well-developed and publicised tracks with natural or historical features as an attraction may fill this need.

4. Tracks for casual and family trampers should be constructed, taking social as well as physical constraints into consideration, such as trips that can be reasonably accomplished in a weekend.

5. Tramping areas near large population centres in particular, should be managed for diversity in tramping groups, bearing in mind that fuel shortages (long or short-term) as well as convenience of proximity may render them subject to great pressure.

6. While solitude is highly prized by some trampers, tolerance of greater numbers, based on expectations of encounters with others, is indicated. However, acceptable levels of carrying capacity for different groups of trampers have to be assessed and planned for. With reassurance that their own particular needs and wants are not neglected, possible friction between groups is dissipated.

7. The public should be informed of different types of facilities and management practices so that competent and casual trampers, particularly the latter, can select areas appropriate to their ability.

8. There is a role for guided tramping for New Zealanders, in providing opportunities for overseas visitors to experience New Zealand mountains and bush.
The 15–25 year age group predominates among trampers, but all ages participate. A tramping party crosses Atuamote Stream in Coromandel State Forest Park (6). Three generations of one family tramp the Heaphy Track (7).
Self-reliance is important to mountaineers. A mountaineer belays his mate crossing a crevasse in the Marcel Icefall at the head of the Fox Glacier (8). Two mountaineers bivy on a traverse on the Spenser Range (9).
9. As many school courses are linked to environmental studies, the future tramping population will be more knowledgeable about natural processes and receptive to further education through interpretation.

10. The costs of travel to tramping areas is already seen to affect participation as to where and how often. With reduced circumference of travel, particularly for the less committed or family tramper, there may be a check on use of remote areas, and demand channelled to nearby areas. However, historically, this has not been the case and research is needed to help predict future trends.

11. Every effort must be made through existing avenues (legal rights Walkways, covenants, etc.) to ensure legal and physical access to tramping areas.

12. Some additional long-term trends need to be studied and monitored such as the effect of widespread outdoor education at school and that of an ageing population.

3.2.2 MOUNTAINEERS

Introduction
Mountaineers or climbers may be, numerically, one of the smallest groups of mountain land recreationists, yet because of their high objectives they have always been prominent. Even as late as the 1930s, mountaineers were contributing to the exploration of South Island mountain ranges. Today, the specialist mountaineer uses an array of refined equipment and techniques for scaling rock and ice not even considered at all by his forebears. For each specialist mountaineer, is an increasing number of alpinists of varying abilities, sophistication in use of techniques and aims and objectives.
From the Literature

(a) Needs

There is no study covering the needs of mountaineers.

Latent Demand

Some 4% of the earlier Auckland sample (2) noted they would like to go climbing. This is the only record of latent demand for the activity.

(b) Behaviour

How Many? (Participation)

General Population Studies: The New Zealand Recreation Survey (21) lists climbing as one of the three most preferred leisure-time activities of 0.2% of the population. One percent of the Aucklanders recorded participation (2), but mountaineering or climbing does not rank at all in the 98 most frequently mentioned activities in the Dunedin study (20).

In the Auckland survey of outdoor recreation activity patterns (3), mountaineering is reported by 3%, while in Wellington the mountaineering fraternity is included in the 11% who went tramping. Christchurch participation is also given at 3%.* Marlborough residents (9) reported 1,948 participations in climbing, which is just under half the total participations for tramping and hunting. Nearby opportunities are less technically demanding mountain ranges, where mountain climbing and "high altitude tramping" merge, and may account for the comparatively higher participation rate in Marlborough.

User Studies: The above comment applies also to the Craigieburn Forest Park Study (35) in which 3% of the users listed climbing as their main activity - the majority of users come to the skifields there. Although Aspiring Lodge data have not been analysed, even in this prime alpine region the number of tramping parties noticeably exceeds the number of climbing parties.

* As reported in study no 3: Neighbour omits this information in her report, but it is included in the lengthier list of activities and participation in the Auckland Study. Both studies used the same questionnaire.
FIGURE 1: Demographic and Socio-economic Characteristics of Mountain Land Recreationists and New Zealand Population.

See Appendix 3 for Note on Figure 1.
Who? (Demographic and Socio-economic Data)

There is no separate information on mountaineers in any of the general population studies. The brief information below is taken from a survey of Mount Cook National Park visitors in 1967/68 (29).

Sex: Ninety-one percent of the climbers at Mt Cook were male.

Marital Status: Eighty-five percent of the climbers were single.

Education: "Some university or higher" education was reported by 59% of the climbers.

Occupation: Just under half the climbers had occupations in the professional and technical categories.

How Often?

Of the 118 climbers who answered the Mount Cook National Park hut questionnaire (42), 42 had spent more than 14 nights in the alpine huts in the past three years, suggesting a pattern of return visitation to this prime alpine region.

(c) Wants

Facilities

The purpose of the Mount Cook hut survey was to elicit climbers' opinions on the alpine huts and facilities provided by the park board. In general climbers were content with the status quo, and were not prepared to pay more in hut fees for improved standards in hut facilities, nor to go without facilities for lower hut fees.

Other Perceptions

Perception of National Parks: Almost 99% of the climbers in 1967/68 (29) knew that Mt Cook was a national park. Fifty-two percent noted recreation as a major purpose. Tourism as a purpose of national parks was mentioned by only 7% of the climbers compared with 13% of the motel users.
From the Mountaineers

Altogether thirteen mountaineers took part in discussion groups. All were affiliated to alpine clubs or tramping clubs with alpine interests (or both). Four were in their 20s, seven in their early to mid-30s and two in their late 40s. Four of the 13 were women.

(a) Needs

The man/environment relationship in terms of overcoming natural barriers and pitting oneself against the elements received first mention in the discussion of needs fulfilled in mountaineering. Achievement thus appears to rank high among the mountaineering fraternity. Friendship, particularly as one grows older, and appreciation of mountain scenery were next mentioned. Mountaineering exploits can contribute to personal growth and development of individual identity. Meeting challenging situations requires both intellectual effort and judgment for personal safety and a sense of achievement. Pride in self-motivation was later mentioned in discussing teaching climbing techniques in outdoor education programmes.

The exercise of specific techniques and skills was not mentioned per se, possibly reflecting a general, rather than technical, orientation of mountaineers in the discussion groups, or else it was taken for granted as an aspect of mountaineering.

No clear differentiation among mountaineers arises in discussing needs, apart from greater importance given to chosen climbing companions as one grows older. Sailing was considered to be the only suitable substitute activity.
(b) Behaviour

The following behavioural trends in mountaineering were noted:

How Many?

Although mountaineers are a very small proportion of New Zealand mountain land recreationists, there has been, as in tramping, a noticeable increase in numbers participating.

Who?

Again, the emphasis is on the youth of the bulk of the mountaineers. This is a male-dominated recreation though the number of female participants is growing. The white collar and university educated classes still dominate. Many mountaineers take up this activity as an extension of tramping experiences. There are a few, however, who have taken up mountaineering directly. Australians are a significant though small proportion of climbers in the New Zealand mountains, particularly in the Mt Cook region. Americans, Japanese and British mountaineers also visit the New Zealand Alps. There have been several organised groups with alpine and tramping ambitions from Germany and the United States.

When?

Among the serious mountaineers in particular there is more winter climbing, both on established routes and for technical ice climbing. The summer months, particularly the Christmas long holiday period, are the most popular and crowding in the high mountain huts at this time is common.

With Whom?

The alpine clubs provide a forum for formal and informal contact and discussion but, as in the case of tramping clubs, it seems that a number of young mountaineers are going into the mountains independently of club organisation and contact. Guided climbing and instruction is offered in Mount Cook, Westland and Mount Aspiring National Parks.
Avenues of Introduction: Traditionally, the alpine clubs have offered instruction courses and club trips to engender experience. Basic snowcraft courses in tramping clubs are also a frequent means of introduction to mountaineering. There are now established commercial guiding schools offering week-long instruction courses at Mt Cook and Mt Aspiring. Australians are a significant proportion of the climbing schools' clientele. Basic alpine techniques may be included in school outdoor education programmes.

Where?

The volcanoes of the North Island and the whole Southern Alps and outlying ranges have long been visited by New Zealand mountaineers. The Mt Cook and Mt Aspiring regions and then the Darran mountains in Fiordland are considered the prime mountaineering areas, although many parties of less ambition and ability aim at objectives of less difficulty in lower alps and outlying ranges.

There is in addition a trend to seek less crowded areas and move away from the "formal" climbs at Mt Cook and Mt Aspiring, in more remote areas difficult of access, for example, combining trans-alpine crossings with ascents. Tramping routes are used for access as far as they go.

Techniques and Skill

In line with a worldwide trend, the 1970s have witnessed advances in climbing skills and techniques. Large faces once considered the ultimate problem now have multiple ascents recorded against them. The most capable mountaineers seek the difficult and technical routes in pushing forward the frontiers of their recreation. The numbers of able but less aspiring mountaineers is increasing.

Some mountaineers also practice rock climbing where local opportunities are available. The emphasis is on skill and technique accomplishing the most difficult climbs. Most of the South Alps greywacke is unsuitable for rock routes, although the glaciated granite of the Darran Mountains, despite the notoriously wet weather, attracts a number of rock aficionados each summer.
(c) Wants

The Mountaineering Resource

New Zealand is by no means lacking in opportunities for mountaineering at all levels of achievement, although North Islanders, limited to four volcanic peaks at considerable distance from major urban areas, are envious of the wide range of opportunities in the Southern Alps within easy reach of South Island mountaineers.

Facilities

Huts: Huts above the snowline in the high alpine regions of Mt Cook are deemed essential for shelter and safety, as weather movements are both rapid and unpredictable. On the whole, the location of existing huts is regarded as satisfactory, serving key routes on the biggest mountains. There has been no call for additional high alpine huts, although the replacement of several huts destroyed by natural elements over time is strongly suggested. With the trend to visiting more remote areas, mountaineers are prepared to bivy, use tents or dig snow caves for shelter, reinforcing the wilderness ideal.

Management Practices

As most mountaineers have a background in tramping, there were a number of comments on current recreation management practices and policies in national and forest parks. Among the mountaineers is the strongest support for wilderness ideals and the creation and extension of national parks and wilderness areas. Development policies are strongly criticised. Large huts and easy tracks are opposed. Most mountaineers value solitude highly in the sense of being the only or one of a few parties in an area. Criticism of hut and track developments are phrased in terms of bringing too many into the hills, and thus seem selfish. On the other hand, mountaineers showed a strong concern for the experience of being in the hills, with the emphasis placed on development of self-reliance being extended to others. Large sophisticated huts encourage big groups, or attract
many groups, which does not enhance togetherness or a sense of self-development. School and youth groups should be aware of this and the desirable group size to inculcate or give an opportunity to experience solitude, simplicity of life style and group togetherness is surely no more than eight pupils. Thus, management policies designed to encourage small groups, such as providing several small huts rather than one large hut, are seen to be a desirable option.

Services

For some mountaineers, the use of helicopters and ski-planes for access to difficult and taxing climbs eliminates days of packing in food and technical climbing equipment. Being able to start the climb physically and mentally fresh is an added safety factor, particularly in view of unpredictable mountain weather. This applies almost exclusively to the Mt Cook and Westland National Park alpine regions where the most difficult challenges are currently sought and aircraft services are readily available.

Conflicts

With Other Recreationists: Notwithstanding the use of light aircraft services, tourist activities in the form of constant helicopter or light aircraft scenic flights are an annoyance to most mountaineers. The prime alpine and tourist areas coincide in this respect. Such tourist activities should be allocated to specified areas to ensure the integrity of the wilderness experience for others.

Summary

From the Literature: As part of the leisure-time and outdoor recreation spectrum, mountaineering is undertaken by a very small fraction of New Zealand recreationists. From one user survey we know mountaineers are mostly male, single and that the majority have tertiary education and work in professional or technical positions. There is a pattern of repeated visits to prime alpine areas. Again, wants information is limited to one minor survey of attitudes to hut facilities and related
management practices, indicating on the whole a satisfaction with the status quo.

Even the most basic information about the needs, behaviour and wants of mountaineers is lacking.

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**General population** studies relating to mountaineers are:

- New Zealand basis: no 21
- Urban or regional basis: nos 2 3 9 13 17

**User studies** relating to mountaineers are:

- nos 29 42

Studies containing information beyond participation rates are underlined.

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**From the Mountaineers:** The composition of the discussion groups reflects that proportionately more women are seen to be taking part in this traditionally male-dominated activity. Even more significant is the youth (under 20 years of age) of many climbers. Outdoor education courses for school children and professional instruction are relatively recent avenues of introduction.

While the prime alpine regions of Mt Cook and Mt Aspiring contain the ultimate goals, there is a noticeable trend to transalpine ventures and visiting more remote areas. Mountaineering is undertaken at a variety of levels ranging from emphasis on skill and technique to "being in the mountains". Mountaineers on the whole are highly conscious of wilderness ideals and favour non-development, although facilities and services, some traditional, as in the case of long-established alpine huts, and some recent, such as light aircraft and helicopter services, are taken for granted where they exist.

**Implications**

1. The increased interest in mountaineering is a natural outcome of more people being introduced to mountain lands and seeking to extend the bounds of previous experiences and can be expected to continue. This is in accordance with the theme explored by Devlin (32) and already discussed in section 3.2.1. TRAMPING.
2. Despite their small numbers, mountaineers can be differentiated by a wide variation in needs, behaviour and wants according to their skills and ability.

3. Because of their strong identification with wilderness ideals, mountaineers and climbers make the least demands in terms of facilities. Their greatest demand is for designation of wilderness or no-development areas. As the small number of mountaineers grows it can be expected that visiting wilderness areas will continue to increase and that the demand for maintaining them as such will be reinforced.

3.2.3 SKIERS

Introduction

Downhill skiing as a winter sport has burgeoned in popularity over the last four years following a worldwide trend. Previously a small number of skiers were served by two or three skifields run by commercial enterprise and eight club-run skifields. It is estimated that most skiers belonged to clubs which provided accommodation or tow and accommodation facilities. The opening or development in the 1970s of over six commercial skifields, some with sophisticated tow, chairlift and snow-grooming services has found a ready and waiting clientele. An indication of the boom in skiing is the c.i.f. value of imported skis which has risen over twenty-five fold from $21 456 in 1971-72 to $616 366 in 1976-77 (Pearce 1978).

From the Literature

(a) Needs

There is no study relating to the needs of skiers.
The majority of skiers patronise commercial skifields with modern tows and good road access. Mt Hutt can attract over 1000 on a good day (10).

Ski-planes are used to reach more remote areas. The Tasman Glacier (11) is popular in this respect.
Latent Demand

One point five percent of the first Auckland sample (2) skied and 13.5% reported they would like to ski. As a desirable activity, skiing received 5.8% of mentions in the Christchurch study and is noted by 3% of the Dunedin sample, being fifth in the list of recreational ambitions. Since these studies, new skifields may well have gone a long way to present necessary opportunity for participation. With more opportunity and variety of opportunity the most-mentioned constraints of lack of time and finance may have been overcome by aspiring skiers.

(b) Behaviour

How Many? (Participation)

General population studies: In the New Zealand Recreation Survey (21), skiing is one of the three most preferred leisure-time activities of 1.3% of the population. This is only slightly less than tramping. In the Dunedin leisure-time survey (20), skiing ranks as the 23rd most popular activity, with participation by 4.9% of the population. However, in the earlier Auckland (2) study, only 1.5% skied.

The Auckland (3) and Christchurch (13) surveys of outdoor recreation patterns of urban populations record participation by 6% and 7% respectively. It should be noted, however, that the Mt Hutt skifield was not in operation at the time of the Christchurch survey, and ski boom indicated had barely begun. A current survey would be expected to show a significant increase due to increased local opportunity. There is no record of participation by Wellington or Marlborough residents because these surveys are concerned with activities that take place within those regions where there are no skifields.

User Studies: A survey of August holiday winter visitors to Lake Tekapo (28) shows that 77.3% of the visitors included skiing in their activities (55.7% came for skiing only), while approximately one in five visited the region for passive recreations such as viewing and driving. Lake Tekapo is also within easy reach of Lake Ohau skifield, and Mt Cook for helicopter skiing on the Ben Ohau Range and skiplane access to the
Tasman Glacier. The Craigieburn Forest Park study (35) notes that 80% of all summer and winter visitors recorded skiing as a previous activity in the Park. As there are three club skifields on the Craigieburn Range it is not surprising that prior experience of the skifields has also affected off-season visitation.

**Who? (Demographic and Socio-economic Data)**

**Age:** Skiing is dominated by the young and single in the Christchurch study. In Dunedin 80% of the skiers are in the 15-24 age group.

In the user surveys, 43.5% of the weekend skiers at Mt Hutt were aged 15-24 years and 26.6% between 25-34 years. At Lake Tekapo 46% were in the 15-24 age group and the rest dispersed in the 25-54 age group (the sample did not include those under 15).

**Sex:** Both the Dunedin and Mt Hutt studies show participation by slightly more males than females.

**Marital Status:** Of the Lake Tekapo sample 45.5% were married, indicating a high proportion of family visitation.

**Education:** The Lake Tekapo visitors were dominated by those with higher education, being 38.6% of the total. Eight percent had technical or other tertiary education, 19.9% University Entrance, 17% School Certificate and 16.5% some secondary education.

**Occupation:** In Christchurch 20% of the professional and managerial group had been skiing at least once the previous year, whereas only 7% of the sales and service groups and 2% of the manual occupation group had skied during the same year. In Dunedin almost half of the skiers were students, contributing to the large percentage in the 15-24 age group, and again the professional and managerial classes are over-represented in proportion to their numbers in the population. Students (33.2%) and the professional classes (19.3%) dominated the Mt Hutt weekend skiers, with 36% classed as 'other' representing a variety of occupations, 8.9% teachers and 2.3% farmers. The professional and managerial categories dominated at Lake Tekapo, being 27.3% and 6.3% respectively, with other major
categories being 23.9% service personnel, 17.6% students and 14.8% housewives. Farmers made up 2.8% unskilled workers 1.7% and unemployed 5.7% of the rest of the respondents.

Income: The Christchurch survey shows that one-fifth of the top income group (earning over $7,000 in 1972) had skied during the past year, whereas only 9% of those earning under $3,000 had been skiing. The Dunedin survey shows a large percentage in the low income bracket, but this reflects the low earning power of the dominating younger age group which, as mentioned, is almost half students.

Nationality: Overseas skiers did not differ greatly in absolute numbers in the weekend and mid-week samples at Mt Hutt, being 6.5% of the weekend skiers and 15.3% of the mid-week skiers. Most of these were Australian families. At Lake Tekapo 15.3% also were Australians.

How Often?

Absolute frequency of participation or total days spent skiing is not indicated in any completed study. However, 62.4% of the weekend clientele at Mt Hutt were classed as "regular".

When?

One-third of the Christchurch skiers skied only during the holiday period, while two-thirds indicated that their last ski trip had been a weekend trip. At Mt Hutt, 55.8% of the mid-week skiers usually skied at that time of the week. During the week there are virtually no skiers of school age. Weekend skiers were generally committed to employment during the week. While the Dunedin study notes that participation is on the whole limited to two months a year, skiing at Mt Hutt may be available from May to November, peaking in August and September due to school and (university) holidays and warmer weather. It is noted that summer sports commitments are a reason for diminished participation late in the season.

With Whom?

Sixty-four percent of the Christchurch skiers went with friends rather
than family members, reflecting the dominance of the younger, single, age group. Family groups are a strong component dominating at Mt Hutt during the weekend (46.7%) and also at Lake Tekapo (55.2%), the latter largely being mothers with children, reflecting the August school holiday period and the fact that the fathers were usually working at the time. Nearly 30% of the Lake Tekapo visitors were with friends and in the 15-24 age group.

Overseas skiers at Mt Hutt had arrived in New Zealand in roughly equal proportions of "by oneself" and "with friends or family". Three percent of the overseas mid-week skiers were travelling by tour.

Where?

Porters Pass and Arthur's Pass were the destination of two-thirds of the Christchurch skiers, with Tekapo, Craigieburn and Queenstown accounting for about 16% of each of the remainder. As this study predates the opening of Mt Hutt skifield, the pattern is expected to have changed considerably. Half of the Mt Hutt skiers came from Christchurch and nearly a quarter from Methven/Ashburton, the nearby opportunity no doubt contributing to the high local participation. Fewer skiers came from Dunedin (roughly 5%) than from the North Island (16.3% at the weekend and 9.5% during the week), reflecting other skiing opportunities further south. The number of North Island skiers at the weekend is noteworthy, possibly indicating that long-distance travel at some expense is not a barrier to a desired skiing experience for some. At Lake Tekapo, 35.8% came from Christchurch and 28% from Timaru (the South Island total being 69.3%), 11.9% were from the North Island and 15.3% from Australia. Over a quarter of the overseas skiers at Mt Hutt had come to New Zealand specifically to ski - 45% were on a holiday visit to New Zealand and 17% on a working holiday.

Accommodation: Eighty-five percent of Mt Hutt skiers who lived outside Christchurch had stayed in Methven the previous night, largely using private accommodation. Forty percent of the North Islanders staying in Methven, however, used farm accommodation. In the weekend 24.2% of the Mt Hutt skiers who lived in Christchurch also stayed at Methven.
Transport: Most Mt Hutt skiers used private vehicles, although 15% of the North Islanders arrived by tour coach and 8.8% by rental car during the weekend.

Source of Information: At Mt Hutt, 69% of the New Zealand skiers learnt of the skifield by word-of-mouth, with a combination of sources being reported by 15% and newspapers by about 10%. Surprisingly, up to 40% of the overseas visitors had not heard of the skifield before arrival in New Zealand, but among those with prior knowledge, word-of-mouth, followed by brochures, were the most important sources.

How Long? (Experience)

Over 30% of the Mt Hutt skiers had been skiing for six or more years, falling into the 25-54 age group and mostly in the professional class. Altogether over half the combined weekend and mid-week skiers had skied since before the opening of the skifield in 1973. Relatively small percentages reported four and five years' experience (7% and 4.5% respectively, weekend and mid-week skiers combined). About 12% of the weekend skiers reported experience of less than one year. A high percentage (26.9%) of mid-week skiers with 0 years' skiing experience is explained by a school party.

Equipment

About 75% of the Mt Hutt skiers owned their own ski equipment, the remainder hiring their gear (21.7%) and some (1.5%) borrowing gear from friends. About 70% owned chains for cars, while the rest equally borrowed from friends or hired them.

Techniques and Skill

Nearly half the Mt Hutt skiers classed themselves as intermediate (48%), while advanced skiers and beginners accounted equally for the remainder, apart from the 2.5% who were racers.

Other

A study using observation techniques on the Whakapapa skifield in Tongariro
National Park measured activity, intensity and distribution against standard parameters taken from overseas experience. Capacity and use of lifts and other facilities were also measured. This study was conducted to aid future skifield management.

(c) Wants

Facilities and Services

Information on facilities relates to specific skifields. Mt Hutt skiers were asked to rate the particular facilities and services on the skifield. The weight of opinion found most facilities and services satisfactory to very good, such as the type of lifts (mostly T-bar), ski school and ski-patrol services, snow-grooming and the cafeteria. Sanitary facilities received a poor rating and the management has since responded by building a new toilet block. At Lake Tekapo, 38.1% saw no need for improvements (or else did not respond). Skifield access and facilities were mentioned only by a few in the context of the study.

Accommodation: At Lake Tekapo, improvements (not specified) in low-grade accommodation were mentioned by 45.4%. Nearly 25% felt there could be improvements in the eating and food services, preferably a cafeteria in addition to the two existing hotels.

Other Perceptions

The Tekapo survey deals largely with visitors' impressions of the Mackenzie Basin and their attitudes towards possible future developments. Nearly 60% described their impressions of the Mackenzie Basin using words such as "great" or "beautiful", while over 30% used terms such as "desolate", "rugged", "natural" and "unique". What pleased them most was the scenery (48.3%) and there was a high "nothing" or nil response when asked what displeased them most (55.7%). Seventy-four of the 186 visitors felt that Tekapo township had a mixed effect on the landscape, while 135 said that the planting of trees would enhance it. This latter attitude suggests that the visitors who valued the Mackenzie Basin because of its scenery and uniqueness may not realise that the planting of trees, irrigation and green pastures could change the scenery they appreciated.
From the Skiers

Nine skiers took part in discussion sessions. Six were ski club members, and of the remaining three, one was a member of a tramping and mountaineering club, one a "family" skier and one a professional ski instructor. The ski-club members were all actively involved in club administration or ski patrol. Four were in their 20s, two in the 30s and three were over 40. All were male.

(a) Needs

Skiing for some is a good way of releasing energy. This can also be a constructive way of channelling aggression, but also has the appeal of speed and grace. Skiing evokes excitement and fun - skiers were generally identified with fast movers and the jet set. Skiing also provides an opportunity to "get into the hills" and away from the city. Social opportunities (after-ski gatherings, parties, etc.) are valued, particularly by the young (teens to mid-twenties). For others, it is an activity in which the whole family can participate. The social prestige attached to skiing (a comparison with golf is made here) brings people into the mountains who might never have been enticed if tramping or mountaineering were the only activities. Its rapid rise in popularity illustrates a general "need" for an additional winter activity or activities. For some individuals, as skill increased, skiing merged into an art form. Others seeking wilderness rather than downhill ski slopes have taken up cross-country skiing and ski mountaineering. From the above, it is suggested that three broad categories of skiers emerge according to the dominance of differing needs:

1. Those for whom the activity and expenditure of energy rank highest.
2. Those for whom skiing provides an opportunity to get into the hills.
3. Those for whom skiing provides a social milieu.
4. Those for whom skiing can be combined with wilderness experience.
(b) Behaviour

The discussion groups put forward the following trends in skiing:

How Many?

The major trend noted is the boom in the numbers who go skiing. In Christchurch most of the new skiers have responded to recent nearby commercial developments, with sophisticated tows and snow grooming, such as Mt Hutt and Lake Tekapo. This in turn reflects a rise in living standards and available cash for leisure-time pursuits. As a fashionable, glamour and fun activity skiing is seen to continue growing.

Who?

The emphasis continues to be on the young skiers. The increased mobility of younger people is seen as a contributing factor to less interest in organised sport such as rugby. Skiing is one of the competing replacement activities. Despite this emphasis on youth, skiing is enjoyed by all ages and by people of widely differing abilities. There are skiing parents who introduce their children to the sport and continue skiing themselves and numerous instances of skiing becoming a family recreation activity after teenagers have introduced their parents to the activity.

Overseas skiers, particularly Australians, are an increasing sector of almost any skifield clientele. This trend, particularly if boosted by tourist promotion, is one of significance. If appropriate airfares are instituted, Japanese skiers should join this segment.

How Often? When?

Many ski, say, only four times a year. Others are now taking a winter ski holiday as well as a summer holiday. Mid-week skiing to avoid Saturday and Sunday crowds is a noted trend in Canterbury where a day trip to one of a number of skifields is feasible. As the main North Island skifields are a considerable distance from the major population centres, skiing is almost always a weekend activity with an overnight stay on or near the skifield.
With Whom?

Against the boom in new skiers attracted by the new commercial fields, the traditional ski clubs have largely remained static in numbers.

Many early skiers formed clubs to provide their own accommodation and tow facilities, as exemplified on the Craigieburn Range, where three such clubs run their own skifields. In Tongariro National Park the major skifields are commercial operations and many clubs, usually based in a major or any sizeable population centre, have been formed providing skifield accommodation for their members. Participation in providing for one's recreation also increased the individual's sense of belonging and collective "club spirit". As most clubs are now well-established some of this solidarity is seen to be declining with the availability of other accommodation and services. Thus, while about ten years ago most skiers belonged to clubs, there is now a far greater number who enjoy a wider range of skifields and accommodation opportunities and have no need of the club framework. It is estimated that roughly 2% of the 25,000 Christchurch people who skied in 1977, were ski club members. One club, having raised sufficient finance, has installed a T-bar, and is raising its charges to non-members to a price comparable with commercial skifields to deter excessive pressure on this new facility. Some clubs are becoming more "commercial" in running their skifields. On the other hand there is a small but noticeable trend in the recruitment of new ski club members from prior commercial-field skiers, for reasons of lower costs and on field accommodation benefits.

Tour groups, both overseas and local, are a feature on commercial skifields. The overseas group may visit several skifields. With active promotion by the travel industry the overseas element is likely to increase significantly. A local tourist agency may arrange weekend, or even daily transport and accommodation, often attracting those with little or no skiing experience. Less organised is the "package deal" where the travel agent markets transport, accommodation, tow fields and instruction courses to both individuals and private groups of skiers.
School and youth groups are also seen on both club and commercial skifields as part of outdoor education programmes.

Family participation is also a noticeable element. One North Island club, once known for its young "social-set" membership is now family-oriented and another was founded for family membership specifically. While the younger age group dominates, there is a continuum of skiers of all ages and abilities. Commercial and club skifields, recognising the importance of the family group, generally offer family concession rates.

Where?

The location of North Island skifields in relation to population centres has been mentioned. The South Island is well-endowed with seven commercial and seven ski club skifields. Christchurch skiers, for example, have a choice of about six skifields for a day's activity.

In Canterbury, by far the greater number patronise the commercial skifields with all or some of the attributes of good access right up to the ski area, deliberately selected easy and moderate slopes, sophisticated tows or chairlifts and snow-grooming equipment provided by greater financial backing. It has thus become easy for a wider section of the public to go skiing. Up to 2000 are known to have skied at Mt Hutt on one day.

Club skifields on the other hand are typified by more primitive (rope) tows and accommodation. Often there is a walk-in of 15 minutes to an hour, a barrier to all but the most dedicated. Club skifields are open to the public with accommodation by arrangement and on a "members first" basis. Some Australian skiers and ski groups are already taking advantage of club skifields. Total daily patronage on a club skifield may average 150 at weekends, and 15-20% may be non-members.

Some skiers seek areas beyond the confines of the tows. For example, there are more ski touring trips across Mt Ruapehu and along the Craigieburn Range. Others, particularly those with tramping and mountaineering backgrounds, go ski touring in areas where there are no skifields - in the foothill ranges of Canterbury, for example.
Ski planes take skiers from Mt Cook to the Tasman Glacier and helicopter services are offered on the Ben Ohau Range, as well as other localities. Ski guides are often employed on these trips.

Ski-mountaineering is increasing in popularity among the small number of mountaineers. Light plane and helicopter services are often employed to reach high alpine huts or suitable snowfields. Such a venture is usually combined with winter-climbing. A trip along or across a range may last a week or more.

In Otago, cross-country or nordic skiing is attracting a small band of devotees to the winter snow-clad hill ranges and upland country. The ski mountaineers and cross-country skiers generally spring from the tramping and mountaineering fraternity and appear to be only a minute fraction of total numbers of skiers.

(c) Wants

The Ski Resource

Areas for skiing development should be assessed for future needs as the increase in New Zealand and overseas skiers is seen to continue in the future. An opposing view, however, expressed that there are sufficient skifields with adequate area and that the demand was for increased tow capacity. This view may well reflect regional opportunities, North Island skiers being resigned to one main central snow resource and Christchurch skiers having the choice of a number of skifields. There remains the plea that the current environmental concern of the land-managing agencies does not result in a moratorium in skifield development.

There does not seem to be an impetus for new club skifields now that commercial enterprise has shown that it can provide access and facilities. The new skiers are willing to pay the higher charges rather than involve themselves in providing for their recreation. From this point of view future skifield development appears to be in the hands of entrepreneurs and businessmen.
Access

The type of physical access is important to skiers. The majority like to drive right up to the skifield as can be attested by the patronage of commercial skifields which provide and maintain such roads as a considerable part of their annual expenditure. Walk-in access is preferred by those club skiers who want to retain their relative isolation and uncrowded slopes. However, one club, faced with the extreme of a two-hour walk-in and refusal by the land-managing agency, a national park board, to allow the bulldozing of a vehicle road, is searching for an alternative site without these access problems. This is expected to result in increased local and regional participation in skiing.

Facilities and Services

Lifts and Tows: From the above remark concerning skifields, adequate lift and tow capacity is one of the foremost requirements of downhill skiers. The North Island skiers compared their six to eight runs a day, spaced by 30-45 minute tow-queue waits, with the all-day skiing possible on many South Island skifields. The T-bars and chairlifts on most commercial fields are considered easier and safer to use by the general public than the tractor-driven rope-tows operated by club (and some commercial) skifields. An expert skier, recalling childhood struggles with rope tows, hopes they will be phased out before his children are ready to ski. On the other hand, some club skiers regard rope tows as a deterrent to an influx of skiers from the general public, thus preserving uncrowded slopes.

Accommodation: On-field accommodation is highly desired, particularly by young skiers wishing to ski for a whole weekend. Environmental reasons against this, such as sewage disposal, are generally understood, in which case the alternative of an efficient transport service to the skifield is essential. Low-cost accommodation, whether on or off-field, is preferred.

While club skiers stress their preference for the simpler operation and unsophisticated skifield accommodation, a number of clubs have recently extended and upgraded their accommodation huts and lodges. Small family rooms are built, rather than large dormitories. This trend is in part
enforced by standards set by local and other government authorities with respect to safety, water supply, sanitation and design, but also responds to a general wish for more ease and comfort and less of primitive living conditions. It is generally a matter of club pride that club facilities are simple and skifields uncrowded.

A day hut that could also be used for shelter and emergency purposes, particularly where on-field accommodation is not available, is of major importance in view of the changeability of New Zealand mountain conditions.

Cafeteria services on existing skifields are generally considered "pricey" and inadequate.

Facilities should be designed to enhance the user's perception of the mountain and skiing environment. Examples of unimaginative and imaginative shelter and facility design and construction by national park and commercial skifield agencies were given.

Conflicts

With Other Recreationists: As skifields are single-activity areas, conflicts mentioned were minimal. Skiers (speed hounds) who were inconsiderate of others, tobaggans and the "plastic baggers" were mentioned. The management technique of providing separate areas for the latter two activities was suggested. The action of a group of mountaineers plugging steps across a skifield was regarded as grossly inconsiderate.

With Other Land Uses: The most frequent current conflict with other land uses revolves around preservation and conservation. Downhill skiing is regarded as an appropriate mountain land recreation by skiers. Some national park personnel are taken to task for attitudes that have been considered as "anti-ski" and excessively protectionist, a classic example of the preservation/use conflict which is inherent in the national park concept. While skiing and the skifield installations may cause comparatively little change in the environment, the access road is generally cut into steep, erosion-prone hill and mountain sides. Pre-season land-
scaping and sewage disposal are also potential problems. Government agencies are now setting strict construction, upgrading and maintenance standards for present and future ski access developments.

Equipment

Worldwide demand for better equipment has been fed from improved ski technology by an industry responsive to a rapidly expanding market. High import duties on sports equipment means that skis are a major purchase, particularly for a young skier. Accompanying the demand for equipment is the demand for clothing suitable for snow and alpine weather, to which the fashion sector has also responded.

Other Perceptions

There is concern that skiers inexperienced in high alpine conditions may suffer tragedy through ignorance of local conditions in off-ski field situations.

Summary

From the Literature: In the more recent surveys skiing is almost as popular as tramping, but as opportunities in the way of new skifields arise the ski boom and increasing participation is expected to continue.

Most of the available information on skiers is behavioural. On a national basis skiing is as popular as tramping. The majority of skiers are young (15-24), single, and rank in the higher education and professional levels. There is a large number of students, and slightly more males than females. Family groups are also a significant proportion, the adult members contributing to the considerable proportion (30%) who had been skiing for over six years. Nearly two-thirds of the Mt Hutt skiers classed themselves as regular skiers, although frequency was not mentioned. The winter holidays were prime times for many skiers, particularly those with set school and university terms. Skifield surveys show a small proportion of overseas skiers, mostly from Australia. A major behavioural study of winter
visitors to Tongariro National Park should expand the above information.

Wants information is sparse, relating to opinions of facilities and services on existing skifields. Demand is greatest for more low-cost accommodation and eating facilities off the skifield and in nearby towns.

As the boom in skiing popularity has continued since the studies from which this information is drawn, some of the above information will be outdated. The study of Tongariro National Park winter visitors (52) should reveal more recent information on North Island skiers but information on South Island skiers needs updating.

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General-population studies relating to skiers are as follows:

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<th>Basis</th>
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<tbody>
<tr>
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<td>nos 21</td>
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<tr>
<td>Urban or regional</td>
<td>nos 17</td>
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User studies relating to skiers are:

<table>
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<tr>
<th>Numbers</th>
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<tr>
<td>nos 34</td>
</tr>
<tr>
<td>nos 40</td>
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<tr>
<td>nos 51</td>
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A user study in progress is:

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<tr>
<th>Number</th>
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Studies containing information beyond participation rates are underlined.

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From the Skiers: The needs met in skiing focus on physical exercise, fun and enjoyment and social opportunities.

New and better equipped skifields with easy access and easier slopes for beginners and intermediate skiers provided by commercial enterprise have caused a boom in skiing participation over the last five years, drawing in a segment of the population ready for an alternative active winter recreation activity. With the increase in casual skiing and a greater choice of skifields, those who ski on club fields or within club organisation have, on the whole, remained static in number and are now a small percentage of the total skiers. Skiing is one active recreation activity that the tourist industry is seeking to promote to attract overseas visitors. Beyond skifields, skiers are using helicopters or light aircraft for access to long mountain runs and more, though numbers are small, are ski touring (including nordic skiing) and ski mountaineering (the mountain-eering fraternity.) The skiing resource can be widened by either developing
more skifields or by increasing capacity on existing skifields. Direct drive-up access, modern tow equipment and groomed slopes attract more skiers than club skifields, where access is by walking in and rope tows are standard equipment. Skiers have demonstrated their approval of ease of access by their willingness to pay the higher charges for higher standard facilities. There is a demand for associated low cost services in accommodation (on or off the field) and restaurants.

Skifields conflict with ideals of preservation and government agencies are setting high criteria for environmental protection in future skifield construction.

**Implications**

1. The number of skiers can be expected to continue increasing.

2. Different groups of skiers can be differentiated by needs, behavioural traits and wants which require identification and monitoring. Family skiers are a significant group.

3. Overseas skiers, particularly from Australia and Japan, will be an increasingly significant proportion of skiers through package deals and tour groups organised by the tourist industry.

4. The increasing cost of skiing will encourage more New Zealanders to join or use club skifields on a regular basis.

5. Because of the huge costs of skifield development and equipment, future development will be through commercial enterprise.

6. In planning ancillary services for overseas skiers, the requirements of New Zealanders for low-cost accommodation and restaurant services should not be neglected. Planning should seek to integrate the requirements of different skiers rather than to cause segregation of local and overseas skiers.
7. Off-skifield activity will increase, including helicopter and ski-plane access to suitable ski areas.

8. Suitable snow-clad terrain will take on the role of a new winter recreation resource for the yet very small number of ski tourers. Following overseas trends a wider interest in this activity can be expected, though the dearth of suitable terrain may be a limiting factor.

3.2.4 HUNTERS

Introduction
Hunting as a recreational activity has followed the vicissitudes of the fate of its resource base. Big game, such as deer, chamois and thar were protected until they multiplied to pest proportions in the 1920s. Since then their sporting trophy status has been a minor concern, as they were hunted for the commercial return on skins or venison, and almost to extinction, for their detrimental effect on vegetation and soil stability in mountain lands. With helicopter hunting (at present for commercial gain) proven as the ultimate control method, it now appears necessary to consider game management techniques to maintain the limiting resource base. However, prompted by an active recreationist lobby, hunting as a legitimate mountain land recreation activity requiring positive protection and support, is beginning to receive official recognition (Conference on Conservation of High Mountain Resources 1978; Wild Animal Control Act 1977).

It was our intention to review big game hunters but information on these hunters is often combined with information on hunters of other quarry. Therefore the broader literature is surveyed below.
From the Literature

(a) Needs

There is no study dealing with the needs of hunters.

Latent Demand

As a desirable activity hunting and shooting received 4.2% of the mentions by urban residents in Christchurch (17) but did not rank in the Auckland (3) list of the twelve most desired activities at all. Four percent of the Wellington (13) sample indicated hunting as an activity they wished to undertake.

(b) Behaviour

How Many? (Participation)

General Population Studies: The New Zealand Recreation Survey (21) indicates "hunting - bow or rifle" as one of the three most preferred leisure-time activities of 2.4% of the sample population. Hunting is 42nd in the Dunedin list (21). There were only two instances of participation during the holiday activities of Canterbury residents (15).

Surveys of outdoor recreation patterns of residents of major urban areas indicate hunting participation by 7% in Auckland (3), 4% in Wellington and 8% in Christchurch. Leaving apart the question of whether or not the differences in these percentages are due to ease or lack of opportunity, the terminology of the surveys themselves can be questioned. The Wellington survey specifies "hunting animals only", whereas the Auckland and Christchurch questionnaires specify "hunting and shooting". Thus hunting and shooting feathered or other small game may be presumed to be included along with big game hunting. Given the well-known feathered and small game resources of the Waitaki River, we may well be considering different activities in comparing hunting participation by Kurow and Otematata residents (10), 15% and 10% respectively, and participation by Auckland or Christchurch residents. Again, it is suspected that the proportion of hunters in rural districts is greater than in urban areas, but there is no study confirming this.
The Marlborough pilot study (9) makes the distinction between "upland hunting" and "wetland hunting". Against upland hunting there are 4 045 participations recorded, making it marginally more popular than tramping and first among seven "resource-based" recreations. Wetland hunting has 1 948 participations recorded.

User studies: Statistics can be taken from (deer, pig or goat) hunting permits issued by the land managing agencies such as the New Zealand Forest Service and national parks. The Summary of the Recreational Use of State Forests (46) gives the number of hunters to whom permits were issued for hunting in state forests but we do not know how many hunt without permits, which may be a considerable number in some districts. Feathered game licences are issued by the acclimitisation societies.

User surveys at specific sites present a similarly sparse offering. One Tararua Forest Park survey (38) records that 12% went to hunt, while 28% of the overnight users at Holdsworth Lodge entrance (22) listed hunting as their activity as against the 1% of day users who went hunting. In the Coromandel Forest Park survey of 1971/72 (39) hunting ranked 3% or eighth and 1% in the 1976/77 survey (44). The survey of visitors to Macetown (31) indicates 1% of the visitors goat-shooting.

Who? (Demographic and Socio-economic Data)

Age: The Wellington survey shows that 42% of the hunters are in the 12-24 age group, over half of these being under 20 years of age. The 25-34 age group makes up 29% and the remainder are over 35 years of age. In the Christchurch survey, however, single males in the 16-24 age group dominate, participation dropping significantly with age.

Sex: Hunting is almost exclusively male-dominated. Men constitute 97% of the Wellington hunters.

Marital Status: The Wellington survey notes that 61% of the hunters were married and that 44% had children under 12 years of age.
**Education:** This recreation activity has one of the lowest proportions of participation with university degrees. Only 2% were students.

**Occupation:** In Wellington the majority of hunters are in the middle occupation levels.

**How Often?**

Thirty-six percent of the Wellington hunters had hunted on more than 15 days in the previous year, 35% had hunted on 5-14 days and 26% on 1-4 days.

**When?**

Fifteen percent of the Christchurch hunters went out on a weekday evening, 35% on day trips in the weekend and 55% preferred hunting trips of more than two days. The weekday evening sample reflects nearby local opportunities.

**With Whom?**

Wellington hunters mentioned friends as their most frequent hunting companions. The third who gave "family" as hunting companions would be brother or father and son combinations. (Some hunters belong to clubs and may well hunt with other club members.)

The Marlborough study cites membership of the Marlborough Branch of the New Zealand Deerstalkers' Association as 130 and that of the Small Game Shooters' Association as 37. These may be only a fraction of those who go hunting or shooting as evidenced by the 463 game bird and waterfowl licences issued by the Marlborough Acclimatisation Society for 1973/74.

Several high country runs have offered guided or "safari" hunting, catering to a largely overseas clientele. None of these runs has a current licence for permitting safari operations (36).

**Where?**

Christchurch hunters mostly travelled two hours or more to hunting destinations, generally in the Lewis Pass or Arthur's Pass areas. A quarter,
presumably the weekday evening or early morning hunters, travelled to areas within half an hour of the city. That ease of access is an important factor is borne out in the Summary of Recreational Use of State Forests, in which by far the majority of permits are issued for easily reached forests such as Mt Thomas and Hohunu.

What?

The Summary of Recreational Use of State Forests also gives figures for animals (deer or game birds) killed according to permit returns. The small percentage of returns, let alone hunters without permits, makes analysis of these figures a very doubtful source of information.

The Wildlife Service summarises the waterfowl shooting season each year by district and type of bird. The data basis is a diary scheme and the purpose is to aid in the calculation of bag limits and other management practices (8). Apart from game licence records kept by acclimatisation societies there is no further information on game bird hunters.

(c) Wants

There is no study relating to the wants of any type of hunter.

From the Hunters and Managers

Five big-game hunters took part in discussion sessions. In addition, a large number of hunters contributed informally to our information. We spoke with hunters throughout the country while hunting, in meetings, on airplanes, in pubs and in their homes. We discussed hunting with club members and officers of the New Zealand Deer Stalkers' Association and Big Game Hunters' Association, non-club hunters, runholders, college teachers, people from a variety of other occupations, professional hunters and helicopter pilots. As recreational hunting was a particular issue discussed in depth with over one hundred managers around the country we have broken our pilot study pattern of reporting on only the recreationist to include the reactions of managers to our questions and observations.
(a) Needs

The most important need expressed by hunters is **proof of their hunting skill** in shooting an animal. This involves **challenge** and exercise of concomitant bushcraft knowledge and skills. Added satisfaction of successful hunting is derived from providing food, a practical justification of the activity and proof of **self-sufficiency**. Hunting is also an **opportunity to get out of the city and back to nature**. Seeing animals in the wild is a specifically mentioned thrill. Some hunters stress **being alone and solitude** as important needs. Others enjoy the companionship of fellow hunters or one or two mates. There are opportunities for **exercise and relaxation**. For these reasons the hunting experience can produce satisfaction even if an animal is not taken or seen. However, for many hunters, the numbers of animals has been reduced far below the level which will guarantee a reasonable chance of success for the time and energy expended. The theme of needs frustrated was one recurring many times in discussion.

(b) Behaviour

Recreational hunters highlighted the following trends:

**How Many?**

The most significant change in behavioural pattern is the **rapid and phenomenal decrease in the numbers** going into the mountains for recreational hunting. Those who still hunt make trips less frequently. This is a direct consequence of the reduction of the big game resource. Over the last ten years the helicopter, backed by the commercial venison industry has become the ultimate means of control, exploitation and destruction of deer which have been officially classed "noxious animals". While animal numbers were high both near population centres and in remote country, a hunter could "pick up his rifle and go hunting almost wherever and whenever he wanted".

It can be assumed that there are a large number of hunters who no longer hunt because "there is nothing to hunt". Maintaining an adequate resource is one of the requests to which recreation and resource planners and managers can respond positively.
As deer now have a high commercial value for venison and as livestock for stocking deer farms, hunters can no longer be classed as recreational hunters. The reward of success is extra cash for living and luxury items. The helicopter has rendered redundant almost all those who hunted on foot for skins or meat as their only means of living, whether as agency employees or on their own account.

With Whom?

Hunting is an activity which can be undertaken alone or with a few companions. Because of the casual and informal basis of participation, a small proportion of recreational hunters belong to organisations such as the New Zealand Deerstalkers' Association and the Big Game Hunters' Association. Membership of the former is approximately 5000. As well as being social and educative forums, these organisations are active political lobbies fighting for recognition and maintenance of the hunting resources.

Most hunters were introduced young to the activity by family members or peer group friends. Hunting is often the first taste of the outdoor life.

Where?

Participation is related to opportunity. Hunters will travel to where they know game is plentiful and where access is not difficult or demanding of time. Often hunters will travel to an area to find that helicopters have recently taken their toll and that the remaining deer are hiding in dense bush. There may be big game in areas where helicopter operations have not been so extensive, or where they are deliberately limited at certain seasons to allow for recreational hunting. Nelson Lakes National Park still relies on recreational hunters to control deer. There are now very few nearby areas where the urban-based hunter can find game and it is often difficult to get permission to hunt on private land as the landholders may wish to reap the commercial value of animals for themselves. Some hunters show preferences for hunting chamois or tahr in subalpine territory. Deer, for the most part, are now confined to forest and bush.
Goats, wild sheep and wild pigs may be the only hunting resource available locally. Some, a minority, (often those affiliated to hunters organisations, we suspect) are trophy hunters. In the recent past, overseas hunters have availed themselves of guided or safari services where trophies are guaranteed. Currently there is no licence allowing this operation. Most hunters, however, are satisfied by taking an animal. These hunters can be differentiated further by the degree of effort and skill displayed in pursuit of their recreation.

(c) Wants

The Hunting Resource

Most New Zealand hunters are used to large numbers of animals in almost any hill, bush or mountain land country, making for relatively easy hunting. Not only have animal numbers been reduced drastically, but those animals which remain have retreated to difficult, almost inaccessible country. For most, numbers are so low that their recreational value is lost. Former hunting areas near population centres are particularly affected.

Depending on local circumstances there may be some degree of management, in that helicopter operations may be suspended at certain times of the year, e.g. in early autumn during the roar (mating season) when most hunting activity is concentrated. This is regarded as a small concession to the idea of full-scale game management.

Access

This is a perennial problem to hunters as well as other recreationists. This may be simply the right to pass through private land to a hunting area. Paper roads may have been disregarded by the landholders. In New Zealand these problems are in their infancy compared to many other countries. The landholder's desire to keep lands for personal recreational hunting, collect or sell game animals for breeding or meat and the commercial value of recreation hunting, all lead to limiting access, as well as refusal to requests for hunting permission on private lands.
Management Practices

Hunters were unanimous in their desire for the management of animals for recreational hunting. This is envisaged as allowing game populations in specified areas to reach sufficient density to restore a degree of certainty of success for more hunters. In view of rising commercial value of live animals, strictly controlled game management areas may be the only way of maintaining a big game resource for recreation.

This is made possible by several new currents of thought. The Wild Animal Control Act 1977 (which changed the designation "noxious" to "wild") has added the qualification "where necessary" after "eradication" and has a provision for setting up recreational hunting areas.*

Hunters, who have long questioned blaming deer for erosion problems, are now joined by scientific investigators, who distinguish natural erosion processes of thin soils over a geologically young terrain and that which is produced by "unnative" causes - man's intervention, his introduction of browsing animals and their effect on mountain land vegetation. The unravelling of facts will be a complex task, as will the essential one of investigating areas that can sustain the environmental alterations required by game management and commensurate hunting capacity.

Recreational hunters are generally willing to pay a licence fee, as long as the revenue is earmarked for improving and managing hunting opportunities.

Most recreational hunters are strongly opposed to allowing certain individuals or groups of individuals to have exclusive rights in hunting public lands. Others equally abhor "managed" herds on private or leasehold land available only on payment of substantial fees to the landholder or safari operator, the more so as helicopter operations have virtually destroyed the equivalent resource on public lands (national parks and forest parks, other State forests and unalienated Crown land).

* Since this was written Recreational Hunting Areas are being included in management plans for a State forest area in the Blue Mountains, Otago and Lake Sumner State Forest Park.
Conflicts

With Other Resource Uses: The harshest and most immediate conflict faced by recreational hunters is competition with commercial venison recovery operations. Not only have animal numbers been depleted, but helicopter operations can drive carefully stalked quarry to cover. So high is the commercial value of game (and now so scarce a resource) that helicopter and recreational hunters compete for the same animal.

The anger of the hunter is greater still when the helicopter is poaching on blocks designated for recreational hunting only. The banning of helicopters and enforcing compliance with the ban is a strong desire of many hunters.

Equally conflicting is the continuing prevalence of the philosophy of total eradication which is still displayed by some resource managers, (and reinforced by sections of the nature conservation lobby). Hunters also query grazing domestic stock on lands where wild animals have been or are being eradicated. To the hunter, a proven recreation resource is sacrificed to boost the private farmer's profits, all in the name of eradicating a pest, while stock continue to deplete vegetation.

Other Perceptions

Through hunting, many New Zealanders have been able to live up to the image of the rugged individual. Ease of hunting was taken for granted as part of the New Zealand male's way of life. The essence for most appears to have been casual and individual participation. This ease of hunting has been shattered by rapid exploitation and destruction of game species. Many regret that their sons do not have the same outdoor opportunities that they once enjoyed. Apart from the active lobbies (the Big Game Hunters' and New Zealand Deerstalkers' Associations), most hunters simply accept the situation. Anger and frustration are expressed but the mood is one of defeatism. They have accepted silently that the rights of recreationists are somewhat, if not considerably, less important than other (exploitive) uses.

Perhaps there is no greater indication of the value of the hunting heritage than that all managers bar one expressed personal reluctance to animals being eradicated everywhere.
Summary

From the Literature: It is difficult to establish participation rates for hunting. The national percentage (2.4%) is considerably higher than for tramping, yet in the regional and urban studies it is generally less and varies considerably depending on local opportunities. Types of hunters are not distinguished.

A significant proportion of hunters are under 24 and most are male. About half are married and in the middle occupation groups. Very few have university degrees. Seventy percent hunted on more than five days a year, making hunters slightly keener than trampers in pursuing their sport. Hunting is usually undertaken with a few friends or other family members. Areas near home and of easy access are preferred.

There are no studies relating to the needs and wants of hunters.

General population studies relating to hunters are:
New Zealand basis no 21
Urban or regional basis nos 3 8 9 10 13 15 17 18

User surveys relating to hunters are:
nos 28 31 36 38 39 46

User surveys underway are: nos 47 48

Studies containing information beyond participation rates are underlined.

From the Hunters: Proof of skill and meeting a challenge in taking an animal are the most important needs satisfied in hunting. Hunting is also an opportunity for getting out of the city, into nature and solitude.

The number of active hunters has declined drastically in response to successful helicopter control operations, backed by a lucrative exploitive commercial venison industry. In general, animal numbers are far below that which allows the easy hunting most New Zealanders have been accustomed to. Some are no longer purely recreational hunters as they also hunt for the venison or the commercial value of the animal. Hunting is essentially a casual activity and only a small percentage belong to hunting organisations.
Some compete for trophy heads, but most are satisfied to just take an animal. Some hunters specialise in hunting tahr or chamois. Guided and safari services have attracted a small number of overseas hunters.

Game management in suitable areas is seen as the answer to maintaining adequate animal numbers, but scientific and practical basis has yet to be established. In some quarters, the belief in total eradication (or control without regard to the values of recreational hunting) is still held. Hunters are prepared to pay a licence fee to fund proper game management, but are opposed to exclusive rights, particularly on public land. Rights of access, particularly across private land to hunting lands, are also required by hunters. The opportunity to hunt is seen as part of the cultural heritage of New Zealanders but only a small proportion of hunters have used their lobby power to fight for and protect this heritage.

**Implications**

1. Recreational hunters must be given more attention in the planning and management of mountain lands. Even given rapidly decreasing opportunity, hunters comprise a significant active mountain land recreation group in New Zealand. Recreational hunting is an important product in itself. The Wild Animal Control Act 1977 should be viewed as an opportunity to take some positive steps towards improving the opportunities for recreational hunters.

2. There is a critical need for information on recreational hunters and potential recreational hunters in New Zealand, according to their differing needs, behaviour patterns and wants.

3. There is also a critical need for wildlife management programmes for recreational hunting.

4. The development of wildlife management programmes should be accompanied by the development of an academic programme for proper training of wildlife managers.
Hunting is also a mean of noxious animal control. A national park ranger discusses prospects with two hunters (12).
Commercial venison recovery operations have largely destroyed the big-game resource (13).
5. Research programmes into the effects of wild game animals on the mountain land environment should be expanded to determine what can be provided and managed as a recreational hunting resource and where it can be provided.

6. Recreational hunting areas need to be identified and established. These areas should be dispersed throughout the country to provide hunting opportunities for different types of hunters and the ability of land to sustain game populations. Recreational hunters should be consulted in the selection process.

7. A licence fee for recreational hunting could be established, if the revenue went towards improving hunting opportunities. Hunters in New Zealand say that they would support this. Revenue could defer the costs of wild game management, training, and research.

8. Domestic sheep should be removed from recreational hunting blocks in the high mountains.

9. Helicopter hunting should not be allowed at the same time and in the same blocks as recreational hunting. Helicopter poachers should be actively sought and prosecuted.

10. The rights of access to and on public lands must be assured.

11. Safari or guided recreation hunting enterprises should be encouraged. They are a potential source of income for both the landholder and the government, providing a needed service for overseas hunters as well as some New Zealand hunters. Nevertheless these enterprises must be closely monitored to assure access to and on public lands for all hunters.

12. There should be no exclusive rights to hunt public lands.
3.2.5 FISHERMEN

Introduction
Trout were introduced to New Zealand streams and rivers in the 1860s. Some high country waters were stocked and fished by the late 1870s. Fishing has a long history as a recreation activity attracting more New Zealanders than tramping or skiing. Not all fishing takes place in the mountain lands. The studies reviewed in detail embrace all freshwater fishing according to regional opportunity, while discussion was limited to high-country fly fishermen.

From the Literature

(a) Needs
There is no study which relates specifically to the needs of fishermen.

Latent Demand
Fishing was the stated recreational ambition of 13.5% in the Auckland leisure-time study (2). As a desirable activity, freshwater fishing received 4.5% of mentions by the Christchurch sample and did not rank in the 12 most desired outdoor recreation activities in Auckland (3). Five percent of the Wellington population would like to participate in sea or river fishing. In Dunedin, fishing ranked 10th as a recreational ambition, being desired by 2% of the sample. Lack of time is the main factor inhibiting participation.

(b) Behaviour

How Many?
General population studies: The New Zealand Recreation Survey (21) shows freshwater fishing as one of the three most-preferred leisure-time activities of 2.6% of New Zealanders, with "fishing - salt and fresh" stated by a further 0.4%. In the Dunedin study (20), freshwater fishing is not
distinguished from saltwater fishing and ranks 20th, favoured by 6% of the urban population, while in Auckland (2) 13% went fishing. The survey of Kurow and Otematata residents (10) distinguishes "fishing from shore" with 9% and 15% reporting this respectively and "fishing from a boat", reported by 2% and 5% respectively. Canterbury holidaymakers (15), however, reported 28 instances of fishing participation out of 446 participations, or 6% of participations in a range of activities.

As an outdoor recreational activity freshwater fishing is undertaken by 6% of the Auckland population (3) and 17% of the Christchurch population (17). Sea fishing rates participation by 36% and 20% respectively. In Wellington (13) 24% of the population went "fishing - sea/river". The Marlborough pilot study (9) records 6,966 participations in "fishing, rivers and lakes".

Numbers of fisherman can be ascertained from licence sales as given in the individual annual reports of individual acclimatisation societies. Regional participation has been further investigated in a series of freshwater fishing resource studies conducted by the Fisheries Management Division (11). It is noted that a region well-endowed with fishing opportunities will reflect high participation rates. Graynoth also adds that there are proportionately more fishermen in rural communities than in urban areas.

Some broad historic trends in fishing are noted in the long-term diary scheme operated by the Fisheries Management Division. Nineteen fifty-seven marked a nationwide upsurge in fishing. For example, between 1951 and 1959 the number of males holding a full-season angling licence in the Otago Acclimatisation District increased from 4.3% to 10% of the District's adult male population (11, Report no. 127).

User Studies: In the 1971/72 Coromandel Forest Park Study (39) 4% fished, while in the 1976/77 (44) study there had been a drop to 2%, although this must be reviewed against the rapid upsurge in tramping and camping over this period. At Aspiring Lodge (41), fishing is noted as an activity in conjunction with tramping, climbing and hunting by several parties.
Sea and freshwater fishing is fairly evenly distributed over all age groups in Wellington, Christchurch and Dunedin.

**Age:** An analysis of fishing licences indicates adult and junior (under 17 years of age) participation in freshwater fishing. For example, the North Canterbury Acclimatisation Society sold licences as follows for the year ended 31st August 1977:

<table>
<thead>
<tr>
<th></th>
<th>Whole Season</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>8 867 (60.5%)</td>
<td>1 342 (88%)</td>
</tr>
<tr>
<td>Ladies</td>
<td>1 384 (9%)</td>
<td>177 (12%)</td>
</tr>
<tr>
<td>Junior</td>
<td>4 410 (30.5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 661</td>
<td>1 519</td>
</tr>
</tbody>
</table>

In a survey of Nelson Acclimatisation District fishermen (25), the pattern varies: 12% were aged 5-14 years, 24% were aged 15-19 years, 21% were aged 20-40 years, 36% were aged 41-64 years and 7% were over 65 years. Fishing is thus popular among the youth and middle-aged groups, once family responsibilities of the latter diminish. Of the North Canterbury Acclimatisation District sample (19), 79% are over 25 years with the mean age in the 35-54 group, but this sample was adjusted to discount the minor fishing effort of the statistically large proportion of junior fishermen.

**Sex:** That males dominate fishing participation is shown in Wellington, where men are two-thirds of the fishermen (sea and freshwater) and in Dunedin where 82% (also sea and freshwater) are men. High male dominance is repeated in freshwater fishing only - men take out 86% of the adult whole season licences. In the Nelson Acclimatisation District sample, 89.1% were male.

**Marital Status:** Roughly two-thirds of the Wellington fishermen were married. In the Nelson Acclimatisation District, 72.6% of the fishermen over 16 were married.

**Education:** The Nelson Acclimatisation District survey showed that 77.9% of the respondents had two or three years' secondary education or a trade certificate, 14.3% had University Entrance and 7.8% some tertiary
qualification. The higher levels are still better represented among fishermen than in the general population of the district.

**Occupation:** In the North Canterbury Acclimatisation District, craftsmen and labourers were 24.5% of the fishermen, professional and technical workers 16.6% and the administrative executive group 11.5%; 12.4% were retired, 9.1% were students, 4.7% were farmers and 3.9% housewives. Clerical, sales, transport, services and recreation workers made up the remainder. In the Nelson Acclimatisation District, the professional and managerial group is almost proportionately represented compared with the general population of the district (12.5% and 12.9% respectively). The sales and service group is over-represented with 39.3% of fishermen being in this group (as against 27.8% of the general population) and manual workers (skilled and unskilled craftsmen) are 48.2% of the fishermen as against 59.3% in the general population.

**Other:** It can also be noted that 78.7% of the North Canterbury licence holders lived in Christchurch, which is in proportion with the urban population of the district.

**How Often? How Much Time?**

Over 22% of the North Canterbury fishermen fished within that acclimatisation district on 29 or more days a year, while the mean of 15-21 days were fished by 18.2%. In addition over half fished 1-15 days outside the District. The average Otago fisherman (IV Report no. 129) was estimated to fish 14.3 days a year. The fishing efforts of keen Otago fishermen, i.e., whole season licence holders who kept diary records of their activity, dropped from 26.7 days per season in 1946-51 to 17 days in 1957, 1962 and 1967. Women's and children's fishing effort dropped correspondingly. While the diarist fisherman in the Nelson district noted an average of 15 days' fishing a year (IV/Report no. 119), Toynbee's Nelson survey (25) gives a mean fishing effort of 8.6 days for men's whole-season licence holders in the Nelson Acclimatisation District. The disparity may lie in that the former relied on diaries which were kept by keen fishermen, while the latter used a random sample. Frequency of participation by Nelson fishermen (25) increased lower down the occupation hierarchy. Fishing is a relatively inexpensive sport and
participation is spread more evenly among occupational and income classes -
the higher occupation classes presumably have less leisure time or more
demands on their leisure time than people in other occupations.

Most of the Christchurch fishermen (17) reported day fishing trips only.
Sixty-eight percent of the North Canterbury fishermen, however, spent nights
away from home on fishing trips.

Costs
Expenditure on their sport by North Canterbury fishermen ranged from
"up to $20" to "$1 000 or more". The mean expenditure was $101-200.

How Long?
The length of fishing experience reflects the generally older age of
fishermen. Over 30% of the North Canterbury fishermen had been fishing
for less than five years, 21.7% had fished for 5-10 years, 16.4% for
11-19 years and nearly 30% for over 30 years.

Over half the Nelson fishermen had fished for 2-5 years, 16% for 6-10 years
and 17% reported 11-20 years' experience.

When?
Whole season fishermen in Nelson made nearly a quarter of their trips in
October, at the beginning of the fishing season, dwindling to 8.5% in
March and rising only slightly in the summer holiday period and in April
at the end of the season. Most trips took place on weekends and public
holidays, but 22% went fishing on the first day of the season in October,
which was a week day. Half-season, weekly and daily licence holders were
most likely to fish in the summer holiday period and the junior fishermen
were the most active, reflecting that children were less restricted during
holidays than adults.

With Whom?
Friends were the most frequent companions of 74.2% of the North Canterbury
fishermen, though 66.2% also fished by themselves and 48.5% with their
families. Sixty-seven percent of the Christchurch fishermen were

140
accompanied by their families, some of whom also fished. Nelson whole-
season licence holders (men) made 260 trips with other fishermen, marginally
more than the 255 trips made alone. Non-fishermen were companions in
15% of the trips and mixed groups of other fishermen and non-fishermen on
the remainder of trips. Non-fishing companions were generally wives and
children, half of whom engaged in activities relating to fishing, such as
watching or spotting fish. Swimming, picnicking, exploring, etc.
occupied most of the rest, only 15% remaining sedentary.

In Nelson friends were the most common mentors or source of introduction to
fishing for men (33%), followed by parents (20.4%). A significant 81.8% of
the women anglers were introduced by their husbands. The age of the women
in the sample (all but one over 41 years) indicated that caring for children
prevented them from taking up fishing earlier.

Where?
The most popular fishing destination for North Canterbury fishermen is
the easily accessible plains country; 51.7% regularly visited the lower
Waimakariri system. In comparison, 22% regularly visited Lake Coleridge
in the high country, the most popular of the high-country fishing lakes.
Roughly one-third of the fishing trips were to high-country destinations.
Nearly half of the trips by men's whole-season licence holders in Nelson
had as their destination lakes and rivers of the Buller system, which is
surprising, as these waters are among the most distant for the majority
of fishermen in the District, some 70 km from Nelson. Thirty-nine percent
of the trips went to the Motueka system, the Motueka River being the most
heavily fished of the whole district. More than half the North Canterbury
fishermen had fished outside their Acclimatisation District at some time
in the previous year, South Canterbury, Otago and the West Coast being
most popular. In terms of absolute frequency, the sample fished 689 days
outside as compared to 1260 days within the District. Part-season licence
holders in Nelson overwhelmingly favoured the Buller system, concentrating
on Lakes Rotoiti and Rotorua, as well as the Buller headwaters, reflecting
the popularity of Nelson Lakes National Park as a holiday area.

Christchurch fishermen all used car transport in their fishing destinations.
North Canterbury fishermen travelled in their own or a friend's car and
10.9% had used motorcycles.
The most frequent overnight accommodation used by North Canterbury fishermen was in tents (32%), caravans (29.4%) and private residences such as baches (25%). Sophisticated accommodation such as motels or hotels were used by 10.8%.

**Quarry**

Over 28% of the North Canterbury fishermen fished exclusively for trout, but only 6.3% fished exclusively for sea-run salmon. The remainder fished for both salmon and trout, some with a stronger preference for salmon and others with a stronger preference for trout. The Nelson fishermen fished for trout only.

**Fishing Techniques**

In Nelson only 16% of the fishermen used the fly exclusively and 40% used threadline exclusively. Forty-six percent of the fishermen used the fly and 76% the threadline at some time during the season. Threadlining was more popular among women and juniors, reflecting that it is considered an easier method.

Forty-seven percent of the North Canterbury fishermen preferred artificial fly fishing, while 43.3% put spinning or threadlining as their first choice. Natural bait fishing and trolling were the preferred methods of fishing for 9% and 2.1% respectively. Combining first, second and third preferences, threadlining and spinning is preferred by more fishermen - 82.2% of the sample, as against 70.6% who preferred artificial fly fishing. Three-quarters of the fishermen regularly used two and 41.6% used three methods of fishing. Recent changes in fishing regulations to encourage participation allowing threadlining and natural bait in more waters than previously, had resulted in moderately more family or group fishing, more threadline and natural bait fishing and correspondingly slightly less fly fishing. There was also a moderate increase in other activities during fishing trips, such as tramping, picnicking, etc.

On the whole the North Canterbury fishermen rarely used a boat for either fishing or access to fishing areas.
Skill and Experience

Catch rates are studied in most fishing surveys, often with the aim of determining the effect on the resource base. From the long-term diary scheme (11), historical change dating from the upsurge of interest in fishing in 1957, brought less experienced anglers into the diary scheme, and geographical differences in skill were also noted, although angling skill itself was not measured.

North Canterbury fishermen who fished mainly for trout or other acclimatized fish averaged 9.4 trout each per season and those who fished mainly for salmon or only salmon averaged 3.6 salmon per season. However, of the total fishermen, 33.6% caught no trout and considerably more did not land a salmon. Taking a group of high-country lakes, the average catch was 10 fish per person, which is probably indicative of a more dedicated and experienced fly fishermen patronage. This is borne out also by the fact that the artificial fly method of fishing had a success rate of 25 fish per person per season. The mean number of fish caught by Nelson whole-season fishermen was 10.6 during the season, or 7.4 including juniors and women. The mean number for part-season fishermen, women and juniors was considerably lower at 1.8 fish. When measured in terms of fish caught per hour, the skill of Nelson trout fishermen correlated strongly with experience - those with one to 10 years' experience caught 0.25 fish per hour and those with 11-20 years' experience caught 0.45 fish per hour.

The North Canterbury study suggests there are two types of fishermen:

1. the dedicated, experienced fisherman who regards his sport as a science;

2. the more recreational fisherman whose fishing may only be a secondary activity whilst on trips. The surrounding environment and associated activities may be of more concern to him than filling his bag with fish.

Thus, a spectrum of casual recreational to keen and dedicated fishermen is indicated.
The Fishing Resource

North Canterbury fishermen ranked the main reasons for choosing their fishing areas as "availability of fish", "convenience" and "scenic beauty". Nelson fishermen from a different list of factors ranked "good fishing", followed by "distance of fishing water from residence", "how good they have heard the fishing is", etc. In trying to match these factors with actual distribution of fishing activity, the author concluded that the individual fisherman's perception, limits of knowledge and experience, all of which are personal variables, dictated his choice of where to fish.

Management Practices

North Canterbury fishermen were asked to comment on aspects of fishing regulations which had recently been revised. Eighty percent were aware of the changes. The winter fishing season received strong approval, while reduction in the size of takeable fish from 30 to 25 cm and fishing from boats in small high-country lakes met with a poor response. The removal of fly fishing restrictions, permitting threadline and natural bait fishing in all waters were also objected to by trout fishermen. Salmon fishermen were generally satisfied with most of the regulations.

When examined by occupation class, fishing from boats in small high-country lakes ranked poor in the opinion of the professional/executive and retired classes. Only students ranked reducing the minimum takeable size of fish as "better than poor" and registered "satisfactory-good" for threadlining and natural bait fishing in all waters. Apart from welcoming increased opportunity by a winter fishing season, North Canterbury fishermen appear conservative in their attitudes to changes that indicate a reduction in standards, such as permitting threadlining in all waters. The bias of the sample towards whole-season fishermen, however, should be remembered here.
From the Fishermen

Five fishermen participated in discussion groups. All were exclusively fly fishermen, exemplifying "the dedicated, experienced fisherman who regards his sport as a science" at the purist end of the angler spectrum. All fished in the high country. One was in his 20s, one in his 40s and three were over 50 years of age.

(a) Needs

Catching a fish through the exercise of angling skill fulfills the first needs of fishermen. The exercise of skill and the challenge of using fine materials is contrasted with the threadline method used by fishermen who were out just to catch a fish or as many fish as possible. Stalking the fish gives the greatest thrill to one of the fishermen, while a catch to take home is often of relatively little importance, "except to please the wife". If the sport has been good, it is hard to explain to a layman how satisfaction had been achieved after returning a fish to water. High-country fish are wilder and generally offer better sport. Being in nature and opportunities for nature observation rank high with fly fishermen. A good day is described in terms of the sparkling stream, still air, sunlight and clear sky, and lack of success was irrelevant. Of all the groups interviewed only fly fishermen offered acute and detailed nature observations.

Fishing is an opportunity to get away from the city and a chance to relax.

Companionship was not emphatically mentioned, though fly fishermen often go in pairs. Solitude is also highly valued. For the youngest fishermen in the group, there was always more to learn.

(b) Behaviour

The small select sample of dedicated fishermen makes it impossible to add with any degree of certainty to the behavioural information in existing studies. Nor are changes in behaviour patterns nearly as dramatic as tramping, skiing or hunting. Nonetheless, some additional information has been brought to light.
How Many?

The number of people who go freshwater fishing is seen to be increasing steadily, due to more leisure-time and more recently the liberalisation of fishing regulations permitting threadlining and the use of natural bait. One could now rarely go fishing in known and accessible areas without seeing signs that someone else had recently been there. The number of cribs around one popular fishing lake had increased in a generation from 13 to over 65. As far as high-country lakes and streams are concerned, the increase in fishermen has not been so great.

Who?

Because fishing is very much an individual activity, it is difficult to assess overseas participation. Some had met American or Australian anglers in the high country. An Australian fishing club makes an annual trip basing itself in a small town on one of the major South Island fishing rivers.

With Whom?

The liberalised fishing regulations and increase in fuel costs are seen to affect patterns in fishing habits. A fishing trip is more likely to be a family expedition, with children and less dedicated family members using threadlines or natural bait. The rising price of fuel is seen as a limitation to high-country fishing, as fishermen were already increasing the party size to share the cost at the expense of the solitude they enjoyed alone or with other fishing companions.

Avenues of Introduction: Some had fished with their families from childhood and fishing is an activity now shared with their own families. Such families often own a bach or crib in the high country where fishing is a focal activity. Others had "converted" from more active outdoor recreations, such as skiing and tramping, and another erstwhile threadliner had deliberately sought a greater challenge in fly fishing. Almost all at some time in their early fishing days have had expert guidance from an experienced fisherman and have sought out the relevant fishing literature.
How Often?

Keen fly fishermen fish frequently. Some fish once a week in the evenings, on weekdays or at weekends, during the season. Another fishes every day if possible. Retirement presented more opportunities for longer trips.

Where?

Because of the distance to high-country lakes and streams, the nearer plains, rivers and streams are fished just as often. Nevertheless, those in the discussion groups regarded themselves as high-country fishermen. A fishing trip for a younger fit angler may well involve a 10-15 mile tramp up a river valley. Retirement age did not deter one keen fly fisherman from planning a trek over the ranges of the Ahuriri headwaters.

Techniques/Skill

The liberalisation of fishing regulations in permitting threadlining and use of natural bait does not appear to have stimulated an interest in fly fishing. The increase, then, appears to be in casual rather than dedicated and skilled participation at well-known and easily accessible areas, not penetrating far into the high country. It was pointed out again that "conversion" to fly fishing almost always involves the interested personal tuition of a more experienced fisherman.

(c) Wants

The Fishing Resource

This was discussed first in terms of fish habitat and then fish stocks.

Preservation of fish habitat is of prime importance. The run-off effects of fertiliser on some high-country lakes has yet to be demonstrated, but already it is possible that fly hatches have been reduced and fish are feeding more on the bottom, which has implications for those who prefer dry fly fishing. In drawing off water, irrigation schemes have also
destroyed a number of fishing rivers on the Canterbury Plains and others are under threat. Hydro-electric dams have already modified a number of fishing rivers and future dams will have a more significant effect. Both dams and irrigation can effectively destroy the salmon resource by preventing the fish reaching their spawning grounds. While representations to conserve the fishing resource are made to the appropriate authorities, fishermen are not confident that valued fishing waters will not be lost to them. The fly fishermen whole-heartedly support current moves by the Commission for the Environment for preservation of wild and scenic and natural rivers for this reason.

Stocking is a question on which it is difficult to get different types of fishermen to agree. The fly fishermen in general prefer the status quo. Examples of (disastrous) major changes in the populations and ecological balance of lakes in other countries as a result of indiscriminate stocking were quoted. Any major stocking moves should be preceded by a thorough and competent scientific investigation. It is generally believed that fish are smaller than several decades ago, as a result of their population adjusting to their environment and also due to fishing pressure. Again, the fly fishermen are accepting existing situations.

Access

Access is important to fishermen, not only as roads and tracks, but also in terms of legal access to streams, rivers and lakes on private land.

Facilities

As a recreation activity, fishing is not demanding of facilities. None were mentioned by the discussion groups.

Quarry

Currently there is a growing interest in salmon fishing, largely stimulated by last season's (1977) good salmon run and publicity given to record catches.
Conflicts

With Other Recreationists: On land, vehicles which penetrate to fishing areas are destructive of solitude: thus motorcycles, trail-bikes, dune buggies and four-wheel drive vehicles which are used in a way to disturb peace and solitude all come under censure. Jet boats, other power boats and even some canoeists have disturbed fishermen with inconsiderate behaviour.

With Other Land/Water Uses: Farming and hydro-electricity are the major competing uses for the fishing resource as outlined above. Pollution from factory effluent is also destructive of fish habitat in lowland areas.

Other Perceptions

Fly fishermen are articulate in distinguishing themselves from other fishermen. They see themselves as courteous, polite, and respecting the solitude of other fishermen. Pride in their skill, as well as its exercise, distinguishes them from threadliners who are "out for the catch only".

Summary

From the Literature: More New Zealanders go freshwater fishing than skiing or tramping. Regional participation varies according to local opportunity. Nevertheless, even with ease of opportunity and access to plains, rivers and streams, visitation to mountain land waters by Canterbury fishermen is high, constituting one-third of the trips reported in one study.

Fishing is dominantly a male sport, and there is a much more even distribution over all age groups than tramping or skiing. While the education level of fishermen is predominantly at the secondary education and trade certificate level, in general participation increases in the lower levels of the occupation heirarchy. Most fished with at least one companion although fishing can also be a solitary activity. Many fishing trips are also family outings. Fishermen can be grouped into those who are dedicated to the exercise of skill and those to whom fishing is a secondary activity of the trip. The most dedicated "purist" fishermen
use the fly only but a large number use both fly and threadline methods. Only a small proportion in North Canterbury fish exclusively for salmon, but a large proportion fish for salmon as well as trout at some time.

The recent liberalisation of regulations permitting threadlining and the use of natural bait in all waters was on the whole objected to as a lowering of fishing standards. However, a winter fishing season was welcomed.

**General population studies relating to fishermen are:**

<table>
<thead>
<tr>
<th>New Zealand basis</th>
<th>nos</th>
<th>11</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban or regional basis</td>
<td>nos</td>
<td>12</td>
<td>3 (sea/water only) 9 10</td>
</tr>
<tr>
<td></td>
<td>nos</td>
<td>11</td>
<td>(reports for individual acclimatisation districts)</td>
</tr>
<tr>
<td></td>
<td>nos</td>
<td>13</td>
<td>(sea and freshwater) 15</td>
</tr>
<tr>
<td></td>
<td>nos</td>
<td>17</td>
<td>19 20 (sea and freshwater) 25</td>
</tr>
</tbody>
</table>

**User studies relating to fishermen are:**

| nos | 39 | 41 | 44 |

Studies containing information beyond participation rates are underlined.

**From the Fishermen:** The fishermen interviewed were all dedicated fly fishermen and the major needs fulfilled were exercise and opportunity to be in nature. A keen fisherman may tramp in difficult country to reach a remote stream. Often there has been a tradition of family fishing, or the fisherman has been taught or encouraged by an older expert fly fisherman. While the trend is for the numbers of fishermen of all kinds to increase, the cost of fuel for travel to the high country may inhibit further in visiting the lakes and streams there. The greatest danger to the fishing resource is hydro-dam construction, which shuts off or destroys spawning gravels, irrigation schemes, which reduce river flows, and fertiliser run-off which, in the long-term, may profoundly affect the ecological balance of fishing waters. Motorised vehicles, motorcycles, jet boats and power boats all disturb the peace of fishermen at times in terms of amenities, physical (as well as legal) access (roads and tracks) to fishing waters is the prime requirement of fishermen.
Implications

1. Fishermen are a significant proportion of New Zealand outdoor recreationists and a slow steady increase is likely to continue.

2. There are different groups of fishermen with common and conflicting needs, behaviour patterns and wants, which require further study.

3. The greatest pressure on fishing waters is likely to be near or within reasonable reach of population centres. Every attempt should be made to retain appropriate fishing waters which meet these needs and requirements.

4. As fishing regulations have been liberalised to allow easier methods of catching fish to be used, increased visitation of all types of fishermen to easily accessible high-country lakes and streams can be expected.

5. Pressure may increase to the extent that fly fishermen would like certain waters designated for fly fishing only.

6. Recreational fishing should be taken into account in planning for other uses of high country land and water. Adequate fishing waters must be maintained in their natural state. Where artificial water bodies are created, fishing should be included in multiple-use planning where possible.

7. Fish stocks in relation to increased pressure should be monitored and maintained where appropriate.

8. To support the above requirements scientific studies of the ecological balance of fish habitat should be carried out to provide the required information for planning.

9. Access to fishing waters must be assured - both in terms of legal rights and provision of tracks and roads, through private and public land.
10. At popular fishing sites, picnic and parking areas and road ends should be kept back from the river and lake shores to allow undisturbed fishing, particularly if vehicle recreation is a potential menace to peace and tranquility.

Fishing is one of the most popular outdoor recreation activities. A fisherman casts into a river pool in Catlins State Forest Park (14).
3.2.6 CANOEISTS

Introduction

The history of canoeing as a recreation activity in New Zealand dates back to the nineteenth century. A boom in canoeing and related water sports overseas is being repeated in New Zealand. It now has the reputation of being one of the fastest-growing recreation activities this decade, particularly as strong fibre-glass craft, mostly in the kayak style, have been available since the late 1960s.

From the Literature

(a) Needs

There is no study relating to the needs of canoeists.*

Latent Demand

This was recorded as a desired recreation by 8% of the earlier Auckland sample (2). It is not noted in any other study, reflecting both the relatively few participants and the fact that most of these studies were conducted four or five years ago prior to increased participation.

(b) Behaviour

How Many? (Participation)

General Population Studies: Canoeing is one of the three most preferred leisure-time activities of 0.2% of New Zealanders, according to the New Zealand Recreation Survey (21). One percent of Aucklanders (2) went canoeing, but canoeing did not feature in the Dunedin study (20) list of the 100 ranked activities.

As an outdoor recreation activity, 4% of Aucklanders (3) and 3% of the Christchurch population (2) had participated. Wellington canoeists (13) would be included in the figures for "boating (all kinds), water skiing", some 16%. The Marlborough study (9) records 1,910 participations, which is

* The needs of canoeists and other water-based recreationists are discussed in Vol. 1 of The New Zealand Recreational River Survey (Egarr & Egarr 1979).
roughly equal with climbing. Being a recent study this may be indicative of the growing popularity of canoeing as well as abundance of local opportunity.

User Studies: Canoeing is ranked 1%, one of the less frequently undertaken activities in Coromandel Forest Park in 1977 (44). It was not recorded in the 1972 Coromandel study.

Styles of canoeing are not differentiated, i.e., in the United States there is a very clear distinction between canoeing (the open Indian or Canadian-style canoe more suitable for placid water) and kayaking in the Eskimo-style kayak which is used on swifter waters.

With Whom?

Avenues of Introduction: While canoeing has comparatively few participants on a national basis, it is boosted in a number of school outdoor education programmes. Clark (6) notes canoeing as the form of activity in 17% of 276 outdoor education sites, a low ranking compared to tramping which is an activity at 71% of the sites, but nevertheless indicative of trends.

Skill

While there is no study classifying canoeists according to skill, the New Zealand Canoeing Association (Egarr & Egarr 1977-78) has published its own resource inventory and guide to New Zealand rivers, assigning appropriate grades of difficulty and listing relevant features. A further survey to identify and classify New Zealand rivers according to their recreational value has recently been conducted. Egarr (1978), under the auspices of the Ministry for Recreation and Sport, has set out to identify rivers for skilled boaters and novice and family boaters, suitable for both one-day and multi-day expeditions. The Report of the New Zealand Recreational River Survey (Egarr & Egarr, in publication) was not available at the time of writing.

(c) Wants

There is no study addressing the wants of canoeists.
From the Canoeists

Seven canoeists took part in discussion sessions. Six were members of canoe clubs and one the operator of a guided canoeing concern. Three were in their 20s, two in their 30s and two over 40. A jet-boat enthusiast also attended one discussion session.

(a) Needs
Canoeing provides an opportunity to get away from crowds, job pressures and into nature. It is also a chance to let off steam and have fun. In testing himself against nature and the demands the individual develops self-confidence. There is solitude and in a contemplative mood the canoeist comes to be friends with the river.

There are opportunities for teamwork and companionship. Some canoeists emphasised techniques and the competition of slalom canoeing or sprinting as more important than the wilderness experience. For others being in the natural environment was highest. All used the kayak style of canoe.

(b) Behaviour
The following trends were noted by the discussion groups:

How Many? (Participation)
Despite the small number participating, canoeing is seen to be one of the most rapidly increasing outdoor recreation activities. Much of this increase has been specifically in kayaking due to the manufacture of light fibreglass craft in New Zealand over the past ten years.

Who?
Most of the new canoeists are in the younger age group, i.e. under 20 and early 20s.

Avenues of Introduction: Clubs offering pool instruction to the public have no difficulty in filling courses. Canoeing in various forms is also offered in outdoor education courses. Others already competent and
knowledgeable in bushcraft and tramping have taken up canoeing as an alternative wilderness recreation. One discussion group member had been encouraged by the Come Alive Campaign.

With Whom?

As with tramping and mountaineering, canoeists seldom venture alone for safety reasons. Guided canoeing is offered on the Wanganui River by a commercial operator.

Where?

Canoeing is not exclusively a mountain land recreation. The lower reaches of rivers, lowland lakes and the sea are all used. Many river trips, however, start in mountain lands and run through the high country. For the most part, canoeists are limited to rivers where there is road access at the beginning and end of the trip. The Wellington discussion group estimated that about half their canoe club members were more interested in slalom canoeing, while the Christchurch group was more oriented to running rivers. North Island canoeists have found lakes created by hydro dams a useful resource for slalom and sprinting competitions. The casual participant canoes the easy well-known rivers such as the Wanganui and the Rangitikei.

(c) Wants

The Canoeing Resource

Canoeists are deeply concerned that good canoeing rivers are being taken one by one for hydro-electricity dams. The choice for canoeists who like to run a different river each weekend will continue to diminish in the 1980s. The survey of rivers identifying recreation potential described by Egarr (1978) is one major effort to create awareness of recreation values among agencies of development and construction. Most hydro-electricity projects, however, have long been planned. Thus, while a canoeing resource is created by hydro-dams for some canoeists, the same project will drown a valued natural rapid for others. Small schemes can be as destructive of the canoeing resource as large ones.
One North Island club has been successful in applying for water rights on a river - a given flow is guaranteed on enough days to permit weekend canoeing during most of the summer season.

Artificial rapids with regulated flows have been constructed overseas, mostly for competition purposes. This, however, is "not the same as a natural rapid" for wilderness canoeing. Other river modifications, such as straightening the stream flow for flood control, lessen the enjoyment of canoeists.

The Commission for the Environment's move to establish criteria for wild and scenic rivers for both preservation and recreation is whole-heartedly supported by canoeists.

Access

Road access to starting and finishing points is an essential requirement for canoeists.

Facilities

The canoeists in the discussion groups did not have facilities required. Rather the simplicity of camping on the river banks and self-sufficiency on multi-day trips was preferred.

Conflicts

With other Recreationists: In line with other self-propelled outdoor recreationists, canoeists cite motorised craft as conflicting with wilderness ideals. This is not to deny the rights of jet-boaters to use rivers and instances of courteous and considerate encounters were cited. In particular cases whereby jet-boaters have assisted canoeists in trouble. The conflict is starker in the case of the Shotover River jet boat and raft trips, where commercial operators are having difficult sections of the gorge blasted, where once only canoes could pass. There is concern for the safety of canoeists in such narrow stretches of water where motorcraft also have access.
With Other Resource Uses

The main conflict with hydro-electric dam construction destroying canoeing rivers has been discussed under Canoeing Resource above.

Other Perceptions

Discussion group canoeists talked about wilderness in the emotional appeal rather than as strictly defined by the purist and in legislation or by regulation. Roads are needed for access and isolation can be experienced often simply by being on the river. However, in line with other wilderness recreationists, most canoeists support the conservation and preservation of natural areas.

Summary

From the Literature: Canoeing is a water-based recreation in which participation appears small but is increasing rapidly, although available studies barely reflect this. It is well-established in the curriculum of a number of outdoor education courses. While no study relates specifically to canoeists, other literature has identified the resource requirements of different boaters in terms of skill and experience, i.e., skilled or family and novice boaters.

General population studies relating to canoeists are:
- New Zealand basis: no 21
- Urban or regional basis: nos 2 3 9 13

User studies relating to canoeists are:
- no 39

A user study (54) in preparation deals with canoeists on the Wanganui River.

From the Canoeists: Canoeing fulfills needs of getting away from the city and into nature, and offers the opportunities for self-development. A number of canoeists emphasise the competition and skill aspects.

Kayaking is seen as one of the fastest growing recreations and is now included in more outdoor education curricula, thus attracting youth in particular. As with fishing, canoeing is not solely a mountain land
A canoeist turns to face the chute he has just descended. This is Maori Gully in the Upper Hurunui which is threatened by a proposed hydro-electricity scheme (15). Canoeing participation has increased rapidly in the past decade. A group cruises the Pelorus River (16).
recreation. Rivers are canoed almost wherever there is suitable road access, while the keenest are looking to wilderness areas. Canoe clubs are generally alarmed at the number of hydro-electricity projects that will destroy favourite rivers and rapids. Despite dependence on road access, many canoeists are proponents of conservation and wilderness preservation ideals.

Implications

1. Although compared with other activities the number of canoeists is still small, it can be expected to continue to increase.

2. The needs, behaviour and wants of different types of canoeists should be studied with those of other boating and water-based recreationists to establish common patterns, compatibilities and incompatibilities. There is no completed study of water-based recreationists in mountain lands to date.* Considering the popularity of water-based recreation in New Zealand this is an urgent requirement.

3. The finite and diminishing availability of canoeing and other recreation waters must be recognised and effort made to maintain the existing resource. The survey of rivers sponsored by the Ministry of Recreation and Sport and conducted by the New Zealand Canoeing Association (Egarr & Egarr, in publication) should be consulted and used as complementary resource information.

4. Given the popularity of water-based activities, including canoeing, recreation must be considered in planning other uses of water resources and integrated where possible. The feasibility of granting water rights to guarantee adequate flows for a summer canoeing season has already been demonstrated and may be applicable in other cases.

* Since this was written, a study of Wanganui River users (54) has almost been completed.
3.2.7 MOTORCYCLISTS

Introduction

Motorcycling, particularly off-road trail-bike riding, is not always welcomed as a recreation activity because of noise disturbance and damage to fragile environments. It is recognised as a legitimate activity and some provision has been made in or near urban areas. Trail-bike riding in the mountain lands, however, is condemned by almost all other recreationists, as disturbing peace and tranquility in an environment in which they have deliberately sought respite from urban traffic and other reminders of workday life. We investigated where and how motorcycle recreation impinges on mountain lands and if it is a legitimate recreational use of mountain lands at all.

From the Literature

(a) Needs

The motorcyclists in the Wellington off-road vehicle recreation study (1) overwhelmingly selected developing riding skill from a short list of likely reasons for taking part in off-road recreation. Next came getting to places not otherwise accessible, enjoyment of scenery and freedom from traffic regulations, indicating a need for variety and change from everyday urban life. Informal competition and social climate ranked low.

Latent Demand

"Motor Cycle Clubs and Rallies" were reported as a recreational ambition by 3.5% in the earlier Auckland study (2). The Wellington study shows that "scramble-biking" and "motorcycling" for pleasure are activities that 4% and 3% of the respondents respectively would like to take up. "Not enough money" is given as the main reason for non-participation by 65% and 84% of the would-be scramble-bikers and pleasure motorcyclists respectively, the financial reason being of far greater significance than "not enough time", which is the reason most often given for non-participation in activities.
(b) Behaviour

How Many?

General Population Studies: Recreational use of motorcycles is recorded under various categories. In the New Zealand Recreation Survey (21), "motorcycling - casual" is among the three most preferred leisure-time activities of 1.7% of the population. The specialised motorcycle recreations of motocross, trailbiking and motorcycle racing are reported by 0.7%, 0.4% and 0.36% respectively. In the first Auckland survey (2), 1% noted "Motor Cycle Clubs and Rallies". "Motorbike riding" is 72nd on the list of activities mentioned by the Dunedin population (20).

As an outdoor recreation activity "scrambling" is recorded by 2% and 3% of the Auckland (3) and Christchurch populations (11). In Wellington (13), "motor-biking for pleasure" and "scrambling" are recorded by 2% and 1% of the population only. In the Marlborough study (9), "cross-country - cars, motorcycles" is classed as an intermediate-based recreation with 2 097 participations (roughly half that of tramping). "Motor racing - car, motorcycle" has 1 199 participations recorded. The membership of five Wellington motorcycle clubs in the region is estimated at 800 in the off-road recreation vehicle study (1). The same study, one of the few general population based single activity studies, estimates approximately 2 500 motorcycle owners participating in off-road activity, which correlates with the 1% or 2 450 of the Wellington population over 12 participating in "scramble-biking" (13).

User Studies: That trail-bikes are regarded as destructive of the environment as well as peace is reflected in an observation one of the Tararua Forest Park surveys (38). Although only four trail-bike riders (2.4% of the sample) are recorded, the interviewers noted that a number of others turned around because they (the riders) mistook them for Forest Service personnel. In Coromandel Forest Park during 1976/77 (44), trail-riding ranked 1%. Several day visits by trail bikes are noted at Aspiring Lodge (41). Reserves rangers conducting a summer holiday survey (31) on the road to Macetown, which is not open to ordinary vehicles, recorded that 66% arrived by four-wheel drive vehicle and 15% by trail bike. The rest walked.
Vehicle use, though the type is not specified, was recorded as the main or secondary activity of 12% of the visitors, scenic and historical appreciation receiving the highest scores of 19% and 18% respectively.

Who? (Demographic and Socio-economic Data)

Age: In Wellington (13), of those who rode motorcycles for pleasure, 45% were in the 16-19 age group, 18% in the 20-24 age group and 16% in the 25-29 age group. The scramble-bike sample was small, with 11 of the 17 respondents between 12 and 24 years of age. In the Wellington off-road vehicle study (1), 55.3% were aged 15-19, 29.8% were aged 20-24 years, and the remainder were 25 and over.

Sex: Motorcycling in various forms is a male-dominated sport. Only 18% of the Wellington survey who road motorcycles for pleasure were female. Yet six of the small scramble-bike sample were women. In the Wellington off-road vehicle study 93.6% of the motorcyclists were male and 6.4% were female.

Marital Status: Only 9.6% of the motorcyclists in the Wellington off-road vehicle study were married.

Occupation: Representative occupations of motorcyclists in the off-road vehicle study were apprentices, clerks, plumbers, carpenters and students.

Income: The average gross weekly income of the off-road vehicle study sample was $40.79 at the lower end of the salary/wage scale, reflecting the youth of participants.

How Often?

Forty-five percent of the Wellington motorcyclists who rode for pleasure reported that they rode more than 21 days a year, while 25% reported only 1-4 days activity a year. Fifty-three percent of the Wellington off-road riders rode more than once a week during their preferred season (see When? below), 30.9% rode once a week and 10.6% rode once a fortnight.
Time Spent?
Once at the riding site 33% of those in the off-road Wellington vehicle study rode between three and four hours and 31.9% rode between one and two hours. Just over 25% rode for more than five hours.

When?
Off-road motorcycling (1) was undertaken most commonly in summer by 53.2% and 35.1% rode all year round, 26.6% mostly in spring, with 18.1% and 17% riding mostly in autumn and winter respectively. All rode during weekends, 34% rode on weekdays after work, 33.9% rode in the Christmas holidays and 44.7% during other holidays rode on workdays during working hours. Over 56% had increased their level of activity over the previous two years while for 26.4% their level of activity had remained the same.

Motorcycles were also used by a small number as a means of transport to other recreations such as hunting and fishing, swimming, etc.

With Whom?
Weighted preferences showed that by far off-road motorcyclists preferred riding with other individuals. Riding alone, in competitions, with other members of the family and with fellow club members ranked in that order. Roughly one-third of the sample belonged to a motorcycle club (which would explain the low ranking of club members as riding companions), but 25.8% of those who did not intended to join a club. Of those who belonged to clubs, the mean length of membership was over two years.

Just over 62.7% did not take part in any competition. One fifth at the most took part in one or more motocross, trials, competitive hare events or scrambles, beach racing, enduro trial and hill climbs, indicating that casual recreation was preferred by most.

Where?
The types of terrain most frequently used (based on weighted values) were "grassland restricted to tracks", "grassland with no tracks" and "fire-breaks in scrub country". "Beach or sand dunes", "tracks within a forest"
and "scrub country without tracks" rank next, with low ratings for "forest without tracks" and "other" such as river beds. This may reflect not only the type of area available locally but also the degree of skill of various riders. Once having ridden in an area, 59% reported they would use it again often and 41% said they would return occasionally. The Wellington study (13) indicates that where suitable terrain is found, the motorcyclists riding for pleasure would also take part in off-road activity.

Over 60% of the motorcyclists travelled less than ten miles for most of their recreation. Only 17.9% travelled more than 25 miles often. A quarter travelled to the recreation site by car or van. The remainder rode their motorcycles.

**How Long?**

Experience is indicated by a mean of 108 weeks since purchasing first off-road motorcycle. This reflects the high percentage of riders in the younger age groups.

**Off-Road Motorcycle Ownership**

Seventy-two point five percent owned trail, 16.3% motocross and 11.2% trial bikes. A few owned two motorcycles of different types.

**Cost?**

Estimated expenditure on off-road motorcycle riding ranged from $10 to $1,650 with a mean of $230. Items were not given in detail.

(c) **Wants**

**The Off-road Motorcycling**

Off-road motorcyclists overwhelmingly stated that there was **inadequate land** for their activity. Only 14% felt that the land available was adequate. The Wellington study made a plea for **provision in local parks** and highlighted the problems of access with farmers and land-owners.
After indicating the terrain they most frequently used (see under (b) Behaviour - Where? above) the off-road motorcyclists chose moderate slopes as the most preferred terrain type, followed by flat to rolling land and then steep slopes.

Conflicts

With Other Land Uses: One of the greatest conflicts arises from the annoyance of motorcycle noise near residential areas. About 38% of the residents (1) who lived near areas used for off-road motorcycle and four-wheel drive recreation saw it as a reasonable land use and 31.4% felt it was a valuable recreation. The noise factor was a major annoyance to 55.5% and the danger potential to others concerned 31.4%. Thirteen point nine percent considered it a misuse of public land and 12.4% were annoyed by damage to land. Just over half felt that a minimum distance from houses should be stipulated for motorcycle recreation and just over a third felt the annoyance could be removed by silencers on bikes.

Other Perceptions

While inadequate land for their recreation was the major concern of most motorcyclists, other points for comment were cost, safety aspects, the need for restriction of noise levels and conflict with other recreational pursuits.

From the Motorcyclists

Ten motorcyclists representing several distinct recreation activities took part in discussion sessions. Two university students were exclusively interested in touring (road travel), two (one a woman) long-standing members of a motorcycle club rode in competitive events as well as cross-country touring, three who owned trail bikes belonged to motorcycle clubs took part in a wider range of cross-country events, two classed themselves as trail riders only, one belonging to a specific trail-riders' club, and the other, in his late teens, had no club affiliation. Most rode in the high country when opportunity arose. Ages ranged from mid-teens to late 40s, the older age groups being represented well out of proportion to the age structure indicated in the studies, due to contact
through motorcycle clubs. Observations from trail bike riders met informally are also included below.

(a) Needs

The first comments on needs met on motorcycle recreation centred on the man/machine relationship. The exercise of skill and co-ordination—riding to "the ragged edge of the point where you are almost out of control", in challenging situations and at speed while retaining mastery of the machine—is the foremost need. With this, there is also the thrill of exhilaration and simply just having fun. Trail-bike riding can be elevated to an art. An aspect of the man/nature relationship there is man challenging nature. Getting into the countryside with its fresh air and to other parts of New Zealand seen by a few only were the next expressed needs. A motorcyclist touring from Christchurch to the West Coast experiences a number of dramatic changes in terrain and environment. Getting away from the city also means getting away from the work situation, traffic lights and closely applied regulations. The comradeship of riding companions was briefly mentioned. All prefer to ride with some other person(s) to riding alone, safety being an additional reason.

No distinct categories of motorcyclists emerged according to emphasis on different needs. The differences rather lay in how these needs were met, e.g., cross-country and off-road riding and motorcycle touring (see (b) Behaviour below).

(b) Behaviour

Motorcyclists noted the following behavioural trends:

How Many?

To some observers, the use of motorcycles for pleasure is not a growth recreation. It appears that less people are riding motorcycles for recreation seriously than a few years ago when the government allowed easier purchase terms. Some of the statements were contradictory, possibly reflecting the difference in opportunity between Wellington and Christchurch. A trail rider from Wellington quoted the example of an
annual off-road event in a central North Island exotic forest now only attracting a fraction of former numbers, while the Christchurch off-road riders felt there were more venturing into the hills and high country. An increasing number of reports of riding on private property without landholder permission confirm this. There were more casual, unthinking riders. There were no more people road touring for weekend recreation than a few years ago. In the current economic down-turn only the keen and dedicated persisted with motorcycling as a form of recreation.

Who?
The discussion groups stressed the distinction between serious riders and casual backyard bike owners. Many of the latter ride their trail bikes as transport to school, work or university and ride in near-urban areas such as fire-breaks to let off steam. These are not serious riders, but should be catered for. Most of them "retire" by their mid-20s, replacing their motorcycles with cars for transport. Thus the majority of motorcyclists particularly the "backyard bike owners" are in the younger age group. On the other hand, the average serious rider is usually in his late 20s or 30s.

With Whom?
Motorcyclists usually ride with at least one other person for safety reasons.

Club membership is not increasing to any marked extent. There would be at least as many riders outside clubs as those who are members (the off-road vehicle survey (1) suggests only a third belong to motorcycle clubs of any kind). Different clubs focus on a variety of motorcycle activities, both off-road and touring. Only one club centres round trail-bike riding, while it is one of a number of off-road activities for several other clubs. The clubs attract enthusiasts, promote a definite ethic and standard in riding practices and have established good public relations with private landholders. They are now reaping the benefit of considerate approaches and behaviour in obtaining access to private land.
Where?

Both Wellington and Christchurch off-road motorcyclists stressed that most of their riding was on private land, e.g., high-country runs particularly where easily accessible in the upper reaches of the Canterbury rivers, as well as river beds themselves. Long rides through central Otago country using farm and old miners' trails would be arranged with farmers by a club.

Permission to ride logging roads in state forests, such as on the West Coast and in the central North Island, is usually forthcoming, with restrictions only at times of high fire risk. On the other hand, motorcycle recreation may be banned or permitted on public land only in exceptional circumstances, such as a club enduro event and limited to once a year.

The Christchurch motorcyclists interested in road touring only, planned trips to Arthur's Pass, the West Coast and Queenstown.

Relations with Land Managing Agencies

Relations with managers of various public lands vary considerably according to the area. The Wellington trail riders are particularly grateful for the use of Wellington Regional Water Board land, while permission to ride in parts of the Rimutaka Forest Park is only granted in special circumstances. On the other hand, permission for Christchurch riders to use the Mt Thomas State Forest is usually forthcoming, with riding hours restricted to allow hunters the benefit of noise-free sport in the early morning and evening.

(c) Wants

The Off-road Motorcycling Resource

The adequacy of areas for off-road riding depends on the type of activity pursued. The Wellington riders have found that nearby properties for motocross events are diminishing as farms are subdivided. Local riding areas are also limited in supply for after work and weekend riding. Areas that had been designated for trail bikes are too confining and boring after a
few visits. Thus a variety of places near at hand are needed. The experienced club rider who is prepared to go further afield rarely experiences problems. Maps are often used to check out land ownership. The clubs have a good reputation for considerate behaviour and approaches to the landowner are always made beforehand. For these riders there are always ample places to go. Lack of knowledge of where to go and who to approach for permission is a keenly felt disadvantage to the young non-club rider in the discussion group.

Native forest land with suitable tracks is more attractive to North Island riders than exotic forests with dusty metalled roads.

Management Practices
In addition to losing riding territory through private land subdivision, the acquisition of land by government agencies almost always means a similar loss as off-road vehicle recreation activity is prohibited on water catchment and reserves or regional parks. The necessity of negotiating permission to use public land inhibits sponteneity of participation.

Conflicts
With Other Recreationists: As a vehicle recreation, motorcycle activity is considered by other wilderness recreationists an inappropriate mountain land recreation, being both noisy, disturbing peace and solitude, and damaging to the environment. There is a strong feeling that vehicle recreation should be given its place on suitable public land. Public land hitherto has been allotted to certain types of recreation only, e.g. tramping and hunting. It was pointed out that most tramping tracks have natural barriers to motorcycle activity, such as a difficult creek or a fallen log. On the other hand one older and experienced rider admitted that he would like to ride the Heaphy Track. Well-formed tramping tracks are a natural temptation to the exploring trail-bike rider.

Off-road motorcyclists also find that their activity is incompatible with other types of motorised recreation, such as four-wheel drive vehicles. If the same land is used, clubs try to schedule visits at different times.
In respect to noise pollution it was felt that "good manners" could be promoted, particularly in consideration of other recreationists, such as fishermen, picnickers and trampers, i.e., by slowing down, not riding unnecessarily close and/or using silencers.

With Other Land Uses: In relation to environmental damage it was noted that after a competition event grass usually grew over rutted and bared patches within a month or two. Different events requiring different skills, as well as numbers, have varying impacts.

Other Perceptions

For the serious older motorcyclists, the image of trail-bike riders as young (probably still at school) and irresponsible is irksome. While the clubs are building good reputations, there are those who do not wish to join clubs. Some motorcyclists were natural troublemakers and clubs find disciplinary action difficult. Ultimately alcohol problems had resulted in expulsion of several "rebel" club members. In spite of the emphasis naturally given by club members to the benefit of their organisations, it is felt that opportunities should be available for non-organised access and riding.

The Christchurch group had not known of the off-road recreation vehicle study (1) and noted the fact that it had been commissioned by a local government authority with interest. Most were eager to acquire and examine the study for themselves.

Summary

From the Literature: In the New Zealand Recreation Survey almost as many New Zealanders participate in casual motorcycle recreation as tramping. As many again are interested in some more specialised form of off-road motorcycle recreation. The regional and urban studies show a much smaller following. Again, differences in categories make comparisons a difficult task. The weight of information is again behavioural, with detailed contributions from an informative study of Wellington off-road motorcyclists, also touching on their needs and wants. User studies rarely mention motorcycle recreation.
The typical recreational motorcycle rider is young, male and single. He is most likely to be an apprentice, tradesman, clerk or student and therefore on the lower rungs of the wage scale. In the appropriate season (summer preferred), riding could take place more than once a week with weekends the most favoured time. Riding in company was preferred to riding alone and casual or informal riding to organised as competitive events, which were nonetheless sought to various degrees by over a third of off-road riders. Roughly a third reported club membership. Trail bikes were the most frequently owned type of off-road motorcycle. Most travelled less than ten miles to participate, seeking the nearest opportunities. Open grasslands, with and without tracks, were used most and moderate slopes were the preferred terrain type. There was an overwhelming accord that there is insufficient land available for this recreation activity, and that the available resource is diminishing. This implies that the need to develop skill may well be satisfied by the adequate provision of suitable riding areas near population centres. However, a second important need to be fulfilled stems from the desire to get to places not otherwise accessible, considered with the general preference for casual or unorganised riding has implications for mountain lands as defined for our study.

General population studies relating to motorcyclists are:

New Zealand basis: no 2, 15
Urban or regional basis: nos 1, 2, 13, 17, 20

User studies relating to motorcyclists are:

nos 31, 38, 41, 44

Surveys with information beyond participation rates are underlined.

From the Motorcyclists: The needs for development of skill and co-ordination and having fun were first mentioned by off-road recreational motorcyclists. Getting to other places and environmental appreciation were important to those who toured rather than the off-road motorcyclists, although the man/nature element was also mentioned by off-road high-country riders.
A trail-bike rider explores forest on McLeans Island near Christchurch (17). Next weekend he may head for the high country. Four-wheel drive recreation is mainly associated with other activities such as camping and fishing — total satisfaction at Lake Tennyson (18).
Two discussion groups gave opposing views to whether activity was increasing or not but it does seem that demand for areas near population centres is increasing. This pressure is more apparent as riding areas are subdivided or motorcycles banned from another recreation area. Clubs have built up good relations with private landowners and, for them, there is no real lack of places to ride. Club riders are particularly concerned with the bad image that irresponsible riders project.

Implications

1. Demand for motorcycle recreation in the mountain lands is not great. In general, motorcycle riding in mountain lands is inappropriate for riders, other recreationists and the environment.

2. Limited recreational demands of off-road motorcyclists can be considered in mountain lands, such as setting aside specific areas on public land where activity can be strictly controlled.

3. Most of the demand for off-road riding and practising skills can be satisfied outside mountain lands, particularly in the provision of areas of greatest need near large centres of population.

4. Demand is also for variety in challenges and places to go both near populated centres and in the countryside. Provision for off-road riding should therefore be made in a number of appropriate areas, rather than a limited few.

5. In identifying such areas, the terrain preferences of riders, environmental carrying capacity for sustaining off-road vehicle recreation and distances from other recreationists to avoid disturbance (particularly noise disturbance) should be considered. While some of the strongest objections come from trampers and mountaineers, it appears that terrain requirements are almost mutually exclusive. The greatest clashes are with fishermen, picnickers, etc. on easier terrain.

6. Areas for off-road motorcycle recreation should be studied and monitored for environmental impact, and managed accordingly.
3.2.8 **OFF-ROAD FOUR-WHEEL DRIVE RECREATIONISTS**

**Introduction**

Four-wheel drive vehicles are most often owned as an adjunct to back-country activities such as hunting, fishing or tramping. For some, however, off-road driving has become a recreational activity in its own right.

**From the Literature**

(a) **Needs**

A study of off-road vehicle activity in Wellington (1) used the 100 or so members of the Wellington Cross Country Vehicle Club as its survey base, as there was no other way to contact recreational off-road drivers of four-wheel drive vehicles. Almost all indicated getting to places not otherwise accessible as the major reason for participation. Enjoyment of scenery, informal competition, and social contact ranked next. Developing driving skill, for competition and freedom from traffic regulations ranked lowest, reflecting the average older age group and family orientation of the activity. For a large proportion, off-road vehicles served as transport to another recreation. Their club membership indicates that the vehicle has become an important part of their recreational experience.

**Latent Demand**

There is no note of four-wheel drive recreation as an ambition in any of the studies reviewed.

(b) **Behaviour**

**How Many?**

*General Population Studies:* Off-road four-wheel drive recreation is not recorded in the New Zealand Recreation Survey (21) list of the three most preferred leisure-time activities. Nor is it mentioned as such in other general population studies, although the activity may be included under "car rallies" or even "driving for pleasure". The Marlborough pilot study (9) however records 2 097 participations in "cross country driving", which includes motorcycles as well as cars, roughly 150 more instances of participation than in climbing and half that of tramping.
When?
Seventy point three percent most commonly drove for recreation all year round and 23.4% drove mostly in the summer. Off-road driving most commonly took place during weekends (93.3%), other holidays (67.2%), Christmas holidays (56.2%) and weekdays during and after working hours (20.3% each).

With Whom?
Driving companions were most frequently other members of the family, predominantly wives and children. Other club members and other individuals ranked next, almost equal. Driving in competitions and driving alone ranked low.

The average length of club membership was two years and four months.

Where?
The most frequently used terrain types were tracks without forest, followed by fire-breaks within a forest, firebreaks in scrub country, beach or sand dunes and grassland restricted to tracks.

Just over half travelled more than 25 miles to the areas they most often drove in, while the rest normally travelled various distances under 25 miles.

The majority (68.8%) drove in the same area more than five times a year, while 31.25% made repeat visits to an area two to five times a year.

Cost
During the past year, a mean of $817.00 was spent on four-wheel drive off-road recreation by respondents. Items were not detailed.

(c) Wants
The Four-wheel Drive Resource
Eighty-one point three percent felt there was inadequate land available for their off-road vehicle activity. Comments indicated that their recreation resource was diminishing, with local bodies closing some areas previously used for off-road driving.
From the Four-wheel Drive Recreationists

The contributions to this section were gathered in an informal discussion with vehicle recreationists at the New Zealand Council of Recreation and Sport. Four-wheel drive recreation was represented by a member of a local cross country vehicle club.

(a) Needs

Four-wheel drive recreation fulfilled the needs of families to get away from the city and into the country. For a much smaller group the activity centred around driving skills and competition.

(b) Behaviour

How Many?

It is estimated that about 4 000 people are involved in four-wheel drive recreation in New Zealand.

With Whom?

As mentioned under (a) Needs, four-wheel drive recreation is basically a family recreation. In spite of comparatively small numbers of reported participants, there are about 20 cross country or four-wheel drive clubs in New Zealand, and a national association. Clubs foster driving skill, safety and competitive events over a set course on rough terrain. Clubs also organise themselves to assist in search and rescue and other emergencies.

Where?

Four-wheel drive trips range from the coast to forest and mountain lands. A trip might be for a day or weekend, or a long trip, in the holiday period taking in an Island circuit or visiting the South Island rivers.

As with trail-bike riders, four-wheel drive recreationists most frequently use private farm lands where they have built up a rapport with the owner. The general experience is refusal for use of state land. In this respect four-wheel drive recreationists feel they are worse off than motorcyclists.
User Studies: As noted under 3.2.7 MOTORCYCLISTS, vehicle use (four-wheel drive or motorcycle) was specified as the main or secondary activity of 12% of the visitors to Macetown (31) - 66% of the visitors arrived by four-wheel drive vehicles.

Who? (Demographic and Socio-economic Data)

The following data is taken from the study of Wellington off-road vehicle recreationists:

Age: Thirty-one point three percent were aged 20-24; 23.4% were 25-29 and 17.2% were 30-34, the emphasis being on the younger adult age brackets.

Sex: Only one of the drivers was female. This is an emphatically male-dominated recreation activity.

Marital Status: Fifty-eight percent of the drivers were married. Wives and children are by far the most frequent companions on vehicle outings.

Occupation: Builders, contractors, labourers, mechanics, teachers, bus drivers and electricians were listed as participants' occupations.

Income: The average income of participants was stated to be almost identical with the national average wage.

How Often?

Thirty-seven point five percent drove once a week for recreation, 23.4% once a fortnight and 21.8% more than once a week in their preferred season of activity, though most also drove all year round (see When? below).

Forty-six point eight percent usually spent 6-24 hours in an area, 32.2% spent 5-6 hours and 27.4% would spend more than 24 hours. Over the previous two years, 48.4% had increased their level of activity while for 37.5% it had remained the same.
Certain local authorities have made provision for use of water supply catchment areas which is greatly appreciated.

(c) Wants

The Four-wheel Drive Resource

The greatest lack appears to be access to suitable public land, even on strictly specified occasions. Land managing agencies are seen to think in terms of foot recreation, which denies recognition in mountain areas to the over-30s and those who have children.

Conflicts

With Other Recreationists: As in the case of motorcycles, four-wheel drive activity is a disturbance to other recreationists seeking peace and solitude. Other recreationists oppose motorised recreation as an appropriate mountain land recreation. At attempt by cross country clubs to join the Federated Mountain Clubs was rejected on these grounds.

Trail bikes are also incompatible with four-wheel drive recreation and clubs schedule trips and events so as not to clash in the same area.

Other Perceptions

Four-wheel drivers are sensitive to publicity that makes them appear irresponsible in terms of not caring for the environment and lacking respect for other recreationists.

Summary

From the Literature: The needs fulfilled in four-wheel driving indicate getting away from everyday life, the vehicle being the means of reaching places not normally accessible. Scenery enjoyment and social contact are also important.

Drivers are in the younger age groups, though not as young as motor-cyclists, mostly between 20 and 34, possibly reflecting the comparative recency of
off-road four-wheel drive recreation. Over half were married and wives and children were frequent companions on outings. Most were builders, contractors, labourers and trades people, earning the national average wage. Weekends were the most popular time for off-road driving and over a quarter drove at least once a week. About half regularly drove over 25 miles to a recreation area, indicating that such distances are not a great barrier to participation. Forest tracks, followed by firebreaks in scrub country were the most popular areas. Four-wheel drive recreation is often combined as travel means to another activity such as hunting, tramping or fishing.

Most drivers felt there was inadequate land available for their recreation and some saw the existing resource diminishing.

Off-road four-wheel drive vehicle recreation for its own sake has a small following and does not appear as a separate activity in any of the general population studies, yet the comparison between off-road four-wheel drivers and motorcyclists reveals significant differences, such as family orientation of the former and emphasis on developing skill of the latter.

---

General population studies relating to off-road four-wheel drive recreationists are:

Urban or regional basis: no 1 9

A user study relating to off-road four-wheel drive recreationists is:

no 31

The study underlined contains information beyond participation rates.

---

From the Four-wheel Drive Recreationists: In discussion the family orientation of four-wheel drive activity was reinforced. The greatest lack is right of access to suitable public lands for their activity, which is supported by the general belief that vehicle recreation is an inappropriate mountain land recreation.
Implications

1. Four-wheel driving is a legitimate recreation activity which should be recognised as such by land managing agencies responsible for recreation activities.

2. With a proper knowledge of the needs, behaviour and wants of these recreationists appropriate areas can be set aside for four-wheel drive recreation.

3. More areas should be designated for four-wheel drive recreation, bearing in mind the need for variety of environment and exploration.

4. Consideration should be given to permitting safari-type expeditions the use of public lands on specific application.

5. The environmental effects of four-wheel drive vehicles need to be studied and monitored, and appropriate management techniques applied.
3.3 REVIEW OF METHODOLOGY AS APPLIED

3.3.1 The Literature and Discussion Groups

From the Literature: Different data bases and different aims in the recreation studies warn that comparison should proceed with caution. A study may deal with all activities of a person's leisure-time, or just outdoor recreation activities; it may be biased towards family recreation, or aimed at resource use and impact.

The popularity of an activity may be measured: by the percentage of the sample population which participated one or many times in the past year, as in most regional and urban studies; in terms of the three most favoured activities (to the exclusion of all other activities) as in the New Zealand Recreation Survey (21); or by the number of participations in the activity, as in the Marlborough study (9); or by stated preference rather than actual participation as in Palmerston North (7). Again, the adequacy of the sample and degree of sophistication of the questionnaire also call into question the validity of comparison. All the studies surveyed in this chapter were based on structured questionnaires filled out by the recreationist. Based on her experiences in handling surveys at Craigieburn Forest Park and Hanmer State Forest, Gillman (35) has reviewed the literature, surveying pitfalls in wording, presenting, selecting samples and analysing questionnaires. The aspiring researcher is recommended to consult this publication as an introduction to questionnaire methodologies. Although most regional and urban outdoor recreation surveys were conducted within a span of five years, the scene is fast changing. Thus, in the case of a rapidly developing recreation activity such as skiing, a study of over five years ago is already outdated (for publication dates see Table 1 on page 33).

Another problem is that not all studies agree in classifying recreation activities. Thus "vehicle recreation" may cover cars, off-road four-wheel drive vehicles and motorcycling, while some studies categorise motorcycle
recreation in detail: touring, trail, trial and motocross. Hunting, as shown in the review, is only broadly defined, while "fishing" may refer to sea and freshwater or the two types of fishing may be considered separately.

From the Recreationists: Group sizes varied according to last-minute unavailability of prospective participants, and, in one case, the sheer difficulty of establishing a suitable date for all to come together. The invitation to participate was invariably received with an appreciation of opportunity to co-operate and communicate points of view, particularly as the resulting reports were to be presented to government departments and be generally available as a publication of the Tussock Grasslands and Mountain Lands Institute. Altogether 64 mountain land recreationists took part in 16 discussion sessions as summarised in Table 2 below.

The following points concerning the discussion groups assembled for the pilot study should be noted:

**TABLE 2: Number of Participants in Pilot Study Discussion Groups**

<table>
<thead>
<tr>
<th></th>
<th>Trampers</th>
<th>Mountaineers</th>
<th>Skiers</th>
<th>Hunters</th>
<th>Fly fishermen</th>
<th>Canoeists</th>
<th>Motor cyclists</th>
<th>Trailbike riders</th>
<th>4-wheel off-road vehicle drivers</th>
<th>Hand-gliders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellington</td>
<td>3</td>
<td>7</td>
<td>3</td>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Christchurch</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td>1 Jet boater</td>
<td>36</td>
</tr>
<tr>
<td>Dunedin</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>(Mixed panel)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10</td>
<td>13</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td></td>
<td>64</td>
</tr>
</tbody>
</table>
1. In assembling discussion groups, we clearly ran into the same problems as the agencies in gathering information. Clubs and organisations are easily identifiable and contactable entities, often with well-articulated policies and objectives, whereas the non-club casual participant is virtually anonymous until identified by survey - which was beyond the means of this exercise. To provide some balance we included observations and perceptions of those we met participating in mountain land recreation during our study period. Nevertheless, long-standing participants in an activity are often involved in its organisation and can present the keenest observations on both short and long-term trends. Observations and responses were given on a purely personal basis and at other times they spoke on behalf or for a range of recreationists within their activity.

2. Only two groups were assembled for each activity, except in the case of four-wheel drive recreation where discussion took place in slightly different circumstances. A mixed panel was assembled in Dunedin.

3. Some groups were more forthcoming and articulate than others. The small groups could be most informative, but there was more interaction and controversy in the larger groups. Discussion was most lively when there were participants in various forms of an activity such as motorcycle touring and trail-bike riding. More information may have been forthcoming if threadline fishermen had been included in the fishermen's groups. Some of these limitations came from stipulating habitual or frequent visitation to mountain lands for recreation as a criterion for taking part in group discussion.

4. There is next to no literature on the discussion group as a research method. The only example in the literature review, a study of Australian perceptions of New Zealand as a holiday destination (16), was not available until after the discussions had been conducted. Thus the approach and concepts clarified as the study progressed and relevant themes emerged - the recreationists themselves helped define this study and its framework.
In the early sessions, we experimented with a range of formats from a large list of specific questions, to virtually no prompting or guidance at all. The former, although evoking immediate response, can defeat the purpose of free and spontaneous discussion - a printed questionnaire would serve the same purpose. The latter can lapse into mere swapping of personal experiences and anecdotes if attention is not drawn back to the main themes. The use of groups is further discussed under 3.3.4 Discussion Groups as a Tool for Researching Needs, Behaviour and Wants of Recreationists. The broad questions settled on as a guide to conducting discussions is given in Appendix II, although there were some specific questions on which we specifically sought feedback.

(a) Needs
From the Literature: Only one study for the eight mountain land recreation activities reviewed began to investigate the needs of recreationists. This was the Off-road Vehicle Recreation Study (1), covering motorcycling and four-wheel drive recreation. Respondents were asked to rank a given list of four or five needs. The same approach with a detailed analysis was used in the study of summer visitors to Tongariro National Park (32). These visitors were not categorised into any of the eight recreationist groups, although where applicable the hut-user sample has been discussed under 3.2.1. TRAMPERS. The needs listed in both of these studies are compared with the needs given by recreationists in the pilot study discussion groups in Table 3, pages 186-7. Some of the "wants" questions elicited expressions of need, such as "I like being in nature", etc.

In this report, however, latent demand has been seen as a positive expression of needs to be met in specific recreation activities. Data for latent demand is usually collected in a behavioural context, attempting to predict possible future participation. The first Auckland study (2) records consistently higher percentages for desired activities than other general population studies investigating this point. In these, authors have noted that relatively low percentages indicate realism rather than wishful thinking as the basis of response to the question. The most common reason for
<table>
<thead>
<tr>
<th>TABLE 3: Summary of Needs in Two Questionnaire Studies and Pilot Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Off-road Motorcyclists</strong> (1)</td>
</tr>
<tr>
<td>Developing riding skill</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Getting to places not otherwise accessible</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Enjoyment of scenery</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Freedom from traffic regulations</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Informal competition and social climate</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>For competition</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>As a means of transport to some other recreation</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

* Response to question "What are the basic human needs met in your recreation activity?"
** Responses to question "Why do you take part in off-road recreation?" selected from given list (weighted preferences given)
*** Motivations ranked from list of six (first choice only stated)
<table>
<thead>
<tr>
<th>C. Skiers</th>
<th>D. Hunters</th>
<th>E. Fishermen</th>
<th>F. Canoeists</th>
<th>G. Motor-cyclists</th>
<th>H. Four-wheel drive Recreationists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release physical energy</td>
<td>Proof of hunting skill</td>
<td>Catching a fish through exercise of skill</td>
<td>Get away from crowds and/or pressures</td>
<td>Skill and co-ordination</td>
<td>Get away from the city</td>
</tr>
<tr>
<td>Excitement and fun</td>
<td>Challenge</td>
<td>Being in nature</td>
<td>Get into nature</td>
<td>Exhilaration and having fun</td>
<td>Family recreation</td>
</tr>
<tr>
<td>Get into the hills and away from the city</td>
<td>Proof of self-sufficiency</td>
<td>Get away from the city</td>
<td>Let off steam and have fun</td>
<td>Man challenging nature</td>
<td>Driving skills</td>
</tr>
<tr>
<td>Social opportunities, can be family activity</td>
<td>Get out of the city</td>
<td>Companionship</td>
<td>Develop self-confidence, personal identity</td>
<td>Getting into the countryside</td>
<td>Competition</td>
</tr>
<tr>
<td>Social prestige</td>
<td>Get back to nature</td>
<td>Solitude</td>
<td>Teamwork and companionship</td>
<td>Getting away from the city</td>
<td></td>
</tr>
<tr>
<td>Skill</td>
<td>See animals in the wild</td>
<td>Opportunity to learn and build on experience</td>
<td>Competition</td>
<td>Comradeship</td>
<td></td>
</tr>
<tr>
<td>Art Form Wilderness (for Ski mountaineers and cross-country skiers)</td>
<td>Solitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
non-participation was overwhelmingly "not enough time" for almost all activities, including those not in the pilot study. For off-road motor-cycling and motor-biking for pleasure, "not enough money" was the main reason for non-participation and a substantial secondary reason for not skiing. Family responsibilities were also given as an inhibiting factor contributing to non-participation but received far fewer mentions. Different reasons for non-participation can be more or less important according to the activity. Only some barriers, such as lack of facilities, nearby access and transport, can be removed by management means. Other barriers are rooted in the structure and functioning of society. Recreational motivation is compounded by personal circumstances of age, state of health, family responsibilities and many other demands on leisure time, although it is held that if the motivation to undertake an activity is strong enough, the constraints such as "not enough time" can be overcome.

From the Recreationists: The question: "What are the basic human needs met in your recreation activity?" met with remarkable uniformity of understanding and response. Only on one occasion was it necessary to prompt "What do you get out of your recreation activity?" or "Why do you tramp, climb, hunt, etc.?"

In general getting away from the city (seeking variety and alternative experiences) was mentioned first or later given emphasis. Getting into/ back to nature is an alternative and positive expression or affirmation. The performance of the activity in terms of developing, proving or exercising a skill received equally as much emphasis, often linked with personal growth and development of identity. For a fisherman, a successful outcome is catching a fish, for a hunter, it is shooting an animal. The expenditure of physical energy is important to trampers, mountaineers, skiers and hunters. The environment is regarded by trampers, mountaineers and hunters first as providing a challenge and then in terms of nature appreciation and opportunities for solitude. Exploration and visiting different places is important to trampers, climbers and motorcyclists in particular. Nature appreciation and observation is specifically emphasised by fly fishermen. Skiers, canoeists and motor-cyclists put emphasis on having fun, letting off steam and excitement. Skiing also has the quality of
becoming an art form. Companionship and social opportunities were rarely mentioned first but their importance was generally emphasised later. Possibly this aspect of recreation is taken for granted, its importance being recognised only after other needs had been discussed.

Needs of types of recreationists not in the discussion groups were also referred to, social prestige being important to some skiers and catching a fish (or as many fish as possible by easier means than a fly rod) being important to some fishermen.

A fuller study with a wider range of recreationists for each particular activity might reveal a considerable number of casual participants for whom being in a natural environment ranks higher than physical challenge or expenditure of energy. For casual participants, the actual activity may be far less important than the opportunity for a change of environment and social interaction. In some cases we have been able to categorise or "type" recreationists according to predominant needs, such as trampers. There are those for whom challenge and chance to use skill rank highest, those for whom the aspect of being in the natural environment ranks highest and those for whom tramping is a social experience. Different needs may dominate at various stages of the life cycle.

Table 3 (pages 186-7) summarises and compares needs in two previous studies with those of the discussion groups. In the studies respondents were asked to rank a limited list of needs, while our question was open-ended. The responses in the previous studies have been ranked, but the responses in our pilot study are merely listed in order of mention. Nevertheless, the replies of off-road motorcyclists in study (1) and those taking part in our pilot study are comparable. The absence of competition in the pilot study group can possibly be ascribable to high-country visitation by the discussion group.

The Tongariro summer visitor sample (32) rated six motivating factors from first to sixth choice. The author notes that "beauty of the mountains, bush, tussock and bird life", while first choice for 23.10%, does not rank more than fifth or sixth for over half the sample. "Being away from the
city" and "the simplicity of life while at the Park" amount to 40% of first and second choices. The next rankings are "physical challenge", "being with one's friends and family", "the beauty of the mountains" and finally "the intellectual challenge". Devlin cautions the implications of these rankings (which are for a diversity of recreationists rather than one specific recreation) and suggests that because of "the relative lack of sharp distinctions among the choices...there is a motivational syndrome at work rather than any one or two single causal factors". Our open-ended question allowed a wider range of responses. Thus, "fun and excitement", "personal development", "solitude", "relaxation", "heightened sensitivity in a natural environment" emerge as needs that might not have been expressed otherwise. This only scratches the surface of the complexity of motivation theory.

As an adjunct to our question on needs, we asked some groups if any other activity could substitute for the one undertaken. Mountaineers and some trampers nominated "sailing" as having the same appeals of challenge of nature and solitude. One hunter ventured to suggest "tramping", but on the whole the discussion groups could not convincingly name satisfactory substitute activities. All were committed adherents of their own recreation activities, and the unlikelihood of prohibition of their activity rendered the question almost imponderable. Casual participants might suggest substitute activities with greater ease, but this hypothesis needs testing.

(b) Behaviour

How Many?

From the Literature: The first question posed was, "How many?" Of the eight recreation activities reviewed, fishing was the most popular, followed by hunting, tramping and skiing. Canoeing and mountaineering had much smaller followings. The vehicle activities are difficult to assess. Motorcycle recreation on a casual basis could be as popular as tramping, but serious trail-biking may be considerably less popular. Table 4 (pages 192-5) compares participation for each of the eight activities as given in the major national, regional and urban general population studies. For overall comparison, there are broad categories of recreation activities and the ten
most popular activities for (a) all leisure-time activities and (b) outdoor recreation activities. The eight activities are ranked in their listings and the number of activities in each list is given. Considering the limitations imposed on such comparisons, there are remarkable consistencies in participation rates, particularly in the outdoor recreation studies. The wider divergences are due to presence or absence of local opportunity, e.g., low participation in freshwater fishing in Auckland and a much higher participation in Christchurch.

From these studies, it appears that relatively few New Zealanders take part in these eight recreation activities, not all of which are entirely dependent on the mountain land resource. In terms of outdoor recreation, participation focuses on informal activities such as picnicking and driving for pleasure where the end point of the journey may be a variety of terrains, from mountain land to beach, according to local opportunity. User studies confirm that the majority of visitors at many sites are these "fringe" users. The activities of these fringe users do not penetrate far into the interior of the park or recreation area. At Kauaeranga Valley in Coromandel State Forest Park, the most popular activities in 1971/72 (39) were "sightseeing/pleasure driving", with a rank of 24%, and picnicking, with a rank of 16%.* At Holdsworth Lodge entrance to Tararua State Forest Park (28), 80% of the visitors were day users engaging in sightseeing, hiking, picnicking and other activities. Forty-five non-skier summer visitors at Craigieburn State Forest Park (35) reported one or a number of activities: 73% went on short hikes, 44% picnicked, 42% rested and 38% were driving for pleasure.

It can be seen from these examples that the recreational use of mountain land is far greater than indicated by the eight activities studied and, from the bibliographic list in Chapter Two, that it is for these informal activities that information on recreationists is needed most.

* These rankings fell to 8% for sightseeing and 6% for picnicking in the 1976/77 Coromandel Survey (44), while tramping and camping with rankings of 25% and 19% had become the most popular activities. This reflects the boom in these activities and resultant pressure on an area within easy reach of one-third of New Zealand's total population. Both Coromandel studies used weightings based on the activities most important to the respondent.
<table>
<thead>
<tr>
<th>Study and Date of survey</th>
<th>NZRS (21) 1975</th>
<th>Auckland (2) 1970</th>
<th>Palmerston North (7) 1969</th>
<th>Dunedin (20) 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Three most popular categories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sports</td>
<td>26.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; maintenance</td>
<td>15.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active outdoor</td>
<td></td>
<td></td>
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### (b) Outdoor Recreation Activities

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<th>Christchurch (17) 1972/73 %</th>
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<tr>
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<td>Walking</td>
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<td>3</td>
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<td>7. Motorcycling</td>
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<td>8. Off-road four-wheel drive</td>
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<td><strong>Total Activities</strong></td>
<td>31</td>
<td></td>
<td>18</td>
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</table>

* User-oriented: High intensity use areas in or near cities and towns, e.g., sports grounds and swimming pools. Intermediate: Less intense use, generally non-urban but within easy reach of population centres, e.g., canoeing, driving for pleasure, etc. Resource-based: Remote, often rugged areas, usually national or state forest parks, attracting trampers, hunters, etc. Little or no development. ** As reported in (3).
From the Recreationists: The most significant behavioural trend is the boom in numbers using mountain lands for recreation. Trampers, mountain-eers, skiers and canoeists all point to phenomenal increases in participation, while fishermen report a slower, but nevertheless steady, increase. Only in hunting has participation decreased. In addition to the traditional mountain land recreation activities, new activities such as off-road motorcycle and four-wheel drive recreation have mustered sufficient numbers to demand recognition from the land managing agencies.

Ease of opportunity has been demonstrated as a factor affecting participation positively, as in the success of recently-developed skifields, and negatively, as in the case of hunting, where reduction in the resource has decreased participation significantly.

The indications are a continuing boom in outdoor interests. Studies, of which the Tongariro summer visitors (32) is a New Zealand example, show that most wilderness and back-country recreationists can point to some degree of exposure to mountain land recreation in childhood. Also, with a greater knowledge of nature and the natural processes, mountain lands may become much more of an integral, inspirational and intimate part of our lives. The comparatively low participation in mountain land recreation activities reported in general population studies may have altered dramatically in the last few years, which may need time to manifest itself in its entirety. In his initial data analysis, Simmons (58) has already shown that outdoor education experiences offered in schools is a significant "first introduction" to mountain land recreation activities for the under-30s.

Who? (Demographic and Socio-economic Data)

From the Literature: Figure 1 (after this page) summarises demographic and socio-economic information for the eight activities in the pilot study and compares it with the New Zealand population as a whole. While there was no information available on canoeists, the survey of Wanganui River users (54) currently in preparation, indicates patterns aligning with those of trampers and mountaineers.
Age is a significant factor for the physically exacting activities. The majority of trampers, climbers and motorcyclists were in their late teens or early 20s. Skiing also attracts youth but is maintained as a recreation by older age groups. The greater proportion of motorcyclists are under 24, the emphasis being on the under-20s. The majority of hunters and four-wheel drive vehicle recreationists, however, are slightly older, being in the 25-plus age group. Fishermen are spread more evenly over all age groups. It can be noted that participation often increases to some extent in the 40-plus age group, when family responsibilities diminish.

The activities are mostly male-dominated, although there is almost equal male-female participation in tramping and skiing.

Marital status generally reflects the dominant age groups and may account for drop in participation as other commitments usurp leisure hours once allotted to time-consuming activities, such as tramping and climbing.

Educational attainment is also significant. The dominant groups in tramping, mountaineering and skiing are those with university degrees or diplomas. Where the age groups under 20 and unemployed dominate, it is also likely that a proportion of those indicating secondary education as their highest attainment are undertaking university studies at the time. It is noted that there is a low proportion of hunters with degrees. The educational attainment of motorcyclists and four-wheel drive recreationists has not been given, although it can be expected to align with the educational requirements of their occupations.

Tramping, climbing and skiing are dominated by white-collar and professional occupations and those with (or undertaking) university education. Fishing, hunting, motorcycle and four-wheel drive recreation appeals more to the "middle" service and trades occupations.

Income is noted in some studies but has not been graphed because of the complexity in reducing data gathered over 10 years to a common base for purposes of comparison.
Not noted on the graphs, but nonetheless significant, is the number of overseas recreationists, mostly from Australia, in well-known tramping areas and on skifields.

These patterns align with studies in countries where life styles and standards of living are similar to New Zealand, particularly in the dominance of the higher educational and occupational groups in traditional activities such as tramping and mountaineering. Participation rates in outdoor recreation activities are highest at the top of the income and occupational hierarchies (Outdoor Recreation Resources Review Commission 1962). According to several population studies in New Zealand (7, 12, 13, 17, 20), informal activities such as driving for pleasure, sightseeing, picnicking, etc., are found to be popular with almost all groups. Nevertheless, user studies reinforce the dominance of the higher education and occupation levels in fringe activities at a number of mountain land sites: the summer programme visitors at Tongariro National Park (32), non-skier summer visitors at Craigieburn State Forest Park (35) and a recent study of visitors to the Waitakeres (56), only 25 kilometres from central Auckland, yielding a similar comment. The significant differences between the general population and user studies may be attributed to factors such as distance to be travelled to the mountains, whether the trip was for a day only or part of a longer trip, and in the availability of other nearby opportunities for driving, picnicking and rambling, such as beaches or lowland parks and reserves. When the other side of the coin is examined, it is only some of those in the higher education and occupation groups who participate in the traditional mountain land activities and all groups are represented to some extent (Devlin pers. com).

Predictions of future wilderness use based on projections of population characteristics have been attempted in the United States. However, the relationship between wilderness or mountain land use and specified demographic or socio-economic characteristics is not wholly understood (Neighbour (17), Lucas 1978). Socio-economic information thus may not be of immediate value to the park manager. It is, however, relevant to decisions in the political process, whereby societal values and goals are furthered by the allotment of public funds and resources.
Picnicking, swimming and native walks are some of the other ways in which people use mountain lands for recreation — swimming in Kauaeranga Valley, a focal point of Coromandel State Forest Park (19), following a nature walk in Fiordland National Park (20), or picnicking at the roadside in Arthurs Pass National Park (21).
With basic identification of recreationists established, researchers have in this decade, as noted by Neighbour (17), begun the investigation of more detailed behavioural and motivational aspects of different recreationists. The rest of this section is in effect a review of such progress in New Zealand.

**From the Recreationists:** The next significant behavioural trend noted by the groups is the number of under-20s who constitute by far the largest proportion of the increase in mountain land recreationists. This is attributed to outdoor education curricula featuring tramping, bushcraft, survival, mountaineering, skiing and canoeing skills - the activities that take place mostly in the mountain lands. Outdoor recreation activities are often coupled with earth science and biological studies. These students already being a noticeable proportion of mountain land users, other factors are the earlier social maturation and a keenness among the most able to achieve and go beyond the limits already reached by earlier participants.

**With Whom?**

**From the Literature:** Friends and peer group are the most frequent companions, particularly for the younger age groups (15-24), in tramping, skiing and motorcycle recreation. Family orientation is also significant in tramping and skiing, as well as fishing and four-wheel drive recreation. Commercial guiding and organised tours have been shown to have a role in tramping and skiing. Very few participate alone, apart from some of the fishermen.

**From the Recreationists:** The discussion groups pointed out guided trampers or canoeists, ski tour groups and safari hunters as discrete categories of recreationists.

**Clubs** are given little or no recognition in literature. Yet in manager/user consultation, as pointed out, the clubs or their national organisations are identifiable and contactable entities, which may also take the initiative in confrontation. Under 3.2.1. TRAMPERS, it is suggested that club membership denotes a degree of commitment to an activity and that different levels of ability, keenness, etc., are found with different combinations of needs, behaviour and wants. The clubs are not only a forum for the
activity itself, but instruct, provide a social milieu, organise formal
competition where this is applicable and are a basis for organised political
lobbies. Some activities appear more "clubbable" than others, e.g., tramping,
mountaineering, skiing and canoeing. The significant trend, however, is
that clubs account for a smaller proportion of an increasing number of
mountain land recreationists. This is the result of more knowledge and
competence (through outdoor education courses), more opportunity (recently
developed commercial skifields) and wider general interest in outdoor
recreation, enabling participation without seeking a club to meet activity
companions.

Other activities such as hunting, fishing and trail-bike riding emphasise
individuality and, apart from participating casually, some simply do not
want to join clubs.

Where?

From the Literature: Not all activities in the pilot study are entirely
dependent on the mountain land resource, although this is where the em­
phasis lies for trampers, mountaineers, skiers and hunters. Fishermen,
canoeists, motorcyclists and four-wheel drive recreationists may all at
some time make demands on the mountain land resource. The general popula­
tion studies do not go into details of specific destinations - the nearest
or most accessible locations are the most popular. The studies of fisher­
ment only (11/all reports, 19, 8, 25) identify in detail the fishing waters
visited.

User studies of popular areas, such as Tongariro National Park, the Route­
burn and Milford Tracks, indicate a nationwide tramping patronage, although
North Islanders dominate the first and South Islanders the second and third.
Inter-island travel, as well as distance barriers, may play a role here.

Several other points are considered under Where? Word of mouth is the
most significant source of information of where to go in the user studies
covering trampers and skiers, although New Zealanders may tend just "to know".
Advertising material plays a more important role for overseas recreationists.
Transport to a recreation area is mostly by privately-owned vehicles (skiing, fishing), although where public transport is available, as in the case of the Routeburn and Milford Tracks, this plays a much more important role. Motorcycles and four-wheel drive vehicles, apart from constituting a recreational activity in their own right, were also used as transport to another activity, such as tramping, fishing, hunting, etc. Accommodation is also discussed in some studies, where overnight stays are involved. The majority of fishermen used simple accommodation – tents, caravans or private baches. At the time of the Mt Hutt study (40), private accommodation appears to have been the most significant for skiers.

**From the Recreationists:** Not all activities belong exclusively to mountain lands. Tramping, mountaineering, hunting and skiing are the traditional activities, but trampers and hunters may, for variation or where game is available, recreate in non-mountain lands. Freshwater fishermen and canoeists divide their attention between lakes and rivers in mountain lands and other water resources down to the coast. Only a few fishermen or canoeists penetrate the most rugged mountain wilderness areas. Some are activities whose demands on mountain lands are recent. Most off-road motorcyclists prefer areas near their homes, but some, either through lack of suitable local opportunity coupled with a desire (need) to explore and visit new places, are venturing into the hill and high country in search of suitable areas, as well as beach and dune lands. The form of activity may similarly direct the four-wheel drive recreationist – if it is a family outing, he may head for a known picnic spot, and, if it is testing his driving skill, he would prefer a suitable nearby area. The competition canoeist requires flat water not too far from his home ground for practice, while the white water canoeist travels to the high country and mountain lands in search of rivers to run. Those who reach remote rugged country may often use light aircraft or helicopter to transport themselves and their supplies or have only their supplies airdropped. Skiers also avail themselves of similar services to ski areas beyond the downhill tows.

Most groups mentioned high fuel costs as possibly inhibiting participation, either by limiting the distance travelled, or directly affecting frequency of participation, although examples of this among the committed recreationists of the discussion groups had not occurred.
How Often? Time Spent? When?

From the Literature: The frequency of participation varies with activities as it is obviously easy for a motorcyclist to ride during the week, while even a keen tramper is normally confined to weekends. The time engaged in an activity is noted only for off-road motorcyclists and four-wheel drive recreationists ranging from several to 24 hours in an area. Other activities are for the most part assumed to occupy a day or involve an overnight stay. Some seasonal preferences are indicated. User studies show the emphasis of activity during the summer season in Tongariro National Park and in the Routeburn and Milford Tracks. Participation in motorcycling and four-wheel drive recreation is year-round, but activity increases in summer. Skiing is limited to winter snow conditions, while freshwater fishing receives particular attention from enthusiasts at the beginning of the open season (generally in October), although the most enthusiastic will fish during an open winter season also. Casual fishing participation occurs mostly in the mid-summer holiday period.

Frequency of participation can be regarded an indicator of the degree of commitment to an activity. For example, a quarter to a third of the Wellington trampers, hunters or fishermen participated less than four days a year, which is not a great commitment.

From the Recreationists: A keen young tramper may tramp every weekend, and a keen fisherman with time at his disposal may fish several times a week. A large number participating casually was also indicated - an annual tramp on a popular route, or only several days' skiing during the winter season.

How Long?

From the Literature: The length of time for participation is recorded for skiers, fishermen and recreational motorcyclists. This understandably aligns with the dominant age groups for these activities. Thus some fishermen have fished for over 30 years, while motorcyclists indicated a mean of little more than two years.
From the Recreationists: As participants committed to their activity, the older members of the discussion groups could point to lengthy experience. While the demands of a young family interrupted constant participation, most found that attention to their activity could be renewed as the children became more independent.

Quarry

From the Literature: This has been applied to the hunting and fishing sports and in future studies may be discussed as a recreation resource. Here it has served to distinguish groups of hunters and fishermen by the kind of game hunted - big game, waterfowl, etc. - or type of fish. A hunter may at different times hunt different types of game, just as it has been shown that some fishermen fish for both trout and salmon.

Methods/Practices

From the Literature: Some of these have been reported separately and some together. Fishermen used three methods: fly, threadline and natural bait. Threadline is the most used method, while fly fishing is regarded as requiring the greatest skill and technique.

Some tramping practices, washing in lakes, carrying tents, etc., are given in the Routeburn study (26) but are specific to the particular clientele and management problems.

From the Recreationists: A number of trends are noted under these headings. Depleted firewood supplies in popular areas and environmental considerations have forced many trampers to carry their own cooking stoves and fuel. Tents are carried more often as huts may be fully occupied by others and if solitude is preferred. Variations of skiing - ski-mountaineering and ski-touring - are attracting their own adherents.

Skill and Experience

From the Literature: Skill is demonstrated by length of experience as success rates of fishermen increased with length of participation. The
North Canterbury fishermen were grouped into the "dedicated" and the "more recreational". Mt Hutt skiers classified themselves as beginners, intermediate and advanced. The inventory of rivers for recreation (Egarr & Egarr, in publication), on the other hand, aims at classifying the resource for varying degrees of skill and experience (see 3.2.6 CANOEISTS). In studies to date little consideration has been given to the actual performance of an activity.

From the Recreationists: As in most human endeavours where achievement is rated highly, the frontiers of some recreation activities are being pushed further back, both in terms of exercise of skill and venturing into the most rugged hinterland. This is seen particularly in tramping, mountaineering, skiing and canoeing. Trips, feats or routes that barely 10 years ago were regarded with awe are now standard. Behind this vanguard of a few, are those who perform that activity at high levels of skill and competence in increasing numbers. The confidence and ability of younger recreationists who have benefited from school tuition and experience in bushcraft and outdoor pursuits has been noted. It appears that at one extreme the upper limits of an activity are being extended and that, at the other, a much larger number are deriving enjoyment from participating at easier levels and more casually than previously. While noted in passing, these casual recreationists were not discussed at any length. The committed trampers, mountaineers, skiers and hunters thus see themselves as discrete groups of recreationists. This only emphasises further that trampers, skiers, hunters, etc., can no longer be regarded as homogenous groups with common behaviour patterns and characteristics because of their common activity.

The discussion groups also highlighted that recreationists can take part in a number of activities which are often related in their demands in energy, wilderness requirements and challenge to skill. An extreme example is provided by a tramer who climbed, skied (including ski mountaineering and ski touring), canoed and rode his trail bike to the area he wished to hunt.

Equipment/Expenditure

From the Literature: Again there is little information forthcoming. There
is information on ownership of skis and expenditure on their activities by North Canterbury fishermen and off-road motorcyclists and four-wheel drive recreationists. The sums spent vary widely and may reflect many variables: the basic outlay, sophistication of equipment, intensity of participation and the amount of cash available for leisure-time pursuits.

(c) Wants

The Recreation Resource

From the Literature: Only the off-road vehicle recreation study (1) investigates the resource requirements of recreationists in detail. The land resource for motorcycle and four-wheel drive activities is only too limited. This study also investigated types of land preferred by these recreationists. Other recreation resource studies take the form of inventories, which are the essential complement to studies of resource requirements. Major examples of these inventories are those mentioned under 3.2.6 CANOEISTS (Egarr & Egarr 1978; Egarr & Egarr in press) and the companion volume to this study (Smith, Davison & Geden 1979).

The game resource – deer, waterfowl, fish, etc.– can also be considered under this heading. The individual Fisheries Technical Reports (11/all reports) take the form of an inventory in this respect. Studies of hunters, as noted, have not gone into such details. It may be concluded that hitherto resource requirements of recreationists have been studied only when the resource has been deemed inadequate to meet an increased or new demand.

From the Recreationists: Fishermen, canoeists and trail-bike riders are all facing major reductions in their recreation resource through dominance of other land uses, such as irrigation and hydro-electricity projects or rural subdivision. In addition, four-wheel drive recreationists and trail-bike riders, recent comers to the mountain lands, find it difficult to obtain permission to use some public lands. The hunting resource is greatly diminished, its recreation value replaced by the commercial value of venison and as deer-farm livestock. The only possible answer seems to be game management for recreational hunting in specified areas. For trampers and mountaineers, the land resource is adequate, though their
political lobby is on guard to preserve it from mining and other commercial exploitation. The skiing resource is expandable, given environmental safeguards and financial backing for ski developments. This scale of operation now appears feasible only with considerable financial backing, i.e., by a commercial enterprise. A variety of places to visit is an important requirement in some activities where the existing resources are limited, e.g., for trail-bike riding.

Access

From the Recreationists: An important adjunct to resource requirements is access to the recreation area, both in terms of legal rights and adequate roads, tracks or routes. These are major concerns to trampers and hunters. Most problems occur where private land is involved. Access to public lands for recreation without payment is regarded as a right.

Facilities

From the Literature: Trampers on the Heaphy, Routeburn and Milford Tracks commented on aspects of hut and track facilities, mainly in regard to neatness of huts or muddy conditions on the tracks. The mountaineers at Mt Cook (29) were, on the whole, non-committal or satisfied with the existing conditions and management of mountain huts. Skiers at Lake Tekapo wanted low-cost accommodation and restaurant or cafeteria facilities, and skiers at Mt Hutt reacted favourably to the current facilities. The detailed general population studies of fishermen (19 and 25) did not express any facilities requirements. Similarities in different studies may be extrapolated to contribute to a general body of information, but it must still be remembered that these studies are specific to the particular users of these sites and that there are likely to be other trampers, mountaineers or skiers, etc., with different facilities requirements.

From the Recreationists: In terms of facilities, simplicity rather than sophistication is the desired attribute. Some recreationists do not consider them at all - canoeists may use huts on overnight river trips, if they are there, but do not demand them. Mountaineers require huts in the highest alpine areas. Payment for use of hut facilities, where it is
demanded, is accepted. Motorcyclists and four-wheel drive recreationists had no requests, their requirements being the basic resource - forest, logging or farm roads or simply open country with suitable topography. However, there are demands from skiers for developed skifields and demands from mountaineers, trampers and hunters for huts, tracks and safe river crossings. The extent to which these are provided is subject to a difference of opinion, reflecting emphasis on different needs and varied abilities. Some types of trampers, such as family groups, are not well-catered for at present.

Management Practices

From the Literature: Fishing is an activity that has long been controlled to conserve its resource, regulation stipulating when it may be undertaken and what methods may be used. Some fishermen, fearing a downgrading of fishing standards, have reacted against the recent liberalisation of regulations whereby many high-country waters are open to threadlining as well as fly fishing. On the other hand, the prospect of a winter fishing season was welcomed by enthusiasts.

Where other mountain land activities are concerned, however, active management of people is of recent concern to the recreationists. The Routeburn study lists attitudes to limiting numbers on the track at any one time - roughly half were for and half against this.

From the Recreationists: Most discussion centred on zoning practices, one system applied to national parks and state forest parks being regarded desirable. The perception of wilderness varies between different recreational activities. Trampers, mountaineers and hunters reinforce the ideal of no man-made modification, a "purist" view. Other recreationists also now freely use the "wilderness experience" to express the state of being in an almost natural environment - a canoeist in a gorge, though only fifty yards from a road, and a trail-bike rider at the end of a road at the bush edge both experience wilderness. "Wilderness" may also be experienced quite near cities. These differing perceptions of wilderness are positive reinforcements of the need for contrast to city and workday life. The
term "management practices" was not always immediately understood and needed explanation by way of example, such as limiting numbers on a popular tramping track at the height of the season.

**Services**

*From the Literature:* Only one comment on services was given on the studies reviewed - trampers complained of the inconvenient transport schedule at the end of the Milford Track.

*From the Recreationists:* Services were not discussed in depth. The use of light aircraft and helicopters by some trampers, mountaineers and skiers has already been noted.

**Conflicts**

*From the Literature:* Only one study recorded instances of conflict. The off-road recreation vehicle study (1) investigated nearby residents' attitudes to motorcycle and four-wheel drive recreation, the noise factor being the most critical.

*From the Recreationists:* Conflict can occur among recreationists within an activity, such as a youth group and a number of private parties in a hut, with competing land uses, as largely discussed under resource requirements, and with other activities. Mountaineers and trampers in particular voiced objections to motorised recreation. These extremists found it difficult to justify ski developments, except on the grounds that they operated in confined areas only. Off-road vehicle recreation is an annoyance but actual encounters with trampers and mountaineers are relatively few as trail-bikes rarely venture into hilly tramping country. Conflict is more likely to occur with fishermen who do not generally venture so far into mountain lands and fish near road or track access. On water, jet and power boats can disturb or endanger canoeists. While light aircraft and helicopter services are used for access to remote country, the noise of commercial scenic flights can be a constant annoyance to trampers and mountaineers. On the whole, the rights of other recreationists to enjoy their activity are recognised and the plea is for adequate zoning and
provision of areas to confine motorised recreation while peace and solitude are guaranteed in other mountain lands. Conflict is more severe in the case of competing resource uses, the most dramatic being the commercial use of the big-game resource. Recreationists on the whole feel that their cause is not given due regard in land and water use decisions.

Other Perceptions

From the Literature: The perceptions of trampers and mountaineers as to the purpose of national parks is compared to the perceptions of other visitors to Mt Cook National Park in 1968/69 (29), revealing a bias towards recreation. Milford Track trampers rate their experience in terms of value for money spent. Lake Tekapo visitors (mostly skiers) described the Mackenzie Basin as "great", "beautiful", "rugged", "desolate", etc. Their approval of tree planting in the Basin implied some lack of understanding of changes that might occur as a consequence of afforestation programmes and irrigation.

The perceptions and attitudes of recreationists have only begun to be studied and, for the eight activities reviewed in the pilot study, contributions are so far limited. There are, however, two studies, in the bibliographic listing in Chapter Two, one of visitors to Milford Sound tourist spot (30), which for most people is rarely a repeat visit, and the other of visitors to the Waitakere Ranges (56), which has frequent repeat visitation from Auckland urban dwellers, which have studied aspects of perception in some detail.

From the Recreationists: Most of the discussion group recreationists had perceived the increasing active role of government agencies in managing for mountain lands recreation. Attitudes ranged from open appreciation to angry criticism, particularly where traditional behaviour patterns are disturbed and new requests are simply ignored. Manifestation of bureaucratic regulation and prohibitions is an irritant to the recreationist seeking temporary freedom from the city. Trampers in particular were critical of insensitive handling of the environment in track or hut construction.
In reviewing the literature and pilot study discussion groups, the eight recreation activities have also been set in a New Zealand context, according to the information available. Participation rates have been reviewed against all leisure-time and outdoor recreation activities in Table 2. Demographic and socio-economic characteristics have been compared with those of the total population in Figure 1. The remainder of the review mostly concerns only the eight types of recreationists in the pilot study, but reference has been made to the other literature listed in Chapter Two where applicable.

The findings of this report can be used as pointers for future research. The needs/behaviour/wants model is a broad outline but has served to show where information is lacking in general and for particular activities.

As a postscript to this review a simple model is suggested as a guide for researching individual recreation activities. Figure 2 is based on elements which can be considered the most relevant. Three levels of ability, skill or experience are suggested, although for a particular activity there may be more:

1. Those whose ability, skill, or experience put them in the vanguard of their activity. Because of this they are easily identifiable. We assume they are relatively few in number compared with other participants.

2. Those with less ability, skill or experience who are nonetheless competent performers and are committed to the activity.

3. Those of comparatively little ability, skill or experience. Possibly participation at this level is on a casual or infrequent basis. In plain numbers they may be the largest group.

In addition there is a fourth group –

4. Those who do not participate in that activity but would like to. If the reasons are lack of resource availability or inappropriate management practices, the resource managers may be able to supply the remedy.
Against these are modifying factors of needs to be fulfilled and personal circumstances such as stage in the life cycle. The vectors emanating from the base of the triangle indicate degree of commitment, but where they actually stand has to be established in a formal survey.

FIGURE 2: Model for Identifying Groups of Recreationists
The three or more levels may include distinct and easily identifiable groups of behaviour, such as instruction groups, school groups, family recreationists, novices, guided recreationists, recreationists from overseas, etc. These are indicated by the shaded areas 2a and 3a.

In the case of groups undertaking an activity in different forms, requiring different resources, as in the example of white water and flat water canoeists. It may be useful to think in terms of a separate pyramid for each group. Activities undertaken casually, such as picnicking, camping, etc., which do not emphasise skill and performance, may be represented by a flatter pyramid.

3.3.2 Using Needs, Behaviour and Wants Information in Planning and Management

The mountain land or wilderness recreation boom is a continuing phenomenon of the late-twentieth century, usually explained in terms of social indicators such as increasing population, more leisure time, more disposable income and greater mobility (Clawson & Knetsch 1966). As a "boom" it has been treated as a problem of numbers, backed by often fragmentary statistical evidence of increased visitation to public lands. Managers have largely dealt with this problem of numbers based on their own intuition, sometimes superbly and sometimes with failure.

Government agencies are charged with managing for recreation, a role which has grown from one of passive interest only to active commitment to provide for recreationists, which is a requirement now expected by society. The agencies are on the brink of, if not caught up in, making major commitments to recreation and a thorough understanding of the demand to be met is essential.

1. Needs and wants information should be combined with behavioural information for assessing and predicting demand. It is not enough to express demand in numbers of recreationists, but rather the
nature of the demand must be understood. Accurate prediction of demand is one of the major goals of planning and is essential for the proper management of people.

2. Knowledge of the needs, behaviour and wants of recreationists is essential when different recreationists appear to be competing for the same resource. Common patterns can be distinguished across several recreation activities. For example, those with the ability to reach the most rugged and remote mountain areas (behaviour) may be motivated strongly to seek the challenges of that environment (needs to be fulfilled). Their wants, if any, are few - access to the wilderness perimeter, then they require to be on their own. This description fits types of tramper, mountaineer, hunter and ski mountaineer, but not the downhill skier who keeps to developed ski-fields. The "wilderness" canoeist could almost be added to this list, but his access requirements are for a road. Types of canoeists can be considered with other types of water-based recreations. Or the same needs may be linked to different abilities and perceptions of how they are to be fulfilled. The need to "be in nature" may be fulfilled in rambling a few hours along a well-constructed track, as much as in the isolation of a remote designated wilderness area. Thus recreationists are not managed so much by the specific activity they undertake but by common behavioural traits, facility requirements (or their absence) as determined by their basic motivating needs.*

3. In planning the use of resources, recreation is usually a secondary consideration or after-thought. Exploitative uses are backed by extensive physical and economic data. Non-economic human values,

* Most studies of motivating needs to date deal with one recreation activity, such as hunting or fishing. See Bibliography in Assessing Demand for Outdoor Recreation (National Academy of Sciences 1975). A major study covering the behavioural traits and wants of recreationists across diverse activities conducted by R. Aukerman (1975) is Feasibility and Potential of Enhancing Water Recreation Opportunities on High Mountain Reservoirs.
of which recreation opportunities are a prime example, on the whole stand very poorly, backed with little substantive weight of evidence, not only in terms of benefits to society, but also to the individual himself. The sociologists and psychologists are only beginning to evaluate the role of recreation in the life and development of the human being.

4. Detailed knowledge of the needs, behaviour and wants of different types of recreationists is essential for the proper management of the recreation resource. Only when the real requirements of recreationists are known, can they be matched with the appropriate resources.

5. Public recreation planners and managers are dealing with aspects of the individual's life which he regards as his freedom to do what he likes within the bounds of respecting the identical rights of others. Planners and managers, however, can only deal with broad categories of recreationists, yet the same activity, even when performed similarly, may be fulfilling different needs of different individuals. The recreation process is a complex one beginning before the recreationist enters the park or recreation area and finishing after he has physically left the area. The underlying motivation for mountain land recreation is the need to escape the city or everyday life for a time, to relax, experience nature, meet a challenge and self-development. The role of the planner and manager is to be neither over-solicitous or indulgent, but rather through understanding the purpose of recreation, to provide a range of opportunities which people themselves see as necessary to enhancing their experience of life. The process is a continuing one of dialogue as patterns of society change and new norms occur.

6. This concept of demand expressed as needs, behaviour and wants, can be applied at policy-making and high-level planning stages, at regional level and in planning and managing specific sites.
3.3.3 Limitations of Pilot Study

During the conduct of our research, a number of limitations became evident, reinforcing its nature as a pilot study. Some have already been mentioned. It cannot pretend to be a total study of trampers, mountaineers, skiers, hunters and other mountain land recreationists, although areas needing investigation and action have been indicated.

1. Even as a pilot study, the scope was particularly broad. We were aiming not only to demonstrate a method (for which two or three recreation activities only need have been investigated) but also cover a spectrum of types of recreation activities to illustrate concerns, similarities and differences, compatibilities and incompatibilities across the framework of needs, behaviour and wants. Again, in demonstrating the importance of relating needs, behaviour and wants, the scope within each recreation activity was necessarily large and details could not be explored. Only one of the 58 studies listed in Chapter Two was conducted by the group discussion method (16).

2. The pilot study is also an experiment in the practical application of the findings of recent recreation research in the United States.

3. Known and easily identifiable activities were selected largely because of literature availability and ease of contacting recreationists in the city, largely through clubs. Thus, we have not broken new ground to investigate campers, caravaners, picnickers, walkers, sightseers or tourists (both New Zealand and overseas) as mountain land recreationists. This is an area where research is sadly lacking and urgently needed.

4. In assembling discussion groups we sought those who recreated in the mountain lands or high country. Thus the groups were not meant to be representative of the whole spectrum of their activity. For example, we talked to high-country fly fishermen only, but the case of motorcyclists was more surprising as in our search for high-country trail-bike riders we invited touring motorcyclists to attend,
who described an essentially separate activity, adding diversity and contrast to the discussion. This has implications in defining, say, studies of campers and caravaners. Do they always, or just sometimes, head for the mountain lands at holiday time? Are they to be studied in relation to their mountain land activity only?

5. Through lack of time, a thorough investigation into the background of each recreation activity was not possible. Thus there was no tentative categorisation for assembling types of recreationists within each activity. Rather, we leaned heavily on people who were committed to and heavily involved in their activity, which resulted in a disproportionately high club representation. A full study using the discussion group method would be based on a random cross-section of participants according to all known (behavioural) data.

6. Apart from the Dunedin mixed panel, discussions were limited to Wellington and Christchurch recreationists. Thus there is no information from recreationists in other regions, particularly the more heavily populated northern half of the North Island.

3.3.4 Discussion Groups as a Tool for Researching Needs, Behaviour and Wants of Recreationists

Some general observations based on our experience with discussion groups is offered, followed by a specific consideration of their application to needs, behaviour and wants.

The recreation experience is a subjective one. For this reason, the researcher seeks to prompt the recreationist to express his own understanding of his expectations, satisfactions and dissatisfactions of that experience. The group discussion encourages spontaneous and off-the-cuff expression by the individual, while allowing interaction and development within the group. The outcome may be consensus, dissension or agreement to differ on the topic under consideration. Whatever, the aim of eliciting an array of statements of fact and human values will have been achieved.
Scientific precision is abandoned but the gains by far outweigh the loss.

One disadvantage of the discussion group methodology is the limited number of participants involved. The number, however, is considerably greater than if the same effort was expended on individual interviews. The question still arises as to what may be an adequate number. While no two sessions will follow exactly the same pattern or necessarily cover exactly the same ground, a saturation for the study purpose may be reached when the same points are consistently raised by similar groups. This has yet to be tested, but in a full study for one category of recreationist it could be as little as five groups, each of up to eight participants. The number of groups a researcher can be expected to handle is a further limitation. In the only study using this method that we encountered (16), 12 groups comprising 133 subjects were interviewed.

It can be suspected that peer group influence might play a role in inhibiting difference of opinion, especially in an activity where organised recreationists are trying to present a united front, even though it is stressed at the outset that personal views were sought. This is a difficulty in including leaders and political protagonists for their recreation. These people should be consulted during preliminary research for the recreation or interviewed as a discrete group.

Consistency in approach and manner of the researcher are essential in maintaining an objective point of reference in subsequent reporting and analysis of discussion. We used our pilot study to develop an approach, establishing a framework that could be applied to a number of recreation activities (see Appendix II).

Some tentative experiments in the United States simply left the group to manage its own discussion, the researcher reducing his role at this stage, to that of switching on the tape recorder before absenting himself. Another technique plants a researcher, unknown to the group, to orient or direct discussion as necessary. Two such researchers or observers could subsequently discuss and monitor their own presentations. Our framework was established to maintain relevance to our theme, while allowing con-
siderable latitude in direction and flow of discussion.

The stand taken by the researcher is of utmost importance. His consistency of manner to all groups is essential to his later evaluation of the discussion material. He must be neutral, yet empathetic to elicit confidence and sincere personal responses. From the beginning he must draw out the essential features of the recreation activity, as if explained to an outsider. It may even be the first time his participants have had to explain their involvement or describe the activity. It is essential that the researcher's manner is consistent towards all groups. The groups will react to his bearing, which is an important point of consistency in a subjective exercise. The role of the researcher is then to guide conversation to relevant topics should it go beyond the point of contributing to the exercise. He may have to "quieten" a dominating personality. This is usually achieved by asking others to contribute and, once they have given voice, they are usually forthcoming on other topics and a balance between contributors is maintained. If a topic has been sufficiently aired, the researcher may introduce a new one. Through his background research he may suggest topics that have been neglected (noting that this neglect may be due to their relative unimportance to that group), or he may wish to test perceptions volunteered by other discussion groups.

It is the responsibility of the researcher to interpret and present largely subjective matters objectively and fairly. Not all participants contribute equally. Some have strong convictions and voice them emphatically. Some display a degree of indifference and others may have no opinion whatsoever. Others display a greater sensitivity. All this must be noted by the researcher. The researcher himself must be sensitive to emphases and nuances that may not be evident in the typed transcript or summary of the proceedings, which can only prompt recall. Other interpretations may not be directly attributable to specific words and conversation but impressions of mood and emotion. Some opinions, though expressed by a few, may be equally valid as those not held so strongly by a majority.

The discussion group is not only a tool for gathering information for management and planning. It is also an opportunity for interaction between
recreationists and management and among recreationists themselves. In the pilot study, discussion frequently progressed from the individual's immediate viewpoint to consideration of the rights of other recreationists and other recreational activities. Particularly where groups contained a varied range of participants, such as motorcycle tourists and off-road trail-bike riders, surprise at different views was followed by appreciation and acceptance. Participants in discussion groups were also eager to obtain recreational literature when it was mentioned. Trail-bike riders in Christchurch were particularly anxious to obtain the hitherto unknown Wellington Off-Road Recreation Vehicle study (1). Thus recreationists are eager for and interested in substantive information about themselves and how their needs, behaviour and wants are interpreted by recreation managers. In this context the discussion is educative in that horizons of participants (and researchers) are broadened. Confrontation and interaction can lead to productive discussion and the exercise becomes an example of user participation.

The following comments apply specifically to the discussion group as a means of researching needs, behaviour and wants.

(a) Needs

Our open-ended question, "What are the basic human needs met in your recreation activity?" put to the discussion groups proved particularly suited to eliciting needs of recreationists. These needs were not presupposed by giving a set list in the style of a wish list, and were open to discussion by participants. It has been seen in the pilot study that "fun" and "letting off steam" had not emerged on the limited lists in the few studies to date which have attempted to investigate needs. Social needs were nearly always mentioned after other needs, yet the weight of deliberation indicated their importance. Needs may also emerge or be reinforced in relation to other subjects, for example, the role of teaching climbing techniques in outdoor education courses was questioned by a number of mountaineers to whom self-motivation in seeking out chances to learn and gain in experience has been important. Discussion group participants could also be asked to rank or cluster groups of needs.
(b) **Behaviour**

The bulk of research to date has been shown to be behavioural and based on questionnaire research techniques. What people do is both easily observed and quantifiable, using scientific techniques of measurement to provide necessary base data and facts for planning and management. Behavioural information volunteered by discussion groups, however, is descriptive of what the members themselves do and what they observe others doing. Quantification is general: "More people are tramping than 10 years ago," or "People aren't going to n place so much now". Managers themselves are usually in a good position to observe these trends, such as the increased use of track beginnings by family groups. In the case of the recreationists, behavioural information is almost always linked to their own reasons for why and why not - plain expressions of needs and wants. The researcher must take care to distinguish between why the respondent follows a certain behavioural pattern and his opinion as to why other people behave in other ways (the latter can be checked with that other type of recreationist). The discussion group is particularly suited for discussing short and long-term trends in their total context, which is not possible using a formal questionnaire.

Discussion groups are a complementary method to formal numbers-gathering surveys in several ways - a pilot group can indicate trends to be investigated by more formal means. A full-scale study of a recreation activity using group discussion requires accurate behavioural data on which to base group selection.

(c) **Wants**

The case against "wish lists" has been argued in Chapter One. The discussion group is an apt situation for discovering and discussing wants (resource, facilities, services, or management practices and other opinions or perceptions) in depth. These all affect recreationists directly and specific examples illustrate likes and dislikes very clearly. It may be that people react more emphatically to what they do not like than to what they do like. Wants are also a product of experience. Thus a desire to
preserve the status quo may dominate unless there is gross dissatisfaction. A group situation can be conducive to a realistic appraisal of pros and cons, leading to positive and creative insights and suggestions. With the implied responsibility, interaction at this level becomes an exercise in user participation. In dealing with the wants discussions at a later date, the researcher will have to use his skill and discernment in interpreting emphasis and points of greatest importance.

Finally, as stated, the scope of our pilot study, even for one recreation activity, was large. The method is eminently adaptable to investigation in detail of more closely defined aspects within one activity, or across a number of activities where needs, behaviour and wants patterns are demonstrably similar.

Postcript

The nature of demand in outdoor recreation is the subject of a study entitled Assessing Demand for Outdoor Recreation conducted by the National Academy of Sciences (1975) for the United States Bureau of Outdoor Recreation. This publication summarises current research and thinking and reviews appropriate techniques of demand assessment. The behavioural approach, including motivating needs of the recreationist, is presented as Appendix A of the above publication A Social-psychological Definition of Recreation Demand with Implications for Recreation Resource Planning by B.L. Driver and P.J. Brown, pp 63-88. Many of the ideas put forward in this publication have been applied in research for this report which we recommend to recreation administrators, planners and managers.
CHAPTER FOUR

Suggestions

(a) Research and Information

1. A well-planned and co-ordinated mountain land recreation research programme should be established. Soundly based information on users and potential users is the most urgent requirement. The major objectives of this programme should be:

   (a) Understanding the recreationists for whom the mountain lands are being managed (their needs, wants and behaviour).
   (b) Understanding the effects of recreationists on the mountain land environment.
   (c) Understanding the physical and psychological effects of the mountain land on recreationists.
   (d) Understanding the interactions between various recreationists and other mountain land users.

2. A national survey of outdoor recreation is critically needed as one of the first steps in identifying the characteristics of recreationists. This should be a general population study. A major objective of this survey should be to identify the basic needs, behaviour and wants of all mountain land recreationists and potential mountain land recreationists. This survey should attempt to elicit the following information:

   (a) What motivates people to recreate in mountains;
   (b) what experiences these people are seeking;
   (c) what rewards they receive from recreating in the mountains;
   (d) their expectations, their satisfactions;
   (e) how their needs, wants and behaviour have evolved;
   (f) needs and wants which they definitely do not have; and
   (g) behavioural changes which have occurred due to fulfillment of their needs and wants.
3. The group discussion technique tested in this study worked well and we believe it is a valuable tool in future studies of mountain land recreationists. The method complements more formal statistical methods which provide base data and elicits in-depth information, particularly for the needs and wants of recreationists.

4. Regional differences, as illustrated in the literature and from our own observations should be sought in any national survey. Regional surveys of mountain land recreationists would also be valuable, given the importance of regional planning under the Town and Country Planning Act 1977.

5. Recreationists of all activities that currently impinge on mountain lands need to be studied. This includes recreationists of activities making recent demands on mountain lands, such as trail-bike riders, four-wheel drive recreation, hang-gliders, etc. While the rights of these recreationists are being recognised in some quarters, little has been done yet to include them in planning and management.

6. There are "traditional" users about whom information for planning and management is needed, such as campers, caravaners, day visitors, picnickers, etc. User surveys generally show these fringe users are the majority. They do not have the benefit of organised lobbies or pressure groups, such as trampers and are often referred to as "the silent majority" or the "forgotten people".

7. Even though the traditional recreation activities such as tramping, hunting and skiing are headed by active political lobbies there are increasing numbers of recreationists who do not belong to clubs and organisations. Therefore, planners and managers are responsible for identifying and managing for the needs, behaviour patterns and wants for the spectrum of recreationists for each activity.

8. Although there is a definite trend towards this in New Zealand, more attention should be given to family recreationists, older people and those who are handicapped.

9. The needs and wants of potential users, those who are not using
recreation sites because of some characteristic of the site or inadequacies in management, should be considered.

10. As well as reliable information on the use of national parks and state forest parks, basic information on the recreational use of land under other tenures is required, i.e., reserves, unalienated Crown land, State forests (indigenous and exotic), pastoral run land, etc.

11. It is imperative to identify forces which are rapidly moulding and changing mountain land recreation to ensure quality experiences for future generations. Some of these are:

(a) Outdoor education programmes are promoting a generation of youth familiar and skilled in mountain land recreation activities. This presages not only greater pressure on mountain lands, but also a greater spectrum of demands expressed in different needs, behaviour patterns and wants. Coupled with biological and earth science studies, outdoor education programmes will also produce a generation more knowledgeable in nature and natural processes of the New Zealand mountain environment.

(b) The high cost of fuel and transport is expected to continue rising. This will not necessarily reduce the use of mountain lands for recreation, but user patterns may change drastically and these should be monitored. The overseas tourist element may increase, lower income groups seek recreation opportunities closer to city areas and people pool transport resources or stay longer in one area.

(c) Tourism as an earner of overseas exchange will be promoted and the overseas element among recreationists will increase.

(d) The role of commercial guided recreation services for New Zealand and overseas tourists is likely to grow.

(e) New specialised activities such as hang gliding will need consideration.
(f) The long-term effects of a stabilising and ageing population should be considered.

12. A central information service and data bank for collecting, storing dissemination of mountain land recreation studies and information is needed. One good location for such a data bank is Canterbury. The Tussock Grasslands and Mountain Lands Institute, the National Park Ranger Training Course at Lincoln College and the School of Forestry and Geography Department (with its interest in tourist studies) at the University of Canterbury, with other natural resource and social science concerns are all close together here, providing a ready source of information and a source of demand for information for the information service and data bank.

(b) Use of Research Results and Information

13. The survey or data collection must be relevant to planning and management. They must not be done simply for the sake of saying, "We have done them".

14. It is of utmost importance that plans for the use of information are developed and implemented.

15. Reliable information will be collected when managers know how to use it and know that it will be used. Administrators should set an example by using data that has been collected and demonstrating to managers how to use the data for planning and management.

16. Reliable information will only be used when it is appreciated by managers. It is essential to impress upon both planners and managers of mountain lands the importance and value of understanding the people for whom they are managing.

17. Information should only be used when managers have confidence in its validity. Staff must be trained in scientific data collection and analysis techniques, or data must be collected and analysed by other reliable institutions or individuals.
(c) Management

18. All agencies involved in mountain lands recreation need to work together in identifying the demands of recreationists and on planning and management to meet these demands. The main agencies are the New Zealand Forest Service, Department of Lands and Survey, National Parks Authority, Ministry of Recreation and Sport, Tourist and Publicity Department, regional authorities, local government and catchment boards.

19. It is critical that all managers and planners have a real appreciation and desire to manage the mountain lands for the recreational enjoyment of people. They should care at least as much about people as about the mountain land resources and environment.

20. Boards and committee members should become more aware of their power in speaking for the needs and wants of the public. They should more actively and positively use this power to the benefit of the people and the resources they represent.

21. Boards and committees must be still more representative of all mountain land recreationists. The role of the Tourist Hotel Corporation, often sole representative of the tourist industry and the tourist, must be re-evaluated. Avid trampers and climbers may be over-represented. Boards and committees should actively seek public input through sub-committees, surveys and consultation with representatives of special interests as part of planning and management decisions. The public hearing stage of involvement is often too late to avoid confrontation with those whose needs and wants are not being met.

(d) Recreationists

22. The needs and wants of recreationists must be considered with those of other users in planning the use of mountain land resources. This is being done in recent land use planning studies. More specifically, the needs and wants of particular recreationists must be considered when resource use is being modified, e.g. damming a river with a
gorge valued by slalom canoeists for hydro-electricity. The lake behind the dam may become a recreation resource for family boaters and picnickers, but canoeists should not be deprived of every wild river slalom course.

23. The above emphasises the point that we cannot regard recreationists, such as canoeists or trampers, as single activity groups. There are distinct types of trampers and canoeists requiring different management practices. Characteristics common to groups of recreationists across several activities are more appropriate keys to identifying groups of recreationists for management purposes.

24. Information on recreation opportunities available to the public is sorely lacking and in some cases it is even purposely withheld. People need to know where they can go, when and for what. They must also know what is expected of them. This is part of an interpretive effort which should be expanded in scope and content, and presented in schools and communities beyond the confines of visitors centres in parks. Contents should include information on opportunities, reasons for management practices, safety and environmental awareness. Sound and open public relations inviting co-operation, and thereby a willing personal responsibility, is far more effective in establishing appropriate behaviour norms than secretiveness and a list of negative regulations.

25. It is essential that mountain land recreation opportunities be increased near population centres. The limited time available to the working person and families, restricts their ability to travel great distances, except during holiday periods.

26. The possibility of substituting some recreation activities for others should be explored. Maybe one activity in a city or along the seashore could provide for the same needs as an activity in the mountains. Thus, providing the activity away from the mountains might take pressure off the mountain land resources.
27. Rejection of and discrimination against tourists must cease. Tourists are legitimate mountain land recreationists participating in activities like anyone else - fishing, boating, sightseeing, etc. Through lack of knowledge, time, physical ability, or desire to pursue an activity without help, preference for comfort, or other reasons tourists depend on commercial services operated by the tourist industry. The needs, behaviour and wants of different types of tourists should be understood and planned for where appropriate. While the popular image is a demand for sophistication and expensiveness, there may also be a demand for simplicity of style. Every effort should be made to protect the tourist and mountain lands from exploitation by inappropriate commercial interests. In catering to overseas tourists, the New Zealand tourist or mountain land recreationist should not be relegated to second-class status. There is a sound case for exploring the integration of recreation requirements of types of New Zealanders and overseas tourists focusing on an essentially New Zealand experience.
CONCLUSION

It is easy to criticise, yet extremely difficult to criticise the work of those with whom one has grown to be friends and respect. It is even harder to accept criticism and act upon it where appropriate. We were asked for our critical analysis and have given it in this report. Our emphasis is upon those items which, given more attention and work, should improve the planning and management of mountain lands for recreation and consequently enhance the quality of life for all New Zealand residents and visitors seeking the mountain lands for recreation. The many unique and outstanding mountain recreation programmes, reviews and the like which already exist have been left to "speak for themselves". However, it is important to note that New Zealand is a leader in the world in the mountain lands recreation movement. This role comes from progressive leadership, experimentation, and the insight to learn from both the successes and mistakes of others. However, with this leadership has come fast growth and rapid transition. As with any rapid growth and transition, some of the logical phases of planning and development are often shortcut in order to keep up with essential services. Given this situation, it is necessary to look back and identify those developmental phases which were shortcuts and right now may be causing problems in meeting responsibilities. It is essential to find money, time and manpower to be self-critical. This is exactly what is being done in New Zealand, as the support of this study demonstrates. Government is attempting to be self-critical and is demonstrating its determination to improve its services. We have been highly impressed by the many positive mountain land recreation changes made in New Zealand in our short year of work. This encourages us in the belief that our own work will be acted upon.

Today most recreationists, club members, non-club members, tourists, trail-bike riders, trampers and others are reasoning why, and most important, managers at all levels are listening, reasoning why and acting. This report is intended to help direct the reasoning into some practical answers,
and some management changes. We are honoured to have the opportunity to make some input.

Progress is seldom made without change, which often means taking some chances and making some mistakes. Knowing more about the people being served should help minimise planning and management mistakes and maximise the benefits to all. We have presented a framework for doing this. The mechanics are available, as are the people in New Zealand who can use them. We would gladly offer any further help we can give in this endeavour.

The most important suggestion that we can make is that managers and planners actively seek to recognise and understand the extreme individual differences in the needs, behaviour and wants of mountain lands recreationists and that they truly believe that the responsibility of management is to attempt to serve all of the public seeking recreation in mountain lands.

We all could do better in the service of mankind by keeping in mind the following two lessons:

Management is a privilege in the service of human dignity.

and

The only worthwhile difference between people is the fact that there are differences at all.

(U.S. Forest Service, n.d.)
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APPENDIX 1: Matrix for Literature Review and Pilot Study of Eight Types of Mountain Land Recreationists.

These headings are used only when appropriate information has been supplied. An additional heading Tramping Clubs and Managing Agencies is used in reporting a separate topic which received particular emphasis in the pilot study discussions.

(a) Needs

Latent Demand

(b) Behaviour

How Many? (Participation)

Who? (Demographic and Socio-economic Data)

Age:

Sex:

Marital Status:

Education:

Occupation:

Income:

Nationality:

Other:

How Often?

Time Spent?

When?
With Whom?

Where?

Source of Information:

Method of Travel:

Accommodation:

Quarry?

How Long? Experience

Technique/Methods/Practices

Skill/Experience

Equipment

Expenditure

Other

(c) Wants

Resource

Access

Facilities

Services

Management Practices

Conflict

Other Perceptions
APPENDIX II: Procedure Used in Conducting Discussions to Research Needs, Behaviour and Wants of Recreationists

1. Outline purpose of study, final presentation of information, its use and availability. (The needs/behaviour/wants concept is not explained to the group. The discussion content was later analysed accordingly in writing this report.)

2. Ask participants to introduce themselves briefly to the group, stating name, occupation and history of interest and participation in the recreation activity concerned.

3. Needs
   (a) What are the basic human needs met in your mountain land recreation activity?
   (b) If you were not able to tramp/climb/ski, etc., what substitute activities would you pursue?

4. Behaviour and Wants
   (a) What recreation activities do you consider appropriate to mountain lands?
   (b) What are the current and long-term trends in your activity? Prompt where necessary:
       How many?
       Who? (Socio-economic information)
       Methods of introduction
       With whom? Group type
       Club role in activity/casual participation
       Where? Land and water resource types - are they adequate?
       Techniques/methods/practices/skill
       Equipment
   (c) What facilities does your activity require? Who should provide them?
       Prompt discussion of style, sophistication, size, etc.
(d) What problems do you encounter?
Conflicts with other recreations? Other land/water uses?

(e) How do you view current management practices?
Prompt where necessary:
Zoning
Wilderness
Charges (entrance or use fees)
Limiting numbers, etc.
Differences between various agencies, etc.
Other

(f) What contact do you have with the managing agencies?

(g) Any specific questions on which feedback is required can be inserted here, e.g. recreationists could be asked to evaluate entrepreneur facilities.

(h) What do you see for the future of your recreation?
(to reinforce question 4 (b) on trends).

This framework enabled most points to be covered without undue guidance and prompting. Most of the time these subjects were broached spontaneously in the course of discussion.
APPENDIX III: Note on figure 1.

Figure 1 summarises demographic and socio-economic information from studies of the eight pilot study activities where this has lent itself to representation in graph form. Information for the New Zealand population is given for purposes of comparison, the source for this data being the New Zealand Official Yearbook 1978 (Department of Statistics, 1978), except where otherwise noted.

Because of different data bases, some studies are not strictly comparable: only 73.6% of the Lake Tekapo winter visitors (34) were actually skiers, and the North Canterbury fishermen (19) sample was biased towards adult males, whereas the Nelson sample (25) illustrates the significant child and youth participation. Some studies have been graphed from verbal expressions such as "over two-thirds" which is indicated on the bar graphs thus ....... . Only statistically important data may have been reported. Thus in the Dunedin study (20) records only that 64% of the trampers are aged between 15 and 24, but no information is given on the rest of the Dunedin trampers. The Mt Hutt study (40) illustrates the strong participation by professional and managerial classes in skiing, but it does not analyse the 36% classed as "other".

Most studies have analysed the recreationist sample only. For example, the Wellington study (13) trampers are apportioned by age, sex and occupation as a percentage of the tramping sample. The Auckland (3) and Christchurch (17) studies, however, apportion groups of trampers as a percentage of the total population sample, the trampers between 15 and 24 years requiring a different graphical representation. In the examples graphed, each method reinforces the other in illustrating the dominant age, education and occupational categories.

The following should be noted:

Age: Not all studies use the same age group base. Some start at 0 years and others at 12 or 15 years. Age groups are generally in line with those used by the Department of Statistics: 15-24, 25-34, etc.
Some studies split the 15-24 age grouping into 15-19 years and 20-24 years, and age groups over 35 may have been amalgamated. In the graphs the amalgamated groups have been divided equally over the relevant age groups as indicated by [ or ] on one side of the pyramid graph to show the split may not be matched in actuality.

The pyramid has been chosen as the most striking form of graphical representation but should not be confused with the standard population pyramid used by demographers to show sex distribution. None of the studies were sufficiently detailed to divide age groups by sex distribution. The pyramid here is rather a mirror reflection from the centre and for this reason the percentage scale is indicated on one side of the graph only.

**Marital Status:** The New Zealand base is for population over 16. The small percentages in age groups under 15 in some studies do not alter the broad pattern illustrated in these graphs. The Lake Tekapo (34) sample under Skiing may reflect the fact that a quarter of the sample were travellers who did not ski and were likely to be married couples on holiday.

**Education:** The educational status of New Zealanders over 15 is represented by formal education and then job qualification status, as given in the *New Zealand Census of Population and Dwellings 1971, Volume 6, Education* (Department of Statistics 1975). A separate graph for each study has been drawn because of the different bases used.

**Occupation:** This has been the most difficult information to represent graphically as bases used differ widely. The major groups in the New Zealand occupational classification used by the Department of Statistics encompasses skills and responsibilities at all levels: the "professional and technical" group includes scientists, economists, teachers, artists, and sportsmen, and associated workers, while "production and related workers, transport equipment operators and labourers" covers trained and skilled craftsmen and unskilled manual labourers. As the labour force is only 40% of the population, the unemployed (students, housewives and retired) and those under 15 have been added to the occupational pyramid.
As spouse or dependent, these groups could be assumed to be engaged, for the time being, in the same life-style as the household head and distributed roughly in the same proportion. In the studies, occupations may be broadly classed into "white collar, non-manual", "intermediate", and "blue-collar manual". Some have made use of prepared occupational scales such as the Elley-Irving Index (1972), which assigns occupations to six levels based on education and income levels, and the Davis scale (1974), which bases seven levels on occupational prestige. The Davis scale distinguishes different levels within an occupation. Thus, university teachers are in Level 2, secondary school teachers in Level 3 and primary school teachers in Level 4. A self-employed or employer/tradesman is assigned to a higher level than his employees.

It is clear that a satisfactory educational and occupational scale for recreational research needs to be devised with regard to census and other statistical information to make comparison with national (and regional) data possible.
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