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RECREATIONAL RESOURCE MANAGEMENT

KAPITI ISLAND - A NEW ZEALAND CASE STUDY
OF VISITOR USAGE, AND PERCEPTION.

A Thesis presented in partial
fulfilment of the requirements
for a degree of
Master of Arts
in Geography at
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Trevor Hook
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PREFACE

This study was undertaken as a requirement for completion of a Master of Arts in Geography. My thanks go to the Geography Department Massey University, especially Professor K. Thompson, Dr. R. Le Heron and Mr. E. Warr for their valuable guidance throughout this research period. The topic of research also had the support of Lands and Survey Department, Wellington. People of the Lands and Survey Department in both the local District and the Head Office in Wellington were very co-operative, and permission was obtained to run a questionnaire for permit-holders visiting Kapiti Island. Great assistance was offered by both Mr. Bruce Tubb (Head Office, Wellington), and Mr. G.A. Turner, (Senior Planning Officer, Wellington Regional Office). Special thanks go to the Ranger and his family Mr and Mrs P. Daniel, who live on Kapiti Island for their assistance and support throughout the Survey period.

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INTRODUCTION TO THE STUDY

It has become increasingly apparent that recreation in all forms is a highly significant factor of modern day life. Today, recreation is as necessary to societal survival as employment is to economic survival. The development of recreational facilities to meet ever increasing demands for recreation, makes demands upon resources, finance and labour in the name of recreation. This is prompted greatly by societal pressures for fulfilment of leisure time enjoyment. Perhaps Patmore, a recreational geographer himself, sums up current thinking on recreational research by saying, "research in recreation transcends traditional subject bounds, and, consciously or unconsciously, is inter-disciplinary in approach and practical in concern." This does not discount the fact that geographers have achieved much in the field of recreational research, foremost by using a geographical approach.

As a result of massive increase in urban population, there has arisen a growing demand for urban dwellers to seek recreation in rural areas. Geographer's interest in recreation as a form of demand for rural land use is now competing with or conflicting with many of the traditional views on usage of land for agriculture.

1.1 Aim of the Study

The aim of this study is to make an analysis of nature of the Kapiti Island visitor population, with a particular view of the extent of visitor participation and utilisation of the island's resources. It must be borne in mind that restrictions are imposed by management policy and economic considerations.

The utilisation of the resource, Kapiti Island, as a semi-closed eco-system with man-imposed, legally-enforced policy constraints, allows for analysis of visitor participation within the limits of this island environment. The physical isolation of the resource under investigation has the advantage of eliminating many extraneous influences encountered in studies carried out on the mainland.

Kapiti Island is, under the 1897 Reserves and Domains Act,

legally designated as an area set aside for the preservation and protection of native flora and fauna, where man is relegated to a secondary position, thus making it one of the more unusual environments in New Zealand. Hence the importance of careful research and planning as to how Kapiti Island is used; it is also hoped this will contribute to the development of management policies for a nationally-significant resource. Because the policy and role of Kapiti Island is concerned with the protection of flora and fauna, all people-oriented activities must be closely observed and analysed. Practices of visitors must be viewed in the light of management policy restrictions.

Analysis is given, in this study, to the extent of processes and pressures at work affecting the utilisation of Kapiti Island. This includes the identification of management programmes aimed at coping with pressures that have been applied in the past, and are being increasingly applied today. On the one hand, to open Kapiti Island up as a recreational resource, and on the other hand, to close it to all but people intent on scientific study leads to the continuing and expanding pressure for either 'increased people usage' or 'total exclusion of the general public'. Because Kapiti Island is of national significance as one of the few places left in New Zealand free of people-dominated activity, its role is significant. This is becoming increasingly apparent, especially in the larger city regions, where resources such as Kapiti Island has to offer, are so scarce. How vital it is for management to have clear objectives and aims for the administration of Kapiti Island.

1.2 Scope of the Study

The interaction processes between man and his physical environment are of primary interest in this study. At the interface of interaction, pressures necessarily arise for conflicting interests often develop between what many people see as Kapiti Island's role, and what is the true role. Within the context of this study, Kapiti Island's physical environment will be examined, to give an indication of the nature of its resource base. The uniqueness of many physical attributes on Kapiti Island, for example, the many varieties of native flora and fauna, and archeological interests, make it an increasingly high demand area by various societies and many individuals. Connected closely with the physical

environment of Kapiti Island is the very important aspect, 'accessibility'. This will be dealt with through a consideration of visitor participation and usage. Kapiti, being an island, the factor of accessibility becomes a vital question. Accessibility is primarily dependent upon the weather, and also on availability of suitable boat transportation. Because climatic factors cannot be controlled by man, the unpredictability of some seasonal aspects makes it a natural barrier to human utilisation of the island. This alone, however, cannot be counted on to control usage of the island, and a man-imposed permit system operates to restrict the numbers visiting Kapiti. The role of the permit system, and transportation to and from the island will be analysed as it is affected by present policy of Kapiti Island and future trends of the Island. Weather conditions are factors that cannot be standardised. They are important, yet very unpredictable, and therefore in this study, favourable weather conditions are taken to be a prerequisite to the utilisation of the island by permit-holders.

From the humanistic angle, Kapiti Island will be analysed using demand processes in terms of recreational, educational and scientific categories. 'Recreation' for the purpose of this study is taken to mean 'passive recreational activities' for which the island is admirably suited. Any recreational pursuit may be entered into, only if it is in keeping with the official policies governing the island. Many of the passive recreational activities undertaken on Kapiti Island are organised by clubs or societies, for example; bird-watching, photography, walking enthusiasts. These, although sometimes designated recreation, may also involve both educational and scientific pursuits. Other types of recreation that are sometimes carried out on the island, yet are discouraged by present management policy, are 'picnic-oriented activities'. From its earliest beginnings as a reserve, there has been resistance to the purely recreational aspects of activities on Kapiti Island. A statement made by Dr. Cockayne, who organised one of the earliest botanical studies on Kapiti Island, puts into perspective the recreational role of Kapiti Island, which today caters solely for passive recreational pursuits, the aesthetic or experience oriented activities.

"It is no place on which to picnic. Only those really interested in animal and plant life should be permitted to land on this island." (Cockayne, 1907, 15).

Educational aspects include both:-

- (i) incidental education, that is, non-formalised, unstructured learning through the appreciation of the total experience.
- (ii) organised educational trips, especially by schools, and by societies such as Forest and Bird, Ornithological Society.

Scientific study, the third category, has been important throughout Kapiti Island's history as a reserve, plays an important role as a scientific research habitat, and controlled research studies have been undertaken intermittently during the past seventy years. As with the recreational and educational aspects of visitor utilisation, the scientific aspects must also be balanced with policy considerations of the island.

It is the present legislation and to a lesser extent public co-operation and respect for the resource, that gives Kapiti Island its ability to remain a unique national asset. The pressures of population growth and the continuing depletion of natural resources on the mainland, however, may affect the role of Kapiti Island in the future. How to maintain a balance between 'human wants and needs' and the preservation of a natural resource, plays a commanding role in the formation of this study.

1.3 Methodology

Kapiti Island is administered by the Lands and Survey Department as a Flora and Fauna Reserve. Under the Reserves and Domains Act (1953) it is designated a "reserve set aside for the promotion of the eco-systems and habitat of native plants and wildlife which is of such importance that some control on public access is desirable". (Robertson, 1975, 15). It is necessary to gain permission from the Lands and Survey Department before any research can be initiated on Kapiti Island. The Kapiti Borough Council was approached regarding the zoning of Kapiti Island. Within the Kapiti Borough it is zoned as a Flora and Fauna Reserve. The borough does not, however, take any active part in the administration of the island.

The research of visitor participation and the utilisation of Kapiti Island took the form of a questionnaire given to each permit-holder over the age of ten years. The restriction on the age was imposed after it was found that those under ten years were mapping answers directly from older people around them. The interviews were held on the island before the permit-holders embarked for the mainland. This was thought best because once on the mainland the people dispersed quickly and an adequate sample would not be readily accessible. Questionnaires were given to the permit-holders to complete, and discussions over recommendations for future development on Kapiti Island with the permit-holders were noted. Questionnaires were given from December 17th to December 31st, 1976 for each day permit-holders were on the Island. As well as each weekend of January, February and to March 6th, 1977 to permit-holders visiting the island. There were several variables which affected numbers of people using the island. Firstly, the weather, which at times, especially in December, forced people to cancel their trips to the Island. Secondly, and to a lesser degree, the availability of boat transport. If the chartered boat is not available then private transport must be arranged, which for some people is impossible, making it necessary to forfeit their trip to the Island. The permit system operating for Kapiti Island makes it possible to know in advance how many permit-holders could be on the island at any one time. Contact with the local owner of the charter boat, whose co-operation is greatly appreciated, gives access to information regarding times permit-holders are coming, and how they are getting to the island. There is no screening process with regard to acquisition of a permit; the only restriction is placed at weekends so that one party cannot monopolise the day. It is thought that a representative sample of those people using Kapiti Island would therefore be given.

Because of the weekend samples during February, March 1977, school parties are excluded. It is assumed however, that these trips have been arranged for educational purposes. In discussions with the ranger regarding school party use of the island, it seems apparent that this usually is the case. Much additional information is obtained by interviews with the ranger and his wife, Mr. and Mrs. P. Daniel, without whose co-operation and help this study would not have been possible.

Investigations are also made of the permit system between 1961 and 1977, giving indications of changing usage patterns on Kapiti Island, with regard to numbers of people using the island.

Public participation in obtaining information with regard to Kapiti in a generalised frame, for example, response from public meetings as to attitudes towards Kapiti Island development, newspaper advertisements for suggestions of planning ideas, questionnaires to individuals in the surrounding region, would have been of great benefit. Time, however, was the prohibiting factor in such an exercise. The survey does not take direct account of the three adjoining islands of Kapiti - Tokomapuna, Motungarara and Tahoramaurea, these are not directly under the control of the Lands and Survey Department, and public access to the three islands is unrestricted. The three smaller islands' role in acting as diversions for the public from the main island Kapiti, however, is dealt with in Chapter Five.

Chapter 2

RECREATIONAL RESOURCE MANAGEMENT

2.1 Natural Resources and Outdoor Recreation

"Since outdoor recreation requires natural resources, the continuance of all outdoor activities depends on the availability of physical resources able to support and sustain the demands they make." (Clawson, 19, 1966).

It is through this statement made by Clawson that account may be taken of the development of outdoor recreation.

The natural environment, as a result of cultural evolution, has been perceived in ever-changing ways as a resource to be developed. It has been given a value, or several contrasting values within a cultural frame of reference. Namely, a value, whether it be materially (money) or non-materially (ideology) oriented, that allows for the natural environment to be zoned into demand and supply areas. The many diverse natural environments of our world have been developed differently, primarily due to this practice of differential cultural perception. Zimmerman epitomises this trend by stating that, "resources are not, they become." (Mercer, 263). It is only when looking at past societal development and needs that an insight may be gained into the resource demand areas of today which vary markedly throughout the world. It is applicable to recount briefly the changing appraisal or evolution of a resource, that is, the changing technology and the evolution of demand for natural resources in the western world, which leads today, to a need for some constraints and controls to be enforced on many natural environmental areas. An increasing influence on the types of controls placed on the environment arises from pressures imposed by recreational demand stemming from modern society. Historically, land has the economic consideration of being the basic factor in the production of food, that is, fulfilling the production function. Its production function was viewed from a subsistence viewpoint as an inexhaustable resource to be tapped, utilised and then discarded. Later, consideration was given to land utilisation in the wider sense of producing more by using improved technologies, and by adhering to aspects of elementary resource management; namely the return to the earth of nutrients that had been extracted by agricultural production.

The natural environment at that time was still perceived as

valuable only for primary production purposes. The countryside was the land for farming. It was not until land as a resource was viewed in the wider sense, that pressures of demand other than economic began to be recognised. The production function of land began to be regarded as more than farming, that is, amongst other functions, a movement toward a recreational orientation. Accompanying and to a large extent initiating this trend, was a greater urbanisation influence. Cities were beginning to grow and boom, spreading to encompass large areas of previously valuable agricultural land. It was leading to a conflict situation between the rural and urban communities. A reappraisal was taking place of rural land areas as the cities' influence spread further out, often towards prime farm land, as the urbanites needed far greater recreational areas.

With the rise of urbanised environments with their increasing problems associated with population overcrowding, pressures, pollution, unemployment and spare leisure time, provision was made to cater for people's spare time, by providing recreational spaces within the urban area. Once people acquired more leisure time, however, and greater mobility with increased car ownership and public transport vehicle networks with increasing spending power and demand for varying forms of rural recreation, it was found that the inter-urban recreation facilities were not sufficient to meet demand. Subsequently people and policy began to move towards the countryside. There began a further reappraisal of the rural environment, emphasis shifting from solely economic to an economic cum-recreational viewpoint. Here it must be stated that recreation is broadly defined (Burton, 19-49), as a purposeful activity involving the time component leisure. Leisure time gives the opportunity for participation in recreational pursuits. Particular reference to recreation in this paper, will be the consideration of outdoor recreation, implying non-team organised activities. This focuses particular attention on the interaction between the urban and rural environments. For outdoor recreation depends heavily on the rural environment and is indulged in mainly by the urban populations. The urban environment has varying influences on the rural environment or countryside. Foremost there is the challenge upon land and its use, pressures of both public demand (often in the form of recreational outlets) and of

productive economic functioning. This necessitates a viewpoint beyond that of rural land traditionally being utilised for farming. Land on the urban fringe has shown the greatest evidence of being linked with this economic/recreation function controversy.

"The greatest demand for outdoor recreation sites and facilities occurs in those areas where people are massed together, that is, within or immediately peripheral to the city." (Richards, 1968, 118).

There has become a necessity to utilise land close to the urban areas as recreational outlets simply because recreation is becoming an integral part of urban life.

Recreation, an activity not new to western society, has existed since man first freed himself of the constraints of a subsistence-level life style. Historically, however, recreation was the prerogative of the rich in society, usually gauged through wealth. It was made use of largely within the boundaries of the city by these people. Not until the stratification of society reached a level where the majority of people could partake in recreational activities, did the need begin to arise for an analysis of recreational patterns. Through improvements and affluence in society, both social and economic, recreation became common to the majority. Such accessibility to recreational activities and areas increased through people getting longer paid holidays, higher wages, and with expanding technological innovations such as improved transportation facilities developing both privately, in the form of the motor car, and publicly, with bus and train travel. Evidence of the importance of public transport is particularly prevelant in the development of recreational activities and areas in England. (Patmore, 1-14) (the British C.C.S. 23-37).

Recreational demand was therefore on the increase, and a brief analysis of the forms of recreation to be considered will help to clarify developments pertaining to pressures upon recreational use. Recreation (a term used for outdoor recreation in this paper), may be classified in a number of ways. Categories popularly used are those of 'active' and 'passive' recreation, active being that involving strenuous participation in the activity whereas passive recreation involves the minimum of physical demand. (For further elaboration refer to Patmore, 1968.). Analysis of outdoor recreation has been undertaken using further categories such as 'formal' (developed) and 'informal' (wild land) recreation.

Formal recreation is characterised by structured organisation, for example, team games, whereas informal recreation has no such pre-planning, as for example; tramping. "The focus of recreation on wild land is on environment, whereas that of developed lands is on activities." (Brockman, 1972, 15.). Traditionally recreation was seen as an active, formal component. Now, however, in some areas passive recreation is the dominant form. Patmore (1968, 17) places the participation in outdoor recreation clearly in the passive domain stating: "The dominant outdoor recreation activity is the passive informal enjoyment of coast and countryside."

2.2 Development of Outdoor Recreation Areas

"Recreational amenities are resources. They can be created and destroyed. Changing technology can reveal new uses for previously undervalued areas of supply, like all else their exploitation has been regulated." (Cosgrove, 1972, 28.).

With increases in the activity patterns relating to movement of urban-dwellers into rural-orientated recreation areas, especially at weekends and during holiday times, management of these recreation areas in the light of usage pressures becomes a major issue. Initially development of recreation areas for urbanites consisted of open spaces in the form of parks within the urban area that were within easy walking distance of residential areas. These parks were, however, limited in what activities could be offered within this environment. With increasing pressure from growing urban populations and increasing personal mobility in the form of the motor car, the demand for recreation forced planners to look further a-field for suitable recreation areas, yet within reasonable travelling distance from the urban area. Emphasis was on the "availability of natural resources and more especially their location in relation to major urban areas." (Burton, 16.). It was time to consider a reappraisal of the land outside the urban area for the purpose of recreational development. This trend began to gain momentum in the 1960's and has increased through the 1970's. It is of national significance as to the designation of recreational land and how it is used.

Most recreation has been synonymous with the concept or notion of active participation in an event, and because of

this many areas have been considered as inappropriate for recreational development. This view is changing with the realisation that informal recreation may be more prevalent than the formal recreation of the past. This also allows for greater possibility of using lands considered marginal for other economic functions. The overall picture of outdoor recreation in New Zealand relies heavily on the use of the rural environment. Some of the areas most used as recreation areas are those that have been created as renewable resources, or those that are restricted in usage to a level where natural cycles ensure continuance of supply. It is when researching these recreation areas that impacts of people's usage and management patterns may be analysed, and evaluations made as to the impact of recreation on the environment and future trends in this direction. One such area, that, on the micro-scale, is of significance as an outdoor recreation area, is Kapiti Island. Although restricted in usage, passive recreational pursuits are permitted on the island. A consideration will be given to the management of this island as a recreational wild land.

2.3 Increasing Emphasis on Management of Outdoor Recreation Areas

With the growing utilisation of 'natural areas' - those that have or have not been modified by man, and are now under protection to regenerate in a natural way, there is the problem of management of such areas with growing pressures from recreation oriented societies on the one hand, and conservationists on the other.

In 'wilderness' or natural areas, there is an importance placed upon arriving at a balance between nature and man.

However,

"the duality of purpose or function - to preserve as nearly undisturbed as possible but to provide for visitor use, creates a divergence of interest amounting almost to a dilemma or conflict. How much preservation and how much use? Full implementation of either largely excludes the other; where is the optimum tradeoff?" (Clawson, 1968, 16).

These questions that Clawson poses involve the people most concerned with management of wild lands for recreational purposes. Kapiti Island is one such management concern, and the questions listed above are vital issues in the development of Kapiti Island management policies. From a management viewpoint the questions Clawson raises may never be fully satisfied. One may, however, look at the management of recreational resources to determine 'best usage', taking into account the following:

- i) Patterns of usage - "Any participation in a recreational activity depends on a knowledge of the existence, location and availability of a facility". (Cosgrove and Jackson, 23). Of importance to recreational growth is the frequency of usage of outdoor recreation areas, which, in all western countries, is increasing rapidly. Most of these growth areas are concentrated near a major metropolitan area. The British Survey on Coastal Recreation states that ... the normal level of local demand is probably not more than one hours driving time, (30-60 miles). Contributing to the increasing demand usage of recreational areas is extended holiday time allowing for extended seasonal periods. Outdoor recreation has a heavy emphasis placed on seasonal usage so that the demand for recreational resources is often concentrated upon one seasonal time. This may be highlighted by the demand and usage patterns of water-based activities during the summer period.

"The kinds of recreation that people engage in are to a considerable extent dependent on age, sex, marital status, income, occupation and education." (Regional Recreation and Conservation Study, 22).

These variables also affect patterns of resource usage. For example, to use the sex variable in the Regional Research and Conservation Study, participants in skin-diving numbered 84 percent male. In cycling 74 percent were single and young teenagers. Golf appeal was strongest to people over 35 years of age. Of those attracted to fishing, two-thirds were male, two-thirds were married. Because of the emphasis placed upon heavy demand for recreational resources, the conservation aspect of resource utilization must also be considered. Usage patterns must take into account

"the careful management of a limited or vulnerable resource so as to ensure efficiency of use, while at the same time taking such steps as are necessary to ensure continuity of supply." (Second Country-side in 1970 Conference, 385).

Each of these areas concerning patterns of usage govern how recreation resources are managed and utilized.

ii) Capacity. Of all recreational concepts, capacity is one of the most difficult to define. Zimmerman sees resources in a generalised frame, as "expanding and contracting in response to human effort and behaviour." (Zimmerman, 5). Although flexibility of resources is emphasised, certain basic criteria govern capacity for a resource to sustain recreational activities:-

- (a) Physical capacity - the maximum number of people a site can physically accommodate for a given activity, a state rarely reached by any resource utilized for recreation.
- (b) Psychological or social capacity - the number of people an area can absorb before the latest arrivals perceive the area to be full and seek satisfaction elsewhere, very much a personal interpretation of recreational capacity, depending exclusively on the perception of the individual within a specific time frame of reference.
- (c) Ecological capacity - the level of recreational activity an area can undergo before irreversible

ecological damage is sustained, a situation often avoided by stringent management policies of protection for areas of delicate ecological balance. (Categories adapted from Dawson, 241).

It is the first and third categories that can more easily be measured when using concepts of capacity, with respect to management considerations for recreation areas. There is a growing demand for certain types of usage, and expansion of resources is often called for, to allow recreation activities to continue to grow. Consideration must be given to the impact of numbers on the resource itself, as well as on people using the resource. This relates particularly to a resource with restricted usage such as Kapiti Island. Secondly, a compromise must be considered pertaining to natural balance between usage and ecological areas. Here, recreational carrying capacity is significant. It refers to "the level of recreational use an area can withstand while providing a sustained quality of recreation." (Wager, 11). Carrying capacity and usage patterns, have direct effects on the resource itself, how it is utilized and maintained as a recreational resource.

iii) Experiences - Recreation has been looked upon traditionally in reference to people participating in a single event. More recently, however, recreation has been fragmented into various stages, preceeding, including and after the event for analytical purposes. The focus is more upon the total recreational experience. Jubenville gives categories for this, which highlight the recreation experience as a broad encounter:-

"Anticipation

Travel to

On site experience

Return travel

Recollection." (Jubenville, 6).

The recreational experience is paramount to the continuance of an activity, and depends both on supply of available resources and sufficient demand for the activity. Many variables enter into the 'experience' of recreation.

Over the last few years the Outdoor Recreation Resources Review Commission (O.R.R.R.C.), have been analysing wilderness areas for scenic value, and have found it difficult to perceive ratings for many potential recreation areas. Thus showing the difficulty of strict analysis for experience oriented criteria.

The basic problem seems to be a reconciliation between the quality of supply and growing demand. Resource management policy must maintain a recreational role yet keep the supply and demand balanced also.

"There seems little doubt that the volume of recreation activity will increase significantly during the next twenty years and that it will be expressed in a demand for a much wider and diverse range of recreation experiences for the whole population." (Burton, 226).

Analysis will be given to one such area, where pressure of recreation participation is increasing and creating management problems, that region being Kapiti Island.

Chapter 3.

DEFINING THE RESOURCE - KAPITI ISLAND.

Kapiti Island lies off the west coast of the lower North Island of New Zealand, oriented in a north-east and south-west direction, and separated from the mainland by the Otaheke Strait (or Rarotterangi Channel) about six kilometres wide. ($3\frac{1}{2}$ to 4 miles). The island is approximately nine kilometres long (6 miles) and two kilometres wide, (1 to $1\frac{1}{2}$ miles) with a total land area of 2,000 hectares, (5,000 acres). The prominent form of Kapiti Island may be seen when driving down the west coast between Levin and Pukerua Bay. With the highest most peak of the island, Tuteremoana, being 517 metres above sea level, the island contributes a dominant feature to the coastal landscape. Kapiti Island is the north-eastern guardian of Cook Strait and as such commands a panoramic view from Mount Egmont in the north to the Kaikouras in the south.

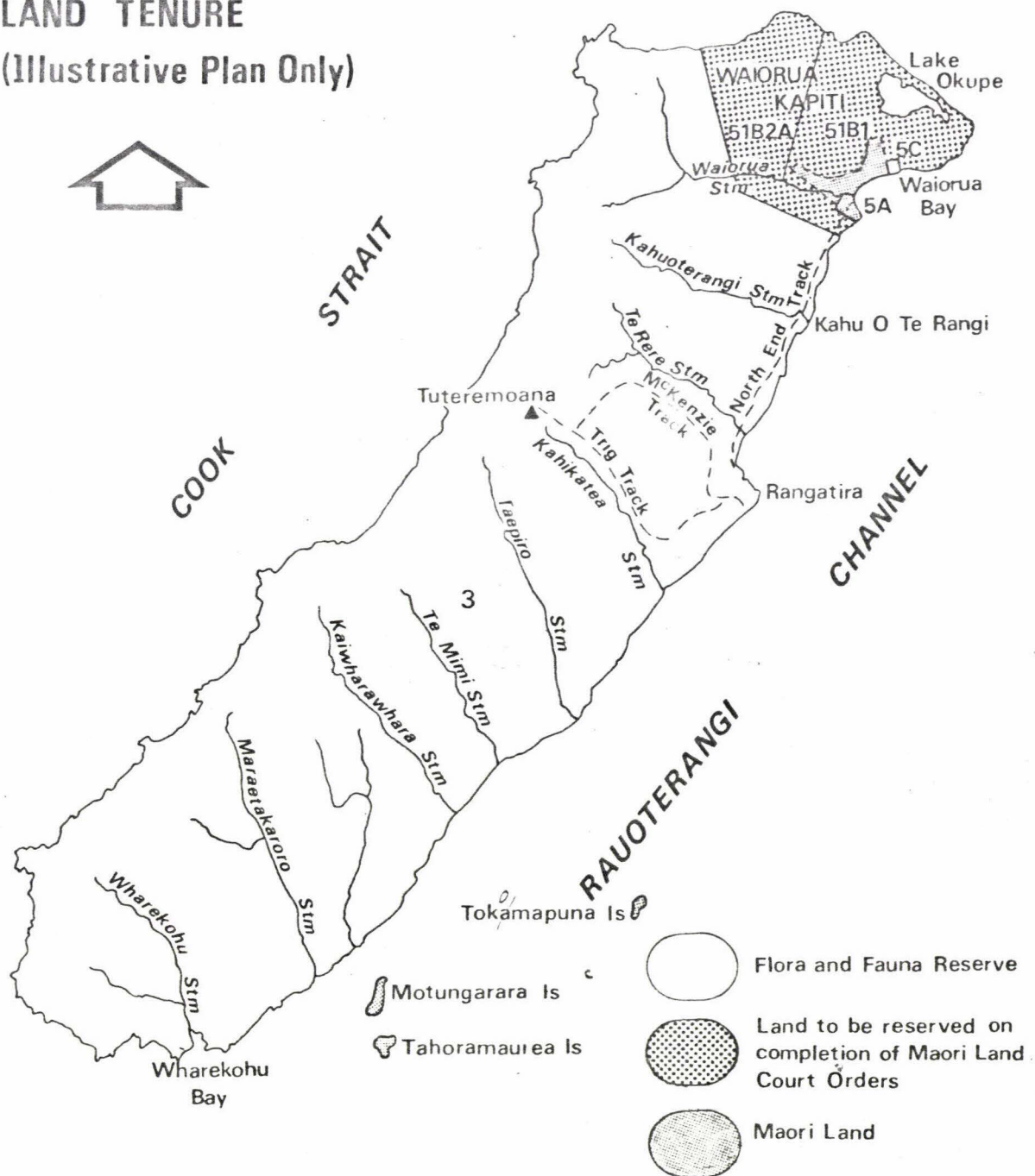


Plate 1

3.1 Geology and Soils

For the most part, Kapiti Island is steep and rugged, the western cliffs being almost sheer to the sea, averaging 302 metres in height on either side of Tuteremoana.

KAPITI ISLAND LAND TENURE (Illustrative Plan Only)



Thanks to Department of Lands & Survey, Wellington, for the use of this map.



Plate 2

Nine major streams, all containing perennial water supplies, rise close to the verge of the western cliffs and flow in an eastward direction, often in ravines and emptying through rough gorges into Rauoterangi Channel, (separating the island from the mainland). The two largest areas of flat land on the island are Waiorua (north end) of some 40 hectares (100 acres) and Rangatira, of 12 hectares (30 acres) which are composed largely of beach boulders with a thin layer of top soil. Ferrar (1928, 312.) describes the island as a fault block that has been uplifted and tilted to the east within recent times. Two fault lines are located offshore of the eastern side of the island however, and run parallel with it. Another theory which has much support, (Cockayne, 1907, 2; Fleming, 1948, 462-64.), suggests that Kapiti Island was once part of a land bridge linking it to the South Island, and Kapiti Island is the only portion still remaining above water. Indeed the tilted block of which Kapiti Island is a remnant could have extended to the South Island, but much of the rest of the bridge has been submerged and eroded away by the action of the rips and currents passing through Cook Strait. The only other significant remnants of this bridge are Fishermans Rock and one or two other pinnacles that lie on an axis linking Kapiti Island with the scarp on the eastern side of

the Marlborough Sounds.

Soils on the island are derived from the underlying grey-wacke and argillite, and have a structure that consists of a shallow layer of greyish brown silt loam, overlying yellowish subsoils. Deposits of volcanic ash and sand at various localities cause some variation in this structure. There are sizeable deposits of wind borne sand, up to three metres (10 feet) deep in places at the northern end of the island. There is a shallow scattering of soil on the steep slopes and on the western cliff faces of the island. Little change has occurred, apart from increased vegetation cover since the observation made by Cockayne during his 1907 visit.

"Rocky ground is everywhere to be encountered, and very often the slopes are covered with stony debris frequently made up of stones of considerable size, between which is but little soil proper". (Cockayne, 1907, 3.).

The beach cover is mainly of a stony nature and the beach itself drops off sharply into deep water. The western side of the island contains rugged reefs and practically inaccessible bouldered beaches. The eastern side contains the best landing places, although again the beaches are shingly.

3.2 Climate.

Kapiti Island has its own Climatological Station, situated at Rangatira Bay. Readings of rainfall, maximum and minimum, wet and dry bulb temperatures, and estimates of wind speed and direction, cloud cover and visibility are made daily by the ranger. The mean annual rainfall for Kapiti Island is 1064mm, however the higher parts of the island, especially over the 1000 foot mark and up to Tuteremoana (1706 feet) probably receive a much higher rainfall. The warmest month is February, with a mean of 16.9°C. The coldest month is July with a mean of 8.9°C. Frosts are uncommon on Kapiti Island and are only likely to occur on an average of 0.4 days per year.

The prevailing wind is the north-westerly, although the high cliffs on the western side of the island afford some protection to the eastern sections of the island from this wind. Because of the many gullies dissecting the island, however, a strong funnelling effect occurs in some places. The sea between Kapiti Island and the mainland is affected by the changeability of the weather, especially the wind. It may

quickly and effectively isolate the island from the mainland, as the sea may become rough enough to endanger small craft that often frequent the Kapiti waters. Constant attention must be paid to the weather and its outlook, for boat transport is the dominant means of conveyance to and from the island, not only for the visitor, but also for the ranger and his family.

3.3 Vegetation.

Kapiti Island was originally covered in native forest, extending on the eastern side to the water's edge in most places. Dieffenbach (1843, Vol.1, 108.), noted especially rata, kahikatea and rimu. The forest was partially cleared (on the hilltops) by burning in the 1825-1840 period to provide areas for cultivation. Much of the remaining forest was burned off after this time, (Esler, 1967, 353-366.), for farming purposes, and grass took its place. A few remnants of the original forest remained in the gullies and gorges. After 1897, when Kapiti Island became a reserve for the protection of native flora and fauna, regeneration processes and programmes were instigated. The island at this time, however, suffered greatly from overstocking with introduced animals which were not allowing the bush to regenerate. Cowan (1907) in his report to the House of Representatives, made the remark, "Much of the bush is fairly open owing to the sheep, wild cattle and goats having eaten the undergrowth". After the animals (sheep, goats, cattle, cats) were cleared from the sanctuary the vegetation then had a chance to regenerate. During the years from 1900 to 1950 regeneration of Kapiti Island's vegetation was helped by the introduction of many native plants, that were planted out by the caretakers of the time. It was noted by Wilkinson (1952, 31.) - one of the early caretakers that "Kapiti, should in time become an interesting botanical museum, where plants from all over New Zealand can be seen".

Today, the central portion of the island comprises remnant podocarp forest, with rata and tawa species. The secondary growth forest on the island is dominated by kohekohe, rata, tawa, karaka and rewarewa. Kanuka and manuka give protection to many of these as yet, smaller trees. In more exposed

places on Kapiti, especially on the northern, western and southern sides of the island, stunted scrub containing tauhinu, coprosma propingua, five finger, lupins and some flax are the only vegetation that will survive.

3.4 Wildlife.

Originally the island probably supported extensive forest and marine bird life. It is difficult to compare the forest and marine bird life today with that of the past, because while many native birds were re-introduced when the island was declared a sanctuary, others were lost. A wide variety of birds, ranging from native forest birds to sea birds, swamp birds, those birds threatened with extinction, to common species now frequent the island. Some of the bird species present include wekas, kakas, parakets, tuis, bellbirds, fantails, native pigeons, North Island robin, whitehead, spotted kiwi, penguins, muttonbirds, tomtit and pipet to name just a few. (For further details, see Wilkinson, 1957.) The animal life on the island is not as diversified by any degree as that of the bird or vegetation populations. There is a species of rare native bat, two species of rat, (the native and the Norwegian rat), lizards and opossums. There has had to be care taken that the animal species antagonistic to bird life are not introduced to Kapiti Island.

3.5 Historical Overview.

Kapiti Island has been witness to much diversity in human settlement, especially over the last 200 years. The island was named 'Entry Isle' upon its sighting by Captain Cook in 1770 (Cook, 1955, 249.). It was known to the Maoris as 'Te Waewai Kapiti O Tara Raua ko Rangitane', or 'the meeting place of the boundaries of Tara and Rangitane'. Maori occupation of the island has been long, although it is only the latter Maori history, as the stronghold of Te Rauparaha, that is recorded.

It was on an expedition of discovery that brought Te Rauparaha, Patuone, Wakanene and other famous northern chiefs to the Cook Strait area. As they made their way over the hills from Masterton, the majestic sight of Kapiti Island greeted them. It was not the grandeur of the island that

was of initial impact, however, for Te Rauparaha noticed a sailing vessel gliding through the channel between Kapiti and the mainland. A sailing ship in those days meant promise of trade, much needed muskets and other implements. The Kapiti area made lasting impact on Te Rauparaha as he again travelled north to his homeland. Upon returning home to Kawhia, Te Rauparaha found hostile pressure was being applied to his people, the Ngatitōa by Waikato tribes, and a shift was almost inevitable. The obvious choice to Te Rauparaha was Kapiti Island. After much deliberation and consultation it was decided among the Ngatitōa people to move south to Kapiti. This remarkable migration took place between 1821 and 1822. During the long haul south, all goods and chattels, as well as children, had to be carried on the peoples backs. Much hostile country was passed through and the warriors had to be on constant watch for enemy attack. After many ordeals the tribe reached the shores of Waikanae, opposite Kapiti Island. There was much fighting with the local tribes and one or two attempts were made to take Kapiti Island but it was not until 1823 that the island was finally captured. Te Rauparaha established at least three large pas on the island.

There were years between 1822 and 1828 when many battles were fought between the Kapiti Island residents and their mainland enemies from both the North and South Island. Not only was Kapiti Island attacked, but Te Rauparaha led many attacks to the mainland in order to obtain revenge against tribes who had attacked him. The last, and one of the fiercest battles was fought as late as 1840. None of the attacks on Kapiti, however, were to succeed in ousting the famous chief from his stronghold. It was not until 1843 that Te Rauparaha was reluctantly removed from the island by the militia and taken to Auckland.

Te Rauparaha, during his stay on Kapiti Island gave protection to and encouraged pakeha contact in order to trade for fire-arms, and to give prestige to his escapades. Trade consisted of ammunition, guns, dried human heads, flax, fresh fruit, as well as numerous other items. Beginning about 1828 the whalers were welcomed by Te Rauparaha as a commercial enterprise. There were seven whaling stations around the Kapiti area, four of which were on Kapiti Island itself at Waiorua, Kahuoterangi, Rangatira and Wharekohu, and also on each of the outlying islands of Motungarara, Tauhoramaurea and

Tokamapuna. The men on the stations were described as:-

"tough men and hard workers who formed veritable hives of industry at the various establishments. In the heyday of whaling there must have been hundreds of Europeans about Kapiti. As many as ten vessels are recorded as having anchored off Kapiti at one time, waiting to pick up oil". (Wilkinson, 1952, 9.).



Plate 3



Plate 4

After 1840 whaling activity began to decline, and most of the whalers and Maoris began to leave the island for the mainland.

In 1839 an American whaler, Captain Mayhew, obtained Maori signatures for the sale of 250 hectares of land at the south end of Kapiti Island and in 1844 transferred this to Andrew Brown who was awarded a Government grant in June, 1851 which allowed him to develop the land for farming. (Wilkinson, 1952). In 1852 Sir George Grey wished to buy the island as a home, from the Ngatitoa and Ngatiawa tribes, but the offer of £5,000 was refused. In 1876, Mr. John Martin of Wellington offered £8,000 for the whole island but this offer was also refused. Apart from the 250 hectares acquired by Brown, and two other small areas totalling 10 hectares, no European ever acquired freehold rights to the island. This was probably due to the fact that the Maori people considered Kapiti as a 'Moturongonui' (far-famed island) with great Mana.

Between 1840 and 1890 over half of the island was cleared of bush for sheep and cattle grazing. Much of the land was leased to European farmers, especially around Rangatira flat. Brown was farming the south end, and the Webber family was farming the north end of the island. In 1897 the Government decided to constitute Kapiti Island a reserve for the preservation of the native flora and fauna and Parliament passed the Kapiti Island Public Reserve Act, 1897. By virtue of which, the freehold and leasehold rights (other than those of the original native owners) were determined and compensation was assessed by the Compensation court. Over this period of human occupance, 1820 to 1897, Kapiti Island's landscape cover had changed from one of native bush to one with over a half the island cleared for pastoral farming. Sheep, cattle, goats, cats, the Polynesian (kiori) and Norwegian rats were among the introduced animals. The opossum was also introduced in 1893, thrived on the island and quickly became a pest. Axis deer and later fallow deer were introduced. However, they failed to survive on the island. During the time of the whalers and farmers Kapiti Island had been markedly altered, and therefore in 1900 steps had to be taken to ensure that the future goals of the reserve (that is the preservation of native flora and fauna) would be realised. It was decided that there was need for a caretaker on the island, and the first one appointed held an honorary position. Mr. P. Sheridan, in a return prepared for the House of Representatives

in September, 1904, states:-

"The Island is occupied by Mr. Malcolm McLean, a farmer, as caretaker on a yearly tenure for which in addition to his services as caretaker he pays an annual rent of £70."

McLean was followed by the appointment of a paid caretaker, Mr. E.A. Newson, who took up residence at Rangatira flat from March, 1906 until March, 1908. He was followed briefly by his brother C.E. Newson until July, 1908. Richard Henry arriving from Resolution Island then took up the position of caretaker which lasted from August, 1908 until July, 1911. J.L. Bennett, the next appointee, served from July, 1911 until August, 1924. Both he and his wife died on the island and are buried at the north end. Mr. Fletcher carried on from August until November, 1924, when Mr. A.S. Wilkinson took over as caretaker. Wilkinson and his family lived on Kapiti Island for the next eighteen years, during which an active replanting programme was undertaken of native trees. In 1930 the Wellington Acclimatisation Society made funds available to assist this work, and men were employed as a result to do the planting out. The caretaker's task was also to eradicate as many introduced animals as possible. Goats were finally exterminated in 1928. The sheep were also fenced from the sanctuary and restricted to the private land at the northern end of the island. Opossums and rats still remain, despite concentrated efforts to eradicate them. After Wilkinson, G.W. Hughes, an opossum trapper, remained on the island until 1943 when it became a prison used by the United States armed forces during World War II. In 1946 W.L. Lindsay became caretaker, he was followed in 1951 by G.L. Fox, who stayed until 1968, and P. Pearson took over for a brief period until 1969. The name 'caretaker' was changed to 'ranger' and in 1969 P.J. Rodda took up the appointment serving seven years until 1976 when the present ranger, Mr. P. Daniel and his family arrived to continue the work started in 1900.

Man has, up until recently, altered Kapiti's eco-system dramatically, as may be seen when looking at the impact of the whalers, traders, farmers, and even the visitors who are arriving in increasing numbers in spite of the restriction of permit acquisition. Kapiti Island has had a varied and dynamic past, and looks forward to the future with some trepidation, as visitor pressure increasingly places demands upon the reserve.

3.6 Jurisdiction, Administration and Legislation.

Kapiti Island is now largely Crown land, acquired under the Kapiti Island Public Reserve Act, 1897. In the Act Kapiti Island Reserve is said to be - "for the purposes of conserving the natural scenery of the island and providing a preserve for the fauna and flora of New Zealand". The only remaining ownership interest on the island is a twelve hectare block of Maori land fronting onto Waiorua Bay at the northern end of Kapiti.



Plate 5

Responsibility for the administration and management of Kapiti Island lies with the Lands and Survey Department. The Department is assisted in its task by the Technical Advisory Committee, consisting of experts in various fields who have valuable specialised knowledge for the management problems of Kapiti Island.

The ranger and his family play a vital role in the day-to-day operation of the island, for he, together with his family are the only permanent residents on the island now. The ranger's duties include:-

- (a) meeting and supervising visitors.
- (b) general maintenance of both track, buildings and machinery.
- (c) patrolling and policing the regulations of the island.

(For example, looking for illegal landings or persons on the island without a permit).

- (d) recording weather statistics.
- (e) search and rescue work on the waters around Kapiti.
- (f) fire fighting - A real threat is fire on the island.
- (g) assisting with research projects.

It is important that people who visit Kapiti Island do so with the full knowledge of both the resident ranger and the district office of the Lands and Survey Department. A permit system monitors entry to Kapiti Island. Only day permits are available, but they are free to any applicant who applies to the Department of Lands and Survey, District Office, Wellington. Permits provide a means of controlling and restricting entry to Kapiti Island as well as providing a record of the number of people on the island at any one time. Several restrictions are placed on the issue of permits. These being that no more than the fifty permit-holders shall be on the island on any one day. Permits are not issued on Monday or Tuesday, (a recent policy decision made to give the ranger and his family two days break from visitor obligations), and that no more than 150 persons per week in the summer months, and 100 persons per week in the winter months visit Kapiti Island. This allows for regulated pressure to be applied to the island without overtaxing the resources of both the ranger and the island tracks.



Plate 6

Chapter 4

THE UTILIZATION OF KAPITI ISLAND.

4.1 Introduction to the Methods used.

The overall aim of the management of Kapiti Island is the proper and beneficial administration, control and planning of the island, primarily for the protection and preservation of native flora and fauna on the island. It is therefore necessary to have information pertaining to any outside influences that have an effect on the reserve. People, are one such influence, and therefore it is necessary to acquire some knowledge of visitor actions on Kapiti Island. This chapter is concerned with the analysis of activities engaged in by the public on Kapiti Island. It also considers the types of people interested enough to come to the island. Policy effects from these results will be dealt with in Chapter 5, while Chapter 6 will give some alternative management structures, bearing in mind both the analysis of people participation on the island and policy implications.

Kapiti Island is designated a flora and fauna reserve. Because of this, visitor participation on the island is primarily of a 'passive recreational' nature. There are also the educational and scientific aspects to consider. The resource base of Kapiti Island is nature-oriented, and this may be highlighted by using Clawson's classification system for areas. (Clawson, 1963.) He gives three general guides to resource utilization.

1. User-Oriented - These include outdoor sites in which supervised activities dominate, and the basic landscape elements are less important. Such areas have only modest requirements for natural resources.
2. Intermediate - Some of these areas may be used for general outdoor recreation activities, with more emphasis being placed upon activities than upon the natural qualities of the site.
3. Resource-Based - Here, primary emphasis is upon the natural qualities of the area with much less emphasis upon the activities. Special emphasis is placed upon the unique natural characteristics of the area.

The third category in this classification has components in it which are present in Kapiti Island's policy guides. Basically it is an environment-oriented situation, where people have only a secondary role to nature. Man, in many cases, is not used to being placed in a secondary position to nature, and this may be seen in some attitude approaches to Kapiti Island. They have come through strongly in the survey, especially when people have been given the opportunity to express ideas regarding improvement recommendations for the island.

A summary of visitor usage of Kapiti Island had not been undertaken before, and it was felt necessary by the Lands and Survey Department to embark upon such a study, in order to get some feedback on visitor usage patterns, and impressions of the island, when considering a new management plan for Kapiti Island. Every encouragement was therefore given to proceed with a questionnaire and an analysis of results of visitor usage on Kapiti Island. Kapiti Island was considered to be a manageable study area because of its defined boundaries, not only in the physical sense, but also in terms of population usage. The various processes working to help contain these boundaries are of significant interest. Some of these include:-

- (i) Controlled usage. There is a governing system (permit) to control access and numbers to Kapiti. The distribution of people landing on the island is also restricted to a defined area. (Rangatira Bay).
- (ii) Seasonal Availability. Restrictions are made by climate, especially the wind in helping to determine sea conditions, but also in terms of rainfall, thus making the island more appealing in the summer months for most people.
- (iii) Visitor participation. This is restricted to day visits only, of a limited time, (between 8.00 a.m. and dusk), after acquiring a permit and getting transportation to the island.
- (iv) Conservation policies. There are restricted numbers using the island because of the likelihood of damage to vegetation and disruption to wild life, if large numbers come to the island at one time.

These processes help to view the working of Kapiti Island, especially in the making of management decisions.

The summer months between December and March were chosen as the most appropriate times to administer a questionnaire on Kapiti Island, so as to get a large number of people in a reasonably limited or short time. This is not guaranteed, however, as numbers vary from year to year, depending largely on the suitability of the weather. A reasonable number of people were questioned (477 people) over this chosen period of time, even though the season was not a good one, and many parties had to cancel their visit to the island because of adverse weather conditions. There are numerous restrictions to the study, and although the questionnaire (Appendix 1) was designed to be short, with allowance for writing of the persons own views, not every permit-holder visiting the island when the study was undertaken was questioned, because of a lack of time. Use was made of asking the questions (using cards for indications of choice) and of individuals filling out their own questionnaire forms. There seemed to be little significant difference in response using either method.

4.2 Patterns of Activity.

- a) Because Kapiti Island is an island, accessibility often becomes a problem. Boat transportation is the only means by which visitors (permit-holders) may get to the island. There is a three-and-a-half mile stretch of water to cross, and this water at times becomes very rough. Although classed as restricted waters, the Rauoterangi Channel may get as rough as the middle of Cook Strait. It is therefore necessary to have experienced men, and safe boats operating a service to get visitors to and from the island. There are at present, two charter boats working between Paraparaumu beach and Kapiti Island. One, a surveyed vessel, is able to carry eight passengers per trip, and has been in operation for a number of years. The other, an unsurveyed vessel, is able to carry six passengers, and started while this survey was in operation. It is the responsibility of the permit-holder to arrange transportation to the island and this must be done before gaining a permit. Private transport is used in some cases. Using the survey as a guide it was found that 90 percent of the permit-holders inter-

viewed came by chartered boat, (both charter boats were put under this category,) and only 10 percent came by private boat. On looking at the numbers of people booking in for the charter boats, it is apparent that this general trend continues throughout the year, with the majority of people going to the island, booking through the charter service.

Accessibility to the island is also dependent on the weather, for both launching from Paraparaumu beach and for landing on the island. It is this variable that most often disrupts plans for a visit to Kapiti Island for it is one factor that cannot be controlled.

"The meaning of the word access is open to wide interpretation, and is certainly not limited to the more familiar use which is that of physical access. Any participation in an activity depends on knowledge of the existence, location and availability of a facility." (Cosgrove, 1972, 23.)

This applies also to Kapiti Island, for advertising of how to obtain a permit to land on the island is restricted to a notice board outside the Kapiti Boating Club at Paraparaumu Beach. This is in keeping with the policy of a 'low-key' public approach, thus keeping the island free for those people keen enough to enquire, and act upon information given. Because of this limited knowledge of how to obtain a permit, many people arrange to come to the island with an organisation or society. (Table 1.)

	Alone	Organisation	Family Group
Numbers of people	4	394	79
Percentage	0.8%	82.6%	16.6%

TABLE 1

A variety of groups organise trips to Kapiti Island. Some of these include:-

Clubs - Boating

- Kapiti Boating Club
- Waikanae Boating Club
- Paraparaumu Beach Underwater Club
- Mana Cruising Club
- Plimmerton Boating Club

- Tramping - Tararua Tramping Club
 - Wellington Tramping Club
 - Wellington Catholic Tramping Club
 - Victoria University Tramping Club
 - Massey University Tramping Club
 - Hutt Valley Tramping Club
- Camera Club

Societies

- Forest and Bird
- Historical Trust
- Ornithological

Youth Groups

- Boys Brigade
- Girls Brigade
- Scouts
- Guides

Schools

Many of these groups come several times a year, often with different members each time.

There are visitors, however, who return to Kapiti Island year after year for a visit. Seventy-four percent of those questioned in the survey had not been to the island before, but twenty-six percent had been before, some as many as twenty times over the last ten years.

b) Distribution of people visiting Kapiti Island.

It is estimated that about one-half of all the people going to Kapiti Island go in school groups. Both primary and secondary, as well as teachers' college groups visit the island during the year. Most of these visits take place in the school year, and their visits were not included in this survey. It is assumed that they come to the island on an 'educational visit'. Most come well prepared with adult supervision, and find the island a 'fascinating experience'. On talking with some of the children making up these parties, it was found that most see Kapiti as a place where birds are 'tame' and not afraid of people, and that the bush is 'different' to that on the mainland. Most school parties take the track to the top or to the north end, very few just remain around Rangatira flat.

Age distribution of Permit-holders between December 1976 and
March 1977.

Years	10-14	15-19	20-24	25-39	40-59	60+
No. of People	39	67	72	144	132	23
Percentage	10%	14%	15%	30%	26%	5%

TABLE 2

Table 2 shows the age distribution of permit-holders going to the island. This excludes school parties and those children under ten years. All the people in the 10-14 years age bracket, were accompanied by adults. An even age distribution may be noticed, with most being in the 25-59 age group, where active organisation participation is expected. It may be expected that this is the age groupings that are most attracted to organisations that use Kapiti Island the most. e.g. Forest and Bird Society, boating and tramping clubs.

Little significant difference was shown between numbers of male and female permit-holders. Out of those questioned, males numbered 236, and females numbered 241. From the 477 people surveyed, 362 came from the Wellington region. This region was designated as an area encompassing from Pukerua Bay South, and over to Featherston in the east. Thus taking in the major city areas of Lower and Upper Hutt, Wellington city proper, and the inner suburbs.

Only 40 people came from the Paraparaumu area, which seems to follow the general trend. On talking with the ranger and many local people, there seems to be less use made of the island by the local Paraparaumu people than from outsiders. Many residents on the coast have never been to Kapiti Island yet some have lived on the coast for many years. It appears that at this time, Kapiti Island is drawing most of its visitors from the city areas.

Some 15.7 percent of the people came from outside the Wellington and Paraparaumu areas. Of these, 7.8 percent were visitors from overseas on holiday in New Zealand, and going to Kapiti Island for the first time.

c) Visitor activities on the Island.

The average stay of permit-holders on the island was six hours, the shortest being three hours, the longest eight hours. There is a restriction as to the period when visiting is allowed on the island, (between 8.00 a.m. and dusk). Time is also taken up with transportation to and from the island, with the average turn-around-time being half an hour, (often longer in rough weather). Categories given to reasons for visiting Kapiti Island by the permit-holders were kept as broad as possible (Table 3), they are open also to varied interpretation, however they do serve as a general frame of reference.

Reasons for Visiting Kapiti Island

(In importance)	Ranking 1	Ranking 2	Ranking 3
Peace and Quiet	<u>63</u>	<u>56</u>	<u>63</u>
Easy access	4	3	7
Physical fitness	10	14	24
Unique experience	<u>183</u>	<u>80</u>	<u>56</u>
Challenge	7	36	24
Quality of Scenery	80	158	93
Historical	9	20	23
Scientific	15	9	8
As A change	23	24	70
Inexpensive	1	3	4
Educational trip	34	46	49

TABLE 3

Table 3 shows that the people answering the questionnaire felt 'quality of scenery' to be the most important reason for visiting Kapiti Island. Second in overall ranking came 'a unique experience', (including 'something not done before', and 'things not found elsewhere'.) Third ranked came 'peace and quiet'. Evaluation of this category varied, however, depending on how many permit-holders were on the island at the time, for up to fifty a day were allowed.

The 'scientific' field, including 'historical', was not highly ranked since most permit-holders were not on the island long enough to delve into scientific matters or follow up problems.

Physical fitness was given highest ranking by tramping clubs.

The categories of 'inexpensive' and 'easy to get to' have the lowest ranking, and were two areas of complaint by many of the permit-holders. They were said to be problems which should be overcome, especially the 'information' aspect of how to get a permit to come to Kapiti Island. The boat charge was found to be excessive by a few people but this, however, did not stop anyone from coming to the island, although it may have deterred a few in the organisations from putting their names forward.

Under the category of 'other' ranked in the top three by most people, 'coming to see the birds' was the main reason given. Ten people ranked 'having a picnic' as their main reason for visiting the island.

There are three main places to visit when going to Kapiti Island. Landing is restricted to Rangatira Bay, and each party is met by the ranger, to be given a briefing as to the rules governing visits to the island and of the tracks available. The flat area of Rangatira is open to exploration, as is the track to the top of the island - either the main trig track or the McKenzie Track, approximately a three-hour-round-trip. There is also a track going to the North End, where Okupe Lagoon is situated - a two-and-a-half-round-trip.

Most people tended to go to the top of the island, (Figure 1), although some keen ones with time in hand combined both the top and North end trips in one day.

Not many people stayed around Rangatira Flat, suggesting that the tracks available are being well used. These results show that recreation demands vary among the various groups who use Kapiti Island bearing in mind, age, group orientations and needs.

There was an insignificant percentage among people surveyed using the island as a purely picnic recreational facility.

TRACK USAGE ON KAPITI BETWEEN
DECEMBER 1976 AND MARCH 1977.

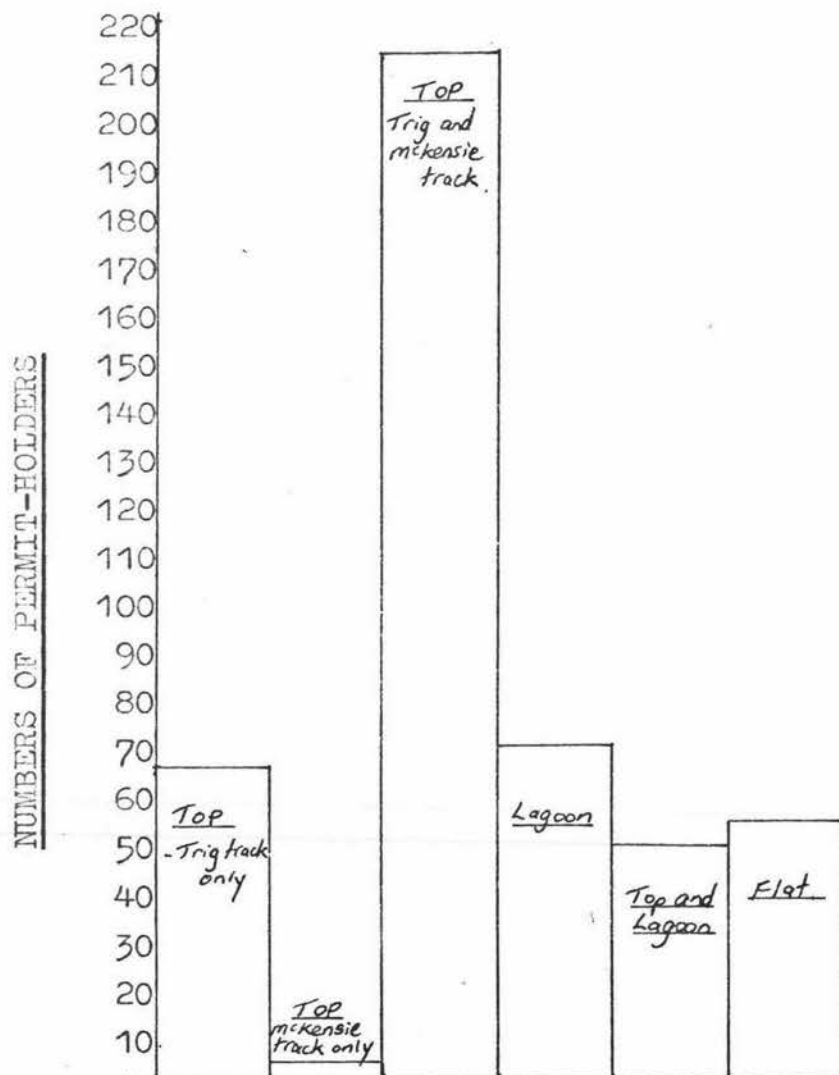


FIGURE 1

4.3 Patterns of Management on the Reserve

The use made of Kapiti Island by visitors over the last ten years has changed in nature and increased quite dramatically. (Figure 2). Before the 1960's, the use made of Kapiti Island differed to some extent from the present day. At that time camping was allowed on the island, with a permit extending up to one week at a time. The camp site had to be approved by the caretaker and was restricted to the Rangatira flat area. Camp fires were also allowed but only under the supervision of the caretaker. The demand for permits to get to Kapiti Island before 1960 was not heavy. Further, boating was not practiced 'on mass', making access more difficult, with the result that visitor pressures were not great.

From 1967 onwards there was a general increase in the popularity of boating, however, as it came increasingly within the budget range of the average family. This made Kapiti Island physically more accessible to many more people at a time when people were becoming more aware of what Kapiti had to offer.

The pressure of visitor usage was beginning to become apparent too and because of this, patterns of management also began to change on the island. Camping was discontinued and a total fire ban was placed on the island which meant that visitors were not able to light any fires on the island at all, nor even smoke in the bush.

Regulations were tightened up and this reflected the increasing use made of the island by permit-holders.

Today, management of the island has become far more 'formal' and 'directed', as far as visitor usage is concerned. There are defined rules to be obeyed by the permit-holder, and it is the responsibility of the ranger to inform the permit-holder of these when he or she enters the reserve.

Clearly defined tracks are provided to allow visitors to see some of the nature of Kapiti Island yet to keep them within defined limits so as not to interfere excessively with the flora and fauna on the island.

NUMBER OF VISITORS TO KAPITI ISLAND BETWEEN 1965 AND 1976.



----- Figures not available - presumed growth pattern.

FIGURE 2

As may be seen (Figure 2) with the numbers of visitors to the island, a sharp rise occurs in the 1971/72 season. This was generally due to a very good summer season when many people made use of the ideal conditions to visit Kapiti. In 1970 there is only a slow rise, not as large as expected, however, because the island was closed during February and March, 1970, due to an extreme fire risk, and no permits were therefore issued during this time. There has been a general levelling out in issues of permit-holder numbers over the last three years, due mainly to the poor weather conditions encountered, especially over the summer months although the numbers of permits issued have increased, the actual numbers of people arriving on the island have not as is shown:

1976 (December)	Numbers booked by permit	-	804
	Actual number arriving on the island	-	527

A good season would see many more of the permits issued utilised.

With the increase in boating activities there has been added the further problem of illegal landings on Kapiti Island, that is, people landing without a permit, usually on the southern or northern end of the island. Much more emphasis is now placed by the ranger on patrolling the island, checking on likely landing spots, an activity rarely carried out by former caretakers in the past.

It is hoped that visits to the three islands off the eastern side of Kapiti may ease the pressures of landing on Kapiti Island. One island, Motungarara, being privately-owned, is therefore restricted in public use. The other two, Tauhoramaurea and Tokamapuna, are both designated as Maori land, however, with the ownership pattern so complicated that it is an almost impossible task to locate all the owners. At present, the public are making use of these two islands, especially Tauhoramaurea. It is not uncommon in the summer months to see twenty boats moored off this small island and if it was not for public access to these islands, pressure would be far heavier on Kapiti Island itself.

Chapter 5

OUTDOOR OPPORTUNITY DEFICITS

5.1 Present usage of Kapiti Island.

People going to Kapiti Island on a permit have differing ideas as to what the island is like, and should be like. Some who have not been to Kapiti Island before, often find it very different to their expectations or perception. To some it is a pleasant surprise, to others a disappointment. People surveyed during December 1976 and March 1977 were given an opportunity to comment on how they felt the island's facilities could be bettered. Answers varied dramatically. Some of the suggestions listed below are those consistently reoccurring.

- 1) Toilet facilities for visitors: as the only toilet is at the ranger's house, with all the visitors who use the island it was felt by many that an inadequate approach to this area of need was a disappointment.
- 2) Increased information: this should take the form of either a notice board on the island, with name plates for trees, and photographs of the more common birds, or a pamphlet containing some of the history of the island, as well as comments on the flora and fauna to be found.
Information should also be more readily available on how to obtain a permit to go to Kapiti Island, and also on how to go about making transport arrangements.
- 3) Weekend or overnight camping should be allowed, as it was before 1960, as long as it is supervised by the ranger.
- 4) Access should be made available to other areas of the island, and landing not solely restricted to Rangatira Bay.
- 5) A landing jetty should be provided on the island side, to make access to the island easier.
- 6) Hot water, or provision of a place to boil a kettle, as well as a picnic shelter was another favoured suggestion.
- 7) Provision should be made for rubbish bins, to be placed at intervals around Rangatira Flat.

Although these were not all the suggestions people made, they include the ones occurring most frequently. Apart from changes suggested, a strong representation was made by many people, saying

that Kapiti Island should not be spoilt by amenities. Emphasis was placed on the idea that the island should be kept restricted and access not made any easier. Looking at the numbers of people responding to ideas about Kapiti Island's future, a greater proportion were in favour of making no change to the island environment than in the development of it. At present the policy is to keep development as limited as possible. Some compromises must be reached, however. There has been the installation of public toilet facilities of a limited but adequate nature. Further development of amenities for visitors, must be equated against the effects on the natural environment.

Kapiti Island is fulfilling roles of both an 'educational' and 'scientific' nature. Education is of an incidental type, with an 'experience oriented' approach. Scientific research of some of the rarer species of flora and fauna found on the island has been encouraged. It has not been overstressed, however, and Kapiti Island is not used solely as a scientific laboratory. This role that Kapiti Island plays in helping the analysis of various factors concerning native flora and fauna, is a very valuable one.

The policy legislation that Kapiti Island is administered under, influences to some degree the activities indulged in on the island by the visitors. Nevertheless, the visitors are an important part of the overall scene. It is man who gives meaning to the purpose behind Kapiti Island, and who has, because of the increasingly rare existence of native flora and fauna in its natural state, placed a high value on retaining the island for the preservation of native flora and fauna.

5.2 People's expectations of Kapiti Island.

Most visitors to Kapiti Island are from urban environments, and for many, former experience of natural environment areas may be limited. Therefore people with a wide variety of experience in wilderness areas, from the totally uninitiated to the experienced bushman, are likely to come to Kapiti Island. Because of this a wide range of experiences may be enjoyed on the island by differing groups of people. It is very much an individualist experience activity, in that background experiences and orientations play a large part in dictating the activities pursued on the island. For example; a person

lacking knowledge of bird life may not see as many types of birds or notice calls of birds as readily as those whose study is in birds. The keen tramper may see more of the island than the person who does not like walking very far.

For most people who visit the island, it is not only the flora and fauna that provide the experience but there is also the anticipation of travel to the island and the journey itself. (Both to the beach, as most people who visit Kapiti Island do so after travelling by car to Paraparaumu Beach, and then the boat trip across the Taurotorangi Channel to and from the island.)

Chapter 6

MANAGEMENT ALTERNATIVES

6.1 Management Considerations.

Successful management of the recreational supply Kapiti Island has, is crucial if continued utilisation of this resource is to be preserved for future generations. There has been, in the western world, a continuing trend to emphasise the place of people in a recreational setting. People formally saw land as an exploitable and expendable resource commodity. In the case of Kapiti Island, however, there has been value placed on the maintenance of the basic asset or resource. Such forethought has been evident since it was created a reserve in 1897.

Not only has there been the people-dominated, recreational activities but also an increase in needs for concentrated recreational facilities, due to increased demand from urbanisation. This urbanisation trend had its impact on rural and wilderness areas. The perceived value of wilderness areas has been lifted, due largely to growing urban areas, and desires by many of the urbanites to 'escape' from their environment at least for a while.

This escape means a need to cater for increasing diversity of recreational activities. In all events it is usually a sharing of leisure or outdoor recreational experiences with others that is of paramount importance.

"For a minority of people, the appeal of outdoor recreation may lie in the possibility of getting away from people, to nature and solitude: but for the majority a major attraction of outdoor recreation seems to be the opportunity to be with people and to share leisure activities with others." (U.S. Outdoor Recreational Resources Review Commission Report, No.20, 1962:31.).

Kapiti Island has a role to play, not perhaps as a major element in the formal operation of recreational activities but in enhancing the aspect of informal passive recreation, perhaps catering more specifically for interest group orientations in educational and scientific roles. People come to Kapiti Island with differing needs and expectations, (Chapter 4). This will always be so. The island in its natural state may cater for many of these needs, whether they be recreationally -

scientifically - or educationally - oriented. .

The question arises; How to continue to cater for people's needs on Kapiti Island, yet preserve it in its role as a flora and fauna reserve?

Any policy decisions must necessarily take note of demand and supply trends. Demand for the resource has increased, as is evidenced by the number of permits being issued. Supply has remained stable, except to the extent of offering alternative routes, i.e. to the trig (Tuteremoana), to the North End (a track walk) and to the flat area of Rangatira Bay. Other parts of the island are closed to permit holders.

Over two-thirds of Kapiti Island is not utilised by the public. There may come a time, however, when demand exceeds the present supply area - whether to expand and allow more area to be opened for public scrutiny, or to maintain a semi-closed Island environment, at this stage is an unanswered dichotomy.

Because of population pressure in areas of demand for regions like Kapiti Island, a consideration must be given to the visitor role functions in management policy.

In the visitor survey conducted (Chapter 4) most permit-holders responded favourably and many emphatically to the need for leaving the island undisturbed. This was borne out by the results to questions on reasons for visiting Kapiti Island. As seen (Chapter 4 Table 3) rankings were:-

- 1) Quality of scenery
- 2) A unique experience
- 3) Peace and quiet.

The expectations of people interviewed who came to Kapiti Island were to view a nature-oriented rather than people-dominated environment. This trend reinforces the view taken at present by management policy of constrained usage, and by people's responses it is thought appropriate that future trends will follow this pattern. The recreational pattern on Kapiti Island has therefore been of a passive nature, and it caters adequately for this. Active recreational pursuits are discouraged if not forbidden by permit conditions.

Kapiti Island, to some extent, must be an attractive recreational area, there will always be those visiting for the pure enjoyment of a day on Kapiti Island. This does not seem

contrary to the roles designated to run the island. Emphasize must lie, however, on the passive recreational domain. It is not only the island itself, but also the waters around Kapiti Island that are popular recreational habitats. Pleasure boating enthusiasts frequent the waters in their hundreds, especially during the summer months. The three off-shore islands take away some of the pressure from Kapiti Island, as far as landing for picnics and barbeques is concerned. There is, however, still the occurrence of illegal landings on Kapiti Island for purposes of picnics. This trend would be far greater, except for the constant patrolling of the shores of Kapiti Island by the ranger in his runabout.

There is a very real danger of fire in the more remote and unsupervised areas of the island because of these illegal landings, especially in the summer months.

An eco-system where flora and fauna may develop without the interference of man (in large numbers) seems to be indicative of Kapiti Island's position. A balance must be maintained in order to meet all the aims of the island. A solution where the semi-closed eco-system of native flora and fauna has dominance, yet where controlled access of interested persons is allowable seems a pleasing compromise. Demand must be curbed in some way to meet the recreational supply which Kapiti Island has to offer to the public. Opening any more of the island to public use goes against the wishes of most visitors to Kapiti Island and also against management aims.

6.2 Future Trends.

Working on the assumption that future management of Kapiti Island, as at present, restricts public use of the island, through limiting access, a vindication of future designations and roles the island may perform, should give some lead as to where management policy must head.

TABLE 4

Characteristics of ORRRC, Bureau of Outdoor Recreation land classes*

ORRRC-BOR class	Location	Developments	Recreation activities	Physical characteristics
I				
High-density recreation areas	Urban but may be in national parks	Intensive; exclusively for recreation	Activity-oriented sports, games, etc.	Attractive; natural or man-made
II				
General outdoor recreation areas	More remote than I usually	Less intensive than I, but picnic, campgrounds, man-made facilities including hotels, stores, ski areas, etc.	Extensive; fishing water sports, games, etc.	Attractive; natural to man-made
III				
Natural environment areas	More remote than I or II; largest acreage class	Limited - roads, trails, camping, picnic facilities; multiple-use management	Related to natural environment; hiking, camping, boating, hunting, etc.	Natural; attractive settings; varied landforms, lakes, etc.
IV				
Unique natural areas	Any place features found	Very limited; walks, trails, etc.	Study of natural features, sight-seeing	Outstanding natural features, scenic, scientific, geologic; part of a larger unit usually
V				
Primitive areas	V-A - where established under Wilderness Act; V-B - usually remote from cities	None to limited trails; usually no motor equipment	Wilderness hiking, camping, etc.	Natural, wild; undeveloped; away from civilization
VI				
Historic and cultural sites	Where sites exist	Limited - walks, interpretive centers, etc.	Sightseeing, study of sites	Associated with historic, cultural interests; national, state, local

Kapiti Island's designation incorporate facets of both Class IV and Class V. (Table 4) This may serve as a guide to some future roles for the island. The recreational activities at present are appropriate:- "The Study of natural features sightseeing," and in Class V - "Wilderness hiking" (limited), however, camping is not permitted. Keeping Kapiti Island within these class differentiations, means that future development from a recreational viewpoint is extremely limited. There are, however, allowances for restricted public entry. The designation of Kapiti Island as a Flora and Fauna reserve (the name of which has now been changed to Nature reserve), emphasises the points of preservation and protection. This has been the case since Kapiti Island was set up, under the 1897 Kapiti Island Reserves Act, which states:- "For the protection of native flora and fauna". This primary concern must have the strongest influence in creating management policies. Kapiti Island is a legacy of a few people's foresight, and New Zealanders must have the right to take advantage of such forward planning, but in such a way as not to jeopardize future generations' enjoyment of the island's environment.

It seems inevitable that the demand for recreational activities and resources will increase and the supply is unable to cope with this demand at all times. Passive recreation is often harder to cater for than that in the active domain. While areas are set aside, like Kapiti Island, where access is limited yet available to interested persons, the needs are being partly met. Utilisation of the resource must be curbed to the supply available. In the case of Kapiti Island it may mean, because of limited controlled access, people must wait for a chance to get to the island. The survey showed that at present the majority of permit-holders come with organisations. (394 out of 477 persons : 82.6 percent), which would seem to indicate a trend towards group use and forward planning for best utilisation of the time available on Kapiti Island. An organisation often gives some background information on the island before coming, thus allowing a greater chance of detailed observations, or more informed utilisation of Kapiti Island. Although often hard to accept, controlled access seems the logical way to keep much of the environment intact.

Man's need for recreation in many forms is being catered for in a large variety of ways. It is hoped that continuation of supply areas is ensured through careful forethought with

educated planning and management. Kapiti Island has a lot to offer many people, and with continued management it can cater for passive recreational demands within a well-defined framework.

APPENDIX 1

M A S S E Y U N I V E R S I T Y
DEPARTMENT OF GEOGRAPHY

QUESTIONNAIRE FOR VISITORS TO KAPITI ISLAND

- 1) Please indicate with an X what form of transport you used to get to Paraparaumu Beach.

Private Car? _____
Motor Cycle? _____
Rail? _____
Bus? _____
Walking? _____
(Hitch Hiking) _____
Other _____

- 2) By what form of transport did you get to Kapiti Island?

Private Boat? _____
Chartered Boat? _____
('Kapiti Transmarine') _____

- 3) Did you come to the Island

Alone? _____
With a group? _____
(organisation) _____
With a family _____
group? _____

- 4) Reasons for visiting Kapiti Island. Please list in order of importance the ~~THREE~~ reasons that explain best why you come to Kapiti Island. (1, 2, 3.)

Peace and Quiet?	_____	Inexpensive?	_____
Easy to Get to?	_____	Educational Trip?	_____
Physical Fitness?	_____	Other	a) _____
Unique Experience?	_____		b) _____
Challenge?	_____		c) _____
Quality of Scenery?	_____		
Historical			
(archaeological)	_____		
Scientific	_____		
As a Change?	_____		

- 5) Please show, by drawing on the map attached, where you went during the day.

- 6) How long did you stay on the Island? _____ hrs.

7) Male / Female

8) Please indicate the age group you are in.

0 - 10	_____
10 - 14	_____
15 - 19	_____
20 - 24	_____
25 - 39	_____
40 - 59	_____
60 +	_____

9) Occupation? _____

10) Please write the name of the suburb _____
and/or town/city _____ where you permanently
reside.

11) Have you visited the Island within the last 10 years? Yes/No.

If yes, how many times? _____

Where were you living then? _____

12) I am anxious to find ways of increasing people's enjoyment
of Kapiti Island. If there are any additional matters that
you would like to bring to my attention, please write them
below.

Thank you very much for your co-operation.

T. Hook,
Geography Dept., Post-graduate Student.

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