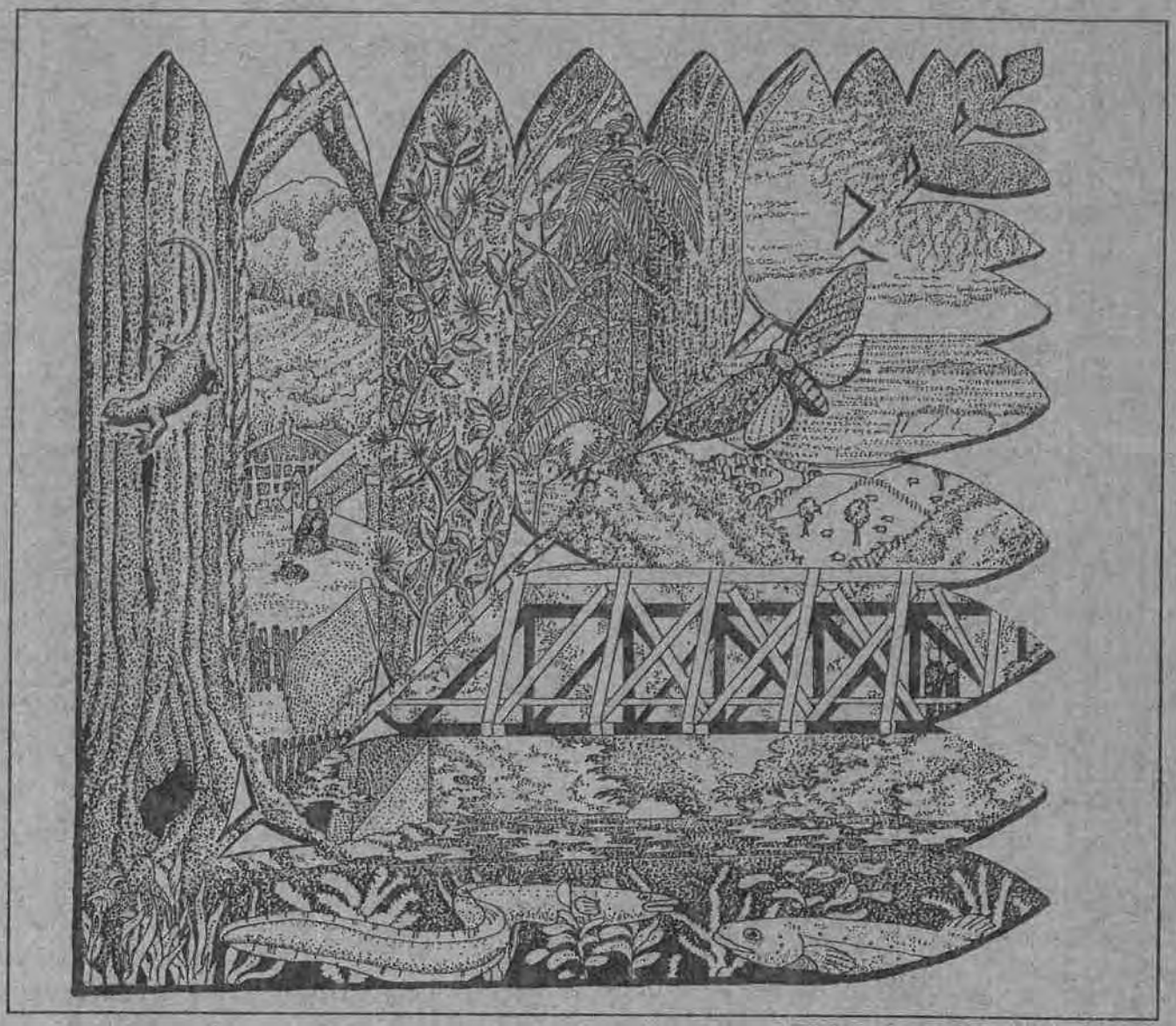

Conservation Management Strategy

East Coast Conservancy

1998 - 2008

Volume I

Department of Conservation
Te Papa Atawhai

Conservation Management Strategy for East Coast Conservancy

1998 – 2008

Volume I
Visions, Objectives and Implementation

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East Coast Hawke's Bay Conservation Management Planning Series No. 2

Ka titiro ki te Tairawhiti
roto te ataarangi Hikurangi Maunga
Ko Raukumara te tahuhu o te rohe
Kei waho kom nga ngaru
o Te Moana a Kiwa
E Papaki mai ana – e haruru mai ana e

Ka huri nga kamo ki te taunga
o nga waka o te Hekenga-nui
Ko Tihirau hoki
Ka titiro ki te tonga ki te huarahi o
Mataatua waka – Te Manuka-tu-tahi-e

Ka tiro atu hoki ke te tuawhenua
ki nga pae maunga nohonga Tawhirimatea
Ko nga riu – ko nga awa
ko te wao a Tane
ko Te Urewera
E kanapa mai ana ko te Waikaukau e

Ka huri te titiro ki Maungaharuru
Te Heru o Tureia kei raro Mohaka
tere ana ki waho
Ko Nukutaurua ko te Mahia
Ka rongo ake ki te hau kainga
o Turanganui-a-Kiwa
Turanga-ara-rau e

I look to the East
in the shadow of Mount Hikurangi
Raukumara the ridgepole.
Outside the tides of the Pacific
crashing to the shore.

My eyes turn to the landing place
of the canoes of the Migration,
There stands Tihirau.
I look to the south,
the pathway of Mataatua
to the Solitary Manuka

I look inland to the mountains
resting place of Tawhirimatea
The valleys, the rivers,
the forest te Te Urewera
sparkling are the waters of Waikaremoana

I look to Maungaharuru
to te Heru o Tureia
below, the Mohaka River rushing to the sea
In the distance is Nukutaurua Mahia.
I feel the winds of home,
of Turanganui-a-Kiwa
Turanga of a hundred paths

FOREWORD

A Conservation Management Strategy (CMS) is a statutory document which implements general policies and establishes objectives for the integrated management of natural (including land and species) and historic resources. The conduct of some activities on land administered by the Department can only take place by and in accordance with a CMS. Those preparing regional and district plans must have regard to any relevant CMS. It must be noted however, that a CMS is generally a statement of intent, and does not over-ride the provisions of legislation, general policy and agreements.

The East Coast Conservancy CMS has been prepared in accordance with Part IIIA of the Conservation Act. It provides a statement of intent for the long-term management of lands managed by the Department, and on its advocacy functions for protection of natural and historic resources generally.

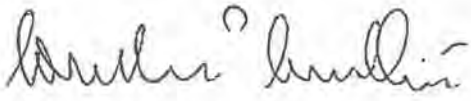
The CMS has been developed in consultation with the East Coast Conservation Board and the people of the region, whose assistance is acknowledged. The ongoing assistance and enthusiasm of these local people is vital if the challenges posed by this CMS are to be met.

A draft CMS was notified in May 1995 and an invitation extended to all persons or organisations to submit their comments by 25 August 1995. Prior to and following release of this document public meetings were held throughout the Conservancy and there was separate consultation with iwi and interest groups.

A total of 57 written submissions were received on the draft CMS by the closing date for submissions. Nineteen persons or organisations asked to be heard in support of their submissions and did so at hearings attended by representatives of the East Coast Conservation Board and the Department.

After giving due consideration to all submissions and other public opinion, the Director-General prepared a summary of them and revised the draft. These documents were presented to the East Coast Conservation Board for its consideration and approval prior to referral to the New Zealand Conservation Authority (NZCA) in February 1997.

The NZCA considered the CMS and referred it to the Minister of Conservation. After having regard to the recommendations of the Minister of Conservation, the NZCA approved this CMS for the East Coast Conservancy on 14 October 1998.



Chairperson
New Zealand Conservation Authority
P O Box 10420
WELLINGTON

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1.1.1 THE PURPOSE OF A CONSERVATION MANAGEMENT STRATEGY

The Conservation Law Reform Act 1990 amended the Conservation Act to introduce a requirement for the Department to prepare Conservation Management Strategies for all areas it manages and all natural and historic resources within its care (s.17D(2) Conservation Act 1987).

The legal purpose of a Conservation Management Strategy (CMS) is to implement general policies and establish objectives for the integrated management of natural and historic resources (including species), managed by the Department under the:

- Wildlife Act 1953
- Marine Reserves Act 1971
- Reserves Act 1977
- Wild Animal Control Act 1977
- Marine Mammals Protection Act 1978
- National Parks Act 1980
- Conservation Act 1987
- New Zealand Walkways Act 1990

and for recreation, tourism and other conservation purposes. A CMS must also identify and describe all lands managed by the Department.

Until the Conservation Law Reform Act of 1990 the Department was obliged to prepare separate management plans for each of the land units it manages under the Conservation, Reserves, Wildlife and National Parks Acts. These plans were usually unrelated to one another, and did not provide an overall sense of direction for conservancies' activities. The CMS, by examining issues over the whole Conservancy, provides a broad overview and sets an overall direction for the East Coast Conservancy's activities.

In practical terms a CMS is a document which sets out to answer the following questions:

- What are the Conservancy's conservation objectives for the next ten years and beyond?
- What are the priorities?
- How will they be achieved?

It is both a practical working document for managers and a guide to the public about how the Conservancy will manage natural and historic resources in the future. It will encourage co-ordination and integration of the Conservancy's management activities (e.g. protected species, fire suppression), provide a mechanism for resolving conflicts and guide the allocation of resources, in association with corporate and business planning, to ensure that resources are used effectively and efficiently.

While it is a practical working document it will also provide a vision for conservation beyond the ten year timespan of the CMS. This vision has been developed from the aspirations of the community expressed at public meetings and through submissions during the preparation of the CMS.

The CMS covers all areas managed by the Conservancy. These areas are identified individually in the Resource Inventory and maps in Volume II of this CMS. The characteristics, issues and broad directions for management of generally similar areas in the Conservancy are also outlined in Section Two of Volume I.

The CMS addressed the Conservancy's management of protected species on all lands, regardless of tenure. It also deals with marine mammal protection, wild animal control, protection of fresh water fisheries, conservation of historic places and other issues which affect natural and historic resources both within and outside of lands managed by the Conservancy. It highlights areas which have high natural and historic values but are currently unprotected, and discusses in some cases how protection could be achieved.

The CMS sets out the Conservancy's general priorities for increasing public awareness of conservation issues, and for interpretation of natural and historic values on lands managed by the Conservancy.

Directions and priorities for conservation management are set out in the CMS. It thus provides guidance for much day-to-day decision making. It achieves complete management planning coverage for all areas managed by the Conservancy, although more detailed conservation management plans may still be required for some areas in the future (*s.3.3.5 Management Planning refers*).

1.1.2 WHAT THE DOCUMENT CONTAINS

The East Coast Conservation Management Strategy consists of this volume together with a separately bound volume that lists and describes in detail the land managed by the Department within the East Coast Conservancy.

Volume One contains 4 major sections.

Section One: Introduction Introduces the CMS and explains its purpose and scope. It also gives a brief overview of the Conservancy by outlining its physical characteristics, its history, and its natural and historic values. The Conservancy is then divided into seven subregions with generally distinctive characteristics, and these are discussed in some detail. Conservation issues and broad directions for the management of the natural and historic values present are outlined.

Section Two: Strategic Directions Describes the principles that were used to determine the nature and priorities of the activities to be undertaken over the next decade. It summarises the key messages from the process of setting geographic and functional objectives and provides guidance on the priorities for conservation work over the next ten years. It also outlines the means by which the effectiveness of the CMS will be monitored, and the process by which new information might be included in the CMS in future and finishes by describing a vision for the future of conservation in the Conservancy.

Section Three: Management Objectives and Implementation Addresses the range of management activities which the Conservancy undertakes in order to fulfil its legal functions. This section establishes policy objectives and outlines implementation provisions to realise the objectives. It also contains a description of the implications of the objectives and implementation statements on the different subregions.

Section Four: Appendices Contains the Appendices.

Volume Two Alphabetically indexes the areas managed by the Conservancy. Location and features maps are provided for each area and descriptions of individual areas are arranged by subregion with an alphabetical index within each subregion. The descriptions of individual areas contain information relating to: values, threats, general management directions and reference to the relevant management objectives outlined in Section 3. Covenants or other protection agreements or privately owned land are not included in Volume II. Similarly, Resource Inventory sheets for Walkways have been included only where they pertain to land managed by the Conservancy.

1.1.3 HOW TO USE THE DOCUMENT

As a user of this document, you are likely to have an interest in either a particular *place* (e.g. Whinray Scenic Reserve or Otoko Walkway) or in a particular management *activity* of the Conservancy (eg wild animal control, recreational facilities, threatened species). If you are interested in the objectives and implementation for a particular activity, you will find the information in Section three, grouped into four broad categories:

- Giving effect to the principles of the Treaty of Waitangi
- Conservation of natural and historic resources
- Fostering recreation and allowing tourism
- Advocacy for conservation

If you are interested in a particular place, you might use the CMS as follows:

- Look for the alphabetical listing of all areas managed by the Conservancy in the Conservancy, at the start of Volume II;
- Beside the place will be a subregion;
- Look for the section of Volume II which relates to that subregion. The place will be found alphabetically within it.
- You can then look at the general context to find the discussion on broad management objectives for that subregion in *Section Two* of Volume I, and to the "Implications for subregions" at the end of each management activity in *Section Three*.

1.1.4 HOW TO RELATE THE CMS TO OTHER PLANNING IN THE CONSERVANCY

The Conservancy is involved in many other planning activities apart from the CMS. These include "functional plans", conservation management plans, operational plans, resource management strategies, annual and multi-year business plans.

Functional plans are those which are specific to a particular type of management activity, such as recreation, or wild animal control. To date the Conservancy Historic Resources and Public Awareness Strategies have been completed. The Kaupapa Atawhai, Recreation and Problem Plant Strategies are in draft, as is an Archaeological Resource Statement. A Wild Animal Control Plan, Marine Mammal Stranding Contingency Plan, Survey and Monitoring, and Ecological Restoration Strategies are proposed in this CMS. The Conservancy Fire Control Plan is an annually updated functional plan which is required by the Forest and Rural Fires Act 1977.
All of these documents provide guidance for management activities at a detailed level and are available to the public. They are reviewed from time to time as circumstances require.

Resource management strategies involve areas or natural physical resources, which can fall within both private ownership and public estate. They comprise an assessment of the natural and cultural values of the area or resource, threats to those values, and objectives and policies for integrated management of the area or resource. Currently, there are Historic Conservation Plans for specific sites (eg the Manganuku Bridge and Te Puia Hot Springs) and a Historic Resources Strategy. There are also several national Species Recovery Plans for specific threatened species (eg kokako, kiwi, ngutukaka), and Threatened Plants and Marine Mammal Rescue Response Strategies.

Conservation management plans implement conservation management strategies. They establish detailed objectives for the integrated management of natural and historic resources within a specific area. They apply only where specified by this document (Section 17E(2) Conservation Act) or where the Minister of Conservation requires their preparation (Section 17E(3) Conservation Act). They involve a formal procedure of public notification and formal opportunities for public participation. At present the Te Urewera National Park Management Plan is operative. All other existing plans have been superseded by this CMS unless specifically provided for in section (*s.3.3.5 Management Planning refers*[1]).

Operational plans are working plans to guide the operational activities of a particular programme, such as landscape, facility and interpretation development plans, animal control plans, site rehabilitation plans and volunteer programmes. They are normally informal and "in-house", but can be subject to inspection through the Business Planning procedure.

Business Plans are a requirement of the Public Finance Act and are prepared annually. The Business Plan outlines the conservation programmes proposed by the Conservancy for the financial year. It is guided by the objectives, policies and priorities of the CMS but is also subject to government priorities, the availability of resources, and natural events and contingencies such as cyclones, drought, fire and the introduction or spread of pests and weeds. Any significant departures will require amendment of the CMS in accordance with Section 171 of the Conservation Act. Essentially, the CMS will guide the Business Plan in its allocation of the Conservancy's discretionary resources, in order to implement the achievement of the long term objectives and policies in this CMS.

1.1.5 THE CMS PROCESS

This CMS has been prepared by the East Coast Conservancy of the Department of Conservation in association with the East Coast Conservation Board.

Conservation and recreation groups and other interested persons were notified that the CMS was being prepared and extensive formal and informal consultation has taken place prior to and during its preparation. Tangata whenua and other groups and individuals have been closely involved in preparation of the CMS. This input from the community has been invaluable and the aspirations of local people are reflected in the contents contained herein.

In May 1995, the draft CMS was notified for public comment. A total of 57 written submissions were received.

In August/September 1995, 19 groups or individuals spoke in support of their submissions.

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[1] Volume II (Resource Inventory) may specify that the provisions of previous management plans apply to specific areas (eg the Waioeka Gorge Scenic Reserve) where they are not inconsistent with the provisions of the CMS. In all cases, the CMS provisions have superior status.

Following this, the written and verbal comments received on the draft CMS were summarised, and the document revised by the Department in light of these comments. It was then considered by the East Coast Conservation Board, and finally referred to the New Zealand Conservation Authority for its approval, in accordance with the procedures in Section 17F of the Conservation Act.

Monitoring and review will be an integral part of the implementation of this CMS. The details and contents of future annual business plans must recognise and have regard to it also.

1.2 INTRODUCTION TO THE EAST COAST CONSERVANCY

The East Coast Conservancy comprises all of the land east of and including the Waiotahi River catchment in the Western Bay of Plenty, follows the western boundary of Te Urewera National Park and then winds south to the coast along the course of the Waikari River. The Conservancy also has management responsibility for the foreshore and seabed out to the 12 nautical mile limit. In total approximately 460,000 hectares of land are managed in the Conservancy.

The dominant feature of the Conservancy is its remoteness. It is unified by its separation from the main population centres and the routes connecting them. It is also characterised by its low population density and the high proportion of Maori, who have always retained a strong presence as tangata whenua.

In other regards, the area is not a particularly cohesive unit geographically. There are 17 iwi with mana whenua over different parts of the Conservancy, three regional and four local authorities with administrative responsibilities. The ecology is distinguishable between 13 Ecological Districts and 5 broad Ecological Regions. Although there are important links to the contrary, the communities on the western coast of the Conservancy are more likely to associate with the Bay of Plenty than the East Coast. Similarly those in Wairoa and the southern communities are equidistant between Napier and Gisborne and often associate themselves with Hawkes Bay. The Gisborne, inland and eastern coast communities have historically existed in isolation from the rest of New Zealand.

Ecological Regions and Districts: At the coarsest level, the Conservancy divides naturally into two halves – the northwestern half mainly retaining its indigenous forest cover, and the southeastern half which has been almost entirely deforested. On roughly the same line at East Cape, the Conservancy also straddles the boundary between New Zealand's northern and central marine biogeographic regions. This is a transitional boundary between warm and cooler water marine fauna and flora.

On a finer scale, the ecological region and district concept is used to recognise the many characteristic combinations of vegetation, geology, topography and climate which form discrete regions in the country. The East Coast Conservancy includes eleven complete (or essentially complete) ecological districts and parts of two others *(Fig. 2 Ecological Districts refer)*. Coastal and alluvial plains distinguish the districts of Opotiki, Turanga and Waihua. Varied rolling hills with isolated mountains characterise the Pukeamaru, Waiapu and Tiniroto Ecological Districts, while the hills of Waioeka and Waimana are more consistently steep. High ranges dominate Waikaremoana, Ikawhenua, Maungaharuru and Motu districts. Mahia Ecological District is a former island.

Topography and Geology: The topographical nature of the Conservancy is also diverse, with dramatic contrasts between large tracts of steepland native forest dissected by narrow gorges, deforested and eroding hillcountry, fertile river valleys, coastal flats, inland lakes, alpine ecosystems, wetlands and coastal dunelands.

Steep hills and ranges cover a large percentage of the Conservancy. The Raukumara and Huiarau Ranges dominate, with the highest point being Hikurangi Maunga at 1753m. The main rivers generally flow to the northwest (eg the Motu and Raukokore Rivers) or to the southeast (eg the Wairoa, Waipaoa, and Waiapu Rivers). River valleys are generally broad in their lower reaches, forming fertile alluvial plains, estuaries and wetlands at Opotiki, Waiaua, Whangaparaoa, Waiapu, Tolaga Bay, Poverty Bay, Mahia and Wairoa. The coastline measures some 550 kilometres,

consisting of steep headlands, rocky or sandy coves, peninsulas, and ancient marine terraces. The Mahia peninsula, to the south, was once an island but is now joined to the mainland by a narrow sandy isthmus, and there are a number of offshore islands.

Geologically, the land is a mixture of old and young rock. The distinctive forms of the Conservancy are mainly the result of the uplifting, faulting, folding and erosion of sedimentary sandstones, siltstones, mudstones and limestones. The consistently steep hillcountry and highest mountains are largely greywacke. To the north huge volcanic blocks underlie a rough triangle with Pukeamaru, Cape Runaway and Matakaoa at its points. The East Cape area and most of the southeastern half of the Conservancy is formed from younger sandstone, mudstone, argillite and minor limestone. Landforms based on more unusual geology include the thermal upwellings of Te Puia and Morere and the marine terraces along the western coast and at Mahia.

The geology, topography and climate all combine to form an inherently unstable region. The dominant mudstones and argillite in the east of the Conservancy are very susceptible to erosion because of their weak or crushed and fractured physical structure. This is exacerbated by the high relief and steep topography of much of the Conservancy, and the climate which features heavy rain alternated frequently with periods of drought, causing rock to further weaken through expansion and contraction. Erosion occurs in the form of soil slips, landslides, gullying, slumping of large blocks, and wind or frost generated screes.

Vegetation: Originally the Conservancy was almost entirely in forest, which demonstrated both altitudinal and latitudinal changes. Coastal forest was generally pohutukawa dominant, merging into semi-coastal broadleaved-podocarp forests, and lowland podocarp, broadleaved and rata-tawa-kohekohe associations. Dense stands of kahikatea and other podocarps occurred along river flats and terraces. The coastal pohutukawa remain extensive on the Bay of Plenty coast to Cape Runaway, but have contracted to only a few headlands south of East Cape. Only a few remnant areas of lowland podocarps remain, scattered mostly in the southeast of the Conservancy. Wetlands, with their distinctive raupo, rush, sedge and scrub vegetation were probably never extensive, and are even scarcer in the Conservancy today. Wetlands remain along the southern coast, and near Gisborne, Opotiki and Te Araroa townships. Lowland hillcountry forest survives in extensive tracts on the northwestern side of the Conservancy, but on the southeastern side, the vast majority of the lowland is in pastoral, horticultural or (increasingly) plantation forest vegetation.

The higher altitude forests are more intact. Beech is more dominant in the forest canopy at higher altitudes, progressing through black and hard beech, to red and silver beech at higher elevations. Mountain beech reaches its northern limit in the Conservancy. In the sub-montane zones the forests are composed mostly of beech with kaikawaka, mountain toatoa and silver pine interspersed. Subalpine scrub and alpine grasslands complete the altitudinal sequence culminating at Hikurangi and a few other summits in the Raukumara Ranges and in Te Urewera National Park.

Nationally threatened plant species occurring in the Conservancy include kowhai ngutukaka (kakabeak), pua reinga *(Dactylanthus* or wood rose), *Plantago spathulata* subsp. *picta*, "X.it[2]", thick leaved tree daisy and heart leaved kohuhu and giant broom.

Wildlife: The North Island kokako, brown kiwi, weka and kaka, the variable oystercatcher, whio (blue duck), New Zealand falcon, New Zealand dabchick, New Zealand and banded dotterel and yellow crowned parakeet are nationally threatened bird species still occurring in the Conservancy.

[2] "X.it" is not formally named as yet.

Other threatened animals include both short and long tailed bats, Hochstetters frog, Urewera land snail, and threatened freshwater fish such as giant, short jawed and banded kokopu, lamprey and koaro.

Human induced habitat destruction, and the effects of introduced mammals have caused numerous losses in the wildlife of the East Cape. The huia, piopio, stitchbird, saddleback and kakapo have disappeared from the region. Black and mottled petrels no longer nest in the highlands of Te Urewera. According to Maori, the now extinct laughing owl also occurred in Te Urewera. The decline of these birds appeared to coincide with the spread of shiprats and stoats in the 1870's[3]. Other species, like the kokako and blue duck, were once widely distributed but are now restricted through loss of habitat, to the remote Urewera and Raukumara forests. A reduction in wetlands due to draining and drought has inevitably lessened the abundance of waterfowl and the species of native fish in the region. Some species (kaka and parakeet) continue to decline, affected by continued development and modification of their habitat.

The human settlers of New Zealand brought a large number of animals which have had a dramatic effect on the indigenous wildlife of the Conservancy. Maori brought kiore (Polynesian rat) and dogs. European settlers introduced numerous species, including rodents (Norway and ship rats, and house mice), insectivores (hedgehogs), carnivores (cats, dogs and mustelids; weasels, ferrets and stoats), hoofed mammals (cattle, sheep, goats, pigs and deer) and marsupials (brush-tailed possums). Most of these animals are now well established in the Conservancy.

Human Settlement and Influence: The region now covered by the Conservancy has always been significant in terms of Maori habitation and Maori have retained a powerful presence through to the present. Oral traditions record and tell of the arrival of waka and their crews and the subsequent intermarriage between descendants of these people to establish tribes within specific areas of the region. The occupation of this region by Maori is a history of intertribal marriages and alliances, epic battles and bitter struggles as tribes strived to establish their mana whenua and mana moana.

Tribes of the region and their areas of location include Whakatohea, Ngai Tai, Te Whanau-a-Te Ehutu and Te Whanau-a-Apanui who are identified with the Eastern Bay of Plenty coast. Ngati Porou, Te Atanga-a-Hauiti, Te Aitanga-a-Mahaki, Rongowhakaata, Ngai Tamanuhiri and Kahungunu are situated within the eastern coastal area of the region.

Kahungunu's influence is also prominent in the southern areas of the region and extends to the west towards Waikaremoana. Ruapani and Tuhoe lived in the hinterland of the Urewera, but this back country settlement was unusual as most settlements were concentrated along the lower river valleys and low hills near rivermouths.

Captain Cook first made landfall at Poverty Bay then Anaura Bay and Tolaga Bay/Cook's Cove in 1769. These were the first significant cultural exchanges between Maori and European. However it was nearly a century before European settlers reached significant numbers on the East Coast. By the 1840s, traders, whalers and missionaries were operating in the region, and were largely integrated into existing Maori society.

The flax trade, and cash cropping of maize and potatoes were important elements of Maori economy during the early nineteenth century. Up until the 1870s Maori had more political, economic and military power than Europeans, and much higher population numbers. During the initial period of European colonisation relationships between local Maori and Pakeha were

[3] Shaw, 1985

strained over political, economic and ideological issues. It was not until the 1880s that large numbers of Pakeha settlers moved in and extensive vegetation clearing began. Pastoral farming became the predominant land use after European settlement, and remained so. Some cleared land was marginal and despite determined farming attempts, was finally abandoned and reverted back to bush. In recent times there has been an increase in horticulture, exotic forestry and processing and manufacturing industries.

The coastal towns were historically linked by coastal shipping which continued late into the development of the area. (Hicks Bay was still serviced by coastal ships in 1950's). Ports, wharves and jetties, or the use of boats off open beaches, were common on the coast due to the lack of roading. Especially m the east, road development was and remains difficult because of unstable terrain and the lack of suitable road metal.

A coach service was first established from Gisbome to Tolaga Bay in 1887 and further up the coast to Tokomaru Bay and Waipiro Bay in 1923. The current state highway between Gisbome and Opotiki was officially opened in 1962 after approximately 40 years of development.

Railway transport history was also chequered. The Gisbome to Moutohora line was opened in 1917 but was never completed through to the Bay of Plenty as planned. The Napier - Gisborne line which was started in 1911 was finally opened in 1942, finally linking Gisborne to the railway network. Significant centres developed in Opotiki, Gisborne and Wairoa, yet the Conservancy remains characterised today by many small coastal settlements, primarily based around marae, and farming concerns. There are also a number of inland farming settlements and scattered homesteads. Although the population of the Conservancy has slowly grown, there has been a trend over the past few decades for rural depopulation in favour of larger centres such as Auckland and Wellington.

Erosion became a major problem in the Conservancy in the 1920s after most of the East Coast forests had been cleared. Large amounts of topsoil were washed away in the floods of 1938, 1948 and in the following decades. The majority of rivers in the Conservancy continue to carry high silt loads to the coast. In 1967 the 'Taylor Report' on the erosion problem identified a 'critical headwaters' area of the Waipaoa and Waiapu catchments, the protection of which was considered essential to control erosion and to preserve the farming industry of the East Coast. The East Coast Project was initiated to stabilise these areas through exotic afforestation. Following sale of these Crown forest assets and the dramatic reminder of the land's vulnerability from Cyclone Bola (1988), this effort has evolved into the East Coast Forestry Project.

The relative isolation of the East Coast Conservancy with its extensive tracts of unmodified indigenous forest, unique coastline and cultural history presents many opportunities for backcountry recreation (hunting, tramping, fishing, white water rafting).

As an off the beaten track 'green tourism' destination, the East Coast Conservancy is also gaining popularity with increasing numbers of independent foreign travellers and backpackers placing an increased focus on key areas such as Lake Waikaremoana, Morere, coastal walkways, Waioeka Gorge, Motu River, Mount Hikurangi and other readily accessible opportunities close to main population centres.

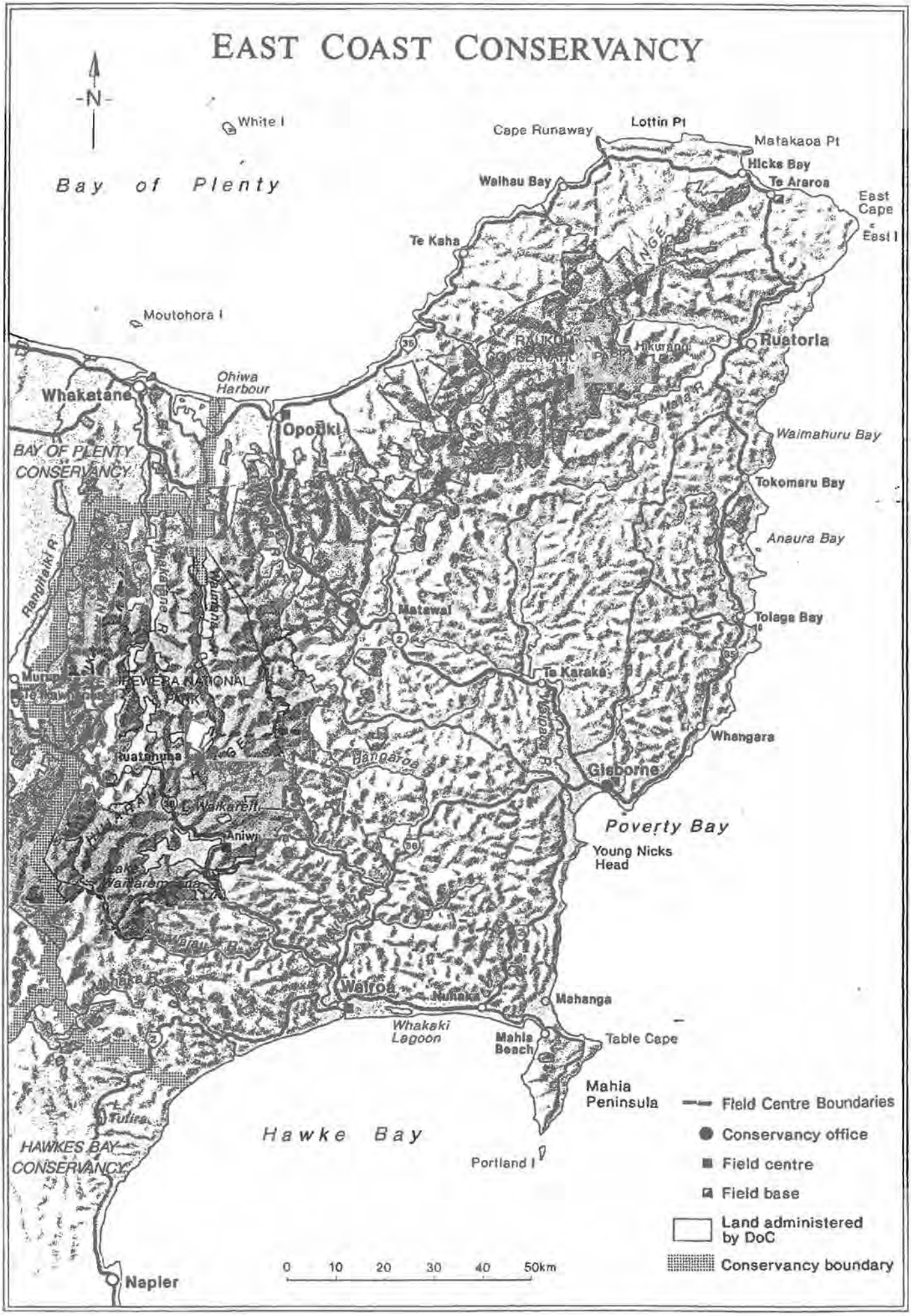
EAST COAST CONSERVANCY
N
White I
Bay of Plenty
Cape Runaway
Lottin Pt
Matakaoa Pt
Hicks Bay
Te Araroa
East Cape
East I
Waihau Bay
Te Kaha
Moutohora I
Ruatoria
Hikurangi
Ohiwa Harbour
Whakatane
Opotiki
Waimahuru Bay
BAY OF PLENTY CONSERVANCY
Tokomaru Bay
Anaura Bay
Tolaga Bay
Matawai
Te Karaka
Whangara
Gisborne
Ruatahuna
Hangaroa
L. Waikaremoana
Aniwa
Poverty Bay
Young Nicks Head
Waikaremoana
Wairoa
Nuhaka
Mahanga
Whakaki Lagoon
Mahia Beach
Table Cape
Mahia Peninsula
Hawke Bay
Portland I
HAWKES BAY CONSERVANCY
Napier
0 10 20 30 40 50km
Field Centre Boundaries
Conservancy office
Field centre
Field base
Land administered by DoC
Conservancy boundary

Figure 1

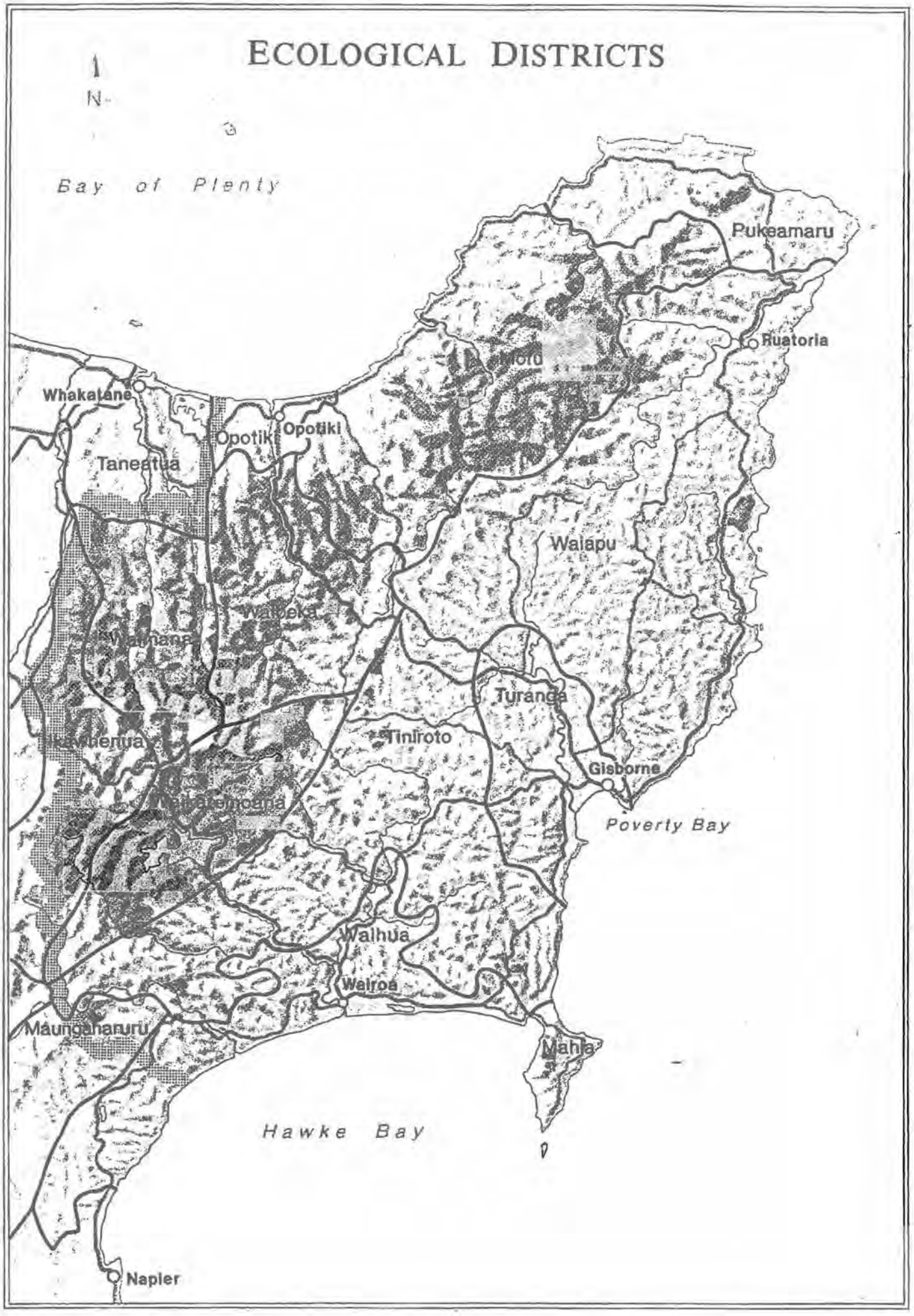
ECOLOGICAL DISTRICTS
N
Bay of Plenty
Pukeamaru
Ruatoria
Whakatane
Opotiki
Opotiki
Taneatua
Waiapu
Waioeka
Turanga
Tiniroto
Gisborne
Poverty Bay
Waihua
Wairoa
Mahia
Hawke Bay
Napier

Figure 2

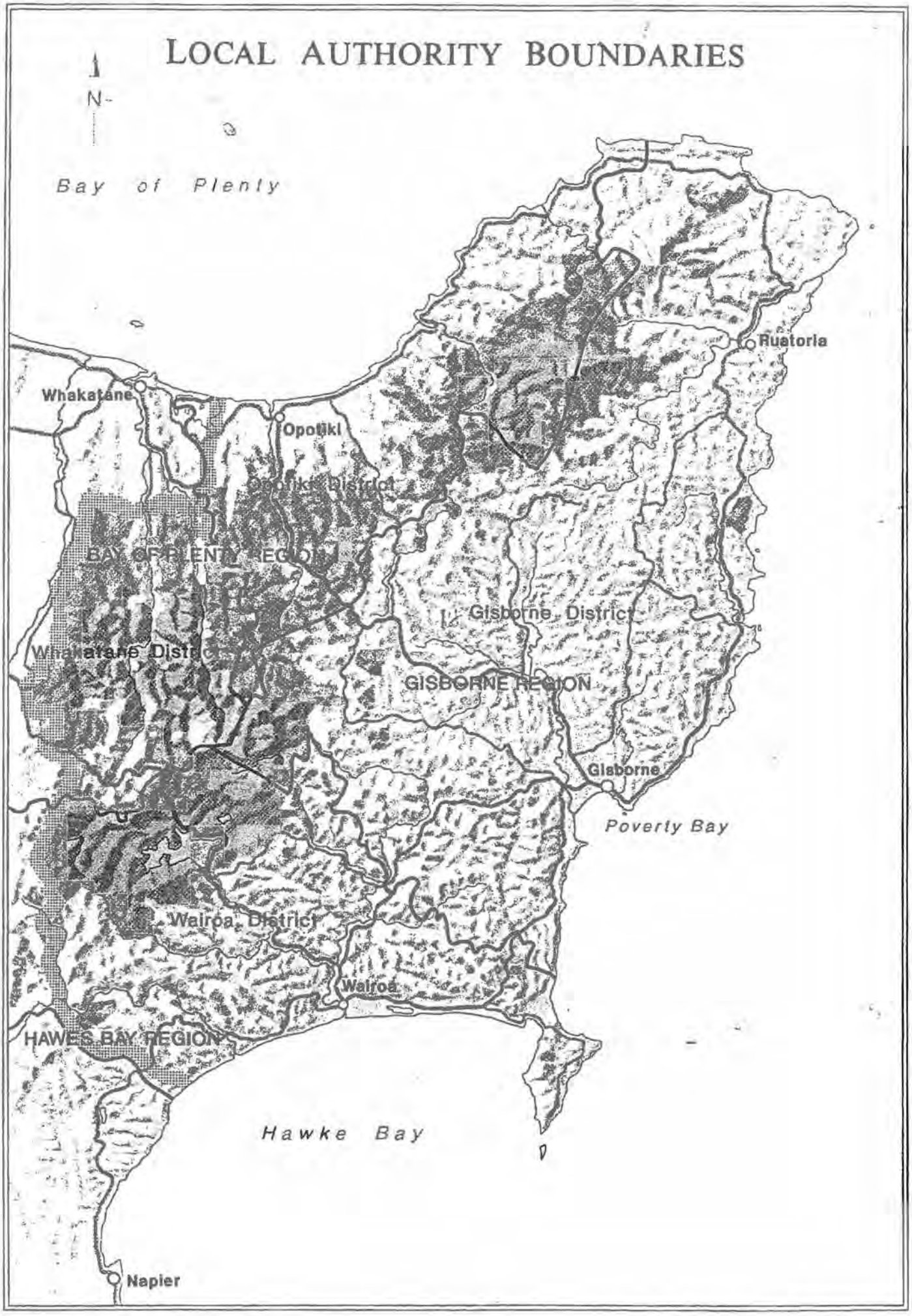
LOCAL AUTHORITY BOUNDARIES
N
Bay of Plenty
Ruatoria
Whakatane
Opotiki
Opotiki District
BAY OF PLENTY REGION
Gisborne District
Whakatane District
GISBORNE REGION
Gisborne
Poverty Bay
Wairoa District
Wairoa
HAWKE'S BAY REGION
Hawke Bay
Napier

Figure 3

Conservation Management Issues

Key conservation considerations which apply generally throughout the East Coast Conservancy, have emerged from public meetings. Control of major pests such as possums and goats is recognised as a primary concern. Pest control is seen to be crucial for the protection of habitat in general, and bird habitat in particular.

Protection of habitat is seen as an important task for the Conservancy, particularly remnant forest and coastal vegetation, wetlands and marine habitat. Much of this task can only be achieved through advocacy and negotiation with landowners, local and regional authorities and community groups.

Recreation and tourism issues are also general to the Conservancy, particularly relating to the provision and maintenance of different opportunities and facilities, and management of visitor impacts on natural and amenity values. The relationship that the Conservancy has with recreational groups is also an important consideration.

The need to encourage community support and involvement in conservation has been strongly expressed throughout the Conservancy, as a means of building a network to share the responsibility for conservation. Providing opportunities for volunteers and joint community/ Conservancy initiatives, and retaining a strong advocacy function are key issues that the Department intends to address.

The Department recognises the strong associations that tangata whenua have with the lands managed by it. Working with tangata whenua to achieve conservation objectives is important.

Introduction to Subregions

The overview has generally outlined the key features and issues of the East Coast Conservancy as an entity. It is naturally and culturally diverse. The following descriptions give a more detailed view of the context in which the Conservancy operates, and recognises this diversity through the provision of seven "subregions".

The subregions are distinctive in terms of the key management concerns that they present to the Conservancy[4]. The subregions are as follows (*Fig. Four refers*):

- *Western Coast*: being the coastal environment[5] between Ohiwa Beach in the west, and Matakaoa Point in the northeast.
- *Eastern Coast*: encompassing the coastal environment between Matakaoa in the north, and Mahanga in the south.
- *Southern Coast*: comprising the coastal environment between Mahanga in the east and the Conservancy boundary at the Waikari River in the west. The coastal environment of the Mahia peninsula is included in this subregion.
- *Te Urewera*: comprising Te Urewera National Park, and adjoining Conservation Areas and Scenic Reserves.
- *Waioeka*: containing the major forested areas between the two protected areas of Te Urewera National Park and Raukumara Conservation Park.

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[4] Marine and urban issues are generally discussed in association with the relevant coastal subregion.

[5] The coastal environment is used here to mean land and water which is coastally influenced. It has been shown, for the purpose of this CMS to extend inland to the top of the nearest dominant ridge where this is sensible, and includes the sea to the subtidal area.

- *Raukumara*: being the forested area defined in the west by the Raukumara Conservation Park boundary, and including the Pukeamaru Scenic Reserve to the northeast. It extends out to the nearest inland ridge on the western Bay of Plenty coast.
- *Tairawhiti*: being the essentially deforested land southeast of the Te Urewera, Waioeka and Raukumara subregions. It is defined to the west by the Conservancy boundary, and extends to the nearest inland ridge to the coast. For ecological reasons, the inland areas of Mahia Peninsula are included in this subregion.

It is important to note that the "Conservation Management Issues" raised in the following sections, and the "General Priorities for Management" given in each, relate to the material in Section Three : Management Objectives and Implementation. They do not suppose to cover all issues, but rather to raise issues of general importance throughout the subregion, and indicate broad intentions for addressing these. Issues are covered in more detail in the particular section to which they relate *(Problem Animals, Historic Places* or *Marine Mammals* for instance). More specific implications of management are provided in the "*Strategic Implications for Subregions*" included in each section.


EAST COAST CONSERVANCY
SUBREGIONS
-N-
Bay of Plenty
Western Coast
Ruatoria
Whakatane
Opotiki
Tairawhiti
Te Urewera
Gisborne
Eastern Coast
Poverty Bay
Wairoa
Southern Coast
Hawke Bay
Napier

Figure 4

1.2.1 WESTERN COAST

The Western Coast subregion has diverse natural values compressed within its small land area. It comprises the narrow coastal strip of land from Bryans Beach (between Ohiwa Harbour and Waiotahi) to Matakaoa Point just outside Hicks Bay, and the corresponding marine area out to the 12 mile territorial limit. It extends inland to include the estuaries and wetlands enclosed by the beaches and dunes near Waiotahi and Opotiki or to the first prominent ridge on the steeper hard-rock coasts characteristic of the rest of the subregion.

Although occupied intensively over 1000 years, this subregion is less modified than the other coastal subregions in the Conservancy. It retains a larger proportion of indigenous ecosystems in its modern landscape than many other segments of New Zealand's coast. Along with the historic values embodied in the land, this gives the subregion a very distinctive character. Pressures on this character are imposed by tourism, recreation, land subdivision and large scale land use changes such as forestry developments.

The subregion comprises the coastal elements of the Opotiki, Motu and western part of Pukeamaru Ecological Districts. It lies mainly within the administrative boundaries of the Opotiki District Council and Bay of Plenty Regional Council while including a small area within the Gisborne District Council's responsibility. The individual pieces of land managed by the Conservancy in the Western Coast Subregion are listed at the end of this subsection.

Physical Characteristics: The physical character of the coastal zone varies markedly along its length from the vicinity of Opotiki to Matakaoa Point, depending mainly on the underlying geology and the character of the rivers bringing sediment to the coast.

In the southwest to as far as Opape, the beaches are sandy, backed mainly by dunes and short sections of soft cliffs of young cemented gravels and sands (as at Waiotahi Beach). The main rivers - Waioeka-Otara, Waiotahi and Waiaua, enter the sea through extensive tidal estuaries. Small freshwater wetlands in hollows trapped within the dunes or between the beach-dune and alluvial systems are also characteristic.

From Opape to Raukokore is a hard-rock coast based on ancient greywacke sandstone with a pattern of alternating steep rocky headlands and broad open bays. Many of the bays have coastal flats and beaches of gravelly sand brought down from the interior hills by vigorous rivers - Motu, Raukokore, Haparapara and Kereu Rivers being the largest which have rather abrupt transitions from river to sea. Other bays have steep rocky shores backed by coastal terraces generally 30-60m above the sea. These marine terraces (tectonically uplifted shorelines from 80,000 - 120,000 years ago) extend along most of the coastline except at the steepest headlands and reach inland generally a few hundred metres.

Beyond the Raukokore River, the coastal terraces are more extensive on somewhat softer Cretaceous greywacke and young Tertiary sandstones, and the Whangaparaoa River with its heavy sand load has formed an extensive duneland/wetland area and small estuary.

From Tihirau/Cape Runaway to Matakaoa Point the coast is different again. Ancient volcanic rocks from the ocean floor now form steep but stable hills lying very close to the rocky coast separated by narrow discontinuous marine terraces.

No rivers cut through these hills, and the sea is notable for its water clarity.

This water clarity is a feature of the whole subregion and relates to the predominant hard greywacke rocks of the hinterland and shorelines, although some of the larger rivers also drain soft erosion-prone rocks from their headwaters. This contrasts with the conditions generally prevailing in the Eastern and Southern Coasts, where direct marine erosion and especially river-borne sediment have marked effects on water clarity through most of the year.

The Western Coast subregion has a favourable climate with high sunshine hours and moderate rainfall (1200 - 1500mm pa) reliably spread through the year (ie it is not prone to drought). The coastal location, general northerly aspect and shelter from the south give mild, relatively frost-free winters, matching the very warm summers.

Land Uses: The coastal terraces are generally fertile, with deep free-draining loams derived mainly from volcanic ash. Much of the original forest was probably cleared under rotational gardening regimes in pre-European times. With the introduction of pastoral farming the forests were cleared more thoroughly, including many of the coastal faces and further inland in areas of easier topography. Later much of the hillcountry proved unsustainable in pasture and reverted to secondary scrub and forest. In recent years some hillcountry areas have been planted in exotic forests. Pastoral farming and horticulture have continued to develop on the fertile terrace lands.

Much of the coastal duneland near Opotiki has been grazed under Crown leasehold tenure in the past, but latterly these areas have been administered as conservation areas, and grazing is being phased out. There are several other protected areas managed by the Conservancy scattered along the coast, but all but one are small areas under 50ha.

There are other, more substantial areas in the subregion still covered in primary and secondary indigenous vegetation. While many areas are managed by the Department, there are also large areas of privately owned (mainly Maori) land.

The subregion is growing in popularity as a tourist destination and for lifestyle or papakainga housing developments, although it remains essentially rural. The predominance of Maori Land continues to have an important bearing on land use patterns today.

Recreational opportunities in the subregion revolve around coastal experiences such as fishing, deep sea diving, surfing, swimming, boating, beach appreciation and whitebaiting. Adjacent areas provide bush-walking opportunities. The subregion is very popular as a summer holiday destination, largely due to the climate and coastal environment. Many people living in the subregion also look inland to the Raukumara, Waioeka and Te Urewera for recreation.

History: The Southern part of the Western Coast has strong significance for Whakatohea, with Ngai Tai of Tainui descent occupying a small area east of Opotiki. The central and northern areas of the subregion are identified with Te Whanau-a-Apanui. Te Whanau-a-Te Ehutu occupy a portion of the central area with its base at Te Kaha. Ngati Porou have mana whenua from Lottin Point to Matakaoa Point. Areas throughout the coastal subregion have historic, cultural and spiritual significance to these iwi, including areas of wahi tapu (sacred places), tauranga waka (landing places of canoes), mahinga mataitai (customary fishing areas), and taonga raranga (prized weaving sources). There is a long history of intensive and sustained Maori occupation, archaeologically evidenced in numerous pa and shell midden (for instance at Waiotahi Spit Historic Reserve).

European settlement of Opotiki dates from the establishment of a mission station in 1860.

Coastal shipping between the western coast and Auckland is a feature of the history of this area. Goods from coastal gardens were shipped north to support the growing Auckland population.

Whaling was a major activity along this coast in the late 19th century (lasting until 1926 at Te Kaha). Most hapu had their own whaleboats and significant whaling stations were established at Houpoto, Omaio, Te Kaha, Raukokore, Whangaparaoa and along the Cape Runaway - Lottin Point coast.

Soil conservation and flood control became of concern after the 1964 flooding of Opotiki from the Otara and Waioeka rivers. An extensive flood protection scheme was undertaken over the Opotiki plains and town area as a result.

Opotiki remains the main settlement in the subregion today, with smaller populations at Te Kaha, and Waihau Bay.

Vegetation, habitats and wildlife: Pohutukawa above rocky shorelines is characteristic of the subregion. Pohutukawa is commonly a component of a diverse coastal forest featuring many other broadleaved species - kohekohe, puriri, karaka, tawa (especially its large leaved variety, tawaroa), whau, limited mangeao, and locally taraire, a northern species at its southern limit. These coastal remnants are largely unprotected and vulnerable.

Little of the terracelands forest has survived, yet in a very few places there is continuous indigenous forest cover linking the shoreline to the interior hillcountry. Secondary scrub-forest including manuka and kanuka-dominated vegetation is widespread, especially on coastal faces, in mosaic with pasture and local areas of plantation forest.

Estuarine and fresh-water wetlands associated with the river mouths and coastal dunes have highly variable vegetation, including mangroves in discrete localities, more widespread rush and sedgelands, and shrublands with marsh ribbonwood and manuka. Mangroves at Waiaua estuary are at their farthest limit around the coast from their northern strongholds. Duneland vegetation is generally rather modified but includes important indigenous elements including pohuehue, spinifex and local pingao.

Coastal dunes, beaches, estuaries and wetlands and rocky shores are important habitats for a variety of the less common coastal and wading birds including banded and New Zealand dotterels, caspian tern, reef heron, banded rail, spotless crake, fernbird, bittern and occasional wrybill and white heron. The common bush, field and shore birds have sizeable areas of habitat available.

Hochstetters frog is present in some coastal catchments east of Opotiki, and two varieties of the common green forest gecko are found at their geographical limits in this subregion. Indigenous freshwater fish include both giant and short-jawed kokopu, as well as significant whitebait and eel fisheries.

Near-shore marine habitats are highly varied from estuarine shallows to intertidal rock platforms and reef systems. The near-shore area of Lottin Point is notable as a mainland coast with many of the characteristics of a deepwater offshore island.

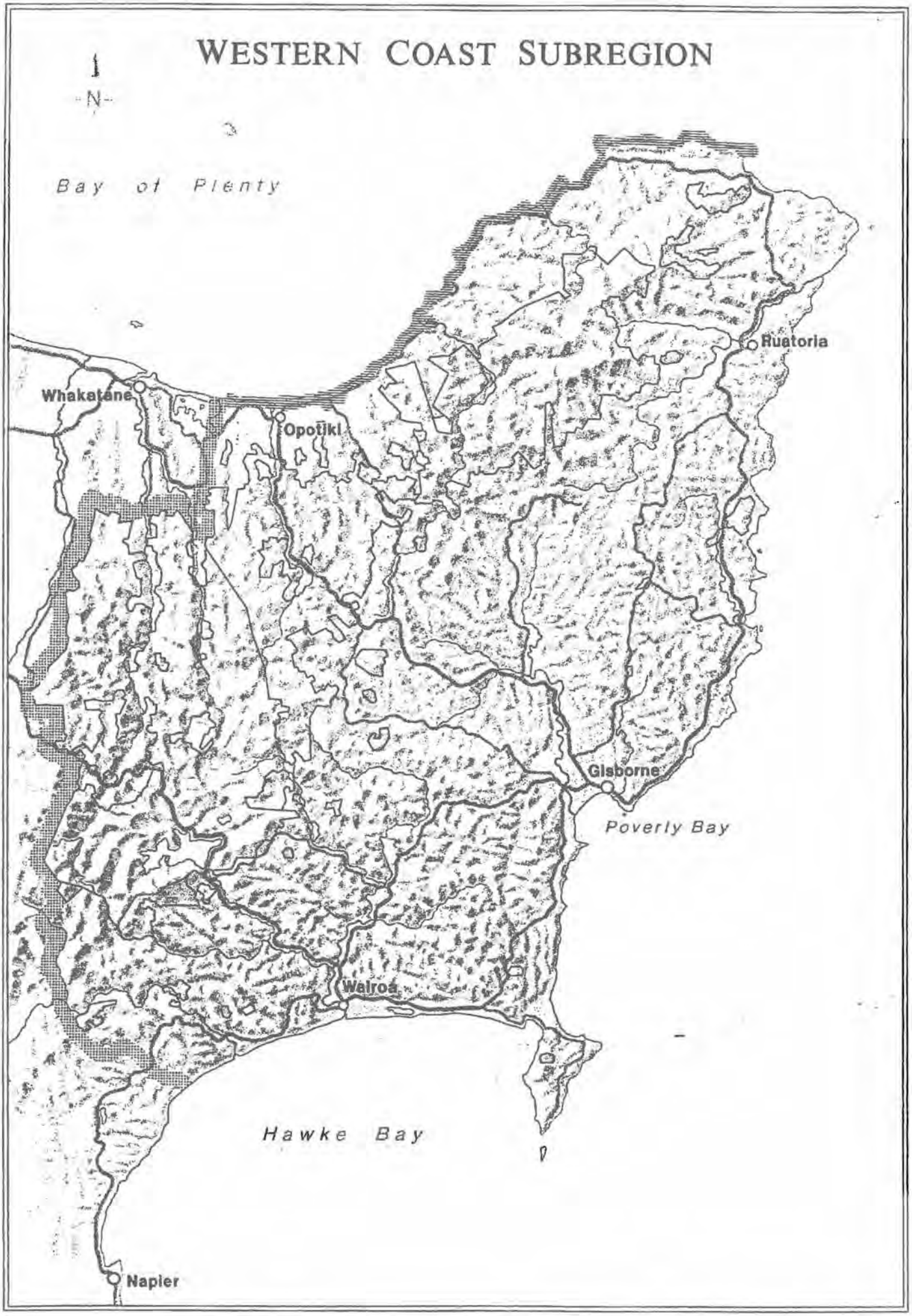
WESTERN COAST SUBREGION
N
Bay of Plenty
Whakatane
Opotiki
Ruatoria
Gisborne
Poverly Bay
Wairoa
Hawke Bay
Napier

Figure 5

Conservation Management Issues

The subregion is distinctive for having an abundance and diversity of natural and historic values but with very little of it formally protected. Development pressures on this subregion have been low in the past. However, pressures from an increasing resident population and from external sources are rising, and the subregion's natural character is increasingly under threat.
On the land, retention of coastal forests is nationally important. Opportunities to protect sizeable coastal forest areas linking interior hillcountry forests right to the sea occur in very few other parts of New Zealand's coastal zones. Forest and significant scrub areas may be threatened by specific proposals such as pastoral, forestry, or residential developments, but more generally by attrition through impacts of stock, and feral animals. Fire is an additional threat.

Possums pose a major threat to coastal forests. Goats (including farm escapees) are only established locally, so their control is particularly important. Goats have recently eliminated one of only three known populations of the threatened shrub daisy *Olearia pachyphylla* from a coastal headland near Torere. *Carmichaelia williamsii* a native broom is another threatened species found at a few coastal scrub/forest locations in areas which are vulnerable to goats and stock.

The historic and archaeological values of the subregion have been surveyed for most of the subregion[6]. Updated and further survey is required to enhance understanding and direct monitoring and protection of sites. Much information on wahi tapu and other historical features resides with the tangata whenua. Few areas have formal protection, and the values are threatened by increasing visitor pressure, subdivisions and other developments for residential and tourist uses.

Similar pressures apply to the subregion's estuaries, coastal dunes and wetlands, and beaches with their distinctive driftwood cover. These are key habitats for a variety of threatened and common birds and other species (including breeding areas for New Zealand dotterel, and whitebait spawning areas).

Marine issues are very important in this coastal subregion. The state of fisheries and kaimoana are of concern to visitors and more especially residents. There is a lack of formal marine protection, and a history of marine mammal strandings, particularly towards Cape Runaway.

The rivers in this subregion provide important freshwater fisheries habitat. The giant, banded and short jawed kokopu are notable threatened species. Eel and whitebait fisheries are also significant, and protection of spawning habitat near the tidal limits in the main rivers and streams is important for their survival. The Haparapara River as a sizeable river system free of all introduced species (and in an almost entirely indigenous catchment) is nationally significant. Water quality issues relating to upstream land uses, and barriers to fish passage pertain to most waterways in the subregion. Waste management is also an important issue in the subregion.

With increasing visitor pressure, come recreation management issues. The Conservancy manages only a few coastal areas which receive high visitor pressure. Public access to the coast is limited in many parts of the Western Coast. Legal provision of public access is generally occasioned by subdivision, which has not occurred greatly in the past, particularly in the case of Maori Land tenure. There is a need to work with landowners and council to facilitate improved access to the coast where possible and desirable.

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[6] Leahy, H. and Walsh, W. 1978

General Priorities for Management

Because the Conservancy manages only some of the areas and values of conservation significance in this subregion, a key conservation activity is advocacy to seek to ensure protection of key areas and values. This will include specific proposals to formally protect features of conservation importance, and more general advocacy.

The Conservancy will encourage and negotiate legal protection of specific natural areas and other vulnerable features of conservation significance. Many of the areas concerned are Maori land, so that mechanisms such as Nga Whenua Rahui kawenata may be appropriate. The Conservancy will update surveys of historic places and will advocate or negotiate for practical or legal protection of sites, in association with land owners, local authorities and the Historic Places Trust.

Conservation in the marine area will focus on promoting the establishment of Marine Reserves. The Conservancy will advocate for the gazettal of at least one representative marine reserve in each of the two biogeographic zones located in the Western Coast Subregion (these are the Eastern Bay of Plenty greywacke coastal area and the Matakaoa volcanic coastal.area).

The Conservancy will liaise with other agencies over fisheries management advocacy, and in regard to protection measures for whitebait spawning areas. Survey of fish distribution, conservation of vulnerable species and advocacy for fish passage are priorities in this subregion.

General conservation advocacy will be undertaken using statutory opportunities in district and regional planning, with more specific cases addressed through mechanisms such as covenant negotiations. The objectives will be to retain or enhance the natural character of the coast, the habitat values of forests, estuaries and other indigenous ecosystems, historic values and water quality. Further surveying of historic places will be undertaken during the term of this CMS to round out the Conservancy's knowledge of historic values in the subregion, and liaison with iwi, local authorities and the Historic Places Trust will be maintained.

Recreation management will focus on monitoring visitor impacts and raising conservation awareness of these, expanding recreation opportunities (particularly walkways) in association with other agencies, and negotiating for improved access to the coast. Public awareness will emphasise maintenance of visitor centre services, provision of volunteer opportunities and media liaison.

The involvement of the community, and other agencies such as the Regional Council in conservation management will be particularly important in this subregion. This is especially so for wild animal control programmes where the involvement of landowners and the Regional Council is essential.

Areas Managed by the Conservancy

- Huntress Creek Conservation Area
- Matapapa Recreation Reserve
- Oroi Scenic Reserve
- Tirohanga Dunes Conservation Area
- Tirohanga Conservation Area
- Tokata Scenic Reserve
- Waiotahi Spit Historic Reserve

- Waiotahi Spit Scenic Reserve
- Whanarua Bay Scenic Reserve

1.2.2 EASTERN COAST

The Eastern Coast subregion runs north to south and takes in the literal (and littoral) east coast that gives the Conservancy its name. It has a northern boundary at Matakaoa Point, on the northern side of Hicks Bay and follows the coast down almost to Mahanga, just north of the Mahia isthmus. The subregion includes the coastal marine area and extends inland to the top of the nearest dominant ridges, or to the inner margin of coastal landforms such as beach ridges, wetlands and tidal rivers where broad valleys back the coast as at Poverty Bay.

The main settlements of Hicks Bay, Te Araroa, Tokomaru Bay, Tolaga Bay and Gisborne are adjacent to the coast, and the lifestyle of these places has been heavily influenced by beach and marine activity. The 30,000 residents of Gisborne comprise half the Conservancy's population. Almost 50% of the urban population is Maori, while in some rural parts of the coast the population is more like 90% Maori. There are many small communities, predominantly based around coastal marae.

This stretch of coastline falls into the Pukeamaru, Waiapu, Turanga, and Tiniroto Ecological Districts. The Conservancy is responsible for managing only 370 hectares in the subregion, in 13 protected areas. Ten of these areas are less than 10 hectares in area (these are listed at the end of this subsection). The subregion lies within the boundaries of the Gisborne District Council.

Physical Characteristics: The Eastern Coast subregion has a distinct topographic pattern of open bays alternating with steep-to and cliffed coasts and prominent headlands. These are formed of generally soft, weak rocks, mainly Tertiary mudstones and sandstones. The topography reflects that of the inland hillcountry and river valleys, modified by the forces of marine erosion and sand movement, and tectonic uplift of the land through successive earthquakes.

Poverty Bay and Tolaga Bay are broad bays where wide river valleys (Waipaoa and Uawa) meet the sea. Coastal dunes and beach ridges are backed by tidal estuaries, and extensive fertile alluvial surfaces further inland in the Tairawhiti subregion. The mouth of the other main river, Waiapu, is more abrupt onto an open coast. Hicks Bay and Te Araroa also feature extensive coastal flatlands where successive beach ridges have advanced seawards.

Tokomaru Bay and Waipiro Bay, where small stream valleys have created only limited areas of moderate - gently sloping land near the coast are more typical of the subregion. Earthquakes over the last few thousand years have raised a narrow coastal plain from the sea at the foot of the coastal faces at these bays and elsewhere (for example, Wainui Beach, Whangara, Anaura and Hautai east of Te Araroa).

A longer history of tectonic uplift is shown by higher marine terraces 80,000 - 120,000 years old near Te Araroa and at Pariokonohi between the Pouawa and Waiomoko rivermouths. Those at 300m just east of Te Araroa are the highest surviving marine terraces of this age in New Zealand. In general though, marine terraces are not characteristic of the Eastern Coast because the rocks are too weak to stand against the forces of erosion for that long. Instead the hillcountry terminates abruptly against the sea with steep slopes and crumbling or slumping cliffs.

There are about 12 small steep-sided islands along the coast, most notably Tuamotu, Te Ana-a-Paikea at Whangara, Pourewa and several nearby south of Tolaga Bay, Motuoroi and Whangaokeno (East Island). Only the last of these is administered by the Department in association with local iwi.

With the exception of a few places such as Poverty Bay where the heavy supply of sand allows the coast to prograde seaward, the coast is in long-term retreat. Eroding cliffs and edges of the narrow "recently" uplifted coastal plains are characteristic.

Wide intertidal rock platforms and offshore reefs are also a notable feature, diversifying the coastal marine area which is otherwise dominated by a silty sediment-covered seafloor. Direct marine erosion of this soft-rock coast contributes to rather persistent water turbidity, along with the heavy load of suspended sediment carried from the interior.

The Eastern Coast subregion is very exposed to occasional storms from easterly and southerly quarters. The climate is otherwise more moderate, with mild winters and very warm summers. Annual rainfall is at a minimum of 1000 mm in Poverty Bay, increasing to both the north and south. However there is high unreliability of rainfall, and droughts are common.

Land Uses.. Land uses are mainly an extension of the inland Tairawhiti sub-region - most of the land has been cleared for pastoral farming, though some has since reverted to secondary forest and scrub. Remnants of original vegetation are extremely limited. There are only minor areas of exotic forestry on coastal faces adjoining inland forests. Pre-European gardening of fertile alluvial pockets along the coast was significant but most of the flatter lands are exposed and have poor sandy soils. Then as now conditions were more suitable slightly inland.

Instead the coastal settlements of the subregion have a servicing function relating to their hinterlands, as well as being marine focused and traditional settlement sites. Recreation and tourism based mainly on the attractions of the coast and coastal marine area are popular uses of the subregion, and are becoming a steadily more significant component of the economy.

History: The iwi historically identified with the subregion are Ngati Porou to the north, Te Aitanga-a-Mahaki and Te Aitanga-a-Hauiti in the Gisborne area, Rongowhakaata in the Manutuke area and Ngai Tamanuhiri in the Muriwai area and southern part of the subregion.

The area has been heavily settled over time, by both Maori and European. Cook recorded in 1769 that the coastline at Anaura Bay was thick with settlements, and there was evidence of many more slightly further inland. At this time the Maori had an economy based on fishing and the cultivation of kumara, yams and taro. Muriwai is also said to have been densely populated and studded with fortified settlements. Archaeological sites are recorded throughout the subregion (including pa and midden), although there are probably many more that have not been surveyed or recorded along the coast and river mouths.

Cook first landed in New Zealand at Gisborne in 1769. The landfall site is commemorated now in a National Historic Reserve in Gisborne City. A significant trading centre was established on the Turanganui River at Gisborne in the early 1830s but it was not until the late 1860s that the nucleus of the town was purchased by the Crown. There was a rapid increase in population during the early 1870s as settlement of the interior gained momentum.

Coastal trading stations were established along the coast from the 1830's and soon ships were exporting food crops to early Auckland. While pastoral farming developed inland of the subregion, freezing works developed at Gisborne, Hicks Bay and Tokomaru Bay, along with wharves at Tokomaru, Tolaga and Hicks Bay.

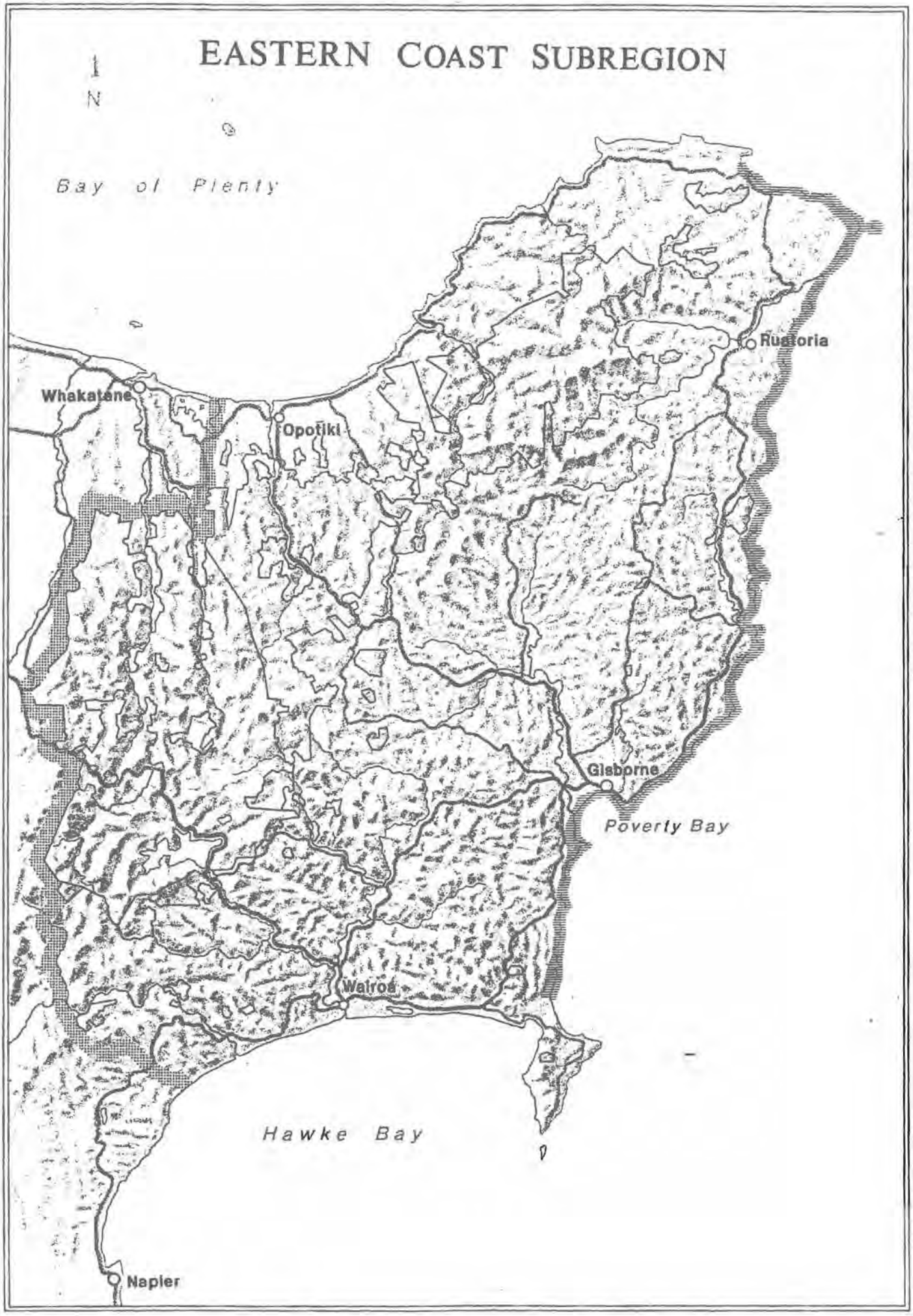
EASTERN COAST SUBREGION
N
Bay of Plenty
Whakatane
Opotiki
Ruatoria
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 6

Armed conflict has also featured in the history of the subregion beginning with early tribal conflicts, moving on to the musket wars involving northern iwi in early 19th Century, and later the New Zealand Wars between the Crown and tangata whenua (notably between the Crown and Te Kooti).

Indigenous Vegetation, Habitats and Wildlife: Very little of the original vegetation or habitat has survived on land, and marine habitats are strongly modified also.

Coastal forests feature various combinations of pohutukawa, karaka, tawa, puriri, kohekohe, wharangi and tawapou, with the natural southern limits of pohutukawa and tawapou near Tolaga Bay. Only minor remnants are left, most notably at Hicks Bay, east of Te Araroa, East Coast, Port Awanui, Waimahuru Bay Scenic Reserve (East of Te Puia), Anaura Bay Scenic Reserve, and Wharekakaho Stream south of Young Nicks Head. Others are very small and scattered, including treelands.

Secondary forest and scrub (kanuka-manuka dominated) is locally extensive in the north and south of the subregion. These are especially significant where they are buffering areas of primary forest and treelands. In general though, the Eastern Coast subregion has a strikingly "bare" look in comparison with the Western Coast.

Unstable coastal slopes and cliffs have notable scrub and herbfield communities which may include the threatened species *Rorippa divaricata*, *Plantago spathulata* subsp. *picta*, or the shrub daisy raukumara *(Brachyglottis perdicioides)*, the latter two species being endemic to the subregion. Kowhai ngutukaka/kakabeak was known on coastal slopes at Te Araroa in recent years, but has disappeared.

Dunelands were never very extensive. Modified indigenous dune vegetation survives, however, with significant examples at Hicks Bay, Hautai, Whangara and the Waiomoko and Pouawa rivermouths. The uncommon species *Austrofestuca littoralis* and local pingao are present.

Estuaries are generally small, including that of the Wharekahika, Karakatuwhero and Waiapu Rivers. The larger Hauiti estuary at Tolaga Bay and Wherowhero (Muriwai) Lagoon are the most significant estuarine habitats for wading and other water birds. Awapuni Lagoon - a tidal estuary associated with the Waipaoa River mouth - was destroyed by drainage and farm development as recently as the late 1950s - 1960s.

Narrow freshwater wetlands lie between lines of beach ridges at Hicks Bay and Te Araroa, and smaller examples occur elsewhere in the subregion. The river mouths and their tidal reaches are key sites in the life cycles of most freshwater fish, in their passage to and from the sea and in some cases (whitebait) for spawning. Estuarine fish include mullet, flounder, kahawai and parore.

Forest bird habitat has been severely limited. Notable surviving bird species are generally of wetland-estuary-scrub margin habitat or they are shore birds - the threatened North Island weka, fernbird, banded rail, spotless crake, bittern, white and reef herons, New Zealand banded dotterel, variable oyster catcher, caspian tern and royal spoonbill. Seabirds breeding in the area include gannet, blue penguin, and various shearwater and petrel species including the black-wing petrel.

Conservation Management Issues

Very little of the original natural elements of the subregion remain, including forest, wetlands, and species. The ecology has been highly modified through different land uses, and is characterised as a consequence, by relatively low indigenous species numbers, restricted to remnant pieces of forest, scrubland and wetland. The remaining natural areas are very significant and highly vulnerable. There is the need and opportunity for a great deal of ecological restoration in this subregion.

The East Cape is particularly notable for its remnant coastal wetlands and dune systems, progressing to typical papa rock reefs and sandy beaches. Many of the coastal wetlands are refuges for wildlife, harbouring threatened species. They also have high cultural and historic significance.

East Island (Whangaokeno), East Cape, Cook's Landing Site, Awatere, Haupara Point, Waimoko and Whangara have international significance based on geological, historic, cultural or endemic species values. In addition there are 12 sites of national significance in the subregion, including; Young Nick's Head (Te-Kuri-o-Paoa), Wherowhero Estuary, Waipaoa River, Tuahine Point, Gannet Rock, Cooks Cove/Pourewa Island, Uawa Estuary, Anaura Bay, Waiapu River, Hauiti Beach, Karakatuwhero River and Hick's Bay. These are primarily significant for the presence of unusual or threatened wildlife and plant species or exceptional botanic values, although several have significant historic values as well.

Marine habitats on the East Coast have also been damaged by human activities. Many years of heavy fishing pressure has reduced the diversity and abundance of marine species in some habitats, sometimes significantly altering the species composition of the habitats. Years of poor landuse practices have resulted in marine habitats, even in deep water, being smothered and water clarity being persistently reduced by excessive runoff from land. Advocacy regarding marine fisheries matters and sustainable landuse practises are therefore significant concerns as is some formal protection of marine areas. The sea area between Hicks Bay and Mahia Peninsula is recognised as a separate biogeographic zone on the basis of its distinctive marine climate, geology and biology.

The combination of heavy sediment loadings in the waterways of the Eastern Coast and modification of riparian vegetation in this subregion (and inland in the Tairawhiti subregion) has had detrimental effects on freshwater fish abundance and diversity. Surveys are needed to assess the distribution of native fish. Practical protection measures have been put in place for whitebait spawning areas along the Karakatuwhero, Wharekahika and Te Arai Rivers. Remedying barriers to fish passage, and raising awareness relating to freshwater fish habitat needs are significant issues for conservation management.

The subregion also contains significant recreation opportunities, mostly based on coastal appreciation. Key opportunities available on lands managed by the Department include walkways, camping, hunting, cycling, fishing and backpacking. The Anaura Bay Scenic and Recreation reserves, the Cook's Cove Walkway, Cook Landing Site, Herenga Scenic Reserve, Hick's Bay Boat ramp Reserve and Okitu Bush Scenic Reserve are key recreation sites. There is a need to co-ordinate the development of new opportunities with other providers, particularly in the provision of day use recreation such as walkways and short walks. There is also a need to advocate for or negotiate improved access to the coast, and for coastal water quality issues.

There have been efforts to raise public awareness about the conservation needs of the subregion, in terms of habitat or species protection. The Eastern Coast subregion continues to present significant opportunities for this, especially in that the population of Gisborne is included in the subregion. Education opportunities, provision of conservation information, and community involvement opportunities such as volunteer projects or community conservation initiatives are particularly important public awareness activities in the subregion. Joint conservation initiatives have been undertaken in the past at Wainui Beach, Whangara, Okitu Bush Scenic Reserve, and Waikanae Stream Conservation Area with positive results. The Gisborne Visitor Information Centre is the 'hub' of the Conservancy's visitor centre network.

The development pressure which has characterised the loss of natural and historic values in the past continues in industrial, residential and rural use demands on coastal resources. Because the bulk of historic resources in the area are on privately owned land, the need for advocacy through resource management and Historic Places Act processes, or negotiation with landowners is highlighted. This involves liaison with iwi, the Historic Places Trust and other agencies or individuals over protection of buildings, wharves and other sites under pressure from subdivision, forestry or other development. The East Coast Forestry Project presents particular challenges and opportunities for this work. The National Historic Reserve at Cook's Landing Site is the only national historic reserve on mainland New Zealand, commemorating Cook's first landfall in New Zealand. It (and its associated view out to sea and Young Nick's Head) is arguably the most significant historic site for pakeha New Zealanders. However port structures and reclamations which have occurred around it have compromised the integrity of the site to some extent.

General Priorities for Management

The priorities for conservation management in the Eastern Coast subregion are dictated to a large extent by the facts that the subregion contains the largest urban population in the Conservancy. There is little left of the original natural and historic character of the subregion. Most is modified or under threat of coastal, forestry or urban development. There are few formally protected areas in the subregion and there is high interest in coastal recreation and involvement in conservation.

Over the period of this CMS, the Conservancy will emphasise advocacy, liaison and negotiation regarding a range of conservation protection issues. Key advocacy issues will include enhancing recreational access to the coast and coastal water quality, avoiding actions causing further loss of remaining natural values (eg freshwater fish habitat and passage, wetlands and indigenous vegetation) and protection of historic places (including conservation covenants).

Negotiation of new protected areas to safeguard significant habitat or species will be a priority in this subregion relative to others in the Conservancy, along with the establishment of at least one Marine Reserve in the Eastern Coast biogeographic zone. The Conservancy will also support appropriate proposals for marine conservation by other agencies.

The Conservancy will co-operate with other agencies in the provision of recreation opportunities such as walkways and other visitor services. The current public awareness emphasis will be maintained, particularly community involvement, interpretation and education opportunities, and media liaison. Active protection of historic places will be targeted to Cook's Landing Site, Cook's Cove, Opou Conservation Covenant and East Cape Lighthouse, in consultation with landowners.

Freshwater fisheries management will focus on identifying and advocating for maintenance of fish passage, restoration and enhancement of riparian and aquatic habitats for whitebait spawning areas, species distribution surveying, and conservation awareness issues. Control of animal pests will focus on areas of high vulnerability, recreation or community involvement, such as Waimahuru Bay and Anaura Bay Scenic Reserves, Matakaoa Point area, Anaura Bay Recreation Reserve and East Island (Whangaokeno) Wildlife Refuge Reserve. The Conservancy will also encourage other agencies and landowners to undertake pest control initiatives. The Conservancy will maintain a high state of fire readiness in this subregion.

Areas Managed by the Conservancy

- Ahikouka Conservation Area
- Anaura Bay Scenic Reserve
- Anaura Bay Recreation Reserve
- Awanui Conservation Area
- Cook Landing Site National Historic Reserve
- East Island (Wildlife Refuge Reserve)
- Herenga Scenic Reserve
- Hick's Bay Boat Ramp Reserve
- Hck's Bay Conservation Area
- Okitu Bush Scenic Reserve
- Ruataupare Conservation Area
- Waikanae Stream Conservation Area
- Waimahuru Bay Scenic Reserve
- Wainui Beach Local Purpose (Esplanade) Reserve

1.2.3 SOUTHERN COAST

The Southern Coast subregion of the Conservancy lies generally east to west on the coast from Mahanga to the mouth of the Waikari River. It extends inland, to encompass the wetlands trapped by coastal dunes where present, elsewhere as far as the first prominent ridge, including the isthmus of Mahia Peninsula and the coastal fringe of the peninsula. The interior of the peninsula, including Mahia Peninsula Scenic Reserve, is regarded as an outlying part of the Tairawhiti Subregion. The Southern Coast Subregion includes the corresponding coastal marine area.

The population is centred on the town of Wairoa, and includes the smaller communities clustered around the Mahia isthmus - Mahanga, Oraka Beach, Mahia, Mahia Beach and Opoutama - along with Nuhaka, Whakaki and Mohaka.

The subregion falls across the Mahia and (most of) the Waihua Ecological Districts, and represents an area that has been severely affected by land development over the last hundred years. It is virtually devoid of indigenous forest but is distinctive for its many extensive wetlands of various types, the largest and most varied set of wetlands in the Conservancy.

Although the Conservancy is directly responsible for only six land areas in the subregion with a total of less than 320 hectares, it has a role in advocating for the protection of natural and historic values[7]. The areas managed by the Conservancy in this subregion are listed at the end of this subsection. The subregion lies within the administrative boundaries of the Wairoa District Council and Hawke's Bay Regional Council (see figure three).

Physical Characteristics: The subregion divides naturally into several segments of different physical character. The Mahia isthmus is a large tombolo - an accumulation of mainly beach and dune sands that connects the former island to the mainland. The interior of the isthmus, between the NE an SW beach dunes, has been infilled by alluvium from the Kopuawhara River, but leaving the tidal estuary of Maungawhio Lagoon and numerous freshwater wetlands.

Mahia Peninsula has mainly a steep or cliffed coast in mudstones, siltstones and significant limestone areas (Long Point). A discontinuous narrow coastal terrace lies at the foot of steep slopes on much of its northern and eastern sides, uplifted from the sea by successive earthquakes in the last few thousand years. Intertidal rock platforms are extensive around much of the peninsula, with frequent scattered offshore reefs beyond. Portland Island (Waikawa) off the tip of the peninsula is the largest island in the Conservancy, 131 ha. A sandspit extends from the island towards the mainland, but most of the island is slightly tilted steep-sided tableland, a fragment of uplifted marine terrace. Similar marine terraces are extensive on the southwest and northeast edges of the peninsula.

West of Mahia Peninsula, the Hawke's Bay coast is almost straight and remarkably smooth, formed by wave attack from the south. A barrier beach has been thrown up by the sea against most of the low lying coast in the eastern half of this area, as far west as the Wairoa River mouth and Whakamahi Lagoon. The Wairoa and Nuhaka Rivers generally flow through this barrier, but elsewhere a series of extensive lagoons and wetlands have been trapped behind. Much of the wetland area has been drained, but six brackish or freshwater lagoons, Whakaki being the largest,

[7] The Mahia Scenic Reserve is ecologically more appropriately managed as for the Tairawhiti subregion, so is not included here.

have survived albeit very modified. Isolated hills between the lagoons and ridges extending out from the interior hillcountry also reach the coast at several points.

West of Whakamahi Lagoon the coast is almost continuously steep to the sea having smoothly truncated ridge systems generally 100-200m high. Young mudstones and siltstones are actively eroded by the sea on some of the coast. Elsewhere a narrow fringe of beach sand has given sufficient protection for steep faces to have stabilised and become vegetated. The Mohaka River, and the much smaller Waihua and Waikari Rivers, cut dramatically through these hills to reach the sea very abruptly. The Mohaka River drains an extensive area of the main axial ranges and carries a heavy bed load of mainly greywacke gravel. Dark gravel and coarse sand from here dominates the beaches of northern Hawke's Bay.

The climate of the subregion is broadly similar to the Eastern Coast with higher more reliable rainfall in the west from more frequent southerly rains. However Mahia misses much of this rain, and strong drying winds are common.

Land Use: Land use is predominantly an extension of the inland pastoral faming uses with minor cropping on better alluvial soils. Extensive areas which were formerly wetlands have been drained for farming. Indigenous forest areas are very limited, and only small areas of exotic forestry have been established.

Tourism and residential land uses are becoming more significant, especially in the several settlements on the Mahia isthmus where subdivisions catering for holiday and retirement houses have been prevalent.

Recreation focuses on coastal and and marine opportunities, including diving, swimming, surfing, picnicking, boating and fishing. Recreational hunting for gamebirds is very popular in the lagoon areas, particularly Whakaki and Ngamotu. Whitebaiting is also a key recreation opportunity, focusing on the Wairoa River. Commercial crayfishing is based at Mahia (Whangawehi Estuary).

History: Historically the area is identified with Ngati Kahungunu whose tribal boundaries extend from Paritu (north of the Mahia Peninsula) to the southernmost extremity of Wairarapa. Hapu within the subregion are descendants of the eponymous ancestors Kahungunu and Rongomaiwahine.

The Mahia Peninsula features prominently in Ngati Kahungunu myths and legends which tell the history of human occupation, not only of Mahia but of areas throughout the subregion. Numerous well preserved pa sites, middens, ovens, pits and terraces provide visible evidence of much of its history. Mahia continues to have high spiritual and historic significance for the Maori people in the area. There are many families based there who have an association that covers many generations.

A European presence was first established during the 1830s with trading posts for flax along the banks of the Wairoa River, with extensive areas from Ohuia Flats to Tuhara and Whakaki being harvested.

A whaling station was set up at the Wairoa Heads towards the end of the 1830s and continued until the 1850s, but following the depletion of whale populations, activities moved to Mahia. Mahia was the principal whaling base for the mid-eastern section of the North Island during the 1850s. There are more than 20 pre-1916 shipwrecks located off the Mahia Peninsula coast.

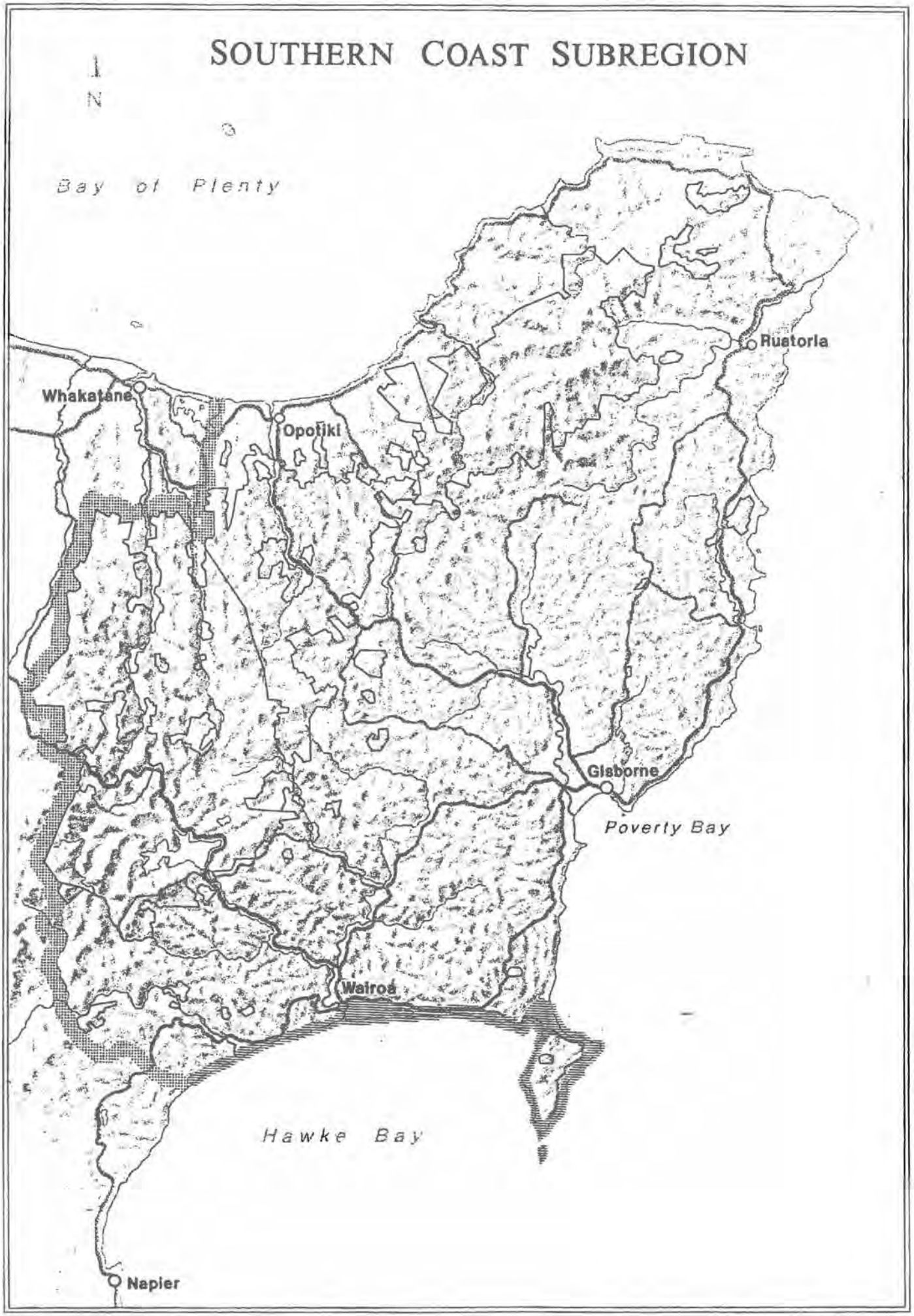
SOUTHERN COAST SUBREGION
N
Bay of Plenty
Whakatane
Opotiki
Ruatoria
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 7

Wairoa of the 1860s was a small scattered settlement. Most communication was by sea or through tracks along beaches and rocky headlands. The inland route to Gisborne was not established until 1877 and the Napier in 1890s. Access to Wairoa was hampered by the difficult river bar.

Vegetation, Habitats and Wildlife: Originally, the vegetation of the subregion would have featured tall podocarp/broadleaved forests on the better soils, merging into kahikatea swamp forests on the margins of the large lagoons. No such forests occur today. Small fragments of coastal and semicoastal forest occur on the fringe of Mahia Peninsula. Secondary coastal scrub and flaxland is more extensive on steep coastal faces and cliffs at Mahia and in the west of the subregion.

The wetlands are the most notable feature, forming a habitat chain 45 km long from Whakamahi to Mahanga that functions together as an interconnected whole as far as waterfowl and wetland birds are concerned. Whakaki was the largest freshwater lagoon on the east coast of the North Island, but is now periodically affected by the saltwater dominance after its outlet was opened to the sea. Whakamahi, Ngamotu and Maungawhio are regular estuaries with vegetation zones on their margins of saltmarsh, herbfields, and rushlands. Notable species include *Mimulus repens* and *Spergularia media*. The other lagoon margins and wetlands are variously dominated by rushes, sedges, raupo and shrubland patches, many modified by cattle.

Collectively these wetlands are nationally important in supporting a range of threatened species including crested grebe, dabchick, bittern, royal spoonbill, grey teal, banded rail, spotless crake, white heron, and the freshwater fish banded kokopu and tadpole shrimp, along with large numbers of common waterfowl, wading birds and freshwater and estuarine fish.

Associated beaches and dunelands and rocky shore coasts also support some threatened bird species including variable oystercatcher, reef heron, Caspian tern, banded and New Zealand dotterels, and on Portland Island a small breeding colony of black-winged petrel. Dune vegetation includes a few small pingao patches and more widespread spinifex among more dominant exotic vegetation.

The marine habitats of the Mahia Peninsula support a great diversity and abundance of marine life (Long point, southeast Mahia and Portland Island in particular). The "Wairoa Hard", an offshore area up to 18 km seaward of the Waihua River mouth, is an important snapper nursery. It is an unusual and distinctive feature of Hawke's Bay with a hard cobble/pebble sea floor swept clear of finer sediment.

Conservation Management Issues

There is a paucity of protected areas in this subregion. Most of the natural and historic values in the Southern Coast are located on privately owned land. This means that the Conservancy's advocacy activities (including statutory advocacy, negotiation, community involvement and public awareness) are the major means of protecting natural and historic values. Most conservation management issues in this subregion relate to the fact that the subregion has been highly modified in the past, and development pressure is still growing. Protection of the remaining natural and historic elements is therefore a key concern.

The Conservancy's involvement in statutory planning processes is a productive means of achieving conservation gains. The Conservancy will also put effort into negotiating with landowners to achieve, if possible, protection of important areas. The wetlands between Whakaki and Wairoa and at Mahia are considered a high priority.

The Conservancy's ecological knowledge of the subregion needs to be updated or completed, in respect to lagoons, estuaries, freshwater fish and remnant vegetation and the threats pertaining to them. Many of these values are in a degraded state. For example at Whakaki Lagoon, degradation has occurred through channelling of the lagoon outlet straight to sea, with resultant saltwater intrusion into the lagoon. This lagoon is currently the subject of multi-agency interest. There is a great deal of scope to restore the margins and hydrological regime of the lagoon in joint initiatives. Portland Island also presents an opportunity for restoration initiatives.

Fire risk along the southern coast is severe due to the extremely warm summers, and high public use of the coastal areas. Fires frequently occur on the Mahia isthmus, affecting wetland and dune values. The Department has responsibility for fire control within 1 km of any area managed by the Conservancy. Public awareness of fire prevention measures, and control of fires is a significant concern throughout this subregion.

The Mahia Peninsula biogeographic zone occurs entirely within the subregion, and contains potential sites for marine reserves. Marine fisheries advocacy is relevant in this subregion, particularly in terms of kaimoana management, and involves liaison with other agencies such as MAFish. The whale strandings which occur typically in the subregion during March and April, October and December require a high level of preparation in terms of monitoring, public awareness, volunteer recruitment and training.

Whitebait spawning areas in the subregion have been vulnerable in the past to water quality, fish passage, modification of riparian areas and overfishing. Protection measures have been initiated in the Wairoa River and the maintenance of these, conservation awareness and law enforcement are significant issues. The commercial take of eels is controversial also. The Ministry of Fisheries is responsible for managing commercial eel fishery (including licencing, sustainable harvest and equity issues). As eels are indigenous fish, the Department focuses its management on protecting eel habitats, regulating fish passage for migrating eels and managing access to land managed by the Department. Liaison with MAFish, tangata whenua and commercial fishers is a key to resolving these conflicts.

Historic resource advocacy may include implementing or co-ordinating field survey of specific historic places in areas not administered by the Department, in liaison with tangata whenua and the Historic Places Trust. Although historic places have been surveyed over the Mahia Peninsula and the Wairoa River, survey knowledge of historic places on the remainder of the coast between Wairoa and Mahia is limited. Detailed knowledge of the historic values of several areas managed by the Conservancy is also required.

Provision of recreation is low key in the few areas administered by the Conservancy. Because most recreation opportunities occur on land in other tenure, the Conservancy's role is to encourage and support other recreation providers in the development of appropriate opportunities.

The recreation pressure on Whakamahi Wildlife Management Reserve is intense, largely because it is the nearest lagoon to Wairoa township and provides access to the beach. The impacts of off-road vehicles, dogs, horses and people pressure, and general beach enjoyment on the high botanic values (sedgeland, rushland, herbfield and raupo reedland) and bird wildlife (the area is a wildlife sanctuary during gamebird season) historic and wahi tapu values is uncertain, and should be investigated through a management planning and public consultation exercise.

General Priorities for Management

Long Point, Ngamotu and Whakamahi will be the target of most conservation management in the subregion, along with historic place surveys, pest control and fire prevention throughout. Long Point will be assessed for appropriate management status, recreation potential and possible establishment of marine protection. Whakamahi will be the subject of a planning study involving public consultation.

The Conservancy will assist landowners and Councils with restoration of the margins of Whakaki Lagoon, and will investigate restoration initiatives for Portland Island. Jobson's Swamp Wildlife Reserve will be managed as a representative duneland ecosystem. Threatened species work for the birds and freshwater fish species mentioned in this section will be carried out. General species surveying will also be undertaken in this subregion, and the Conservancy will complete Protected Natural Areas Programme surveys of the Waihua and Mahia Ecological Districts. The Conservancy will maintain a high state of preparation for fire control in this subregion.

Historic place surveys will also be undertaken regarding whaling sites, and over the southern coast between Wairoa and Mahia, in association with the Historic Places Trust, the Wairoa District Council, tangata whenua and other landowners.

The establishment of marine reserves remains a high priority. The Conservancy will pursue the gazettal of at least one representative Marine Reserve in the Mahia Peninsula biogeographic zone, and may support other marine protection proposals such as taiapure and mataitai reserves where they have appropriate conservation objectives.

The Conservancy will liaise with other agencies to promote comprehensive and co-ordinated provision of recreation opportunities, and improvement in access to the coast. Current emphasis on public awareness, volunteer and education opportunities will be maintained.

Negotiation with private landowners, other organisations (such as the Eastern Region Fish and Game Council) and statutory advocacy will promote the protection of remaining habitat (particularly wetlands, estuaries, freshwater fish habitats and representative terrestrial and marine natural areas), protection of water quality and quantity (particularly concerning the Mohaka River, the lower Wairoa River) and general fish passage requirements, sustainable marine management and protection of freshwater fisheries, retention of the natural character and landscape of the coast, protection of historic resources, provision of access to the coast and advocacy for sensitive tourism development.

Areas Managed by the Conservancy

- Jobson's Swamp Wildlife Reserve
- Long Point Conservation Area
- Ngamotu Wildlife Management Reserve
- Opoutama Sections
- Pittar's Conservation Area
- Whakaki Government Purpose Wildlife Refuge Reserve

1.2.4 TE UREWERA

Virtually all of the land in Te Urewera subregion is managed by the Department. The subregion includes Te Urewera National Park and adjoining protected areas, including the Heruiwi, Miromiro, Okui, Waikareiti, and Panekirikiri Conservation Areas[8]. The individual pieces of land managed by the Conservancy in this subregion are listed at the end of this subsection.

Te Urewera subregion contains highly significant natural and historic values, and is also the greatest focus for recreational use of lands managed by the Department in the Conservancy.

Large areas of the subregion are in a condition as near to pristine as anywhere on the main islands of New Zealand. It contains the most diverse part of the largest remaining area of indigenous forest in the North Island. The intact habitats have ensured that wildlife values have remained outstanding. The subregion includes most of the Ikawhenua, Waimana and Waikaremoana Ecological Districts.

A significant characteristic of the subregion is its importance to tangata whenua. The Te Urewera area remains the centre of a largely traditional Maori way of life, especially for the Tuhoe people living in enclaves of Maori Land within the general National Park boundaries (particularly in the Waimana and Whakatane valleys, Ruatahuna and Maungapohatu areas).

Physical Characteristics: The region is characterised by thick native forest, ranging across a variety of altitudes, and highly scenic landscape features including lakes, wetlands, valleys and imposing mountain ranges. In the north and west, the topography is more dissected than in the rest of the subregion and generally consists of steep, rugged, greywacke ranges 450-1200 metres high. The southern part of the subregion has very different topography, based on young Tertiary sandstones and mudstones. There are prominent scarps, long dip slopes and tilted blocks of sandstone reaching 1403 metres above sealevel at Mount Manuoha, and the striking lakes Waikaremoana and Waikareiti.

There are a number of key rivers in the area including the Hangaroa, Ruakituri, Waiau and Te Hoe Rivers which flow to the southeast and form gorges alternating with broad valley floors. The Horomanga River and several smaller rivers drain to the northwest to join the Rangataiki, and the Whakatane, Waikare and Waimana rivers flow to the north, surrounded almost entirely by mountain ranges.

The Huiarau, Ikawhenua and Panekiri Ranges, and lakes Waikaremoana and Waikareiti are probably the most distinctive landforms in the subregion. Lake Waikaremoana in particular is the focal point for many visitors. The lake was formed as the result of a huge landslide 2300 years ago which created a natural dam It has a maximum depth of 248 m. The climate in Te Urewera subregion is frequently challenging. Mild summers are experienced throughout the subregion, but there is high annual rainfall (1600 -2500mm, with slightly less in the west). The subregion has cool winters, with frequent fog, high winds and snow, particularly in exposed areas such as Panekiri.

Soils are generally steepland pumice types, consisting of layers of volcanic ash. They are strongly leached, with high annual rainfall and low soil temperatures and the presence of rimu and beech forest litter contributes to their acid nature.

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[8] Conventionally the Waioeka Conservation Areas have been placed within the Waioeka subregion. Parts of these Conservation Areas are characterised more appropriately by Te Urewera subregion. The review of classification of such areas is an issue for this subregion, and will be addressed in *s.3.3.2 (Land Classification)*.

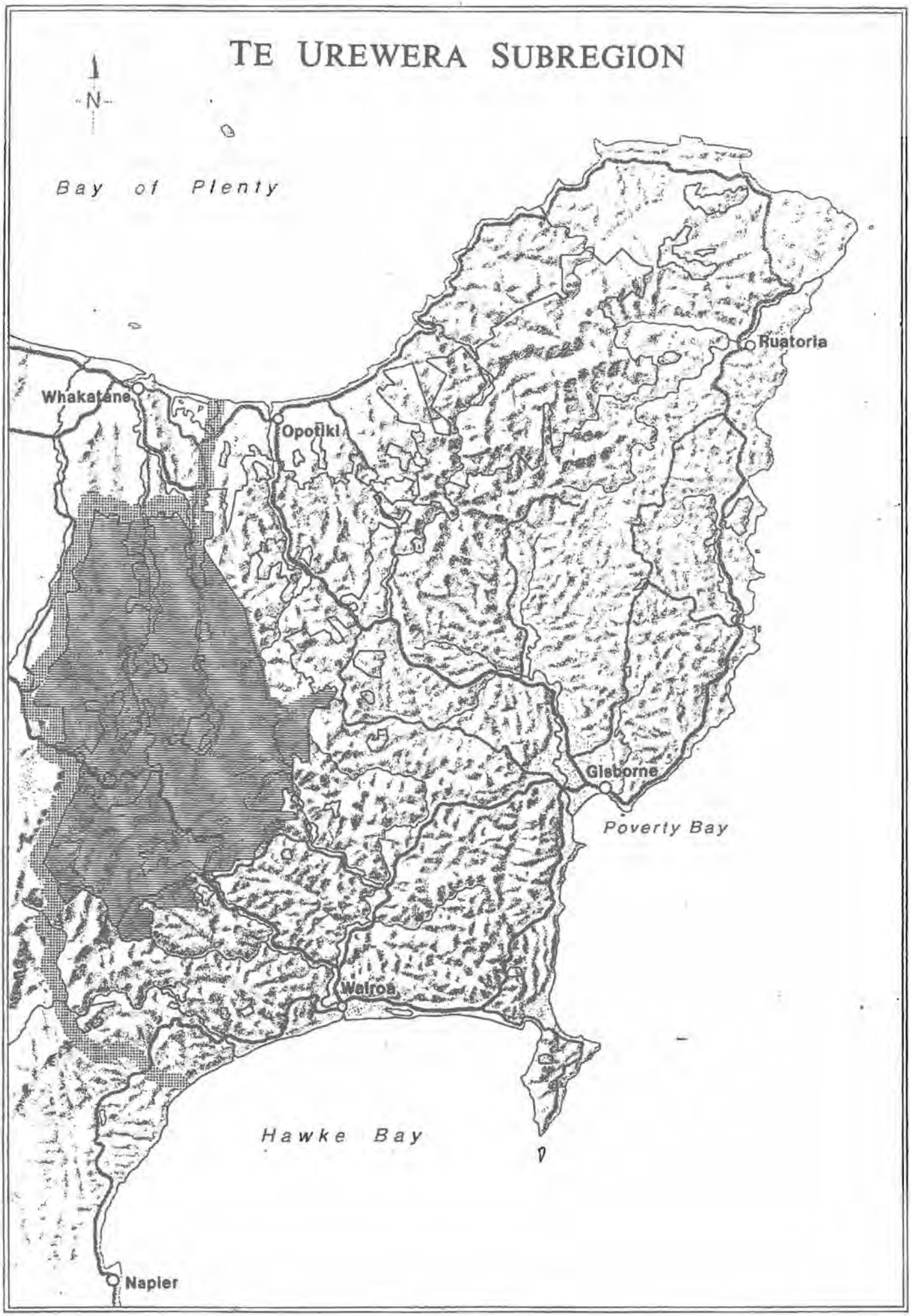
TE UREWERA SUBREGION
N
Bay of Plenty
Ruatoria
Whakatane
Opotiki
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 8

Land Uses: The bulk of the subregion is managed for conservation purposes as National Park or Conservation Areas. A few of the river valleys and adjacent hills have been cleared through logging and/or burning in the past.

The private land in the Whakatane and Waimana valleys, Maungapohatu and Ruatahuna includes substantial pasture areas, plus secondary scrub and forest, but extensive primary forest also. The Waikaremoana lake is used as a storage catchment for three hydroelectric power stations built on the slope of the natural dam.

The subregion has very high recreational use. It is concentrated around Lake Waikaremoana, although the Whakatane and Waiau valleys also attract significant visitor numbers. The subregion is popular for recreational hunting, tramping, fishing and other water-based recreation, nature and historic place appreciation.

Vegetation, Habitats and Wildlife: The quality of the vegetation (largely indigenous forest) in the subregion is one of the most significant aspects of the area. Lowland forest covers most of the river catchment areas and there is sub-montane forest above 670-820m asl. There is extensive montane forest in the eastern and southern part of the National Park and the highest points, such as Manuoha are characterised by subalpine vegetation.

Forest types include extensive rimu/tawa forest (especially in the north) at lower altitudes, with rimu/tawa and red beech, up to approximately 800 metres. Above that the forest is dominated by beech (including red, silver and mountain beech) with occasional podocarps, and then silver and mountain beech at the highest altitudes.

Other vegetation types include limited subalpine scrub, aquatic plant communities, scrub, shrubland and exotic grassland. Seral scrub/forest in the south of the subregion is the national stronghold of the endangered wild populations of kowhai ngutukaka (kakabeak). More than 20 mires are found in Te Urewera, most notably in the National Park. There is a complex of montane mires in the vicinity of Lake Waikareiti, with sedgeland, herbfield, and aquatic vegetation in small lakelets and tarns. Lowland mires are limited to a small area of raupo reedland in the Waimana catchment and the margins of Lake Kiriopukae. The only known individual of the plant "X.it " is in the Te Urewera forest tract. This plant belongs to the family *Cunoniaceae* and has no known close relatives in New Zealand.

Because of its large size and range of habitats, the forests of Te Urewera support a wide range of wildlife species, including many which are threatened. The largest surviving kokako population has been indicated by recent surveys in the northern areas of the subregion. Blue ducks are found in a number of tributaries of the Rangitaiki, Waimana, Whakatane, Waioeka, Ruakituri Rivers and Lake Waikaremoana. Other threatened bird species include kiwi (which have declined in recent years), red and yellow-crowned parakeets, North Island kaka, kereru and kaeaea, the New Zealand falcon. Weka, probably descended from birds translocated from the Gisborne area, are reported occasionally in the south. It is conceivable that the officially extinct bush wren and piopio have survived. There have been unconfirmed reports in recent decades, but the huia of the Huiarau Range have long gone.

Other wildlife include the 'vulnerable' long and short-tailed bats. A population of the *Powelliphanta marchanti* "Urewera" on the upper slopes of Manuoha is the northernmost occurrence of this important genus of large landsnails. The rivers support several species of freshwater fish, including vulnerable native species such as the short-jawed kokopu, and sports fish such as rainbow and brown trout.

History: Te Urewera is the homeland of the Tuhoe iwi who descended from the Potiki people and also descendants of those who travelled in the Mataatua waka from Hawaiki to Whakatane. The southern area of this subregion is dominated by Lake Waikaremoana, which is highly significant to the Ruapani, Tuhoe and Kahungungu iwi. Over the past centuries, tribes now collectively known as Tuhoe have retained control over the Urewera forests. Maungapohatu is a wahi tapu and identifying landmark for the Tuhoe people. Settlement was extensive in lowland river valleys in the northern Urewera, and around Lake Waikaremoana.

European missionaries ventured into the Urewera region from the 1840s, and there were several ill-fated military campaigns mounted against the Maori leader Te Kooti who sought refuge there with his followers during the late 1860s and early 1870s. There were several battles fought in the area at this time and a number of people were killed on both sides, although Te Kooti ultimately eluded capture and was eventually pardoned.

Tourist traffic to Lake Waikaremoana began from Wairoa in the 1880s. In 1903 accommodation was built at Aniwaniwa. This building, known as the Lake House, was closed in 1972.

Timber milling began in the 1900s in the Te Whaiti area and around the southern margins of Te Urewera from Maungataniwha to the Ruakituri Valley. Lands were consolidated, for protection from exploitation in 1921-22. Milling continued in Ruatahuna until the 1940s.

Also during the 1900s, Rua Kenana established a community based on the Ihiraira Ringatu faith at Maungapohatu. A number of distinctive and non-traditional structures were built, and a farm was established. The settlement was abandoned in the 1950s but the area is still used for pastoral farming.

Farm development was undertaken in the Ruatahuna Valley during the 1930s and these farm units were consolidated into one development scheme in the 1960s. After the Second World War, many Tuhoe people migrated to find work in neighbouring towns and cities such as Rotorua, Murupara and Auckland. During this time there was a drop in Te Urewera settlement populations. The families who have remained have retained traditional settlement patterns, based on loose clusters of houses focused on a marae.

There are currently two main communities within the area (at Tuai and Ruatahuna) and several enclaves of Maori land (at Waikaremoana, Whakatane Valley and Maungapohatu).

Conservation Management Issues

Several of the reserves within the subregion have high or exceptional botanical value, including Heruiwi, Panekirikiri, Waikareiti and Riwhara Conservation Areas. Te Urewera National Park is also ranked 'very high-exceptional' because it is both a large representative area, and because it forms a continuous ecological sequence across an ecological district[9]. Kowhai Ngutukaka (*Clianthus puniceus*) and wood rose (*Dactylanthus taylorii*) and *Myosotis "pottsiana"* are threatened plant species found within the subregion.

Wildlife values in part of the subregion have similarly been assessed as being 'outstanding'[10] There are at least 48 species of birds in the subregion, including many threatened bird species: brown kiwi, kaka, rifleman, North Island robin, weka, the largest population of North Island kokako, New Zealand falcon, morepork (ruru) and yellow and red crowned parakeet. There have

[9] Shaw, W.. 1988
[10] Rasch, G. 1989

been recent (unconfirmed) sightings of bush wren and piopio in the park, although these species are officially extinct. There are also two 'vulnerable' species of bat (long and short-tailed), at least nine species of native fish (including the threatened short jawed kokopu), Hochstetter's frog and a wide variety of invertebrates, including the northernmost population of the native land snail *Powelliphanta marchantii.*

Introduced animals are the most significant threats to these ecosystems and species values. Animal pests include possums, deer, pigs and goats, as well as cats, rats, dogs, mice and mustelids. There are concentrations of rusa deer in the north western part of the subregion, and pigs are mostly found in tawa predominant areas. Most of these introduced animals threaten indigenous fauna or their habitat. The primary threats however, are possums, goats and deer. There are a number of introduced plants in the subregion, including aquatic species, buddleia, blackberry, ragwort, willow, radiata pine and old man's beard.

The subregion is special in that the natural ecosystems are still relatively intact, threats are still controllable, there is a useful level of information available about the values within the subregion, and the values are mostly significant in a regional context, and often in the national context. The northern part of the National Park is therefore well suited to "whole ecosystem management" rather than any exclusive focus on only one or two aspects of the ecosystem. Whole ecosystem management involves protected species surveying, threatened species management and pest control amongst other management activities.

Most of the outlying conservation areas in this subregion are effectively managed as for the National Park, or as buffers to it. Management of these areas in a manner compatible with the National Park may not be consistent with their current status. The status of such areas should be reviewed, and action taken to ensure their appropriate classification.

Te Urewera National Park is a major recreational focus for the whole of the Conservancy. Peaking during the summer months from December to March, visitor use comprises mainly family groups, overseas tourists and educational groups. Recreational fishers and hunters are more common during spring and autumn.

Recreation facility provision is intensive in this subregion compared to others. Key facilities include the Waikaremoana Motor Camp and associated accommodation, parking, boat launching and mooring facilities, the Aniwaniwa Visitor Centre, the Waikaremoana Great Walk and standard campsites on the shores of lake Waikaremoana adjacent to State Highway 38 and in the Waimana Valley. An outdoor education centre run by the Whakatane Lions Club is located in the Waiaua Valley at Ngutuoha. In addition a further 52 huts and more than 650 km of foot tracking are maintained within the subregion. Several commercial tourism and recreation services operate in the subregion, expanding the range of recreation opportunities or services.

The key issues for recreation in this subregion include upgrading of facilities in the Waikaremoana area (particularly Aniwaniwa Visitor Centre and the Waikaremoana Motor Camp); a review and rationalisation of remote backcountry huts, tracks and associated facilities throughout Te Urewera, and impact management. There is also the potential to develop further day-use and/or camping opportunities in more accessible parts of the subregion, such as the Waimana and Horomanga Valleys, Galatea Foothills and at Waitangi Falls on the Ruakituri River. More remote opportunities in the backcountry for tramping, hunting and fishing will continue to be managed at an appropriate level, through the continued provision of huts and tracks in the Whakatane, Waimana, upper Horomanga and Waiau Valleys. The generally remote area within the Ruakituri Catchment (excluding Waitangi Falls) will continue to be managed as one of those

rare opportunities for visitors to enjoy minimal impact and a wilderness character with no huts or bridges, and minimal provision of access (primarily for search and rescue and for animal control purposes only).

Although the Conservancy is committed to providing a range of recreational opportunities in this subregion, there are potential conflicts between recreational use and effective conservation. The key issues involve the monitoring of recreational use (including concession use) as it relates to impact on the environment and the experience of other visitors and balancing the negative and positive conservation acts of recreational and commercial hunting.

The subregion (and particularly the National Park) is the focus of much community interest. Volunteer projects have been in place for years in the Whakatane and Waimana valleys. The cost-effectiveness of the adopt-a-hut and adopt-a-track initiatives are recognised and Conservation Corps projects operate within the Park. Tairawhiti Polytechnic runs annual summer programmes based at Waikaremoana. There is the potential to expand community involvement in conservation still further throughout this subregion.

There are many historic places throughout the area, but most of these are in private land and are not officially recorded. The majority are kainga and pa relating to Maori occupation, though there are also sites relating to the mid nineteenth century armed constabulary occupation. The subregion contains seven of the 15 actively managed sites in the Conservancy. The high profile of the subregion in the history of the Conservancy is reflected in the many artefacts, photographs and documents on display at the Aniwaniwa Visitor Centre.

General Priorities for Management

The fact that a great deal of the natural and historic values in this subregion are legally protected in some form means that there are many opportunities to make significant conservation gains in terms of species, habitat, ecosystem, historic resource protection and recreation provision.

General species protection and management of threatened species such as North Island kokako, short tailed bat, "X.it", kowhai ngutukaka *(Clianthus puniceus)*, wood rose (*Dactylanthus taylorii*) *and Myosotis "pottsiana"*, koaro and kokopu will be a priority in this subregion, along with trials of "whole ecosystem management" in the northern Urewera forests. Management will include survey, research and monitoring, pest control and advocacy.

A high priority has been set for the control of goats and possums in this subregion with highest priority being sustained possum control in the northern Urewera and at Manuoha. Old man's beard is a priority for plant pest control in riverbeds and open reserve areas.

Protecting linkages between Te Urewera and the Waioeka is also an issue and a strategy will be developed for this.

The classification of Conservation Areas adjoining the National Park will be reviewed, and they will be reclassified where appropriate.

There will be continued emphasis on recreation management in the Waikaremoana catchment relative to most other places in the Conservancy. Key opportunities will be maintained, and further development of the high visitor pressure areas in the Waikaremoana catchment may be required to mitigate visitor impacts and ensure quality recreation opportunities. Development that is appropriate to the level of use of an area and protects the environment may be undertaken

in areas adjacent to State Highway 38 in the Waimana and Horomanga Valleys, the Galatea Foothills and Waitangi Falls.

Recreation information and conservation awareness will stress environmental care, and private property considerations. Aircraft access for recreational hunting will be reviewed as part of the Recreation Strategy. Concession operations will be monitored for impact management, along with areas receiving high visitor numbers. Huts, tracks and associated facilities throughout Te Urewera will be reviewed.

The sports fishery within the Park is managed by the Eastern Region Fish and Game Council, subject to the policy laid down in Te Urewera National Park Management Plan. The plan recognises that the sports fishery is a significant recreational resource but that there may be conflicts with protection of native fish species. The plan provides for the management, maintenance and enhancement of the sports fishery but prohibits liberations to Park waters not already containing salmonoids. It provides for re-stocking only where there is evidence of stock decline and where the habitats of indigenous species will not be detrimentally affected.

Public awareness activities will receive a high priority in Te Urewera subregion, particularly in respect to interpretive material, visitor information and conservation awareness messages, visitor centre services and provision of volunteer opportunities.

Areas Managed by the Conservancy

- Heruiwi Conservation Area
- Kaitawa Conservation Area
- Miromiro Conservation Area
- Northern Urewera Conservation Area
- Okui Conservation Area
- Onepoto Conservation Area
- Onepoto Dump
- Panekirikiri Conservation Area
- Riwhara Conservation Area
- Ruatahuna Conservation Area
- Waikareiti Conservation Area
- Te Urewera National Park
- Whakatane River Conservation Area

1.2.5 WAIOEKA

The Department of Conservation manages 39 protected areas in this subregion, including the Urutawa Conservation Area, the Waioeka Gorge Scenic Reserve and the Waioeka Conservation Area. The individual pieces of land managed by the Conservancy in this subregion are listed at the end of this subsection.

Physical Characteristics: The northern part of the Waioeka subregion is largely based on alluvial flood plains formed around rivers such as Waiotahi, Waiaua and Waioeka which have flowed out from the hills and formed fertile, inland flats. Approximately 10 percent of the subregion lies below 400 metres. To the south, the land becomes heavily dissected and broken, and increases in steepness. Land higher than 400 metres above sea level is predominantly covered in heavy forest or scrub. Moanui is the highest point in the subregion at 1066 metres above sealevel. The subregion is dissected by the Waioeka Gorge which runs roughly north to southeast. In the west and south of the subregion, the landforms consist of alternating layers of sandstone and mudstone.

In the low-lying northern areas of the subregion, the soils are generally fertile and consist of alluvial terraces (often covered in ash deposits) or flood plains.

The soils in the subregion are predominantly Raukumara sandy loam and Urewera sandy loam over greywacke bases. The soils are largely acidic due to weathering and to the acid nature of leaf litter. Volcanic deposits of up to two metres deep are distributed throughout the subregion. The shallow, fertile top-soil beneath the indigenous forest cover is underlain by a partly weathered volcanic sub-soil or an infertile gravelly material overlying bedrock. Erosion of saturated soils from the underlying greywacke is a natural feature of the subregion in general, and is due to the generally high rainfall in the subregion.

Vegetation, Habitats and Wildlife: The Waioeka subregion includes a wide range of different vegetation types. Vegetation ranges from semi-coastal podocarp and broadleaved forest (including rimu, rata and tawa) through lowland podocarp, broadleaved forest with some beech forest, to montane mixed beech and podocarp forest. Kamahi, puriri and rewarewa forests are also present with totara/matai forest on alluvial soils being a rare occurrence. The Marawaiwai Scenic Reserve contains a small raupo wetland, and there is lowland flaxland in the Waioeka Conservation Area.

Although the original vegetation has been modified in many areas by farming, forestry and transport developments, the Toa Toa Scenic Reserve comprises a corridor of vegetation between the Raukumara and Urutawa forest tracts, thus linking a chain of protected vegetation which stretches from the northern Raukumara to the southern Urewera.

Several threatened plant species occur in the Waioeka subregion, including carmine rata and possible king fern in the Hine Rae Scenic Reserve. More definite reports of king fern and also the native forget-me-not *Myosotis "pottsiana"* come from the Waioeka Gorge Scenic Reserve. The Meremere Hill, Toa Toa, Tukainuka, Waiaua, Waioeka Gorge and Whitikau Scenic Reserves, and the Urutawa and Waioeka Conservation Areas are all recognised as having 'Very High' or "Exceptional' botanical value.

Blackberry and gorse occur throughout the reserved areas in the subregion. Pampas, privet, buddleia, thistle and ragwort are also problem plants in various reserves. Nasella tussock is a major plant pest occurring in this subregion.

Fauna includes a wide variety of unusual or threatened birds such as kokako, North Island robin, kaka, kiwi, weka, parakeets and falcon. Whio (blue ducks) breed in some areas of this subregion. Most areas also have common bush birds and introduced song birds. Wildlife values also include the threatened Hochstetter's frog, native fish including eels (tuna) and inanga, an indeterminate giant slug, and short and long-tailed bats.

The Waioeka Conservation Area and Waioeka Gorge Scenic Reserve are recognised as having 'Outstanding' wildlife value.[11]

Introduced wildlife include the regionally important trout fisheries of the Waiotahi and Waioeka. Possums, domestic stock are the most prevalent animal pests affecting reserves in the subregion. The ease of visitor access, and proximity of developed lands adjacent to many reserved areas may explain the fact that rats, cats, ferrets and other mustelids are also very common animal pests in the reserves of the subregion. Goats, pigs or deer are found in approximately 40% of reserves in the subregion.

Land Use: Lands to the north and east of the reserves have historically been developed into pasture for farming, and this is still true, although exotic forestry has increased in recent times. The economy remains almost entirely based on land resource uses such as dairy farming, grazing for sheep and cattle, horticulture and forestry. However, tourism is becoming an increasing influence on the economy of the area. Opotiki is the main population centre in the subregion, acting as a service centre for the surrounding rural areas.

History: The people of Whakatohea who claim mana whenua to lands within the subregion trace their ancestry to the waka Mataatua under the leadership of Toroa who arrived at the Whakatane rivermouth at the time of the legendary Great Migration. At that time the land was already occupied by several tribes of tangata whenua who were descendants of the chief Toikairakau, an important figure in Bay of Plenty tribal history and genealogy. These tribes were known as Te Tini-a-Toi, the many tribes of Toi. From the intermarriage of the Toi people and descendants of the waka Mataatua, the tribes of Ngati Awa, Tuhoe, Whakatohea and Te Whanau-a-Apanui were established.

Archaeological evidence in the subregion suggests that settlement by tangata whenua occurred along the major river systems. There are a number of recorded pa, pit and terrace sites in the area, particularly in the Waiotahi, and Waioeka Gorge, Waiaua and Tukainuka Scenic Reserves, the Hine Rae Historic Reserve and the Waioeka Conservation Area. There are probably many more unrecorded sites, particularly in the Waioeka Valley area.

The Waioeka area (and particularly the gorge) provides access between the western and eastern coasts. The area therefore has a long history from early Maori settlement, through the New Zealand wars, to early farming. Changes in settlement patterns and land use over time is evidenced in the old Motu coach road, the Pakihi stock route and the Manganuku bridge.

[11] Rasch, G. 1989


WAIOEKA SUBREGION
N
Bay of Plenty
Ruatoria
Whakatane
Opotiki
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 9

Attempts to farm the land surrounding the Waioeka Gorge have been made since the late 1890's. The historic Tauranga bridge in the Waioeka Gorge is a vivid reminder of this. It is associated with post World War I rehabilitation programmes for returned soldiers, whereby returned servicemen were allocated undeveloped land parcels. These attempts met with limited success. Falling meat and wool prices, and the severe erosion following land clearance resulted in the abandonment of many of these areas. However there are still pockets of farmed land throughout the Waioeka Gorge.

The Waiotahi, Waioeka and Otara catchments were targeted for intensive soil and water protection in the late 1960's, and were protected through scenic reserve and state forest gazettal. Today appropriately 75% of the subregion has reserve status, largely concentrated in the west and south.

Conservation Management Issues

One of the key conservation management issues facing the Conservancy in this subregion is a need to fill information gaps relating to the natural and historic values of areas managed by the Department. Very little is known about the values and threats to them in around twenty reserves (many of these are riparian strips). There is therefore a need for general surveying and/or monitoring of historic places, vegetation and wildlife. Monitoring of threatened species and their respective habitats is another important aspect. Visitor numbers, the reasons people come to the area, and their impacts upon natural and historic values need to be monitored.

The subregion contains at least seven species of native fish, including the threatened koaro. Several other threatened species are known to occur in this subregion, notably; North Island kokako and short tailed bats, North Island brown kiwi, whio (blue duck), long tailed bats, Hochstetter's frog, North Island weka and kaka, and kaeaea (falcon). These species will need active management, including pest control.

Although we have a solid appreciation of the nature and extent of the pest problem in the Waioeka subregion, pest control constitutes a major management issue. Possums, domestic stock, goats, deer, pigs, wilding pine, old man's beard, nasella tussock and willow are a major problem in lowland areas (Waioeka, Motu River, Raukokore). Associated with animal pest control, fencing is a management concern in many scenic reserves and conservation areas.

Freshwater fish in the subregion are threatened from habitat modification including barriers to fish passage, and degradation (eg through land use), particularly in the Waiotahi, Waioeka and Otara rivers. The Waioeka River supports a regionally important brown and rainbow trout fishery. The brown trout fishery in the Motu (Takaputahi) area is of national significance.

There are several actively managed historic places in this subregion, including the Manganuku and Tauranga bridges, and Hine Rae Historic Reserve that need to be maintained and monitored. Historic conservation plans have been prepared for the Tauranga and Manganuku bridges. Further survey may identify other historic places for active management.

While remote recreation opportunities exist in places (particularly in the Urutawa Conservation Area), a good network of legal roading throughout most of the subregion facilitates access to many conservation areas. Tramping, hunting, trout fishing and camping are popular recreational pursuits in the subregion, particularly focusing on the gorge area. The Waioeka Gorge Scenic Reserve and areas along State Highway 2 provide for the enjoyment of day visitors with facilities for picnicking, and opportunities to investigate historic sites such as the Tauranga and

Manganuku bridges. The bridges have been conserved and are associated with various walking opportunities. The Urutawa Conservation Area contains several huts and tracks. These are used mainly for hunting and tramping.

A small number of concessionaires operate within reserve areas, mainly as hunting, tramping, rafting and fishing guides. The rise in popularity of mountain biking has resulted in use of the legal roads in the subregion. The old Motu coach road in the Meremere Hill Scenic Reserve and the Pakihi track in the Urutawa Conservation Area are used for this purpose.

Because of the easy access from State Highway 2 and other legal roads into protected areas, there is a relatively higher risk of fire in the subregion. Unauthorised camping and associated littering, cannabis cultivation and timber theft within lands administered by the Conservancy are of concern. Illegal taking of kereru continues to threaten this highly vulnerable species.

The Waioeka subregion provides many possibilities for public awareness and recreation initiatives. There is good potential to develop a conservation 'trail' through the Waioeka Gorge area, emphasising interpretation of the development of the highway, settlement, historic incidents associated with the New Zealand Wars, and other cultural values.

General Priorities for Management

Survey and monitoring will be given a greater focus in this subregion. Survey will cover a broad range of subjects, including habitats and species, historic places and visitor use and impacts.

Fire prevention, and preparation for control will remain high priorities, and will involve conservation awareness activities, particularly in the Waioeka Gorge Scenic Reserve.

Sustained goat and/or possum control will be carried out in the Waioeka Conservation Area adjacent to Te Urewera National Park, and the Urutawa Conservation Area. Landowners and Regional Authorities will be encouraged to undertake animal pest control also. Problem plant pest control will occur in lowland areas. The Conservancy will also act to raise hunters' awareness of recreation impacts on the environment.

Consideration will be given to a conservation trail in the Waioeka Gorge Scenic Reserve, emphasising recreation facilities, interpretive material regarding historic resources and public awareness messages. Development of recreation initiatives will target the Waioeka Gorge area in association with this. Recreation facilities will also be developed in the Urutawa Conservation Area.

The Conservancy will continue to actively manage Hine Rae Historic Reserve, Manganuku and Tauranga Bridges. Further survey will be undertaken in areas managed by the Conservancy. Research of the Waioeka gorge will be undertaken for "historic trail" interpretation as part of the conservation trail concept for the gorge.

Compliance activity will focus on unauthorised camping, cannabis cultivation, timber theft and kereru poaching. Protection of remnant natural areas and landscape will be emphasised in the Conservancy's advocacy. Advocacy will also address fish habitat, fish passage requirements, restoration of riparian areas and sustainable land and water management. Introduced species interaction with native fisheries will be managed so as to avoid, remedy or mitigate adverse effects on native species and their habitats. The Conservancy will liaise with MAFish and tangata whenua over eel fishery management issues.

Areas Managed by the Conservancy

- Apanui Gravel Pit
- Hine Rae Historic Reserve
- Marawaiwai Scenic Reserve
- Meremere Conservation Area
- Meremere Hill Scenic Reserve
- Opape Scenic Reserve
- Otara River Conservation Area
- Otara River Soil Conservation Area
- Pakihi Conservation Area
- Pakihi Stream Conservation Area
- Tutaetoko Scenic Reserve
- Takaputahi Conservation Area
- Te Waiti Stream Conservation Area
- Te Wera Bush Conservation Area
- Toa Toa Scenic Reserve
- Tukainuka Scenic Reserve
- Urutawa Conservation Area
- Waiata Village Conservation Area
- Waiata Village Private Protected Land
- Waiaua Scenic Reserve
- Waioeka Conservation Area
- Waioeka Gorge Scenic Reserve
- Waioeka River Conservation Area
- Waioeka River Control Reserve
- Waiotahi River Conservation Area
- Waiotahi Scenic Reserve
- Wairata Conservation Area
- Whitikau Conservation Area
- Whitikau Scenic Reserve

1.2.6 RAUKUMARA

The Raukumara subregion includes all of the Raukumara Conservation Park, and most of the forested areas nearby, including the Pukeamaru Scenic Reserve in the north. The subregion extends westward to the nearest ridge inland of the western coast, forming the boundary between the Raukumara and the Western Coast subregions. The Raukumara subregion falls within the Raukumara Ecological Region. The areas managed by the Conservancy in the Raukumara subregion are listed at the end of this subsection.

Physical Characteristics: The Raukumara subregion is dominated by the Raukumara Ranges, which form a spine of mountainous ridges along the eastern edge of the subregion, linked to the western coast by irregular side ranges. The major river systems are the Motu, Haparapara, Raukokore and Kereu Rivers, while several tributaries of the Waiapu drain to the east. Hikurangi Maunga (on the eastern boundary of the subregion) is the highest point in the East Coast Conservancy at 1752m. There are a number of other prominent points above 1400m within the Forest Park, including Raukumara, Whanokao and Arowhana. The subregion is characterised by a predominance of very steep, densely forested valley sides and narrow ridges, and therefore the Pukeamaru Scenic Reserve to the northeast has been included in this subregion also.

The Raukumara Ranges have been formed from old, strongly hardened deep-sea sediments (now greywacke and argillite) as a northern continuation of the Huiarau and Urewera mountain chains in the Te Urewera and Waioeka subregions. These rocks are brittle and locally shattered and crushed by earth movements during their uplift. To the north, inland of Cape Runaway and Waihau Bay is an extensive area of softer rocks including flat lying, young sandstone, forming low hillcountry. In the northeast, the Pukeamaru Range is made of old volcanic rocks which were originally part of an ancient oceanic crust. These rocks are generally much stronger than the greywacke ranges, forming dramatic slopes and bluffs.

Erosion is a feature in some westward draining catchments, particularly the Motu and Haparapara catchments. However, despite the very steep slopes, erosion is only moderate in comparison with that on the much weaker rocks of the adjacent Tairawhiti subregion.

The Raukumara subregion is directly exposed to sea air masses from three sides. Rainfall is therefore high annually, and also in terms of sustained, high intensity rainfall events. The highest rainfall is at Hikurangi Maunga and most areas exposed to the south have snowfall in winter. The soils in the region are of moderately low fertility, predominantly being acidic Raukumara sandy loam and Urewera sandy loam, (formed from the weathering of greywacke parent materials). Volcanic ash deposits are derived from the central North Island. The deposits are thinner than those in closer areas such as Te Urewera and Waioeka subregions.

Land Use: Although much of the subregion is unpopulated and covered in indigenous forest, large areas of land toward the western coast have been planted in exotic forest over the last 20 years. There are areas of pasture to the northwest of the Raukumara Conservation Park. Much of the land in the region is too steep and infertile for intensive land uses, although some of the more stable, rolling hillcountry to the south and west is in pasture at present.

The majority of the Raukumara Subregion is under Department of Conservation management. It includes the Raukumara Conservation Park and Pukeamaru Scenic Reserve as well as a number of smaller outlying areas. The majority of reserved land in this subregion is managed for habitat protection, wilderness, or remote recreation activities. Most of the remainder of the subregion (including indigenous forest, farmland and pine forest), is Maori land.

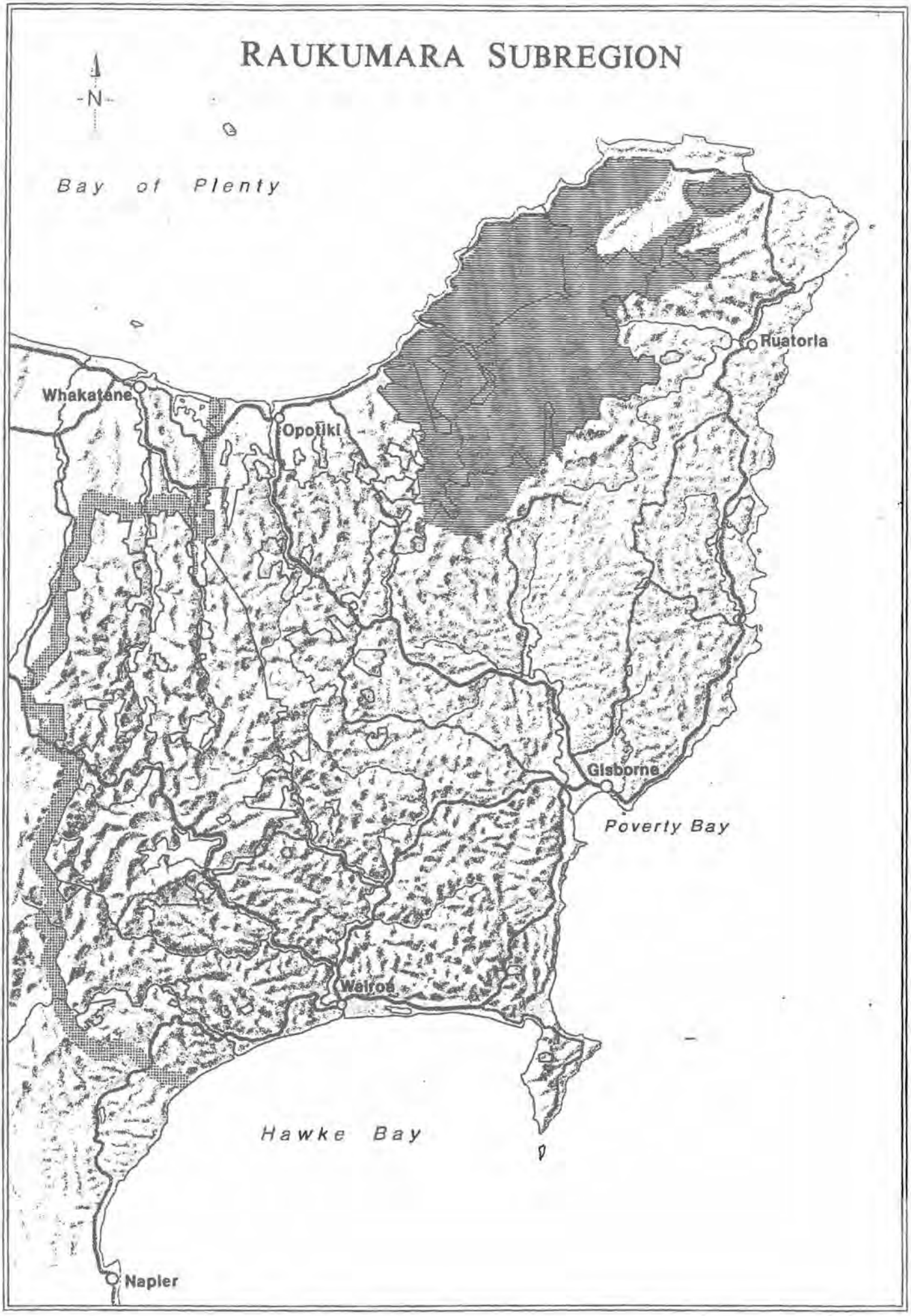
RAUKUMARA SUBREGION
N
Bay of Plenty
Ruatoria
Whakatane
Opotiki
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 10

There is a variety of recreational use of the subregion, mostly focused on the Raukumara Conservation Park and the major rivers. A major feature of the Park is the gazetted Wilderness Area. The main recreational activities in the area include hunting and tramping, water-related activities such as rafting, canoeing and jetboating or activities associated with various legal and farm access roads in the area such as mountainbiking and off-road vehicles on the Otipi Road, or tramping.

Vegetation, Habitats and Wildlife: The subregion corresponds roughly to the Motu and (part of) the Pukeamaru Ecological Districts. It covers a varied series of vegetation and habitat types ranging from semi-coastal broadleaved forest through to alpine fell-field, herbfield and tussock land (restricted to Hikurangi and Whanaokao). The continuous sequence of native forest covering most of the subregion from the central mountains to the western coast is particularly significant. Predominant higher altitude species include red and silver beech, and locally pink pine, yellow and silver pine. At the lower altitudes in the west, forests are predominantly a mosaic of tawa, kamahi, hinau and rewarewa, often with emergent rimu and rata, and hard beech forest. Approaching the western coast, semicoastal broadleaved species such as puriri and kohekohe become significant forest components.

Fauna in forest areas includes a wide variety of native birds as well as introduced song birds. Hochstetter's frog, 10 species of native fish (including two threatened species), and bats are also present in the subregion as is a probable new species of tusked weta (unnamed). Introduced animals include red deer, goats, domestic (and feral) farm stock, pigs, possums and mustelids.

History: The area contains the rich history of a number of iwi and affiliated hapu who have occupied and continue to maintain mana whenua on all flanks of the Raukumara subregion. Ngati Porou, Te Whanau-a-Apanui, Te Ehutu, Ngai Tai, Whakatohea and Te Aitanga-a-Mahaki are iwi who have historically had a powerful influence in the region.

Waiata, whakapapa and pakiwaitara embody and convey the history of their occupation, and the importance of the Raukumara both as a mahinga kai area, and as a major thoroughfare for missions of peace and war between iwi. Occupation and associated historic activities are captured in the names of key geographical features of the subregion.

There is archaeological evidence of cultivation on river terraces and various pa sites, including the Hungahungatoroa Pa. Tracks traversing the Mangatutara and Raukokore Rivers are indicative of the use of the area as a thoroughfare between the eastern coast and the Opotiki and Whakatane area. It is also likely that waka were taken up the Motu River to the Mangatutara Stream.

Bush clearance and logging for farming began late last century. The 'Rip' (Raparapaririki) Station (and its historic homestead) was one of the first areas to be purchased by the Government for planting under the 'East Coast Project') in 1969[12].

Conservation Management Issues

There is good representation in the forested areas of the subregion of threatened bird species, including the endangered kokako, whio (blue duck), North Island robin, kaka, kiwi, weka, parakeets, and falcon. Hochstetter's frog, native fish (including the threatened short jawed kokopu and koaro) and long-tailed bats are other threatened species found in the subregion.

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[12] Although the Raparapaririki Conservation Area and the 'Rip' Homestead lie within the Tairawhiti subregion, they have long been identified as a gateway to the Raukumara, and so are mentioned here.

The Haparapara and Waikakariki streams in the eastern Bay of Plenty are recognised as having outstanding scientific and ecological value for their high diversity of native fish species and absence of introduced trout.

Introduced animal control is a key to protection of the area. Introduced animals include possums, goats, red deer, cattle, pigs, and mustelids. Goat and possum control is urgent in Mullanies and Raparapaririki Conservation Areas, Pukeamaru Scenic Reserve and Raukumara Conservation Park because of threats they pose to ecosystems and threatened species in these places.

The Raukumara Conservation Park is ranked 'outstanding' for wildlife interest, and 'very high – exceptional' for botanical values[13]. The Pukeamaru Scenic Reserve is also extremely significant, with 'high' wildlife ranking and 'exceptional' botanical conservation value and 'high' wildlife ranking. The natural or historic values in many of the other protected areas in this subregion are little known. There is a need for general monitoring and surveying for native wildlife (particularly freshwater fish distribution) and plant species and their habitats

The large area of primary forest (approximately 60,000 hectares) in the zone between the Raukumara Conservation Park and the western coast is nationally outstanding as a continuous indigenous ecosystem, linking the interior to the sea at several points. The area has no formal protection, and negotiating protection in order to 'plug' the ecological gaps is an important consideration.

Wilding pine, old man's beard and willow can be problem plants in lowland areas (such as the Motu River and the Raukokore). Wilding pines are a risk from production forestry adjacent to areas managed by the Conservancy. Logging impacts on riparian and aquatic habitat are also of concern. The subregion is not without significant soil erosion, in part due to loss of vegetation on unstable hillcountry.

There are several key recreation opportunities in this subregion, generally centred on the Raukumara Conservation Park and waterways. The Motu River became New Zealand's first Wild and Scenic River in 1984. It offers prime fishing, kayaking and rafting experiences, and access to the Raukumara Wilderness Area. Public roads adjacent to it (eg the Otipi Road) are becoming popular for mountainbiking or other off-road activities, and as access points into the Raukumara Conservation Park.

The key conservation issues are of fostering appropriate recreational (including provision of access), while ensuring that wilderness values are protected. Several concessionaire activities are associated with recreation in the subregion, particularly rafting, hunting and fishing. The impacts of these operations need to be carefully monitored.

There is long-term potential for establishing interpretive material and a summer visitor programme in the Pukeamaru area. Public awareness of conservation regulations also needs to be raised in terms of unauthorised camping in the Raukumara Conservation Park and the Kapuarangi Conservation area.

The historic homestead at Raparapaririki Station should be assessed for historic values, and the recorded archaeological sites within the Raukumara Conservation Park should be verified. There are many gaps in our knowledge of the historic values of the subregion. Archaeological assessment of the Kopuapounamu, the Littleworths and Tokomaru Conservation Areas, the

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[13] From Shaw, WB, 1988. Sites of Special Wildlife Interest are ranked in Rasche. G, 1989

Kapuarangi Conservation area, and the unrecorded sites in the Pukeamaru Scenic Reserve would add greatly to our knowledge of the subregion.

The Conservancy recognises the strong cultural and spiritual significance that the Raukumara area has for tangata whenua, particularly Hikurangi Maunga, and other wahi tapu. There are two major claims which will potentially impact significantly on this subregion, both are at the preliminary stages of the Waitangi Tribunal process. The full implementation of the terms of agreement (including ensuring the provision for recreational access) between the Crown and Ngati Porou over the return of Hikurangi Maunga is a high profile conservation issue.

General Priorities for Management

The Conservancy's effort in the Raukumara subregion will be balanced between active management of the wealth of natural values on areas under the Conservancy's administration, and negotiation for appropriate protection of key areas of primary forest which link the hinterland to the sea.

Management of the natural and historic resources in the subregion will emphasise threatened protection, threatened species work and animal pest control. This is especially important in Ecological Areas within the Raukumara Conservation Park, Raparapaririki and Mullanies Conservation Areas and Pukeamaru Scenic Reserve.

The Kapuarangi, Kopuapounamu, Littleworths, Raparapaririki and Tokomaru Conservation Areas will be priorities for ecological survey regarding species presence and distribution, and threats to natural values. Survey of historic places will be carried out in consultation with tangata whenua, and will be focused on these areas, with the addition of Pukeamaru Scenic Reserve. Recorded sites within Raukumara Conservation Park will be verified.

The Conservancy will investigate the status of land it manages adjacent to the Raukumara Conservation Park. Reclassification of various land may be initiated, where it would facilitate compatible management of these areas and the Conservation Park.

Establishment of new protected areas, in liaison with landowners in the forest tract between Raukumara Conservation Park and the western coast will be a priority, aiming to represent the remarkably intact mountains-to-sea biodiversity of this subregion in the formal protected areas network. The remote recreation values of this subregion will be maintained or enhanced, through ensuring that access is low key, facilities are minimal and that concession operations are appropriate to the areas in which they occur. Monitoring of the effects of visitor pressure in vulnerable areas such as the Motu River and the Raukumara Wildemess Area will be a priority.

The Raparapaririki (Rip) historic homestead will be reviewed along with other facilties in the Conservancy. The Conservancy will emphasise the importance of access to Hikurangi Maunga via Pakihiroa Station, in implementing the terms of agreement between the Crown and Ngati Porou over the return of Hikurangi Maunga.

Public awareness activity will remain low key relative to other subregions. Investigation of the potential for interpretation and a summer visitor programme in the Pukeamaru area will be undertaken. Public awareness will focus on environmental care messages for visitors to areas managed by the Department.

Advocacy (apart from the need for new protected areas) will also be a lower priority and will focus on seeking appropriate provision for conservation management in resource management policy, and for the proection of natural and historic values generally. A few specific issues will be subject to advocacy activity; such as the maintenance of salmonoid-free streams, forestry development impacts on riparian, soil conservation and water quality values, and the impacts of adjacent impacts of adjacent landuses in terms of problem plant invasion.

Areas Managed by the Conservancy

- Kopuarangi Conservation Area
- Kopuapounamu Conservation Area
- Littleworth's Conservation Area
- Mullanies Conservation Area
- Pukeamaru Scenic Reserve
- Raparapaririki Conservation Area
- Raukumara Conservation Park
- Tokomaru Conservation Area

1.2.7 TAIRAWHITI

The Tairawhiti subregion encompasses the majority of the land to the east of the forested areas of Raukumara, Waioeka and Te Urewera subregions. It stops short of the narrow coastal strips of the Western, Eastern and Southern Coast subregions, but includes the Potaka and Waikura Valley areas in the north and extends to the Waikari River in the south. The subregion includes most of the land within the administrative boundaries of the Gisborne and Wairoa District Councils (*Fig. 3 Local Authority Boundaries refers*), and a very small part of the Opotiki District Council area inland from Whangaparaoa. The areas managed by the Conservancy in the Tairawhiti Subregion are listed at the end of this subsection.

In the Tairawhiti subregion the effects of large-scale land clearance, settlement and development have been felt very strongly. It covers almost 60% of the total Conservancy area but includes less than 4% of the land managed by the Conservancy. The subregion is characterised by fragments of indigenous vegetation within predominant pasturelands, much of it on erosion-prone hillcountry, and increasing areas of exotic forest plantation.

Physical Characteristics: The Tairawhiti subregion is predominantly hillcountry with summits mainly between 300m and 1000m. It is drained by four major rivers flowing out to the southeast; the Waiapu, Waipaoa, Wairoa and Mohaka, and many smaller ones including Uawa (Hikuwai). It also includes some headwaters of the Waioeka (Koranga), Motu and Raukokore Rivers flowing through the Waioeka and Raukumara subregions to the Bay of Plenty. Extensive alluvial plains are associated with the lower reaches of the Waiapu, Uawa and especially Waipaoa Rivers, and smaller areas of terracelands with the Wairoa, Mohaka and upper Motu Rivers.

The area making up the Tairawhiti subregion is well-known for the erosion which tends to dominate the topography. While extensive land clearance has contributed to the phenomenon, the subregion also has a geological propensity to erode. The hillcountry is formed of a variety of Tertiary and late Cretaceous sedimentary rocks. In the south (the Wairoa and Mohaka catchments) although the rocks are very young and the hillslopes generally steep, erosion is no more severe than is typical of deforested Tertiary hillcountry elsewhere. However in the Waipaoa catchment and further north, severe to extreme erosion is common.

There are some solid sandstones and limestones that form bold plateaus or stable escarpments, but weak mudstones and crushed argillites are more prevalent, characteristically forming slopes not particularly steep but unstable, prone to severe slumping, earthflow or gully erosion. Sediment yield from such areas is very high, most carried in suspension in the rivers which are turbid for most of the year except after prolonged dry spells.

There are a number of distinctive physical features in the subregion, including limestone caves and other typical karst formations e.g. Mangaone Caves Scenic Reserve, near Nukaha, and natural hot springs at Morere Springs Scenic Reserve, and Te Puia Hot Springs Reserve.

The subregion's climate features very warm summers with dry winds from the northwest. Winters are generally mild but southerly storms may bring snow and heavy rain to the hillcountry. Mean annual rainfall is a moderate 1000mm the vicinity of the Poverty Bay plains but increases to the north and southwest to over 2000mm. However rainfall can be very unreliable, with frequent spring-summer droughts and conversely, prolonged or intense rainstorms from the southerly or easterly quarters. Cyclone Bola, a 3-day southeasterly rainstorm depositing up to 900mm of rain in March 1988, caused widespread damage.


TAIRAWHITI SUBREGION
N
Bay of Plenty
Ruatoria
Whakatane
Opotiki
Gisborne
Poverty Bay
Wairoa
Hawke Bay
Napier

Figure 11

Most of the primary industry in the Conservancy is sourced in this subregion. While pastoral farming remains the predominant landuse, there has been a large expansion of the forestry sector in recent times.

Although change from pastoral farming to forestry in erosion-prone areas has been encouraged by successive governments over the last 30 years, in recent times the economic incentives to change have been greater through the East Coast Forestry Project, a government-subsidised erosion control scheme applying to the Gisborne District. The Project anticipates planting over 200,000 ha 28 years.

Horticulture, viticulture and intensive cropping remain the major landuses on the alluvial plains inland of Poverty Bay due to the rich soils, temperate climate, and ready access to processing and marketing facilities.

Approximately 18,000 hectares in the Tairawhiti subregion is managed for conservation purposes by the East Coast Conservancy. There is a significantly larger area of unprotected indigenous forest, most of it secondary forest that has regenerated from pastoral use that became unsustainable.

Vegetation, Habitats and Wildlife: Primary forest remnants tend to be small and scattered nearer the coast, and larger towards the west where the cooler wetter climate meant forests were less easily cleared. The 100 ha Waingake Waterworks Bush is a major exception to this pattern. The standard lowland hillcountry forest is tawa-dominant with emergent rimu (where they have not been felled). On more fertile soils, combinations of totara, kahikatea and matai are present, while black beech is prevalent on less fertile ridges. A semicoastal zone towards the coast may include puriri (north of Muriwai), karaka and more abundant nikau, kohekohe and titoki. The central portion of Mahia Peninsula, included in this Tairawhiti subregion, features semicoastal forest as at Mahia Peninsula Scenic Reserve. Intact forests of alluvial sites are rare. Gray's Bush Scenic Reserve (kahikatea-puriri forest with tawa and titoki) is an exceptional example. At cooler, wetter sites at higher altitude, mainly in the interior, red beech and silver beech become the dominant forest species.

Secondary forests are considerably more extensive. Kanuka forest commonly about 15 m tall are the most widespread while manuka or broadleaved secondary forest varieties generally occur on wetter areas or poorer soils.

Wetlands, although widely scattered in the subregion, are generally very small and are not characteristic of the Tairawhiti. The original wetlands once extensive on the Poverty Bay flats are no more. The subregion contains several small lakes, grouped in the Putere area (Rotoroa, Rotongaio, Rotonuiaha), and Tiniroto (six lakes), Tuai (L Whakamarino) and Lake Repongaere near Patutahi.

There are several threatened plants in the subregion, notably the heart leaved kohuhu, *Pittosporum obcordatum*, mistletoe *(Peraxilla colensoi)*, Hikurangi tutu (*Coriaria pottsiana*) dwarf false musk (*Mazus novaezelandiae*), totangi (*Teucridium parvifolium*) and kakabeak kowhai (*Clianthus puniceus*). Most of these species are found outside of lands managed by the Conservancy.

There is a broad range of native bird life in the area, including forest birds such as kaka, weka, kereru, tui, rifleman, silver eye, whitehead, robin, bellbird, falcon, and blue duck and wetland birds such as dabchick, white heron, bittern, kingfisher, spotless crake and fernbird. Central parts of the subregion have a thinly scattered population of North Island weka. Kiwi appear to have

all but disappeared from the subregion in recent years, being known now only from areas on its northwest edge.

Our knowledge of non-bird fauna in this subregion is very limited. Long-tailed bats are known from scattered localities. Indigenous freshwater fish (eels, bullies and galaxiids including whitebait) are widespread but in generally low numbers and diversity - limited by poor habitat condition.

Conservation Management Issues

The Conservancy is responsible for administering around 80 pieces of land in this subregion, comprising approximately 18,000 hectares. Many of the land areas are less than 100 hectares and there are none larger than 4,000 hectares. This means that the Conservancy is managing a fragmented and scattered collection of areas for conservation purposes. The protected areas comprise the few representative remnants of botanic or ecological types that were previously much more widely distributed in the subregion, and are highly significant and vulnerable.

The fragmented nature of the remnant natural areas has challenging implications for the protection of the values therein. Birds may not be able to migrate to other food and breeding areas (hence the importance of creating corridors between natural areas). Small, scattered 'islands' of protection are also far more vulnerable to disturbance of any kind. Adjacent land drainage, fertilisation and intensive stocking are all typical land management practices which impact severely on fragments, but can be more easily absorbed by larger intact ecosystems. In addition, problem plants and animals, and accidental fire are likely to affect larger percentages of each small, discrete natural area.

Active protection of remnants managed by the Conservancy is therefore a significant conservation issue, and needs to be accompanied by both public awareness initiatives on the values and threats involved, and advocacy for the protection of the few remaining natural areas in the subregion. Areas with exceptional botanical value in the Tairawhiti subregion include Grays Bush and Mahia Scenic Reserves, Te Heru o Tureia, Mangaone Conservation Areas, Hurumua Nature Reserve[14]. There are at least 20 further scenic reserves and conservation areas with 'very high' botanical value. There are several threatened plants in the subregion, notably *Pyxotis petiolata* (sub species), *Peraxilla colensoi* and *Pittosporum obcordatum* (mentioned above).

Although distribution of freshwater fish species is relatively unknown, the degradation of catchment areas, riparian and instream habitat in this subregion is graphic. In addition to this, there are many barriers to fish passage, mostly associated with roading operations. Interest in small scale hydroelectric proposals affecting rivers in the subregion have implications for freshwater fish conservation.

The Conservancy is involved in the East Coast Forestry Project with the Ministry of Forestry in joint inspections of proposals for Government funding for erosion control. Criteria have been set for the exclusion of indigenous regenerating areas which should not attract funding for conversion to exotic species. In addition, tender weighting criteria apply as a disincentive for land owners to clear certain categories of scrub that have or will soon have the same soil protection role as exotic afforestation. The Conservancy's role is essentially to advocate against the use of Government funding to destroy diverse native vegetation which has important natural and soil and water conservation values.

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[14] Beadel, S. 1989

A number of introduced animal species have been listed above. These pose a general threat to natural and historic values in the subregion. Possums and goats are the main threat to the vulnerable natural values in the subregion, such as mistletoe.

Old man's beard is a major, widespread problem plant in this subregion, severely impacting on at least seven reserve areas. Other problem plants include buddleia, honeysuckle, blackberry, gorse, willow, pampas, thistles and wilding pines.

Recreational opportunities mainly focus on water-based activities, hunting and bushwalking. Fishing, whitebaiting, rafting and kayaking take place in several of the rivers in this subregion, including the Mohaka and Ruakituri Rivers, the Wairoa Tributaries, and the Waikaretaheke. Scenic values are appreciated in the Gray's Bush, Whinray, Te Reinga, Motu and Morere Springs Scenic Reserve. Visitor numbers are high in this subregion, and the opportunities are generally small and scattered. Visitor pressure is therefore high.

Te Puia Hot Springs Scenic Reserve contains significant geological, historic, landscape and botanic values, and is also an easily accessed recreation area. There is a high degree of community interest in involvement in the management (including restoration and recreation development) of this reserve, and it currently suffers from a lack of integrated management attention.

Hunting of possums, goats, pigs and other game is a recreational use of the subregion which is generally beneficial to conservation. However, access for recreation hunters can be a management concern in that many reserved areas have difficult legal or practical access.

There is a need for effective advocacy in liaison with other agencies, landowners and iwi to encourage the protection of historic values which are not administered by the Conservancy, particularly in association with the East Coast Forestry Project. The subregion contains the Opou Historic Covenant, one of the 15 actively managed historic places in the Conservancy. In general historic places in protected areas are less likely to be disturbed, although practical conservation of them is still a management concern. The archaeological values are inadequately known in over 70% of these areas. The Conservancy therefore needs to survey reserves, and to assist in establishing surveys over areas not managed by it through liaison with other agencies, including local authorities, landowners, iwi and the Historic Places Trust.

General Priorities for Management

The bulk of the Conservancy's activity in this subregion will be focused on advocacy for the protection of remnant native vegetation, riparian vegetation, water quality, historic values and soil conservation. Much of this will be through statutory advocacy, however public awareness initiatives, negotiation with landowners, and assistance to other agencies (as in the East Coast Forestry Project) will be significant management activities.

Protection of remnants managed by the Conservancy is also a priority, emphasising threatened species management, survey or monitoring of flora and fauna and animal and plant pest control.

Plant pest control will be focused on areas where there are statutory obligations, as well as where significant natural values are threatened. Encouragement of and co-operation with Regional Councils' and landowners' pest control works are a priority, given the bulk of land outside the Department's management responsibility. Animal pest control will be targeted to priority areas based on conservation values at threat.

Recreation management will emphasise improvement of access for recreation hunters and increased provision (in conjunction with other recreation providers) of easily accessed recreation opportunities, particularly short walks or day use opportunities.

Advocacy for the protection of historic values in general remains a high priority for Conservancy action, particularly relating to forestry development pressure. The Conservancy will work in conjunction with iwi, the Gisborne District Council, the Ministry of Agriculture and Forestry and the Historic Places Trust on East Coast Forestry Project issues. The Opou Covenant will receive active management. Survey of historic places in areas managed by the Conservancy, and assistance to HPT, local authorities, landowners and tangata whenua in establishing surveys over other areas will be priorities in this subregion.

Statutory advocacy will focus on District and Regional Plans on issues such as soil conservation, protection of existing native vegetation (including riparian values), water quality, freshwater fish habitat and passage and historic places. The Conservancy will liaise with MAFish and other interested parties regarding eel fishery conflicts.

Areas Managed by the Conservancy

- Anaura Stream Conservation Area
- Aorangiwai Scenic Reserve
- Begley's Fill Scenic Reserve
- Boundary Stream
- Bushy Knoll Road Conservation Area
- Erepeti Scenic Reserve
- Fraser's Bush Scenic Reserve
- Gray's Bush Scenic Reserve
- Hangaroa Scenic Reserve
- Henry Loisel Scenic Reserve
- Hurumua Nature Reserve
- Kakariki Conservation Area
- Kakariki Scenic Reserve
- Kumi Conservation Area
- Lakes Rotorua/Lake Rotongaio Conservation Area
- Lower Waiau Conservation Area
- Mahia Peninsula Scenic Reserve
- Makaramea Scenic Reserve
- Makaretu Scenic Reserve
- Mangaone Caves Scenic Reserve
- Mangaone Conservation Area
- Mangaone Stream Bed
- Mangaone Stream Conservation Area
- Mangarere Scenic Reserve
- Mangatahae Conservation Area
- Mangawharangi Scenic Reserve
- Matawai Conservation Area
- Matawhero Wildlife Management Reserve
- Maulder's Conservation Area
- Moanui Conservation Area
- Mohaka River Scenic Reserve

- Morere Springs Recreation Reserve
- Morere Springs Scenic Reserve
- Motu Scenic Reserve
- Nuhiti Q Scenic Reserve
- Okitu Bush Scenic Reserve
- Ormond Conservation Area
- Ormond Kohi Bush Recreation Reserve
- Otoko Conservation Area
- Otoko Scenic Reserve
- Otoko Walkway
- Painga Conservation Area
- Pakaturi Conservation Area
- Pakowhai Scenic Reserve
- Papatu Scenic Reserve
- Pihanui Conservation Area
- Puha Conservation Area
- Putere Scenic Reserve
- Rakaukaka Scenic Reserve
- Rakauroa Scenic Reserve
- Raupunga Scenic Reserve
- Rawhiti Scenic Reserve
- Rewarewa Conservation Area
- Ruakituri Scenic Reserve
- Strathblane Scenic Reserve
- Tahungatawa Scenic Reserve
- Te Arai Scenic Reserve
- Te Puia Hot Springs Reserve
- Te Heru o Tureia Conservation Area
- Te Reinga Falls Scenic Reserve
- Te Raupo Scenic Reserve
- Te Wera Bush Conservation Area
- Tutaekuri Conservation Area
- Tutaemaro Conservation Area
- Tutamoe Conservation Area
- Waiatai Scenic Reserve
- Waiau River Conservation Area
- Waihi South Conservation Area
- Waipare Redwoods Scenic Reserve
- Waipare Scenic Reserve
- Whakarau Scenic Reserve
- Whakaroa Scenic Reserve
- Wharekopae Conservation Area
- Wharerata Hill Scenic Reserve
- Whinray Scenic Reserve
- Willowflat Conservation Area