AN INTRODUCTION TO THE FITZGERALD RIVER NATIONAL PARK

Prepared for the Fitzgerald River National Park

Advisory Committee

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1.0 LOCATION, SIZE AND TENURE

The Fitzgerald River National Park of 242, 804 ha lies along the central south coast of Western Australia, between the towns of Bremer Bay and Hopetoun along the coast, and Jerramungup and Ravensthorpe inland (Figure 1.0). It consists of 'A' Class Reserves No. 31737 and No. 31738, vested in the National Parks and Nature Conservation Authority.

It is registered as an International Biosphere Reserve with the United Nations Educational Scientific and Cultural Organisation (UNESCO), one of the only two so designated in Western Australia.

Excluded is an enclave in the south west corner of the park, consisting of privately owned land, Locations 1293 to 1305 inclusive, Reserve 32666 Government Requirements, and Reserve 5085 Water.

The park extends to low water mark.

A proposal to add approximately 51 000 ha to the northern boundary of the Park has been approved by the State Government.

2.0 LANDFORM

Chapman and Newbey (1987) suggest that the Stirling Fault separates the Fitzgerald area into Archean granitoide and greenstone plains to the north, and quartzite and phyllitic schist peaks and ridges, spongolite gorges and limestone dunes in the southern portion (Figure 2.1, 2.2). The peaks, which rise from 300 to 450 metres above sea level, include West, Middle and East Mount Barren, Mount Bland, Woolberup Hill and the Whoogarup and Eyre Ranges, with Thumb Peak rising to 457 metres. The coastline is steep and rugged. There is an extensive wave cut platform about 60 metres above sea level.

Coastal dunes, limestone, sandplains, rivers, swamps, granite outcrops and spongolite are common. All rivers are saline with generally small flows during winter/spring.

3.0 CLIMATE

The Park is characterised by cool wet winters and hot dry summers. Rainfall reaches 650 mm per annum in coastal areas and decreases to 500 mm inland. Dry rain shadow areas occur. Most rainfall occurs in the winter but occasional light falls and thunderstorms are experienced in other seasons.

The weather is controlled by the east-west movement of sub polar depressions with associated cold fronts throughout the year and troughs during summer. Generally the depressions move past the State at approximately seven day intervals. Days without wind are uncommon.

4.0 VEGETATION, FLORA AND FAUNA

The Park is dominated by very open mallee, mallee and shrubland. Heath tends to be more common in exposed coastal area, while woodlands occur on greenstone,

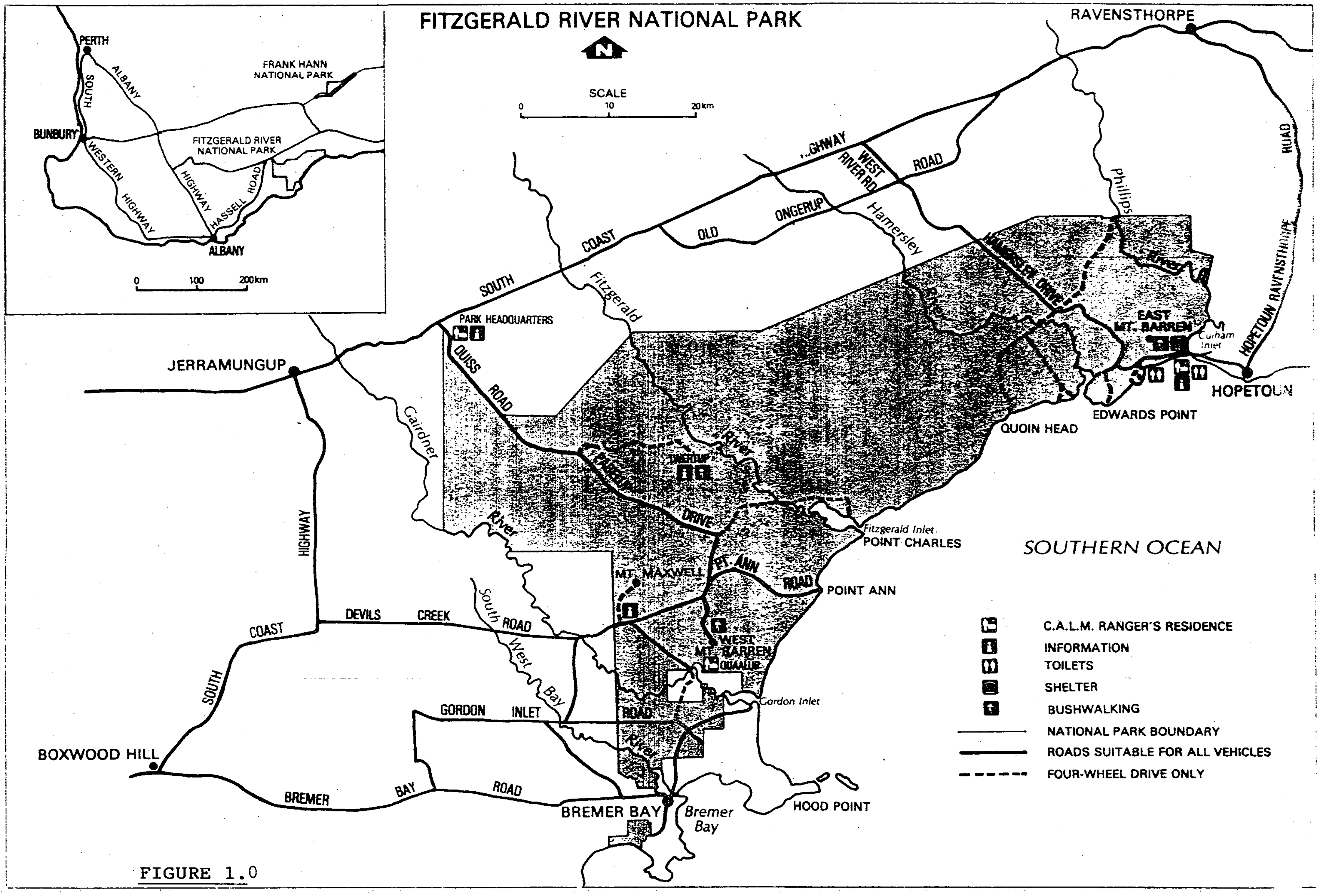
FITZGERALD RIVER NATIONAL PARK
N
SCALE
0
10
20km
PERTH
SOUTH
ALBANY
BUNBURY
WESTERN
HIGHWAY
FRANK HANN NATIONAL PARK
FITZGERALD RIVER NATIONAL PARK
HASSELL ROAD
ALBANY
0
100
200km
RAVENSTHORPE
HOPETOUN RAVENSTHORPE ROAD
HOPETOUN
Culham Inlet
EAST MT. BARREN
EDWARDS POINT
QUOIN HEAD
Phillips
River
HAMERSLEY DRIVE
WEST RIVER RD
ROAD
HIGHWAY
Hamersley
ONGERUP
OLD
COAST
SOUTH
Fitzgerald
PARK HEADQUARTERS
QUISS
ROAD
JERRAMUNGUP
Gairdner
River
PABELUP
DRIVE
TWERTUP
Fitzgerald Inlet.
POINT CHARLES
SOUTHERN OCEAN
MT. MAXWELL
PT. ANN
ROAD
POINT ANN
WEST MT. BARREN
QUAALUP
Gordon Inlet
HIGHWAY
DEVILS
CREEK
ROAD
South
West
Bay
GORDON
INLET
BOXWOOD HILL
BREMER
BAY
BREMER BAY
Bremer Bay
HOOD POINT
C.A.L.M. RANGER'S RESIDENCE
INFORMATION
TOILETS
SHELTER
BUSHWALKING
NATIONAL PARK BOUNDARY
ROADS SUITABLE FOR ALL VEHICLES
FOUR-WHEEL DRIVE ONLY

FIGURE 1.0

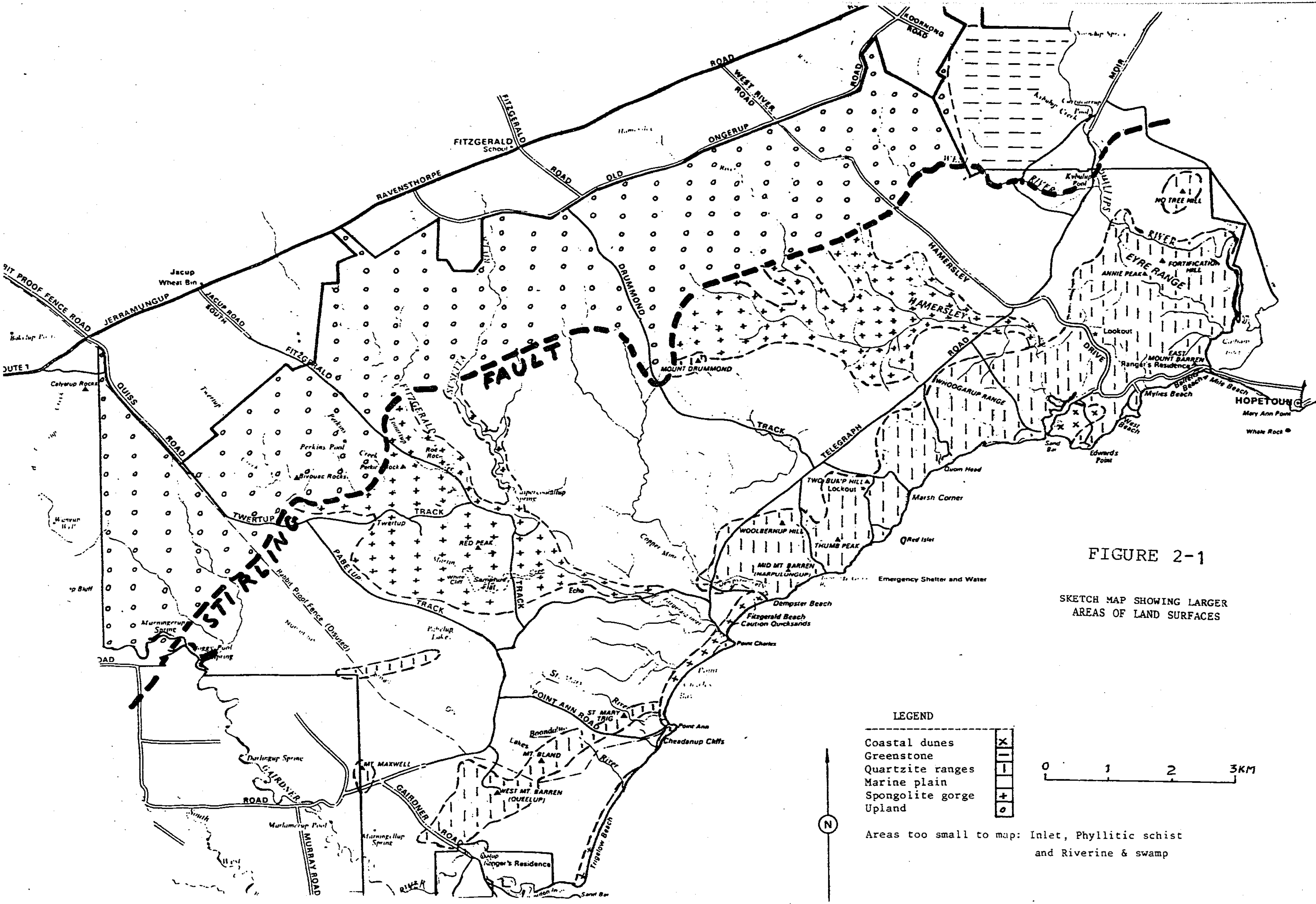

FIGURE 2-1

SKETCH MAP SHOWING LARGER AREAS OF LAND SURFACES

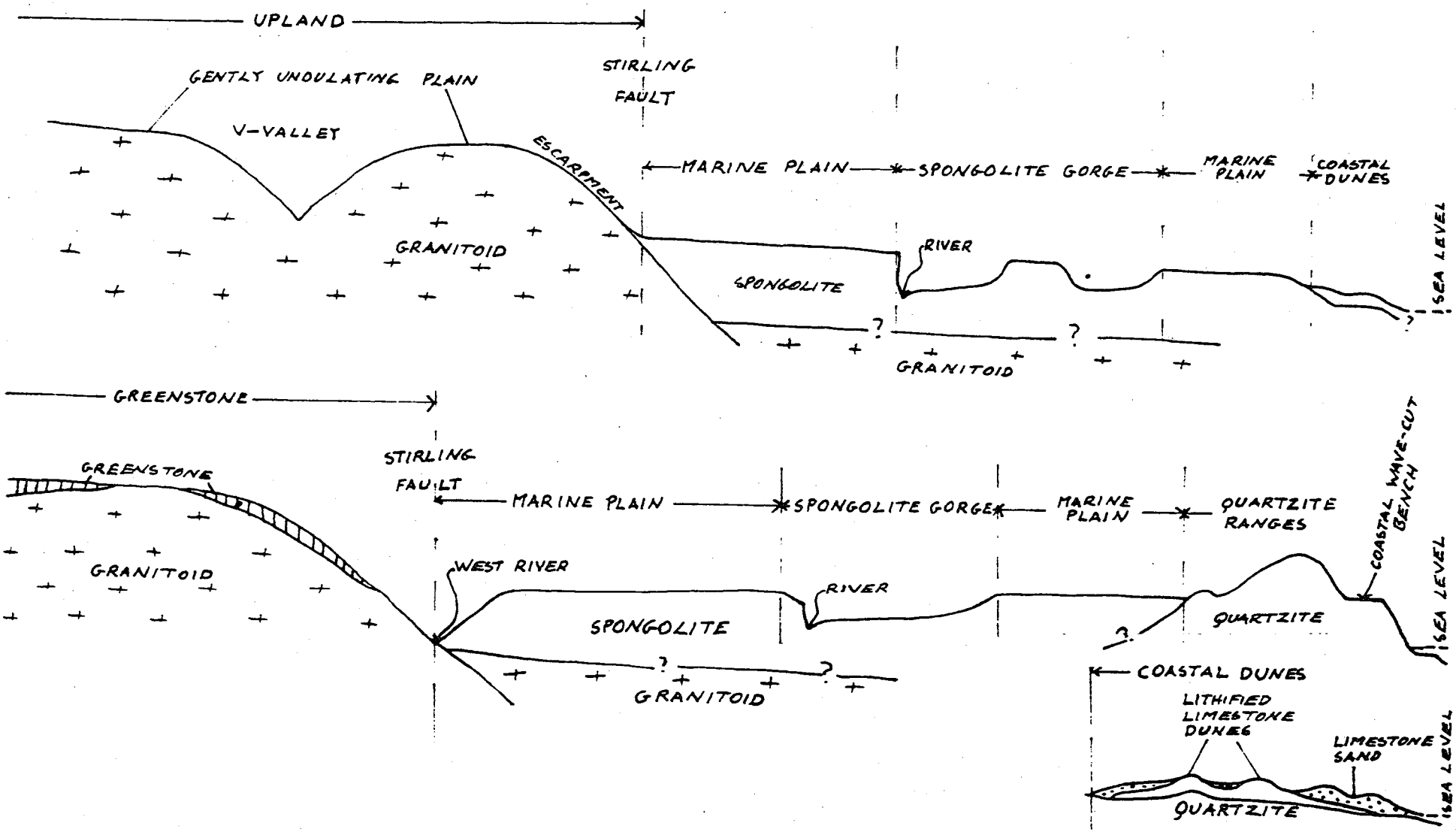

FIGURE 2-2 Cross-section showing relationships of land surfaces.

and along rivers or in swamps. The quartzite ranges and spongolite support a large number of species.

Aplin and Newbey (1987) identified 12 major plant communities.

The two year biological survey (1985-1987) by Chapman and Newbey (1987) recorded 1 748 native and 99 introduced plant taxa. The native taxa represent 19% of known plant spp. (named and unnamed) in Western Australian and 42% of the known species for the South West Botanical Province. Numbers of species contained in this park is equivalent to approximately half of the flora of South Australia. The area is one of the two nodes of high species richness in south-western Australia with a high proportion of endemic, geographically restricted and rare species. The flora is typical of the Eyre Botanical District, but it also contains some elements of the wetter forest and drier Goldfields flora.

The vertebrate fauna of the park is presently known to include 21 species of native mammals (5 gazetted rare and endangered), 175 species of birds (4 gazetted rare and in need of special protection), 41 species of reptiles and 11 species of frogs. The fauna richness is greater than any other conservation reserve in the south west of Western Australia and may be due to the following factors:

(a) the size of the reserve which encompasses enormous diversity of habitat;

(b) the lack of widespread habitat degradation, minimal known dieback infection *(Phytophthora cinnamomi)* and limited history of grazing; and

(c) the geographical location of this park at an apparent faunal interzone which is indicated by the co-existence of some semi-arid species and some wet adapted species.

5.0 ADJACENT LAND USE

5.1 Agriculture

Agricultural land abuts the Park. Most of this land is already developed, with minimal new land clearing now occurring. Major land clearing occurred between 1960 and 1975. Sheep, cattle and grain cropping are the predominant agricultural activities.

5.2 Mining

Mining is not permitted in the Park. A number of applications for Exploration Licences are current; decisions on this depend on the outcome of the current Bailey Committee Report which is investigating mining on conservation lands.

Mining leases are current adjacent to the north west corner of the Park and in a large section of Philips River Goldfield to the north east.

5.3 Townships

Four townships occur within 20 km of the park:

Bremer Bay - a retirement and coastal holiday resort on the south west corner of the Park.

Jerramungup - an agricultural based centre on the north west corner of the Park

Ravensthorpe - an agricultural and mining based centre on the north east corner of the Park.

Hopetoun - a retirement and coastal holiday resort on the south east corner of the Park.

6.0 HISTORY AND ACTIVITIES WHICH INFLUENCE CURRENT MANAGEMENT

6.1 Historical Notes

West, Middle and East Mount Barren, three prominent features in the Park, were named by Mathew Flinders in 1802. In 1841 Eyre traversed the Park.

The Overland Telegraph Line which ran parallel to the coast was completed in 1877, and remained in use until 1927.

In 1902 the Number Two Rabbit Proof Fence was constructed, traversing the western portion of the Park. It was maintained until 1955.

Botanical collecting in the Park commenced in 1829 and continues to the present day.

Grazing occurred along the Phillips, Fitzgerald and Hamersley Rivers.

Mining activities in the Park have been mainly exploratory. These reached their peak in 1969-70 when about 31 200 ha or 13% of the park was pegged for mineral exploration. Actual mining operations for copper occurred at West River from 1908 to 1909 and the quarrying of spongolite at Twertup Creek from 1965 to 1978. Exploratory shafts have been sunk at Naendip for copper and Coppermine Creek for manganese.

There are three resident National Park Rangers who attend to the day to day operations in the Park. They are responsible to staff at Albany.

On-site management personnel have been present for approximately ten years.

6.2 Existing Use

Recreation occurs mainly in the coastal sections of the Park and is generally associated with fishing. The other main vehicle-based activity occurs at both ends of the Park where tourist drives are used by both the general public and tour operators. Some bushwalking occurs along the coast and the rivers. Visitor num-

bers are seasonal and peak at holiday times. User groups include the local people, city people and interstate and overseas tourists.

Most visitors seek the coastal and scenic resources of the Park. West Mount Barren and the Eyre Range are the only significant attractions that are not on the coast.

Most visitors drive through the extreme eastern and western portions of the Park. Others visit more specifically to fish from beaches or rocky headlands; such use is distributed along the whole coastline. Many camp overnight at coastal sites.

There are two developed walk trails - one at East Mount Barren and the other at West Mount Barren.

Most roads and recreation sites were largely in place prior to a management presence.

Many roads in the Park are unsurfaced and subject to severe erosion.

A local group, the Fitzgerald River National Park Association (established in 1981), has an active interest in the Park and the surrounding unvested lands. Their headquarters are at Twertup in an old reconstructed house adjacent to the now abandoned spongolite quarry. The group has received funding through the National Estate Grants Program to facilitate the biological survey.

A locally-based Fitzgerald Biosphere Project Committee was established in 1986. This Committee aims to integrate management of the Park and adjacent lands to achieve long term conservation. This approach supports the concept that biosphere reserves are

> ... not a closed system but rather an open system, looking out towards the management problems of the surrounding areas, and incorporating landuse management concerns of the local population. (Batisse 1982).

7.0 OTHER FACTORS INFLUENCING MANAGEMENT

7.1 Rare Fauna

The significance of the Fitzgerald River National Park for fauna conservation has been previously discussed. Based on present knowledge it is the only conservation reserve in the south west of Western Australia where a relatively complete fauna occurs on one piece of land managed by one authority. Elsewhere in the south-west, the species occur with a patchy distribution over many of the small parks and reserves.

Five species of gazetted rare and endangered native mammals occur: Dibbler *(Parantechinus apicalis)*, Heath Mouse *(Pseudomys shortridgei)*, Red-tailed Wambenger *(Phascogale calura)*, Tammar *(Macropus eugenii)* and Western Mouse *(Pseudomys occidentalis)*.

Five species of gazetted rare and endangered native birds occur: Ground Parrot, Brown Bristlebird, Western Whipbird, Peregrine Falcon and Red-eared Firetail Finch.

One Species of gazetted rare reptile occurs, the Carpet Python.

7.2 Rare Flora

The significance of the reserve for flora conservation has been previously mentioned. The most important landforms for the plant taxa are quartzite and spongolite.

This reserve contains the following flora -

- 14 species gazetted rare and in need of special protection
- 204 species considered rare and endangered, ie. less that 1000 plants known in conservation reserves or few populations (203 confined to this park)
- 75 species endemic to the Park
- 38 species almost confined to the park (80-99% of known populations)
- 25 species are outliers (more than 150 km from other known populations)
- 192 unnamed taxa.

Most of the important plant taxa are woody perennials. Some 65% of the recorded species may sucker after fire and the other 35% regenerate from seed.

Further details about rare flora and fauna habitat, distribution and fire relationships are given in Chapman and Newbey (1987). This 2 year survey revealed that 41.6% of the plant taxa appear to have populations of more than 1 000 individuals and a surprising 28.4% have populations of less than 50.

7.3 Dieback

Dieback *(Phytophthora cinnamomi)* has the potential to permanently degrade the conservation and aesthetic values of this park. The disease is present in all south coast national parks with the infections being extensive in the Stirling Range National Park and Cape Le Grand National Park. Many nature reserves are also infected. The biology of the disease has been well documented. Some 900 species of plants that occur on the South Coast are susceptible to the disease.

In 1986 a Dieback Policy for the South Coast Region was developed and approved by CALM. In line with this policy, road closures have occurred and some existing access has been upgraded.

There are three known infections in or surrounding the park:

- one on the South Coast Highway in the headwaters of the Hamersley River;
- one approximately 6 km long, on the north end of the Bell Track; and
- one on the Hopetoun-Ravensthorpe Road, adjacent to the start of the south eastern access into the park.

The impact of the current infection is extremely high, with the loss of most species. Aerial photographs have been taken of parts of the Park and sampling continues.

The implementation of the Dieback Policy for the South Coast has met with some opposition from local and visiting users, specifically where access to the coast is affected.

7.4 Fire History

Records show that large areas of the Park have been burnt by wildfires in the past 40 years. These have apparently been the result of a variety of causes including lightning strikes within the Park and escapes from private property burns. A lightning-caused wildfire burnt about 14 000 ha in January 1985.

Fuel reduction burning has been limited to small areas within the dual fire break system surrounding the park. Recently, wind driven fire strips ignited from aircraft have been tested as a means of creating fuel reduced buffers.

8.0 MANAGEMENT OBJECTIVES

8.1 Management Objectives for National Parks

The objectives for the management of national parks are laid out in Section 56 (1) (c) of the Conservation and Land Management Act (1984):

> ...to fulfil so much of the demand for recreation by members of the public as is consistent with the proper maintenance and restoration of the natural environment, the protection of indigenous flora and fauna and the preservation of archaeological, historic or scientific interest...

8.2 Managaement Objectives for Fitzgerald River National Park

The following objectives should guide management of the Fitzgerald River National Park:

1. To conserve the (representative) sample of the regional biota found in the Park.
2. To conserve rare fauna and flora present in the Park.
3. To conserve the landscape features of the Park.
4. To conserve the archaeological, cultural, historical and scientific values of the Park.
5. To promote educational opportunities in the Park and to provide for the proper use and management of the scientific and educational resources of the Park.
6. To provide opportunities for recreation in the Park, consistent with maintaining the environmental values of the Park and the quality of recreational experience.
7. To integrate management with management of surrounding lands.

9.0 LEGISLATION AFFECTING MANAGEMENT

Legal Responsibilities

Management of conservation reserves in W.A. is to be undertaken according to approved management plans. These plans are developed through a planning process which includes widespread public consultation. In the case of National Parks, management plans shall be designed to allow members of the public to recreate, consistent with the proper maintenance and restoration of the natural environment (i.e. the protection of indigenous flora and fauna and the preservation of any features of historic, archaeological or scientific interest). In both the preparation and implementation of management plans, departmental staff must comply with the various Acts and legislation which impinge on operations. These are:

9.1 Acts administered by the Department

Conservation and Land Management Act, 1984

Timber Industries Regulations Act, 1926

Wildlife Conservation Act, 1950

9.2 Acts under which the Department has specific responsibilities are:

Bush Fires Act 1954

Land Tax Assessment Act, 1976

Mining Act, 1978

9.3 Other State Acts which affect the Department's land management responsibilities include:

Aboriginal Heritage Act, 1972

Aerial Spraying Control Act, 1966

Agriculture and Related Resources Protection Act, 1976

Agriculture Protection Board Act 1950

Beekeepers Act, 1963

Control of Vehicles (Off-road Areas) Act, 1978

Country Areas Water Supply Act, 1947

Environmental Protection Act, 1986

Fisheries Act, 1905

Land Act, 1933

Local Government Act, 1960

Main Roads Act, 1930

Mining Act, 1978

Public Works Act, 1902

Rights in Water and Irrigation Act, 1914

Soil and Land Conservation Act, 1945

State Energy Commission Act, 1979

State Planning Commission Act, 1985

Water Authority Act, 1984

(There are a number of relevant Commonwealth Acts as well).

CONCLUSION

The Fitzgerald River National Park is one of the most important conservation reserves in Western Australia. There are many factors which could contribute to degradation of this area. These include the spread of dieback, frequent wildfires and disturbance of vegetation on fragile coastal dunes. Similarly there are many management options that could assist to preserve its current apparent pristine condition.

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