PARKS, PEOPLE AND THE ENVIRONMENT

Abstract

Australia, a vast land mass of 7,694,505 Km² contains relatively few people, mostly distributed around the seaboards and concentrated in the south-east. Much of the land mass is hostile desert, much is marginal land used for grazing and dryland agriculture. The most climatically pleasant areas are relatively small in area and are fairly heavily populated making Australia one of the most heavily urbanised countries in the world!

The Australian people and visitors are now reasonably served by parks of various types ranging from zoos to botanic gardens, from neighbourhood parks to great national parks. However, there are some areas, particularly in the inner suburban areas of the big cities where the size and distribution of parks is inadequate to meet local community needs.

These parks are invaluable resources most of which have been greatly under-utilised insofar as imparting the conservation ethic to visitors. There are some very important and exciting exceptions which are highlighted in the paper.

Parks are very special places in which there is a mingling of man and nature. We must aim to provide mentally rewarding, stimulating and enjoyable experiences for park visitors. Special people with a commitment to the conservation ethic and excellent communicating skills are required to operate, interpret and maintain parks. Their selection, education and training are extremely important.

It is absolutely essential for the survival of mankind and the world as we know it, that urgent action be taken to reverse the alarming trends in water, land and air degradation and despoliation. All those connected with the provision of park and recreation services have the duty to be in the forefront of those making their community aware of the threats to the environment, to create a love for all the natural wonders of the world, to impart an understanding of ecology and how every living thing is linked. There is no time to be lost! Unless the community takes immediate action, every delay will accelerate the damaging processes. We must make sure all visitors, especially children, become committed to saving our world by providing them with experiences in parks which will encourage them to become friends of spaceship earth. We are not citizens of one country, we are citizens of the World.

PARKS, PEOPLE AND THE ENVIRONMENT

* Trevor Arthur

1. Abstract

Australia, a vast land mass of 7,694,505 Km² contains relatively few people, mostly distributed around the seaboards and concentrated in the south-east. Much of the land mass is hostile desert, much is marginal land used for grazing and dryland agriculture. The most climatically pleasant areas are relatively small in area and are fairly heavily populated making Australia one of the most heavily urbanised countries in the world!

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2. Introduction

Although I am confining my comments almost exclusively to Victorian parks, much of which I say is applicable to parks throughout Australia and indeed the world. All types of parks are represented in Australia ranging from the great National Parks to the commercial theme parks, from zoos to small neighbourhood parks, each filling a niche in the recreational opportunity spectrum for the community and its visitors.

Australia is a large island continent of some 7,686,000 Km2 stretching from Lt 11°S to 43°S. Much of the land is inhospitable to man and unsuitable for agriculture. One third is desert, one third marginal land mainly used for cattle grazing at low stocking densities. It is the driest continent, two thirds receives erratic and low annual rainfall, 125-250mm and droughts of three years have not been uncommon. The flow of all the rivers in Australia is less than that of the Mississippi.

Since the first National Park, the Royal National Park in Sydney, was reserved in 1879, progress has been made in the reservation of land for Conservation Parks including National Parks. By December 31, 1988 some 407,810 km² 5.3% had been set aside as Conservation Parks in Australia. There have been significant increases since then.

To these parks must be added the tens of thousands of other parklands of various types, as well as the large areas of Crown land often reserved as State Forest, which are mainly natural areas, all being accessible to the public for recreation.

Most of the conservation parks are under the control of the individual States; however some 1150 km² is controlled by the Commonwealth Government in Canberra and the Territories.

Australia has a small population by world standards just 17,000,000 at an overall density of 2.2 people/Km². Victoria, the most densely populated state has a density of 19.1 people/Km². This sharply contrasts with the overall population density in Japan of 322. These Australian figures may have contributed to the lack of awareness that past land use practices were causing significant land and water quality degradation.

The awakening of many to the degradation of the environment has only occurred recently and now much more attention is being given to the environment by community groups and the government. Whether this attention is too little or too late remains to be seen.

Conservation and other parks are ideal areas in which the conservation ethic can be engendered; however, unfortunately this aspect, except for notable exceptions, has not been given the attention it deserves. What is required are effective, entertaining, interesting and thought-provoking interpretative programmes which are now a necessity for every park system in the world.

3. PARKS

A park is a special area set aside where man and nature meet. A place of inspiration and wonder. It may be large or small, natural or contrived, and may have buildings, services, structures and programs for the added comfort and enjoyment of visitors. The degree of development permitted would depend on the classification and character of the park.

3(a) Conservation Parks

In this paper it is impossible to deal with all the 46 types of conservation parks in Australia and it is proposed to concentrate only on National Parks as being the prime example of a conservation park, the philosophy and management of which closely follow the American pattern. In fact the Royal National Park in New South Wales was declared in 1879, just seven years after the declaration of the World's first national park, Yellowstone in the United States of America in 1872. In Victoria, Fern Tree Gully, now part of the Dandenong Ranges National Park, a small National Park was declared in 1882.

The major conservation parks in Australia are the National Parks, which together with other areas such as State Parks, Fauna and Flora Reserves, Aboriginal Reserves, Nature Reserves and Wilderness areas have been reserved. In 1988, an area of 478,100 km² had been set aside in over 3200 reserves and comprised some 5.3% of the land area of Australia. In addition, Marine and Estuarine Protected of areas 384,000 km² had been set aside in over 220 reserves; but comprised only 0.07% of the total marine area over which Australia has jurisdiction. (1)

3(b) National Parks in Victoria

National Parks are typically large areas of land set aside permanently for public enjoyment and education as well as for conservation. They are managed to maintain their conservation values, natural cultural and history, and control or minimise the impact of external factors on the parks' ecosystems. Valid, scientific research is encouraged with 111 research permits being issued in 1988/89.

The press release dealing (2) with the increased Mallee parks highlights the emphasis placed on conservation. The Minister stating that their creation is a major step in ensuring all of the State's major ecological systems are represented in parks. The additions provide the only opportunity to further protect relatively unmodified examples of the Mallee vegetation and its faunal inhabitants. It is also one of the few semi arid regions of the world where large tracks of relatively undisturbed vegetation remain.

In Victoria, since December 1988 (Table 1), there have been significant increases in the areas set aside for National Parks with very large additions (8070 km²) proposed for the Mallee as well as Alpine areas (2428 km²) set aside in 1989. By the end of June 1990 some 14,630 km² had been reserved in 34 National Parks* and some 4,300 km² in 47 State and other parks. The Government indeed is to be congratulated for its foresight in setting aside such large areas at this stage. The total area of land to be

TABLE 1

LAND MANAGED UNDER THE NATIONAL PARKS ACT VICTORIA

National Parks	Area at 30/6/88 (ha)	Area at 30/6/89 (ha)	Area at 30/6/90 (ha)
Alfred	2300	3050	3050
Alpine			646000
Baw Baw	13300	13300	13300
Bogong	81200	81200	(in Alpine N.P.)
Brisbane Ranges	7517	7517	7517
Burrowa-Pine Mountain	17600	17600	18400
Churchill	193	193	193
Cobberas-Tingaringy	107000	154600	(in Alpine N.P.)
Coopracambra	1 1 1 1 1 .	35100	35100
Croajingo long	86000	87500	81500
Dandenong Ranges	1920	1920	1920
Errinundra	Le du el la deserva	25100	2510
Fraser	3750	3750	3750
Grampians	167000	167000	167000
Hattah-Kulkyne	48000	48000	48000
Kinglake	11430	11430	11430
Lind	1166	1365	1365
Little Desert	132000	132000	132000
Lower Glenelg	27300	27300	27300
Mitchell River	11900	11900	11900
Morwell	283	283	283
Mount Buffalo	31000	31000	31000
Mount Eccles	5470	5470	5470
Mount Richmond	1733	1733	1733
Organ Pipes	85	85	85
Otway	12750	12750	12750
Point Nepean	-	2200	2200
Port Campbell	1750	1750	1750
Snowy River	41300	95400	95400
Tarra-Bulga	1230	1230	1230
The Lakes	2390	2390	2390
Wilsons Promontory	49000	49000	49000
Wonnangatta-Moroka	107000	107000	(in Alpine N.P.)
Wyperfeld	100000	100000	100000
TOTAL:	1073567	1240116	1462916

* Although legislation has been passed, as yet, the new Murray-Sunset National Park and the extensions to Wyperfeld National Park have not been proclaimed. Area of the additions is 807,162 Ha making a total of 2,370,078 Ha.

SOURCE: Department of Conservation and Environment-National Park Service. reserved under the National Parks Act* is 270,000 km² representing more than 12% of the State's area, a tripling of the area that had been set aside for parks in 1982. The only other State to exceed this figure is Tasmania.

In most of the parks effective environmental education is undertaken mainly by providing interpretative programmes to people of all ages, brochures, nature trails and visitor centre displays. These are all aimed at introducing or reinforcing the conservation ethic of park visitors.

3(c) Urban Parks

Being close to the centres of population, these areas have the potential to attract much greater numbers of visitors per hectare than the countryside parks and consequently usually require more intensive management. The first type of urban Park to be dealt with is one which, although subject to considerable urban pressures, is of sufficient size to provide a diverse range of experiences for park visitors. In a major review of the Planning Scheme, the Melbourne and Metropolitan Board of Works (MMBW) set aside six large tracts of land as sites for metropolitan parks.

3(d) Metropolitan Parks

In 1973 the MMBW decided to develop five of the areas set aside as major parks. There are now eight metropolitan parks with a total reservation of about 5000 hectares. The parks are funded through the Metropolitan Improvement Fund which is a rate collected by the Board to fund open space development and other improvements. The parks are at various stages of development. The metropolitan parks offer the opportunity for a diverse range of recreational opportunities including developed picnic/barbecue areas, extensive trail systems, remnant bushland, wetlands and rivers, market gardening, commercial orchards, historic buildings, visitor centres, interpretative programmes, coastal beaches and children's farms. The full potential of this parks system is enormous. They are strategically located around Melbourne in a semi-circle from 12km - 30km from the City Centre. See Map (1)

Also in recent years the Board has become responsible for the implementation of many improvements to the waterways threading through Melbourne and which have been usually funded by the State Government.

The Metropolitan Parks along with the improvements to the waterways have contributed significantly to the quality of life. They meet regional needs of visitors and residents for informal outdoor recreation, they contain remnants of the original vegetation and provide habitats for wildlife. Their high landscape values, enhanced by the Board's planting programs, have added considerably to Melbourne's visual appeal.

* Legislation passed but not proclaimed for the additional 8070 km² in the Mallee area. New Murray-Sunset Park and extensions to Wyperfeld.

The ratepayers of Melbourne have paid for the Metropolitan Park System with very little assistance from the State or Federal Governments. Since their inception in 1971 \$47.5m has been spent on land purchase and \$31.3m for capital works. The budget for 1989/90 is \$13m for recurrent expenditure and \$3.5m for capital works.

In the 1988/89 year, at least 2.5m persons visited the metropolitan parks. This is a testimony to their value to the community seeing that the first metropolitan park was not opened to the public until 1976.

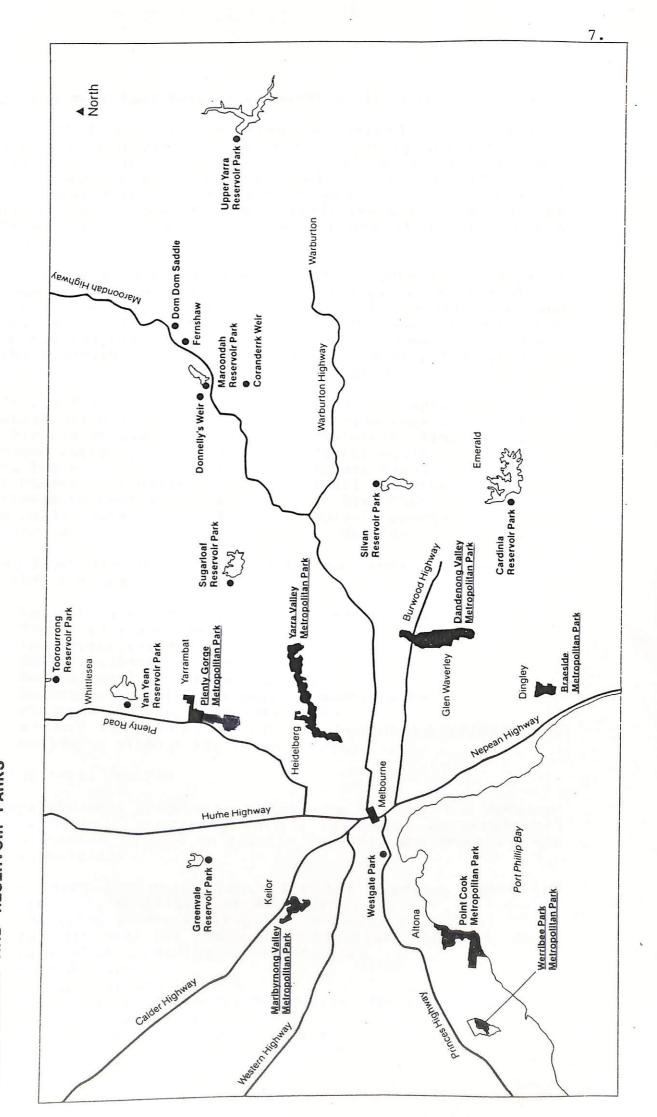
At all Metropolitan Parks open to the public, interpretative programs, nature trails and brochures are provided, and where there are visitor centres, visualnd participatory displays are available as well as a hall for meetings and programs. All are designed to impart the conservation ethic to visitors.

In addition to the Metropolitan Parks, the Board has provided picnic areas, trails and informal play areas in very scenic areas on land adjoining Melbourne's water supply reservoirs (now termed Reservoir Parks). The first was provided in the 1850's at the Yan Yean Reservoir.

	Visitation	Area (Hectares)	
METROPOLITAN PARKS:			
Werribee Park Point Cook Westgate Maribyrnong Valley Plenty Gorge Yarra Valley Dandenong Valley Braeside	332,000 183,000 N/A 554,400 N/A 624,500 752,300 34,300	216 906 38 535 393 1,359 1,325 307	
SUB TOTAL:	2,480,500	5.079	
RESERVOIR PARKS:			
Cardinia Reservoir Park Greenvale Reservoir Park Northern Region Reservoir	885,600	235 50	
Parks	277,700	109	
Upper Yarra Reservoir Parks	1,095,000	225	
SUB TOTAL:	2,473,700	619	
TOTAL	4,964,200	5,698	

TABLE 2

FIGURES FOR VISITOR DAYS 1988/89



METROPOLITAN AND RESERVOIR PARKS

3(e) Local and Municipal Parks - Nunawading City Council Parks

Nearly all local municipalities in Australia provide some park and recreation services to their community and are in the best position to cater for local needs. Perhaps the best and most active local municipality in this field is the Nunawading City Council (3) located about 22 km from the Central Business District of Melbourne. It is one of 52 municipalities which comprise the metropolitan city of Melbourne which has about 3 million inhabitants.

Nunawading with a population of about 100,000 and an area of 4,161 Ha where some 19% (\$6.7m) of its annual income (\$35m) was spent on both capital and recurrent expenditure for parks and recreation. About 10% of its area has been set aside in more than 200 parks and reserves in the city for recreational use. These include the following:- (3) A plan of community facilities is shown on page 9.

Athletics Track	1	Pool - Olympic	
Baseball Diamond	1	size heated	1
BMX Bicycle Tracks	3	Skateboard Ramp	1
Bushland Parks	8	Sports Ovals	30
Cycle Track	1	Tennis Clubs	17
Golf Course - 18 holes	1	Trail and Mini	
Horticulture Centre	1	Bike Club	1
Lawn Bowls Clubs	7	Women's Sports	
Playgrounds	90	Reserve	1

In addition the very active parks and recreation department staff provide for the following:

- . Recreation activities for disabled persons
- . Mobile play equipment
- . Interpretative Programs
- . School Holiday Programs
- . Recreational activities in centres
- . Encouragement of volunteers to assist with programs and operating facilities
 - Assist in operation of two community gardens for residents without their own gardens

Horticultural Centre:

Perhaps the most progressive innovation has been the development of the Council's Nursery into a community Horticultural Centre from concept in 1975 to reality in 1981, and embracing the following activities:

- . Nursery for most plants for the streets, parks and community facilities of Nunawading
- . Courtyard garden setting for community activities
- . 80 seat hall for community activities especially those related to gardening/natural history
- . Guided tours
- . Display gardens
- Source of horticultural information for residents
- . Gardeners' workshops
- Horticultural shows and displays

CITY OF NUNAWADING COMMUNITY FACILITIES



Legend

Schools and Colleges	
Special Schools	
Pre-Schools and Kindergartens 7	2
Senior Citizen's Centres	_
Infant Welfare Centres	
Post Offices	

Its popularity is highlighted by the recent survey on outdoor recreation activities which showed that gardening for pleasure was one of the most popular outdoor recreational activities with over 50% of the population aged over 55 gardening and from 14-55, over 35%. (4)

Special note should be taken of the only metropolitan council of which I am aware who employs an interpretative officer to design and assist with environmental programs.

3(f) Special Purpose Parks

The parks included under this sub heading are those that have a specific prime purpose; but at the same time provide many other attributes of a park. They include the Zoo, Botanic Gardens, and the Melbourne City Council Parks which not only serve the local community, but the larger parks in particular are major recreation facilities for state, interstate and international visitors.

(i) ZOOLOGICAL GARDENS

Surrounded by Royal Park, 22 Ha was set aside in 1861 for the Zoological Gardens four years after its formation in another area making it the oldest Zoo in Australia.

Facilities for the animals were rather primitive for many years, until 1966 when the first steps were made to provide more appropriate habitats for the animals by the building of the Lion Park. Reconstruction and redevelopment has continued through to the present time resulting in the Great Flight Aviary, Butterfly House, Reptile House, Platypussary and the Primates House. These and the very extensive and colourful gardens have now made the Melbourne Zoo one of the great zoos of the world. (5)

There are two annexes, one at Healesville which is restricted to Australian native animals, the other at Werribee which has mostly ungulates.

The Zoo's education service was commenced in 1969 with a teacher spending one half of the week at the Zoo, now there is a staff of 18 teachers, 14 at Melbourne and 4 at the Healesville Sanctuary along with 10 support staff, it is reported to be the best Zoo education service in the world, not only in numbers but in its innovative programs, including school holiday programs. The education service is still unable to meet the demands on its time, particularly by schools.

The service aims to help school students develop an awareness of the environment and to foster positive attitudes towards animals.

Established in 1980, some 10,000 members are Friends of the Zoo. The committed members often become volunteer guides (now totalling 104) and who after attending training sessions and following graduation, serve a probation period before they become qualified to wear a uniform. In addition, another 104 volunteers undertake all types of work to assist in the operation of the Zoo.

Over one million people visited the Zoo in 1988/89, which considering the population of Melbourne of about three million, is an indication of the Zoo's popularity with both residents and interstate and overseas visitors alike.

(ii) MELBOURNE CITY PARKS AND GARDENS

Melbourne City has long been recognised for its high class parks and gardens, most of which are managed and maintained by the Melbourne City Council. In a sense they are special parks and gardens as they provide relaxation and enjoyment for millions more people every year than are resident in the City of Melbourne which has only 56,000 residents.

Melbourne City Council is responsible for the management, operation and maintenance of 546 Ha of parks and gardens, plus a further 133.5 Ha of street plantations, nature strips and medians. (See Plan P) In addition, some 323.4 Ha of open space is managed by other Government departments, instrumentalities and trusts such as Melbourne General Cemetery, Zoological Gardens, Melbourne Cricket Ground, Flemington Racecourse and the Royal Botanical Gardens.

Melbourne is thus well served with open space, the 851 Ha represents 27% of the land area of Melbourne (3145 Ha).

The area of parkland would have been much greater if the vision of Governor LaTrobe had been kept. For instance, he set aside on a temporary basis, 1,036 Ha for parkland to the north of the city in 1854. On his last day in office, he permanently reserved 283.5 Ha as Royal Park. In 1868, the Government sold land to the public for housing lots and in 1950, 4 Ha was excised for the Royal Children's Hospital. Today only 182.25 Ha remain for public recreation, a loss of some 35%. Fortunately most reservations near the city's centre remained, but others in the adjacent suburbs were reduced by sales to the public, part of the vision for Melbourne was lost!

To finance the excellent standard of operation and maintenance of these parks and gardens, the Council allocated (\$9.3m) 11.7% of its rate revenue of \$79.7m to them, and (\$3.4m) 4.4% for recreation, as well as another \$4.8m or 6% for arts and culture.

The number of visitors catered for in all Melbourne's parks and gardens, including those used for active sports such as the Melbourne Cricket Ground, has been estimated to be of the order of 30m people annually.

Unfortunately, no interpretative programs are conducted by the Council although pamphlets and other literature is available.

(iii) ROYAL BOTANIC GARDENS MELBOURNE

Victorians are fortunate that in Melbourne they have a botanic garden that is listed amongst the ten best in the world and was set aside for the Botanic Garden in 1845, and increased over the years especially when the Yarra River was straightened and a major ornamental lake was created.

The total area is now 35 Ha containing over 10,000 plant specimens and, because of Melbourne's temperature climate, a large range of species from all over the world. These include Australian and exotic plants, ferns, conifers, tropical and arid plants, deciduous and evergreens, rare and endangered plants. These plants have been arranged in such a manner as to provide delightful vistas across the lake and along the lawns.

PARKS AND GARDENS MELBOURNE CITY

The Melbourne City Council's Parks, Gardens and Recreations Committee operates as an agency which serves its local community, and as a regional authority.

Its mission is to provide a multiplicity of park and recreation facilities and services. The range is extensive — swimming pools, community centres, horticultural displays, entertainment in parks programmes and playgrounds, are just a few examples.

The Department operates and maintains 851 ha of open parks and gardens areas, plus a further 133.5 ha of street plantations, nature strips and median strips. This total area represents 29.7% of the total within the Melbourne City Council.

A variety of facilities at local and regional level, operated in conjunction with professionally planned and supervised programmes, provides recreation outlets for people of all ages and interests. The young, the old, the middle-aged, the sportsman, athlete, art or culture lover, health enthusiast or naturalist, will all find activities to suit.

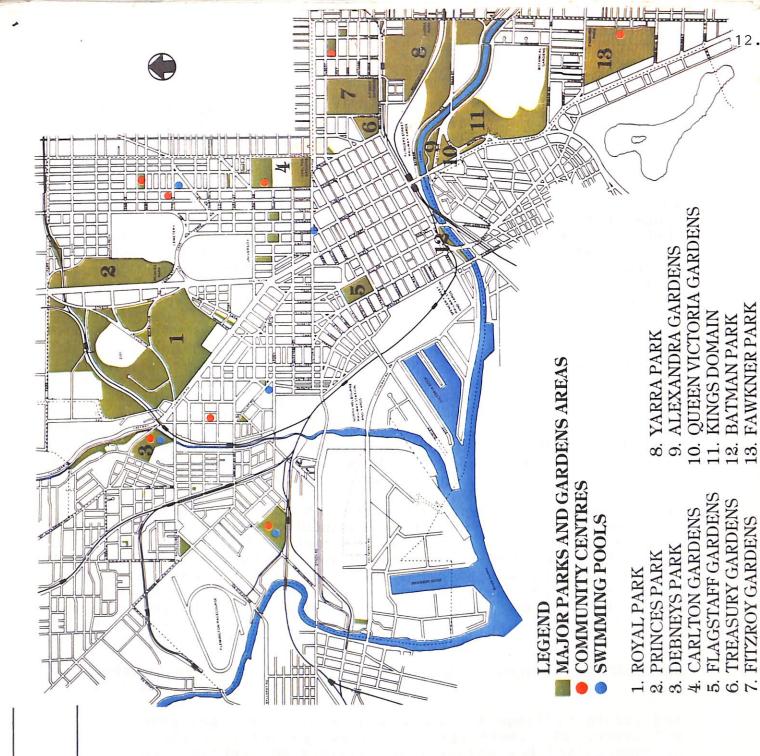
Constant monitoring of the community's leisure time needs is carried out, to facilitate action when improvements or additions are required, availability of finance being the constraining factor.

Whilst the Parks, Gardens and Recreations Department and Committee bear the primary responsibility for the administration of the city's park and recreation programmes, it must be stated that the quality of the system cannot be maintained without continued support from the State Government and the community.

In these times of fiscal austerity, community involvement and volunteer help remain essential ingredients if today's high standards are to be maintained.

"THE GOAL"

To create a richer environment by providing for, improving and encouraging participation in the opportunities available for the use of leisure time.



Within the gardens in the National Herbarium of Victoria, the scientific centre for the gardens containing a million plant specimens used for research, plant classification and identification.

An education service is provided which enables schools to undertake special programs led by their teachers who can be supplied with a Teacher's Guide, information leaflets and lessons, and student activity sheets. Special topics offered include Environmental Awareness and Appreciation, as well as Earth Caretakers/Earth Secrets for an activity based program for senior primary school children. Some 95 voluntary guides are trained to conduct tours in the gardens and to take part in the Earth Caretakers programs.

The total number of visitors is 1,300,000, of which some 160,000 are overseas visitors, which testifies to the Garden's popularity with local residents and tourists alike. A recent survey showed that people preferred company when visiting the gardens and usually made repeat visits. They came simply for relaxation and tranquility found in pleasant garden surrounds.(6) Annually some 10,000 visitors, 5000 school children, primary, secondary and tertiary, persons of all ages take part in educational and inter-pretative programs and guided tours.

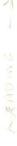
In the early 1970's 200 acres was purchased in a sand belt at Cranbourne (60kms from Melbourne) by the Commonwealth Government for an Australian native plant annexe of the Gardens. Since then, Victorian State Government purchases have resulted in the area being increased to 350 Ha. The garden is due to open in 1991 although currently guided tours are provided for particular groups. Most of the land will be retained in its natural state; one section being set aside for the Native Botanic Garden and another for an Arboretum of Australian trees.

(iv) OTHER PARKS AND OPEN SPACE FOR THE MELBOURNE METROPOLITAN AREA AND ITS ENVIRONS

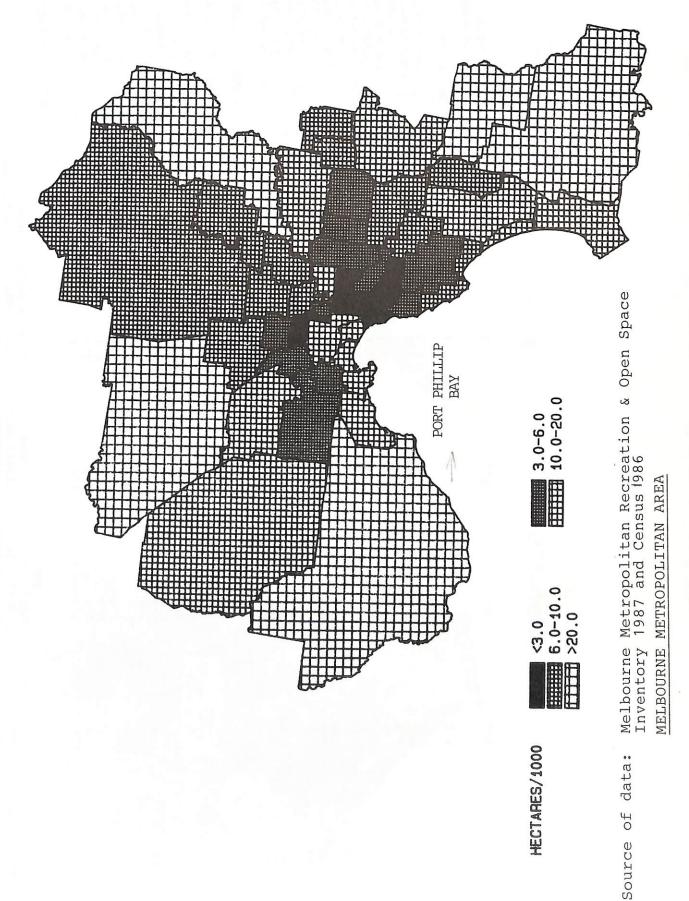
The foregoing has dealt with a number of specific parks; but others are available for recreational activities. To assess the situation as a whole, the Ministry of Planning and Environment in 1987 again revised the data base established in 1976 and revised in 1978, 1982 and 1984 (7). The report comprised 121 base maps at a scale of 1:9600, computer printouts and comparative statistics.

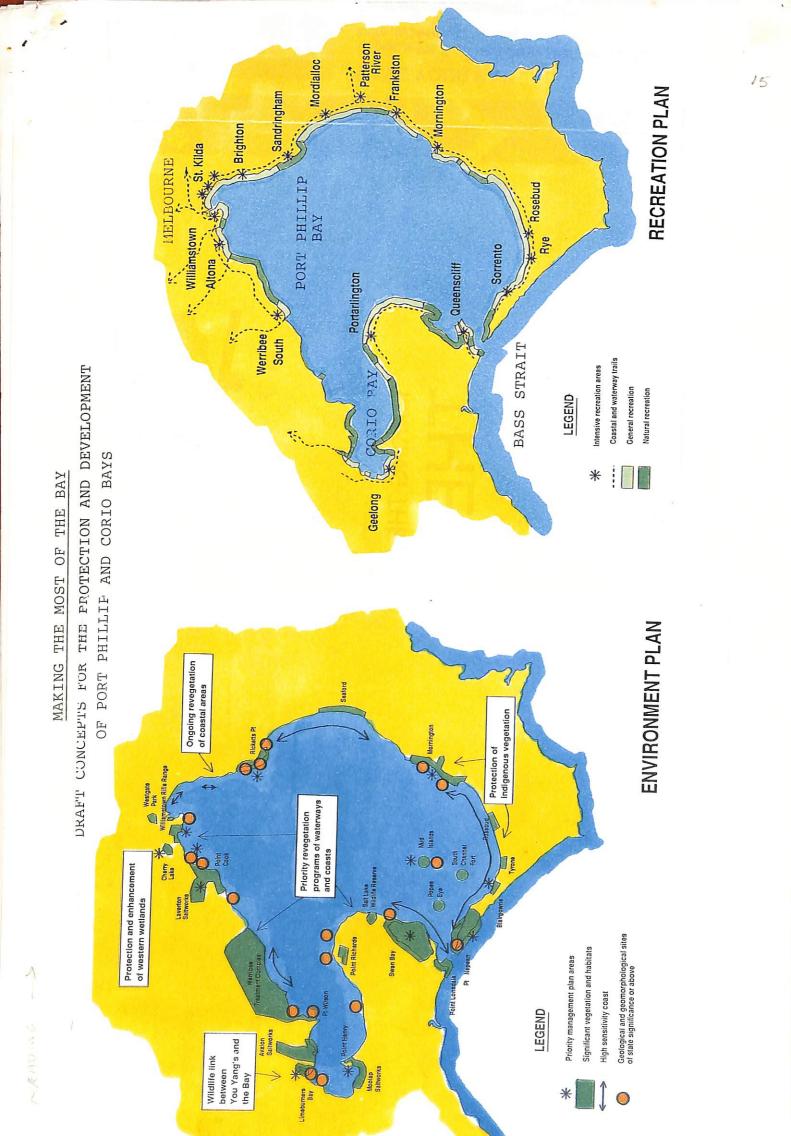
A plan showing the area of open space for 1000 people is on Page 14. If the ideal is 4 Ha/1000 people, there is a deficiency in a number of the inner suburbs where Brunswick has only a total of 1.6 Ha/1000 people. It would not be possible to increase this area from a financial point of view as it would cost several millions of dollars/hectare to acquire the land.

Facilities not dealt with specifically in my report include the many delightful sandy beaches and waters of Port Phillip and Corio Bays where hundreds of thousands of people recreate on sunny days during the summer. A Draft Plan for the Protection and Development of Port Phillip Bay was released in April 1989 (8) for public comment by the Ministry for Planning and Environment. Now more than 30 million visits are made annually to the Bays to fish, sail, power boat, swim, walk, sunbake, play in the sand, watch birds and sleep on hot nights. It is ideal for children in most places because of the relative shallow waters near the beach.



TOTAL OPEN SPACE PER 1000 PEOPLE





Surfing is very popular on beaches adjacent to Bass Strait. Over 90% of the foreshore is in public ownership, a wonderful legacy from our forefathers in the 1880's. Plan on page 16.

16 15 X 15.

Also the many thousands of hectares of reserved forest in the hills around Melbourne are available for recreational activities, particularly barbecues and picnics amongst the tall gums on hot days, walking and nature study. These facilities, as well as many tree lined streets, all contribute to making Melbourne a very pleasant capital city in which to reside, provide due diligence is taken to reduce pollution in every way possible.

, Biosphere.

4. **PEOPLE**

(a) PEOPLE WORLDWIDE

This report would not be complete without considering the population of the world. As Dr Nicholas Polumin of the World X Council for the Brosphere said in an address, that the world is reeling from at least 20 serious menaces, the worst of which is overpopulation. (9) It took some million years to reach 250 m people by A20 another 1700 years to reach 500 m, another 130 years & to reach 1000 m, new world here to world here those to be world here the world here the book to be book to be the book to be book to be book to be the book to be book

Polunin

Japan and China have taken active steps to reduce population growth and have achieved dramatic results. In effect, each of these countries halved its rate of population growth within a matter of years. (9) It is now up to the world to follow suit.

Overpopulation causes poverty, excess pressure on all lands including parklands, degradation of land, creates tensions, people are less able to cope with natural disorders such as drought and people are unable to live in ideal conditions necessary for them to achieve their potential.

One result of overpopulation is for parks to be alienated or the land used for other purposes or the parks are used well in excess of their carrying capacity with their subsequent degradation.

In order to counter these pressures, every park needs solid support from the community at large to see that its integrity is not impaired for the park is lost to the community, never likely to be recovered again.

(b) PEOPLE AND PARKS

(i) Expectations

People's expectations for a good experience are often aroused simply by the word 'park'. To most people the word has many pleasant connotations, often related to experiences they have enjoyed in parks in times past. I believe that most recreational surveys do not give sufficient importance to the power of recall in giving people a true recreational experience. I'm sure many people will recall with pleasure their experiences briefly reliving and enjoying them again and again.

If people's expectations are not met, it should not be because of a lack of diligence or foresight on the part of the Manager, lack of friendliness of park staff nor the failure to give proper tender loving care to their parks.

(ii) Involving People

To be sure of the support of the community every endeavour must be made to ensure that you are producing what the conservation ethic of your community wants.

To achieve a rapport between your park and the community you need to involve as many people from the community as possible in the planning, management, operation and maintenance of your parks. This can be achieved in a number of ways:-

- . Present draft plans for park development to the community giving them full information and plenty of time for them to respond.
- . Establish Friends Groups.
- . Obtain competent and conservation committed people to act on your Advisory Committees.
- . Obtain sponsors provided that they do not place conditions on their sponsorship.
- . Obtain volunteers to help with interpretative or participatory programs and in any other way possible to ensure the parks have a high quality presentation.
- . Let people know what you are doing, publicise your park.
- . Put on programs that involve people.
- . Look after people with disabilities by providing accessible facilities and staff or volunteers to assist them in any way possible.
- Provide special interpretative experiences for all visitors.

The greater the community support you are able to engender, the greater the political clout you will have to prevent people with ulterior designs from causing changes that could downgrade your park resources and park programs.

(iii) Friends Groups

Many people with a conservation interest have some time available in which they wish to further their interest and feel that they are helping a particular park or park system in its operation. They are often a source of volunteers to undertake specific work in the park such as conducting guided tours (for which they need proper and adequate training) or assisting in weed control, or litter collection.

Most of these organisations do not charge for membership, however the Friends of the Melbourne Zoological Gardens (FOTZ) is an exception, members pay an annual fee. They receive very high standard newsletters and are offered free admittance to the Zoos and enjoy other privileges. Most of the organisation of the Friends is undertaken by members. There are ten thousand members. Many National Parks have Friends Groups who assist with important projects as well as such mundane tasks as litter collections.

(iv) Volunteers

Not only are the park staff ambassadors for their park to the visitors; but there are many ways in which people can be involved and often volunteer their services. This may involve more park staff time in training, assessing and organising the volunteers; but there are many advantages:

- . They usually contribute a special enthusiasm for their task;
- . They feel good as they believe they are contributing to a better park system;
- They become ambassadors for your park in the community;
- . The park staff can extend their role, particularly in the public relations and interpretation fields by using volunteers;
- Use appropriate and committed volunteers to organise and run the volunteers for discrete tasks such as guided walks.

Examples of use of volunteers in parks of Victoria:

- Royal Botanic Gardens Melbourne conducting guided tours, manning information desk, assisting with clerical work;
- . Zoological Gardens Melbourne conducting guided tours, manning information desks, clerical work, helping with Friends of the Zoo organisation;
- Metropolitan Parks Friends Groups have been established for two parks: Dandenong Valley and Braeside; from which volunteers
 National Parks - have many Friends Groups for individual have come parks as well as a group for the Parks as a whole many works have been undertaken by volvateers from them

(v) Advisory Groups

People who wish to help in advising on the management and operation of the parks will sometimes volunteer to be appointed to an advisory committee. Select only those who have a significant conservation ethic, and who are competent in other fields not necessarily related to parks. They should not become management committees, management must be the responsibility of the professionals who have to answer to their superiors. However, advisory committees can have a very beneficial effect in being a link to the community served by the park and they are often able to give a broader perspective to aspects dealing with the parks. The professionals must take them fully into their confidence so that the members of the Committees can make the right recommendations.

(vi) Programs and People

There is no doubt in my mind whatsoever, the programs that can change people's attitudes to the conservation ethic for the better are those which involve skilled communications whether they be park staff or volunteers. They must have the conservation ethic otherwise they will sound false. However, they can be trained in the messages you wish to impart. Your best interpreter may not be your professional; but one of your other staff who is a Some people can improve with training, skilled communicator. others cannot because of their inability to relate to people. Make your selection of the best persons early rather than late, they are so important to the success of the program. Surveys have shown that visitors' attitudes have changed because of their experiences in taking part in program in National Parks (10). Almost half the people taking part in an interpretative program said they were likely to change their attitude and/or behaviour as a result of their experiences. There was also evidence of more subtle changes in participants' awareness, knowledge base and interest in the environment.

I quote the general conclusions:

"Visitors' expectations and enjoyment of the interpretive activity appeared to be centred on the personal aspect of the experience, rather than solely on the supply of information. There was significant evidence that the ranger-guided interpretation activities had a direct and positive impact on participants' levels of knowledge, understanding and attitudes towards matters related to National Parks, and conservation values and management.

The frequently-voiced criticism of interpretation - that it is merely "preaching to the converted" - was not supported by the survey findings. Instead, it appeared that Holiday Program activities reinforced visitors' existing interest in the environment, encouraging them to think about appropriate changes in their personal environmental behaviour, and also attracted National Park visitors who had only recently started thinking about their natural surroundings and conservation.

Overall, the study showed that the Holiday program objectives, of educating visitors about conservation while increasing visitor's present and future enjoyment of the National Park, were achieved to a great extent. The results provided overwhelming support for the continuation, and indeed expansion, of ranger-guided interpretive services, as their role clearly could not be fulfilled by non-personal interpretation alone. "

Earthkeepers and Earth Guides

Special programs conducted by the National Parks, Metropolitan Parks and Royal Botanic Gardens are those devised by Professor Steve Van Matre and his staff of the Institute for Earth Education. They are termed the Earthkeepers and Earth Guides.(11) Both aim to create an awareness of the bonds of which link man to the living world and his dependence on them.

"Earth Guides are people who give of their time freely to lead Earth Education activities. They are trained to be able to impart their knowledge and feelings and need to understand the basic ecological concepts of energy flow, cycles, interrelationships and change. They need to know these concepts in developing more appropriate lifestyles. They need to have a sense of relationship with the natural world; a sense of wonder, a joy of life, of time of place and caring. (11)

Earthkeepers is a program with four keys designed for helping young people to live in harmony with the earth. It is designed for 10-12 year olds which takes $2^{1}/_{2}$ days in a natural setting. Half of the program takes place in home and school. It is designed to help young people in developing a conservation ethic, which hopefully will last them all their lives.

The program run by the MMBW caters for 1000 children/ year and a charge of \$20/head is made. If the program is as effective as I believe it is, there should be no charge, the community as a whole should bear the cost. It is a small price for the community to pay when considering the benefits gained during the years to follow. Some children may not be able to participate because of the change involved.

Night Excursions

Other programs such as possum prowls run by the MMBW and the National Parks Service provide special experiences for children not used to being in the bush at night. It is usually designed as a family night and the sense of discovery and enjoyment is very real indeed.

5 ENVIRONMENT

(a) Environment worldwide There is no doubt that the world as we know it is in great peril. Responsible newspapers carry messages of concern almost daily. The World has been abused by man for far too long the degradation of land, water and air quality is frightening. There are no national nor state boundaries Even our children could well have a very Unsatisfactory future, the next fifty years will be critical to the Survival of the world as we know it today. We must insist that nations unite together to fight against pollution not people Perhaps the greatest threat to man's Survival is over population. 8.5 B Expected by 2025 " mcreasing at 1.7 % / year. Type of Country Years % increase years % increase More Developed 1950-1990 45 1990-2025 12% Less Developed 1950-1990. 143 1990-2025 75%.

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Between 1949 and 1956 Japan cut ils population growth vate from just under 2:2% to under 1% (9) It shows that with a will it is possible to take positive steps to reduce growth. and other environmental degradation Overpopulation 'effects con include the following :-- Creating demands on resources which cannot be supplied

. Increased land degragation by overclearing and overuse - (The clearing of the foothills of the Kimalayos has resulted in increased

run -off, more erosion, more siltation and more server and regular flooding in Bangladesh. The decline of many past civilisations . Increased social tensions between the haves and have note of society . Increased air pollution - which emissions, power plant emissions as poorer quality coals are used, more emissions due to increased factories, increased release of harmful chemicals to the environment of the

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refrigerant CFC's which are seriously damaging the ozone layer (These are produced by developed countries "by indeveloped" To change as developed countries phase them out. Indianto, was sold us equipment which was obsolete now produces 10,000 Tonnos/g. arms to produce 200000 TPY by 2015 unless compensated by Broom to replace CFC's with sole refrigerants. #60 m affered)

- · Increased threat of nuclear contamination from nuclear power plants old or new. . Increased pressure from migrants whose countries are being clestroged to those who are not.
 - . increased water pollution of Creeks vivers, ground waters, lakes, and oceans. (They dat in his epic crossing of the oceans reported pollution almest all the way

(b) Environment and Parks

I have gone well beyond the boundaries of parks in my comments; but let us not kid ourselves that pollution stops at the boundary to the park. We must become aware of the problems and join the fight against environmental degradation. The additional consequences of environmental damage and pressures which will offect parks are:

- · Increased pressure for alienations of park land for other uses
- · Either no more parks would be set aside or outerix small parks would be created.
- · Serious damage to vegetation due to air pollution
- . The range of species available for parks and gardens would be limited to a ferr very hardy species.
- . Adverse changes to soil fertility, pH levels as well as increased? Salinity
- . The hidden fawna and flora of the soil could be denoded or wiped out.
- · Pressures for adverse changes in land use or over use of private land within or under control of national panks
 - . The carrying capacity of the park would be exceeded causing damage to soil and plants.
 - · Reople will not have the same realisation of expectations nor enjoyment when visiting a degraded park.

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(er) Environment worldwide

There is no doubt that the world as we know it is in great peril! Responsible newspapers carry messages of concern almost daily. The world has been abased by man for for too long the degradation of nor state beindatics from ever children certa will have a very consumptional of the mark fifty years will be artificed to the Survival of the world as we know it teaday. We most insist that patiens unice together befight against people no people Respected by 2025 finded to an 1:79, 1900 very Respected years and the against people no people non developed years finded to and structures is cour people and the developed years and the people of the survival is cour people. Non developed years and the structures is a process the field of the structures of the structures of the structures of the second of the structures of

Between 1949 and 1956 Lapen estils population growth rate from just under 22% to ender 1% (9) It shows that with a will it is possible to take positive steps to reduce growth. Overpopulation environmental degradation

- Creating demands on resources which cannot be supplied . Encreased land degragetion by overclearing and overcise - (The clearing of the feat hills of the Kinnelagos resulted in increased

in the middle east. The Sinai Peninsula, much of Judea, and mesopotamia ave some examples of kind devastated by evesion (D) in the middle east of some examples of kind devastated by evesion (D) in the second of the second in the second of the sec

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23 6 COUNTERACTION (a) Counter action - Worldwide To counter these pressures no munities throughout the world must demend -. Active steps be taken worded wide to reduce population . Insist on complete, accurate, extensive and independent assessment of those processes or products will affect the environment · See that all alternatives are explored for less harmful to the and push for their use, even if capital costs are increased. . Robibit the bransfer of dirty technologies, equipment or factories to other countries " Kush for acceptable + conservative standards for discharges to the , to be implemented would wide, · Request that all products be labelled according to them effect on the environment either during manufacture, use or disposal - Green Spot products must get preference ! Ensure the palluter pays, the greater the damage the greater the fine and costs for repair of damage (The new amendments to the Environment Protection Act in Victoria makes directors + managers are personally liable for their company's pollution of the environment of they cannot prove they have acted diligently to prevent it! Fine up to 500,000 also men be also men be to well as being imprisoned for up to 5 years The person who knowingly Contaminates the environment is also not only guilty of a dreadful offence against his children but yours and mine as well-that is an enemy of markind? (6b) Counter action by Parks people Pro To prevent damage or loss of parks, all park planners, dezigners menegers, operators meliding interpreters should include the following achieties · Join your park professional organisation - make it a & strong voice in government · Join at least one other conservation organisation.

· Push for environmental education to be a compulsory subject from Kindergarben to un ·

all park planars

6 CONTERACTOON

the following

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Steens vous fait proposeant Sugarisation - make it as in a steens coice in generineat. Join at least one other conservation organisation is

contrado

To parent damage or loss of perfor on all park flow

24 Add your, voice to the protests
Create environmental objectives for your pares
Join in protests & aliencition parks, yours may be next ! · Ensure people with disabilities are made welcome and Appoint rangers to oversee peoples activities in parks not as Policemen; but as a special link person between the visitors and your park. When the park is open to the public they should be on duty Appoint talented communicators with a strong conservation ethic to interpret your park, especially to young children. . Ensure your good communicators want to stay as that. Pay them annual bonuses, if necessary. by seeking volunteers . Encourage as many people as possible, to assist with your park in all aspects, planning, management, operations including interpretation, and arrange to set up friends groups-you may be surprised at the results! And your community by talks pemphiels, leaflets, posters, books, · Recycle metrials for parks and visitors where very possible . Mise the most environmentally friendly materials in all Park Constructions . Wherever possible underbake extensive tree planting in your park and within your community . Use machinery that operates only on natural gas 7. A Special Message to the Japanese people. The Japanese people have shown great resilience, Strength of purpose, duive, skill, industry intelligence and unity in making such a resounding recovery and astounding Progress Since the war to become a leading pation of the world. I believe that given the vision, they could well become the World'sleaders in the fight against pollution and environmental degradation. They have achieved some excellent results of by lowevigorthrate, the lowest power consumption percentage of Gross National Product in the world.

Now is the time to take further action for the future. What better day to announce a major target against pollution on each Children's day of the fifth of May each year. So Sure, have fun but at the same time give tong ble evidence of your concern for their future!

8 Conclusion I throw of no better way to conclude with Chief Seattle's address to his fellow chiefs in 1854 when they were discussions a treety with the white man. (13) We must change people's attitudes to this fragile planet we call earth on which we are merely passengers , is saved because the majority of people work for it 1.

> How can you buy or sell the sky, the warmth of the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them? Every part of this earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the red man.

> The white man's dead forget the country of their birth when they go to walk among the stars. Our dead never forget this beautiful earth, for it is the mother of the red man. We are part of the earth and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle, these are our brothers. The rocky crests, the juices of the meadows, the body heat of the pony, and man — all belong to the same family

> The ashes of our fathers are sacred. Their graves are holy ground, and so these hills, these trees, this portion of earth is consecrated to us. We know that the white man does not understand our ways. One portion of land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The earth is not his brother, but his enemy, and when he has conquered it, he moves on. He leaves his fathers' graves behind, and he does not care. He kidnaps the earth from his children. He does not care. His fathers' graves and his children's birthright are forgotten. He treats his mother, the earth, and his brother, the sky, as things to be bought, plundered, sold like sheep or bright beads. His appetite will devour the earth and leave behind only a desert....

I am a savage and I do not understand any other way. I have seen a thousand rotting buffaloes on the prairie, left by the white man who shot them from a passing train. I am a savage and I do not understand how the smoking iron horse can be more important than the buffalo that we kill only to stay alive....

What is man without the beasts? If all the beasts were gone, men would die from great loneliness of spirit. For whatever happens to the beasts, soon happens to man. All things are interconnected Strikes to Glibres.

WE ARE STILL RUINING THE EARTH SEA AND SKY AND EVERY LIVING THING IN THEM

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We must

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You must teach your children that the ground beneath their feet is the ashes of our grandfathers. So that they will respect the land, tell your children that the earth is rich with the lives of our kin. Teach your children what we have taught our children, that the earth is our mother. Whatever befalls the earth befalls the sons of the earth. If men spit upon the ground, they spit upon themselves

Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say goodbye to the swift pony and the hunt? The end of living and the beginning of survival.

This we know. The earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites one family. All things are connected.

Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself

The whites too shall pass; perhaps sooner than all other tribes. Continue to contaminate your bed, and you will one night suffocate in your own waste

When the last red man has vanished from this earth, and his memory is only the shadow of a cloud moving across the prairie, these shores and forests will still hold the spirits of my people. For they love this earth as the newborn loves its mother's heartbeat. So if we sell you our land, love it as we've loved it. Care for it as we've cared for it. Hold in your mind the memory of the land as it is when you take it. And with all your strength, with all your mind, with all your heart, preserve it for your children and love it.

8 AckNowlebelmen 75 WE ARE STILL RUNNING THE I wish to thank the many persons who contributed material for my Talk. Without their willing and generous help it would not have been possible to cover such a comprehensive range of issues. Richard Whately and Rissell Watkinson of the Melbourne and Metropoliton board of Works; John Branden Durg and Ian Belcher of the City of Nonawading; Rhonda Boyle and Neville Wale of the Ministry for Planning, Chris Mopkins of the Zoo Education Service, Melbourne, Marian Ruan Gemeran of the Royal Botanic Garden's educational Service, Peter Harrison

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