

Wilderness planning and perceptions of wilderness in New South Wales

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WILDERNESS PLANNING
AND
.....
PERCEPTIONS OF WILDERNESS
IN NEW SOUTH WALES

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1994

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CERTIFICATE OF ORIGINALITY

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of a university or other institute of higher learning, except where due acknowledgement is made in the text.

(Signed) .

ABSTRACT

Wilderness is still a controversial issue in New South Wales, despite the enactment of the NSW Wilderness Act in 1987 which gave a legislative basis to wilderness as a land use in New South Wales. Although there have been many studies of attitudes to wilderness and wilderness users in United States, there have been few such studies in Australia and none which have questioned the public's perception of what is wilderness and how it should be managed.

The aim of this study was to review the history of wilderness planning in New South Wales, to examine how closely public perceptions of wilderness coincide with wilderness legislation, and to determine whether perceptions of wilderness are influenced by factors such as age, education, previous bushwalking experience or place of residence.

Surveys were undertaken of almost 200 visitors to four wilderness areas in Kosciusko and Morton National Parks in New South Wales and to two areas in national parks which were not wilderness, one in Kosciusko National Park and one in Sydney Harbour National Park. Also surveyed were 150 staff responsible for managing national parks in New South Wales. All three groups were asked a range of questions, which included the same ten core questions to determine the respondents perceptions as to the desirability of a range of facilities and activities in wilderness areas.

The surveys found that most people supported the protection of wilderness, even though many were confused about whether they had ever visited a wilderness. There was also general agreement that wilderness should

comprise natural areas with little evidence of other visitors and that horseriding and cycling were undesirable in wilderness. On other issues however there was a range of responses, both between the groups and between respondents within the one group.

Wilderness visitors and park staff were more likely than non-wilderness visitors to consider facilities at campsites and well-constructed walking tracks to be undesirable in wilderness and to support solitude in wilderness. Park staff differed from both user groups by considering no features at all to be desirable and management tracks to be undesirable in wilderness.

Wilderness visitors with previous overnight bushwalking experience appeared more likely than those without bush camping experience to oppose management tracks and well-constructed walking tracks in wilderness. Wilderness visitors from city homes were more likely than those from country areas to consider management tracks and horseriding to be undesirable in wilderness areas. Non-wilderness visitors from the city were more likely to consider solitude and walking tracks only to be desirable and cycling to be undesirable in wilderness.

Although education levels did not affect the response of wilderness visitors, non-wilderness visitors with a tertiary education were more likely than those without a tertiary education to consider solitude and walking tracks only to be desirable in wilderness. Similarly, while membership of conservation organisations appeared to have no relationship to the response of wilderness visitors, non-wilderness members were more likely to oppose campsite facilities and horseriding and support cycling in wilderness. The

age of the respondent appeared to have no relationship to the response of either wilderness or non-wilderness visitors.

Most people interviewed wanted a continuation of current conditions in each area. Visitors to areas in which facilities were currently provided were more likely to consider facilities to be desirable in wilderness, and visitors to areas with no facilities were more likely to consider facilities undesirable in wilderness.

It is not however proposed that conditions necessarily change to meet visitor perceptions, but that each area be managed so that no further degradation occurs and priority given to meeting the perceptions of those whose views are closest to the Wilderness Act. There may also be areas which meet wilderness criteria which should not be declared as wilderness so as to protect the environment or provide alternative recreational opportunities.

Regardless of which areas are declared wilderness, it is clearly shown by the data that there is still widespread confusion as to the meaning of wilderness within the community. The managers and proponents of wilderness need to better educate the community to understand how wilderness will be managed and that wilderness is a land use designation that provides one type of recreational experience, although not necessarily an experience which will be enjoyed by all. Until this message is clearly understood, there will continue to be confusion and debate over the appropriate management of wilderness areas and wilderness will not be accepted as a legitimate land use in New South Wales.

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CHAPTER 1

INTRODUCTION

Wilderness is a type of super national park. It provides a sanctuary for our species in areas large enough to enable them to interact in the way nature intended and protect the variety of life on Earth (Hartcher, News Release 23 Dec. 1993, p. 2).

Wilderness areas will lock up the bushland to all but the fittest of bushwalkers; the right of access of cattle drovers, four wheel drive enthusiasts and horse riders will be lost, weeds will choke the native bush and feral animals will make a smorgasbord of the very endangered birds and animals the declarations aim to protect (Cochran, Sydney Morning Herald 22 Jan. 1994, p. 31).

The NSW Wilderness Act 1987 defines wilderness as a large natural area capable of providing opportunities for solitude and self-reliant recreation. Under the Wilderness Act, wilderness became the newest land use category recognised in New South Wales, although wilderness as a zoning within national parks had been recognised under the NSW National Parks and Wildlife Act since 1967. However six years after the Act came into force, the declaration and management of wilderness is still a controversial issue in New South Wales (NSW) as can be seen from the above quotations by two politicians within the present New South Wales State Government and the plethora of articles in the popular press on wilderness.

This study was undertaken in order to discover how users of national parks and wilderness areas, as distinct from politicians and academics, perceive wilderness; what facilities and activities they consider should be permitted in wilderness; and whether their perceptions are influenced by factors such as age, education, residential location or bushwalking experience. The study also examines how managers of wilderness areas believe wilderness should be managed. Unless the values and interpretations people place on the

concept of wilderness are understood, it is not possible to adequately determine whether the NSW Wilderness Act, and the wilderness policies developed by the NSW National Parks and Wildlife Service to implement the Wilderness Act, adequately represent the wishes of the people of New South Wales for the declaration and management of wilderness.

1.1 DEFINITIONS OF WILDERNESS

As noted at the recent Fourth National Wilderness Conference, most of the issues in the identification and management of the wilderness resource relate to definition (Colong Foundation 1993).

The *concept* of wilderness had no meaning until people left hunting and gathering to become farmers, and consequently saw the uncultivated land that had previously supplied food as a waste land which had to be tamed. The word "wilderness" has been traced to the Saxon and Celtic words "wyld" meaning wild or uncontrolled and "deor" meaning animal. The word "wildeor" is used in the 8th century epic *Beowulf* to refer to a dismal region of forests and crags inhabited by savage and fantastic beasts (Nash 1982, p.1). The use of the English word "wilderness" dates from the first translation of the Bible from Latin into English in the 14th century when it was used to refer to vast, desolate, uninhabited lands - usually desert - where people were sent as punishment, to purge and cleanse the soul (Hendee et al. 1990, p. 5).

Definitions of wilderness are still essentially the same today, 30 years after the first wilderness act came into being in the United States. The Concise Oxford Dictionary (1976) defines wilderness as a "desert, uncultivated and

uninhabited tract" while the Macquarie Dictionary (1987) definition of wilderness is "a wild region, as of forest or desert; a waste; a tract of land inhabited only by wild animals". The Macquarie Dictionary also defines a "wilderness area", as "a wilderness in which the ecology is undisturbed". This reflects the modern concept of wilderness which developed in late nineteenth century America.

Since the mid 1800s various groups within society have recognised the need to protect large remote areas of natural land for nature conservation and recreation. Initially the main emphasis was on the protection of these lands for aesthetic appreciation, then for recreation. In recent years the emphasis has shifted to the protection of the nature conservation values of wilderness areas, although they are also increasingly popular recreation areas. While such a change in community attitudes is not uncommon (a similar change occurred in community attitudes to national parks - from pleasure grounds to nature conservation areas) Lesslie (1991, p. 35) notes that "wilderness protection in Australia has been hindered by uncertainty about precisely what constitutes a wilderness area, and how wilderness quality can be assessed".

This lack of a precise definition is not only an Australian phenomenon. America has a similar problem in defining wilderness, despite having had a Wilderness Act since 1964. As Nash (1982, p. 1) notes:

Wilderness has a deceptive correctness at first glance. The difficulty is that while the word is a noun it acts like an adjective. There is no specific material object that is wilderness. The term designates a quality (as the "-ness" suggests) that produces a certain mood or feeling in a given individual and, as a consequence, may be assigned by that person to a specific place....Wilderness, in short, is so heavily freighted with meaning of a personal, symbolic, and changing kind as to resist easy definition.

The objective of this study is not to develop an all-encompassing definition of wilderness, nor is it to question whether the primary values of wilderness are recreation, nature conservation or scientific research. It is to examine what the people of New South Wales perceive a wilderness area should be and how it should be planned and managed.

1.2 WILDERNESS AND LAND USE PLANNING

Wilderness represents one end of the land use continuum, which ranges from urban land through rural land to wilderness. It is clearly at the natural or undeveloped end of the recreation opportunity spectrum (Clark & Stankey 1979). It also provides a starting point from which other, more developed, land uses can be measured. Aldo Leopold, who in 1921 suggested the establishment of the first officially-designated wilderness area in the world, stated that "wilderness is the raw material out of which man has hammered the artefact called civilisation" (Leopold 1966, p. 200).

Wilderness however has only recently been acknowledged as a legitimate land use in Australia. When Bob Carr, then Minister for the Environment, made his second reading speech for the NSW Wilderness Act he stated that "under this Government, wilderness is enshrined as a legitimate land use" (NSW Legislative Assembly 1987, p. 15935). More recently Bob Hawke, then Prime Minister of Australia, declared "wilderness is one of many legitimate land use options" (Hawke 1989, p. 23).

Concern about the relationship of people to their environment is central to land use planning. Patterns of human settlement have been strongly influenced not only by issues such as social policies and transport, but by

the complex interaction between human behaviour and the physical environment. Rapoport, in discussing Australia as a human setting, noted that "perception" is "the principal mechanism linking people to their environment...perception of the environment must precede any form of action" (Rapoport 1972, p. 7). One of the leading researchers into wilderness use in the United States, George Stankey, stated:

Today...we see an increasing emphasis on understanding how and why people perceive the environment as they do and how these perceptions, whether grounded in reality or myth, alter the pattern of occupancy and use of that environment (Stankey 1977, p. 75).

It is therefore appropriate that wilderness be examined not only because it is a new and important land use zoning category, and land use planning is about the sensitive allocation of land to different uses, but also because it is only if we understand wilderness and how people perceive wilderness can we understand the development (or non-development) of the towns and cities and make informed land use and land management decisions.

1.3 PREVIOUS RESEARCH

There has been little research into wilderness, wilderness users and wilderness management in Australia. Most research into wilderness and its management has been undertaken in the United States. This work has concentrated on understanding the desired visitor experience. Stankey and Schreyer (1987, p. 246) argued that the attitudes that society holds about wilderness, as well as those espoused by visitors to such areas, are critical to the planning and management of wilderness as these attitudes are reflected in continuing community support or otherwise for the concept. They suggest that studying use patterns and preferences is a prerequisite to developing sound wilderness management policies to both protect the

natural environment and to manage wilderness use so that it causes minimum impact on the environment.

Research into wilderness in Australia has concentrated on debating the nature of and need for wilderness, and attempting to establish quantitative or qualitative criteria for establishing new wilderness areas. There has been little objective research in Australia into wilderness, wilderness users or wilderness management (Land Conservation Council 1990, p. 70).

To date few attempts have been made to determine what the Australian public, as distinct from researchers and conservationists, consider to be wilderness and how such areas should be managed. Exceptions include community surveys undertaken in Victoria (McKenry 1975; Morgan 1989) and surveys of wilderness users undertaken by Foster (1975), McGrath (1982) and Stankey (1986) in New South Wales and by McKenry (1978) in Victoria. However none of these studies questioned the public's perception of what is wilderness and how it should be managed in a similar way to that in which Stankey (1973) reviewed attitudes to wilderness in the United States.

1.4 STUDY AIMS AND RESEARCH QUESTIONS

Stankey notes that the most difficult task facing wilderness managers is to keep in touch with the "evolving cultural definition of wilderness" (Hendee et al. 1990, p. 155). Despite formal definitions of wilderness in laws and government policies, wilderness remains largely a function of human perception.

The aims of this study were therefore to examine:

1. whether there is a variety of perceptions within the community as to what physical, social and managerial factors constitute wilderness;
2. whether the New South Wales Wilderness Act and the policies which govern wilderness management in New South Wales are representative of the views held by the majority of the community and wilderness managers, or whether they are inconsistent with community attitudes;
3. what aspects of the wilderness regulations appeal to visitors whose perception of wilderness is most consistent with the statutory definition embodied in the Wilderness Act and what aspects they are prepared to compromise on, given that Stankey (1973) suggested that wilderness users should be given more consideration than other sectors of the community; and
4. whether social characteristics such as age, education level, bushwalking experience, membership of conservation organisations or home residence affects perceptions of what constitutes wilderness, and therefore whether educational information should be targeted at certain groups within the community.

1.5 STRUCTURE OF THE THESIS

This thesis is in three parts. The first reviews literature on wilderness, how it is defined and the implications of these definitions for how it is managed. It also contains a brief history of the development of wilderness legislation and wilderness policies in New South Wales.

The second part of the thesis is empirical. It presents the results of a number of surveys of wilderness users, national park visitors who were not visiting a wilderness area, and park managers. It compares and contrasts the different perceptions of wilderness held by these three groups and examines how closely their views coincide with the Wilderness Act and Wilderness Management Policies in New South Wales.

The final section of the thesis considers the implications of the results of these surveys for the planning and management of wilderness in New South Wales. It is suggested that the views of the community with respect to wilderness can be grouped to determine the most preferred settings for a wilderness experience and recommendations made as to how the conflicting views of different groups within the community can be reconciled by land use planners.

1.6 METHODOLOGY

The study includes a review of American and Australian literature on the history of wilderness, both in philosophical terms and as a management tool. It also includes a review of research papers and studies on wilderness undertaken in America, Australia and New Zealand. Published research papers, unpublished theses and student reports, as well as articles in the popular press and conservation journals were examined. The various New South Wales National Parks and Wildlife Acts (1967, 1974 and 1987 amendments) were also studied as were the NSW Wilderness Act 1987 and papers relating to the development of the Wilderness Act.

A total of 343 questionnaires was analysed in order to gain a range of views on the concept of wilderness. The surveys of perceptions of wilderness attempted to target a range of groups which stand in different relationships to the wilderness concept and its application in New South Wales. These groups were the users of declared and proposed wilderness areas, the managers of national parks and wilderness areas, and members of the general public who had an interest in bushwalking but were not visiting a wilderness area. A number of wilderness and non-wilderness areas were selected, rather than only one area, in order to determine whether the characteristics of a particular wilderness area would affect the response.

The core questions relating to wilderness perception were based on the principles embodied in the NSW Wilderness Act and wilderness management policies. Based on the methodology followed by Stankey (1972, 1973) an attitude scale was designed to measure the extent to which a respondent's perception of wilderness coincided with the objectives embodied in the Wilderness Act and wilderness management policies. This approach was taken because, as stated by Stankey (1973, p. 12):

The Wilderness Act provides a legal definition of wilderness; it is this definition which governs the direction of management decision-making.

Although the methodology and format used in this study were similar to that used by Stankey in the United States, there were some differences in the questions asked in order to take account of the differences in the wilderness acts and wilderness management policies in each country. However, to permit comparisons, some questions which were applicable to the New South Wales situation were asked in exactly the same words as those used in the United States by Stankey.

In addition, a number of questions about the respondents' background, such as age, sex, education, bushwalking experience and membership of conservation organisations were also asked, both to allow comparison with United States results and to determine whether factors such as experience, information and group pressures had any affect on attitudes and perceptions of wilderness.

Further details of the survey methodology are outlined in Part II of the thesis. It should be noted that the survey only canvassed a small sample of visitors to each area and the results are indicative only, however the data does provide directions on which future wilderness planning can be based pending more detailed research.

PART I

CHAPTER 2

DEVELOPMENT OF THE WILDERNESS CONCEPT

We did not think of the great open plains...as wild. Only to the white man was nature a wilderness...There was no wilderness since nature was not dangerous but hospitable; not forbidding but friendly (Chief Standing Bear of the Ogalala Sioux, in Nash 1982, p. xiii).

The modern concept of wilderness had its genesis in America in the late nineteenth century, resulting eventually in the United States Wilderness Act in 1964. The American experience also had a considerable impact on Australia and the NSW Wilderness Act which was passed in 1987. Stankey and Schreyer (1987, p. 246) maintain that to fully understand modern society's view of wilderness it is necessary to understand something of the history of the country, its people and its ideas.

2.1 WILDERNESS IN THE UNITED STATES

In the early years of the American colonies, the new settlers saw the wilderness as that area beyond the frontier of known and cultivated lands - a land of wild animals, Indians and other threats. The word did not begin to take on its present connotations, as a natural area for preservation and recreation, until the late nineteenth century (Hendee et al. 1990, p. 6).

The first American philosophers to espouse a reverence for nature were Ralph Waldo Emerson and Henry David Thoreau in the mid 1800s. Following in the tradition of the European Romantics of that time, they saw value in a simple life close to nature. Wilderness was revered as a symbol of God's, as distinct from man's, creative work. However, when Thoreau

stated "in wildness is the preservation of the world" he referred not to what would today be called a wilderness, but to the woods and abandoned farms of the New England countryside (Wellman 1987, p. 49).

The few parks that were reserved in the 1800s were dedicated for more utilitarian purposes than the mental and moral restoration envisaged by the Romantics. Forest preserves were established to protect future timber supplies and water catchments, while other areas such as Yosemite State Park were established to protect spectacular natural phenomena and for "public use, resort and recreation" (Wellman 1987, p. 59). When Yellowstone was established as the world's first national park in 1872, it was not for any purposes associated with wilderness or nature conservation but to protect the thermal springs in the area from private ownership and to maintain them as "a public park or pleasuring ground for the benefit and enjoyment of the people" (Hendee et al. 1990, p. 31). Wilderness at this time was only a backdrop to the natural wonders, which were to be enjoyed at a distance from luxurious hotels and viewing stands. Commercial operations were common in the park, and trapping and killing of the park's wildlife was an accepted means for the less well-to-do visitors to feed themselves (Wellman 1987, p. 98).

2.1.2 The Beginnings of the Preservation Movement

The case for preservation of natural areas was taken up by John Muir. In 1892 he formed the Sierra Club to protect the forests of the High Sierra Mountains from exploitation and grazing by sheep ("hoofed locusts" as he called them) and to open up the mountain regions of the Pacific Coast for exploration and enjoyment (Nash 1982, p. 138). It was not however appreciation of the forests for their own sake which were sought at this time by the members of the Sierra Club, rather the hunting and the challenge of surviving in the wilderness. Similar attitudes were also held by President

Theodore Roosevelt, a keen hunter, and by the rapidly growing Boy Scout movement (Johnson 1974, p. 14).

This strong recreational support for wilderness was tested in 1906. In response to a proposal to construct the Hetch Hetchy Dam in Yosemite to provide water and hydro-electric power for San Francisco, the Sierra Club argued that a dam would impact on the area's scenic values and its value as a public playground. Ironically, the dam was finally built in 1913 on the basis that a dam would, as well as providing water, actually improve the scenery and recreational opportunities rather than detract from them (Wellman 1987, p. 111).

2.1.3 Government Conservation Initiatives

In 1916 the US National Park Service was established under the directorship of Stephen Mather. This represented a significant long-term commitment by the government to protect important natural areas throughout the country (Stankey & Schreyer 1987, p. 249), although the emphasis was still on their tourist value and the National Park Service "cultivated a resort or circus image of parks" (Hendee et al. 1990, p. 32).

It was the US Forest Service that first raised the protection of wilderness. Arthur Carhart, a landscape architect with the Forest Service, was the first to argue that some areas should be left undeveloped but it was not until 1921 that Aldo Leopold, a forester with the Forest Service, made the first public statement in support of wilderness. Leopold argued strongly in a paper called "The Wilderness and Its Place in Forest Recreation Policy" published in the *Journal of Forestry* that some wild areas be "preserved in its natural state, open to lawful hunting and fishing, big enough for two weeks pack trip, and kept devoid of roads, artificial trails, cottages, or other works of man" (Nash 1982, p. 186). As such, these areas were to be distinctly different

from the pleasure grounds of the national parks. Leopold also suggested that the undeveloped portion of Gila National Forest in New Mexico be made such a permanent reserve. As a result of Carhart's and Leopold's endeavours, Gila National Forest was reserved in 1924 as the first designated wilderness area in the United States (Hendee et al. 1978, p. 36).

In 1929 the Forest Service, under the influence of Leopold, issued the "L-20 Regulations" which established an official policy on preserving wilderness in forest areas. Debate within the Forest Service over the benefits of these roadless areas proposed by Leopold versus commercial logging continued, but by 1933 a total of sixty-three "primitive areas" had been designated, although many of these primitive areas were still proposed for future logging and their boundaries could be easily changed (Hendee et al. 1978, p. 35).

Robert (Bob) Marshall, chief of the Forest Service's Recreation and Land Division, pressed for stronger measures. The result was the "U-Regulations" of 1939 which established three new land use categories. Under the regulations over 100,000 acres of forest in the US were set aside as "U1 Wilderness". These were areas of land over 40,000 acres in size in which no roads could be built or timber harvested, although grazing and water projects could continue. U2 areas were also identified which were smaller in area than U1 wilderness areas, while U3 areas were principally managed for timber harvesting and recreation (Hendee et al. 1990, p. 101).

2.1.4 The Wilderness Society

Meanwhile the wilderness movement was gradually growing in strength within the wider community. In 1935 Leopold and Marshall formed The Wilderness Society, a group wholly aimed at the preservation of

wilderness. The aims of The Wilderness Society were:

to integrate the growing sentiment which we believe exists in this country for holding wild areas sound-proof as well as sight-proof from our increasingly mechanised life (Nash 1982, p. 207).

Over the following years The Wilderness Society, together with the Sierra Club and a number of smaller conservation groups, fought to preserve many roadless areas from logging but its first major battle was over another proposed dam, at Echo Park in Dinosaur National Monument. Although a public hearing in 1950 found in favour of the dam, the debate continued until 1956 when it was finally accepted by Congress that the dam would not be built (Nash 1982, p. 219).

2.1.5 The Wilderness Act

Efforts to defend Dinosaur National Monument led The Wilderness Society and the Sierra Club to press for a wilderness act. In 1956 Senator Hubert Humphrey was persuaded by Howard Zahniser of The Wilderness Society to introduce a bill to establish a National Wilderness Preservation System giving protection to one hundred and sixty areas in National Forests, National Parks and Monuments, National Wildlife Refuges and Indian Reservations. Stankey (1980, p. 326) maintains that one of the major underlying reasons behind the development of a statutory wilderness system in the United States was a desire to ensure consistency in the establishment and management of wilderness areas.

In all, sixty-six wilderness bills were introduced into Congress between 1956 and when Congress passed the Wilderness Act in 1964. These bills were opposed by timber industries, grazing and mining interests, as well as the Forest Service and the National Parks Service, all of whom saw a separate wilderness act as unnecessary (Nash 1982, p. 226). The National Parks

Service was at this time responding to higher visitor numbers through its "Mission 66", which emphasised developments and public convenience, while the Forest Service followed a similar philosophy with its "Operation Outdoors".

The US Wilderness Act was the first document in the world to give statutory protection specifically to wilderness. When finally adopted in 1964, the act gave official recognition to wilderness as a land use by immediately reserving 3.7 million hectares of National Forest already designated as U1, U2 and U3 areas as part of the National Wilderness Preservation Scheme. The act also outlined procedures for adding future wilderness areas to the system, and shifted the process of wilderness designation from the Forest Service to Congress (Cordell et al. 1990).

The US Wilderness Act 1964 defines wilderness in the following terms:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain (Section 2(c)).

The Wilderness Act also states that wilderness areas should provide outstanding opportunities for solitude and unconfined recreation, and be of at least 5,000 acres (2,000 hectares) or of sufficient size "to make practicable its preservation and use in an unimpaired condition" (Section 2(c)(3)).

Although the minimum size criteria set by the Wilderness Act was much smaller than that envisaged Leopold or Marshall, it resulted in few wilderness areas being declared in the eastern United States. In 1975 the Eastern Wilderness Act was passed which allowed the designation of smaller areas as wilderness. Today there are over 500 areas in the National

Wilderness Preservation System, and over eighty areas of less than 5,000 acres.

2.1.6 Implementing the Act

Although the US Wilderness Act was a major initiative, it was also to some extent a compromise. The Wilderness Act defined a concept of and management policy for wilderness similar to that already being used by the Forest Service, with the purpose of the act defined as being to provide places "for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness" (Section 2(a)). It thus set the seeds for a continuing controversy between the objectives of managing wilderness "to preserve its natural condition" and providing "outstanding opportunities for solitude or a primitive and unconfined type of recreation". It also allowed for some grazing rights and for prospecting and mining to continue until 1984. Water conservation projects and roads could be approved by the President in wilderness areas if deemed "in the national interest" (Nash 1982, p. 226).

How wilderness is to be managed in the United States, beyond the above statements, is not clearly specified in the US Wilderness Act. Facilities such as picnic tables and horse corrals, as well as toilets and trails, have been built in some wilderness areas. It was not until the 1970s that a purer attitude was taken and permits introduced to control the large numbers of visitors in heavily used areas. For example, before controls were introduced in 1972 over 260 people a day were climbing Mount Whitney which is the highest peak in the United States outside Alaska, and over 16,000 people a year travelled down the Grand Canyon before a quota system was introduced in 1972 which slowed growth, although it has now reached over 22,000 a year (Hendee et al. 1990, p. 28).

The fact that each wilderness area in the United States is established by separate act which must be approved by Congress has had a significant effect on the nature of areas declared as wilderness and on their management. The acts not only establish the areas but also set policies on how the area is to be managed. In the years since passing of the Wilderness Act over 100 additional wilderness laws have been passed which, although generally reaffirming the management guidelines laid down in the 1964 Act, have also reinterpreted and clarified the act. In general, Congress has excluded areas of high mineral potential from wilderness; allowed recreational aircraft, motorboats, snowmobiles, etc. in specific wilderness areas or parts of wilderness areas; allowed the construction of facilities such as toilets, water tanks and meteorological equipment; and permitted the construction and maintenance of new and existing cabins in the Alaskan wilderness. It has also continued to allow those people whose land is surrounded by wilderness to maintain their existing access rights and continue existing grazing use (Browning et al. 1989, pp. 307-312).

2.2 DEVELOPMENT OF THE WILDERNESS CONCEPT

IN NEW SOUTH WALES

Although the wilderness movement in Australia has been said by some authors to have paralleled the US wilderness movement (e.g. Carter 1991), others such as Hall (1992) and Prineas & Gold (1983) note that in most cases it was around twenty years behind similar actions in the United States and relied heavily on the US experience.

2.2.1 The First References to Wilderness in Australia

Early European settlers brought with them to Australia the Biblical meaning of wilderness, and applied it to this country which was so unlike the English countryside they knew and inhabited by "savages" and strange creatures. In

1789 Governor Phillip called it "a savage coast" of "wild appearance" that needed to be tamed and ordered, while Governor Denison wrote in 1856 "of this great continent, more than three fourths is an absolute, howling wilderness" (Proudfoot 1979, p. 39). Explorers and surveyors also commonly used the word "wilderness" in journals and on maps. George Caley, for example, formally named part of the Grose River in 1804 as the "Devil's Wilderness" (Prineas & Gold 1983, p. 18) while Surveyor Hoddle described the Morton area in 1824 as "as wretched a wilderness as ever man trode upon" (Prineas & Gold 1983, p. 81).

Such attitudes were not universal. In the 1850s the Reverend W. B. Clarke described the "solitary wilderness" as comparable to the "most gorgeous cathedral" (Prineas & Gold 1983, p. 27) and in 1866 the Fish River (Jenolan) Caves were reserved to protect their scenic wonders "and excite the admiration of tourists from all parts of the world" (Hall 1992, p. 91). Nevertheless, in general the early settlers sought to improve the wilderness through clearing of the native vegetation, planting of familiar plants and the introduction of European animals (Helman et al. 1976).

2.2.2 The National Park

Even the national parks were seen as a refuge from the wilderness. In 1879, seven years after the declaration of Yellowstone National Park in the United States, 18,000 acres (7,284 hectares) of land which was considered unsuitable for agriculture on the southern outskirts of Sydney, was set aside and declared as The National Park (it did not become Royal National Park until 1955). The park was not for conservation so much as to provide an escape from the city and, as asserted by the then Premier Sir John Robertson, "a national domain for rest and recreation" (Strom 1979, p. 46). Speaking in defence of the financial vote for The National Park in 1881 Sir

Henry Parkes said:

The Honourable Member says it is a wilderness and years must elapse before it can be of any use, but is it to remain a wilderness?...certainly it ought not to remain a wilderness with no effort to improve it (Mosley 1978, p. 27).

Under the Deed of Grant to the trustees of The National Park it was specified that the park could be used for "ornamental lawns and gardens...zoological gardens...a racecourse...cricket and other lawful games...bathing places...or any other public amusements declared by notification in the Government Gazette" (Pettigrew & Lyons 1979, p. 22). By 1905 there were stables, an artificial lake, a boat shed, an orchard, aviaries and a trout hatchery. Emus, wallabies, perch, trout and deer had also been introduced to the park (Pettigrew & Lyons 1979, p. 23).

The declaration of The National Park was followed by the setting aside of Ku-ring-gai Chase on the northern outskirts of Sydney in 1894. The trustees of Ku-ring-gai Chase were, like those of The National Park, urged to develop their park for public recreation (National Parks & Wildlife Service 1992). Although these improvements were appreciated by most visitors to the park, other park users were concerned with the management of the parks and especially the tendency for roads to be built within parks to attract tourists (Mosley 1978, p. 28).

2.2.3 Myles Dunphy and the Conservation Movement

In 1914 Myles Dunphy established the first long-distance bushwalking club in Australia, called the Mountain Trails Club, which had as one of its objectives:

to associate walkers, mountain trackers and amateur explorers who instinctively reject roads and beaten tourist routes to reach and enjoy the canyons, ranges and tops of the wildest parts of this country (Johnson 1974, p. 18).

Following establishment of a National Parks Service in the United States, Dunphy took up the cause for a similar system in Australia. He also adopted the concept of wilderness from the US Forest Service, and used the term "primitive areas" to designate wilderness areas (Mosley 1978, p. 29).

In 1932 Dunphy wrote a report to the New South Wales Government advocating establishment of a national park over a major proportion of the Blue Mountains, and the following year he formed the National Parks and Primitive Areas Council to continue the push for a "Blue Mountains National Park with Primitive Areas" which would protect the areas which were being enjoyed by bushwalkers. Members of the Council were drawn from the Sydney Bushwalkers, the Bush Tracks Club, the Coast and Mountain Walkers and the Mountain Trails Club. Over the following years a number of other primitive area proposals were developed by the Council, including proposals for a Heathcote Primitive Area and a Snowy-Indi Primitive Area. The primitive area concept was seen as both a type of zone established within national parks and as a separate reserve (Hendee et al. 1990, p. 58).

The first declared primitive area in New South Wales was the Tallowa Primitive Area (now part of Morton National Park) which was proclaimed in 1934, only ten years after the Gila Wilderness was established in the United States. Although only 3,110 hectares in size, Dunphy was pleased that the Department of Lands had officially accepted the designation "primitive", which he understood to be the equivalent of wilderness (Dunphy 1979, p. 63).

Dunphy was not an advocate of primitive areas or wilderness as a place of solitude but saw it as an area that was "roadless but not necessarily

trackless" for "mateship among the people of the little tents" (Johnson 1974, p. 18). As Dunphy recalls:

All the bushwalking clubs stood for the conservation of the bushland environment for people like themselves, and for the habitat of wildlife. Most members of clubs were more concerned in supporting proposals for parks and using them - **use** being the main objective (Dunphy 1979, p. 64).

2.2.4 The Kosciusko Primitive Area

This attitude of the bushwalking fraternity became obvious following the enactment of the Kosciusko State Park Act in 1944, which designated a park over part of the Snowy Mountains and allowed up to 10% of the park to be set aside as a "primitive area". Initially it was proposed that grazing be allowed to continue in primitive areas, however this policy was opposed by the scientists who argued that only conservation and scientific research should be permitted in primitive areas (Prineas & Gold 1983, p. 161). Dunphy and many of the bushwalking clubs which had first proposed the concept of primitive areas in the park, strenuously opposed the exclusion of walkers from these primitive areas (Thompson 1986, p. 199). As a result of this conflict, no further action was taken to designate primitive areas until 1962 when the Kosciusko Primitive Area was proposed by the Kosciusko State Park Trust as a means to halt Snowy Mountains Scheme hydro-electric construction works in the high country (Mosley 1978, p. 30).

2.2.5 The National Parks and Wildlife Act

Meanwhile the trust system of management continued in The National Park with the erection of more buildings, the extension and improvement of roads and car parks, and the development of kiosks, surf sheds, cabins and ovals. Similar facilities were also being built in other national parks by their trusts, in the face of sporadic but intense criticism from conservation groups (Pettigrew & Lyons 1979, p. 27).

As in the United States, these differences in management by the separate trusts led to public pressure for a single park management authority to replace the trusts. In 1957 the conservation community in New South Wales formed the National Parks Association with the objective of establishing a single national park management authority in that State.

This was finally achieved with the enactment of the NSW National Parks and Wildlife Act in 1967 which, as well as establishing a National Parks and Wildlife Service to administer the parks, also provided for the setting aside of wilderness areas within national parks and state parks. Wilderness areas were to be identified through the preparation of a plan of management for a park. Areas set aside as wilderness were to be maintained in a "wilderness condition" and no buildings, ski tows or other apparatus constructed "except simple survival huts where essential" (Section 29, National Parks and Wildlife Act 1967). A separate category of wilderness reservation outside parks, similar to the US example, was discussed but not included in the 1967 National Parks and Wildlife Act (Prineas & Gold 1983, p. 34).

In 1974 the National Parks and Wildlife Act was amended to permit the Director to declare and revoke wilderness areas in a national park or nature reserve by notice in the Government Gazette, to specify areas within a wilderness for scientific research only, and to permit the erection of any apparatus or structure as long as it was necessary for the purposes of research or the protection or preservation of the area (Sections 59-61, National Parks and Wildlife Act 1974).

2.2.6 Wilderness Zoning in Plans of Management

The first wilderness zone identified in New South Wales was in the 1972 Kinchega National Park plan of management. The plan used the term

"wilderness" to designate a zoning category in which it was proposed that no buildings would be constructed. Other zones were designated "natural" and "development" (National Parks and Wildlife Service 1972). However the land zoned as wilderness was not a natural area as it had been heavily grazed for many years before gazettal as park. The designation of this area as a wilderness was soon recognised as being inconsistent with community attitudes and concerns (Prineas 1993), and consequently the wilderness zone in Kinchega has never been gazetted as a wilderness under the National Parks and Wildlife Act.

In 1974, four wilderness zones were identified in the Kosciusko National Park Plan of Management. The plan defined wilderness as:

large tracts where man's disturbance has been minimal and the landscape and vegetation is essentially in a natural condition, supporting a harmonious balance of wildlife populations (National Parks and Wildlife Service 1974, p. 22).

The wilderness areas delineated under the plan covered approximately 54% of the park and included heavily-used recreation areas, stock routes, power lines (which were to be removed when no longer required), and a number of vehicle access tracks which were used by government departments, researchers and volunteer groups for purposes such as fire management, weed control, hut maintenance and monitoring of pipelines. The use of mechanised transport by the public and the construction of further roads and power lines were however prohibited in the wilderness.

Although these and other wilderness areas were identified in park plans of management, none were immediately gazetted and the conservation groups became concerned that no wilderness areas were being given statutory recognition (Prineas & Gold 1983, p. 43). This concern was compounded by events elsewhere in Australia such as the building of a dam on the until-then remote Lake Pedder in Tasmania, which was subsequently flooded to

provide hydro-electric power despite an Australia-wide campaign against the proposal by conservationists.

2.2.7 Wilderness Assessments

In 1974 the Commonwealth Committee of Inquiry into the National Estate released a report urging identification of Australia's diminishing wilderness. As a result of this report, and supported by a National Estate grant, a team from the University of New England undertook the first survey of potential wilderness areas in Australia (Helman et al. 1976). Using satellite imagery and 1:250,000 scale topographic maps, they identified potential wilderness areas in south-east Queensland and eastern New South Wales and developed a definition of wilderness to guide the inventory. The study defined a wilderness as "a large area of land perceived to be natural, where genetic diversity and natural cycles remain essentially unaltered" (Helman et al. 1976, p. 29).

The team based their assessment on a core area of 25,000 hectares free of major indentations and at least ten kilometres in width, with a management (buffer) zone surrounding the core of at least another 25,000 hectares. A "natural" appearance was permitted to include roads of a low standard, low-density frequently-used walking tracks and limited clearings but not power lines. The size of an area suitable to be declared wilderness was based on the minimum area considered necessary to support viable populations of native animals and the width was considered to be approximately one day's walk. A total of twenty wilderness areas were identified in the report in New South Wales, with some areas different to those areas already zoned wilderness in plans of management (Helman et al. 1976).

Attempts were made to identify indicators of wilderness quality as a basis for identifying wilderness areas, although some inventories (including the

Australia-wide inventory conducted by Prineas in 1986) were still based on the Helman criteria. Kirkpatrick and Haney (1979, in Tasmania Parks Wildlife and Heritage 1991, p. 62) defined wilderness as "land remote from mechanised vehicles, and from which there is little or no consciousness of the environmental disturbance of contemporary people". They assumed that no wilderness value could be gained until after four hours walking at two kilometres per hour, with half wilderness value after eight hours, and maximum wilderness value after forty-eight hours walking. Any disturbance within five kilometres was assumed to be sufficient to negate wilderness quality although walking tracks, helicopter pads, huts, and artefacts not used after 1900, were not regarded as disturbance.

2.2.8 Wilderness Gazetted

The first wilderness areas gazetted in New South Wales were in Kosciusko National Park in 1982. These four areas had been identified as wilderness in a new plan of management for Kosciusko National Park adopted in 1982. They were generally those areas which had been identified in the 1974 plan of management for the park, although with minor boundary differences and the deletion of a substantial section of one wilderness area to make them more consistent with contemporary views of wilderness and the Helman report (National Parks and Wildlife Service 1981, p. 34).

Although by 1982 fifteen of the twenty wilderness areas identified in the Helman report had been largely incorporated in national parks, there was continuing pressure from the conservation movement for the declaration of more wilderness areas, for better management practices in gazetted wilderness areas and for more secure legislation protecting wilderness (Carter 1991, p. 74). In 1985 the Wilderness Society began to build up its presence in Sydney, following a decision to use New South Wales as a

"proving ground" for enactment of wilderness legislation in Australia, and started actively lobbying the State Government (Prineas 1988, p. 22).

2.3 WILDERNESS IN OTHER AUSTRALIAN STATES

The establishment in New South Wales of The National Park in 1879 and Ku-ring-gai Chase in 1894 was followed by the establishment of reserves in most other Australian States in the early twentieth century. These were typically called "The National Park" and had the primary objective of providing for public recreation (Hendee et al. 1990, p. 58).

In 1906 Queensland established the first state-wide system of national parks, followed by Tasmania in 1915. The Queensland legislation was significant for its time in that it allowed for the establishment of "primitive areas". It was not until 1975 that the Commonwealth National Parks and Wildlife Act made provision for wilderness zones in parks established under that act, and the Victorian National Parks Act 1975 also allowed for the establishment of both wilderness parks and wilderness zones. Wilderness zones were also permitted under legislation passed in 1976 in the Northern Territory, 1980 in the Australian Capital Territory, and 1984 in Western Australia. However, at the time the NSW Wilderness Act was enacted in 1987, only four wilderness areas had been formally designated in Australia outside New South Wales - two in Victoria, one in Western Australia and one in the Northern Territory under Commonwealth legislation. A number of areas were however proposed as wilderness in most other states and an area had been zoned as wilderness in South Australia despite that State having no legislative basis for wilderness at the time (the South Australian Wilderness Protection Act was enacted in 1992).

In 1982 the NSW National Parks and Wildlife Service recommended the formation of a working group consisting of representatives from the various State conservation agencies, under the auspices of the Council of Nature Conservation Ministers (CONCOM), to consider and make recommendations on the establishment and management of wilderness areas throughout Australia. To encourage consistency, the report of the Wilderness Working Group (CONCOM 1986) recommended that wilderness areas be larger than 25,000 hectares in size, be places "where visitors may experience remoteness from roads and other facilities [with] minimal evidence of alteration by modern technological society" and made specific recommendations for the management of wilderness areas. However the CONCOM report was not enforced and each State established its own separate management requirements in relation to issues such as grazing, hunting, mining and permissible recreational activities in wilderness.

**Table 2.1 STEPS LEADING TO THE DECLARATION OF
WILDERNESS IN THE UNITED STATES AND NEW SOUTH WALES**

1872 Yosemite National Park declared	1879 The National Park reserved
1892 Sierra Club formed	1894 Ku-ring-gai Chase reserved
1906-13 The Hetch Hetchy Dam controversy	1914 Mountain Trails Club formed
1916 US National Parks Service formed	
1921 Leopold's paper on Wilderness	
1924 Gila National Forest reserved as wilderness	
1929 US Forest Service L-20 Regulations	1932 Blue Mountains National Park with Primitive Areas proposed
	1933 National Parks and Primitive Areas Council formed
	1934 Tallowa Primitive Area proclaimed
1935 The Wilderness Society established	
1939 "U" Regulations	1944 Kosciusko State Park Act
1950-56 The Echo Dam controversy	
1956 First wilderness bill introduced by Howard Humphry	1957 National Parks Association formed
1964 US Wilderness Act passed	1967 NSW National Parks and Wildlife Act
	1976 The Helman Report
	1982 First wilderness areas gazetted in NSW
	1983 CONCOM Working Group formed
	1985 NSW Wilderness Working Group established
	1987 NSW Wilderness Act

CHAPTER 3

THE WILDERNESS ACT AND ITS IMPLEMENTATION

The objects of the Wilderness Bill are to provide for the permanent protection and proper management of wilderness areas within this State and to educate the public in the appreciation, protection and management of wilderness (Bob Carr, Minister for Planning and the Environment, NSW Legislative Assembly 1987, p. 15931).

3.1 THE WILDERNESS BILLS AND WILDERNESS ACT 1987

The NSW Wilderness Bill 1987 and Miscellaneous Acts (Wilderness) Amendment Bill 1987 were passed without amendment by both houses of the NSW Parliament in November 1987 and were assented to on 4 December 1987. Only one lone Independent (previously National Party) Member of Parliament opposed their adoption (Prineas 1988, p. 22). It is misleading however to assume that the vote indicated unanimity within the Parliament or the community.

The Wilderness Bills were largely a product of the Wilderness Working Group which was established in 1985 by the then Minister for Planning and Environment and Minister for Heritage, Bob Carr, on the suggestion of a coalition of conservation groups called the National Wilderness Coordinating Committee (NWCC). The Working Group consisted of three members of the NWCC (Peter Prineas, Peter Maslen and Randall King), David Papps from the Minister's office and Jim Starling from the National Parks and Wildlife Service.

The NWCC had proposed that separate wilderness legislation should be enacted in New South Wales to identify and protect wilderness areas within and outside national parks not already declared under the National Parks

and Wildlife Act. According to Prineas (1988, p.22) the objectives of the NWCC were to use a New South Wales wilderness act as a "light on the hill", by establishing the precedent of separate wilderness legislation in Australia and taking a first step in an Australia-wide program of wilderness conservation. It was also seen as a way of adding large additional areas of land to the National Park system (Prineas 1992 pers. comment). Thirty six potential wilderness areas had been identified by the NWCC, many of which were outside existing national park boundaries (Wells 1986). However, Starling (1985) notes that the NWCC had not fully formulated its own attitudes to wilderness and there was dissension between member groups of the NWCC, notably the National Parks Association and the Environmental Law Association, regarding the views being expressed by its representatives on the Working Group.

In a situation bearing strong similarities to the introduction of wilderness legislation in the United States, the proposed legislation was initially opposed by the National Parks and Wildlife Service's representative on the Group who submitted that it was the Service's preferred strategy to amend its own National Parks and Wildlife Act to give greater statutory emphasis to wilderness and to reserve those identified wilderness areas outside the park system as national parks (Starling 1985, p. 2). Proposed amendments to the National Parks and Wildlife Act included a statement of purposes and principles relating to the declaration of wilderness areas and a statement of objectives of management of wilderness areas. The Service also raised the problem of conflict with other land management agencies and the dangers of assuming that areas identified by the wilderness study would be reserved as national park in the face of possible future unsympathetic governments (Starling 1985, p. 4).

The Working Group took approximately one year to prepare its report to the Minister which proposed a "Wilderness and Wild Rivers Management Act" based on a model act largely drafted by Peter Prineas (Prineas 1988, p. 23). However following public exhibition of the report, and a large public response including some nine thousand written submissions, a number of compromises were made to the original proposal. These included the introduction of voluntary conservation agreements rather than mandatory requirements on public authorities to protect wilderness, the removal of buffer zones around wilderness areas and the removal of almost all the sections relating to wild and scenic rivers (Prineas 1988, p. 23).

The Wilderness Bill was introduced to the NSW Parliament by Bob Carr who, in his second reading speech on 12 November 1987, represented the bill as a choice between conservation and the destruction of the nation's environment. He argued that:

The matter of wilderness protection strikes at the heart of this conundrum because wilderness is the total and absolute embodiment of the Australian environment (NSW Legislative Assembly 1987, p. 15930).

Carr noted that there were an estimated thirty-six wilderness areas in New South Wales which together covered approximately four per cent of the State, of which less than half were within the national park system. The legislation was envisaged to protect this remaining wilderness by permitting not only the declaration of wilderness over national parks but also, with the agreement of the owner, over private lands and Crown land under the control of another government department or statutory authority.

The NSW Wilderness Act, 1987 established a statutory definition of wilderness and clearly placed the management of wilderness in New South Wales under the control of the NSW National Parks and Wildlife Service. It also placed a "trigger" in the hands of the community which would activate a mandatory assessment and report on areas nominated as wilderness under the Act (Prineas 1988, p. 24).

.....
The press release by the then Premier of New South Wales Barrie Unsworth on 11 November 1987 summarised the provisions of the Act. It noted that the Act provided for:

- * areas outside the national parks system to be declared as wilderness where agreement had been reached with the landowner;
- * binding voluntary management agreements between the National Parks and Wildlife Service and other public authorities;
- * voluntary management agreements over privately held wilderness;
- * consideration under the Environmental Planning and Assessment Act of the effect of developments on wilderness;
- * third party appeals to the Land and Environment Court where wilderness areas were threatened;
- * management guidelines for continued protection of wilderness;

- * an Act of Parliament for the revocation of wilderness declared over public lands;
- * Ministerial consultation for any change in the use or tenure of Crown leasehold lands with wilderness value;
- * any person or organisation to submit a wilderness area declaration proposal and have it assessed within two years;
- * a Wilderness Fund to assist in the acquisition of wilderness; and
- * an annual report on the status and management of wilderness to be prepared by the Director of the National Parks and Wildlife Service.

The NSW Wilderness Act initially defines wilderness areas as "lands declared to be a wilderness under this Act or areas declared under section 59 of the National Parks and Wildlife Act 1974" (Section 2, Wilderness Act 1987). However Section 6 of the Act provides a more definitive statement:

- 6 (1) An area will not be declared as wilderness by the Director unless the Director is of the opinion that-
- (a) the area is, together with its plant and animal communities, in a state that has not been substantially modified by humans and their works or is capable of being restored to such a state;
 - (b) the area is of a sufficient size to make its maintenance in such a state feasible; and
 - (c) the area is capable of providing opportunities for solitude and appropriate self-reliant recreation.

Section 5 of the Wilderness Act defines the functions of the Director of National Parks and Wildlife:

- * to investigate and identify areas of land that are wilderness;
- * to consider and assess proposals made to the Director relating to wilderness;
- * to promote educational activities in respect of wilderness or wilderness areas;
- * in the case of each wilderness area to arrange for the carrying out of works in connection with the protection, management and use of wilderness areas;
- * to undertake scientific research as necessary in connection with the protection, management and use of wilderness areas;
- * to enter into negotiations on behalf of the Minister in connection with the protection, management, use or declaration of existing or proposed wilderness areas;
- * to take such other action as the Director considers necessary in connection with the carrying out of directions by the Minister relating to existing or proposed wilderness areas; and

- * to carry out such works and activities as the Minister may direct either generally or in any particular case in connection with wilderness areas.

3.2 WILDERNESS DECLARATIONS

Since the inception of the Wilderness Act on 1st January 1988, eighteen wilderness areas have been declared in eleven national parks. Together these wilderness areas cover 190,522 hectares, which is 13.6% of the area managed by the National Parks and Wildlife Service and 0.67% of the total land area of New South Wales.

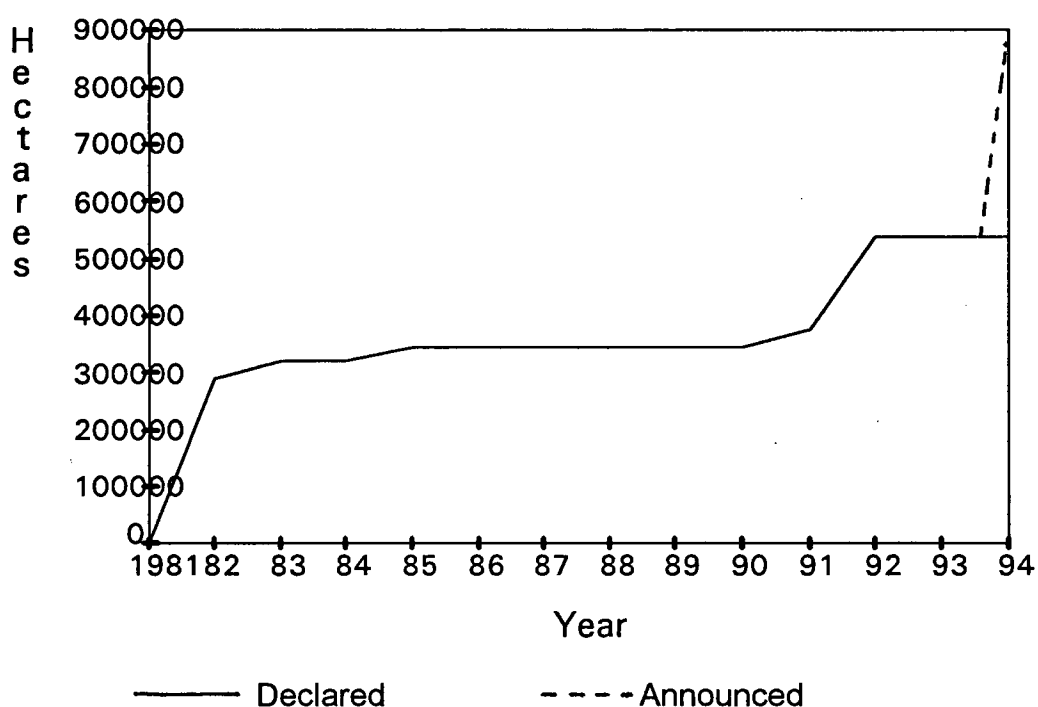
The declarations under the Wilderness Act include all areas previously declared as wilderness under Section 59 of the National Parks and Wildlife Act prior to introduction of the Wilderness Act (twelve wilderness areas in Kosciusko, Gibraltar Range, Mount Kaputar, Wadbilliga and Washpool National Parks) and another six areas, also within national parks but not previously identified (one area each in Mootwingee, New England, Nymboida, Nungatta, Nattai and Morton National Parks). All these areas were gazetted under the Wilderness Act in December 1991 and March/April 1992, four years after the Wilderness Act was passed. No areas outside national parks have been gazetted, although a number of areas outside parks have been investigated by the National Parks and Wildlife Service under the Wilderness Act. In addition, no wilderness agreements have been signed (or even prepared) to protect land with wilderness qualities outside parks.

The Wilderness Act states that all wilderness areas that are nominated by the community must be assessed by the National Parks and Wildlife Service within two years. To date (mid 1994) twenty-eight areas have been nominated for investigation as wilderness under the provisions of Section 7 of the Wilderness Act, including Budawang (Morton National Park), Lost World (Border Ranges National Park and Limpinwood Nature Reserve), Goodradigbee (Kosciusko National Park and Bimberi Nature Reserve), Barrington (Barrington National Park), Nadgee (Nadgee Nature Reserve) and Werrikimbe (Werrikimbe National Park). Nine areas have been nominated by The Wilderness Society, six by the Colong Foundation For Wilderness, two by bushwalking clubs, two by local environment groups and the remainder by various individuals. Some of these nominations were not accepted for full assessment because they had previously been assessed or because the nomination covered land which was clearly not wilderness, such as Centennial Park in Sydney which was nominated by a Member of Parliament who disagreed with a wilderness announcement by the Government.

Although not required under the Wilderness Act, in 1991 the then Minister for the Environment, Tim Moore, decided that Cabinet rather than the Minister should determine all wilderness proposals and decide which areas should be granted legal recognition through declaration. In March 1992 Cabinet decided to place all completed assessments on public exhibition and to invite public comment on the original proposals and the Service's assessment of the proposals. As a result, assessments of seven proposed wilderness areas were publicly exhibited in May 1992 and a further seven assessment reports have been exhibited since.

On 23 December 1993 the Premier, John Fahey, and Environment Minister, Chris Hartcher, announced that 350,000 hectares of new wilderness would be declared in seven National Parks and Nature Reserves within New South Wales. Parts of three State Forests were also to be declared as wilderness in this "Christmas gift for our grandchildren" (Fahey 1993). This announcement was met by concern from a number of backbenchers who threatened to resign or sit on the cross benches with the independent Members of Parliament. Following prolonged National Party and joint Liberal and National Party meetings, it was decided to defer the declaration of all the new wilderness areas pending a "full assessment of existing interests' access rights" and "an examination of the wilderness nomination and assessment process" (Fahey 1994). As a result, none of the eleven wilderness areas has yet been declared.

Figure 3.1 Area of Declared and Announced Wilderness



3.3 WILDERNESS MANAGEMENT

Wilderness management in New South Wales is also guided by the Wilderness Act, 1987. Section 9 of the Wilderness Act states that wilderness areas shall be managed so as:

- (a) to restore (if applicable) and to protect the unmodified state of the area and its plant and animal communities;
- (b) to preserve the capacity of the area to evolve in the absence of significant human interference; and
- (c) to permit opportunities for solitude and appropriate self-reliant recreation.

In addition to the Act, guidelines for the management of wilderness areas in New South Wales are outlined in the National Parks and Wildlife Service's Field Management Policies (1989). The Wilderness Conservation Policy (p. 1.10) notes that the legislation recognises that as well as wilderness having value for providing for "wilderness experience" recreation, wilderness also has value for biological conservation. Guidelines for the management of wilderness detailed in the policy include:

- * motorised transport is not permitted except for essential management operations which do not have significant long-term impact;
- * vehicle tracks and helipads will be closed and rehabilitated except where required for essential management operations;
- * where possible, the area will be maintained free of signs, trail markers and other management devices;
- * horseriding and other forms of animal transport will not be permitted;

- * minimal impact bushwalking practices will be encouraged; and
- * prescription burning and control of introduced plants and animals will be undertaken as necessary.

Robertson et al. (1992, p. 122) notes that the management principles embodied in the Wilderness Act "are vague and do not provide clear guidance as to acceptable uses". A similar comment could also be made about the National Parks and Wildlife Service's Wilderness Conservation Policy, which is currently under review by the Service (Ramsay et al. 1993).

CHAPTER 4

PAST RESEARCH INTO WILDERNESS PERCEPTIONS

The generally less-developed concept of wilderness [in Australia compared to America] is reflected in the relatively small amount of research and scientific literature dealing with wilderness (Stankey 1986, p. 288).

4.1 SURVEYS UNDERTAKEN IN THE UNITED STATES

4.1.1 Wilderness Visitor Surveys

Basic data on wilderness use patterns has been collected in the United States since the late 1950s. This has shown that in the years up to 1964 use of US National Forest wilderness areas was growing at a rate of 11.5% a year, but it reduced to 4.4% a year between 1965 and 1985, and has stabilised since then at approximately eleven million visitor days a year (Lucas & Stankey 1989). More detailed data has also been collected on visitor activities and characteristics. Roggenbuck and Lucas (1987) reviewed over twenty surveys of wilderness users undertaken in more than thirty wilderness areas in the United States and found that:

- * most wilderness visitors are young (25-40% are twenty-five years old or younger) but there is a fairly wide spread of ages with 30-50% of visitors being between twenty-five and forty-five years old;
- * most wilderness visitors (70-85%) are male, although the number of female visitors is increasing;
- * 30-40% of adults are in professional and technical occupations and about 25% of adults and young adults are students;

- * most visitors have above-average incomes;
- * educational levels are high, 40-80% have attended college and 20-40% have undertaken post-graduate study;
- * 20-35% of visitors belong to conservation or outdoor recreation clubs and around 33% of club members belong to a wilderness-oriented organisation;
- * the average length of stay in wilderness areas was two to three days, with 25-50% visiting on day trips;
- * most parties are small (50-66% of parties consisted of two to four people), with large parties of more than ten people making up only 5% of use;
- * the majority of parties are groups of family or family and friends, with half the groups containing children;
- * organised groups make up less than 10% of parties;
- * most visitors to wilderness areas are from urban areas;
- * wilderness visitors are generally from the State in which the wilderness is located, although some wilderness areas attract visitors from all over the nation and overseas;

- * most wilderness visits occur on weekends, and 60% of use is in summer;
- * around 60% of visitors make a round trip of between one and ten miles, 25% make a trip of between eleven to twenty miles, and only 15% travel more than twenty miles;
- * most visitors stay on tracks and trails, with fewer than 20% of visitors travelling cross-country, and then often for only short distances; and
- * most camp near water, with 85% camping within two hundred feet of water or with water views (Roggenbuck & Watson 1989).

Hendee et al. (1990) concluded, following a review of more than ten surveys undertaken in the United States, that visitors to US wilderness areas generally:

- * are strongly against mechanised transport in wilderness areas;
- * agree that tracks and trails are appropriate in wilderness areas but prefer simple, narrow, winding, low-standard tracks rather than well-formed tracks;
- * want little or no development along tracks, except for wooden directional signs and bridges over major streams;
- * seek solitude for their own group, especially at campsites;

- * are more concerned by encounters with other user groups (e.g. horse riders and large parties) and littering, than by campsite and track degradation;
- * generally do not favour barbecues, tables or toilets at campsites but support toilets in places where they are already provided;
- * seem to be shifting towards a preference for more primitive campsites; and
- * were prepared to accept restrictions on use, such as permits and party size limits (Hendee et al. 1990, pp. 474-476)

These conclusions were verified by my own review of the results of a survey of 2,000 visitors in the north-west United States (Hendee & Catton 1968), a survey of nearly 400 visitors to four wilderness areas in the United States in 1969 (Stankey 1973) and a survey of 2,470 visitors to nine wilderness and roadless areas undertaken between 1970 and 1972 (Lucas 1980).

4.1.2 Surveys of Wilderness Managers

Most research into the perceptions of wilderness managers undertaken in the United States has been directed towards management problems. These studies have found that resource degradation, particularly at campsites, and loss of solitude were commonly perceived as problems by managers in most wilderness areas. Vandalism, off-road vehicles and lack of resources were also frequently mentioned problems (Watson 1989, p. 395).

Peterson (1974) investigated the different preferences and perceptions of managers and canoeists in the Boundary Waters Canoe Area. His survey of 185 canoeists and seventeen managers found that although there was general agreement on many factors, canoeists tended to be more favourably disposed than managers toward pristine nature, scenic grandeur and convenience facilities such as boat landings and picnic facilities.

4.2 AUSTRALIAN RESEARCH

Compared to the United States, there have been very few surveys of wilderness users in Australia and none of wilderness managers. The relevance of United States data to the Australian situation is therefore debatable. This lack of data has also meant that the development of wilderness legislation in Australia and concepts relating to wilderness, such as wilderness quality, have been largely undertaken or influenced by the academics, bureaucrats and leaders of conservation groups. Following is an overview of the main research into wilderness use and perceptions undertaken in Australia.

4.2.1 Bardwell, South West Tasmania, 1971-72

Bardwell undertook a small sample survey of 44 visitors to South West Tasmania over the 1971-72 summer. She found that blazed walking routes were supported by a majority of walkers, but well-graded walking tracks and more huts were strongly opposed. Fire trails were also opposed by a majority of walkers, while the response was divided over the desirability of basic sanitary facilities at huts and campsites. Litter and run-down campsites were considered the most annoying features by a majority of walkers (Bardwell 1978).

4.2.2 Foster, Kosciusko National Park, 1975

Foster analysed 198 questionnaires from a sample of walkers who listed their names in registration books and hut log books in Kosciusko National Park, as well as members of bushwalking clubs using Kosciusko during 1973-75. Of this sample, which Foster admits was biased towards club members and not necessarily representative of walkers within the area over this period (Foster 1975, p. 112), most were young males (15-30 years old), had attended university and came from the cities of Sydney, Canberra and Melbourne. Most groups preferred meeting a larger number of small parties than one large party, and they preferred to meet other parties during the day rather than at night. One third considered some areas were overcrowded (mainly around huts). However while most users favoured a reduction in access routes into the wilderness and a reduction in the number of fire trails/management tracks and constructed walking tracks in wilderness areas, most were also opposed to the advertising of less well used areas in an attempt to distribute use over a wider area or any form of permit to control numbers of walkers or campers (Foster, 1975, p. 116).

4.2.3 Helman, Perceptions of Conservation Groups, 1976.

Helman found that there were a variety of perceptions of wilderness held by members of conservation groups. Helman asked members of one wilderness conservation group, the Colong Committee, to mark on a set of maps the areas they considered were of wilderness status. He found that although all members of the Colong Committee identified generally the same areas as wilderness, some included roads, power lines, habitation and areas used intensively for bushwalking, while others specifically excluded these developments from wilderness areas (Helman et al. 1976, p. 65).

4.2.4 McKenry, Attitudes to Wilderness in Victoria, 1973-77

In 1974 McKenry undertook an attitudinal survey of 1,400 households in Victoria on the values of wilderness. He found that the majority of the Victorian population supported wilderness preservation (McKenry 1975), but although terms such as "natural", "beautiful", "free" and "restful" were commonly used to denote wilderness, only 18% of respondents applied terms commonly used by academics and conservationists such as "roadless" to wilderness (McKenry 1980, p. 91). McKenry also found that the majority of the 47% who considered that they had visited a wilderness area in the last twelve months nominated an area that would not normally be considered wilderness (McKenry 1980, p. 85).

Between 1973 and 1975 McKenry also undertook a survey of 475 visitors to the Baw Baw Alpine Reserve in Victoria. He found that bushwalkers, ski tourers and conservation group members showed a marked readiness to perceive as wilderness, areas which were substantially smaller than Helman's 25,000 hectares (66% of those surveyed said that all or part of the 8,000 hectare Baw Baw Alpine Reserve was wilderness). Conservation group members were more likely to see "no more facilities" in the area as desirable, and to consider vehicle tracks, unauthorised vehicles, erosion, pollution and litter as more serious problems than other users (McKenry 1977). McKenry (Mosley 1978, p. 49) suggested that most people in Victoria had a concept of wilderness "which does not necessarily preclude areas which have been visibly affected by man's activity."

4.2.5 Turner, Conservation Group Leaders, 1978.

In 1978 Turner formally investigated whether the perceptions of leaders of conservation groups were representative of the general community. Turner

surveyed approximately 750 visitors to Kosciusko, Royal and Kinchega National Parks as well as members of conservation groups, and compared this group to census information on the broader community (Turner 1979). Turner found that the leaders or "tall poppies" of the conservation groups were more likely to have attended university (84% compared to 68%), undertook a greater variety of outdoor recreation activities and were significantly more likely to value preservation of national parks than the wider public. He concluded that the leaders of conservation groups were not representative of the public, other park visitors, or even all members of the pressure groups (Turner 1981, p. 166). It should be noted however that Turner was surveying park visitors at the main vehicle entry points and only one of the three surveyed parks contained wilderness. Consequently few wilderness visitors are likely to have been included in the survey.

4.2.6 McGrath, Carrying Capacity in the Budawangs, 1981

McGrath analysed 237 questionnaires sent to a random sample of over 1500 names entered in log books in the Budawang area of Morton National Park during 1981. Almost half of those surveyed had tertiary qualifications and 31% were members of a conservation society or bushwalking club. Most (65%) had walked for two or three days although 17% had spent only 1 day in the park. Three quarters of those surveyed supported the setting aside of some natural areas as roadless or wilderness areas, but they disagreed with the maintenance of management tracks and were divided over the desirability of erecting signs in wilderness areas. McGrath noted that there was a link between high numbers of wilderness users and dissatisfaction with the recreational experience, but ten times the number of people found evidence of previous users, such as litter and erosion, more disturbing than meeting large numbers of people. Only 20% felt that the number of groups

they met reduced enjoyment of the trip and half the visitors did not notice the eroded walking tracks (McGrath 1982).

4.2.7 Stankey, Kosciusko Summit Area, 1983

Stankey analysed 921 questionnaires returned by a sample of walkers using the summit area of Kosciusko National Park over the 1982-83 summer. While the summit of Kosciusko is not a declared or proposed wilderness area due to its high use and past modifications, it was perceived by Stankey to be similar to some wilderness areas in the United States. Stankey found that most visitors to the summit area were young males, 30% belonged to conservation or outdoor recreation groups, most parties consisted of three or fewer members, and 82% were on day trips. Despite 50% of people reporting seeing seven or more parties a day, with a mean of thirteen groups a day, most respondents reported the level of encounters as being "about right" with only 18% saying there were too many people. He noted that the number of contacts reported by walkers in the Kosciusko summit area were not dissimilar to the number of contacts reported by walkers in the Desolation Wilderness Area in the United States, however in that case 49% said there were too many people in the area (Stankey 1986).

4.2.8 Lolicato & Davies, Budawang Survey, 1985.

A small survey of 33 people undertaken by the NSW National Parks and Wildlife Service in the Budawang over Easter 1985 found that most walkers spent three nights in the area and over half came from Sydney. A majority of visitors were critical of the condition of the walking tracks and wanted the walking tracks in the area marked or signposted. Most visitors did not feel the area was overcrowded (Lolicato & Davies 1985).

4.2.9 Morgan, Community Attitudes in Victoria, 1989

In 1989 another survey of community attitudes to wilderness was commissioned in Victoria, by the Land Conservation Council. It found that there had been little change in attitudes to wilderness over the fifteen years since McKenry's survey. The majority of 615 people surveyed supported the protection of wilderness and considered wilderness to be "beautiful" and "natural", but only 11% of those surveyed considered "roadless" to be a descriptor of wilderness. The survey also found that while most people considered motor vehicles and firearms to intrude upon or spoil wilderness, only 23% considered the wilderness would be spoiled by vehicle tracks, 10% were concerned by bush toilets, and less than 5% considered constructed walking tracks or old huts would spoil wilderness (Morgan 1989).

4.2.10 Small, Northern NSW Community Attitudes, 1993.

In 1993 a telephone survey was undertaken of 100 people in northern New South Wales to investigate community attitudes towards the National Parks and Wildlife Service. It found that 90% of those interviewed were in favour of the identification and protection of wilderness, but only 60% considered that the National Parks and Wildlife Service was currently preserving and managing wilderness well (Frank Small & Associates 1993).

4.4.11 Saulwick Poll, 1994.

The Sydney Morning Herald Saulwick Poll was undertaken in February 1994. Six hundred respondents in New South Wales were asked in a telephone survey if they approved of the preservation of wilderness areas and the restriction of public access to bushwalkers. It found that 54% supported the declaration of wilderness areas, 40% opposed the move, and 6% were undecided. More men than women supported wilderness

declarations (57% and 53% respectively). On an age basis, support was strongest among twenty-five to thirty-nine year olds (65%), closely followed by eighteen to twenty-four year olds (61%) and forty to fifty-four year olds (56%). However a majority of those over fifty-five (52%) were opposed to the declaration of wilderness (*The Sydney Morning Herald*, Feb. 14 1994, p. 4).

4.3 NEW ZEALAND STUDIES

A survey of wilderness visitors undertaken in New Zealand by Wilson in 1979 (Kearsley 1990) noted that there was considerable agreement between members of a walking club and members of the general public as to what constituted wilderness in terms of adjectival selection, but that walkers tended to be more purist in regard to the provision of access and facilities in wilderness areas. Walkers did not consider it was possible to have wilderness where there was any sign of people or their artefacts, while most of the general public surveyed considered that there was no inconsistency in facilities such as huts, tracks, swing bridges or toilets being located in a wilderness. Vehicular access was however "vehemently rejected" by both groups.

A later study of 233 backcountry users by Shultis (Kliskey & Kearsley 1991) found that while 18% of the sample rejected all developments, the remainder considered bridges/walkwires, maintained tracks and maintained huts/shelters acceptable in wilderness.

4.4 COMPARING PAST RESEARCH

Most research to date, both in the United States and Australia, has been directed towards the identification of the demographic characteristics of wilderness users and the delineation and assessment of wilderness quality, rather than to determining how wilderness should be managed.

While it is difficult to generalise from such a small number of surveys it appears that, like their American counterparts, Australian wilderness users:

- * are mainly young males;
- * are highly educated;
- * most are from urban areas;
- * around one third are members of conservation groups or bushwalking clubs; and
- * generally spend between less than a day, but may spend up to two to three days, on their walk.

Australian bushwalkers differed from US walkers and from conservation group leaders in that they were undecided or divided over:

- * the minimum size of wilderness;
- * the acceptability of management tracks/fire trails in wilderness;
- * the acceptability of facilities such as well-constructed walking tracks and toilets; and
- * the total number of people acceptable in wilderness.

New Zealanders were also divided over the acceptability of recreational facilities in wilderness areas.

A number of possible explanations have been put forward to explain differences between Australian and US survey results. Helman et al. (1976) hypothesised that differences in landscape rather than attitudes might be the determining factor, Stankey (1986) suggested that perceptions might be influenced by cultural factors, while Robertson et al. (1992) suggested that differences in the number of people visiting wilderness areas in Australia may have led to less concern by users with the number of people encountered in Australian surveys. Whatever the basis, Stankey's conclusion appears valid that there are differences between the two countries in the meaning, appropriate use and management of wilderness areas and it is questionable how much United States studies should be used as a basis for decisions in Australia (Stankey 1986, p. 295).

PART II

CHAPTER 5

RESEARCH METHODOLOGY

Although use of wilderness areas appears similar in the two countries, perception of the meaning of these areas and their appropriate use and management appears mitigated by cultural influences (Stankey 1986, p. 287).

5.1 DEVELOPMENT OF THE QUESTIONNAIRE

Stankey made the above statement based on a comparison of visitors to the Summit Area of Kosciusko National Park in Australia and visitors to four wilderness areas in the United States. However the summit of Mount Kosciusko is not legally designated as wilderness, nor is it commonly regarded as wilderness by park staff due to the high numbers of people using the raised walking track to the summit during peak periods.

In order to verify whether Stankey was correct that there were different perceptions of the meaning and appropriate use of wilderness between Australia and the United States, or whether the vast amount of US data could be used as a basis for making decisions about the use and management of Australian wilderness, it was decided to survey visitors to a number of wilderness areas in New South Wales.

To permit a direct comparison to be made between the results obtained from the United States and Australia, Stankey's 1969 survey of 493 visitors to four wilderness areas in the United States (Stankey 1972, 1973) was used as the basis for this study. Stankey designed the first part of his questionnaire so that he could obtain a measure of the extent to which the respondents'

personal concept of wilderness coincided with wilderness as defined by the US Wilderness Act (Stankey, 1973). A five-point affective scale (Likert scale) was used by Stankey to obtain a range of responses (from very desirable to very undesirable) to fourteen aspects of wilderness:

- absence of man-made features, except trails;
- lakes behind small man-made dams;
- gravel roads;
- private cabins;
- stocking the area with kinds [sic] of game animals that are not native to the area;
- developed campsites with plank tables, cement fireplaces with metal grates, and outhouses;
- lots of camping equipment to make camping easy and comfortable;
- stocking the area with kinds of fish that are not native to the area;
- no motorised travel by visitors;
- forest, flowers, and wildlife much the same as before the pioneers;
- solitude (not seeing many other people except those in your own party);
- covers a large area (at least 25 square miles);
- remote from towns and cities; and
- little evidence of other visitors before you (Stankey 1973, p. 10)

Stankey summed the responses of each individual to develop a "purism" score and ranked respondents along a continuum from strong purist to non-purist according to their concept of wilderness. He then evaluated user attitudes towards levels and types of use in the light of the purism of each individual (Stankey 1972).

Stankey's purism scale can be criticised on the basis that there is no reason why a high score on one factor, such as naturalness, should also necessitate a high score on another factor, such as solitude. Stankey however justified his own methodology on the grounds that it "seeks to measure the extent to which the individual's definition of wilderness conforms to the Wilderness Act, which is also multidimensional" (Stankey 1973, p. 12).

5.2 THE QUESTIONS

The core wilderness questions developed for this study were, like Stankey's questions, developed to test how closely perceptions of wilderness coincided with legislation relating to the management of wilderness - in this case the NSW Wilderness Act. They were also based on the NSW National Parks and Wildlife Service's wilderness management policies, particularly those policies relating to recreational use of wilderness.

Some questions asked by Stankey were included in the questionnaire to permit direct comparison between the two surveys, however those questions relating to activities which were clearly unacceptable in wilderness under the NSW Wilderness Act or policy (such as motorised travel by visitors, private cabins and stocking the area with introduced game animals) were not asked in this study. However a number of issues relating to wilderness management are not clearly resolved by the Wilderness Act or National Parks and Wildlife Service Wilderness Conservation Policy. Neither the act nor the policy clearly state whether visitor facilities, such as pit toilets and walking tracks, are permissible in wilderness or whether they are excluded because they are not "self-reliant" (Section 9, Wilderness Act 1987). A similar problem occurs with bicycles as the policy states "mechanical personal transport must be manually powered". While this statement appears to some people to permit bicycles, others maintain that bicycles are not a self-reliant form of recreation. As a result there is a confused situation with cycling permitted in some wilderness areas but not others (Ramsay 1991). Horseriding is not permitted in Australian wilderness areas but it was included in the survey because horseriding is allowed in US wilderness areas and it is frequently suggested it should also be permitted in Australian wilderness.

It should be noted that visitors were not asked about operational issues, such as fire management in wilderness, as these were considered to be beyond the general knowledge of most members of the community. This decision was based on a previous survey of visitors to Morton National Park which found that questions relating to fire management could not be answered in a short period of time and without a great deal of explanation (Lolicato 1985).

The questionnaire was tested in the Budawang area of Morton National Park. Based on responses obtained from the eight groups surveyed in the pre-test, and on advice from National Parks and Wildlife Service staff, the questionnaire was modified before the first survey was undertaken in Morton National Park. Small changes were later made to the Kosciusko National Park questionnaire and the Sydney Harbour National Park questionnaire to meet specific management needs in each of these areas, however the core wilderness questions remained the same in all surveys (the questionnaires are included as Appendices A, B and C).

No attempt was made in the questionnaire to define wilderness or to make specific reference to legally declared wilderness areas. The questions were asked in relation to wilderness generally, and prefaced by the following statement which attempted to make this theoretical framework clear:

One of the issues in park management at present is wilderness. We would like your opinion on wilderness. Please tell me how desirable you think the following are in wilderness areas. There are no right or wrong answers; we are just interested in your opinion.

Visitor opinions were sought on the following ten issues which were intended

to cover the range of possible facilities and activities which might be permitted in wilderness:

- * Little evidence of other visitors before you;
- * Management tracks, such as fire trails;
- * Well-constructed walking tracks;
- * No man-made features except walking tracks;
- * No man-made features at all;
- * Campsites with basic facilities, such as pit toilets;
- * Natural bushland (no weeds, erosion or clearings);
- * Solitude (not seeing many other people except those in your own party);
- * Horse riding; and
- * Bicycles (e.g. mountain bikes).

Respondents were given the option of responding either "very desirable", "desirable", "neither desirable nor undesirable", "undesirable" or "very undesirable" to each factor.

Those people surveyed in wilderness areas were also asked whether they thought the area in which they had been walking was wilderness, while those interviewed in non-wilderness areas were asked whether they thought they had ever visited a wilderness and, if so, which wilderness areas they had visited.

In addition to perceptions and attitudes, visitors were asked their response to a number of possible management actions which could be undertaken in the park. Because these questions were site specific and subject to the conditions in that park, no comparison was undertaken of the responses to these questions from the different survey locations.

5.3 SOCIAL CHARACTERISTICS OF VISITORS

Information was also obtained on the visitors' previous bushwalking experience, membership of outdoor recreation or conservation organisations, education, age and place of residence, to determine whether these factors would affect the perceptions of visitors. It was hypothesised that:

1. younger visitors would hold stronger environmental attitudes to wilderness than older visitors given that society has become more environmentally conscious in recent years and younger visitors would be more likely to "rough it" than older visitors;
2. those with tertiary education would, due to the influence of wider reading and peer group pressure to protect the environment, hold purer views than those without tertiary experience;
3. members of conservation or bushwalking clubs would hold purer views than non-members because conservation and bushwalking magazines generally provide information on wilderness and promote the conservation of wilderness areas along lines consistent with the Wilderness Act;

4. those with experience in bushwalking and camping out overnight in large natural areas would be more likely to support few facilities in wilderness because they currently visit such areas; and
5. those visitors whose place of residence was in an Australian capital city would be more likely than those from country areas to have views that coincided with the NSW Wilderness Act, as NSW country politicians have continued to maintain that the Wilderness Act was written by "city greenies" who have no understanding of the views of rural New South Wales.

5.4 THE STAFF SURVEY

The staff survey canvassed attitudes to the same ten core wilderness issues as those asked of park visitors. In addition, staff were asked their attitudes to a further ten issues relating to the management of wilderness areas, whether a number of issues were problems in wilderness areas, and what they believed should be the priority areas for funding. Staff were also asked their position within the Service, qualifications and wilderness management experience to determine whether their personal background would affect the response (Appendix D).

5.5 SURVEY LOCATIONS

Visitors to a number of wilderness areas, rather than only one park or wilderness area within New South Wales, were surveyed in order to determine whether the physical or management conditions in an area would

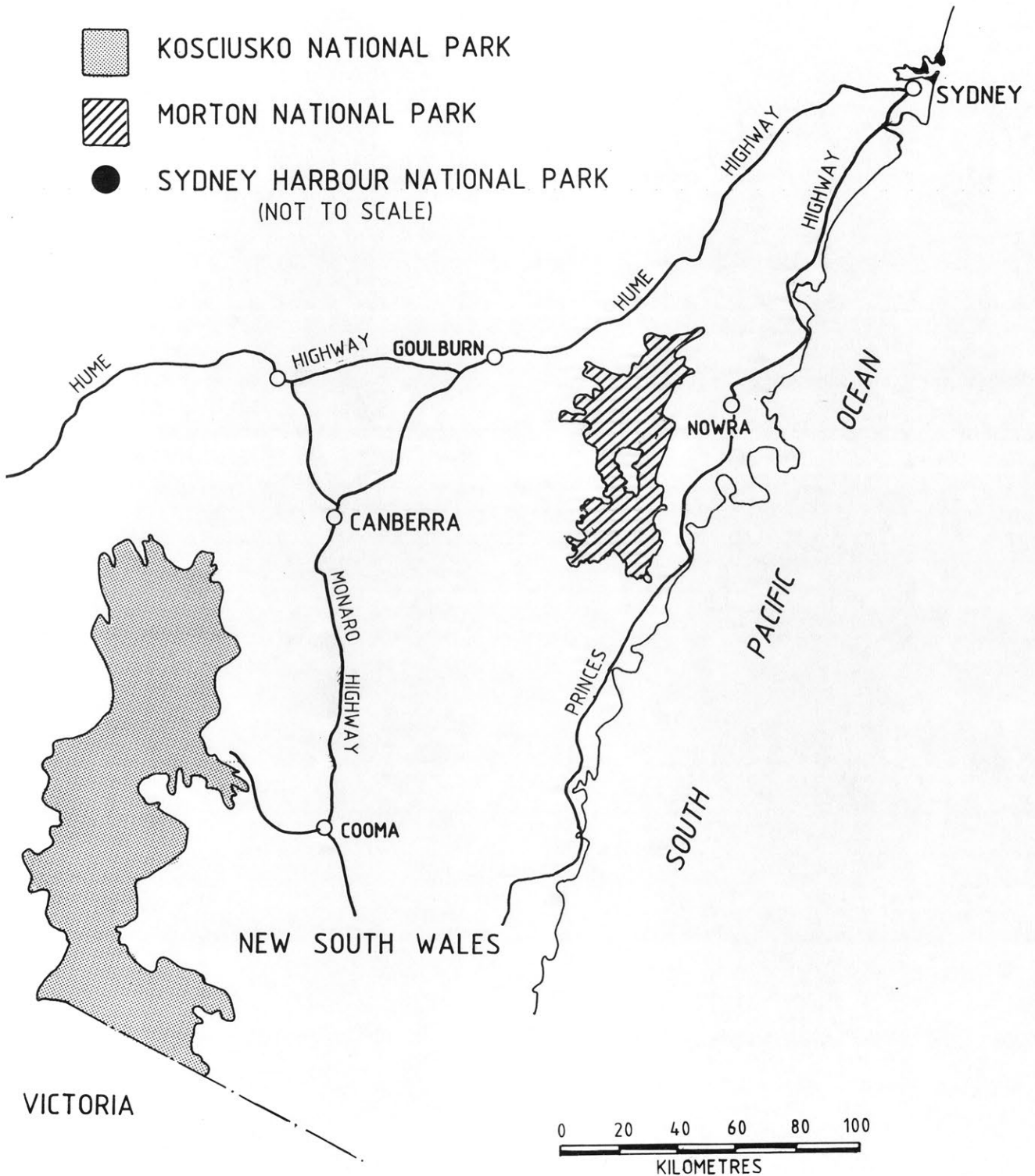
affect the response. The areas selected were the Pilot and Jagungal wilderness areas in Kosciusko National Park, and the Ettrema wilderness and proposed Budawang wilderness area in Morton National Park. To determine whether the response would be the same from users and non-users, it was also decided to survey a sample of non-wilderness users, from the Cooleman area of Kosciusko National Park and the Manly Scenic Walkway in Sydney Harbour National Park. The areas selected were all in the south-east of the State (Figure 5.1). It was considered that the level of public controversy current in the north of New South Wales was likely to skew perceptions in that area, while only one wilderness area has to date been declared west of the Great Dividing Range.

5.6 IMPLEMENTATION OF THE SURVEY

Visitors to the wilderness areas were approached as they returned to their cars at the end of their walk or bicycle ride in the wilderness. A specific attempt was made to approach a random member of each group to respond to the survey. At some sites a random number table was used to select a respondent, while at others one individual was selected from the next group past the interviewer - with conscious efforts made to vary between selection of male/female, leader/member of party, and age categories.

Respondents on the Manly Scenic Walkway were also selected on a random basis from the next group past the interviewer, while those in the Cooleman area were selected from those participating in Ranger-guided walks, thus ensuring that all respondents had an interest in the national park and were not just "stopping off" on their way through the park.

Figure 5.1 Survey Locations



Wilderness visitors were interviewed when they returned to their cars. Walkers in the rain at Round Mountain, Kosciusko National Park.



Visitors on the Manly Scenic Walkway were approached on a next-past-the-interviewer basis.



Although the basis of the survey was the questionnaire, responses to which could be assessed quantitatively, the personal interview approach also permitted a measure of qualitative research. The interest of most respondents was such that a questionnaire designed to be answered in ten minutes often led to a twenty minute or longer discussion, which then had to be terminated by the interviewer in order to interview other park visitors. Any additional comments made by respondents were noted in the margins of the questionnaire so that they could be used to clarify responses later if necessary.

5.7 ANALYSIS OF THE QUESTIONNAIRES

The questionnaires were analysed using the Statistical Program for the Social Sciences (SPSS for Windows). The main tests used were frequency distributions and cross-tabulation or correlation tests. The chi-square test was used to determine whether the observed frequencies were different from the expected frequencies and consequently whether the variables were independent or related. To obtain statistically significant chi-square results, the desirable and very desirable responses were combined and the undesirable and very undesirable responses were combined. Only those results with a chi-square significance of less than .05 were considered statistically significant, as this indicates that the result would have occurred by chance no more than 5% of the time.

It should be noted that this was a sample survey only, and in some areas the sample was quite small. All sample surveys are subject to a certain margin of possible error. A sample is an attempt to represent a population and, although procedures were followed to ensure representativeness, there is always a possibility that an unrepresentative sample has been selected by chance. The larger the sample, the lower the probability of this happening (Nyman et al. 1991).

In all wilderness surveys it is difficult to obtain a sufficiently large sample. Even popular wilderness areas do not attract as many visitors as popular picnic areas. Therefore, to enable a sufficient number of questionnaires to be administered in the time available, all the wilderness surveys were conducted over public holiday weekends. This may have biased the survey in favour of people who were restricted in the time of year they could go bushwalking and those who did not consider that solitude was essential for them to enjoy their bushwalking experience (solitude is very difficult to obtain in any area over public holidays). Despite the choice of peak times for the survey, the sample obtained from some areas was still small, and the responses were therefore aggregated into either wilderness or non-wilderness areas. However, where the responses from the different wilderness and non-wilderness areas were significantly different, these differences have been noted.

In analysing the data it became clear that the collection of the age of respondents in predetermined categories presented major difficulties. The numbers of people interviewed who were below the age of twenty-five or over the age of sixty were too small for any reasonable conclusions to be made from the sample about the general population.

Another difficulty in the analysis was related to the question on the desirability of "no man-made features except walking tracks". It became evident during the survey that it was difficult for some respondents who thought there should be "no man-made features at all" to decide whether to respond in the positive or negative to "no man-made features except walking tracks" (a statement which implies walking tracks will be provided). Additional comments written in the margins of these questionnaires made it possible however for some interpretation, as many noted that there should be no constructed walking tracks but it would be unreasonable to expect there would be no sign of previous visitors to the area. The response of people who believed that there should be no man-made features at all was therefore modified where necessary to show that they also supported "no man-made features except walking tracks". This then allowed a comparison between those who thought walking tracks were acceptable but not other features and those who thought there should also be other man-made features in addition to walking tracks.

CHAPTER 6

PERCEPTIONS OF WILDERNESS VISITORS

Unlike many of our fine national parks with their bitumen roads, camping grounds, amenities, walking tracks, recreation facilities and the like, wilderness stands as a stark reminder of what once was. It reminds us of the ancient life of this continent (Carr, NSW Legislative Assembly 1987, p. 15930).

6.1 THE SURVEY SAMPLE

A total of 112 questionnaires from wilderness visitors was analysed: 42 from wilderness areas in Kosciusko National Park, 11 from the Ettrema Wilderness in Morton National Park and 59 from the Budawang proposed wilderness area which is also in Morton National Park.

The Morton surveys took place on a weekend before Easter and over the Easter long weekend in 1991. The high numbers of people in the park at this time may have biased the sample in favour of those people who did not object to large numbers of other walkers (some of those surveyed on days outside the holiday period noted that they would not walk in the park during school holidays because of the large numbers of people in the park at that time).

The proposed Budawang wilderness is a very popular bushwalking area (it is estimated that over the survey weekend there were over 350 people walking in the Budawang area). Visitors were approached at three major car parks and track heads surrounding the main Budawang bushwalking area: Wog Wog, Long Gully and Newhaven Gap (see Figure 6.1). The Budawang wilderness contains a network of walking tracks, some of which have recently been upgraded by the placement of stepping stones or logs across

boggy areas, but no other facilities. There are no management tracks in the Budawangs and horseriding is not permitted in the area. Although cyclists have been reported in the Budawangs, the country is generally too steep and rough for cycling.

Although the number of interviews obtained from visitors to Ettrema was very small (eleven in total), it is believed that almost all groups walking in the western part of the Ettrema Wilderness on the Easter weekend were surveyed. Ettrema is a rugged wilderness area which contains no walking tracks or other facilities. Ettrema visitors were approached when they returned to their cars which were parked along the Tolwong Road on the western edge of the wilderness (Figure 6.1). No cycling or horseriding is known to occur in this part of Ettrema.

The survey in Kosciusko National Park was undertaken over the four days of the Australia Day weekend in January 1993. There was rain on all but one day of the survey period and this decreased the number of people in the park and consequently the response to the survey. Visitors were interviewed near Thredbo on the Cascades Track into the Pilot Wilderness and at the Round Mountain carpark and track head on the western edge of the Jagungal Wilderness (Figure 6.2). Both these wilderness areas are popular bushwalking areas and contain well-constructed management tracks and walking tracks. A number of old stockmen's huts remain within the wilderness areas and some huts have toilets nearby. Cycling and horseriding are both popular activities in parts of Kosciusko National Park although horseriding is not permitted in the wilderness.

Figure 6.1 Morton National Park

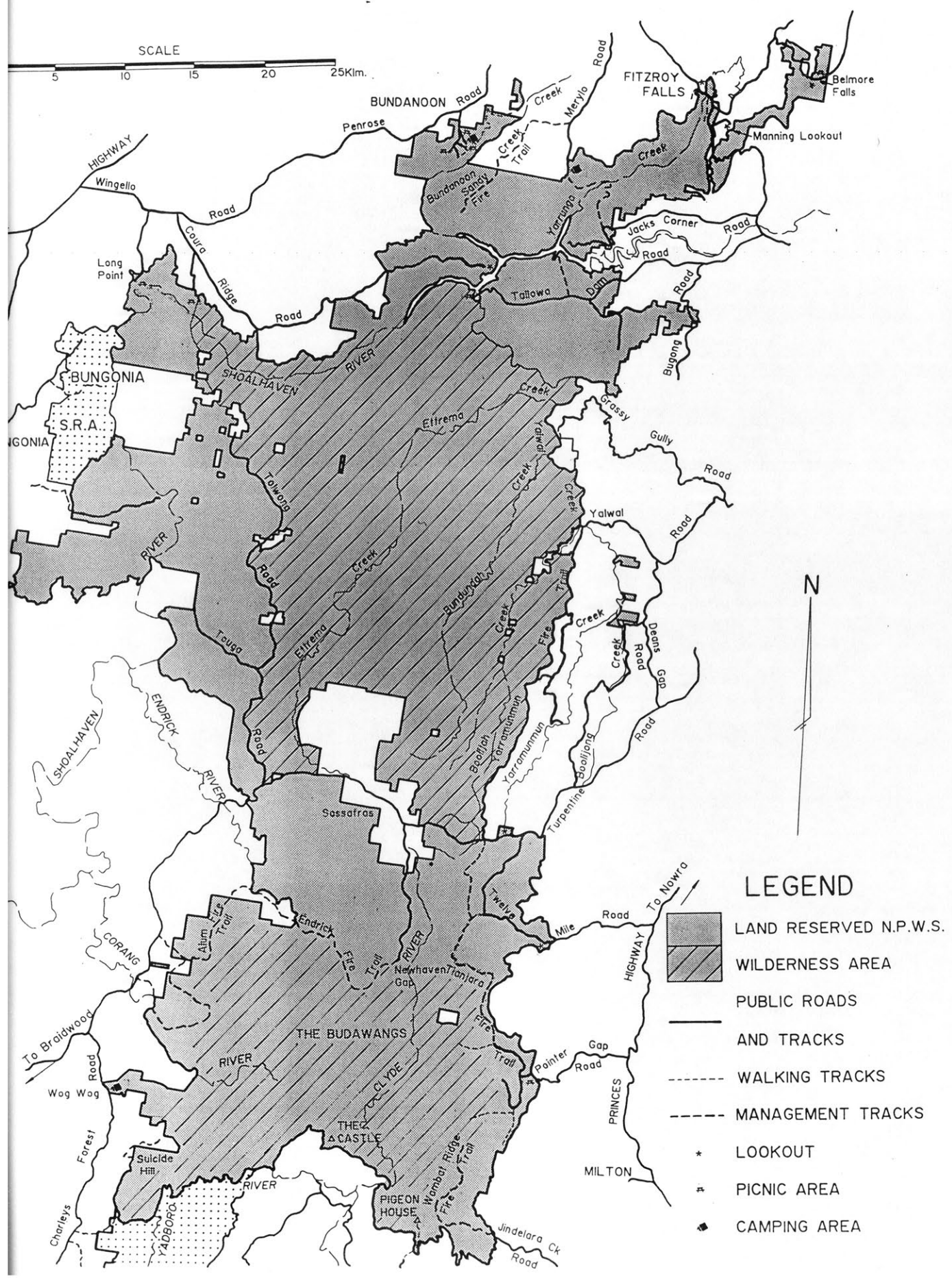
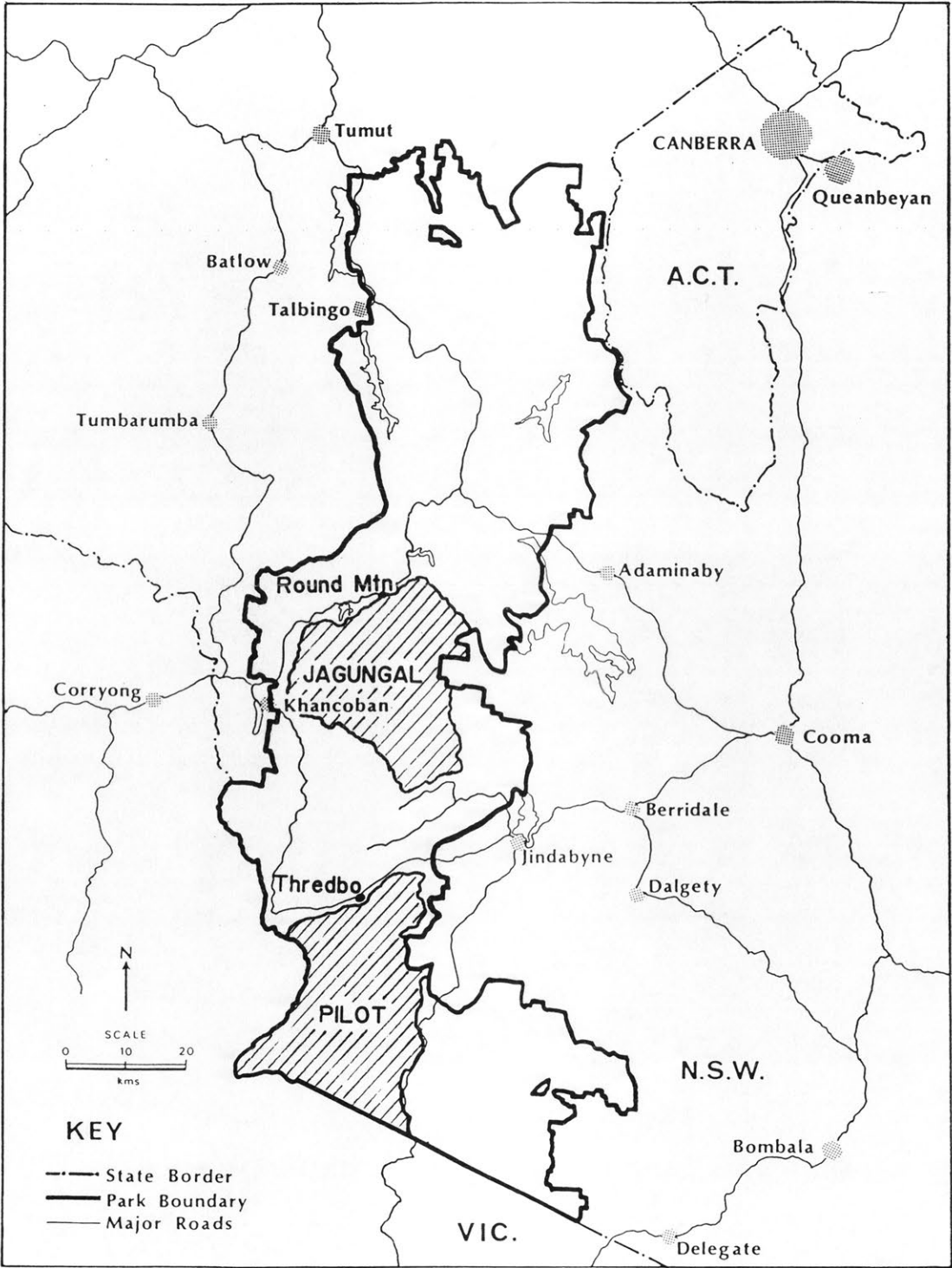


Figure 6.2 Kosciusko National Park



The Budawang and Ettrema Wilderness Areas



Walking Track into the Budawangs from Wog Wog



The Jagungal Wilderness



The Pilot Wilderness

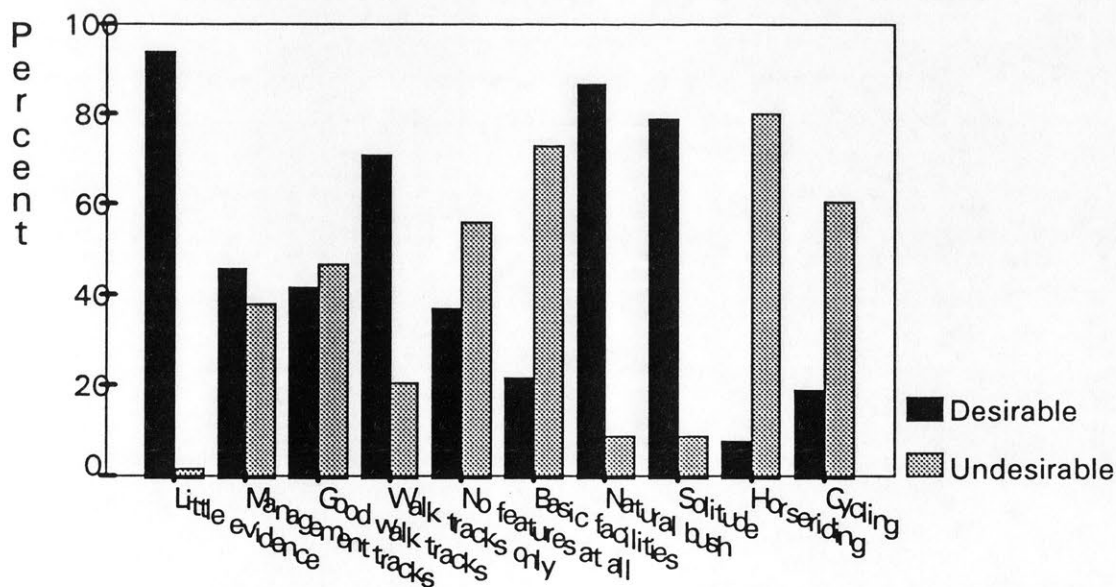


6.2 RESPONSE TO THE CORE WILDERNESS QUESTIONS

Over 70% of the 112 wilderness visitors surveyed thought that little evidence of other visitors, natural bushland, solitude and walking tracks only was desirable or very desirable in wilderness areas. There was opposition by over 70% of those surveyed to horseriding and basic facilities at campsites in wilderness areas. Over 60% of wilderness visitors were opposed to cycling in wilderness areas.

The response was more evenly divided on the issues of management tracks and well-constructed walking tracks in wilderness areas, with a small majority in favour of management tracks and opposed to well-constructed walking tracks.

Figure 6.3 Perceptions of Wilderness Visitors



6.3 IS IT WILDERNESS?

Just over half of those interviewed in Kosciusko National Park and the Budawang area of Morton National Park considered that the area met their perception of a wilderness (55% and 56% respectively), while 100% of those interviewed in Ettrema considered that area to be wilderness.

Those visitors who thought they had been walking in a wilderness were asked where they thought the wilderness began. The response varied from "at the start of the walking track" to "after one day's walk", however most thought the wilderness started "when out of sight of the road" (45%) or "two or three kilometres from the road" (36%).

6.4 AGE

Just over half of all wilderness visitors surveyed (54%) were between twenty-five and forty years of age, with 11% being under twenty-five, 33% between forty and sixty, and 2% over sixty years old. There appeared to be no relationship between the age of the respondent and perceptions as to what factors were desirable in wilderness.

6.5 EDUCATION

A majority of wilderness visitors (88%) had undertaken some tertiary studies and 63% had four or more years tertiary education. There appeared to be no relationship between the level of tertiary education of wilderness visitors and their perceptions of what facilities and activities were appropriate in wilderness areas.

6.6 PREVIOUS BUSHWALKING EXPERIENCE

Most wilderness visitors (86%) had visited other national parks in New South Wales over the last twelve months, and 80% of wilderness visitors surveyed had camped out overnight either on this trip or on a previous bushwalk in the last twelve months. Most of those who had not been on an overnight walk in the last twelve months were in the Pilot area of Kosciusko National Park.

There was a relationship between overnight bushwalking experience and the desirability of management tracks, well-constructed walking tracks and no features at all in wilderness areas. Wilderness visitors with no overnight bushwalking experience in the last twelve months appeared more likely than those with bush camping experience to consider management tracks and well-constructed walking tracks to be desirable in wilderness, and to consider no features at all to be undesirable in wilderness. Wilderness visitors with overnight bushwalking experience generally opposed good walking tracks but were more equally divided on the other issues.

Table 6.1 Relationship between Overnight Bushwalking Experience and Desirability of Good Walking Tracks (%)

Overnight Experience	Desirability of Good Walking Tracks*		
	Desirable	Neither	Undesirable
Camped	34.8	13.5	51.7
Not camped	69.6	0.0	30.4
Total	42.0	10.7	47.3

n=112

Chi-square = 10.09968, significance = .00641

*recoded from original five point scale

Table 6.2 Relationship between Overnight Bushwalking Experience and Desirability of Management Tracks (%)

Overnight Experience	Desirability of Management Tracks		
	Desirable	Neither	Undesirable
Camped	37.1	20.2	42.7
Not camped	78.3	0.0	21.7
Total	45.5	16.1	38.4

n=112

Chi-square = 13.54974, significance = .00114

*recoded from original five point scale

Table 6.3 Relationship between Overnight Bushwalking Experience and Desirability of No Features At All (%)

Overnight Experience	Desirability of No Features At All*		
	Desirable	Neither	Undesirable
Camped	40.4	10.1	49.4
Not camped	21.7	0.0	78.3
Total	36.6	8.0	55.4

n=112

Chi-square = 6.81646, significance = .03310

*recoded from original five point scale

6.7 MEMBERSHIP OF CONSERVATION ORGANISATIONS

Just over one third of wilderness visitors (38%) were members of conservation organisations. There appeared to be no relationship between whether or not people were members of conservation organisations and their perceptions of appropriate facilities and activities in wilderness areas.

6.8 PLACE OF RESIDENCE

Approximately 80% of wilderness visitors resided in an Australian capital city and 20% lived in country towns or rural areas. Two individuals interviewed in the wilderness were visitors from overseas and consequently were not included in the analysis as being either city or country.

There appeared to be a definite relationship between place of residence and attitudes towards management tracks and horseriding in wilderness areas. Country residents were more likely than city residents to consider management tracks and horseriding to be desirable in wilderness, although it should be noted that overall a majority of country residents opposed horseriding in wilderness areas. City residents were strongly opposed to horseriding in wilderness areas but more equally divided over the desirability of management tracks.

Table 6.4 Relationship between Place of Residence and Desirability of Management Tracks (%)

Place of Residence	Desirability of Management Tracks*		
	Desirable	Neither	Undesirable
City	38.5	17.6	44.0
Country	78.9	10.5	10.5
Total	45.5	16.4	38.2

n=110

Chi-square = 10.74683, significance = .00464

*recoded from original five point scale

Table 6.5 Relationship between Place of Residence and Desirability of Horseriding (%)

Place of Residence	Desirability of Horseriding*		
	Desirable	Neither	Undesirable
City	3.3	12.1	84.6
Country	31.6	10.5	57.9
Total	8.2	11.8	80.0

n=110

Chi-square = 16.80195, significance = .00022

*recoded from original five point scale

6.9 AREA DIFFERENCES

Although the majority of wilderness visitors supported management tracks in wilderness and opposed well-constructed walking tracks, campsites with basic facilities such as pit toilets, no man-made features at all and bicycles in wilderness, the response was not consistent across all areas or even within the one national park.

Management tracks and well-constructed walking tracks were supported by a majority of Kosciusko visitors, but around half of those interviewed in Morton National Park thought that management tracks and good walking tracks were undesirable in wilderness. All of those interviewed in Ettrema considered well-constructed walking tracks to be undesirable in wilderness. Visitors to Morton National Park were also divided over no man-made features at all (Ettrema visitors were in favour and Budawang visitors against) but no man-made features at all was opposed by a majority of those interviewed in Kosciusko National Park. Kosciusko visitors were divided over basic facilities such as pit toilets at campsites and bicycles in

wilderness, but both bicycles and basic facilities at campsites were considered undesirable in wilderness areas by Morton visitors.

It should be noted that all of those surveyed in Morton National Park were walking but eight people surveyed in Kosciusko National Park were cycling. Cyclists were, not surprisingly, more likely to consider cycling desirable in wilderness. There were no significant differences between the responses of cyclists and walkers on other issues.

**Table 6.6 Attitudes towards Wilderness by
Wilderness Visitors (%)**
(Majority response to each question)

	J	P	E	B	Total
Little evidence	+82	+92	+100	+97	+94
Management tracks	+59	+80	-64	-46	+46
Well-constructed tracks	-48	+64	-100	-46	-47
Walk tracks only	+70	+52	+73	+80	+71
No features	-52	-80	+91	-56	-55
Basic facilities	-47	+48	-91	-90	-72
Natural bushland	+94	+82	+100	+81	+87
Solitude	+82	+64	+91	+81	+79
Horseriding	-82	+40	-82	-85	-79
Bicycles	-53	+23	-82	-71	-61

J = Jagungal Wilderness (Kosciusko National Park)

P = Pilot Wilderness (Kosciusko National Park)

E = Ettrema Wilderness (Morton National Park)

B = Budawang Proposed Wilderness (Morton National Park)

+ = desirable or very desirable response

- = undesirable or very undesirable response

6.10 RESPONSE TO OTHER QUESTIONS

Although most wilderness visitors (79%) desired solitude, most were also opposed to any control measures to increase solitude such as bushwalking permits and restricting visitor numbers during peak periods (62% and 54%

respectively). Wilderness visitors were also opposed to restricting camping to designated sites and divided over the desirability of prohibiting wood fires (Kosciusko visitors supported no wood fires but Morton visitors did not) and placing limits on the size of groups (supported in Ettrema but the response was divided in all other locations).

Table 6.7 Opinions on possible management actions (%)
(Majority response)

	J	P	E	B	Total
Good quality tracks	+40	+96	-82	+39	+49
Bridges, etc.	+76	+92	-64	+58	+66
Signs, track markers	+64	+76	-82	+70	+64
Pit toilets	+80	+76	-82	-58	+50
Designate camp sites	-87	-52	-82	-58	-63
Prohibit fires	+40	+64	-73	=43	=44
Permits	-73	-52	-73	-61	-62
Restrict numbers	-73	=46	=46	-54	-54
Limit group sizes	+33	=42	+73	+48	+43

J = Jagungal Wilderness (Kosciusko National Park)

P = Pilot Wilderness (Kosciusko National Park)

E = Ettrema Wilderness (Morton National Park)

B = Budawang Proposed Wilderness (Morton National Park)

+ = desirable or very desirable response

- = undesirable or very undesirable response

= = same percentage desirable and undesirable response

6.11 CONCLUSION

Wilderness visitors overall had attitudes which were generally consistent with the Wilderness Act and wilderness management policies on most issues, although they were divided over the desirability of management tracks and well-constructed walking tracks in wilderness.

Wilderness visitors generally opposed any controls and restrictions on their activities, with the exception of limits on the size of groups. Such a response is consistent with the principles of the NSW Wilderness Act that wilderness

should provide opportunities for "self-reliant recreation" but is not consistent with maintaining opportunities for solitude in wilderness areas.

There appeared to be a definite relationship between the attitudes of wilderness visitors and their previous overnight bushwalking experience and place of residence. Those people with no recent overnight bushwalking experience were far more likely to favour management tracks and well-constructed walking tracks in wilderness, while country residents were far more likely than city residents to favour management tracks in wilderness. It is probable that if visitors had been asked whether they had undertaken an overnight bushwalk within the last two or three years rather than in the last twelve months the differences in the response by those with and without overnight bushwalking experience would have been even greater, because many people do not undertake overnight bushwalks every year.

There were also significant differences in the factors supported and opposed by respondents from the different wilderness areas surveyed. These differences appear to be associated with the different conditions present in each area. For example, management tracks were supported by a majority of visitors to Kosciusko National Park, which contains a large number management tracks, but opposed by a majority of visitors to Morton National Park, which has no management tracks within the wilderness areas surveyed. Similarly walkers in the Ettrema Wilderness, which has no facilities at all, opposed all facilities in wilderness areas. It should however be noted that there were a higher number of people with little overnight bushwalking experience and a relatively high number of cyclists using Kosciusko National Park, both of which could also have affected the majority response.

CHAPTER 7

THE NON-WILDERNESS RESPONSE

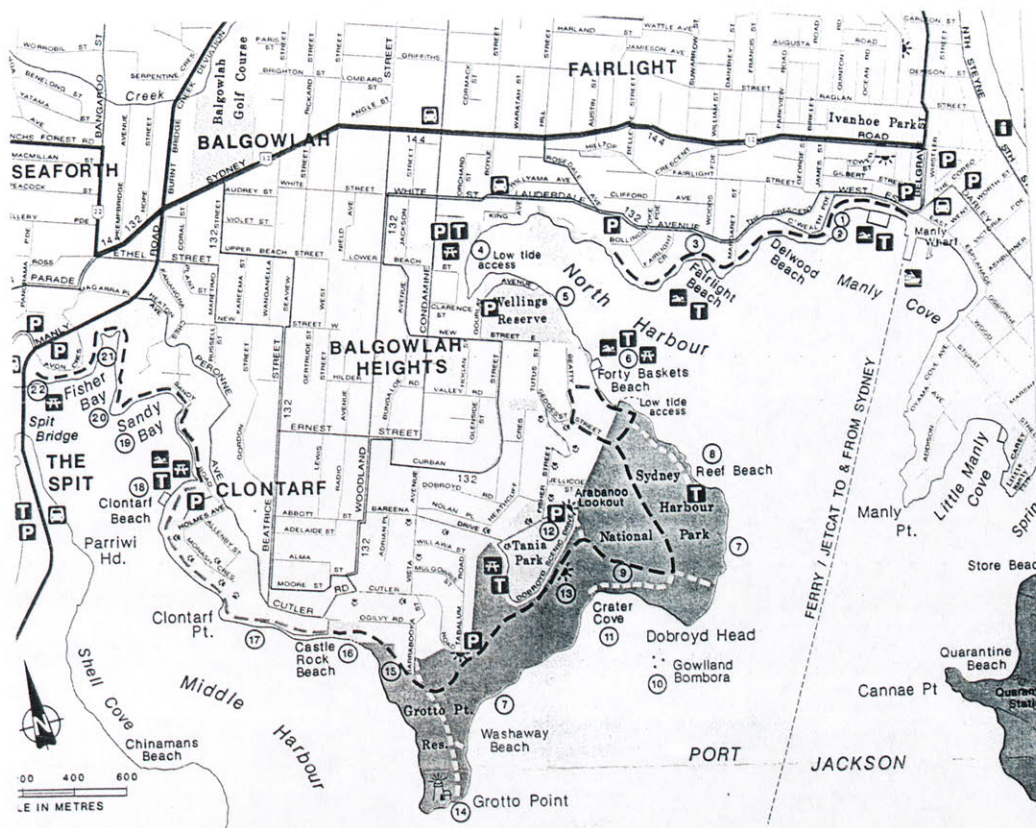
A study of persons who consider they have visited wilderness in the last twelve months may provide no insight into the characteristics, habits, aspirations and attitudes of those people who penetrate one or other of those few [wilderness areas] in Eastern Australia (McKenry 1988, p. 85).

7.1 THE SURVEY SAMPLE

To test whether the location of the survey would affect perceptions of wilderness, visitors to two non-wilderness areas were also surveyed. A total of 83 questionnaires were analysed from non-wilderness visitors, consisting of 54 from people walking on the Manly Scenic Walkway in Sydney Harbour National Park and 29 from visitors in the Cooleman area of Kosciusko National Park.

The Manly Scenic Walkway is a ten kilometre walking track through bushland between the Spit Bridge and Manly within urban Sydney (see figure 7.1). It is a well-constructed walking track which has signs describing the vegetation and views, and bench seats at selected locations along the track. Horses are not permitted on the track and the many steps make it unsuitable for cycling. The Manly Scenic Walkway is popular with people who enjoy an half to one day bush walk within Sydney. All respondents to the questionnaire were approached and asked to participate in the survey at the Grotto Point Lookout, approximately half way along the walk.

Figure 7.1 Manly Scenic Walkway, Sydney Harbour National Park



Grotto Point Lookout, Manly Scenic Walkway

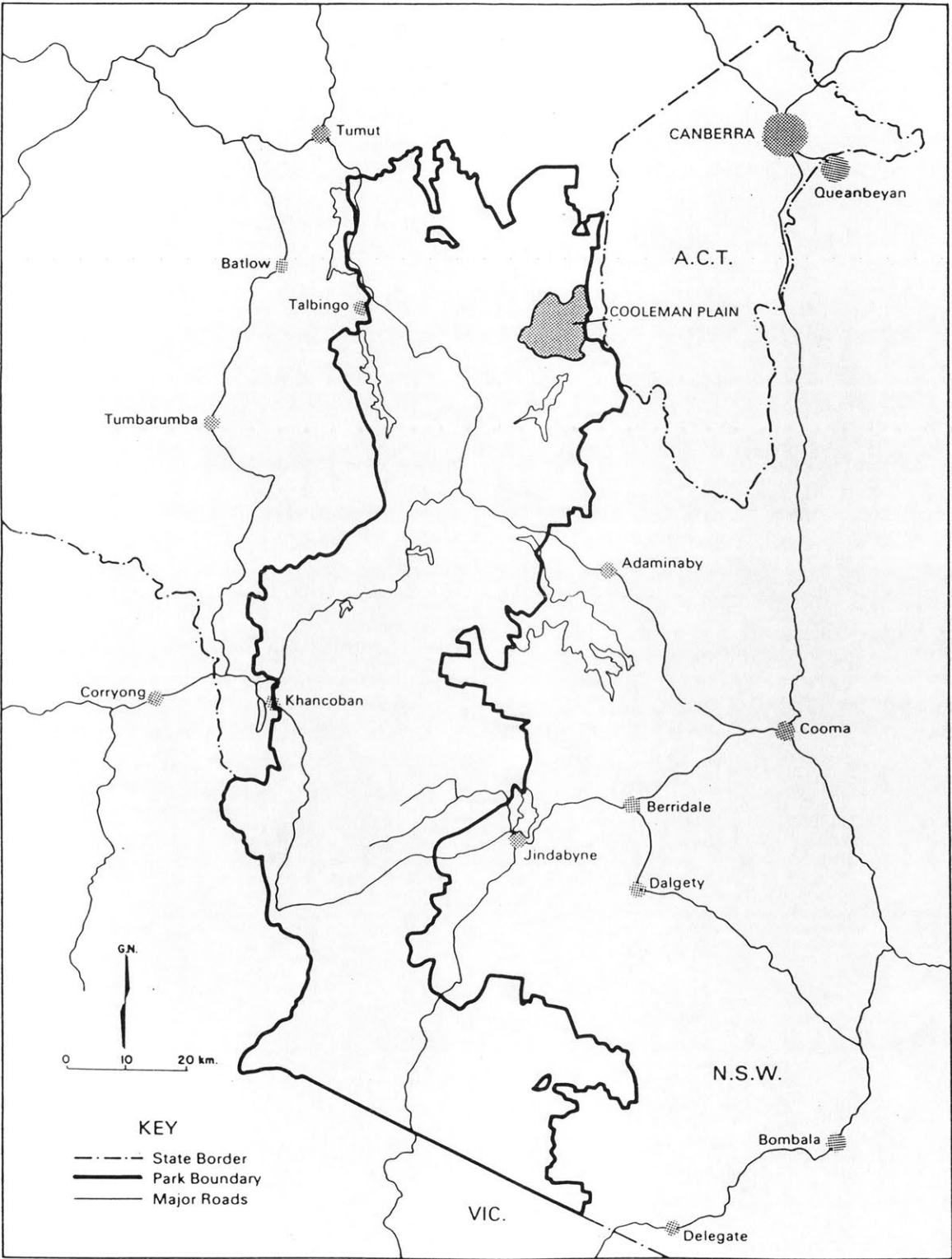


The Cooleman area is very different from the Manly Scenic Walkway. It is located in the northern end of Kosciusko National Park (see figure 7.2). Most people surveyed had travelled by four wheel drive vehicle along dirt roads to the remote drive-in camping area near Blue Waterholes in the centre of the Cooleman plains. Bushwalking (mainly day walks rather than overnight walks), caving, four wheel driving, cycling and horseriding are popular activities in the area. The camping area often attracts large organised groups, and can become crowded at peak times. The survey took place over the Australia Day weekend in January 1993, and the high number of people present in the area over this period may have affected the response to some questions.

Cyclists interviewed in the Cooleman Area, Kosciusko National Park



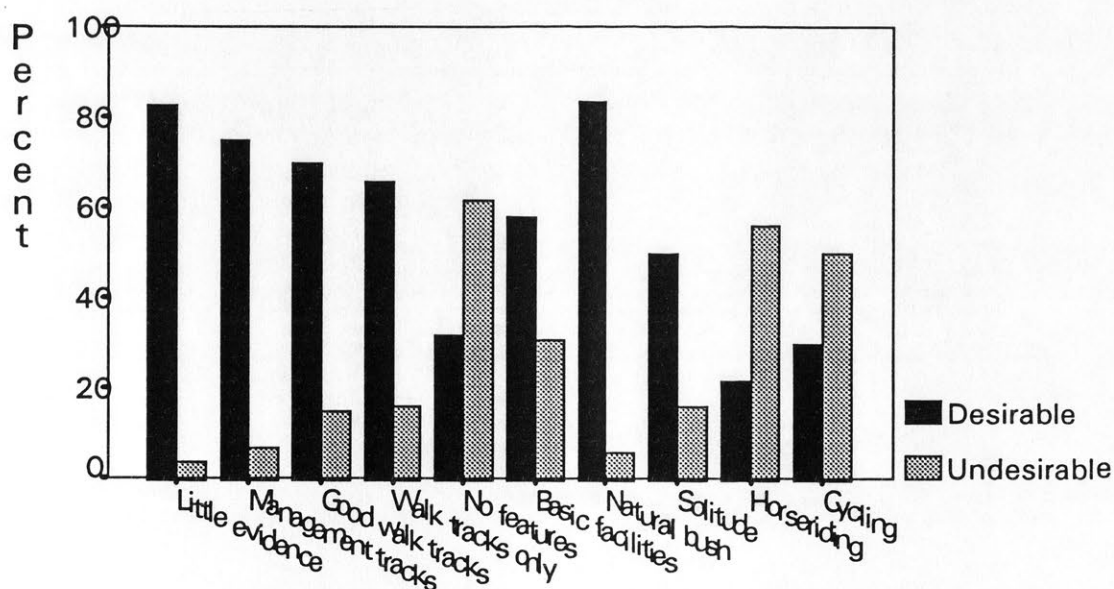
Figure 7.2 Cooleman Area, Kosciusko National Park



7.2 RESPONSE TO THE CORE WILDERNESS QUESTIONS

As with wilderness visitors, there was strong support by non-wilderness visitors for little evidence of others and for natural bush. There was also support for management tracks, well-constructed walking tracks, and basic facilities such as pit toilets. A majority of non-wilderness visitors were opposed to horseriding and no man-made features at all in wilderness areas. Although a majority of respondents supported solitude and opposed cycling in wilderness areas, there were also a large number of people who were undecided or neutral on the desirability of these factors in wilderness (34% undecided or neutral on solitude and 20% undecided or neutral on bicycles).

Figure 7.3 Non-Wilderness Perceptions of Wilderness



7.3 AGE

The percentage of non-wilderness visitors in each age group were almost the same as for wilderness visitors (13% were under twenty-five years old, 53% between twenty-five and forty, 28% between forty and sixty, and 6% were over sixty years old). Again, the number of people under twenty-five and over sixty was very small. There did not appear to be any relationship between the age of respondents and perceptions of wilderness.

7.4 EDUCATION

While the number of people with tertiary qualifications was not as high in non-wilderness areas as in wilderness areas, over half had three or more years tertiary education. While there was no relationship between the level of education of wilderness visitors and their perceptions of wilderness, there was a relationship between the level of education of non-wilderness visitors and attitudes towards solitude and walking tracks only in wilderness areas. Those non-wilderness visitors with a tertiary education appeared more likely to perceive solitude and walking tracks only as desirable in wilderness, compared to those people with no tertiary education.

Table 7.1 Relationship between Level of Education and Desirability of Solitude (%)

Level of Education	Desirability of Solitude*		
	Desirable	Neither	Undesirable
Tertiary	55.8	38.5	5.8
Non-tertiary	40.0	26.7	33.3
Total	50.0	34.1	15.9

n=82

Chi-square = 10.83860, significance = .00443

*recoded from original five point scale

Table 7.2 Relationship between Level of Education and Desirability of Walking Tracks Only (%)

Level of Education	Desirability of Walking Tracks Only*		
	Desirable	Neither	Undesirable
Tertiary	75.0	17.3	7.7
Non-tertiary	50.0	20.0	30.0
Total	65.9	18.3	15.9

n=82

Chi-square = 7.85254, significance = .01972

*recoded from original five point scale

7.5 PAST BUSHWALKING EXPERIENCE

Only one quarter of those interviewed in non-wilderness areas had undertaken an overnight bushwalk in the last twelve months, compared to 80% of wilderness visitors having undertaken an overnight bushwalk in the last twelve months. There appeared to be a no relationship between past overnight bushwalking experience and perceptions of wilderness by non-wilderness visitors.

7.6 MEMBERSHIP OF CONSERVATION ORGANISATIONS

Only 15% of non-wilderness visitors were members of conservation organisations, compared to one third of wilderness visitors. Unlike wilderness visitors, there appeared to be a relationship between membership of conservation organisations and perceptions of the appropriateness of campsite facilities, horseriding and cycling in wilderness areas. A majority of conservation organisation members opposed facilities at campsites and

horseriding, while non-members supported facilities at campsites and were divided over the desirability of horseriding in wilderness. However, on the desirability of cycling in wilderness the response was the reverse from what was expected, with non-members opposing cycling in wilderness and members of conservation clubs divided over its desirability.

Table 7.3 Relationship between Membership of Conservation Clubs and Campsite Facilities (%)

Conservation Membership	Desirability of Campsite Facilities*		
	Desirable	Neither	Undesirable
Members	30.8	7.7	61.5
Non-members	62.9	11.4	25.7
Total	57.8	10.8	31.3

n=83

Chi-square = 6.58496, significance = .03716

*recoded from original five point scale

Table 7.4 Relationship between Membership of Conservation Clubs and Desirability of Horseriding (%)

Conservation Membership	Desirability of Horseriding*		
	Desirable	Neither	Undesirable
Members	0.0	15.4	84.6
Non-members	25.7	24.3	50.0
Total	21.7	22.9	55.4

n=83

Chi-square = 6.09273, significance = .04753

*recoded from original five point scale

Table 7.5 Relationship between Membership of Conservation Clubs and Desirability of Cycling (%)

Conservation Membership	Desirability of Cycling*		
	Desirable	Neither	Undesirable
Members	29.4	41.2	29.4
Non-members	30.3	15.2	54.5
Total	30.1	20.5	49.4

n=83

Chi-square = 6.20244, significance = .04499

*recoded from original five point scale

7.7 PREVIOUS WILDERNESS EXPERIENCE

A total of 63% of non-wilderness visitors said they had previously visited an area that they thought was wilderness, but when asked to name the areas many became confused. Some people stated that they were told areas such as Kakadu and the Daintree were wilderness when they visited them, but they were not sure that it was wilderness as there were roads, buildings and major facilities in these areas. Apart from Kakadu and the Daintree, other areas considered to be wilderness included Cradle Mountain, Kanangra Walls, Tidbinbilla and national parks generally. Around one quarter of visitors to Cooleman thought that area was wilderness, and three people interviewed on the Manly Scenic Walkway stated that they considered Sydney Harbour National Park was a wilderness.

7.8 PLACE OF RESIDENCE

While all but one person interviewed in Sydney Harbour National Park was living in a capital city, there were almost three times the number of country to city residents visiting the Cooleman area.

There appeared to be a relationship between place of residence and perceptions of the desirability of solitude, walking tracks only and bicycles in wilderness areas. City residents tended to consider solitude and walking tracks only to be desirable, and to consider cycling to be undesirable in wilderness areas. Country residents tended to consider cycling to be desirable and solitude to be undesirable in wilderness areas. Country residents were divided over the desirability of walking tracks only in wilderness areas. Unlike wilderness visitors, there was no relationship between the place of residence of non-wilderness visitors and management tracks or horseriding.

Table 7.6 Relationship between Place of Residence and Desirability of Solitude (%)

Place of Residence	Desirability of Solitude*		
	Desirable	Neither	Undesirable
City	65.5	27.6	6.9
Country	13.6	45.5	40.9
Total	51.3	32.5	16.3

n=80

Chi-square = 21.29873, significance = .00002

*recoded from original five point scale

Table 7.7 Relationship between Place of Residence and Desirability of Cycling (%)

Place of Residence	Desirability of Cycling*		
	Desirable	Neither	Undesirable
City	24.1	17.2	58.6
Country	50.0	22.7	27.3
Total	31.3	18.8	50.0

n=80

Chi-square = 6.80460, significance = .03330

*recoded from original five point scale

Table 7.8 Relationship between Place of Residence and Desirability of Walking Tracks Only (%)

Place of Residence	Desirability of Walking Tracks Only*		
	Desirable	Neither	Undesirable
City	74.1	17.2	8.6
Country	50.0	13.6	36.4
Total	67.5	16.3	16.3

n=80

Chi-square = 9.05894, significance = .01079

*recoded from original five point scale

7.9 AREA DIFFERENCES

On an area basis, walkers in Sydney Harbour National Park were far more purist in their views of wilderness than those surveyed within the Cooleman area of Kosciusko National Park. Those surveyed at Cooleman were neutral or undecided about the desirability of solitude in wilderness, and supported basic facilities at campsites and bicycles in wilderness. Solitude in wilderness was supported and bicycles in wilderness opposed by those surveyed in Sydney, while the Sydney response was divided over basic facilities at campsites. Cooleman visitors were also less supportive than Sydney visitors about walking tracks only, evidence of other visitors and natural bush in wilderness.

Given that one quarter of Cooleman visitors thought the area was wilderness, it is probable that even more Cooleman visitors were concerned that their answers could be taken as relating to that particular area, rather than to designated wilderness areas.

**Table 7.9 Attitudes towards Wilderness by
Non-Wilderness Visitors (%)**
(majority response)

	Coolleman	Sydney	Total
Little evidence	+69	+91	+83
Management tracks	+77	+74	+75
Well-constructed tracks	+68	+70	+70
Walk tracks only	+55	+80	+66
No features	-65	-50	-62
Basic facilities	+65	=45	+58
Natural bushland	+72	+91	+84
Solitude	=31	+61	+50
Horseriding	-45	-61	-56
Bicycles	+45	-57	-50

+ Desirable or very desirable; - Undesirable or very undesirable; = Divided response

7.10 RESPONSE TO OTHER QUESTIONS

Visitors to the Coolleman area were also asked about a number of other management actions which could be instituted in the area. Consistent with their attitudes to wilderness, Coolleman visitors supported additional facilities such as good quality walking tracks and track markers but opposed controls such as permits or restrictions on visitor numbers. They did however support designated camp sites at camping areas, probably reflecting a problem with the organisation of camping in the Coolleman area.

Walkers in Sydney Harbour National Park were not asked the same questions because these are not issues in the management of the Manly Scenic Walkway. They were asked however, in addition to the key wilderness questions, their attitudes towards signposts or track markers in wilderness and the desirability of emergency shelter huts in wilderness. Most of those surveyed considered both emergency shelter huts and track marking to be desirable or very desirable in wilderness areas (76% and 92% respectively). Visitors to Sydney Harbour National Park were also asked

whether they thought that large natural areas should be protected as wilderness. All people interviewed supported the protection of wilderness areas.

7.11 CONCLUSION

A majority of non-wilderness visitors considered management tracks, well-constructed walking tracks and basic facilities at campsites desirable in wilderness. There were also a large number of non-wilderness visitors who were undecided over the value of solitude in wilderness areas.

Non-wilderness visitors perceptions of wilderness appeared to be related to their level of education, membership of conservation organisations and place of residence. City residents and those with tertiary education appeared to have perceptions of wilderness which coincided closer with the NSW Wilderness Act than people from country areas or those with no tertiary education. The perceptions of members of conservation organisations was however more confusing, with some views of members consistent and some inconsistent with established policies.

Place of residence appeared to be a particularly important factor in determining perceptions of non-wilderness visitors. For example, most tertiary educated non-wilderness visitors who supported solitude came from the city, while tertiary educated visitors who came from the country were undecided on the desirability of wilderness. In addition, all non-wilderness visitors who stated that they were members of conservation organisations came from city homes, which indicates a low penetration of conservation organisations into country areas.

CHAPTER 8

STAFF PERCEPTIONS OF WILDERNESS

Even more confounding is the realisation that those of us in the allied professions of parks, recreation, forestry, environmental science and natural resource management do not subscribe to a uniform and consistent definition of wilderness (Kuzmic 1992, p. 36).

8.1 THE SURVEY SAMPLE

The wide variety in attitudes to and perceptions of wilderness between wilderness visitors and those people in the broader community who are not wilderness visitors presents a number of problems for the staff who attempt to provide the public with the type of wilderness experience they desire. If there is also disagreement between the staff responsible for managing wilderness over how wilderness should be managed, then the difficulties of wilderness management are increased significantly.

Staff of the National Parks and Wildlife Service, the managers of wilderness in New South Wales, were surveyed to determine whether they had a consistent definition of wilderness and how well this view coincided with those of wilderness users and non-users of wilderness areas. The same ten core wilderness questions asked of park visitors were included in the staff questionnaire. In addition staff were asked their attitude to another ten questions relating to the management of wilderness areas, and what they considered were the main problems in wilderness areas and funding priorities.

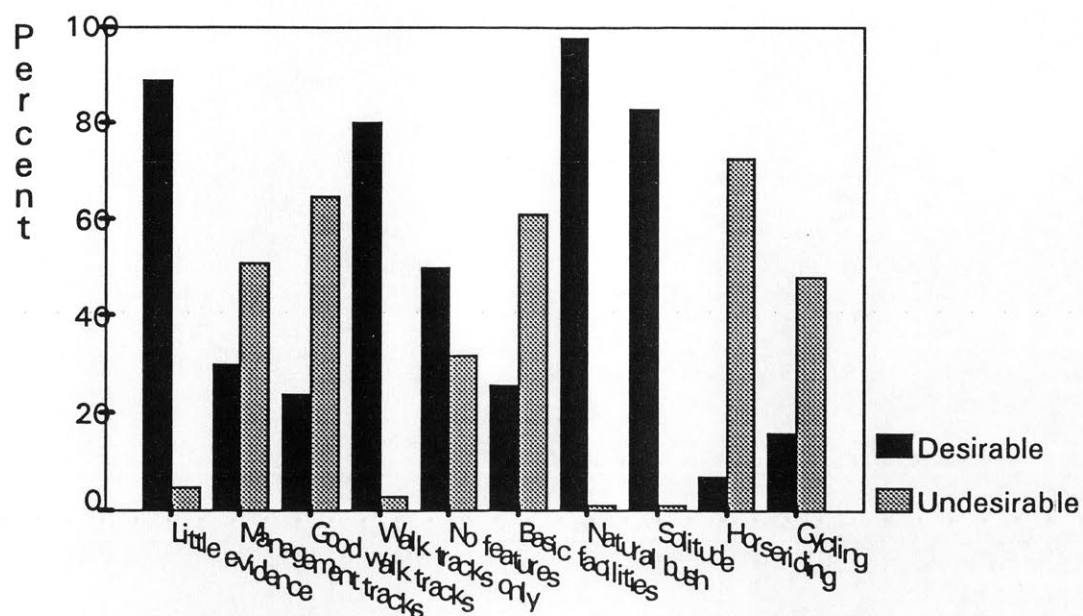
Questionnaires were mailed to all Ranger staff within the National Parks and Wildlife Service. Questionnaires were also sent to selected senior Park Workers (the staff responsible for such work as facility construction, maintenance and weed control in parks), and Head Office and Regional Specialists involved in wilderness to determine whether their work experience within the department would affect the response. A total of 250 questionnaires were distributed to staff, and 149 were returned and analysed.

8.2 RESPONSE TO THE CORE WILDERNESS QUESTIONS

The survey found that over 80% of staff supported natural bush, little evidence of other visitors, solitude and no man-made features except walking tracks in wilderness. Half the staff supported (and 30% of staff opposed) no man-made features at all in wilderness areas.

Over 60% of staff considered horseriding, well-constructed walking tracks, and basic facilities at campsites to be undesirable in wilderness. Around 50% of staff opposed management tracks such as fire trails and bicycles in wilderness areas. Twenty percent of staff were undecided or neutral on management tracks and 36% were undecided or neutral on cycling in wilderness. The high negative and neutral response on management tracks probably reflects an awareness by staff that not all management tracks in parks are essential for management purposes. Comments written on the questionnaires in regard to cycling in wilderness ranged from 'we should support cycling as an environmentally-friendly activity' to 'they do less damage than trail bikes' to 'bicycles are contrary to the ethic of self-reliance in wilderness'.

Figure 8.1 Staff Perceptions of Wilderness



8.3 WORK CLASSIFICATION

Approximately 70% of questionnaires were returned by Rangers, 15% by Regional and Head Office staff involved in wilderness management, and 15% by Park Workers. Although there appeared to be no significant differences between the responses of Rangers and Regional/Head Office staff, Park Workers held different views to the majority of other staff on management tracks and well-constructed walking tracks in wilderness areas. A majority of Park Workers considered that well-constructed walking tracks and management tracks to be desirable in wilderness areas, while a majority of other staff considered well-constructed walking tracks and management tracks to be undesirable in wilderness.

Table 8.1 Relationship between Work Classification and Desirability of Good Walking Tracks (%)

Work Classification	Desirability of Walking Tracks Only*		
	Desirable	Neither	Undesirable
Park Workers	45.0	30.0	25.0
Other Staff**	20.3	8.6	71.1
Total	23.6	11.5	64.9

n=148

Chi-square = 17.02391, significance = .00020

*recoded from original five point scale

**Rangers, Head Office and Regional staff

Table 8.2 Relationship between Work Classification and Desirability of Management Tracks (%)

Work Classification	Desirability of Walking Tracks Only*		
	Desirable	Neither	Undesirable
Park Workers	60.0	25.0	15.0
Other Staff**	24.8	19.4	55.8
Total	29.5	20.1	50.3

n=149

Chi-square = 13.26464, significance = .00132

*recoded from original five point scale

**Rangers, Head Office and Regional staff

It should be noted that in response to a question asking staff if they had any concerns about the current National Parks and Wildlife Service wilderness management policy, a large number of Park Workers stated that they were unaware of the policy. Thus it appears that the staff responsible for carrying out work on the ground are not aware of the management directions of the organisation for which they work.

8.4 QUALIFICATIONS

A majority of staff had tertiary qualifications, with 21% having an associate diploma and 52% having degree qualifications. Only 27% of staff responding to the survey had no tertiary qualifications. There appeared to be no relationship between the qualifications of staff and their responses to the key wilderness questions.

8.5 WILDERNESS MANAGEMENT EXPERIENCE

Around 65% of respondents had recent experience managing a wilderness area. There appeared to be no relationship between the responses of staff with wilderness management experience and staff who did not have direct wilderness management experience.

8.6 RESPONSE TO OTHER QUESTIONS

In regard to the other issues canvassed, most staff considered limits to group sizes, portable stoves instead of camp fires, permits to limit numbers of people, boardwalks over boggy areas and canoes were desirable in wilderness areas. Military exercises, low flying aircraft, campsites with basic facilities, interpretive signs, emergency shelter huts, helipads, track markers, commercial guided walks and vehicles for research were considered undesirable in wilderness areas. Respondents were divided over the desirability of designated campsites and prescribed burning in wilderness areas.

**Table 8.3 Staff Attitudes to Other Activities
in Wilderness Areas (%)**

	VD	D	N	U	VU
Board walks	15	43	18	15	9
Prescribed burning	6	31	31	22	10
Designated campsites	10	28	20	32	10
Canoes	5	34	52	5	3
Low flying aircraft	1	0	13	24	62
Guided walks	3	15	39	26	18
Helipads	1	20	24	35	19
Historic buildings	7	24	51	9	10
Emergency shelter huts	3	18	23	41	15
Limit group sizes	28	48	16	5	3
Track markers	5	30	13	31	21
Military exercises	1	0	12	24	64
Permits	18	48	18	10	5
Research vehicles	3	24	20	37	16
Interpretative signs	5	20	13	40	22
No camp fires	28	40	18	11	2

VD = Very Desirable; D = Desirable; N = Neither desirable nor undesirable; U = Undesirable; VU = Very Undesirable

8.7 PROBLEMS

Feral animals, weed management and stopping illegal vehicles were mentioned as a problem by over 80% of staff with recent wilderness management experience. Damage around campsites, litter, fire management, conflicts between user groups and too many people were seen as a problem "in a few places" by over 50% of those answering this question. Damage to vegetation along walking tracks, maintenance of cultural sites and damage associated with the maintenance of trig stations and survey lines were also seen as a problem in a few places.

The highest priorities on which staff would spend funds in wilderness areas were (in order) feral animal control, weed management, public education programs, fire management, and research into the resources of the wilderness areas they were managing. Interpretation, law enforcement/access control, closure of unnecessary tracks and trails and rehabilitation of disturbed areas were also given a high priority for funding.

8.8 CONCLUSION

Overall the attitudes and perceptions of park staff were consistent with the Wilderness Act and wilderness management policies. However, most Park Workers had different views from other staff in that they considered well-constructed walking tracks and management tracks to be desirable in wilderness areas.

The different attitudes between Rangers and Park Workers appears to reflect the fact that most Park Workers are unaware of the Wilderness Act and National Parks and Wildlife Service policies relating to wilderness management. It may also reflect the functions of their job, which is to construct and maintain visitor facilities in parks and to undertake weed and feral animal control. Consequently well-constructed walking tracks would be a reflection of a job well done, while management tracks would be seen as aid both to undertaking construction and maintenance of facilities and carrying out control programmes in parks.

CHAPTER 9

COMPARING THE SURVEY RESULTS

Wilderness is a cultural concept, and is difficult or impossible to define to the satisfaction of everyone (National Parks and Wildlife Service 1982, p. 49).

9.1 THE VISITOR RESPONSE

The results of surveys undertaken among the 195 visitors to the four wilderness areas and two non-wilderness areas in New South Wales indicate that visitors to wilderness areas and to non-wilderness areas both believe that wilderness should comprise natural bushland and little evidence of other people.

However, the surveys also indicated that there are differences between whether people were surveyed in a wilderness or non-wilderness area and their attitude towards the desirability of a range of facilities and activities in wilderness. Visitors to wilderness areas were found to have different views to non-wilderness visitors in regard to:

- a) the acceptability of management tracks and well-constructed walking tracks in wilderness (management tracks and well-constructed walking tracks were supported by non-wilderness visitors but wilderness visitors were divided over their acceptability);
- b) the desirability of basic facilities at campsites (opposed by a majority of wilderness visitors but supported by a majority of non-wilderness visitors);

- c) the extent to which solitude is desirable in wilderness (while a majority of both wilderness and non-wilderness visitors considered solitude to be desirable in wilderness areas, a large proportion of non-wilderness visitors were neutral or undecided on this issue); and
- d) the acceptability of horseriding in wilderness (a majority of wilderness visitors considered horseriding to be undesirable but a significant number of non-wilderness visitors considered horseriding to be desirable in wilderness areas).

Table 9.1 Relationship between Visitors and Desirability of Management Tracks (%)

Location	Desirability of Management Tracks*		
	Desirable	Neither	Undesirable
Wilderness	45.5	16.1	38.4
Non-wilderness	75.3	17.3	7.4
Total	58.0	16.6	25.4

n=195

Chi-square = 24.99727, significance = less than .00005

*recoded from original five point scale

Table 9.2 Relationship between Visitors and Desirability of Good Walking Tracks (%)

Location	Desirability of Good Walking Tracks*		
	Desirable	Neither	Undesirable
Wilderness	42.0	10.7	47.3
Non-wilderness	69.5	15.9	14.6
Total	53.6	12.9	33.5

n=195

Chi-square = 22.76837, significance = .00001

*recoded from original five point scale

Table 9.3 Relationship between Visitors and Desirability of Campsite Facilities (%)

Location	Desirability of Campsite Facilities*		
	Desirable	Neither	Undesirable
Wilderness	22.3	5.4	72.3
Non-wilderness	57.8	10.4	31.3
Total	37.4	7.7	54.9

n=195

Chi-square = 32.52412, significance = less than .00005

*recoded from original five point scale

Table 9.4 Relationship between Visitors and Desirability of Solitude (%)

Location	Desirability of Solitude*		
	Desirable	Neither	Undesirable
Wilderness	78.6	12.5	8.9
Non-wilderness	50.6	33.7	15.7
Total	66.7	21.5	11.8

n=195

Chi-square = 17.40707, significance = .00017

*recoded from original five point scale

Table 9.5 Relationship between Visitors and Desirability of Horseriding (%)

Location	Desirability of Horseriding*		
	Desirable	Neither	Undesirable
Wilderness	8.0	12.5	79.5
Non-wilderness	21.8	22.9	55.4
Total	13.8	16.9	69.2

n=195

Chi-square = 13.43827, significance = .00121

*recoded from original five point scale

There were also differences between the responses from visitors to different parks and from visitors to different wilderness areas within the one park.

Although the questionnaire asked about attitudes towards wilderness in general, the response appears to confirm Stankey's assessment that exposure to certain conditions tends to breed tolerance to some degree (Stankey 1972).

Location of home residence affected perceptions of wilderness in both wilderness and non-wilderness areas. Those from city homes appeared to have attitudes which were more consistent with the Wilderness Act than those from country areas in relation to the appropriateness of management tracks, horseriding, solitude and cycling in wilderness. Overnight bushwalking experience also appeared to affect the response of wilderness visitors but not non-wilderness visitors, with those without bush camping experience being more likely than those with bush camping experience to support management tracks and well-constructed walking tracks in wilderness. However, tertiary education and membership of conservation organisations appeared to affect the response in non-wilderness areas but not in wilderness areas. Those non-wilderness visitors with a tertiary education were more likely to support solitude and walking tracks only than those without a tertiary education. Members of conservation organisations were more likely to oppose facilities at campsites and horseriding than non-members, but were less likely to oppose cycling in wilderness areas than non-members.

Contrary to the original hypothesis, the age of the respondent appeared to have no affect on perceptions of appropriate facilities and activities in wilderness areas in either wilderness areas or non-wilderness areas, although the limited number of people in some age categories may have resulted in an unrepresentative response.

9.2 RELATIONSHIP OF RESPONSES TO THE WILDERNESS ACT

The 10% of people with the "purest" scores, those with responses closest to the wilderness management policies embodied in the NSW Wilderness Act, were those walking in the Ettrema, Budawang and Jagungal wilderness areas. Although they had attitudes strongly consistent with the Wilderness Act and policies on most issues, a majority of people with the purest scores considered management tracks and cycling to be undesirable but not very undesirable in wilderness.

Those people who recorded the least pure scores were all interviewed in the Cooleman area of Kosciusko National Park. They typically had not visited any other national park in the last year and had not undertaken an overnight bushwalk in the last twelve months. Non-purists typically favoured a range of facilities and activities in wilderness areas and thought solitude was undesirable in wilderness.

9.3 THE STAFF RESPONSE

Overall, park staff had the closest perceptions to the Wilderness Act and policies of the three groups surveyed. Staff had significantly different views to visitors on two important issues. A majority of staff considered well-constructed walking tracks and management tracks to be undesirable in wilderness, while a majority of park visitors considered well-constructed walking tracks and management tracks to be desirable in wilderness. (It should be noted however that many visitors qualified their response on management tracks with a statement that management tracks were desirable if they were considered necessary for park management.)

**Table 9.6 Relationship between Staff and Visitors
on the Desirability of Good Walking Tracks (%)**

	Desirability of Good Walking Tracks*		
	Desirable	Neither	Undesirable
Visitors	53.6	12.9	33.5
Staff	23.5	11.4	65.1
Total	40.5	12.2	65.1

n=343

Chi-square = 36.82667, significance = .00000

*recoded from original five point scale

**Table 9.7 Relationship between Staff and Visitors
on the Desirability of Management Tracks (%)**

	Desirability of Management Tracks*		
	Desirable	Neither	Undesirable
Visitors	58.0	16.6	25.4
Staff	29.3	20.0	50.7
Total	45.5	18.1	36.4

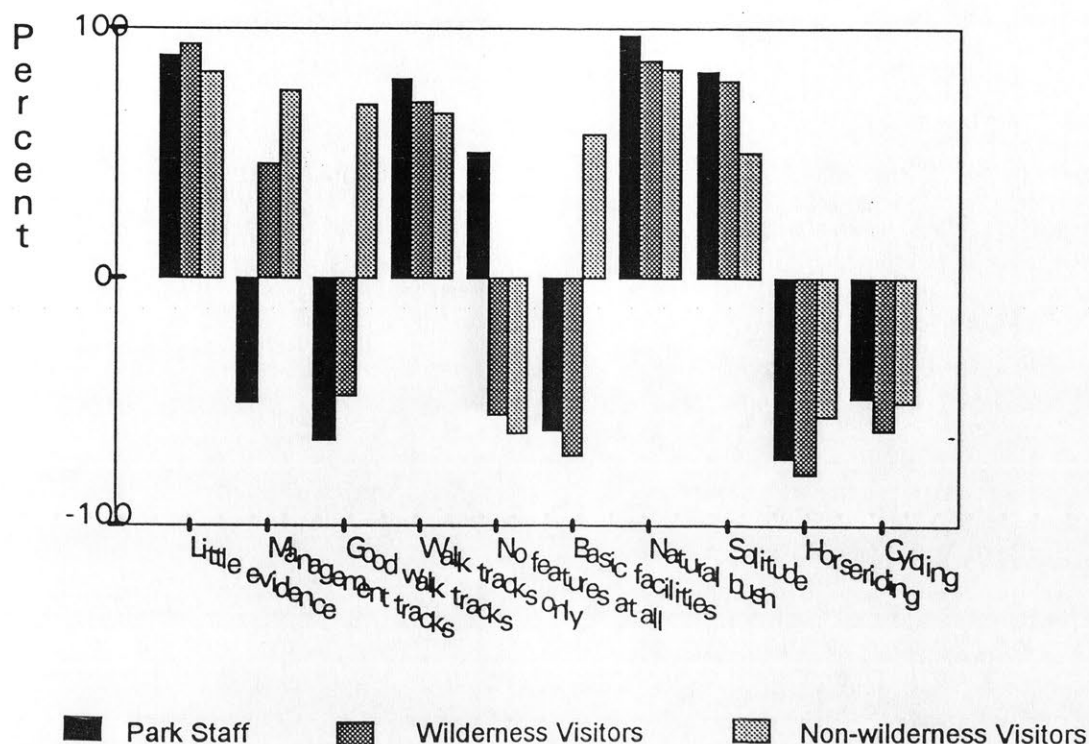
n=343

Chi-square = 30.62823, significance = .00000

*recoded from original five point scale

Although there were strong similarities between the attitudes of staff and wilderness visitors, staff and wilderness visitors had opposite views on the desirability of management tracks and no man-made features at all in wilderness. Park managers had opposite views to non-wilderness visitors on the desirability of basic facilities at campsites, well-constructed walking tracks and management tracks in wilderness (see Figure 9.1).

Figure 9.1 Attitudes of Wilderness Visitors, Non-wilderness Visitors and Park Staff to Wilderness Issues



Although all groups supported solitude, there was also a significant difference between the response of staff and non-wilderness visitors to the desirability of solitude in wilderness.

Table 9.8 Relationship between Non-Wilderness Visitors and Staff on the Desirability of Solitude (%)

	Desirability of Solitude*		
	Desirable	Neither	Undesirable
Non-Wilderness	50.6	33.7	15.7
Staff	83.3	15.3	1.3
Total	71.7	15.3	6.4

n=231

Chi-square = 33.29536, significance = .00000

*recoded from original five point scale

9.4 COMPARISON TO OTHER WILDERNESS SURVEYS

Consistent with previous studies undertaken in both Australia and the United States, this study found that most wilderness visitors came from urban areas, a majority were male, a very high proportion were tertiary educated, and less than half were members of conservation or bushwalking clubs.

This study confirmed the findings of Helman (1976), McKenry (1977), Turner (1979), McGrath (1982), Stankey (1986) and Morgan (1989) that there are a variety of perceptions in Australia as to what facilities are considered appropriate in wilderness areas, with opinions differing over the acceptability of management tracks, well-constructed walking tracks and toilets in wilderness. Opinions also differed over the degree to which solitude was considered to be desirable in wilderness.

As with their United States counterparts, most wilderness visitors interviewed in this survey considered walking tracks desirable in wilderness areas. Bridges and stepping stones were also supported by a majority of wilderness visitors in both countries, although visitors to Ettrema were notable in their opposition to any man-made developments in wilderness areas.

The trend in the United States is generally away from facilities at campsites, such as picnic tables and fireplaces, but attitudes towards toilets varied in relation to the perceived need and whether toilets were already present in the area (Hendee et al. 1990, p. 476). A similar variation appears to occur in Australia: toilets were supported in areas where they presently exist but opposed in areas where there are currently no toilets. Visitor attitudes towards management tracks were not tested in the United States, nor were

attitudes to horseriding and cycling - although walkers in the US have been found to generally oppose horses and bicycles on walking tracks.

It therefore appears that wilderness visitors in both Australia and the United States have fairly similar attitudes and perceptions of wilderness. The differences in regard to solitude reported by Stankey (1986) probably relate more to current conditions, expectations of the number of people likely to be met and whether the area is perceived as wilderness by the visitors than cultural differences between the two countries.

The main problems of New South Wales wilderness management staff were related to management of the resource (control of weeds, feral animals and illegal vehicles) rather than being the people-oriented problems (resource degradation at campsites and loss of solitude) which were identified by managers of wilderness areas in the United States. It is unclear whether this reflects different wilderness conditions in the two countries, or different attitudes and priorities of wilderness managers.

PART III

CHAPTER 10

THE FUTURE FOR WILDERNESS IN NSW

The main question appears to be whether there is a good understanding of wilderness conservation as a specialised objective in land management or whether there is still widespread confusion caused by the use of the term as a synonym for "natural" (Colong Foundation for Wilderness 1993, p. 5).

10.1 THE DIFFICULTY OF DEFINING WILDERNESS

The visitor surveys undertaken as part of this study show that, despite a legal definition and legislative basis for wilderness management in New South Wales, there is still widespread confusion within the community regarding the meaning of the term "wilderness". This is because wilderness, like other land uses such as commercial or industrial purposes, is a cultural concept and there are no absolute standards by which wilderness can be judged. As noted by Nash (1982, p. 1) "One man's wilderness may be another's roadside picnic area". It is a relative notion that only has meaning as part of a continuum of land uses, each with its own purposes and goals.

Almost all visitors to national parks in New South Wales support the concept of protecting wilderness, regardless of whether or not they have actually visited a wilderness area. There is however a diversity of views held by the community in regard to where wilderness starts and to what activities and facilities are appropriate in wilderness areas. Such views range from considering four wheel driving appropriate and desirable in wilderness (Recreational Four Wheel Drive Clubs' Association 1986; Cochran 1994) to opposing all facilities including walking tracks in wilderness areas (The

Colong Foundation 1993, p. 12). Between these two positions, this study shows that there are also different perceptions as to the appropriateness of facilities at campsites, well-constructed walking tracks, management tracks, horseriding, cycling and solitude in wilderness areas.

The surveys also show that those people with wilderness experience have perceptions of wilderness which are closer to the NSW Wilderness Act than those people without wilderness experience. These differences between wilderness and non-wilderness visitors, and the strong support for the concept of wilderness from visitors to both areas, would appear to support McKenry's statement that:

Many people who instinctively would support, and support fairly strongly, the setting aside of areas as wilderness will be alienated by those who advocate very strict policies for access to, and visitor use of, such areas (McKenry 1980, p. 96).

10.2 MANAGING FOR THE PURISTS

One argument for not using visitor attitudes as a means of formulating wilderness management strategies is that public attitudes as to what constitutes wilderness will become less discriminating as the population rises, user densities increase and people become more used to a modified environment. Stankey (1972) therefore argued that wilderness management should be oriented towards meeting the perceptions of those whose views are closest to the spirit and intent of the legislation, those he labelled as "purists", with other areas being provided and managed for those wanting other experiences. Purists can only find the experience they desire in wilderness, but there are a range of alternative areas which can provide opportunities for those wanting a more developed experience.

In this study, the purists agreed with the NSW Wilderness Act and wilderness management policies on all issues but most were prepared to compromise over management tracks and bicycles in wilderness (the majority of purists saw these factors as undesirable but not very undesirable in wilderness). This appears to suggest that if the NSW Wilderness Act or wilderness management policies were to be modified, the most appropriate modifications might be to permit management tracks and cycling in wilderness areas. However, as a majority of both wilderness and non-wilderness visitors were opposed to cycling in wilderness areas (although a majority of visitors to the Pilot Wilderness and the Cooleman area supported cycling, possibly because cycling currently occurs in these areas), it is likely that any proposal to permit cycling in all wilderness areas would be opposed by a considerable number of park visitors.

10.3 ZONING OF WILDERNESS AREAS

Zoning has been proposed as one method of both providing for the range of attributes desired by wilderness visitors and meeting the requirement to protect wilderness areas. Roggenbuck et al. (1993), for example, suggested that wilderness areas should be zoned for different experiences, with different condition standards established for each zone. Managers could then provide information to potential visitors to help them find the zone that best met their experience requirements. A similar approach was suggested by Kliskey & Kearsley (1991) in New Zealand. They proposed that a number of separate wilderness areas could each be managed for different clientele. Each group's standards would be used to set acceptable conditions, and information provided so that clientele groups could find the area that best met their desired experience conditions.

The survey results indicate that managing different wilderness areas for different clientele groups could be acceptable to most wilderness users. For example, the present policy of permitting cycling in some wilderness areas but not other wilderness areas could be continued. This is likely to be acceptable to most users given that users generally accept the current conditions in each area, although it may be confusing for cyclists to understand why they are permitted in some wilderness areas but not others.

There is also the concern that user groups whose activity is considered undesirable by a majority of users, such as horse riders, might argue that their activity is only considered undesirable because it is not currently permitted. If this argument was continued to its logical conclusion, every activity would be permitted until proven undesirable by a survey of users of the area. To counter this argument, Hendee et al. (1990) recommended that wilderness should be managed under what they called the "nondegradation concept", whereby the manager aims to prevent degradation of the current levels of naturalness and solitude in each wilderness and restore substandard levels rather than letting all areas deteriorate to the lowest standard.

One conundrum is that wilderness designation itself may contribute to loss of wilderness values. Large numbers of people in a wilderness inevitably leads to the destruction of wilderness characteristics (O'Loughlin & Henderson 1990, p. 33). Kearsley (1990) observed that the application of a specific term such as "wilderness" for primitive areas could lead to visitors congregating in wilderness areas which are often also the most vulnerable areas. This appears to be the current situation in New South Wales.

Conservationists and politicians have stressed that wilderness areas are the "best and most beautiful areas" (Hartcher, Minister for the Environment, quoted in the *Sydney Morning Herald*, Jan. 21 1994), and consequently horse riders, four wheel drive owners and others now wish to see these areas. Many bushwalkers are also making greater efforts to see the wilderness, having been convinced that they are the best areas and if they have not seen them all they have missed out (personal comment from respondent to Budawang wilderness survey).

It may therefore be that, given the requirement of the Wilderness Act to provide opportunities for self-reliant recreation (Section 9 (c)), protection of major biological values may be better achieved by some designation other than wilderness, such as nature reserve, which does not imply public use. It may also be that some popular bushwalking areas which require facilities such as constructed walking tracks or toilets to protect the resource should not be declared wilderness so that the principle of "pure" wilderness is not compromised. Whatever the immediate response, it should be remembered that wilderness is a cultural concept which will not necessarily mean the same in the future as it does at present. As noted by Armstrong (1989):

It must be recognised that the future will not be the same as the present; "wilderness" may not be perceived or valued in the same way as it is today, and reservations made on that basis are the most likely to be threatened by the changed values of society (Armstrong 1989, p. 34).

10.4 EDUCATION AND COMMUNITY AWARENESS

Education is the obvious means of changing perceptions and attitudes. However, while education through universities/colleges and conservation groups appeared to affect non-wilderness visitors perceptions of wilderness,

education did not appear to affect the response of wilderness visitors. Formal education also had little association with the response of park managers, although knowledge of the management policy did have a major affect on the attitudes and perceptions of managers.

The impact of place of residence on perceptions of wilderness by both wilderness visitors and non-wilderness visitors (city residents appeared to have purer perceptions of wilderness than country residents) shows that wilderness is less well understood in rural areas, although not to the extent suggested by country politicians.

The National Parks and Wildlife Service as the manager of wilderness in New South Wales must give greater attention to the messages it is giving to the general public, park visitors and politicians, particularly in rural areas, regarding wilderness and the differences between wilderness areas and national parks. The department needs a clear view of how it wishes to manage wilderness areas, and must educate its own staff in these views. The National Parks and Wildlife Service also needs to promote wilderness as part of a continuum of land uses, of which wilderness is an important part although not necessarily "the best".

10.5 LIMITATIONS AND CONCLUSIONS

Survey data can only provide part of the answer. It does not address the management of the resource nor the impacts of various recreation activities on the natural environment. These surveys were also limited in that they surveyed only park visitors not the general community, were undertaken in

only three parks, and asked about the desirability of factors such as "solitude" without defining these factors in terms of numbers of people.

While attitudes do not necessarily reflect behaviour, the data does provide an indication of what conditions are likely to be acceptable to the wilderness user and the national park user who is not necessarily a wilderness user. It also shows that most park users, whether or not they are wilderness users, are supportive of the wilderness concept. This community support for wilderness needs to be maintained if new wilderness in areas are to be proclaimed. Without community support any proposal is likely to be much harder to sell, and may in fact antagonise the people whose support is necessary to protect and maintain wilderness as a long-term concept.

The surveys also indicated that most wilderness visitors would like each wilderness area to remain generally as it is at present. Wilderness visitors might be prepared to accept well-constructed walking tracks, management tracks and bicycles in **some** wilderness areas, but changing the wilderness management policy to allow well-constructed walking tracks, management tracks and cycling in **all** wilderness areas would be strongly opposed by those people who specifically visit undeveloped areas in order to enjoy a "pure" wilderness experience. Management actions which are contrary to the views of these visitors will not only cause a decline in visitor satisfaction, but could well displace these users into less developed and less heavily used areas, increasing impact on the natural values of these alternative areas.

Non-wilderness visitors are exactly that, non-users of wilderness areas, because wilderness does not provide the experience that they desire. They

are unlikely to visit wilderness areas unless facilities such as well-constructed walking tracks and toilets at campsites are provided in these areas. However this does not indicate that such facilities should be provided in wilderness. All non-users questioned in Sydney supported the protection of wilderness. While this question was not asked at Cooleman, and it is likely that they would not be so universally supportive, general support for wilderness exists even amongst those who have never visited a wilderness area.

Overall this study supports the proposition that wilderness areas should be managed to meet the wilderness user or purist view of wilderness, rather than different wilderness areas being managed and promoted to provide different wilderness experiences. However the different perceptions held by visitors to the different wilderness areas prove that it is difficult to generalise and that there may be some large natural areas, particularly those that are heavily used for recreation or have high nature conservation values, that should not be declared wilderness.

This study also shows that there is no clear understanding of what is meant by the term "wilderness" within New South Wales. Until the managers and proponents of wilderness better educate the community to understand that wilderness is a land use designation that provides one type of recreational experience, although not necessarily an experience which will be enjoyed by all, there will continue to be confusion and debate over the appropriate management of wilderness areas and wilderness will not be accepted as a legitimate land use in New South Wales.

CHAPTER 10

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APPENDIX A - MORTON QUESTIONNAIRE

MORTON/BUDAWANGS BUSHWALKING SURVEY

DATE: __/__/__
INTERVIEWER: ()
CODE NO: ()()()()

Introduction:

Hi, my name is _____ and I'm from the NPWS. We are conducting a survey of bushwalkers in Morton and Budawang National Parks so we can improve the way in which we manage the parks. Do you mind if I ask you a few questions about your visit? Thank you.

1. With what kind of group did you visit the park?

- By yourself () 1
With family and/or friends () 2
With a club or organisation () 3

* If with a club or organisation, what is its name?

2. Where did you walk in the park?
(Name routes or mark on map).

3. Did you stay overnight in the park?

- YES () 1
NO () 2

* If no, about how many hours were you in the park?

_____ hours. (Go to Question 4)

* If yes, how many nights did you stay in the park?

_____ nights.

* Where did you camp while you were in the park?
(Name locations or mark on map).

4. Not counting this visit, how many previous bushwalking trips have you undertaken in Morton and/or Budawang National Park?

None	()1	(Please go to Question 5)
One visit	()2	
2 - 5 visits	()3	
6 - 10 visits	()4	
More than 10 visits	()5	

- * In about what year did you first walk in Morton or the Buddawangs? _____

- * Since you first visited these parks, in general how has the overall condition of the area changed?

Improved, its better now than it was before	()1
Remained the same	()2
Declined, its worse than it used to be	()3

In what ways have the conditions improved/declined?

5. Apart from this national park, have you visited any other national parks in New South Wales in the past 12 months?

YES	()1	
NO	()2	(If no, go to Question 6)

- * If yes, which parks?

- * Did you undertake overnight bushwalks in any of these parks?

YES	()1
NO	()2

6. Many different qualities attract people to this national park. Please rank the following attractions from 1 to 6 in terms of how important they are to you, with 1 being the most important, 2 the second most important, and so on. (Show cue card)

The park's restful atmosphere.....()1

The chance to escape from people.....()2

The park's recreational opportunities
such as camping, walking and sightseeing.....()3

The park's natural qualities,
its plants and animals.....()4

The park's convenient location to my home()5

The park's scenic qualities()6

Other (please specify) _____

7. There are many possible actions that park managers might undertake. Some involve providing things previously not found in this part of the park; others might involve either providing more or less of some things, such as changes in the roads or walking tracks within the park.

We would like your opinion about some management actions the Service might undertake in this park, although there are not necessarily any plans to do so at the moment. Please tell me of the extent to which you agree or disagree with the following possible actions.

strongly agree	agree	neither agree or disagree	disagree	strongly disagree
-------------------	-------	------------------------------------	----------	----------------------

- * Provide good quality walking tracks within the park.....()1 ()2 ()3 ()4 ()5

- * Provide bridges, stepping stones, etc. at selected locations on walking tracks.....()1 ()2 ()3 ()4 ()5

- * Provide signposts or track markers along walking tracks.....()1 ()2 ()3 ()4 ()5

- | | strongly
agree | agree | neither
agree
or
disagree | disagree | strongly
disagree |
|--|-------------------|-------|------------------------------------|----------|----------------------|
| * Provide basic facilities,
such as pit toilets,
at car parking areas..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Provide pit toilets at
pack camping areas..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Restrict camping to
designated camping areas... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Prohibit fires (walkers
would have to carry
portable stoves)..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Require permits for
bushwalking in the park.... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Restrict visitor numbers
during peak use periods.... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Place limits on the
size of groups..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Provide more information
about alternative walks
within the park and
surrounding areas..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Provide information
about the park's
natural and cultural
features..... | ()1 | ()2 | ()3 | ()4 | ()5 |

8. Are there any other management actions you think the Service should undertake in this section of the park?

1. _____
2. _____
3. _____

9. One of the issues in park management at present is "wilderness". We would like your opinion on wilderness. Please tell me how desirable you think the following factors are in wilderness areas? Remember there are no right or wrong answers; we are just interested in your opinion.

very desirable neither undesirable very
desirable desirable undesirable
 or
 undesirable

- * Little evidence of other visitors before you.....()1 ()2 ()3 ()4 ()5
- * Management tracks, such as fire trails....()1 ()2 ()3 ()4 ()5
- * Well-constructed walking tracks.....()1 ()2 ()3 ()4 ()5
- * Absence of all man-made features except walking tracks.....()1 ()2 ()3 ()4 ()5
- * Absence of all man-made features, including walking tracks.....()1 ()2 ()3 ()4 ()5
- * Campsites with basic facilities, such as pit toilets.....()1 ()2 ()3 ()4 ()5
- * Natural bushland (no weeds, erosion or clearings).....()1 ()2 ()3 ()4 ()5
- * Solitude (not seeing many other people except those in your own party).....()1 ()2 ()3 ()4 ()5
- * Horses.....()1 ()2 ()3 ()4 ()5
- * Bicycles (e.g. mountain bikes).....()1 ()2 ()3 ()4 ()5

10. Do you think the area in which you were walking is wilderness?

YES ()1
NO ()2

Finally, just a couple of questions about you so that we can compare you and your answers with other respondents. This information is STRICTLY CONFIDENTIAL and cannot be associated with you as an individual in any way.

11. What are the ages and sex of the members in your group, including yourself?

(Indicate the number of people in the group in each age and sex category. Place an asterisk (*) by the respondent's age group/sex.)

AGE	MALE	FEMALE
Infant - 14 years	_____	_____
15 - 24 years	_____	_____
25 - 39 years	_____	_____
40 - 60 years	_____	_____
60 years and over	_____	_____

12. What is the highest level of education you have achieved? (Circle the appropriate number.)

Primary						Secondary						Tertiary						
Year	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5+	Years

13. Do you belong to any conservation or outdoor recreation organisation?

YES () 1
NO () 2

- * If yes, which ones?

14. In which city or town do you live?

_____ Postcode _____

THANK YOU VERY MUCH FOR YOUR HELP!

APPENDIX B - KOSCIUSKO QUESTIONNAIRE

KOSCIUSKO WILDERNESS SURVEY

DATE: __/__/__

LOCATION: _____

CODE NO: () () ()

Introduction:

Hi, my name is _____ and I'm from the NPWS. We are conducting a survey of walkers in Kosciusko National Park so we can improve the way in which we manage our national parks. Do you mind if I ask you a few questions about your visit? Thank you.

1. Where did you walk/cycle/ride* in the park? _____
(*cross out inapplicable categories)

2. Did you camp overnight in the park? YES () 1
NO () 2

* If NO, approximately how many hours were you in the park?
_____ hours.

* If YES, how many nights did you camp in the park?
_____ nights.

3. Not counting this visit, how many previous bushwalking trips have you undertaken in Kosciusko National Park?

None	() 1	Go to Q4
One visit	() 2	
2 - 5 visits	() 3	
6 - 10 visits	() 4	
More than 10 visits	() 5	

* In about which year did you first walk in Kosciusko National Park?

4. Apart from this national park, have you visited any other national parks in New South Wales in the past 12 months?

YES () 1
NO () 2 Go to Q5

* If YES, which one(s)? _____

* Did you undertake overnight bushwalks in any of these parks?

YES ()1
NO ()2

5. There are many possible actions that park managers might undertake. We would like your opinion about some management actions the Service might undertake in this park, although there are not necessarily any plans to do so at the moment. Please tell me of the extent to which you agree or disagree with the following possible actions.

	strongly agree	agree	neither agree or disagree	disagree	strongly disagree
* Provide good quality walking tracks within this area of the park.....	()1	()2	()3	()4	()5
* Provide bridges, stepping stones, etc. at selected locations on walking tracks.....	()1	()2	()3	()4	()5
* Provide signposts or track markers along walking tracks.....	()1	()2	()3	()4	()5
* Provide pit toilets at pack camping areas.....	()1	()2	()3	()4	()5
* Restrict camping to designated camping areas...	()1	()2	()3	()4	()5
* Prohibit fires (walkers would have to carry portable stoves).....	()1	()2	()3	()4	()5
* Require permits for bushwalking in the park....	()1	()2	()3	()4	()5
* Restrict visitor numbers during peak use periods....	()1	()2	()3	()4	()5
* Place limits on the size of groups.....	()1	()2	()3	()4	()5
* Are there any other management actions you think the Service should undertake in this park?					

6. One of the issues in park management at present is "wilderness". We would like your opinion on wilderness. Please tell me how desirable you think the following factors are in wilderness areas? Remember there are no right or wrong answers; we are just interested in your opinion.

very desirable neither undesirable very
desirable desirable undesirable
 or
 undesirable

* Little evidence
of other visitors
before you.....()1 ()2 ()3 ()4 ()5

* Management tracks,
such as fire trails....()1 ()2 ()3 ()4 ()5

* Well-constructed
walking tracks.....()1 ()2 ()3 ()4 ()5

* Absence of all
man-made features
except walking
tracks.....()1 ()2 ()3 ()4 ()5

* Absence of all
man-made features
(not even walking
tracks provided).....()1 ()2 ()3 ()4 ()5

* Campsites with basic
facilities, such as
pit toilets.....()1 ()2 ()3 ()4 ()5

* Natural bushland
(no weeds, erosion
or clearings).....()1 ()2 ()3 ()4 ()5

* Solitude (not seeing
any other people
except those in
your own party).....()1 ()2 ()3 ()4 ()5

* Horse riding.....()1 ()2 ()3 ()4 ()5

* Bicycles (e.g.
mountain bikes).....()1 ()2 ()3 ()4 ()5

7. In your opinion, is the area in which you were walking a wilderness area?

YES ()1
NO ()2

* If YES, where did the wilderness start? _____

8. Have you visited any (other) areas that you felt were wilderness areas in the last 12 months?

YES () 1
NO () 2

* If YES, which area(s)? _____

Finally, just a couple of questions about you so that we can compare you and your answers with other respondents. This information is STRICTLY CONFIDENTIAL and cannot be associated with you as an individual in any way.

9. What are the ages and sex of the members in your group, including yourself?

(Indicate the number of people in the group in each age and sex category. Place an asterisk (*) by the respondent's age group/sex.)

AGE	MALE	FEMALE
Infant - 14 years	_____	_____
15 - 24 years	_____	_____
25 - 39 years	_____	_____
40 - 60 years	_____	_____
60 years and over	_____	_____

10. What is the highest level of education you have achieved? (Circle the appropriate number.)

Primary	Secondary	Tertiary
Year 1 2 3 4 5 6	7 8 9 10 11 12	1 2 3 4 5+ Years

11. Do you belong to any conservation or outdoor recreation organisation?

YES () 1
NO () 2 Go to Q12

* If YES, which ones?

12. Is this a club outing? If yes, which club?

13. In which city or town do you live?

_____ Postcode _____

THANK YOU VERY MUCH FOR YOUR HELP!

APPENDIX C - SYDNEY QUESTIONNAIRE

SYDNEY WILDERNESS SURVEY

DATE: __/__/__

LOCATION: _____

CODE NO: ()()()

One of the issues facing park management at present is "wilderness". I would like your opinions on wilderness to compare with other responses we have on the issue from people surveyed in wilderness areas.

1. Do you think the government has an obligation to set aside large areas of undeveloped land as wilderness?

YES () 1
NO () 2

2. I have here a list of factors and a 5 point scale ranging from desirable to undesirable. Please tell me how desirable you think the following factors are in wilderness areas? Remember there are no right or wrong answers; we are just interested in your opinion.

	very desirable	desirable	neither desirable or undesirable	undesirable	very undesirable
* Little evidence of other visitors before you.....	() 1	() 2	() 3	() 4	() 5
* Management tracks, such as fire trails....	() 1	() 2	() 3	() 4	() 5
* Well-constructed walking tracks.....	() 1	() 2	() 3	() 4	() 5
* Absence of all man-made features except walking tracks.....	() 1	() 2	() 3	() 4	() 5
* Absence of all man-made features, including walking tracks.....	() 1	() 2	() 3	() 4	() 5
* Campsites with basic facilities, such as pit toilets.....	() 1	() 2	() 3	() 4	() 5

- | | very
desirable | desirable | neither
desirable
or
undesirable | undesirable | very
undesirable |
|---|-------------------|-----------|---|-------------|---------------------|
| * Natural bushland
(no weeds, erosion
or clearings)..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Solitude (not seeing
any other people
except those in
your own party)..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Horses..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Bicycles (e.g.
mountain bikes)..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Signposts or
track markers along
walking tracks..... | ()1 | ()2 | ()3 | ()4 | ()5 |
| * Emergency shelter huts. | ()1 | ()2 | ()3 | ()4 | ()5 |

3. Have you ever been in what you felt was a wilderness area?

YES ()1
NO ()2
DON'T KNOW ()3

* If YES, which one(s)? _____

* If NO, do you wish to visit a wilderness? YES ()1
NO ()2

Now, just a couple of questions about you so that we can compare you and your answers with other respondents. This information is STRICTLY CONFIDENTIAL and cannot be associated with you as an individual in any way.

4. What age category do you fall into?

AGE	MALE	FEMALE
Infant - 14 years	_____	_____
15 - 24 years	_____	_____
25 - 39 years	_____	_____
40 - 60 years	_____	_____
60 years and over	_____	_____

5. What is the highest level of education you have achieved?
(Circle the appropriate number.)

Primary						Secondary						Tertiary						
Year	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5+	Years

6. Do you belong to any conservation or outdoor recreation organisation?

YES () 1
NO () 2 Go to Q8

- * If YES, which one(s)? _____

7. Apart from this national park, have you visited any other national parks in New South Wales in the past 12 months?

YES () 1
NO () 2 Go to Q8

- * If YES, which parks? _____

- * Did you undertake overnight bushwalks in any of these parks?

YES () 1
NO () 2

8. In which suburb or town do you live?

_____ Postcode _____

9. Finally, are there any comments you would like to make about the management of this park?

THANK YOU VERY MUCH FOR YOUR HELP!

APPENDIX D - STAFF QUESTIONNAIRE

NATIONAL PARKS AND WILDLIFE WILDERNESS MANAGEMENT SURVEY

1. One of the issues in park management at present is wilderness. There are many possible actions that park managers might undertake in regard to wilderness.

We would like your opinion on wilderness. Please tell us how desirable you think the following factors are in wilderness areas by **ticking one response to each question**. Please note, there are no right or wrong answers; we are just interested in your personal opinion. (If you want to qualify your answer, please tick the appropriate box and write your comments in the margin).

- | | very
desirable | desirable | neither
desirable
or
undesirable | undesirable | very
undesirable |
|---|-------------------|-----------|---|-------------|---------------------|
| 1a. Little evidence of
visitors to the area... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1b. Management tracks,
such as fire trails.... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1c. Well-constructed, formed
walking tracks..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1d. Absence of all
man-made features
except walking
tracks..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1e. No man-made features
at all, not even
walking tracks..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1f. Campsites with basic
facilities, such as
pit toilets..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1g. Virtually undisturbed
natural bushland..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1h. Solitude (not seeing
many other people
except those in
their own party)..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1i. Horse riding..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1j. Bicycles on
management tracks..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1k. Canoes..... | () | 1..() | 2..() | 3..() | 4..() 5 |
| 1l. Track markers along
walking tracks..... | () | 1..() | 2..() | 3..() | 4..() 5 |

very desirable desirable neither desirable or undesirable undesirable very undesirable

- 1m. Interpretive signs.....()1..()2..()3..()4..()5
- 1n. Emergency shelter huts.()1..()2..()3..()4..()5
- 1o. Historic buildings.....()1..()2..()3..()4..()5
- 1p. Prescribed burning.....()1..()2..()3..()4..()5
- 1q. Helipads.....()1..()2..()3..()4..()5
- 1r. Commercial guided walks()1..()2..()3..()4..()5
- 1s. Military exercises.....()1..()2..()3..()4..()5
- 1t. Low level flying.....()1..()2..()3..()4..()5
- 1u. Limits on group sizes..()1..()2..()3..()4..()5
- 1v. Permits to limit
numbers of people.....()1..()2..()3..()4..()5
- 1w. Portable stoves only...()1..()2..()3..()4..()5
- 1x. Designated camp sites..()1..()2..()3..()4..()5
- 1y. Boardwalks across boggy
or damaged areas.....()1..()2..()3..()4..()5
- 1z. Vehicle access for
research projects.....()1..()2..()3..()4..()5

2a. Have you visited a dedicated or proposed wilderness area
in the last 12 months?

YES ()1
No ()2

2b. If YES, how many times did you walk into the area?.....
drive into the area?.....
ride into the area?.....
camp in the area?.....

2c. How many of these visits were for work?.....
How many of these visits recreational?.....

3. If a wilderness area was declared over a large natural
area for which you were responsible, do you think it
would mean a change in your management of the area?

YES, it would mean more active management ()1
YES, it would mean less active management ()2
NO, it would mean no change to management ()3

4a. Have you ever worked in a wilderness area? YES ()1
NO ()2

4b. If YES, in which area(s) have you worked?
.....

5. If you presently manage a wilderness area, or have in the past managed a wilderness area, do you consider that the following are/were a problem in those wilderness areas? Please tick one response to each question. If you have not managed a dedicated or proposed wilderness area, go to question 6.

Type of Problem	Not a problem.	A problem in a few places.	A problem in many places.	Name of area(s) in which problem occurs
5a. Too many people...	()1....	()2....	()3.....	.....
5b. Conflict between user groups (eg between walkers and horse riders).	()1....	()2....	()3.....	.....
5c. Litter/garbage....	()1....	()2....	()3.....	.....
5d. Lack of firewood..	()1....	()2....	()3.....	.....
5e. Water pollution...	()1....	()2....	()3.....	.....
5f. Damage to vegetation along walking tracks....	()1....	()2....	()3.....	.....
5g. Damage around campsites.....	()1....	()2....	()3.....	.....
5h. Stopping illegal vehicle use.....	()1....	()2....	()3.....	.....
5i. Feral animal management.....	()1....	()2....	()3.....	.....
5j. Weed management...	()1....	()2....	()3.....	.....
5k. Fire management...	()1....	()2....	()3.....	.....
5l. Maintenance of cultural heritage.	()1....	()2....	()3.....	.....
5m. Maintenance of survey lines or trig markers.....	()1....	()2....	()3.....	.....
5n. Any other problems? (please specify problem and location)	.....		

6. If funds were available for wilderness management, what would be the 3 highest priorities on which you would spend funds?

1.

2.

3.

7. If you have any specific concerns about the current Wilderness Management Policy contained in the Field Management Policies document or wilderness management generally by the Service, we would like to know about them, and any changes you would like made. (If there is not enough room below, please write on the back of this survey form or attach additional pages to the form).

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Finally, just a couple of questions about you so that we can compare your experience with those of other respondents.

8a. What is your present position within the National Parks and Wildlife Service?

Ranger.....()1
Senior Ranger.....()2
District or Ass. District Manager..()3
Regional or Ass. Regional Manager..()4
Project Officer.....()5
Park Worker.....()6
Other(please specify).....()7

8b. For approximately how many years have you worked in conservation management?

.....

9. What formal tertiary qualifications, if any, do you have and from what institution? (e.g. Ass. Diploma in Park Management from Charles Sturt; B.A., Macquarie).

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THAT'S ALL! THANK YOU VERY MUCH FOR YOUR HELP!