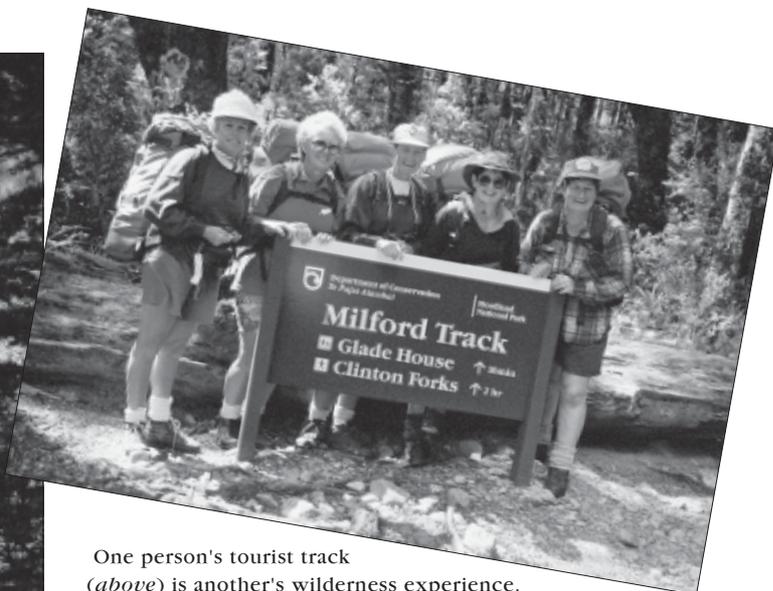




Part 3

Wilderness perceptions

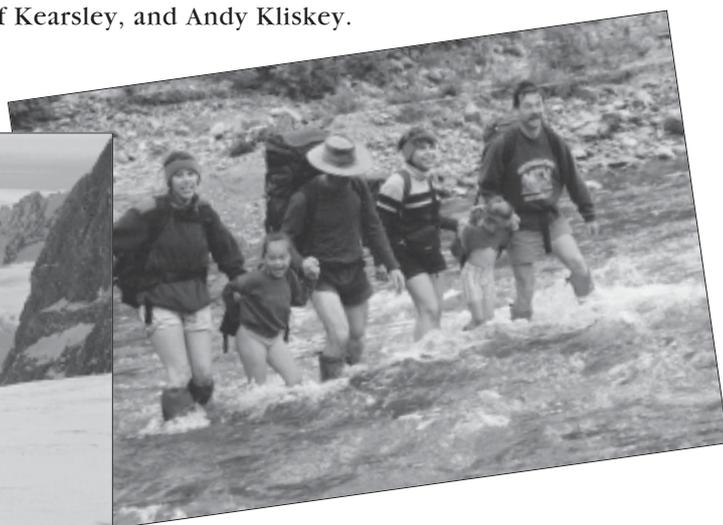


One person's tourist track (above) is another's wilderness experience.

Is it real? (left) A wilderness fishery in an easy tramping valley.

Designated Wilderness Areas are often different in extent and management from the sorts of places that many people regard as wilderness. These articles describe some of the variations that occur in perceived wilderness.

- The duality of wilderness: Comparing popular and political conceptions of wilderness in New Zealand. By John Shultis.
- Perceptions of international visitors to New Zealand wilderness. By James Higham.
- Multiple wilderness recreation management: Sustaining wilderness values—maximising wilderness experiences. By James Higham, Geoff Kearsley, and Andy Kliskey.



When did you first feel wilderness?
All photos this page: Gordon Cessford

However you perceive it, wilderness is a rare and special thing!

Previous page: Williamson River and couloir to Olivine Ice Plateau. Now part of Olivine Wilderness Area. *Photo: Les Molloy, 1967*

The duality of wilderness

Comparing popular and political conceptions of wilderness in New Zealand

By John Shultis

There are popular conceptions of wilderness embraced by the public, and political conceptions created by special interest groups, bureaucrats and politicians, as manifest through policy or legislation. While often postulated in the literature, this dual conception of wilderness has not yet been assessed through empirical research. This paper presents results from research assessing the different conceptions of wilderness in New Zealand. The inherent duality of wilderness was confirmed and clarified, with the popular conception of wilderness differing significantly from the political conception contained within the New Zealand Wilderness Policy. Implications of this finding for wilderness managers are discussed.

1. INTRODUCTION

Definition of wilderness is ‘frustratingly elusive’ (Nash 1982; Oelschlaeger 1991) because the term ‘wilderness’ implies both a state of mind (a conception created and held by individuals and groups), and a political construct (a specific protected area defined and designated by governmental decree). Many authors have suggested that these popular and political conceptions of wilderness exist (Wildland Research Center 1962; Krieger 1973; Stankey & Schreyer 1987; Kearsley 1990; Walker & Kiecolt 1995). Referring to the situation in the United States, Hendee et al. (1990: 4) noted that:

At one extreme, wilderness can be defined in a narrow legal perspective as an area possessing qualities outlined in Section 2(c) of the Wilderness Act of 1964. At the other extreme, it is whatever people think it is, potentially the entire universe, the *terra incognita* of people’s minds.

Hendee et al. (1990) refer to these dual conceptions of wilderness as ‘legal’ and ‘sociological’. In this paper, the term ‘political’ wilderness is used, as some governments use policy rather than legislation to define wilderness (e.g. New Zealand). Similarly, the term ‘popular’ rather than ‘sociological’ is used, as society encompasses both the individuals’ conceptions of wilderness, and the associated policy and legislation conceptions.

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Despite acknowledgement of this duality of wilderness, wilderness research has almost completely concentrated on the contemporary political conception. Reviews show that most studies on wilderness use and users have been carried out onsite with current visitors to a particular wilderness, while very few have involved the general public (Roggenbuck & Lucas 1987; Stankey & Schreyer 1987; Hendee et al. 1990). As a result, the extent of the contemporary popular conceptions of wilderness including both non-user and user perspectives remains unclear.

Further, these visitor surveys focus almost exclusively on attitudes toward problematic management practices or issues (Manning 1986; Virden 1990; Hendee & Ewert 1993), because these issues are of overriding concern to the land management agencies which fund most wilderness research. The public's basic perceptions of wilderness are normally considered peripheral. Yet non-user perspectives and attitudes towards wilderness have critical implications for future public support and management strategies for wilderness areas (Henning 1987; Virden 1990). In democratic nations, the popular conception of wilderness will continue to influence the political conception of wilderness.

This paper identifies the popular conception of wilderness held by a representative sample of the New Zealand public, and compares this with the political conception of wilderness contained within the 1985 New Zealand Wilderness Policy. It begins by reviewing popular attitudes towards wilderness and generates hypotheses based on past research. The evolution and current status of the political conception of wilderness in New Zealand is outlined, and a description of the methods and survey questions used to assess the popular and political conceptions of wilderness is provided. Next, the paper provides results from a public survey, outlining public perceptions, utilisation and images of wilderness. The final section contrasts the dual conception of wilderness and discusses its potential implications for wilderness managers.

2. PREVIOUS RESEARCH ON POPULAR CONCEPTIONS OF WILDERNESS

The vast majority of wilderness research focuses on visitor attitudes towards management issues in wilderness areas, and is typically based in the north-western region of the United States (Hendee et al. 1990; Hendee & Ewert 1993). While no previous studies have contrasted potential public and political conceptions of wilderness, a limited number have addressed basic social orientations towards wilderness. The principal topics addressed in these studies are:

- Public knowledge of the activities and facilities allowed in wilderness areas by relevant legislation or policy
- The ability to correctly identify one or more designated wilderness area
- Global attitudes towards wilderness
- Popular images of wilderness areas

Respondents in these public surveys tend to believe that many activities and facilities expressly forbidden by wilderness legislation or policy were allowed, or were desirable in wilderness areas. In one American study, over half the sample believed that developed campsites were allowed in wilderness, and more than 40% felt that logging and sightseeing by car were allowed (Yankelovich, Skelly, and White 1978, cited in Stankey & Schreyer 1987). Similarly, a sample of Illinois residents were generally unaware of the facilities and activities allowed in wilderness areas (Young 1980; Young & Crandall 1979). More recently, Burde & Fadden (1995) noted that 51% of their sample of primarily rural Illinois residents believed that logging was allowed in wilderness and 88% felt that maintaining water holes for wildlife was acceptable. These findings suggested the following hypotheses:

H₁ The majority of respondents will believe that more than half of the activities disallowed under existing legislation or policy are desirable in wilderness areas;

H₂ Unprompted popular conceptions of wilderness will be less purist than the political conception of wilderness provided in the New Zealand Wilderness Policy.

Public knowledge of wilderness policies, particularly the activities and facilities deemed acceptable by existing wilderness legislation or policy, also appears limited. A number of studies found that only a minority of respondents were able to correctly identify the activities and facilities allowed in wilderness areas (Young 1980; Utter 1983; Burde & Fadden 1995). For example, in Young's (1980) sample, 68% answered less than half the wilderness knowledge items correctly. Thus, the third hypothesis states:

H₃ The majority of respondents will answer less than 50% of the items in the wilderness knowledge scale correctly.

Members of the public are also normally unable to correctly identify a designated wilderness area. Burde & Fadden (1995) found that no more than 21% of their sample could correctly identify any of seven local wilderness areas. Of 111 respondents who indicated they had visited a wilderness area, Young (1980) found that 79% did not know the name of the area, could not remember the name, or had not actually visited a true wilderness area. Based on these findings, the fourth hypothesis states:

H₄ The majority of respondents will be unable to correctly identify a designated New Zealand Wilderness Area.

Despite the general lack of knowledge, previous studies have shown that public populations were extremely supportive of wilderness areas. A recent Finnish national survey noted that over 90% of the sample thought it was important to retain wilderness areas to preserve endangered species, protect the area for future generations, and serve as recreational areas (Hallikainen 1994). In 11 counties that contained federally designated wilderness areas, Rudzitis & Johansen (1991) found that about half (53%) of the residents agreed with the statement that the presence of wilderness was an important reason in their decision to move or stay in the area. Only 26% disagreed. In Young's (1980) study, only 2% disapproved of the wilderness concept, and 85% of a sample of Montana residents approved of the creation of designated wilderness areas

(Utter 1983). Burde & Fadden (1995) measured popular support for wilderness through a series of attitudinal statements. More than 83% of respondents agreed with the positive aspects and disagreed with the negative aspects of wilderness. Moreover, many of these studies were located in rural areas of the American West, which are traditionally perceived as strongholds of conservatism and thus far more likely to have less purist attitudes towards wilderness areas (Rudzitis 1996). These findings generated the final hypothesis:

H₅ The majority of respondents will agree with a series of attitudinal statements supporting the political conception of wilderness.

Finally, several studies have measured popular images of wilderness. In the only other study measuring images of wilderness in New Zealand, Wilson (1979) utilised a selected list of 40 adjectives to elicit prompted images of wilderness. The sample of small public and tramping club populations most frequently described wilderness as natural, beautiful, unspoiled, inspired, restful, free, challenging, wild, valuable, and remote. Each of these adjectives was mentioned by over 70% of the sample. A Tasmanian study of backcountry users concluded that 'a composite picture of a wilderness area included undeveloped or untouched land remote from civilisation, of scenic beauty in mountains, rivers and forest, populated by native flora and fauna, and of large extent' (Bardwell 1978: 64-65). An American study including 123 undergraduate students concluded that wilderness was defined as 'a beautiful, quiet green forest with trees, animals, birds, and water, where one can find peace and solitude' (Heberlein 1982: 173). Similarly, a recent Finnish study indicated that:

'peoples' first images of wilderness were of roadless, uninhabited areas covered mainly with virgin forests' (Hallikainen 1994: 261).

Despite considerable temporal, social, and cultural variation, the consistencies between these different cultural constructs of wilderness are striking. While no hypothesis was generated for the issue of wilderness images, it was posited that a composite New Zealand image would be similar to those summarised here.

To enable the comparison of popular and political conceptions of wilderness in New Zealand, it was first necessary to review the history and current status of the political conception here. New Zealand's distinct biogeography and social history has created a political conception of wilderness significantly different from those in other nations (Shultis 1997).

3. THE POLITICAL CONCEPTION OF WILDERNESS IN NEW ZEALAND

The visits of two prominent conservationists helped disseminate the concept of wilderness from the United States to New Zealand. Lance McCaskill travelled from New Zealand to the United States in 1939 to discuss protected area planning and management and the conception of wilderness with Aldo Leopold and other American park managers. The visit of Olaus Murie to New Zealand in 1949 was even more critical (Hendee et al. 1990; Shultis 1997). According to McCaskill (1965) and Thom (1987), Murie's visit not only expedited the

creation of the National Parks Act in 1952, but also directly led to the provision of a section dealing with wilderness areas in this legislation.

Beginning in the mid 1970s, the Federated Mountain Clubs (FMC) used its considerable influence to petition the New Zealand government to reassess the existing wilderness policy and designate new wilderness areas. The Silver Jubilee conference of the FMC in 1981 (Molloy 1983) was a turning point in the evolution of the wilderness concept in New Zealand. A multi-stakeholder group was created to develop and implement a Wilderness Policy to be adopted by all government agencies responsible for protected area management. In 1985, the new joint Wilderness Policy came into effect. Table 1 provides the political conception of wilderness as it appeared in the 1952 National Parks Act, the amended National Parks Act of 1980 and the Wilderness Policy of 1985.

According to the 1952 National Parks Act, wilderness was to be kept and maintained in a state of nature, with foot tracks the only recreational facilities allowed within wilderness boundaries. The slight changes contained within the amended National Parks Act of 1980 reflected the growing concern in New Zealand with the environmental effects of introduced ungulates and other animals.

TABLE 1. THE EVOLUTION OF WILDERNESS POLICY IN NEW ZEALAND (SOURCE: SHULTIS 1997).

National Parks Act (1952)	<p>34.2 While any area is set apart as a wilderness area—</p> <ul style="list-style-type: none"> (a) It shall be kept and maintained in a state of nature (b) No buildings of any description or ski tows or other apparatus shall be erected or constructed thereon (c) No horses or other animals or vehicles of any description shall be allowed to be taken onto or used in the area (d) No roads, tracks, or trails shall be constructed on the area except such foot tracks for the use of persons entering the area on foot as for the Board deems necessary or desirable
National Parks Act (1980)	<p>14.2 While any such area is set apart as a wilderness area—</p> <ul style="list-style-type: none"> (a) It shall be kept and maintained in a state of nature (b) No buildings of any description or ski tows or other apparatus shall be erected or constructed in the area: <ul style="list-style-type: none"> Provided that the Minister may, on such conditions as he sees fit, authorise the erection of huts essential for the destruction or eradication of introduced plants and animals in the park or for scientific study (c) No animals or vehicles of any description shall be allowed to be taken onto or used or kept in the area (d) No roads, tracks, or trails shall be constructed on the area, except such tracks for the use of persons entering the area on foot as are contemplated by the management plan
Wilderness Policy (1985)	<p>Wilderness areas are wild lands designated for their protection and managed to perpetuate their natural condition and which appear to have been affected only by the forces of nature, with any imprint of human interference substantially unnoticeable.</p> <ul style="list-style-type: none"> (a) Tracts of land chosen to be protected through appropriate management as wilderness should meet the following criteria: <ul style="list-style-type: none"> (i) they will be large enough to take at least 2 days foot travel to traverse (ii) they should have clearly defined topographic boundaries and be adequately buffered so as to be unaffected, except in minor ways, by human influences (iii) they will not have developments such as huts, tracks, bridges, signs, nor mechanised access.

The 1985 Wilderness Policy provided a considerably expanded and altered conception of wilderness. New Zealand's wilderness areas were now defined as:

'... wild lands designated for their protection and managed to perpetuate their natural condition and which appear to have been affected only by the forces of nature, with any imprint of human interference substantially unnoticeable. (Wilderness Advisory Group 1985).

Such changes to the political conception of wilderness in New Zealand have created a more stringent and purist wilderness than found in other countries: neither recreational facilities (including recreational trails) or commercial industrial activities are permitted, and buffer zones between road access and wilderness boundaries are required. As a result, wilderness areas in New Zealand have become more strictly geared toward preservation than recreation. Though recreational use of wilderness is allowed in New Zealand, it is not explicitly encouraged: as the policy states:

'... wilderness areas should have their designation identified in management plans, but their use will not be promoted (Wilderness Advisory Group 1985).

Recognising that wilderness is highly susceptible to overuse, the Wilderness Policy utilises remoteness, inaccessibility, and limited marketing to regulate recreational use and its associated impacts.

4. METHODS

To assess attitudes toward the popular and political conceptions of wilderness in New Zealand, a mail survey was administered to a random sample of 1358 adult residents. Fifty surveys (4% of the sample) were returned to sender, and a further 62 surveys (5%) were returned incomplete, creating a final sample size of 1242. A total of 858 questionnaires were returned, for a response rate of 69%. No significant differences were found when basic socio-demographic characteristics (sex, age, education, residence) of the sample population were compared with census data, suggesting the sample was broadly representative of the adult New Zealand population.

4.1 Measuring the popular conception of wilderness

The first three survey questions addressed the public's unprompted conception of wilderness. Respondents were specifically requested to use their own personal definition of wilderness when answering these questions. A modified wilderness purism scale (Stankey 1972) measured the desirability of selected activities, facilities and experiences in what the respondent considered to be wilderness. The purism scale is a proven method of assessing attitudinal orientation toward the wilderness ideal (Shafer & Hammitt 1995; Higham 1997). The New Zealand Wilderness Policy was utilised to provide the items in the scale. A wilderness knowledge scale tested public knowledge of activities and facilities allowed in designated wilderness areas. And to further assess public knowledge of wilderness, respondents were also asked to identify an area they believed to be an example of New Zealand's wilderness.

4.2 Measuring the political conception of wilderness

As opposed to the previous section, which measured unprompted conceptions of wilderness, a definition of wilderness was now provided to respondents. Based on the definition of wilderness provided in the New Zealand Wilderness Policy, wilderness was defined as ‘those areas which remain wild and remote, and which have no facilities such as huts or tracks’. Utilisation of wilderness areas was measured, both for the individual’s lifetime, and in the previous two-year period. Next, user motivations for visiting wilderness were requested, and non-users were asked to indicate why they thought other people visited wilderness areas. Global attitudes toward wilderness were measured with a wilderness attitude scale which included a combination of 12 different attitudinal statements. Completing this section was an open-ended question asking respondents to list their three strongest images of wilderness, allowing the most salient images of wilderness to be assessed.

5. POPULAR CONCEPTIONS OF WILDERNESS: WILDERNESS PURISM AND KNOWLEDGE

5.1 Wilderness purism

The wilderness purism scale included 16 items relating to activities, facilities, and characteristics of wilderness, and used a five point Likert scale with responses ranging from 1 (strongly desirable) to 5 (strongly undesirable). Mean scores for the 16 items are provided in Table 2, with high scores indicating purist attitudes.

TABLE 2. WILDERNESS PURISM SCALE ITEM SCORES.

WILDERNESS PURISM ITEMS	MEAN*	STD. DEV.
Maintained tracks	1.8	0.9
Maintained huts	1.9	0.9
Bridges/walkwires	2.0	0.9
Road access to wilderness boundary	2.3	1.1
Commercial recreation	2.6	1.1
Developed campsites	2.7	1.2
Hunting	3.3	1.3
Stocking exotic species	3.6	1.2
*Remote from cities or towns	3.7	0.9
*Solitude (not seeing many other groups of people)	3.7	0.9
Motorised travel by visitors	3.7	1.1
Hydro-electric development	3.8	1.1
*Large size (at least 2 days walk)	3.8	0.9
*Free from evidence of impact	4.2	0.9
Logging	4.2	1.0
Commercial mining	4.4	0.9

* Mean score ranges from 1 (strongly desirable) to 3 (neutral) to 5 (strongly undesirable), except for the four marked items, which are scored in the reverse direction. In all cases, high scores indicate purist wilderness values.

The facilities traditionally provided in New Zealand's protected areas such as tracks, huts, bridges/walkwires and road access were considered most strongly desirable in wilderness areas by the sample group, although none of these facilities are allowed by the Wilderness Policy. The first three of these facilities were considered particularly desirable, all having mean scores of 2.0 or less and low standard deviations. The more purist characteristics of wilderness, including the absence of obvious human impact (presumably other than those created by the above facilities), large size, remoteness and solitude were considered moderately desirable. The most strongly undesirable items in wilderness were commercial mining and logging.

As Table 2 indicates, Hypothesis 1 was supported. The majority of respondents believed that most activities disallowed under existing policy were desirable in wilderness areas. Only logging, mining, and stocking exotic species—all disallowed by the Wilderness Policy—were considered undesirable by a majority of respondents. Hypothesis 2 was also supported. The unprompted popular attitudes towards wilderness were much less purist than in the political conception as outlined in the Wilderness Policy.

5.2 Wilderness knowledge

This section tested the public's knowledge of whether the 12 activities and facilities listed in the purism scale were allowed in designated wilderness areas in New Zealand (Table 3). As previously noted, knowledge levels in public populations were generally found to be low. This was supported here, with an average of fewer than five correct responses for the 12 items.

Approximately 10% of respondents recognised that tracks, huts and bridges were not allowed in designated wilderness areas. Only 12% of the sample answered more than two-thirds of the wilderness knowledge items correctly, and only 35% answered half or more correctly. Thus, Hypothesis 3 was

TABLE 3. WILDERNESS KNOWLEDGE SCALE.

ITEMS NOT ALLOWED IN WILDERNESS	CORRECT %
Maintained tracks	9
Maintained huts/shelters	11
Bridges/walkwires	12
Road access to wilderness boundary	16
Hydro-electric development	38
Developed campsites	43
Motorised travel by visitors	43
Logging	55
Commercial mining	62
Stocking exotic species	64
*Hunting	71
*Commercial recreation	80

* Hunting and commercial recreation are the only items in the list that are actually allowed in designated wilderness areas in New Zealand.

supported. Less than half of respondents were knowledgeable about facilities and activities allowed in wilderness areas.

The New Zealand public's knowledge of wilderness was also measured by the third question in this section, which asked the respondents to name an area considered an example of New Zealand's wilderness. Of the 80% of the total sample who responded to this question, 6% identified a potentially correct wilderness area, and the remaining 94% named an area which did not match the definition of wilderness provided in the Wilderness Policy. National parks and specific locations within them were most frequently identified as wilderness areas. Fiordland National Park was the most frequent response from the 55% of the sample who indicated a national park. Forest Parks were mentioned by 22% of respondents, with the remaining 23% of responses ranging from the whole South Island to local parks and reserves. These findings reflected those of Kearsley (1990: 135), who stated that 'national parks and wilderness are synonymous for many people in New Zealand' (see also Molloy 1997). Most respondents were unable to identify a New Zealand wilderness area, and Hypothesis 4 was accepted.

6. POLITICAL CONCEPTIONS OF WILDERNESS: USE, MOTIVATIONS, ATTITUDES AND IMAGES

6.1 Utilisation of wilderness

After the definition of wilderness was provided, respondents were asked if they had ever visited a wilderness area in their lifetime, or in the last two years. The majority (78%) indicated that they had never visited such an area, with an additional 8% answering in the affirmative, but not indicating a proper location or any location at all. Only 5% indicated they had ever visited a wilderness, and then correctly identified a potential wilderness area. Around 90% of the sample indicated they had not visited a wilderness area in the previous two years. An additional 4% had made one visit in the previous two year period, with 3% making two, 1% three, and 2% four or more wilderness visits.

6.2 Motivations to visit wilderness areas

Motivations for visiting wilderness areas were requested to further assess attitudinal orientations towards the wilderness concept. Respondents who had visited a designated or de facto wilderness in the last two years were asked to list, in order of importance, their three most important motivations for visiting these areas. Non-users of wilderness in the previous two years were asked why they think other people go into wilderness areas. Table 4 suggests the non-user population was able to predict both the type of motivational category and, to a somewhat lesser extent, their relative importance to the user population. The primacy of the enjoyment of nature category was confirmed by both samples, and only two motivation categories were not contained in both responses. Differences were present. Activity specific motivations were much more frequently attributed by the user population sample. The motivation to visit a less crowded area was non-existent in nonuser responses, as was the work-related reason for visiting wilderness. Nonusers believed the search for

TABLE 4. MOTIVATIONS TO VISIT WILDERNESS (cumulative, from 3 responses).

MOTIVATIONS (%)	FIRST	SECOND	THIRD	OVERALL
Enjoy nature	19 (27)*	22 (18)	19 (24)	60 (69)
Specific recreational activity	13 (4)	15 (6)	6 (5)	33 (15)
Hunting	12 (5)	9 (7)	5 (5)	26 (17)
Less crowded area	12 (0)	8 (0)	3 (0)	23 (0)
Relaxation	9 (14)	13 (12)	11 (7)	33 (33)
Escape from work/home/city	9 (14)	13 (12)	11 (7)	20 (35)
Achievement/Challenge	5 (8)	6 (12)	5 (12)	16 (32)
Work-related	5 (1)	0 (1)	2 (2)	7 (4)
Solitude	3 (8)	3 (12)	5 (3)	11 (23)
To get back-to-nature	1 (6)	3 (5)	3 (6)	7 (17)

* Visitors to wilderness were requested to provide their three most important motivations; non-visitors (in parentheses), were requested to state what they felt were the three most important motivations for people who did visit wilderness areas. All numbers are percentages.

solitude to be a significant motivation behind wilderness use, though this motivation was not of equal importance in the user population.

6.3 Wilderness attitudes

The wilderness attitude scale used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to measure public attitudes toward the political conception of wilderness. The 12 items tapped affective, cognitive, and behavioural responses to wilderness. Table 5 lists statements in decreasing order of agreement, and provides mean scores and standard deviations for each item.

TABLE 5. WILDERNESS ATTITUDE SCALE ITEM SCORES.

WILDERNESS ATTITUDE ITEMS	MEAN*	STD. DEV.
1. It's good that wilderness exists.	4.6	0.5
2. Wilderness areas are important to mankind.	4.5	0.6
3. We have a duty to future generations to keep some parts of New Zealand as 'wild' as our ancestors found it.	4.5	0.7
4. It's good to know wilderness still exists, even if I decide never to use it.	4.4	0.6
5. *Setting aside wilderness areas is a waste of valuable resources.	4.4	0.8
6. I would like to visit a wilderness area.	4.3	1.0
7. Once a wilderness area is established, it should always remain protected from exploitation.	4.1	0.8
8. I would be prepared to pay \$5 each year to a special government fund in order to establish and maintain a few wilderness areas in New Zealand.	3.7	1.1
9. *Only an 'elite' group of people use wilderness.	3.7	1.0
10. Livestock should be prevented from grazing in wilderness, even if it slightly raises the cost of meat.	3.7	1.1
11. *There are already enough wilderness areas set aside in New Zealand.	3.2	1.0
12. *Wilderness areas should be left completely alone—not even used for recreation.	2.1	0.9

* Mean score ranges from 1 (strongly disagree) to 3 (neutral) to 5 (strongly agree), except in the marked items, where scoring is reversed. In both cases, high scores indicate positive attitudes toward wilderness.

As previous research has indicated, public attitudes here were quite favourable toward wilderness, with a total mean of 47.4 out of a maximum of 60. Respondents agreed most strongly with the affective statements relating to the existence value of wilderness areas, their general importance to humans, and their bequest and option values. The items related to behavioural attitudes toward wilderness received somewhat less support. The willingness-to-pay question received general support, but also provided the greatest standard deviation about the mean. The importance of recreational use of protected areas in New Zealand society was reinforced by the fact that the only unsupported item was the statement that ‘wilderness areas should be left completely alone—not even used for recreation’. Hypothesis 5, which stated that the majority of respondents would agree with the statements provided in the wilderness attitude scale received overall support. Seven of 12 items had mean scores of 4.0 or higher.

6.4 Public images of wilderness

In this open-ended question, respondents were asked to list, in order of importance, the images that came to mind when thinking about the term ‘wilderness’. Table 6 provides a list of the 10 most frequent responses to this question.

TABLE 6. PUBLIC IMAGES OF WILDERNESS (CUMULATIVE, FROM 3 RESPONSES).

RESPONSE CATEGORIES	FIRST	SECOND	THIRD	OVERALL
Bush/native forest	23	8	3	34
No evidence of impact	13	7	5	25
Trees/forest/vegetation	11	5	4	20
Peace/solitude/freedom	8	11	13	32
Remote/isolated	7	6	6	19
Primeval/original condition	4	3	2	9
Nature/scenery/beauty	4	5	7	16
Mountains/alpine	4	5	5	14
Animals/birds/wildlife	4	13	14	31
Rivers/waterfalls	1	8	7	16

A large number of image categories (over 40) were generated. When cumulative responses are calculated, ‘bush/native forest’ was the most frequent image, followed by ‘peace/solitude/freedom’ and ‘animals/birds/wildlife’. The composite image emerging was that of undisturbed, peaceful, and beautiful areas of native forests and other vegetation containing birds and other animals, and often including alpine and freshwater scenes. As previously suggested, some consistencies were apparent in the images of wilderness from population samples in different western nations.

7. DISCUSSION

The four pre-eminent facilities found in protected areas of New Zealand—maintained tracks, huts, bridges/walkwires, and road access—were the items respondents were most likely to incorrectly believe were both desirable and allowed in wilderness areas. Of the three major types of industrial development contained in the list, hydroelectric power development was answered correctly by 38%, logging by 55% and mining by 62% of the sample. The latter two items were also perceived as the most strongly undesirable activities in wilderness areas. The fact that only 35% of respondents were able to correctly identify more than half of the activities and facilities allowed in designated wilderness areas seems to reflect a pervasive inconsistency with the political conception of wilderness, as contained in the New Zealand Wilderness Policy.

Despite these low knowledge levels, and the low levels of recreational use of wilderness (only 10% had visited in the last two years), the prompted public attitudes to designated wilderness areas were extremely positive. Items referring to the existence, bequest and option values of wilderness (items 1, 2, 3 and 4 respectively in Table 5) were most strongly supported. Historically, researchers have suggested that recreational use is necessary to retain public support of wilderness areas (e.g. Stankey 1993). Many would agree with William Greeley, Chief Forester of the US Forest Service, who in 1924 insisted that ‘public use and enjoyment are the only justification for having wilderness reserves at all’ (cited in Hendee et al. 1990: 35). However, the data provided in this paper does not support this supposition. The New Zealand population appears to support the political conception of wilderness, despite the fact that the Wilderness Policy does not allow the recreational trails or huts so favoured by New Zealand recreationists. One important caveat to this widespread support is reflected by the only item on the wilderness attitude scale that was not supported. Respondents felt strongly that wilderness areas should not directly prohibit public recreation.

Several interesting patterns emerged when the wilderness user and non-user perceptions of why others are motivated to visit wilderness areas are compared. Non-users correctly identified the most important motivation of enjoying nature and the importance of relaxation and hunting, but overstate the role of achievement/challenge, escape, solitude, and back-to-nature motivations. Users mentioned the less crowded aspect of wilderness recreation, and activity-oriented motivations much more than nonusers. The ability of non-users to estimate user’s motivations to visit wilderness suggests that wilderness recreation has broad support in New Zealand.

The term ‘bush’ was most strongly associated with the term wilderness. The composite wilderness image that emerged was undisturbed, peaceful, and beautiful areas of native forests and other vegetation containing birds and other animals, and often including mountain and freshwater scenes. This was strikingly similar to the wilderness images derived from many other samples, which may reflect the existence of a common conception of wilderness throughout a number of Western nations.

8. CONCLUSION

The data generated by the public survey indicate a divergence between popular and political conceptions of wilderness in New Zealand. The political conception of wilderness does appear to be based on the popular conception of wilderness. But the vast majority of the general public seemed to equate conceptualisations of wilderness with the concept of the national park, and particularly those national parks that epitomise undeveloped, peaceful areas of native forest containing wildlife as well as alpine and freshwater features. The popular conception of wilderness seems to better reflect the original political conception of wilderness from the original National Parks Act (1952) and amended National Parks Act (1980). These allowed for the provision of recreational trails in designated wilderness. Only 10% of the sample seemed to equate their unprompted conception of wilderness with the stricter political conception of wilderness defined in the later Wilderness Policy (1985). Although the public conception of wilderness is less rigorous than the current political conception, that more purist conception (as contained in the Wilderness Policy), is nonetheless strongly supported by the New Zealand public.

Results from this public survey indicate that utilising unprompted and prompted perceptions and attitudes to wilderness may prove to be a fruitful means of assessing public orientation towards the cultural construct of wilderness. However, as exploratory research, this data tends to generate as many questions as answers. For example, this research has not addressed the source of the popular conception of wilderness. What specific sources of information do people access to accumulate their personal definition and images of wilderness, and how do these attitudes and values change?

Perhaps the most critical question for wilderness managers is, how closely should the two conceptions correspond? Should agencies managing wilderness defer to the public conception of wilderness, or should they attempt to promote the values expressed in policy or legislation to the public via educational programs? The question of whether purist views of wilderness should be given priority when making management decisions has long been debated (Dustin & McAvoy 1982; Cole et al. 1997), but not yet answered. A related question is whether agencies should attempt to better educate members of the public in the differences between the national park and wilderness areas, and their specific goals and objectives. Despite high levels of support, the public's equivocal image of wilderness areas may compromise future support of these protected areas.

The possibility of numerous variations in the popular conception of wilderness has not been addressed in this research. Special interest groups supporting and opposing the designation and management of wilderness areas have disparate conceptions of wilderness. As members of special interest groups often provide disproportionate levels of 'public' input when policy and legislation are modified or created, it is critical that land agencies understand differences in the conception of wilderness between the general public and such special interest groups.

The existence of a common Western conception of wilderness, or of heterogeneous conceptions held by different nations or cultures, is also a potential topic for future research. By amassing popular conceptions of wilderness in various nations, researchers can better appreciate the role of this concept in Western (or non-western) culture. As the amount of these endangered wild spaces continues to decrease throughout the world, and as conflicts between preservation and exploitation escalate, the importance of understanding the relationship between popular and political conceptions of wilderness will only increase.

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Perceptions of international visitors to New Zealand wilderness

By James Higham

The New Zealand tourism industry has experienced uninterrupted growth in international visitor arrivals since the mid 1960s (Statistics New Zealand 1995), and during the last decade a growth of 8-14% per annum. During this timeframe the New Zealand Tourism Board (NZTB) has maintained a marketing focus in order to achieve foreign exchange and employment, with a target goal of 3 million visitors per annum by early in the next millennium. Currently New Zealand hosts approximately 1.5 million international visitors. This period of rapid growth has coincided with the emergence of ecotourism, and this is no surprise when one considers that New Zealand's greatest tourist resource is its extensive system of national parks and reserves. While the NZTB succeeds in attracting international tourists in increasing numbers, demands upon New Zealand's protected area system have also increased. Called the conservation estate, this system covers more than one-third of New Zealand's designated wilderness. The evolution of tourist preferences includes a shift in demand from the concentrated use of a small number of highly accessible and closely managed key sites, such as Milford Sound, Mount Cook, and the Westland Glaciers, towards the increasingly dispersed use of less accessible natural areas. O'Neill & Kearsley (1994) propose that pressure on wilderness recreation resources has intensified more than increasing inbound tourist arrivals alone would indicate. While inbound tourism increases at the rate of 8-14% per annum, an increasing proportion of these tourists seek to experience qualities of wilderness during their visit. Tourists, while still visiting the key sites, are increasingly looking beyond these high-profile attractions to wilderness settings, and to visiting them too.

1. THE PERCEPTUAL APPROACH TO WILDERNESS MANAGEMENT

Kliskey & Kearsley (1993) note that ecotourists seek '... natural environments and wild places and, as their numbers have grown, so too has pressure upon wilderness resources'. However, the management of wilderness recreation is complex (Dubos 1972; Tuan 1974), with growing needs to appreciate the

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wilderness perception of visitors. The term 'wilderness' can be used as either an adjective or noun (Nash 1982), and this has led to growing attention in the field of wilderness perception imagery (Kearsley 1983; Leslie & Taylor 1985; Shultis 1991; Kliskey 1992). Shultis & Kearsley (1989) recognise that natural environments are '... perceived, evaluated, and interpreted by the brain'. It is therefore apparent, as Gresham (1983) explains, that 'wilderness experience is not confined to wilderness areas'. In light of these points, Davison (1983) places heavy emphasis upon the need for an appreciation of wilderness perceptions and values, drawing attention to subsets of the recreation population who may hold quite distinct perceptions of wilderness. These perceptions are likely to be reflected in the demands and preferences associated with the notion of wilderness recreation.

2. WILDERNESS PERCEPTION SCALING

Wilderness perception scaling in the New Zealand context has been the subject of academic attention since the late 1970s (Wilson 1979; Kearsley 1983; Shultis 1991; Kliskey 1992). This sequence of research confirms that '...many environmental contexts are acceptable as wilderness depending on the imagery and the attitudes of the visitor' (Kearsley 1990). Research conducted by Shultis (1991) and Kliskey (1992) included the development and mapping of a purism scale that 'represents' a gradient of perception levels based on backcountry user's personal concepts of what constitutes a wilderness setting' (Kliskey 1992). These research programmes confirm that wilderness perceptions are subjective. Wilderness perceptions may be determined by social and cultural conditions as much as by individual preferences and experience (Stankey & Schreyer 1987; Kearsley 1990). It is probable that inbound tourists to New Zealand, from a diversity of national, social, ethnic and cultural settings, bring an equally diverse range of wilderness preferences to recreational settings in this country. Thus, an appreciation of the qualities of wilderness experiences sought by international visitors would seem relevant to the management of wilderness recreation resources in New Zealand.

3. RESEARCH METHODS

In my recent study of the wilderness perceptions of international visitors to New Zealand I applied a specialised survey instrument, wilderness perception scaling (Higham 1996). A questionnaire was designed, pilot tested, and administered at a range of selected backcountry locations, employing the cluster sampling method. The questionnaire was designed to minimise written responses and was translated fully or in part into four languages. Questionnaires were personally delivered to 465 international tourists on twelve tracks of varying remoteness, facility development and use intensity. A response rate of 72.3% generated a sample frame of 336 respondents representing twenty nationalities.

4. DIMENSIONS OF WILDERNESS IMAGERY: NON-PURISTS TO PURISTS

A list of 21 variables, addressing various qualities of wilderness experience, was developed drawing on previous research (Brown & Haas 1980; Shultis 1991) and personal experience. The use of a five-point Likert scale afforded tourists the opportunity to express the degree to which listed variables were considered appropriate or inappropriate to wilderness recreation settings (Table 1).

Based on their perception of the appropriateness of the variables, international tourists were classified according to the degree of purism they attach to wilderness (Table 2). Purism scores were then examined by nationality of the tourists. The most non-purist of international visitors, in terms of the wilderness images held, were Japanese and Israeli (Fig. 1). Those nationals who were predominantly 'neutral' or 'moderate' purists proved to be Continental Europeans, namely Swiss, German, Dutch and Austrian. The most purist perceptions of wilderness were held by North Americans, Britons, and Australians.

Gender and levels of educational achievement proved to have little bearing on the wilderness purism of these international visitors. The extent to which visitors had backcountry experience was also related to the purism scores with

TABLE 1. RESPONSES OF INTERNATIONAL TOURISTS TO WILDERNESS PERCEPTION VARIABLES*.

VARIABLE LIST	UNACCEPTABLE		ACCEPTABLE			MEAN
	1	2	3	4	5	(1-5)
Search and rescue	4.0	3.1	16.6	21.2	49.1	4.3
Distant from towns and cities	4.0	6.7	19.8	22.6	45.1	4.0
Swing bridges/walkwires over rivers or streams	5.2	6.8	21.8	28.3	36.9	3.9
Restricted group size	10.5	9.5	16.6	24.9	33.5	3.8
Restricted access to prevent crowding	10.5	8.0	17.5	25.2	34.2	3.8
Big enough to take at least 2 days to walk across	8.9	6.8	18.8	24.3	39.4	3.8
Water provided in huts	14.3	7.9	17.7	22.3	36.9	3.6
Maintained huts and shelters	9.5	11.0	22.7	27.9	26.4	3.6
Toilet facilities	14.0	8.5	18.6	22.9	34.5	3.6
Exotic plants/trees (pines, thistles and foxgloves)	11.2	11.6	20.4	20.7	33.4	3.6
Signposts/information	7.0	12.8	24.8	24.5	29.4	3.6
Road access to the start of track	12.5	11.6	27.1	22.0	25.0	3.4
Maintained tracks (e.g. tracks cleared of fallen trees)	13.1	18.3	21.7	27.2	18.0	3.2
Developed camping sites	20.2	14.4	25.2	24.2	14.1	3.0
Grazing of stock (cattle, sheep)	31.2	15.9	25.7	11.9	11.3	2.7
Gas provided in huts for cooking	33.7	16.7	21.3	10.3	16.7	2.6
Stocking of animals and fish not native to NZ	40.1	20.7	21.0	4.6	7.7	4.4
Hunting/trapping	38.6	18.8	21.9	9.3	8.0	2.4
Motorised transport (powered vehicles, boats)	44.9	22.5	15.7	6.2	8.3	2.2
Plantation logging/mining/hydro development	52.8	18.1	16.6	4.3	4.0	2.0
Commercial recreation (e.g. guided tours)	52.7	20.1	13.1	5.5	6.4	2.0

* Row percentages—ranked according to their acceptability in wilderness recreation setting.

Non-purist	Neutralist	Moderate purist	Strong purist
	Japan (1.92)		
	Israel (2.13)		
	Hong Kong (2.34)		
	Switzerland (2.45)		
	Holland (2.54)		
	Germany (2.62)		
	Austria (2.67)		
	USA (2.89)		
	Canada (2.90)		
	Britain (2.92)		
	Australia (3.04)		

Figure 1. Wilderness purism mean scores by visitor nationality (mean scores in parenthesis).

first-time, occasional, and regular backcountry recreationists achieving different mean purism scores (2.36, 2.63 and 2.91 respectively). Indeed 57.2% of non-purists were first-time trampers, while 58.3% of strong purists were regular trampers. The association between increasing recreational experience and strong purism provides clear supporting evidence of research conducted by Vaske et al. (1980); Schreyer et al. (1984); Kearsley (1990) and Bourassa (1991).

5. DISCUSSION

Since it is well established that wilderness perceptions are shaped by cultural and sociological factors (Stankey & Schreyer 1987; Kearsley 1990) it is no surprise that international visitors to New Zealand fall into a wide range of wilderness purism classes, and that class membership is related to nationality. This information affords the opportunity to project international visitor demand for recreation resources offering qualities of wilderness experience on the basis of visitor statistics and tourism forecasts as published by the NZTB. For example, it is apparent that Asian visitors generally hold non-purist perceptions

TABLE 2. CLASSIFICATION OF INTERNATIONAL TOURISTS WITH THE WILDERNESS PURISM SCALE.

PERCEPTION LEVEL	PURISM CLASS	PURISM SCORE	FRE-QUENCY*	PERCENTAGE OF SAMPLE
1	Non-purist	82-105	14	4.4
2	Neutralist	67-81	92	28.7
3	Moderate purist	52-66	144	45.0
4	Strong purist	21-51	70	21.9

* Sixteen sample units provided insufficient response to variables listed in this question to be included in wilderness purism scaling analysis.

of wilderness. As such, these visitors are likely to seek certain qualities of wilderness experience (e.g. naturalness and scenery) in a relatively safe and humanised natural setting (e.g. with search and rescue services and a high level of facility development provided). Continental European visitors occupy the middle range of the spectrum and are most likely to hold neutralist or moderate purist perceptions of wilderness. This suggests that they may seek locations of moderate remoteness and naturalness with some level of facilities development. North American, British, and Australian visitors are those who exhibit the strongest purism. In relative terms then, these tourists seem most likely to seek the least humanised, i.e. least developed, wilderness settings.

6. CONCLUSION

This study confirmed that international visitor perceptions of wilderness vary according to nationality and previous backcountry experience. This suggests that providing a spectrum of wilderness recreation opportunities is needed to meet the diverse visitor preferences, and that wilderness sites must be managed to provide stated qualities of experience about visitor activities, facilities and services. This, however, requires that the various qualities of wilderness experience be available at a wide range of recreational settings to allow tourists to achieve wilderness experiences that reflect their wilderness expectations.

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