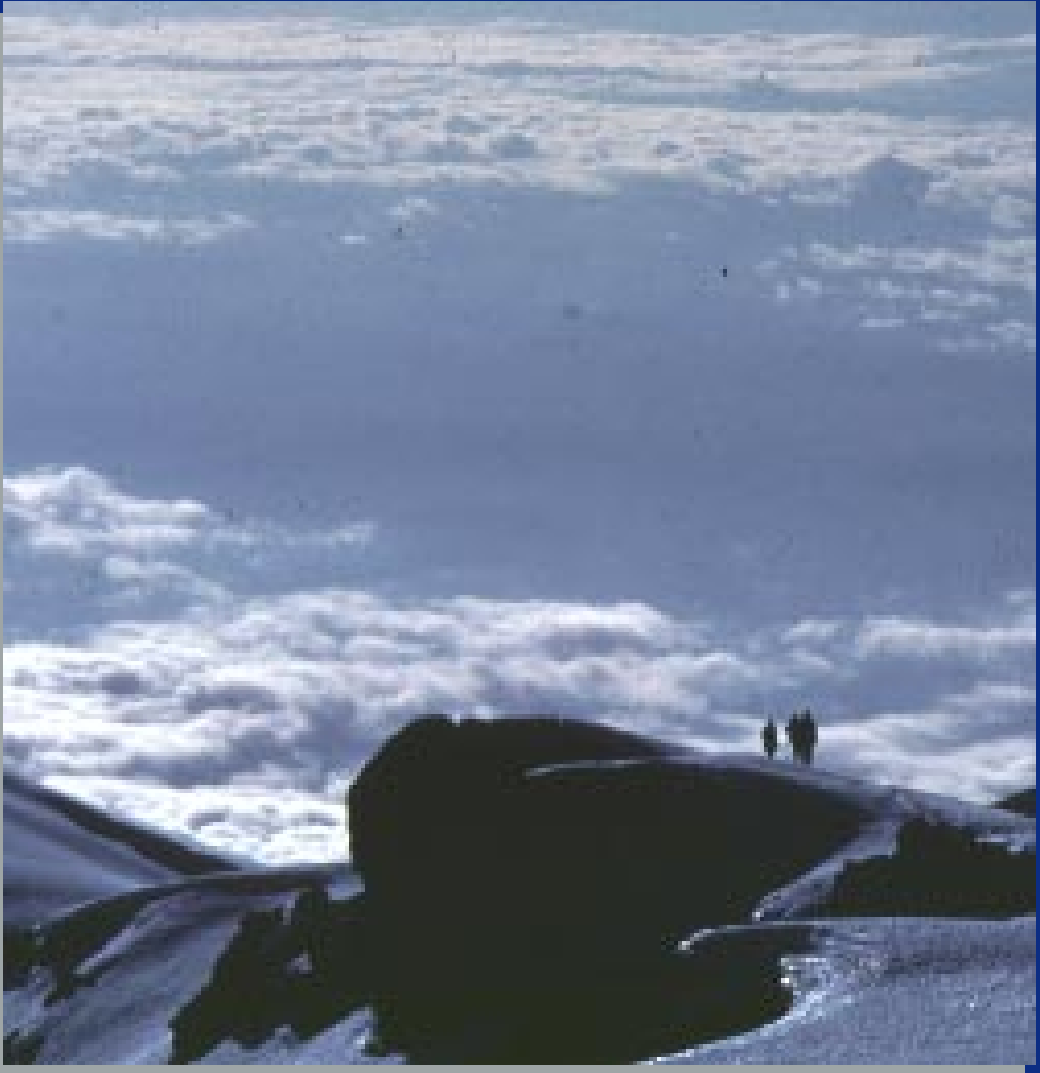


Protected Areas Programme

PARKS

Vol 10 No 2 • June 2000

Non-Material Values of Protected Areas



IUCN
The World Conservation Union

Protected Areas Programme

PARKS

The international journal for protected area managers

Vol 10 No 2 • June 2000

ISSN: 0960-233X

Published three times a year by the World Commission on Protected Areas (WCPA) of IUCN – The World Conservation Union.

Editor: Paul Goriup

Assistant Editor: Andrew Mann

Translations: Lilia Knight (Spanish),
Balfour Business Communications Ltd
(French)

PARKS Advisory Board

David Sheppard *Chairman*

(Head, IUCN Protected Areas Programme)

Paul Goriup

(Managing Director, Nature Conservation Bureau Ltd)

Jeremy Harrison (WCMC)

Lota Melamari

(Director General, Tanzania National Parks)

Gustavo Suárez de Freitas

(Executive Director, ProNaturaleza, Peru)

Adrian Phillips (Chair, WCPA)

**PARKS, 36 Kingfisher Court, Hambridge
Road, Newbury, RG14 5SJ, UK**

Fax: [+ 44] (0)1635 550230

Email: parks@naturebureau.co.uk

Subscription rates and advertisements

Please see inside back cover for details of subscription and advertising rates. If you require any further information, please contact the editorial office at the address above.

Contributing to PARKS

PARKS welcomes contributions for future issues. Potential authors should contact PARKS at the address above for details regarding manuscript preparation and deadlines before submitting material.

PARKS is published to strengthen international collaboration among protected area professionals and to enhance their role, status and activities by:

- maintaining and improving an effective network of protected area managers throughout the world, building on the established network of WCPA;
- serving as a leading global forum for the exchange of information on issues relating to protected area establishment and management;
- ensuring that protected areas are placed at the forefront of contemporary environmental issues such as biodiversity conservation and ecologically sustainable development.

Ideas and viewpoints expressed in PARKS do not necessarily reflect those of IUCN or their associates, collaborators or advisers. Moreover, the presentation of material and geographic designations employed do not imply any expression of any opinion whatsoever on the part of IUCN or their associates, collaborators or advisers concerning the legal status of any country, territory or area, or concerning the delimitation of its frontiers or boundaries.

All material may be reprinted unless it has been used in PARKS from an identified source publication in which case no reprint is authorised except upon permission of the source publication. Reprinted material should bear the author's name and credit to PARKS should be given. The Editor would appreciate two copies of any material so used.

Cover photo: Climbers approaching the summit of Kilimanjaro, Tanzania. Photo: Edwin Bernbaum.

Production of PARKS is supported by the United States National Park Service.



© 2000 IUCN, Gland, Switzerland. Produced by the Nature Conservation Bureau Limited, UK.

Editorial

ALLEN PUTNEY

THIS ISSUE of *PARKS* is dedicated to an exploration of the non-material values of protected areas. The term, ‘non-material values’, is an imprecise term for many, as it encompasses a range of values, not all of which are particularly meaningful to each individual or culture. Perhaps the term is best understood when contrasted with the ‘material’. The material attributes of protected areas provide the physical resources essential to human existence – food, fibre, shelter, water, air, medicines, a stable environment, and sources of employment – and are generally understood and valued by societies around the world. The non-material attributes of protected areas are those that provide resources for the non-physical dimension of human existence. This dimension includes a plethora of attributes held sacred by humans, including recreational and therapeutic resources; spiritual, cultural, and existence values; artistic inspiration and aesthetic qualities; and opportunities for education, and the promotion of peace (as in peace parks). Yet each society tends to perceive these attributes in different ways, and assign different values to them according to the particular cultural context.

The articles presented in this issue of *PARKS* illustrate some of the different concerns and approaches that fall within the rather general theme of “non-material values”. The articles by Lee (Canada) and English (New South Wales, Australia) explore the difficulties, and present possible approaches, to bridging the gaps between the perceptions and approaches of native cultures and those of predominant western societies. The articles by Hamilton (international), Bernbaum (US), and Tranel (US) provide examples, and some preliminary guidelines, for incorporating different non-material values into management programmes, while the article by Andrade (Machu Picchu, Peru) explores the conflicts and potentials of managing major tourism sites that are held sacred by a native culture.

While these articles offer a fascinating look at a few of the non-material values and their relationship to the selection and management of protected areas, there are many others that have not been addressed. Obviously, much work remains to develop a more holistic approach to management, and to provide guidelines and diverse examples that will help managers around the world.

In the end, however, there is perhaps one uniting theme for this work that can be expressed in infinite variety. It is the theme of unity – the relationship of all things – that is a central concept of ecology, economics, physics, spirituality, and many other fields. Protected areas can play a unique role in fostering the healing of our relationship with nature, and with each other. This is the underlying requirement of sustainable development, but it can only emerge from our hearts and our spirits. Perhaps no one has expressed it more simply and elegantly than Chief Seattle (a native American of the Pacific Northwest of the US) when he said:

Teach your children
what we have taught our children –
that the earth is our mother.
Whatever befalls the earth



befalls the sons and daughters of the earth.
If men spit on the ground,
they spit on themselves.

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

Whatever befalls the earth
befalls the sons and daughters of the earth.
We did not weave the web of life,
we are merely a strand in it.
Whatever we do to the web,
we do to ourselves.

Can we manage protected areas in ways that are appropriate to each culture and society, so that we enable visitors to understand and re-experience their unity with the natural world and with each other? If this can be done, it will perhaps be the greatest legacy of our protected areas to future generations.

A personal footnote

As I write this piece, I hear the flood stage waters of one of the Amazon's major tributaries rushing by just down the hill. I am in the field working on a management plan, and as I reflect on my work, I suppose that it is not too different from that of many of my colleagues around the world. I spend most of my time absorbed in the details of ecosystem and social analysis, visitor attractions, management programmes, participation processes, human resources, infrastructure, equipment, monitoring and evaluation, and financial options. Yet when there are those few moments of magical solitude in the park, these details slip from the mind as I slowly merge with the life around. All else becomes insignificant and thoughts move to a different plane. Finally, the insects start to bite, the ants start climbing to within reach of uncovered skin, and the spell is broken. Yet in those few moments I remember once again that my work is for that – for maintaining that profound personal connection with nature, for providing the means and encouragement for others to make their own connection in their own way, and for preserving that option for generations to come. It is an endeavour well worth the effort, and a deeply satisfying one.

*Allen D. Putney, Independent Consultant, Incline Village, Nevada, USA.
Allen.Putney@worldnet.att.net*

Cultural connections to the land - a Canadian example

ELLEN LEE

The concept of cultural landscapes is widely used today, under a broad range of circumstances from the very general to the very specific. It is a convenient term for integrating the cultural and natural values of a place and conveys the wholeness of a place, rather than just the sum of its elements. However, some kinds of cultural landscapes can be difficult to define in concrete physical terms because of their intangible cultural values. If we wish to define cultural landscapes in order to evaluate and manage them we must find some culturally appropriate way to define them. In this paper, I will discuss some of the issues surrounding the identification, evaluation and management of cultural landscapes associated with the history of Aboriginal Peoples in Canada. I will suggest one approach that integrates the intangible and the tangible, the cultural and the natural.

This article is a reworked, updated version of a presentation entitled *Sacred Places, Cultural Landscapes and Protected Areas - a Canadian Perspective* I presented at *Natural Sacred Sites: Cultural Diversity and Biodiversity*, International Symposium sponsored by UNESCO, CNRS, MNHN, September 22-25, 1998.

IN GENERAL in western terms, cultural resources are defined as having a specific physical nature and fall into specific categories, such as buildings and structures, archaeological sites, artifacts, and so forth. These categories are seen as more or less mutually exclusive, primarily in terms of the academic disciplines best suited to study them. However, as a category of cultural resource, the term 'cultural landscape' is not so easily defined, and tends to be used to lump rather than to split. It also integrates the natural world in a way that other categories of cultural resource do not. The quintessential nature of the use of the term cultural landscape is that its definition and meaning are in the eye of the beholder. The same area of land can be looked upon as several different versions of cultural landscape depending on the cultural or disciplinary filters and values of the person who is doing the looking, even within a group of western scientists with the same cultural background. The meaning of a landscape to a botanist is different than the meaning of the same landscape to a forester, a wildlife biologist, a farmer, a cottage owner, an ornithologist, a miner, an engineer, etc.

Parks Canada is a Canadian federal government agency, which manages the national historic sites and the national parks programmes. In these two programmes, places of national significance for their historic/cultural values and/or for their natural values are identified, evaluated, designated, in some cases, set aside as protected areas, and presented to the public. Fitting cultural landscapes into this process of identification, evaluation, designation and protection presents some significant challenges.

Two of the challenges we face in this exercise are to:

- develop approaches to identifying, categorising and evaluating the significance of cultural landscapes in an appropriate comparative context while respecting holistic cultural perspectives and values; and
- find ways to protect these sites in a context of limited legal mechanisms for protected areas, which often artificially separate natural and cultural values.

Places associated with the history and culture of the Aboriginal peoples of Canada present particular challenges. The Aboriginal peoples of Canada fall into three diverse groups – First Nations, Inuit and Metis, each with its own complex histories, traditional territories and interrelationships. In a recent report, the Royal Commission on Aboriginal Peoples discussed the diversity of Aboriginal peoples in Canada and described them in terms of about 60 language groups (56 First Nations, four Inuit and the Metis. For those not familiar with the term, Metis refers to the people resulting from the intermarriage of First Nations or Inuit people and Canadians of European ancestry, particularly French and Scottish.

Approaches to identifying, categorising and evaluating Aboriginal cultural landscapes

In order to develop approaches to identifying, categorising and evaluating the significance of Aboriginal cultural landscapes in an appropriate comparative context while respecting holistic cultural perspectives and values, several steps are required.

Identification

First of all, there is the process of identification – an Aboriginal group looks at its traditional territory and identifies which site(s) it would like to have protected and presented. This identification is based primarily on cultural values, which may or may not be articulated or shared outside the group. This process in itself may be alien to traditional ways of operating. Many elders find it difficult to select specific sites for special consideration – often all the land is considered sacred. Depending on the cultural group, however, this may sometimes be a fairly straightforward process, as traditional villages, hunting, fishing or plant collection sites, seasonal gathering places, landscape features with associative value or places of spiritual power can be identified.

Identifying sites within a cultural group relies on internal or ‘emic’ approaches to describing and categorising the sites within the internal meaning systems of the group. However, once these sites begin to be discussed and examined outside the cultural group, with people of other cultures, the places are often given meanings and names by these outsiders, which are not necessarily congruent with their original meanings and values.

Categorisation or classification

The names that these places acquire then fall into ‘etic’ or external categories or terminology. Even the words used to describe places identified by Aboriginal groups – “traditional villages, hunting, fishing or plant collection sites, seasonal gathering places, landscape features with associative value or places of spiritual power” – are external words which reflect western anthropological and archaeological training, and are not the words that any given group would necessarily use to describe their specific sites. So when I talk about these sites from my Euro-Canadian, anthropological perspective, I am adding layers or filters of meaning to the sites and obscuring the rich individual values, experiences and stories that are connected to the place by the cultural occupants who gave the place its original meaning.

Evaluation using the concept of ‘cultural landscapes’

Once sites have been identified, the next step is to evaluate them according to some explicit criteria, which will help to determine their relative significance. This process can be problematic for several reasons.

First of all, what should be the comparative context within which sites should be evaluated? Should a rock art site associated with one language group in a maritime environment on the east coast of Canada be compared and evaluated relative to a rock art site associated with a very different language group in a maritime environment on the west coast of Canada? Should a caribou hunting site associated with the fall caribou hunt of the Inuit in the Kivalliq area of Nunavut be compared and evaluated relative to a caribou hunting site of the Vuntut Gwich'in in northern Yukon, more than a thousand miles away and associated with a different Aboriginal group with a significantly different history and language?

The important question to address at this point is ‘what is the purpose of the comparison?’ That should help to determine whether the comparison is appropriate. In this case, the purpose of the comparison is to determine whether the site should be considered of national historic significance. Should sites be compared within site types or categories (and if so, whose categories), or should they be compared within their own cultural context, which is what gives them meaning?

Slotting or pigeonholing sites within a particular set of themes or types can be problematic, as generally most sites, especially cultural landscapes, have many layers of meaning. Trying to develop site types or categories to use across cultural boundaries is very tricky. We may look at a particular site and say ‘From our perspective, that is a fishing site – therefore it will get compared to other fishing sites to determine whether it is of national significance or not.’ However, by doing so, we make it very difficult to give adequate consideration to the other layers of value that the site may have which may not be present in the fishing sites from other cultural areas to which we wish to compare it.

The concept of ‘national’ – political versus cultural definitions

The next question to address is how to approach the concept of ‘national’ significance. Western researchers tend to see site designation as a positive, non-political act. However, Aboriginal Canadians do not necessarily see it that way. The term ‘First Nations’ has been developing as a political concept in Canada over the last several decades. The history of how the original, independent, sovereign Aboriginal peoples of what is now Canada came to be subject to the laws of the Canadian nation state and part of the geographical entity of Canada continues to be the subject of a considerable amount of study and legal debate. Ongoing land claim and treaty negotiations and precedent setting legal cases demonstrate that the relationship between Aboriginal peoples and the Canadian government continues to evolve.

The approach we are developing is to do some pilot projects using the concept of Aboriginal nation as the comparative context. When a community expresses an interest in having one of their sites considered, Parks staff work with them to prepare a descriptive report on the site using a set of explicit guidelines which will help in the evaluation process. The report gives the cultural, geographical and historical context of the Aboriginal nation or group; describe the traditional territory of the group. It positions the specific site as a *cultural landscape*, representing or illustrating

important aspects of the larger cultural landscape of the traditional territory of the Nation or group. The concept of Aboriginal cultural landscapes has been further developed through the preparation of “An Approach to Aboriginal Cultural Landscapes” (Buggey 1999a):

The aim was to provide the Board with a framework that could encompass the traditional values of Aboriginal peoples, including spiritual values, cosmic views of the natural world, and the associative values in the land, while still being understandable to Board members whose world views are typically based in Western historical scholarship. (Buggey 1999b).

The following definition of Aboriginal cultural landscapes is proposed:

An Aboriginal cultural landscape is a place valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment. It embodies their traditional knowledge of spirits, places, land uses, and ecology. Material remains of the association may be prominent, but will often be minimal or absent. (Buggey 1999a).

Criteria or indicators

The evaluation of a site involves describing both the cultural and natural values of a site. This is where elements related to biodiversity can be identified. Often if resource extraction is one of the main characteristics of the site (a fishing site or a caribou hunting site, for example), natural elements play an important role in making the place significant for cultural reasons. In one case, a Sahtu Dene elder described a cultural area they want protected in the following way: “it has everything you need to live (fish, small game, caribou, etc.)”. Sometimes the site is a place where oral traditions indicate that a particular species of animal originates, through a connection between the underworld and this world. However, in the description of the values of this place, the scientific version of the values in terms of biodiversity is not always described.

The following principles for identifying and evaluating Aboriginal cultural landscapes are proposed:

- The long associated Aboriginal group or groups have participated in the identification of the place and its significance, concur in the selection of the place to commemorate their culture/history, and support designation.
- Spiritual, cultural, economic, social and environmental aspects of the group’s association with the identified place, including continuity and traditions, illustrate its historical significance.
- The interrelated cultural and natural attributes of the identified place make it a significant cultural landscape.
- The cultural and natural attributes that embody the significance of the place are identified through traditional knowledge of the associated Aboriginal group(s).
- The cultural and natural attributes that embody the significance of the place may be additionally comprehended by the results of academic scholarship. (Buggey 1999a).

Some of the evaluation criteria include the following:

- the site's ability to represent the cultural and historical values within the traditional territory and cultural expression of the group;
- the site's ability to express the group's attachment to the land;
- the site's integrity (both cultural and natural);
- the site's importance to cultural survival;
- the site's importance to the understanding of the complexity and diversity of Canadian history; and
- the potential public benefit related to the site's protection.

Protection of cultural landscapes

The second major issue is the challenge to find ways to protect these sites in a context of limited legal mechanisms for protected areas, which often artificially separate natural and cultural values. In Canada, most legislation providing for the establishment of protected areas focuses on natural values. In fact, natural parks are seen by many as wilderness areas, with as little human impact as possible. However, in the last decade or so, partly as a result of the influence of northern Aboriginal groups in the settlement of land claims, this has begun to change, and the cultural values of natural parks are beginning to be recognised. However, it is still the case that the identification of areas for consideration of natural parks uses natural criteria identified by Euro-Canadian scientists for determining what areas should be protected. Minor consideration may be given to boundary adjustments to include important archaeological sites, and once the natural area is identified, its cultural values are then determined. However, cultural values are still seen as secondary in this process.

On the other side of the coin, most cultural heritage legislation focuses on the identification and designation of cultural heritage sites, and is particularly suited to dealing with built heritage such as buildings and archaeological sites. Natural values are rarely considered in the initial identification stages, and then, only as complementary to or a subset of the cultural values and again are considered to be secondary. Most natural parks are large geographic areas. Most cultural heritage sites are small geographic areas. In both cases the legislative and policy process for the establishment and management of these parks and sites reflect this reality. So what happens when we try to identify places with both cultural and natural values, giving their cultural and natural elements equal attention? We get cultural landscapes, some of which are quite large, by traditional historic site standards whose characteristics do not fit very well with the sets of legislative and policy processes and mechanisms for either natural parks or cultural heritage sites.

The following table compares and contrasts protected areas, historic sites and cultural landscapes in terms of evaluation criteria, size of geographical area, whether sub-surface protection is needed, and whether natural and cultural values are balanced in the management of the area.

This can put considerable stress on communities who would like to have their special places recognised and protected from inappropriate development, and bureaucrats who are faced with trying to force-fit park or site proposals into legislative or policy moulds which are not really meant for the purpose at hand.

This is made worse in a situation where Aboriginal communities do not have adequate access to land ownership to protect these places themselves. On the other hand, governments who have land management responsibilities have to answer to

Table 1. Comparison of protected areas, historic sites and cultural landscapes.

category	protected areas (e.g. National Park)	historic sites	cultural landscapes
evaluation criteria	natural values	cultural or historic values	cultural and natural values
size of geographical area	Large geographical areas to protect ecosystems, watersheds	Small geographical areas to protect buildings; building complexes and archaeological sites	Large geographical areas to encompass all values
sub-surface protection	Statutory protection of sub-surface	No protection of sub-surface	Sub-surface protection may be needed
significance of natural and cultural values in area management	Cultural or historical values secondary	Natural values secondary	Cultural and natural values integrated

many constituencies, including the heritage and environmental lobbies, as well as development and industrial sectors whose main interest is resource extraction such as lumbering and mining or hydroelectric development.

Historic treaties/comprehensive land claims

Aboriginal ownership or control of land in Canada or lack thereof, is at the root of the difficulty here. Historically, the way Aboriginal groups have gained control of specific pieces of land has been through the process of the establishment of reserves created as a result of historic treaties. These reserves generally are very small relative to the original traditional territories of the particular group. Also, in the eastern part of the country, where early ‘Peace and Friendship’ treaties did not deal with land rights, very little land was reserved for Aboriginal communities. In some historic treaty areas, not all reserves promised have been established. Modern land claim and treaty-making deals in large part deal with how much and which land will become Aboriginal land within the traditional territory of the group or Nation. However, generally speaking, the amount of land that is available for selection is limited, and in the end because of survival needs, the criteria for selection ends up being economic potential; and heritage and environmental concerns get minimal consideration.

A recent legal ruling by the Supreme Court of Canada in the Delgamuukw case may have a major impact on the question of Aboriginal land ownership. In this case, the court ruled that where it has not been extinguished through treaty, Aboriginal title could co-exist with Crown title. It also indicates that Aboriginal title does not just mean rights to use, but also proprietary rights. The full implications of this decision have yet to be determined, but they could be very significant.

Fitting heritage places into a protected area strategy - an example from the Canadian north

An interesting exercise is proceeding in the Northwest Territories (NWT) with regard to protected areas. As a result of the environmental assessment process

in response to major mining activities in the area, a commitment has been made by government to develop a Protected Area Strategy (PAS) for these areas. Work on this strategy is currently under way, with community consultation being one of the major parts of the exercise. The focus of the exercise from the government perspective is on natural or environmental values, but communities have the potential to add a significant cultural component. Two of the relevant guiding principles are: “Recognise the importance of linkages between Aboriginal peoples and the land; and Respect and use traditional and scientific knowledge” (NWT PAS 1999).

At the same time, a working group established by the Sahtu Dene and Metis Land Claim Agreement (for the Sahtu region, an area within the NWT, see Figure 1), has developed a list of heritage places and sites which it has recommended for protection through a range of available mechanisms. This group included three representatives appointed by the Sahtu Secretariat Inc. (the Aboriginal organisation established to implement the land claim on behalf of the Sahtu Dene and Metis) and two representatives appointed by government.

The list of places developed includes a range of types including:

- sacred mountains and other landscape and water features with associated stories (Red Dog Mountain, a sacred mountain in the Sahtu region);
- homelands of specific family groupings;
- places where specific historic events took place, places of medicine power;
- places where supernatural events occurred to create the landscape as it is today;
- the place where a supernatural hero killed the giant beaver (which existed in the area at the end of the Pleistocene) to make the area safe for the Dene people;
- meeting places where yearly gatherings occurred;
- whirlpools;
- burial sites;
- fishing lakes,
- important trails; and
- water transportation routes.

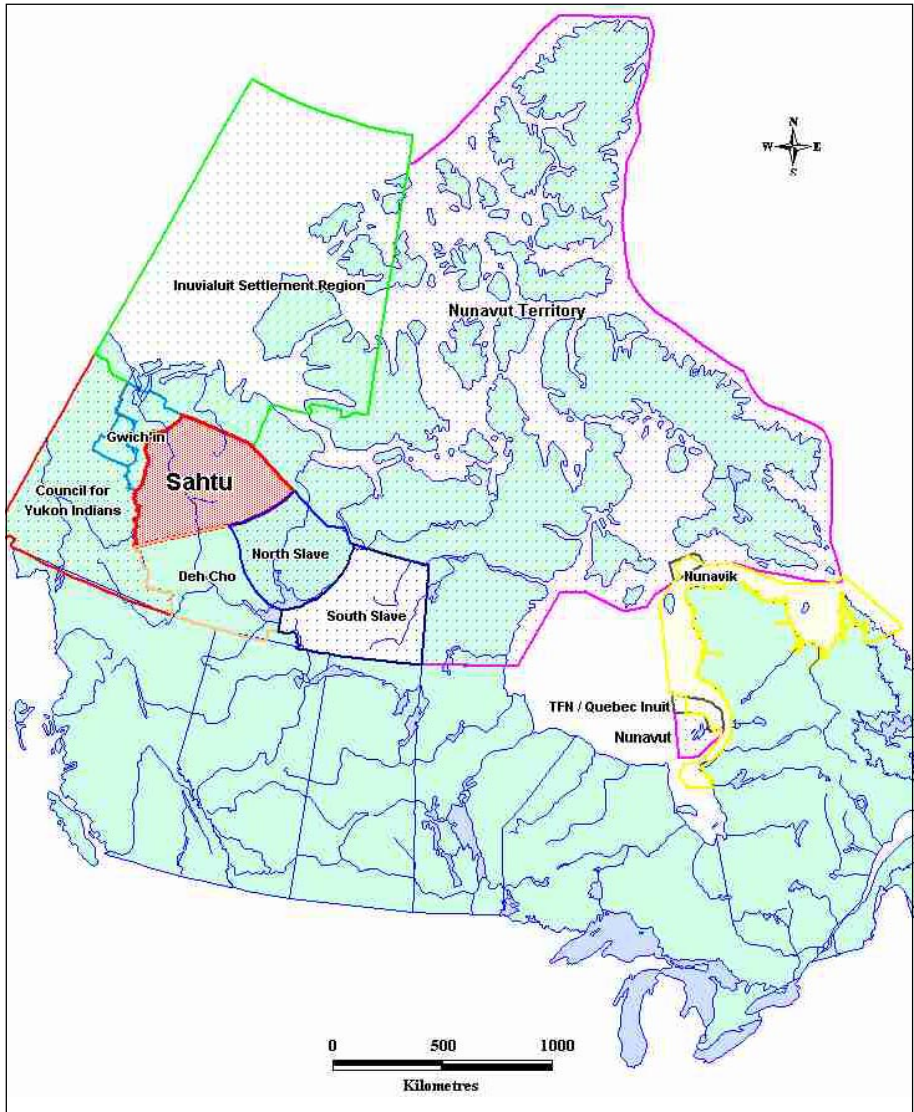
Some of these places are large, some are small, some are round or globular, and some are linear corridors. Some are places to preserve species, some are places to interpret and present history and culture, and some are places where people should not go because of the dangerous power of the place.

The heritage working group itself has no power to determine how these places will be managed. Its role was to make recommendations to the appropriate government department and to the Sahtu Secretariat Inc. regarding these heritage places and sites. In addition to developing a list of

*Red Dog Mountain
– a sacred
mountain in the
Sahtu region.
Photo: Ellen Lee.*



Figure 1. Land claims in northern Canada: map of Canada showing location of area covered by Sahtu Dene and Metis Land Claim Agreement.



sites and describing their cultural values, the heritage working group has identified the kind of protective mechanisms, which might be appropriate to manage these sites.

The mechanisms recommended, sometimes alone, sometimes in combination include:

- National Historic Site;
- transfer to Commissioner's land;
- Territorial Historic Park;
- Critical Wildlife Area;
- Migratory Bird Sanctuary;
- Caribou Protection Measures;
- identification for protection under the Archaeological Sites Regulations;

- identification for special consideration by land management authorities;
- to be determined after further inventory and evaluation;
- sub-surface protection;
- Heritage River.

Although specific, explicit criteria were not developed by the working group to determine which mechanisms would be the most appropriate for which site, some patterns can be observed in the results. For example, generally sacred sites which have Medicine Power or landforms created by 'supernatural events' have values that are not just manifested on the surface of the land, but have a more three-dimensional expression. For these places, the group recommended sub-surface as well as surface protection. Three of these places are very large, averaging roughly 3,000 km². Obtaining sub-surface protection for such places will be very difficult because of the legislation and regulations governing access for mineral extraction.

Discussions between this heritage working group and those working on the protected area strategy may lead to a better integration of cultural values into the protected area strategy. One of the simple ways of integration is to add cultural information to the Geographic Information System used to map the natural/environmental values used by the regional renewable resources staff to manage fish and wildlife resources in the area and to feed information into land use planning process. This has the potential to be a breakthrough in the integration of cultural and natural values in determining protected area regimes, and hopefully it can be a model for use in other areas.

The challenge to all of this is to bring a variety of interests together to deal with a common, overlapping issue. Sometimes integrating technical information can lead to a change in the perceptions of the users of this information, to broaden their way of looking at the landscape, and recognising that their way of seeing the world is not strictly objective but has cultural filters. Recognising your own cultural filters can sometimes lead to a more enlightened perception of other peoples' cultural values and perspectives, and lead to a more holistic approach to dealing with the environment and landscape.

The Report of the Sahtu Heritage Places and Sites Joint Working Group has been released, and the NWT Protected Areas Strategy has been finalised and approved and is ready for implementation. The implementation of these two reports will be the test of the commitment of all parties to move forward and take some creative steps to resolve some of these issues.

Conclusions

Recent initiatives of the World Commission on Protected Areas of the International Union for the Conservation of Nature and Natural Resources promote a more integrative approach to the development of protected areas management categories (IUCN 1999). One of the purposes of these new approaches is to encourage the involvement of local people in the management of protected areas. In order for this to be effective, the cultural understanding of the landscapes of the protected areas of these local peoples must be integrated into the approach to identifying, evaluating and managing the protected areas. Work that is currently being done in Australia on the development of Indigenous Protected Areas appears to be an innovative approach to integrating natural and

cultural values in protected areas (Biodiversity Group, Environment Australia 1998).

Both of these initiatives are encouraging signs that international efforts in the establishment of protected areas are moving to more integrative and creative arrangements. To conclude, I would like to focus on where I think we need to go to begin to resolve some of the challenges that I have identified. First of all, I think we need to further develop the concept of a cultural landscape as a protected area. To do that, we need to work at developing a more holistic approach to integrating natural and cultural values of special places. We need to look at the entire landscape as a whole, and identify the diverse elements within it, rather than just focusing on individual elements or sites within it. And finally, I think we need to work on developing new legislative or statutory mechanisms, which will meet the needs of protecting a cultural landscape for all of its inherent values. This will go a long way to increasing both the protection of biodiversity and the cultural survival of threatened indigenous groups on this planet.

References

- Buggey, S. 1999a. An Approach to Aboriginal Cultural Landscapes. Agenda paper for the Historic Sites and Monuments Board of Canada, Hull, Quebec.
- Buggey, S. 1999b. *An Approach to Aboriginal Cultural Landscapes*. Website, Parks Canada, 2000.
- Delgamuukw versus British Columbia, Supreme Court of Canada Ruling. 11 December 1997.
- Indigenous Protected Areas: a new approach to Biodiversity Conservation in Land and Sea. Country Biodiversity Group, Environment Australia, 1998.
- Northwest Territories Protected Areas Strategy, A Balanced Approach to Establishing Protected Areas in the Northwest Territories. Prepared by the NWT Protected Areas Strategy Advisory Committee, 15 February 1999.
- Rakeké Gok'é Godi: Places We take Care Of – Report of the Sahtu Heritage Places and Sites Joint Working Group. January 2000.
- Short Term Action Plan 1999–2002*. IUCN World Commission on Protected Areas (WPCA), September 1999.

Ellen Lee, Director, Archaeological Services, National Historic Sites Directorate, Parks Canada Agency.

An emu in the hole: exploring the link between biodiversity and Aboriginal cultural heritage in New South Wales, Australia

ANTHONY ENGLISH

In NSW, Aboriginal heritage has been defined as having a focus on pre-contact sites such as middens and rock art. This focus has dominated both off-park Environmental Impact Assessment and the management of Aboriginal heritage in protected areas. The continued importance of biodiversity and environmental health to the identity and lifestyle of Aboriginal communities has been largely ignored. The dynamic nature of Aboriginal people's culture which has included strategies designed to allow continued contact with the land has been hidden by this emphasis on relics and pre-contact Aboriginal sites.

This has resulted in an array of Aboriginal social values being neglected in environmental management. This paper looks at the values associated with the use of wild foods and resources and the role this activity plays in the transmission of cultural knowledge and in binding Aboriginal families together. The extent of such activity in NSW is little understood and its importance to Aboriginal communities is rarely considered when assessing the impacts of a proposed development on Aboriginal heritage values. Similarly, Aboriginal people's involvement in park management has been largely restricted to the conservation of sites and physical remains.

The NSW National Parks and Wildlife Service has been working with two Aboriginal communities to explore the continued cultural importance of biodiversity and to develop mechanisms which can build associated cultural values into environmental management in NSW.

OVER THE last two years, the NSW National Parks and Wildlife Service (NPWS) has been talking with Aboriginal people about the ways in which they value land and biodiversity. This process has formed part of the Aboriginal People and Biodiversity Project which seeks to assess whether these values are taken into account during off-park Environmental Impact Assessment (EIA) and protected area management.

The project has revealed that biodiversity is valued by Aboriginal people in New South Wales (NSW) for many reasons. This may come as a surprise to wider society in NSW which has little understanding of the manner in which Aboriginal people have adapted and developed their cultural identity throughout 200 years of immense upheaval and change. The opinions and knowledge that Aboriginal people have shared with us during the project demonstrate the strength of indigenous people's capacity to retain links with their country and to utilise and pass on cultural knowledge despite the effects of dispossession.

The project also revealed that this aspect of contemporary Aboriginal life is not encompassed by the notion of 'Aboriginal heritage' as it is applied in EIA and protected area management. Instead, the term has been defined as primarily relating

to 'Aboriginal sites' or the material remains of pre-invasion occupation of the land by Aboriginal people. Rock art, middens, burials and stone artefact scatters and not the dynamic nature of living people's culture are the focus of heritage management in NSW.

This paper looks in detail at this issue and uses the outcomes of interviews with Muruwuri and Gumbaingirr people about the importance of utilising wild resources to critically assess the current approach to Aboriginal heritage management in New South Wales. Wild resources are defined here to include native and introduced species of flora and fauna utilised for food, medicine and materials. It also includes the land and sea where these species are obtained. For example, this could include a beach, a pathway through the forest or a stand of trees.

I have approached this situation as an archaeologist who works for the NPWS. This paper therefore represents a non-Aboriginal person's interpretation of these

issues but it is based on close collaboration with Aboriginal people in two areas of NSW.

The Aboriginal People and Biodiversity Project

Background

As an archaeologist with the NPWS, I have been regularly involved in surveying newly created protected areas for Aboriginal sites (English, 1997b and English *et al.* 1997). These surveys have been conducted in collaboration with local Aboriginal people, many of whom talked about how they still utilised wild foods and medicines as part of their daily life. People pointed out plants and animals during these surveys which they valued and in some cases stated they were finding increasingly difficult to access due to the effects of clearing and cropping and landowner objection to Aboriginal people coming onto their land.

It became obvious that by recording the physical remains of past Aboriginal occupation on the land now within park boundaries, the NPWS was recognising only a fraction of the cultural values that Aboriginal people attached to these landscapes. Of more importance however was the fact that the failure to understand contemporary values associated with the environment was limiting the scale and form of Aboriginal people's involvement in environmental management and effectively barring them

Arthur Hooper from the Muruwuri Tribal Corporation, recording a scatter of stone artefacts during an archaeological survey in 1996.
Photo: Tony English.



from expressing their interest in accessing wild resources within the park system and on non-reserved lands.

The emphasis on relics and their protection in NSW reflects a particular view of Aboriginal history and culture which is now openly brought into question by events such as the passage of the *Native Title Act 1993* (Cth.). Byrne argues that it reflects a desire on the part of the State to acquire a 'deep' history which it could not otherwise obtain. He also points out that it is symptomatic of the European perspective that Aboriginal culture in NSW was corrupted through Aboriginal people's contact with Europeans. Artefacts and the archaeological remains became viewed as being a "benchmark of authentic Aboriginality" (Byrne, 1998).

One of the outcomes of this situation has been a tendency for government to represent Aboriginal communities in NSW as "products of colonial history which have left their members, whether as passive victims or resistance fighters, dislocated and implicitly bereft of their cultural traditions" (MacDonald, 1997). By focusing on pre-contact sites in park management plans, NPWS has been unconsciously creating an impression that Aboriginal heritage is tangible only where it is directly associated with the period before European invasion. This has rendered invisible what Byrne (1998) describes as "dynamic and adaptive forms of Aboriginality."

This is not to say that sites associated with pre-and post-contact occupation are not important to Aboriginal people. On the contrary, they are highly valued and represent a depth of connection with the landscape that cannot be underestimated. Sites however represent only one facet of Aboriginal heritage. Contemporary land use and the transmission and adaptation of cultural knowledge are another, yet they are generally left out of the heritage equation.

Building on change within the NPWS

While being aware of the perspectives described above, the project was aided by the fact that in the late 1990s, the NPWS was beginning to shift slightly in its approach to working with Aboriginal communities to manage their heritage. First, in 1996, legislation was passed which allowed the joint management of protected areas with Aboriginal people where those parks were of cultural significance (English, 1997a). This represented a strong recognition of the continued importance of land and wildlife to Aboriginal people in NSW. A handful of reserves have now been identified for joint management.

Secondly, in 1998, the NPWS embarked on the Visions Symposium that was modelled on the Vail Symposium held in 1997 in the United States. The Visions Symposium report recommended a radical change in the NPWS's approach to defining 'Aboriginal heritage' values. It recommended that traditional and contemporary associations with the land be recognised and that the indivisibility of the environment's natural and cultural values should form the basis for working with Aboriginal people (Report of the Steering Committee, 1998).

The NPWS needed to better understand how to put this approach into practice. The majority of staff in the agency at the field management, policy and research levels have been operating in a system that has seen little linkage between those involved in what have been termed 'natural' and 'cultural' heritage management. The Aboriginal People and Biodiversity Project has been designed to help address the agency's limited experience in working with Aboriginal people to understand how they value land and biodiversity. Prior to this there has



Rob Leggo filming Philip Sullivan and John Kelly, who are explaining the medicinal uses of plants, during the making of a documentary on the cultural values of biodiversity to Muruwuri people in north-western New South Wales.
Photo:
Tony English.

been little or no consideration by the NPWS of the Aboriginal cultural values associated with biodiversity.

Methodology

The project has been based on the close involvement of two Aboriginal communities. The first involved working with the Muruwuri people in the semi-arid north-western part of the State. These people live in a number of towns such as Bourke, Brewarrina, Lightning Ridge and Weilmoringle. The second case study with the Gumbaingirr people, was conducted on the mid-north coast at Corindi Beach (see Figure 1). Both case studies allowed us to compare and contrast

people's experience in two areas with vastly different environments as well as different European and Aboriginal land use histories.

Importantly, the work was not designed as a dry academic exercise that sought to create lists of people's ecological knowledge. Rather, it has been issues-based and has focused on seeking people's responses to a set of key questions in taped interviews and in informal trips out into the bush. The scope of the work was designed collaboratively with the two communities who retain ownership of all of the information shared with the NPWS during the project.

The interviews were conducted with both sexes and across a wide range of age groups. This allowed us to assess and understand people's experiences over the last 50 years.

We asked people to discuss a number of key questions with us. These included:

1. Has using the beach and bush been important to you?
2. If so, has your ability to access wild resources changed over time?
3. What has caused a change in levels of access?
4. Has environmental change and development affected your ability to utilise the land and sea?
5. Does using the land and sea have cultural meaning to you as an Aboriginal person?
6. What are your feelings about how Aboriginal people are involved in EIA and the management of National Parks?

These questions interweave in complex ways. They required us to understand the life history of the interviewees and the changes in land use and land access which have occurred in both areas of the State where these people live.

Preliminary case study results

Both the Muruwuri and Gumbaingirr people involved in the project have retained their connections with the land since European settlement. After periods of violence in the mid-19th Century involving massacre and dispossession, people used a variety of strategies to locate themselves physically on land that was important to them. These included gaining employment on farms and occupying pastoral camps and vacant Crown land. Members of both communities were able to avoid being

congregated onto Missions in this way. Some Muruwuri people were moved to a large Mission at Brewarrina but even here they retained links with the land through the continued use of wild foods and the passing on of stories and knowledge throughout the Mission era, which extended into the second half of the 20th Century.

The people we interviewed in both communities explained that utilising wild foods and medicines remains an important part of their lifestyle. Apart from being delicious, wild food collection and consumption brings families and communities together. Learned rules about sustainable use, sharing and the seasonal availability of resources are passed from one generation to the next. This activity is viewed as being an important means of expressing one's identity and connection with the land. The experience for successive generations has been different, but underlying the effects of social change is a continued commitment to the value of wild resource utilisation, which spans different age groups.

The case study from Corindi Beach is discussed here in more detail. The experience of the Muruwuri people has been made into a documentary titled 'Muruwuri Voices' as part of this project.

Case Study at Corindi Beach

Corindi Beach is a small settlement located on the NSW north coast, 30 km north of the regional centre of Coffs Harbour. Prior to European settlement of the region in the 1840s, the Gumbaingirr people occupied a resource-rich environment, which encompassed the coast and the immediate hinterland. In the Corindi Beach area, people were initially forcefully displaced but a small group of families returned and occupied farming land with the permission of a landowner in the late 1890s. Following this, the families moved to occupy vacant Crown land adjacent to the beach where they remained until the late 1980s under the terms of a permissive occupancy (Cane, 1988 and Morris, 1992). Occupation was focused on a freshwater lake which lies behind the dunes.

Today, the community resides on land within the township close to the lake. They were moved away from the lake itself when the permissive occupancy was revoked to allow the land to be managed for coastal recreation and conservation.

We interviewed people ranging in age from 58 to 19. It became clear that a number of factors had operated to reduce people's access to land since the 1950s and their level of reliance on wild foods.

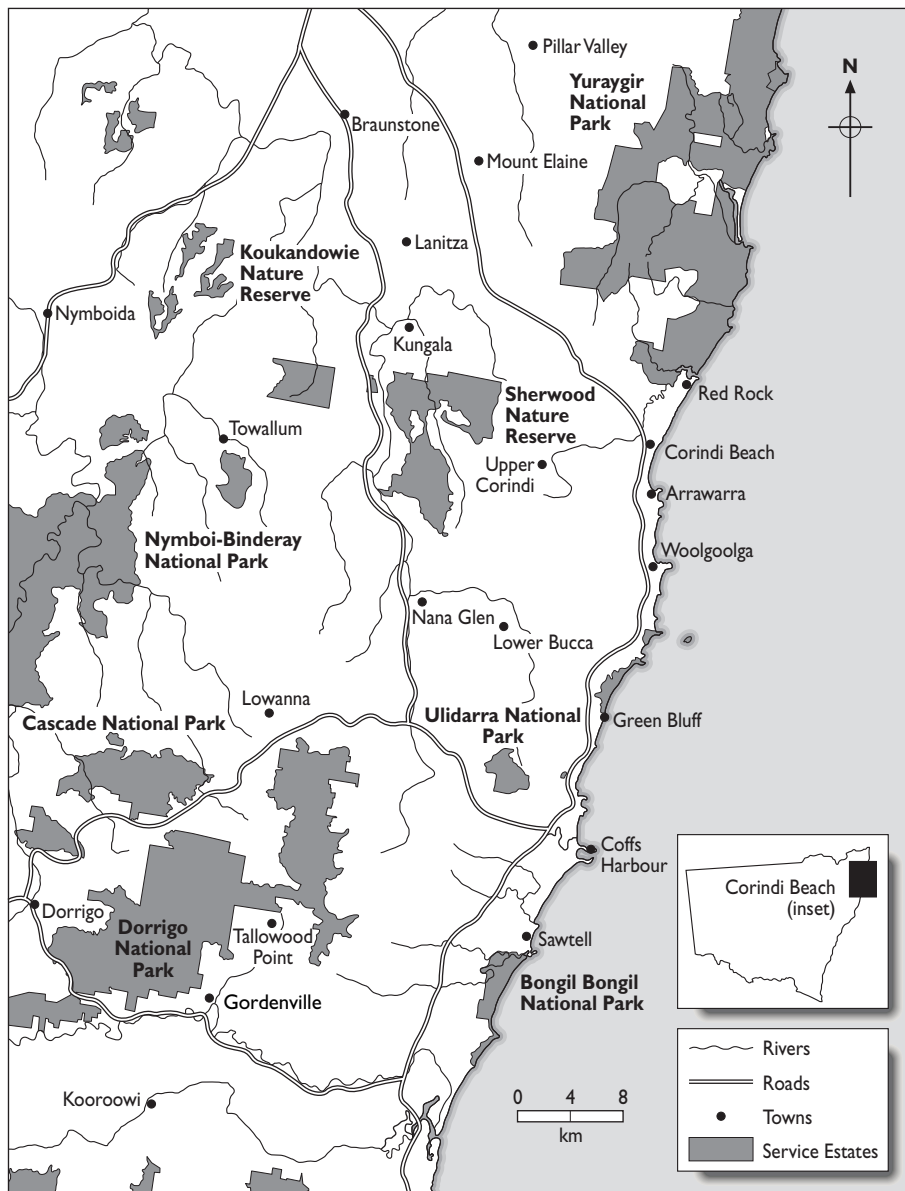
These included:

1. Environmental change caused by residential development and pollution which has destroyed areas used for wild food collection.
2. Change in landowner attitudes to Aboriginal people having access to their land from the late 1960s onward.

Mike Flanders from the Yarrawarra Aboriginal Corporation, leading a group of visitors along the Bush Tucker Walk at Corindi Beach. The walk is one of the cultural tourism ventures established by the Corporation. Photo: Tony English.



Figure 1. Corindi Beach region, New South Wales, Australia.



3. The emergence of environmental laws which prohibited or restricted the taking of some wild foods.

4. Changes in lifestyle and improved access to bought foods and products.

During the 1950s and 1960s Aboriginal people living at Corindi Beach were still relying on wild foods for subsistence. Low-income levels and sporadic work opportunities meant that kangaroo, wallaby, echidna, fish and an array of plant foods were obtained on a daily basis. This activity allowed a level of independence and ensured that knowledge about the land was used and passed on. One Elder explained that this situation created a strongly-knit community:

Everyone had to do something. Like today, you can write an order out and one person can go into the supermarket while other people are just sitting around. They're not going to do anything. They don't know nothing. Because you had to know – you were part of a team, in a group, that you had to go out next morning. There might be three or four different groups that had to go and collect stuff, you know. Because you had no money it was no good sitting at home. You had to keep going. Share it around.

Today, people are able to access only a small area of bushland and Corindi Beach itself if they wish to obtain wild resources such as fish, shellfish and plant foods and medicines. The lake was polluted in the 1970s by urban runoff and pollution at a time when many families were still relying on it for food. One Elder explained the effects of this on people and pointed out that it is still polluted today:

Oh, I think they ruined that lake. All that murky water come down from that big drain near the shop there. All run into the swamp there and from the swamp out into the lake. So we hardly don't take anything from the lake now, clouded up like that ...I don't know how the turtles are getting on in the swamp hole, where they go to, because it runs straight into the swamp and from the swamp straight out to the lake, big lake. All of it's polluted.

Despite the fact that wild foods are no longer relied on for subsistence, wild food collection still forms an important part of many old and young people's lifestyle. Different generations have a different perspective on this. The Elders talk with nostalgia about accessing places which are now barred to them and obtaining foods which are now either prohibited by law or unavailable due to a lack of access to land. People interviewed who were born during and after the 1960s see their use of the beach and bush as being an expression of their Aboriginality and wish to expand their use of wild foods under the tutelage of the Elders. Where wild foods are gathered today, such activity is valued by the younger generations as a means of binding families together. One interviewee aged 30 explained:

We had a really big pipi gathering day here and we had everybody down there. We had them down from the camp, and Mum and Dad. We had everyone down on the beach and it was really good. It's a good feeling to have everybody doing it and talking while you're doing it, trading stories. People start remembering the old days and what their Mum would have said or what they would have done when they were living. That's how it passed on. It's very important. I want to be able to teach my kids about it as well. I mean, I'm never going to stop learning about bush tucker. I'm never

Recording a scarred tree during a survey of Culgoa National Park within the Muruwuri language area. The bark removed from this tree was probably used to make a shelter. Sites such as this form only one part of Aboriginal people's cultural heritage, and are linked with people's contemporary association with and use of the land.
Photo: Craig Wall.



going to stop learning about who I am. But I want my kids to have that feeling as well ... When I grew up I was made to feel ashamed that I was black and I mean you hate that. You feel like you don't belong anywhere.

Today, the community at Corindi Beach is actively seeking to negotiate access to land and resources in State forests and on Crown land. They are also seeking to play a greater role in environmental management to ensure that the land is protected from overdevelopment.

These desires are currently not recognised as forming an element of Aboriginal people's heritage due to a focus by government on sites and relics. As an Elder at Corindi Beach explained, this is not enough:

I know sites are very important, but sites are only part of the land. That's how it works. The land is the base of your culture; your tradition and your culture. That's where your food source is. It could be a swamp but it's very valuable. The site may be a very important place, but without a land base you can't teach anything.

Implications for land and heritage management

Off-park EIA

At present, the social values associated with Aboriginal people's continuing use of wild foods and the land are rarely considered as part of the EIA process. Cultural heritage assessment is largely restricted to archaeological surveys. The assessment of potential impacts on the environment is restricted to fauna and flora surveys which take no account of the link between the environment and contemporary Aboriginal people's lifestyle and values.

As an example, in north-western NSW near the township of Goodooga, the last quandong tree accessible on foot by Muruwuri people was destroyed by a road development that had been designed to ensure avoidance of archaeological sites. This left people reliant on access to vehicles and farming land at much greater distances from the town if they wanted to obtain the fruit from the quandong tree. In a town where people have sporadic access to vehicles and limited money for petrol, the loss of the tree was noted by the community as a real impact.

Another scenario common to coastal NSW can be used to illustrate this issue. A housing development is proposed for a headland overlooking a beach. Behind the beach, a swamp feeds a creek that empties into the sea. The beach, creek and swamp are used by local Aboriginal people for fishing and collecting plant foods and medicines. These foods and medicines supplement people's diet and allow those on limited incomes to have a level of economic independence.

Under the current approach to EIA, archaeological sites in the area would be identified and managed as part of the development process. Threatened species of flora and fauna would also be identified. No assessment of the possible impact of the development on contemporary Aboriginal use of the beach, swamp and bush would occur. This is not dealt with by the NPWS's approach to development consent.

This needs to be rectified. We need to be asking a range of questions about developments. Does a development have the potential to impact on the extent and

accessibility of resources currently utilised by Aboriginal people such as fish in rivers and foods in estuarine environments? Might these impacts manifest themselves outside a development's boundaries and affect areas used by the community due to the detrimental effect of the development on surrounding ecosystems? Could these impacts extend to lands which are either claimable under the *Aboriginal Land Rights Act 1983* (NSW) or the *Native Title Act 1993* (Cth)? Is the development going to create access problems for Aboriginal people when they are travelling to an area they use?

Building such considerations into EIA would require restructuring Aboriginal heritage management. Archaeologists currently dominate cultural heritage assessment in EIA but the sorts of considerations listed above could not be assessed by archaeologists. There needs to be a multi-disciplinary approach to assessing Aboriginal heritage values and a greater role for Aboriginal people in identifying and articulating potential cultural impacts and management options.

One approach that needs greater consideration in NSW is the application of Social Impact Assessment (SIA). SIA relating to Aboriginal people has been neglected in New South Wales both in formal EIA, regional planning and reserve selection despite its ability to empower Aboriginal people. SIA is supposed to involve the assessment of a development's potential impacts on a community's well being (BBC Consulting Planners, 1994).

Examples of SIA being applied can be found in many countries, including Australia where its treatment of indigenous issues appears to have been restricted largely to large-scale mining developments in the Northern Territory and Cape York, Queensland (Gagnon *et al.* 1993). In some cases, the SIAs have been commissioned by indigenous groups who have employed consultants who are provided with all of the data feeding into the EIA. Impacts, which have been dealt with under these projects, have included the effects of an influx of construction workers and alcohol on remote communities, loss of land and resources and the effects of pollution on surrounding country utilised by the community.

SIA does not appear to have been adopted however in broad scale EIA in States like NSW. While SIA is not without methodological problems, elements of SIA could at least be applied as a requirement of the development approval process. This could be given a legislative foundation by utilising the broad definition of the 'environment' provided in the *Environmental Planning and Assessment Act 1979* (NSW) (EPAA) to require the consideration of a development's social and cultural impacts. This Act defines the environment as including "all aspects of the surroundings of man whether affecting him as an individual or in his social groupings." This wording is very similar to that used in the American National Environmental Policy Act (1969) which has been used to support the application of SIA as part of the development approval process. Such wording should conceivably allow indigenous social values attached to the environment to be a relevant consideration in EIA.

An instructive example of the poor consideration of Aboriginal cultural values associated with the environment in NSW is provided by the Commission of Inquiry report on a proposed mineral sands mine in an area valued by Aboriginal people on the mid-north coast (Cleland and Carelton, 1992). This represented a higher level of scrutiny than generally occurs in EIA and was prompted by the fact that the land had also been flagged by the NPWS as being suitable for reservation.

The Aboriginal cultural importance of the Saltwater area was identified during a Heritage Study of the Taree Council area and not during a specific EIA project. The community indicated that the area had been utilised for wild food collection and camping since the 1890s and acted as a place where people could go to escape the restrictions of the Mission system. The Purfleet-Taree Local Aboriginal Land Council requested that the area be gazetted as an Aboriginal Place under the National Parks and Wildlife Act 1974 (NSW) to protect the “traditional cultural values inherent in the open beach and Khappinghat estuary, and to preserve an existing use” (Cleland and Carelton, 1992).

Despite this information, which was repeated at the Commission of Inquiry, the Commission argued that mining of the area should be allowed with the provision that known Aboriginal sites (relics) not be impacted. No statement is made about the effects of the development on contemporary Aboriginal land use.

The question can be asked, why cannot people seek to use the existing development assessment process to raise their concerns? Certainly, non-indigenous people who wish to ensure their rights to a clean environment or to protect a threatened species from a housing development have used planning law to their advantage. Standing rights provided by the EPAA allow anyone in the community to question an EIA decision by responding to documents such as Development Applications and Environmental Impact Statements. If this fails to achieve a desired outcome then litigation may follow, sometimes as class actions. To a large extent however, the success of these actions is dependent on the scope and strength of related statutes such as wildlife protection legislation. Court action is also an expensive and adversarial process which members of the public may be poorly-resourced to undertake.

Aboriginal people have access to these same rights yet they face further restrictions. The ability of an Aboriginal group to argue that cultural values might be impacted by a development is greatly muted by the restricted approach to defining Aboriginal heritage values in heritage law and EIA and by the absence in planning law of specific reference to indigenous social values as being a consideration in land use planning. A restricted approach to environmental assessment has become entrenched in NSW and the potential linkage between planning and heritage law has been largely condensed to an archaeological question. The Saltwater case is a good example of this.

It is important to emphasise that the cultural foundation of Aboriginal concern about environmental management is not explicitly supported by planning legislation. This can be seen by contrasting NSW with New Zealand where planning laws such as the *Resource Management Act 1991* have been revised to incorporate Maori values and concerns into the land use planning process (English, 1996). In NSW, the cultural impacts of loss of biodiversity, restricted access to resources or limited involvement in land use planning is not presented as a potential consideration of EIA. This remains to be argued in court using an interpretation of the EPAA and addressed by more enlightened government policy. The project report (English, 2000) is recommending that the NPWS use its consent role in EIA to develop standards and guidelines for assessing social and cultural impacts relating to Aboriginal community values.

A preliminary attempt has been made to identify criteria that could be used to assist the assessment of Aboriginal cultural values associated with biodiversity and

contemporary land use during the EIA process. This is presented in Table 1. It is recommended that the term ‘cultural heritage assessment’ be replaced with ‘cultural environment assessment’ to promote a more inclusive approach to the identification of social values.

The NPWS

The Aboriginal People and Biodiversity Project also argues for a number of changes in the way in which the NPWS manages the reserve system and carries out regional planning and biodiversity survey and research. At present there is little or no Aboriginal community involvement in biodiversity survey and research and no

Table 1. *Assessing impacts on the cultural environment.*

feature	impact to assess	data required
Use of wild foods and resources	<ul style="list-style-type: none"> • Is development going to affect resources used by the community on adjoining lands (e.g. public lands, Aboriginal-owned lands) by causing a decline in environmental health? • Is the development going to affect resources used by the community on other sections of the property being developed? • Is the development going to affect the community’s access to areas used for wild resource use and collection? • Is the development going to lead to increased pressure on wild resources (e.g. fish, shellfish) due to an increase in the local human population? • Are there any other areas that the community can access/use to obtain wild resources if the development goes ahead? 	<ul style="list-style-type: none"> • Information about the potential effects of a development on the surrounding ecosystem (e.g. via runoff, pollution, destruction of habitat, impacts on water quality etc). • Information on the travel routes used by the community and their relationship to the new development and any re-zoning associated with the development. • Information on the potential carrying capacity of utilised resources and a projection of the possible impact of increased use on species availability. • Information about opportunities for access to other areas, the availability of targeted resources in these areas, landowner attitudes to access and community preferences.
Passing on of cultural knowledge	<ul style="list-style-type: none"> • Is the development going to limit the ability of families to engage in group activities which are currently a major forum for passing on and learning cultural knowledge (e.g. during food collection or visits to a special site/place)? 	<ul style="list-style-type: none"> • Information about the types of group activities undertaken by the community, what role they play and where they occur.
Community health	<ul style="list-style-type: none"> • Is the development going to adversely affect the health of members of the Aboriginal community by limiting their use of wild foods and resources? • Is the development going to contribute to a decline in the strength of community esteem and identity by limiting the community’s capacity to undertake cultural activities associated with landuse and education? 	<ul style="list-style-type: none"> • Information about the levels of wild food use in people’s diet and the nature and extent of health issues in the community (e.g. diabetes) associated with diet and environmental health. • Information about the relationship between land use, community interaction and identity.

consideration of the social impacts that can occur to Aboriginal communities through the inclusion of land and resources within the reserve system.

The NPWS does not fully recognise the link between Aboriginal people's involvement in environmental management and the sense of playing a custodial role over culturally significant land. Outside the handful of reserves flagged for joint management, reserve Plans of Management provide for only limited involvement in site management.

The NPWS also has no policy on Aboriginal utilisation of wild foods and this is restricting Aboriginal communities from understanding their rights at law. For example, communities are largely unaware of the possibility of using the wildlife licensing system managed by the NPWS to their benefit (English, 1997a).

A variety of changes in NPWS policy and practice are being recommended as part of the Aboriginal People and Biodiversity project. These argue that the NPWS should, among other things:

1. develop mechanisms for Aboriginal community involvement in pest species and fire management programmes in protected areas;
2. develop projects that facilitate co-operative approaches to wildlife management on Aboriginal lands and in the reserve system;
3. integrate Aboriginal community concerns, values and knowledge into regional planning exercises;
4. develop protocols on Aboriginal involvement in programmes and projects covering issues such as intellectual property rights, training, consultation and employment;
5. actively build SIA in relation to Aboriginal people into the reserve design and selection process;
6. expand the role of Aboriginal staff within the agency to allow them to assist Aboriginal communities to identify concerns about land management and access to wild resources within the reserve system and as part of the off-park EIA process.

The project has already inserted many of these recommendations into reviews of NPWS Field Management Policy and the NPWS's response to the NSW Biodiversity Strategy.

Conclusion

The utilisation of wild resources in NSW remains an important element of many Aboriginal people's lives. It represents the continuation of traditions and practices that have been adapted and maintained by Aboriginal communities throughout the period since European settlement and remains highly valued by people of different age groups.

This aspect of contemporary Aboriginal life is not encompassed by current approaches to recognising and managing Aboriginal heritage in NSW. It is neglected in both off-park EIA and regional planning as well as in protected area management. A focus on relic or site protection is obscuring the dynamic nature of Aboriginal people's culture and addresses only part of the concerns felt by Aboriginal people.

The Aboriginal People and Biodiversity Project has allowed the NPWS to work with two communities to better understand the continuing cultural value of land and biodiversity. It is hoped that the projects recommendations for change will have an effect on the policy and practice of environmental management in NSW.

References

- BBC Consulting Planners. 1994. Review of Commonwealth EIA-Social Impact Assessment. Prepared for the Assessment Policy and Coordination Section, Commonwealth Environment Protection Agency, Canberra.
- Byrne, D. 1998. Deep nation: Australia's acquisition of an indigenous past. *Aboriginal History* 20:82-107.
- Cane, S. 1988. The Red Rock Mob. Aboriginal relationships with the Red Rock-Corindi Area, NSW. Report to the Grafton Lands Office.
- Cleland, K. and Carelton, M. 1992. Mineral Sands Mine. Proposed by Mineral Deposits Limited, Saltwater, City of Greater Taree. Report by the Commissioners of Inquiry for Environment and Planning to the Honourable Robert Webster, Minister for Planning and Minister for Housing.
- English, A.J. 1996. Legislative and policy frameworks for indigenous involvement in cultural heritage management in New Zealand and New South Wales. *Environmental and Planning Law Journal* 13(2):103-119.
- English, A.J. 1997a. Terrestrial Hunting and Gathering by Aboriginal People in New South Wales: An Assessment of Law and Policy. *Environmental and Planning Law Journal* 14 (6): 437-455.
- English, A.J. 1997b. Archaeological Survey of Culgoa National Park, North Western New South Wales. Unpublished report to the NSW National Parks and Wildlife Service and the Muruwuri Tribal Council.
- English, A.J. 2000. What does the land mean to you? Contemporary Aboriginal landuse and cultural heritage management in NSW. Unpublished report to the NSW National Parks and Wildlife Service, the Yarrawarra Aboriginal Corporation and the Muruwuri Tribal Council.
- English, A.J., Erskine, J., Veale, S. and Robinson, J. 1997. Cultural Heritage Assessment of Goobang National Park, Central Western New South Wales. Unpublished report to the NSW National Parks and Wildlife Service and Peak Hill, Dubbo and Wellington Local Aboriginal Land Councils.
- Gagnon, C., Hirsch, P. and Howitt, R. 1993. Can social impact assessment empower communities? *Environmental Impact Assessment Review* 13:229-253.
- MacDonald, G. 1997. Recognition and justice: the traditional/historical contradiction in NSW. In Smith, C. and Finlayson, R. (Eds.) *Fighting Over Country. CAEPR Australian National University Research Monograph* 12: 65-82 .
- Report of the Steering Committee, 1998. Visions for the new millennium: Report of the Steering Committee to the Minister for the Environment.

Anthony English is an archaeologist with the NSW National Parks and Wildlife Service and has qualifications in archaeology and environmental law. He is currently running the Aboriginal People and Biodiversity Project as well as assisting field staff and Aboriginal communities to manage heritage places in protected areas in NSW. Anthony English, Archaeologist, New South Wales National Parks and Wildlife Service, 43 Bridge Street, Hurstville, Sydney NSW 2220.

Some guidelines for managing mountain protected areas having spiritual or cultural significance

LAWRENCE S. HAMILTON

Members of the international conservation community have become increasingly successful in promoting concern for the protection of biological diversity in protected areas. The Convention on Biological Diversity has significantly abetted this process. We have not done so well, however, in achieving the conservation of cultural or spiritual values associated with natural environments, or of integrating these values into management protocols for protected areas. This is particularly deplorable in view of the fact that these values are often responsible for the conservation of much natural native biodiversity. Nowhere is this more true than in mountain areas, where sites of special significance abound: mountain summits, caves, cliff promontories, old gnarled trees, unusual rock formations or hidden valleys. Recognising the problem and the opportunity, a group of mountain protected area professionals at a workshop in Hawaii Volcanoes National Park, sponsored by IUCN's World Commission on Protected Areas and the East West Center, developed a set of guidelines for the management of these special areas. These were synthesised by Duncan Poore, and were published as part of IUCN's Protected Areas Programme Series No. 2, *Guidelines for Mountain Protected Areas*. This is now out of print, but the guidelines have continued validity and are presented verbatim in what follows.

MANY MOUNTAINS have a metaphysical significance, which involves sacredness, fear, ceremony and mystique. This already gives them some degree of protection. The managers, planners, and interpreters of mountain protected areas should take account of the opportunities and problems presented by this special spiritual and cultural aura.

Many areas can be chosen as illustrations:

- From two to four per cent of the Yunnan prefecture of Xishuanbanna in China lies in 'holy hills' where dwell the spirits of ancestors of the Dai people, and these mountain forests are largely intact because of the reverence in which they are held.
- Part of the central mountains of Venezuela is 'la Sorte de María Lionza' or the sacred place of the Queen María Lionza, goddess of nature. The Queen will enhance the welfare of the people provided that they do not enter the 'Sorte', in which case they will first become lost and later die. (It is difficult to afford this protected area status.)
- Highland dwellers in Tibet dispose of dead bodies by feeding the body to vultures in a 'sky burial' at special sites. If this were not done, cremation would require large amounts of fuel resulting either in depletion of scarce resources of wood or in the use of fragile cushion plants dug from the steep slopes.
- The volcanic fire of Tongariro (New Zealand) was lit by the gods to warm Ngatoroirangi, ancestor of the present day Ngati Tuwharetoa tribe. The mountain in

turn was itself regarded as an ancestor. Recognition of these special values has limited the expansion of facilities on the upper mountain slopes of the park.

■ Tarns like Suraj Khund in the Kumaon Himalaya and many of the Bhadelji Guars (the highest alpine pastures) are regarded as sacred gardens of the gods; shepherds believe that trespassing in these holy places would have dire consequences to them, and hence never graze their sheep in these areas.

■ Gauri Shanker peak in Nepal depicts the lord Shankar and his consort Gauri in Hindu religion; this peak is sacred and no mountaineering is permitted. This has resulted in a mountain and adjoining valleys, which are clean and free of refuse.

■ In Hawaii, the volcano goddess Pele, creator and destroyer by her lava flows, is both feared and loved. Now, within Hawaii Volcanoes National Park, fear of Pele's bad luck reduces the removal of lava for souvenirs and the desecration of natural or cultural sites.

■ 'The Sacred Valley' between Cuzco and Ollantai Tambo in Peru was once devoted to the crops used to feed the Inca warriors, while the cliffs were used for burial crypts for those of high rank in the Inca king's court. The place gave, and still gives, some protection to the soils, wild flora, and Andean crops.

In addition, there is an aura of spirituality in many mountain physical features – rocks, caves, summits, flora, springs, and celestial conditions.

This special significance provides an opportunity for some form of protected area designation including that of protected landscape or biosphere reserve, taking advantage of the protection afforded by these values. In such instances, the paramount responsibility should be to protect and respect the 'spirit of the place'. This may require special management measures.

The people whose spiritual and cultural values are at stake must have complete confidence in those responsible for stewardship of the protected area. This sense of trust must be carefully fostered and maintained. Those responsible for management should seek guidance from the people who hold the belief system before acting.

The landscapes in areas of cultural and spiritual significance have usually evolved through long interaction between people and nature. Because any alteration of the

Where mountain areas are of special religious and cultural significance, they should be included in protected areas wherever possible, and precedence in protection and management should be given to the sacred or ceremonial values. Management should be based on full consultation and collaboration with the people to whom the area is sacred, and a proportion of the benefits of any visitor income should return to them.

Guideline

1. Mountain managers should consult with the people of the place and establish consultative mechanisms with them to ensure a cooperative approach to handling the opportunities and possible conflicts resulting from the presence of sacred sites in mountain protected areas. Management plans should be developed in collaboration with local people.

landscape may change the 'spirit of the place', great care should be taken to preserve the authentic landscape setting.

Areas of cultural and spiritual significance are much more complex than other protected areas, because their qualities are not only physical and biological, but also include the metaphysical. As their management requires skills in dealing not only with the natural environment but also with the cultural and spiritual aspects of the area, there is a strong case for selecting management staff primarily from the local people and giving them the necessary training to deal with the usual aspects of management.

Many of these sacred areas are also places of pilgrimage. Everything must be done to maintain their sacred character and to avoid detracting from the spiritual experience of those on pilgrimage to them.

Guidelines

1. Places of cultural and spiritual significance, especially sites of pilgrimage, usually require development of some infrastructure. Any new structures must be carefully designed to integrate harmoniously with the natural and cultural environment.
2. These places attract many users, often including tour operators who may make profits from visitors. Arrangements should be made to ensure that a reasonable proportion of the profits return to the local population through local spending or through investment in, for example, health and education.
3. Special measures may be needed at sites of pilgrimage to reconcile the number of visitors with the quality of their experience and to provide for sightseeing by tourists without upsetting the pilgrims.
4. Where there are great numbers of pilgrims as, for example, at Kedarnath in the Indian Himalaya, the carrying capacity of the site should be assessed in terms of possible pollution, site deterioration and overloading of existing facilities. An attempt should be made to predict future numbers, in order that adequate, environmentally-sound facilities may be provided in good time.
5. If there is a danger of overuse, it may be necessary to design an equitable system to limit access, such as areas in which visitors are strictly controlled or from which tourists are excluded.
6. Sites of metaphysical importance are often also of great significance for their natural features, both physical and biological. Excessive use (for example, of trails or ceremonial plants) often leads to damage to physical or biological features. The same measures should be applied in sacred places as are recommended for the conservation of nature in other protected areas.
7. To enhance the natural values and to avoid conflicts with cultural values, it may be necessary to establish sets of both ethical and practical rules to be followed equally by users and managers. Protected area managers and the tourism industry should, therefore, develop culturally sensitive codes of conduct for visitors and make them available through publications and display boards.

The guidelines have been translated into Spanish, Japanese and Russian and published for use by protected area managers where those languages are spoken. It is hoped that by reproducing them in this special issue of PARKS devoted to the non-material values of protected areas, that they may find wider usefulness.

Mountains with cultural and spiritual significance are often the roots of indigenous cultures and contain monuments and artefacts of great importance. While there is a legitimate desire among scholars to study these, there should be an absolute prohibition on the unauthorised disturbance of sites, the removal of artefacts or any vandalism.

Guidelines

1. There should on no account be any desecration of sites through destruction or unauthorised removal of sacred artefacts. Regulation should be promulgated and enforced, and codes of behaviour drawn up, governing all research. These would clearly define the general prohibition on the disturbance of artefacts and the special conditions under which licenses might be granted for the collections of specimens.
2. Stringent conditions should also govern the trading and taking as souvenirs artefacts or scientific specimens. The managers of mountain parks should keep an inventory of archaeological, historical, and sacred object and provide adequate control to ensure that they are not removed, damaged or defaced.
3. Any display and promotional sales of souvenirs depicting sacred qualities of the site should be done with discretion and sensitivity.

The interpretation of sacred sites must be particularly sensitive. For many parts of the world's people, religions are based on nature gods and goddesses that provide an overriding system of order – a cosmos – which includes all environments from mountains to the seas: “spirituality” is considered to be inherent in all natural things. Such an approach may provide a broad framework in which may fit the specifics of particular sites.

Guidelines

1. Interpretive policies and programmes should be designed to present metaphysical and cultural values in mountain protected areas in a manner that respects local beliefs, and also informs visitors by encouraging them to act in a sensitive manner towards the beliefs of others.
2. Interpretation in such sites should be carried out by custodians who are repositories of the local values and beliefs.
3. Myth must be represented with great care to avoid the extremes of glorification or belittlement.

Lawrence S. Hamilton, Vice-Chair for Mountains, World Commission on Protected Areas/IUCN.

The cultural and spiritual significance of mountains as a basis for the development of interpretive and educational materials at national parks

EDWIN BERNBAUM

As the highest features of the landscape, mountains have tended to become associated with the highest ideals and aspirations of societies around the world. In the United States, pristine mountain environments within national parks like Mount Rainier and Rocky Mountain enshrine cultural and spiritual values central to American society. As the writings of John Muir demonstrate, views of mountains as places of inspiration, freedom, and renewal helped give rise to the American environmental movement and are one of the most effective means for motivating public support for the preservation of wilderness areas. While the majority of national parks lie in undeveloped mountainous regions, interpretive materials based on the cultural and spiritual significance of mountains and other features of nature are usually lacking. The Mountain Institute is therefore working with the US National Park Service to develop interpretive and educational materials and activities that draw upon diverse views of the cultural and spiritual significance of mountains and features of mountain environments and ecosystems. The addition of these materials will help to enrich visitors' experience of nature and give them deep-seated reasons for conserving the environment – both in the parks and back home. In order to reach the general public, Americans of different cultural and ethnic backgrounds, and foreign visitors, the project will make use of evocative poetry, writings, photography, art, music, and other material from the three general areas of mainstream American, Native American, and world cultures. The Mountain Institute is selecting several major parks as pilot sites to develop a wide range of interpretive products and activities as models for replication and adaptation throughout the national park system and at other parks and protected areas in the United States and elsewhere in the world.

FOR ASSURANCE of long-term sustainability, conservation programmes and messages need to be grounded in deeply-held values and beliefs. As the highest features of the landscape, mountains have tended to become associated with the highest and deepest ideals and aspirations of societies around the world. Here in the United States pristine mountain environments within national parks like Yosemite and Mount Rainier enshrine cultural and spiritual values basic to American society, embodying for many the free, unsullied spirit of the nation. As the writings of John Muir demonstrate, views of mountains as places of renewal and inspiration helped give rise to the American environmental movement. The inspirational value of mountains, in particular, has played a key role in the establishment of the US National Park System and is one of the most effective tools for galvanising public support for the preservation of wilderness areas.

Project description

While the majority of the 54 major national parks lie in undeveloped mountainous regions, interpretive materials based on the cultural and spiritual significance of mountains and other features of the natural landscape are often lacking. The addition of interpretive and educational materials focused on this aspect of the natural environment would complement and enhance existing materials that highlight the scientific, ecological, cultural and historical importance of national parks and monuments. The Mountain Institute has begun work with the US National Park Service to develop interpretive and educational materials and activities that draw on diverse views of the cultural and spiritual significance of mountains and mountain features – such as rocks, streams, meadows, tree groves, and wildlife – to enrich visitors' experience of national parks and give them deeply rooted, sustainable reasons for conserving the environment both in the parks and back home.

Meetings and site inspections with National Park Service staff are leading to the selection of several major parks as pilot sites for the next phase of the project. These sites will probably include Mount Rainier, Rocky Mountain, and Great Smoky Mountains National Parks. The Mountain Institute will work with park staff in close consultation with local Tribes and other interested stakeholders to design and develop trail guides, exhibits and displays, wayside signs, pamphlets and brochures, interpretive walks, campfire presentations, publications, outreach and media programmes, databases, and web sites. These materials and activities will make use of literature, poetry, philosophy, history, anthropology, science, folklore, music, art, and photography.

Drawing on Native American as well as the many different cultures from around the world represented in American society and among international visitors, the interpretive and educational materials and activities will illuminate the diversity of views of the cultural and spiritual significance of nature and elicit deep-seated reasons for environmental conservation and protection. The parks chosen for the pilot project include mountains or mountain sites sacred to Native Americans to demonstrate locally the significance of mountains and the environment for both traditional and modern societies. An evaluation of the impact of these materials, based on questionnaires, focus groups, and interviews, will determine how best to

Andean Curanderos in Cusco, Peru. Many curanderos or traditional healers throughout Latin America derive their powers to diagnose and heal from their relationship with local sacred mountains, like Ausangate near Cusco. Photo: Edwin Bernbaum.



Sample interpretive trail guide

Based on the cultural and spiritual significance of mountains and mountain features

The introduction to the self-guided interpretive pamphlet or set of wayside trail signs would explain how bringing different cultural and spiritual associations to bear on a feature of the natural landscape can deepen and enrich our experience of it, much as several notes played together in a chord of music create a deeper, richer harmony. Then, taking a number of general and site-specific features encountered on mountain trails – such as a view of mountains, a spring, a grove of trees, and an eagle – the guide would present relevant information and evocative material at each feature along the particular trail. This information and material would be drawn from the three areas of diverse world, mainstream American, and Native American cultures and would be designed to invite the visitor to reflect on various associations that the specific feature calls to mind. The contents of the interpretive guide could include quotes, extracts, and reproductions from poems, stories, essays, historical accounts, scientific and philosophical ideas, music, art, and photography.

View of mountains (as an example)

■ Diverse world cultures:

Chinese poem by Han Hung:

*Who need be craving a world beyond this one?
Here, among people, are the Purple Hills!*

■ American society:

“America the Beautiful” by Katherine Lee Bates:

*O beautiful for spacious skies,
For amber waves of grain,
For purple mountain majesties
Above the fruited plain.*

■ Native American traditions:

A local chant or story having to do with a specific sacred mountain in the park or else a passage on the significance of mountains in general for a particular tribe, preferably one with a stake in that park. For example, Jim Enote, Zuni/Tewa:

My grandmother told me that mountains are where cloud beings live. If we live the right way and say our prayers correctly the clouds will come and they will bring rain or snow to our crops. Rivers flow from mountains and the rivers are like umbilical cords leading us back to the mountains. She said when you are confused about life look to the horizon and you will see the mountains and you won't get lost.

The trail guide would talk about different views of mountains reflected in each passage and what spiritual and cultural values they enshrine. Purple hills in the Chinese poem, for example, symbolise heaven, and the poet is saying that heaven can be found right here on earth, especially in mountains and even among people. Purple mountains in “America the Beautiful”, on the other hand, evoke ideas of splendour and majesty that many Americans associate with patriotic conceptions of the nation and its landscape. The words of Jim Enote’s grandmother tell us that for the Zuni and Tewa peoples mountains are, in Enote’s interpretation, “metaphorical compasses for living a right life.” If appropriate to the particular site, the guide might also talk about Native American visions quests on mountains or the healing, harmony or sense of identity the local Tribe draws from its sacred peak. The text would then ask the visitor to look back at the mountains in light of these diverse associations and see what further insights, ideas, and feelings the view now evokes for him or her.

At the end of the trail, after they have experienced a number of different mountain-features in this way, the conclusion would ask visitors to consider the value of protecting mountains, wilderness, and the environment at the park and back home and the importance of respecting and honouring Native American sacred sites and traditions. The final section or station would provide an opportunity for visitor feedback and comments on their experience and the effectiveness of the guide.

use this pilot project as a model for developing similar programmes at other parks in the US and internationally as well.

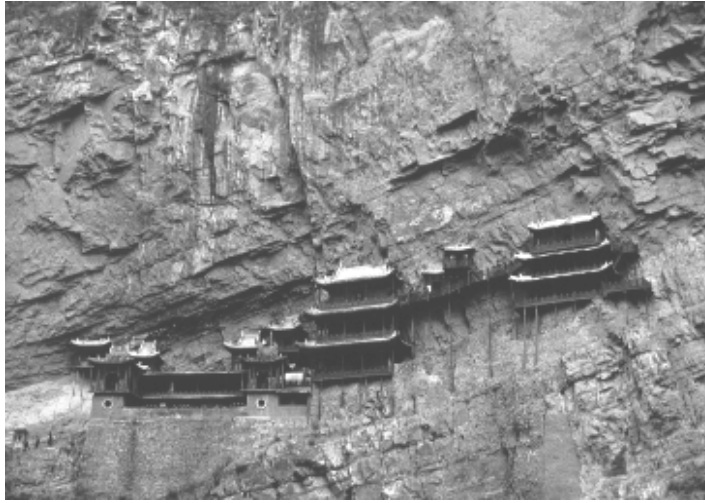
There will be three areas from which the project will draw on the cultural and spiritual significance of mountains and wilderness to develop the interpretive and educational materials and activities at the national park or monument selected for the pilot site. They include, in no order of relative importance:

- The cultural and spiritual significance of mountains and other sites of special importance for Native Americans, especially sacred places inside the parks. This would be done for the benefit of those who hold the sites sacred and to teach respect for their views, traditions, and practices among outside visitors. It would also point out other ways of viewing the environment to the general public and encourage them to look for equivalents within their own cultural backgrounds. A landscape consultation protocol for Tribes, Pueblos, Native Hawai'ians, and Alaskan Natives could also be developed to build on conventional consultation processes.

- The cultural and spiritual significance of mountains and mountain features in 'mainstream' American society. Many Americans today see mountains and wilderness as places of spiritual renewal and symbols of freedom. Such symbols are central to American conceptions of what the country stands for. The national bird, the eagle, for example, is an icon of independence, strength, and integrity.

- The cultural and spiritual significance of mountains and mountain features in cultures around the world. This would be for the benefit of American citizens with diverse cultural and ethnic backgrounds – to get them involved and interested in national parks – and for international visitors to the parks, as well as for the general public.

As the first interpretive product of the project, The Mountain Institute has started work with Rocky Mountain National Park to develop a series of eight to ten waysides going up a footpath from the Alpine Visitors Center to an observation point overlooking a number of mountain ranges. These waysides will be the highest in the US national park system and each one will present inspirational quotes and images about mountains from a different culture, ranging from mainstream American to Ute and Arapaho to Asian, Latin American, European, and African



The 'Temple Hanging in Air' – this monastery clings to a cliff facing Heng Shan, the sacred mountain of the north. The Chinese people have long-regarded mountains as ideal places to go for inspiration and contemplation.
Photo:
Edwin Bernbaum.

El Capitan, Yosemite National Park, USA. Photo:
Edwin Bernbaum.





San Francisco Peaks, Arizona, USA. Ancient ruins at Wupatki National Monument lie along an old Hopi pilgrimage path to the San Francisco Peaks, one of the primary abodes of the Katsinas, ancestral rain deities on whom the Hopi people depend for their very existence.

Photo:
Edwin Bernbaum.

furtherance of the several laws and Executive Orders that deal with “sacred sites” and other sites of significance that are physical places that may, or may not be, eligible for inclusion in the National Register of Historic Places.

Partners

The first phase of this project – to select pilot sites and trial test a sample interpretive trail guide – has been made possible through funding from the Nathan Cummings Foundation, which is committed to democratic values, including fairness, diversity, and community. The Foundation seeks to build a society that values nature and protects ecological balance for future generations, promotes humane health care, and fosters arts to enrich communities.

The Mountain Institute’s (TMI) mission is to advance mountain cultures and preserve mountain environments. TMI works in partnership with mountain communities in major mountain ranges of the world to implement programmes that link conservation, cultural heritage, and community development.

Edwin Bernbaum, PhD, is Research Associate at the University of California at Berkeley and a member of the World Commission on Protected Areas of the IUCN. A Senior Fellow at The Mountain Institute, he is working on a project with the US National Park Service developing interpretive materials based on the cultural and spiritual significance of mountains. He is the author of Sacred Mountains of the World (University of California Press) and lectures widely to audiences such as the Smithsonian Institution, the Metropolitan Museum of Art, the American Museum of Natural History, and the National Geographic Society.

Edwin Bernbaum, 1846 Capistrano Ave, Berkeley, CA 94707 USA. Tel: 510-527-1229; Fax: 510-527-1290; E-mail: bernbaum@socrates.berkeley.edu

cultures. The idea is to expose visitors to the evocative power and significance of mountains for people around the world and to provide links with the cultural heritages and traditions of ethnic and cultural groups living near the park, such as African Americans, Hispanic Americans, Native Americans, and Asian Americans.

In addition to generating support for national parks and programmes of environmental conservation, educating the public about the spiritual and cultural significance of mountains will contribute to, and build on, the importance of cultural resources in

Incorporating non-material values in wilderness planning for Denali National Park and Preserve, Alaska, USA

MICHAEL J. TRANEL

Like many protected areas, Denali National Park and Preserve faces a variety of challenges in its management planning. As an Alaska conservation unit that has been significantly expanded by the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), Denali faces the additional responsibility of acknowledging that its management of controversial issues affects how other wilderness areas are managed throughout the state. In dealing with controversies such as the appropriate types and levels of snow mobile use and in amending its general management plan, the park has recognised the importance of non-material values to the overall significance of this sub-arctic ecosystem. Non-material values such as recreational values, including opportunities for experiencing solitude and natural sounds, aesthetic values, and existence values have entered the discussion at a greater level than ever before in the park's history. Based on laws affecting the park, management policies, the park's administrative history, and public concern, these values are being incorporated into the backcountry management plan and general management plan amendment as critical to the future of Denali National Park and Preserve.

RECREATIONAL ACTIVITIES such as snow mobile use, sight-seeing by aircraft ('flight-seeing') and mountaineering have increased rapidly in Denali National Park and Preserve in recent years. Recognising the potential for impacts to resource conditions and to the experience of wilderness users, the National Park Service initiated a backcountry management plan for Denali National Park and Preserve in 1998, gathering information on levels and types of use and on the legal parameters for planning. The backcountry management plan will amend the 1986 *General Management Plan* for the park and guide management decisions for the designated wilderness, about one-third of the park, and for the remaining two-thirds, most of which is suitable wilderness. According to National Park Service policies, suitable wilderness is to be managed as designated wilderness until the US Congress acts regarding wilderness designation. The new plan will guide management decisions for the next 15–20 years.

During the winter of 1998–1999, the potential for widespread snowmobile use in Denali National Park, including within designated wilderness, prompted the National Park Service to enact a temporary closure of the designated wilderness. This temporary closure was replaced with a final rule to become effective in 2000. The temporary and especially the permanent closure attracted substantial media attention and thousands of public comments and generated considerable controversy within the State of Alaska. The National Park Service issued an environmental assessment and held public meetings on both the temporary and permanent closures.



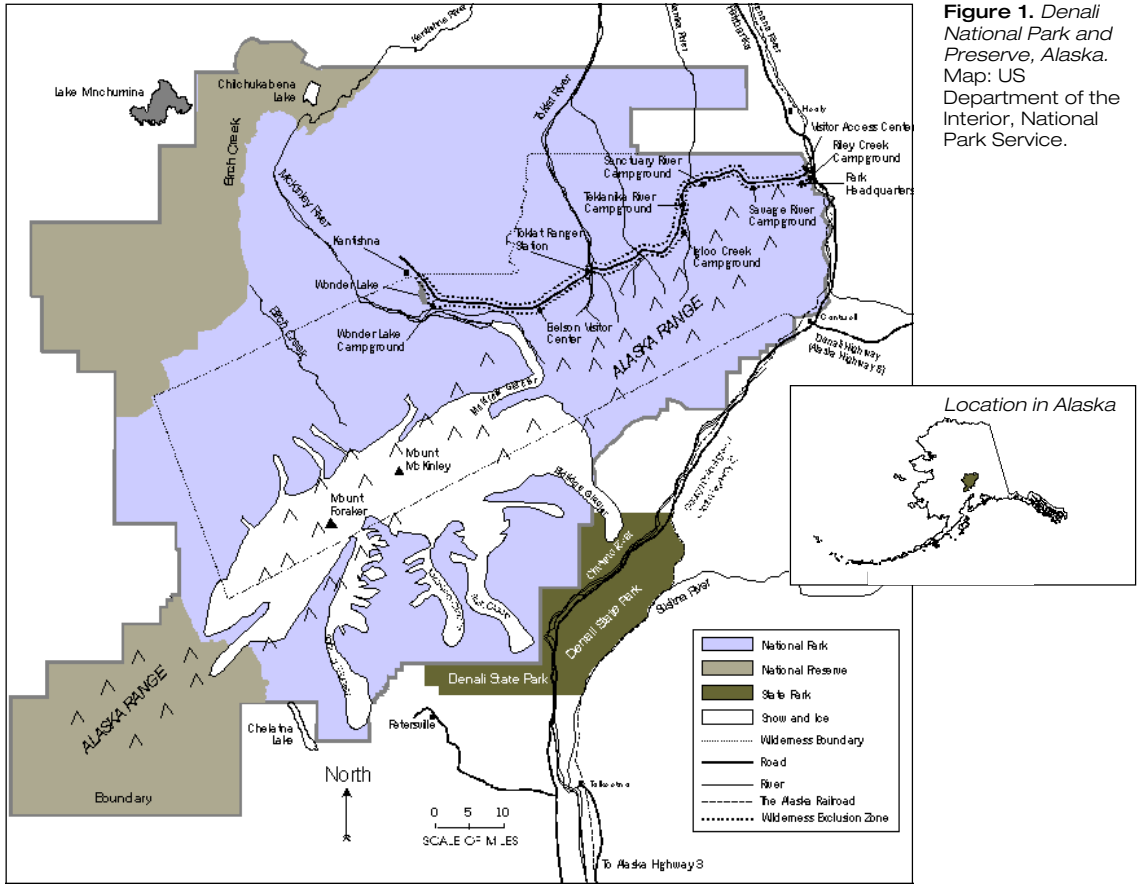
Mount McKinley, North America's highest mountain at 6,194 m (20,320 ft.) is located in Denali National Park and Preserve. Photo: National Park Service.

values, aesthetic values, and existence values have also entered the discussion at a greater level than ever before in the park's history and are being incorporated into the backcountry management plan as critical to the future of Denali National Park and Preserve. This paper outlines the bases for incorporating these values into the backcountry management plan: laws, regulations, agency management policies, the park's history, and public concern.

Background

Denali National Park and Preserve is located in south-central interior Alaska and includes over 2.4 million hectares (6 million acres). Approximately one third of the area is designated wilderness. (See Figure 1) Development is limited to visitor facilities, maintenance and administrative support facilities and an employee-housing complex near the entrance area of the park at mile 237 of the George Parks Highway. The Parks Highway connects Anchorage and Fairbanks, Alaska's two largest cities. Additional visitor facilities exist at several locations along the 145 km (90 miles) Denali National Park Road that extends from the park entrance to Wonder Lake and the former mining community of Kantishna. Lodges and a campground are located in the Kantishna and Wonder Lake area near the end of the park road. Automobile traffic on the park road is restricted beyond the Savage River at mile 14.8 (km 24). The primary access into the Park's interior is on a tour bus, visitor transportation shuttle bus system, or by bus to a Kantishna area lodge. This controlled access system has been in place since 1972, when the George Parks Highway was completed. Controlled access is a significant factor in protecting resource values and the visitor experience in Denali.

Denali National Park and Preserve is an internationally significant protected area that has been proclaimed a biosphere reserve under the United Nations Man and the Biosphere programme. Wilderness is a fundamental value identified with Denali at its establishment, and this value has been reaffirmed throughout the administrative history of the Park. The philosophy and policies for managing the wilderness and backcountry areas of the Park are intertwined with and have constantly influenced the management of the more developed and heavily visited regions of the Park. Denali still exemplifies the intent of the 1964 Wilderness Act and provides an opportunity for



the public to experience wilderness values. The park contains large areas where trails and evidence of human use are minimal to non-existent.

The purposes of Denali are specified in the enabling legislation for the original Mount McKinley National Park and in the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). The Park's purpose is also tied to the traditions of the other national parks and preserves added to the system through ANILCA. Denali includes several administrative subsets with different legislative histories and legal mandates (original national park, national park additions, national preserve and designated and proposed wilderness). It is a place where special uses related to subsistence and a frontier-type way of life continue, subject to regulation to ensure they do not jeopardise the integrity of park resources. A blend of largely pristine conditions and an intense focus on use and access in a relatively small but critical portion of the Park, coupled with the unique provisions of ANILCA, creates unusual management challenges and is often at the core of most controversial issues (Brown 1993).

The legal basis for incorporating non-material values into wilderness management planning

Much of the literature on non-material values is relatively recent, and the list of these values has been augmented and clarified during the past few decades (Fausold and

Lilieholm 1996; Manning, *et al.* 1999; Morton 1999; Parker and Avant 2000). The predominant non-material value identified during the establishment of large natural areas early in the history of the National Park System is aesthetic – particularly scenery – and the core area of Denali, the former Mount McKinley National Park, is no exception. Congress established Mount McKinley National Park in 1917 to “set apart as a public park for the benefit and enjoyment of the people ... for recreation purposes by the public and for the preservation of animals, birds, and fish and for the preservation of the natural curiosities and scenic beauties thereof ... said park shall be, and is hereby established as a game refuge” (39 Stat. 938).

The Alaska National Interest Lands Conservation Act of 1980

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) doubled the size of the area administered by the National Park Service, adding several new units and extensive areas of designated wilderness throughout the nation’s largest state. A total of 104.3 million acres of national parks, national wildlife refuges and other protected units were designated by ANILCA (Williss 1985), and more than 56 million acres were added to the National Wilderness Preservation System (Landres and Meyer 1998). The former Mount McKinley National Park was expanded from two million acres to six million acres and renamed Denali National Park and Preserve. Almost all of the former Mount McKinley National Park was designated as wilderness.

ANILCA contains language defining the broad purposes of the new national parks and preserves in Alaska as well as the specific purposes of each conservation unit including Denali. The primary purposes of the new and enlarged national parks and preserves in Alaska are included in Section 101 (94 Stat. 2371):

- preserve lands and waters for the benefit, use, education, and inspiration of present and future generations;
 - preserve unrivaled scenic and geological values associated with natural landscapes;
 - maintain sound populations of, and habitat for, wildlife species;
 - preserve extensive, unaltered ecosystems in their natural state;
 - protect resources related to subsistence needs;
 - protect historic and archeological sites;
 - preserve wilderness resource values and related recreational opportunities;
 - maintain opportunities for scientific research in undisturbed ecosystems;
 - provide the opportunity for rural residents to engage in a subsistence way of life.
- ANILCA also includes language specific to Denali National Park and Preserve:
- to protect and interpret the entire mountain massif and the additional scenic mountain peaks and formations;
 - to protect habitat for, and populations of fish and wildlife including, but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans, and other waterfowl;
 - to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities.

Non-material values are an integral part of the general purposes of ANILCA and of the expanded Denali National Park and Preserve. However, the recent snowmobile debate and the more contentious issues in the backcountry management

plan focus on the provisions in ANILCA for motorised use not traditionally associated with wilderness. Motorised uses for traditional activities are permitted by Section 1110 (a):

Notwithstanding any other provision of this Act or other law, the Secretary shall permit, on conservation system units, national recreation areas, and national conservation areas, and those public lands designated as wilderness study, the use of snow machines (during periods of adequate snow cover, or frozen river conditions in the case of wild and scenic rivers), motorboats, airplanes, and non-motorised surface transportation methods for traditional activities (where such activities are permitted by this Act or other law) and for travel to and from villages and home sites. Such use shall be subject to reasonable regulations by the Secretary to protect the natural and other values of the conservation system units, national recreation areas, and national conservation areas, and shall not be prohibited unless, after notice and hearing in the vicinity of the affected unit or area, the Secretary finds that such use would be detrimental to the resource values of the unit or area (94 Stat. 2371).

The Cathedral Spires area became part of an expanded Denali National Park and Preserve with enactment of the Alaska National Interest Lands Conservation Act (ANILCA) in 1980. Photo: Page Spencer, National Park Service.

This section of the act includes the terms “natural and other values” and “resource values” that the National Park Service has defined broadly, guided by the legislative history of ANILCA. Defining these terms has been critical to managing the uses specifically mentioned in the law. The Environmental Assessment for the Proposed Permanent Closure of the Former Mount McKinley National Park to Snow-mobile Use (NPS 1999a) states that solitude and natural quiet (natural sounds) are resource values and essential to the visitor experience in the park.

The legislative history of ANILCA also states that the old park portion of Denali National Park and Preserve is intended to be a large sanctuary “where fish and wildlife may roam freely, developing their social structures and evolving over long periods of time as nearly as possible without the changes that extensive human activities would cause.” The values of solitude and the challenge of remote wilderness are specifically mentioned in the legislative history in connection with all national park units in Alaska (US Senate Report 1979).



The National Park Service Organic Act, the Wilderness Act, and case law

The National Park Service Organic Act of 1916 (39 Stat. 535), the Wilderness Act of 1964 (78 Stat. 890), and case law also direct management of Denali National Park and Preserve and provide some discussion of non-material values. The Organic Act calls for conserving scenery and providing for enjoyment. ANILCA does not replace the Organic Act, which directs the agency to:

... promote and regulate the use of the Federal areas known as national parks, monuments, and reservations ... by such means and measures as conform to the fundamental purpose of said park, monuments and reservations; which purpose is to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (39 Stat. 535).

The Organic Act was amended by the Redwood National Park Expansion Act of 1978, in which Congress explained that the promotion and regulation of the National Park System shall be consistent with the protection of park resources, and shall not be exercised in derogation of these values except as may have been specifically provided for by Congress (Bader 1999).

The Wilderness Act (78 Stat. 890) includes the fundamental purposes in Section 2 to “secure for the American people of present and future generations the benefit of an enduring resource of wilderness” and to administer wilderness areas for the “preservation of their wilderness character.” The definition of wilderness later in Section 2 includes non-material values in terms such as “primeval character and influence,” “generally appears to have been affected primarily by the forces of nature,” “has outstanding opportunities for solitude,” and a reference to scenic value.

Case law affecting the National Park Service supports the agency being proactive in protecting resource values (Bader 1999). In a court case involving Grand Canyon

National Park, the US Court of Appeals, District of Columbia Circuit, determined that aesthetic resources such as natural quiet are an essential part of overall resource values (Grand Canyon Air Tour Coalition v. FAA 1998). This case validated the National Park Service position in a 1995 report to Congress that natural quiet is a resource in many units of the National Park System, and that preserving it is an integral part of the agency mission.

Two additional concepts that emerge from an analysis of case law involving the National Park Service include:

1. the allocation of recreational uses; and
2. the National Park Service responsibility to act affirmatively to protect resources.

Hikers in Denali National Park viewing Mount McKinley. Photo: National Park Service.



These concepts were fundamental in the environmental assessment supporting closure of one-third of Denali to snow-mobile use. In the portion of the park closed to snow-mobiles, natural sounds and solitude were identified among the primary values being protected (NPS 1999a).

The enabling legislation from 1917, the park purposes identified in ANILCA, and other laws such as the National Park Service Organic Act and the Wilderness Act are referenced in management plans for Denali National Park and Preserve and provide the basis for management goals.

Policy basis for incorporating non-material values in wilderness management planning for Denali National Park and Preserve

Protecting non-material values in Denali National Park and Preserve is supported by long-standing management policies for the national park system and for Denali National Park and Preserve, and by planning documents that have been reviewed by the public. According to the 1988 National Park Service Management Policies:

The individual parks contain various tangible natural and cultural features such as animals, plants, waters, geologic features, historic buildings and monuments, and archeological sites. They also have intangible qualities such as natural quiet, solitude, space, scenery, a sense of history, sounds of nature, and clear night skies that have received congressional recognition and are important components of people's enjoyment of parks. These Management Policies use the terms resources and values to mean the full spectrum of tangible and intangible attributes for which parks have been established and are being managed (NPS 1988).

The *National Park Service Strategic Plan* (NPS 1997a) states the agency mission:

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The 1999 Director's Order for Wilderness Preservation and Management provides policy guidance for managing wilderness areas in the national park system. One of the overall purposes is to "guide Servicewide efforts in meeting the letter and spirit of the 1964 Wilderness Act" (NPS, 1999b).

The park's Strategic Plan (NPS 1997b) presents the mission of Denali National Park and Preserve:

Denali National Park and Preserve is committed to furthering the basic tenets proclaimed in the National Park Service Organic Act of 1916: to ensure the protection of wildlife, natural and cultural resources, and aesthetic and wilderness values along with the use and enjoyment of the park by present and future generations. It is the park's mission that visitors

understand and appreciate the significance of natural systems. Recognizing the unique development and character of Alaska, we are also responsible for sustaining subsistence lifestyles and a setting conducive to scientific investigation.

The Strategic Plan also outlines the park's purpose and significance. The park purpose is stated as "a vast area that provides visitors of all abilities with opportunities for superlative, inspirational experiences in keeping with its legislative mandates. Over the long term, preserving the wilderness and its continually evolving natural processes is essential to ensuring continued opportunities for outstanding resource-based visitor experiences."

Park significance statements identify the area's most important resource values and their significance relative to similar resources elsewhere in the United States and the world. The park's purpose and significance are presented in recent planning and decision documents for the park such as the 1997 *Entrance Area and Road Corridor Development Concept Plan* (NPS 1997c), the *South Side Denali Development Concept Plan* (NPS 1997d), the 1995 *Statement for Management* (NPS 1995), the 1997 *Strategic Plan* (NPS 1997b) and the current backcountry management plan.

The park's resource management plan (NPS 1998) includes language that speaks to the feeling that a large wilderness area can provide:

One of the special values of Denali is that an overpowering feeling of wilderness is still available for all types of users. Visitors of all physical abilities may travel the park road and pass through a rugged wilderness area that lacks the visual intrusion of extensive facilities, to observe, at close range, both wildlife in its natural wilderness habitat and world class scenery. The premier vistas and opportunities for solitude in the park are consistent with the wilderness setting that visitors expect of Alaska parks.

The park management plans discussed above provide the overall vision and management goals for Denali National Park and Preserve. Public review of these documents shows substantial support for the overall management goals. The backcountry management plan and general management plan amendment follows this established management direction.

Non-material values continue to be at the forefront of management plans and are discussed as integral to the overall resource values of the park. Planning documents articulate why and how the National Park Service will manage for non-material values identified in the law – such as inspiration – that may be abstract and defy measurement.

The historical basis for incorporating non-material values into wilderness management planning

Along with legislative and policy mandates, the park's administrative history sets the course for incorporating non-material values in backcountry management planning. Denali's administrative history clarifies its purposes. Because of its outstanding natural resources and accessible wilderness, Denali has become one of the most heavily visited of the national parks in Alaska. Still, development and use have been

limited because of the Park's remote location (compared with the contiguous 48 states in the US) and by management decisions and park plans to achieve its legislative purposes.

Non-material values have been discussed as integral to the overall resources in the park throughout its history. In working during the early 1900s to establish Mount McKinley National Park, Charles Sheldon wrote of attributes such as intact natural systems, solitude, and self-reliance in addition to wildlife protection. The first superintendent of Mount McKinley National Park, Harry Karstens, captured the essence of the wilderness in the park in stating during the 1920s that "there is much to offer those who understand the language of the great silent places, the mighty mouthed hollows, plumb full of hush to the brim," and that the park:

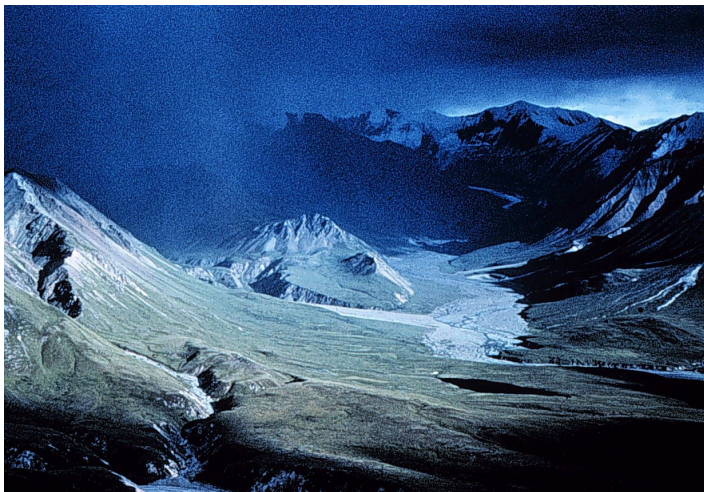
... has an abundance for each and everyone. Here will be found an indescribable calm; a place to just loaf; healing to the sick mind and body, beyond reach of the present day mental and nervous and moral strain (Brown 1993).

In 1948, National Park Service Director Newton B. Drury articulated the wilderness values – and especially non-material values – being protected in large natural areas such as Mount McKinley National Park:

Phrases like 'natural protection,' 'recreation,' 'wilderness values,' 'the unity of nature,' 'sanctuaries for native animals and plants,' imply the recognition, by those concerned with the good earth and the fullness thereof, of the fact that land is used to minister not only to man's physical well-being, but also to his mind and spirit – that man 'does not live by bread alone'; that some lands, in the Americas and throughout the world, should be preserved for what they are, as well as for what they will produce; preserved with all their wealth of flora and fauna and geological formations, with all their beauty and wonder and significance, in the perfection that nature gave them, unchanged by man (Brown 1993).

In a critique of the National Park Service's Mission 66 programme for what was then Mount McKinley National Park, Adolph Murie wrote of "the wilderness spirit that concerns us" in planning decisions for the park. He argued that:

The wilderness standards in McKinley must be maintained on a higher level than anything we have attempted in the States. Because McKinley is a wilderness within a vast northern wilderness, the ill effect of any intrusion will



The first superintendent of Mount McKinley National Park, now part of Denali National Park and Preserve, spoke of "great silent places...plumb full of hush to the brim." Photo: National Park Service.

here be proportionately greater; and any 'dressing up' will be more incongruous, will clash more with the wilderness spirit, than would be true in any of our areas in the States. And since wilderness is recognised as one of the foremost values of the Park, it must be given special consideration in order to maintain its purity (Brown 1993).

Denali's history includes several critical management decisions supporting the "wilderness spirit" that Adolph Murie advocated. The George Parks Highway connecting Anchorage and Fairbanks – and what was then Mount McKinley National Park to Alaska's two largest cities – was completed in 1971. Anticipating a rapid increase in private automobile traffic, the park road was restricted to buses and traffic to park campgrounds.

As backcountry use escalated in American parks and wilderness areas during the 1970s, Mount McKinley National Park introduced use limits in 1974 and established a quota system with the 1976 *Backcountry Management Plan* (NPS 1976). This plan outlined use limits for designated units in the backcountry and institutionalised the concepts of dispersed use, freedom, and self-reliance. Implicit to the visitor experience in the backcountry of Mount McKinley National Park was the 'overpowering feeling of wilderness' articulated in later plans.

The 1986 *General Management Plan* (NPS 1986) continued the backcountry management direction from the 1976 plan, calling for an extension of the quota and backcountry units system to the 1980 ANILCA additions as necessary. The concept of dispersed use was to be continued for the newly designated Denali Wilderness that replaced the former Mount McKinley National Park. More recent planning documents including the 1995 *Statement for Management* (NPS 1995), the 1997 *Strategic Plan* (NPS 1997b) and the 1997 development concept plans (NPS 1997c, NPS 1997d) identify wilderness and associated non-material values as essential to the overall resource values of the park.

Public concern for non-material values of Denali National Park and Preserve

While the planning process relies upon all available scientific information, scientific studies cannot independently recommend specific limits on recreational and other park uses. These limits must be set based on visitor experience and on accounting for all park values, including non-material values such as inspirational value, solitude, aesthetic value, and existence value.

Public expectations of Denali National Park and Preserve and concern for non-material values can be discerned from a variety of sources including visitor surveys, unsolicited visitor comments, and public comments on management plans. Examples of visitor surveys in Denali include those conducted during a 1996 planning process. Many of the visitor comments addressing the desired level of traffic on the park road mentioned visitor experience instead of or in addition to wildlife concerns as a reason to hold traffic at existing levels (NPS 1997c; Miller and Wright, 1998). A broader and more general survey on the National Park System conducted by Colorado State University in June 1998 found that:

1. Seventy-two percent of the American public believed national parks to be very important as places for people to experience natural peace and the sounds of nature, and

2. Eighty-eight percent of the people surveyed value national parks for their importance to future generations (NPS 1999c).

Results of surveys and studies in other areas (Fausold and Lilieholm 1996, Manning, *et al.* 1999, Morton 1999, Parker and Avant 2000) have also demonstrated the importance of non-material values such as existence, bequest, spiritual, moral and ethical obligations to nature, and aesthetics.

Comments received in response to public scoping on the backcountry management plan for Denali National Park mentioned that quiet is a value of wilderness, that the park should be protected for future generations, and existence value. Similar concerns – especially the need to protect natural quiet or natural sounds – were expressed by many of the 6,039 comments received on the environmental assessment closing the former Mount McKinley National Park to snow-mobile use.

Debate in Alaska newspapers about controversial issues in Denali National Park and Preserve also reveals public concern for protecting non-material values. In an opinion column in the *Anchorage Daily News*, Arthur Mannix, a former member of a parks advisory council, argued that unrestricted snow-mobile use would make Denali “smaller” by making it more accessible, and appealed especially to the sanctity of the place, as a “haven which we need to resanctify rather than a commodity”, and that in finding common ground among users we might also rediscover “ground that is also sacred” (Mannix 2000).

Summing up some of the most important non-material values of Denali, including not only natural sounds but undisturbed scenery, Celia Hunter of Fairbanks, who has been active in the Alaska conservation community since 1960, argued in an opinion column in the *Fairbanks Daily News-Miner* on the snow-mobile issue:

Besides, there ought to be some winter areas free of motorized use, where those who prefer to travel by their own power or with dog companions can enjoy the peace and solitude implicit in wilderness. Quiet and undisturbed expanses of snow are a solace for many who want to get away from the frantic pace of modern life, with all its traffic and noise and anxieties (Hunter 2000).

A comment in an *Anchorage Daily News* article by Jim Wilke, owner of Alaska Power Sports, an Anchorage store that sells personal watercraft, snow machines and all-terrain vehicles, provides a contrasting opinion: “It happens one step at a time. This year, they’ll ban jet skis. Next year they’ll get rid of all powered boats. Pretty soon no one is there. The land is not worth 20 cents unless people use it.” (Manning E. 2000).

The public debate over wilderness values in Denali National Park and Preserve continues to focus on what

Public comments in response to surveys and management plans identify the importance of non-material values such as solitude to be found in areas like this in the northern part of Denali National Park and Preserve. Photo: National Park Service.



level and type of motorised use is appropriate. Non-material values frequently identified by advocates of wilderness protection in these debates are solitude and natural sounds. These values are being addressed in the park's backcountry management plan and general management plan amendment.

Planning and managing for long-term protection of non-material values in Denali National Park and Preserve

Based on laws, agency management policies, history and established traditions, and public concern, Denali National Park and Preserve has identified strategies for long-term protection of non-material values. The 1999 environmental assessment on closure of the former Mount McKinley National Park to snow-mobile use (NPS 1999a) established the importance of solitude and natural sounds to the overall resource values of the park. The backcountry management plan and general management plan amendment will expand upon this discussion.

The backcountry management plan emphasises that Denali National Park and Preserve is internationally significant and requires a high standard of care. This high standard is supported by the park's enabling legislation, relevant case law, management policies, and previous management plans. Maintaining this standard requires that the agency act before an increasing recreational activity or other resource use causes detriment to resource values. It also requires that resource values be defined broadly and that non-material values be incorporated into this definition.

The backcountry management plan outlines several different prescriptive management zones in the park and describes the desired future conditions for each zone. Management actions necessary to achieve these desired future conditions and monitoring needs are included. The plan recognises the importance of continuing to gather additional information on the visitor experience and resource values. However, based on existing information on resource values that comes from the park's enabling legislation and history, the management alternatives being evaluated in the plan emphasise different types of values. For example, one alternative emphasises a wider variety of recreational opportunities above existence value and aesthetic value. At the other end of the spectrum is an alternative that emphasises the value of Denali as a wildlife sanctuary and associated non-material values such as aesthetics, existence value, and bequest value.

The challenge at Denali is to provide for backcountry uses consistent with the resource protection goals in the Organic Act, the Park's enabling legislation and ANILCA. The most contentious issues that are expected to arise in backcountry management planning discussions relate to aircraft overflights and landings, snow machine use, other motorised uses and commercial and recreational uses.

Denali National Park and Preserve receives considerable support from Alaskans and other interested individuals throughout the United States and the world. The park must continue finding new ways to enlist this support for meeting its mandates to provide for an outstanding visitor experience and to protect its internationally significant resources.

In educating potential backcountry users, the park will continue to emphasise the unique opportunities to explore and obtain the sense of discovery that has been possible throughout the park's history. For both the wilderness users and the general public, the park will continue to provide information on the laws, management

policies, and administrative history that determine its future direction and the values to be protected.

Conclusions

Denali National Park and Preserve has developed a vision statement to guide management decisions, based on laws, policies, and administrative history:

Denali National Park and Preserve is a vast area that provides visitors of all abilities with opportunities for superlative, inspirational experiences in keeping with its legislative mandates. Over the long term, preservation of the wilderness and its continually evolving natural processes is essential to providing the opportunity for outstanding resource-based visitor experiences. (National Park Service 1997b).

Protecting non-material values such as aesthetics, natural sounds, and opportunities for solitude and inspiration is a critical part of realizing this vision. The park will continue to bring these values into the discussions of appropriate levels and types of use while completing the backcountry management plan and general management plan amendment that determines the future of the internationally significant Denali wilderness.

References

- Bader, H.R. 1999. A Review of Judicial Decisions Affecting Management Planning in the National Parks of the United States. Unpublished Report for Denali National Park and Preserve. Department of Forest Sciences, University of Alaska-Fairbanks. 49 pp.
- Brown, W.E. 1993. *Denali, Symbol of the Alaskan Wild*. Alaska Natural History Association, Denali Park, Alaska. 223 pp.
- Fausold, C.J., and Lilieholm, R.J. 1996. *The Economic Value of Open Space: A Review and Synthesis*. Lincoln Institute of Land Policy, Cambridge, MA.
- Grand Canyon Air Tour Coalition v. FAA, 154 F.3d 455 (D.C. Cir. 1998).
- Hunter, C. 2000. "Care and Consideration Needed," *Fairbanks Daily News-Miner*, Fairbanks, Alaska, 27 January 2000.
- Landres, P., and Meyer, S. 1998. National Wilderness Preservation System Database: Key Attributes and Trends, 1964 Through 1998. General Technical Report RMRS-GTR-18, Rocky Mountain Research Station, Forest Service, US Department of Agriculture. 11 pp.
- Manning, E. 2000. "Park Service bans jet skis," *Anchorage Daily News*, Anchorage, Alaska, 22 March 2000.
- Manning, R., Valliere W., and Minter, B. 1999. Values, Ethics, and Attitudes Toward National Forest Management: An Empirical Study. *Society and Natural Resources*, 12:421-436.
- Mannix, A. 2000. "Snowmachines would make park a lesser place," *Anchorage Daily News*, Anchorage, Alaska, 20 January 2000.
- Miller, C.A., and Wright, R.G. 1998. *Visitor Satisfaction with Transportation Services and Wildlife Viewing Opportunities in Denali National Park and Preserve*. Wildlife Management Institute, University of Idaho. 35 pp.
- Morton, P. 1999. The Economic Benefits of Wilderness: Theory and Practice. *Denver University Law Review*, University of Denver College of Law, Denver, CO. Vol. 76, No. 2, pp. 465-518.
- National Park Service, 1976. Backcountry Management Plan for Mount McKinley National Park. National Park Service, McKinley Park, Alaska.
- National Park Service, 1986. General Management Plan/Land Protection Plan/Wilderness Suitability Review, Denali National Park and Preserve, Alaska. Denver Service Center, National Park Service, US Department of the Interior. 231 pp.
- National Park Service, 1988. National Park Service Management Policies. National Park Service, US Department of the Interior, Washington, DC.
- National Park Service, 1995. Statement for Management, Denali National Park and Preserve, Alaska. Denver Service Center, National Park Service, US Department of the Interior. 63 pp.
- National Park Service, 1997a. National Park Service Strategic Plan. National Park Service, US Department of the Interior, Washington, DC. 88 pp.
- National Park Service, 1997b. Strategic Plan: Implementation of the Government Performance and Results Act. Denali National Park and Preserve, Alaska. 54 pp.
- National Park Service, 1997c. Final Entrance Area and Road Corridor Development Concept Plan and Abbreviated Final Environmental Impact Statement, Denali National Park and

- Preserve, Alaska. Denver Service Center, National Park Service, US Department of the Interior. 358 pp.
- National Park Service, 1997d. Final South Side Denali Development Concept Plan and Environmental Impact Statement, Denali National Park and Preserve, Alaska, Volume 1. Denver Service Center, National Park Service, US Department of the Interior. 317 pp.
- National Park Service, 1998. Resource Management Plan. Denali National Park and Preserve, Alaska.
- National Park Service, 1999a. Environmental Assessment: Proposed Permanent Closure of the Former Mount McKinley National Park to Snowmobile Use, Denali National Park and Preserve, Alaska. National Park Service, Denali National Park and Preserve, 62 pp.
- National Park Service, 1999b. Director's Order #41: Wilderness Preservation and Management. National Park Service, US Department of the Interior, Washington, DC, 19 pp.
- National Park Service, 1999c. *Listen Up!* National Park Service newsletter, USDI, NPS, Vol. I, Issue 1, 1999.
- Parker, J.D., and Avant. B. 2000. In Their Own Words: Wilderness Values of Outfitter/Guides. In: Cole, D.N., and McCool, S.F. Proceedings: Wilderness Science in a Time of Change. Proc. RMRS-P-000. Odgen, UT: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- US Public Law, 1916. An Act to Establish a National Park Service, and for Other Purposes. 39 Stat. 535.
- US Public Law, 1917. An Act to Establish the Mount McKinley National Park, in the Territory of Alaska. 39 Stat. 938.
- US Public Law 88-577. 1964. The Wilderness Act. 78 Stat. 890.
- US Public Law 96-487. 1980. Alaska National Interest Lands Conservation Act. 94 Stat. 2371.
- US Senate, 1979. Report of the Committee on Energy and Natural Resources of the United States Senate, Together with Additional Views to Accompany H.R. 39, Alaska National Interest Lands. Report No. 96-413, 96th Congress, 1st Session. US Government Printing Office, Washington. p. 248.
- Williss, F.G. 1985. *Do Things Right the First Time: The National Park Service and the Alaska National Interest Lands Conservation Act of 1980*. National Park Service, Denver Service Center.

Michael J. Tranel is a park planner at Denali National Park and Preserve. He is currently the project manager for the backcountry management plan and general management plan amendment.

The non-material values of the Machu Picchu World Heritage Site from acknowledgement to action

GERMÁN I. ANDRADE

The historical sanctuary of Machu Picchu belongs to our short list of cultural and natural heritage sites and is included in the system of protected lands in Peru and in the UNESCO World Heritage Convention. Even though it can easily be seen and is such an important financial asset for Peru, the site is plagued with basic environmental problems such as the degradation of its ecosystems and the proliferation of a formal and informal infrastructure as a response to the growing demand for visitors. The causes are partly due to its material success, to inadequate institutional regulations and the continuous conflicts over property rights between the State and the local inhabitants. Recently, important legal steps have been taken with the approval of the first Master Plan and the creation of the Management Unit. The solution to its environmental problems is important but is not sufficient to preserve its non-material values. These include living cultural values, its very existence and quality, esthetical, recreational and educational values, its spiritual dimensions and national identity. In order to fulfil its potential we must form a complete picture of all its values on which new integrated management, the expansion of the operation of the large regional natural and cultural ecosystem and the enlargement and qualification of the social support will be based. For this to be achieved the creation of an International Institute, attached to UNESCO, is proposed which, apart from giving Peru the necessary support, will also aim to oversee and promote its non-material and universal values.

IN 1981 THE ancient Inca city of Machu Picchu and its surrounding 32,592 ha of prime landscape were incorporated into the Peruvian system of protected areas, as an Historic Sanctuary. Machu Picchu Historic Sanctuary (MPHS), equivalent to IUCN Categories III and V (República del Perú 1999), was included in 1983 in the UNESCO list of World Heritage Sites. It belongs to the few so-called “mixed sites”, that share the double character of being natural and cultural patrimony, which makes them irreplaceable in the global context (Mujica 1994).

The natural diversity of the area, from 1,800 to 6,300 metres above sea level; includes mid-and high-elevation montane forests; highland grasslands (wet puna); and snow covered peaks. The canyons of the Vilcanota River (upper Urubamba) and its tributaries dissect the mountain range here forming an impressive landscape.

The classical view of Machu Picchu.
Photo: Machu Picchu Programme.



Although a large part of the biological diversity present in the Sanctuary has yet to be documented, current information indicates that it is one of the country's biodiversity "hotspots." While the Sanctuary represents only 0.003% of the country's land surface, around 10% of the plant and animal species known to occur in Peru have been recorded within its boundaries (Galiano 2000). The mosaic of habitats contains many threatened or vulnerable species, as well as many endemic vertebrates and plants, especially valuable orchids such as *Bletia*, *Anguloa*, *Masdevallia*, *Lycaste* and *Phragmipedium* (Galiano 2000).

MPHS, is also one of the few protected areas located in the Peruvian Yungas Ecoregion (Dinerstein *et al.* 1995). The Greater Machu Picchu Ecosystem is also a key element in a large biological corridor between the Central and Eastern Cordilleras, and the Vilcabamba Range (Peyton 1988), throughout Madidi National Park, Bolivia; a remarkable wildland within one of the world's biodiversity hotspots for conservation priorities (Myers *et al.* 2000).

The cultural attributes of MPHS are also outstanding. The well-known 500-year old Inca city, is surrounded by a network of trails linking 32 archeological sites, with agricultural terraces, hanging gardens and drainage systems. The nearby Sacred Valley, with numerous historic remains, is also considered a global centre of cultural agrobiodiversity (Ráez-Luna *et al.* 1998).

Overcrowding at Machu Picchu Visitor Centre. Photo: Germán I. Andrade.



For many people, Machu Picchu is a sacred place. Historically, however, sacredness was a large-scale character that included the landscape, in a complex system of meaningful lines – the so called ceques – linking more than 400 sites spreading out in a radial manner from the city of Cusco (Bauer 1998).

At present, MPHS is the most visited site in Peru and is one of the most important tourist destinations in Latin America. It represents an important economic asset, bringing benefits for direct and indirect users (Table 1). Even though there are no studies on the economic value of MPHS, it is evident that tourism accounts for most of its economic value, with impacts on the city of Cusco, its surrounding areas and the country as a whole.

According to data provided the Peruvian National Institute of Culture (INC), the number of visitors to MPHS has increased steadily from 55,000/year in the early nineties to 400,000 visitors to the Inca city and 75,000 to the Inca Trails in 1999. Visitation rates increased 30% during 1998–1999, and are expected to double by 2002. Although under the

current legal structure of the protected area system, the National Institute of Natural Resources (INRENA) is responsible for defining entrance fees, historically INC has established fees for the Inca citadel (US\$10) and for the Inca trails (US\$17). Total direct income in 1999 was about US\$5,125,000 for the Sanctuary, one of the highest in Latin America for any protected area.

Within the MPHS, there are also other important economic activities, such as a helicopter service, a hydropower station, the Machu Picchu Ruins Hotel and Peru Rail concessions, and a bus line from the train station to the ruins. Although these activities generate substantial income for these businesses, no one is paying for the environmental services, not even for the environmental costs. Taxes normally are paid to the central government, but they are not reinvested in the maintenance of the Sanctuary.

The cost of success: an environmental crisis

Despite its global visibility and national importance, MPHS is plagued with numerous basic environmental problems, most of which are the direct result of its current material-centred valuation. (Table 2, República del Perú 1999, and Galiano 2000).

Table 1. Machu Picchu Heritage Site users.

type	users
direct	<ul style="list-style-type: none"> • visitors to Machu Picchu Citadel and Inca trails (c.400,000 visitors during 1999) • local inhabitants (1600 urban dwellers and about 1,000 rural inhabitants) • researchers
indirect	<ul style="list-style-type: none"> • travel and tourism agencies • Association of Tourism Agencies (APTAE) • transportation companies: Peru Rail (Orient Express), Helicusco and Consetur • Electricity Company (EGEMSA)
non-users or potential users	<ul style="list-style-type: none"> • scientific community • spiritual communities • humankind

Table 2. Environmental problems.

problem	direct cause
ecosystem degradation and loss of biological diversity	<ul style="list-style-type: none"> • persistent, non-compatible land uses, shifting agriculture, unsustainable cattle ranching, induced fire, spread of invasive exotic species and forest plantations with foreign species; • harvesting of endangered species (orchids and firewood) and over hunting of wildlife; • weak institutional capacity.
uncontrolled development of tourism infrastructure, legal and illegal urban development, roads, markets, telecommunications, and solid waste production	<ul style="list-style-type: none"> • weak government presence and lack of transparency and accountability; • predominance of informal economic sector • limited inter-institutional coordination and collaboration; • lack of environmental policies to regulate tourism.

The underlying causes of the current environmental problems are the following:

■ **Institutional arrangement: the implementation gap**

In the protected area, several institutions with different mandates converge, but cooperation and coordination among them has been limited. This is a major obstacle for sustainable management of the Sanctuary (Pulido 1993). The dominance of INC (the cultural institution) over INRENA (the environmental institution) and the local government (Municipality of Aguas Calientes) has created institutional rivalries over the control of power and resources. INC currently receives 100% of the income from entrance fees, but only 20% is allocated for the management of the cultural values within the area. The rest of the income is used to fund conservation activities at other cultural sites in Peru and to cover institutional costs at the regional and national levels. This monopoly has created a resource-driven powerful bureaucracy, and essentially no resources are allocated to manage the environmental aspects of the Sanctuary. Meanwhile, the local government (Aguas Calientes Municipality), not considered an authority within the Sanctuary, strives for resources for its own agenda in a heavily centralised environment.

■ **Property rights and equity issues**

Despite the fact that the MPHS has been in Peru's protected area system for 19 years, the legal status of local populations has remained unclear. Around 2,600 people still inhabit the area, 1,600 of which live in the urban area of the town of Machu Picchu (Aguas Calientes), where informal economic activities prevail. During the seventies, there were about 160 rural families that benefited from agrarian reform and to whom rights to settle within the area were granted by the central government (Pulido 1993). In the eighties, these agrarian laws were revoked, and people started disputing property rights with the State. Today, most of the area of the Sanctuary is under some kind of unresolved land tenure situation, and it is estimated that only a fraction of the rural inhabitants holds legitimate rights (MPP, unpublished data).

Unresolved land-tenure issues and resource-use rights pose a major threat to MPHS sustainable management. In fact, clarification of property rights within the Sanctuary has been one of the most important implementation gaps, in part due to the weak legal system. Fortunately, the Government of Peru recently adopted a national

Weak protection for most sacred spots.
Photo:
Germán I. Andrade.



system plan for protected areas (Supreme Decree 010-1999) that opens new avenues for solving this chronic conflict.

In short, while local residents – among the poorest of the poor according to official figures – are not compensated for the opportunity cost of not using resources, external agents such as travel businesses and bureaucracies are getting most of the benefits. This prolonged situation has contributed to reduced governance and a lack of environmental management, bringing about a critical inequity issue that needs to be addressed in order to avoid further conflicts.

Protected area management

Although slow, conservation planning for the area has progressed considerably in recent times. The long-awaited Sanctuary Master Plan was formulated based on the conceptual framework provided by Gamarra (1996), which was followed by institutional consultations and technical assessments. After severe fires in 1988, the regional government created the Multisectorial Technical Commission. This body promoted an environmental diagnosis for which inputs by a UNESCO advisory mission were particularly important (MacFarland & Nuñez 1991). The National Multisectorial Council, created in 1990 to coordinate government policies, however, did not meet general expectations, and in the late nineties, the chaotic situation precipitated a new crisis.

Following recommendations provided by UNESCO and various international constituencies, the Master Plan was approved in October 1998. The new work plan, which was legally established in June 1999 in accordance with protected area legislation, addressed institutional issues proposing a new governance structure:

1. a Management Unit composed of top-level INRENA and INC officials (the unit is the Sanctuary's highest administration authority);
2. a General Manager;
3. two Deputy Managers to deal with the natural and cultural aspects of the Sanctuary;
4. an Advisory Committee composed of institutions present in the area; and

Non-official versions of Machu Picchu history explained by local guides. Photo: Germán I. Andrade.



5. a Coordination Committee as a consultative body.

Currently, there are many expectations about when and how this new body will fully operate.

International concern for the continued integrity of MPHS prompted the Governments of Finland and Peru to choose the site as the target of a debt-for-nature swap in 1995. Under this agreement, US\$6,150,000 was allocated for the Machu Picchu Programme (MPP), which is currently being implemented. In addition, a trust fund was created to guarantee the long-term sustainability of activities initiated under this programme.

The priorities of the environmental management programme are listed in Table 3.

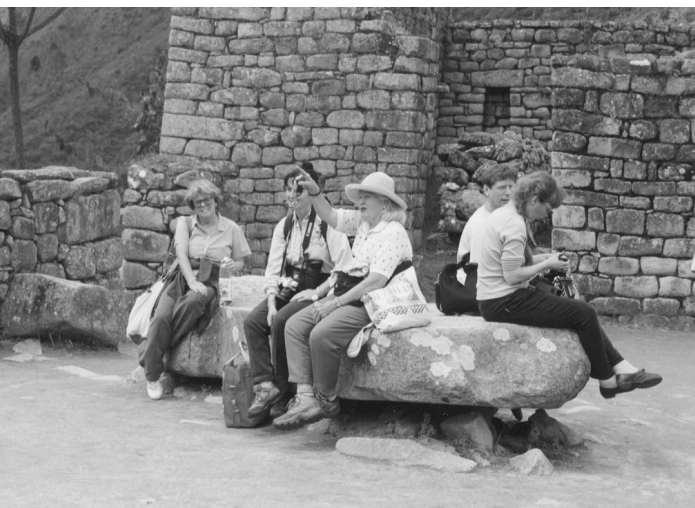
Machu Picchu Sanctuary: beyond its sustainable use

Solution of the environmental conflicts in the Sanctuary is necessary, but by itself is not enough for the conservation of its non-material values. Even if necessary corrective measures based on ecological facts and sound environmental management techniques were to be implemented, there would still be a need for a management approach that is more holistic and one that integrates preservation of life diversity with cultural values. Recognising the Sanctuary's non-material values, nevertheless, provides new opportunities for integrated management and the generation of benefits to a wider array of actors.

Cultural values

Machu Picchu is considered to be a World Natural and Cultural Heritage Site. According to the Peruvian legislation, it is a strictly protected area; thus, only non-consumptive or traditional uses are permitted (República del Perú 1999). This conceptual framework may be the origin of the frequent management obstacles that have been encountered. In fact, the mainstream perception that the eastern slope of the Andean range is essentially a wildland has been proven incorrect. There is ample evidence indicating that the area is a cultural landscape, although with outstanding natural values.

People sitting on top of a sacred rock. Photo: Germán I. Andrade.



Human intervention in the south-eastern Andean slopes, in the Cusco region between the puna and cloud forests ecosystems, is very old. These ecosystems seemed to have been managed based on functional and aesthetic criteria. Large natural areas were preserved in accordance with an animistic conception of the universe. Intensive use areas were also established, which are today recognised world centres of crop genetic resources (Ráez-Luna *et al.* 1998). Many researchers have also identified this region as the core area of potato diversity (Brush *et al.* 1995). For example, the area of Cusichaca, located along the boundary of the MPHS, has very

noticeable terraces on which new food crop varieties were created to sustain large human populations (Kendall 1992). In addition, the Sacred Valley of Pisac-Urubamba is the habitat for a rare tuber species, *Solanum lignicaule*, and the Urubamba Canyon, near Machu Picchu, is the habitat of *Solanum urubambae*, *S. santolallae* and *S. buesii* (Ochoa, C.M. 1998). The second most important tuber crop known to occur in the Andes is the 'Ulluco' *Ullucus tuberosus*, with great diversity of types in the Vilcanota Valley (Gade, 1975). On the other hand, apparently during the peak of the Inca Empire, the mid-mountain elevations were dedicated to coca production (Dollfus 1981).

Table 3. Environmental Management Priorities.

issue	management measures
urban development and related impacts	<ul style="list-style-type: none"> • upgrade urban development in Aguas Calientes in accordance with the Urban Management Plan (MPP unpublished); • limit urban expansion within the sanctuary and promote alternatives outside of it.
informal tourism and related services	<ul style="list-style-type: none"> • set new rules for tourism, especially with regard to the Inca trail, and allow only registered travel agencies to operate there; • build a handicraft market in Aguas Calientes.
inappropriate agriculture and grazing systems	<ul style="list-style-type: none"> • provide incentives to restore traditional agricultural practices (i.e. terraces) and to ban other types of agriculture, or provide compensation for stopping them; • promote replacement of non-traditional grazing systems for llamas and alpacas; • integrate the rural sector into environmental management.
wildlife hunting and native plant extraction	<ul style="list-style-type: none"> • improve knowledge on the issue and eventually strengthen protection programmes.
fire wood and timber extraction	<ul style="list-style-type: none"> • carry out a detailed diagnosis and promote alternative energy systems and multi-purpose reforestation.
fire and degradation of forest ecosystems	<ul style="list-style-type: none"> • implement the current fire prevention and fire-fighting plan; • design and implement a forest restoration programme.
solid waste	<ul style="list-style-type: none"> • mitigate the current situation (3 metric tons of solid waste/day) through the solid waste management scheme proposed by MPP; • adopt a solid-waste prevention policy according to the land use category of the area.
Spread of exotic species	<ul style="list-style-type: none"> • define the scope of the problem and a prioritised action agenda.
tree plantations (especially <i>Eucalyptus globulus</i>).	<ul style="list-style-type: none"> • allow logging of exotic timber species in the sanctuary.

As a result of the Spanish conquest, the region remained uninhabited during colonial times, allowing the natural vegetation to recover. That was the reason why Yale scholar Hiram Bingham made his scientific discovery in 1911, "in the middle of the jungle", as was portrayed by US National Geographic Magazine (Vol. XXIV, No. 4, April 1913).

At present, the archeological heritage is the only cultural value that has been integrated into the management of the area. Traditional perspectives of its values are not well known, though, and have not been integrated into the management of the area. During an encounter of Quechua-speaking cultures that took place in Cusco in 1999, the importance of existing cultural values associated with the Inca monuments was reinforced and the market-driven use currently given to the MPHS was criticised. Unfortunately, living cultural values are mentioned in the tourist guides only when referring to Ollantaytambo, considered as the single surviving Inca town.

As in the rest of the upper Andean regions, it is known that peasants have conserved, managed, transformed, and advanced local 'biotechnology' of cultivated plants to ensure food security. Through various management processes deeply embedded in the agro-ecological context of the Andes, these peasants have been able to conserve biodiversity and allow ecosystem resilience (Gari 1999). Ecological practices and cultural meanings are thus rooted in the cultivated fields throughout the entire cultural landscape. But this is being lost in the Andes (Dueñas *et al.* 1992), as well as in the Machu Picchu area.

The human population inhabiting the Sanctuary and its surrounding areas has been westernised culturally. Many are recent newcomers. Traditional agriculture in terraces, for example, has been replaced by shifting agriculture in forested areas. Also, since colonial times, South American camelids have been replaced by sheep and goats with an evident negative ecological impact on the upper Andean ecosystems. Today, most terraces either are covered by alien kikuyu grass *Penisetum clandestinum* or Mediterranean shrubs or 'sweet peas' *Spartium junceum*, when not planted with eucalyptus trees *Eucalyptus globulus*.

The impractical strict protection status given by law, and limited scientific knowledge concerning traditional uses of terraces (see however Kendall 1992), do not allow cultural restoration to be a management objective for this area. The loss of living cultural heritage and its memory in the landscape (Dollfus 1991), is without a doubt a major environmental problem of the Sanctuary, and the least acknowledged.

Recreational values

All visitors come to the MPHS to see the old Inca city. The average time per visit is four hours, and the second most popular tourist attraction is the Inca trail, which takes three days to visit. This has become one of the most-sought-after

Alien beauty. Cultivated gardens in Machu Picchu Sanctuary, with dozens of exotic species. Some of them have already spread out, threatening the native value of the site. Photo: Machu Picchu Programme.



trekking destinations in South America. The hot springs in the town of Machu Picchu (Aguas Calientes) complement the visit of tired hikers.

There is also an increasing demand to appreciate the Sanctuary's natural values, but response to this need has been limited due to a lack of adequate infrastructure (J. Koechlin, pers. com.). At present, groups of professional and amateur birdwatchers increasingly go to see the more than 400 bird species, some considered genuine local specialties. Also increasing in number are visitors in search of adventure for whom horse-riding tourist packages are being expanded to include, within a week, a visit to the high snow areas near the Salacantay peak as well as the lower valleys near the Machu Picchu citadel. There are also possibilities for mountain and rock climbing activities.

Public officials do not monitor nor manage in any way visits undertaken beyond the citadel and Inca trails. There are proposals from the private sector, though, to expand local infrastructure to serve such visitors. The Machu Picchu Pueblo Hotel has offered to rehabilitate one branch of the Inca trail which combines an experience of a remnant spectacular pisonay forest *Erythrina falcata* – the sacred tree of the Incas – and the recently restored Choquesuysuy site. Still pending is a project proposed by Q'ente Association to carry out the ecological and cultural restoration of the extensive terraces at Cusichaca, at the eastern entrance to the Sanctuary. There is also a private proposal to develop a botanical garden close to the citadel. Several planners have agreed that the diversification of attractions offered to tourists is a key element to the management of the MPHS, which now concentrates visitors and services around the Machu Picchu citadel.

Spiritual dimensions

There is an undetermined, but growing number of visitors that go to Machu Picchu in search of inspiration and meditation and to experience their relationships with the universe. Part of this demand includes religious and spiritual communities, and has created what it is also known as 'spiritual tourism,' for which there are specialised agencies. This use touches another dimension of non-material values, one that is little understood or acknowledged by public officials. This situation generates conflicts within current management guidelines. Those who value the site for its sacred dimensions do not welcome increased infrastructure development near or even within the ruins, such as the Machu Picchu Ruins Lodge located only a few metres away from the entrance to the citadel; and high-voltage electrical cables that dissect the landscape, disrupting archeological sites such as the outstanding Wiñaywayna ruins.

There is also the sense that the area is being profaned, when large numbers of visitors wander around the site without any restrictions, except for a few square metres of weakly protected *sancta sanctorum*, excluded from public access to avoid physical damage.

Identity dimensions

For Peruvian citizens, Machu Picchu is a symbol of their nationality; a combination of myths, legends and past history. Since these components have been the subjects of relatively little research, there is no official history or adequate interpretative material for visitors. This in turn has resulted in a proliferation of interpretations, many of which are misunderstandings or fantasies. The lack of a real

effort to rescue cultural values has promoted stereotypes that may provide photo-opportunities for visitors, but nevertheless, may portray an incomplete or false image of the site. Hence Inca trail porters are encouraged to wear their 'traditional' outfits that may be inappropriate for their job, while a few llamas graze in the terraces, far away from their normal open grassland habitat.

The public perception of Machu Picchu is centered on the 90-ha Inca Citadel, but generally the public is unaware of the existence and extent of rest of the Sanctuary. As a result of severe fires in 1997 that affected hundreds of hectares, public officials and local newspapers announced that "the Sanctuary had been saved from the flames" (Galiano 2000).

Existence value

Given its icon status and worldwide recognition, Machu Picchu has high existence value. A study on the willingness to pay, conducted for the MPP by the firm EFTEC, of London, showed that the majority of European and North American visitors did not know the cost of entrance tickets, but would be willing to pay up to ten times the actual fee. While this pattern is not applicable to all visitors, it clearly demonstrates that the value of Machu Picchu is high; a resource that could be used to generate the funding required to address urgent management needs.

Aesthetic qualities

Although there are ruins in the region that from an archeological perspective could be considered superior, none leave the indelible mark on visitors that Machu Picchu does. The beauty and harmony of the landscape in which Machu Picchu is located, and the quality of the setting is the main reason for this.

In the interior of the MPHS, however, the original harmony of the landscape has deteriorated. The preservation of Machu Picchu's aesthetic qualities has suffered. One of the main concerns associated with aesthetic qualities, is the proposed construction of a cable car that would disrupt the visual space between the citadel and the mountainous background. Even though it is an extremely important issue, other severe aesthetic disruptions, such as the road to the ruins, the town of Aguas Calientes, and a hydroelectric plant, have received much less attention, if any at all. The shanty-town character of Aguas Calientes is the greatest contrast the visitor encounters before visiting the appealing citadel. Artificial beauty, however, is not appropriate either: the gardens in the Inca citadel contain dozens of introduced species of ornamental flora, some of which have spread out and invaded adjacent areas (Ochoa 2000).

If beauty is considered as the expression of human harmony with the universe, Machu Picchu is a fundamental assertion of it. The preservation and restoration of the scenic quality of Machu Picchu should therefore be the guiding principle of the MPHS research and management activities (Ráez-Luna 1999).

Education resources

In Peru, it has become a tradition to take high school students to Machu Picchu on graduation. There are even special discounts given to visitors in school groups. However, many of the inhabitants of Cusco, and even Aguas Calientes only a few kilometres away, have never visited the Inca citadel. Many would certainly never do so. Further, the majority of the visitors leave the Sanctuary poorly informed about its

history and values. In addition, there are no interpretative materials on the natural values of the Sanctuary, and the archeological museum is completely abandoned. Machu Picchu is woefully undervalued as an educational resource.

Challenges in the conservation and promotion of non-material values

Beyond business-as-usual solutions to its environmental problems, though most are still pending, there are numerous opportunities to adjust MPHS management programmes to conserve and promote non-material values. The main challenges to meet in this endeavour are the following:

■ Building a holistic vision and integrated management

The prevalent, segmented vision of natural and cultural values has led to a fragmented management regime of divergent institutional mandates. This has triggered inter-institutional conflicts over jurisdictions within the Sanctuary. The Master Plan reflects an initial consensus, however, though for some people it represents the institutional culture of the environmental authority, and to a lesser degree a conservation agenda for cultural heritage. In any case, these two aspects are not adequately integrated. Even though the problem has been legally solved with the creation of the Management Unit, in practical terms it could be overcome through understanding of a more holistic interpretation of Machu Picchu's significance. The integration of non-material values into the management concept for the Sanctuary could be seen as an opportunity to solve existing conflicts. UNESCO could provide valuable assistance based on experiences from other mixed natural and cultural sites. Research that goes beyond the restricted boundaries of disciplines could also contribute to this holistic vision. In this regard, combined research could be conducted on archeology and ecology, thus extending Kendall's (1992) research focus to the rest of the Sanctuary. Another line of research could involve agriculture and archeology aimed toward reassessing cultural values and improving the quality of life of the local population (Ráez-Luna 1999).

But science is not everything. The process of revising the Master Plan could be improved, in accordance with the law, through the participation of those who recognise non-material values, especially recreational, scientific, and spiritual ones.

The most sought-after shot. Photo: Germán I. Andrade.



■ **Expand the management to the Greater Machu Picchu regional ecosystem**

Many MPHS analysts have agreed that the solutions to most of the problems of the Sanctuary are to be found outside the protected area. Integrating MPHS management within a regional context is critical to guarantee long-term, natural and social sustainability (MacFarland and Nuñez 1991). Galiano (2000) proposed the enlargement of the Sanctuary to include the integrity of the nearby upper watersheds. Although this would be a significant improvement, it is necessary to consider an even larger territory that would allow long-term maintenance of large-scale, ecological and socio-cultural processes.

From the conservation biology standpoint, a larger protected area is needed in order to guarantee the viability of the Sanctuary's highly-cherished charismatic species such as the Andean bear (*Tremarctos ornatus*; Peyton 1988) and the cock-of-the-rock (*Rupicula peruviana*), the national bird of Peru, among many others. Also, the Sanctuary is devoid of natural habitat below 2,000 metres, which limits its biodiversity content and ecological resilience. Opportunities to attain long-term, ecological sustainability do exist, however. MPHS is located on a human settlement frontier that has been maintained since Inca times. To the west of the Sanctuary there is a large and unprotected natural ecosystem. To the east, there is a culturally-rich, human landscape which is considered to be a global hotspot for agricultural biodiversity. Together, these elements could constitute a greater protected landscape, or a biosphere reserve, encompassing a larger proportion of the natural and cultural diversity of the Americas.

■ **Broaden and improve partnerships**

Most of the environmental problems of MPHS arise from a decision-making process (or lack thereof) that favours short-term economic benefits for a few actors. The realisation of opportunities for the management of the Sanctuary's non-material values, however, requires the participation of a wider array of actors who must be listened to and to whom the power of making decisions must be given.

People who place high value on the Sanctuary's many qualities, those who are deeply concerned about its conservation, and those who see it as an irreplaceable

component of world heritage, represent a new opportunity for building a large constituency of defenders and promoters world-wide. In this respect, it would be highly desirable to create an international advocacy and research organisation, such as the Charles Darwin Foundation for the Galapagos Islands in Ecuador. Such an institution would independently monitor Sanctuary matters, speak up on behalf of its non-material universal values, and lend support to concerned Peruvians whenever needed in its uncertain future.

Acknowledgments

I thank Allen Putney for stimulating me to expand the protected-area-

Lack of respect for most sacred places.
Photo:
Germán I. Andrade.



management perspective toward integrating non-material values. What better place to carry out this case study than Machu Picchu! I would also like to thank Mikko Pyhälä, Ambassador of Finland in Peru, for his kind invitation to join the Machu Picchu Program; Matti Maatta, of the Finnish Forest Service for his permanent support; and my MPP colleagues, especially Mr Jesus Arias, the Program's patient coordinator. Ernesto Ráez-Luna provided valuable information on the agro-ecological diversity.

References

- Bauer, B.S. 1998. *The Sacred Landscape of the Inca. The Cusco ceque system*. University of Texas Press. USA.
- Brush, S., Kesseli, R., Ortega, R., Cisneros, P., Zimmerer, K., and Quiros, C. 1995. Potato diversity in the Andean center of crop domestication. *Conservation Biology* 9: 5, 1189–1198.
- Dinerstein, E., Olson, D.M., Graham, D.J., Webster, A.L., Pimm, S.A., Bookbinder M.P., and Ledec, G. 1995. *A conservation assessment of the terrestrial ecoregions of Latin America and the Caribbean*. World Wildlife Fund & The World Bank. Washington, DC USA.
- Dollfus, O. 1991. *Territorios andinos: reto y memoria*. Instituto Francés de Estudios Andinos. Lima. Perú.
- Dueñas, A., Mendivil, R., Lobatón, G. and Loaiza, A. 1992. Campesinos y papas: A propósito de la variabilidad y erosión genética en comunidades campesinas del Perú. Pp. 287–309. In: De Gregori, C. I., J. Escobar and B. Marticorena (eds.). *El Problema Agrario en Debate*, SEPIA IV. Lima, Peru.
- Gade, D.W. 1975. Plants, man and the land in the Vilcanota Valley of Peru. The Hague: Junk, W. BV.
- Galiano, W. 2000. *Situación Ecológico-Ambiental del Santuario Histórico de Machu Picchu: Una Aproximación*. Programa Machu Picchu. Cusco, Perú.
- Gamarra, J.C. 1986. Esbozo del Plan Maestro del Santuario Histórico de Machu Picchu. Tesis de Grado. Facultad de Ciencias. Departamento de Biología y Geografía. Universidad de San Antonio Abad Cusco. Perú.
- Gari, J.A. 1999. Biodiversity conservation and use: local and global considerations. *Science, Development and Technology Discussion Paper No. 7*. Center for International Development and Belfer Center for Science and International Affairs, Harvard University, Cambridge, MA, USA.
- Kendall, A. 1992. *Los patrones de asentamiento y desarrollo rural prehistórico entre Ollantaytambo y Machu Picchu*. Editorial Universitaria UNSAAC, Cusco, Perú.
- MacFarland, C., and Nuñez, L. 1991. *Informe de la misión asesora sobre el Plan Maestro del Santuario Histórico Nacional y Sitio de Patrimonio Mundial Machu Picchu*. PNUD/UNESCO. Mayo de 1991. Lima, Perú.
- Mujica, E. 1994. *Mixed sites monitor: The Machu Picchu experience where the works of man and natures seem contemporaneous*. Systematic monitoring exercise. World Heritage Sites, Latin America, the Caribbean and Mozambique findings and international perspectives. Report 91–94. UNDP/UNESCO.
- Myers, N., Mittermeier, R.A., Mittermeier, C.G., De Fonseca, G.A.B., and Kent, J. 2000. Biodiversity hotspots for conservation priorities. *Nature* (403): 853–858
- Ochoa, C.M. 1998. Ecogeography and breeding potential of the wild Peruvian tuber-bearing species of *Solanum*. *Economic Botany* 52: 1, 3–6.
- Ochoa, J. 1999. *Manejo de la flora y vegetación de la ciudad inca de Machu Picchu: problemas y propuestas*. Documento de Asistencia Técnica 3. Programa Machu Picchu. Cusco.
- Ochoa, J. 2000. *Especies introducidas e invasoras en el Santuario Histórico de Machu Picchu: Alcances del problema y guías para su manejo*. Manuscrito en revisión. Programa Machu Picchu, Cusco, Peru.
- Peyton, B. 1988. *Uso de Hábitat por el Oso Frontino en el Santuario Histórico de Machu Picchu y Zonas Adyacentes en el Perú. Simposio Conservación y Manejo de Fauna Silvestre Neotropical*. IX Congreso Latinoamericano de Zoología. Pp: 23–31. Arequipa. Perú.
- Pulido, V. 1993. *Informe sobre los parques nacionales del Perú seleccionados bajo el Proyecto GEF. Fideicomiso para las áreas protegidas del Perú*. Informe INRENA- Banco Mundial. Lima, Peru.
- Ráez-Luna, E. 1999. *Estrategia para el desarrollo de la investigación en el Santuario Histórico de Machu Picchu*. Documento de Asistencia Técnica No. 2. Programa Machu Picchu, Cusco. Perú.
- Ráez-Luna, E. F., Hyman, G.G., and Lema, G. 1998. Distribución de la biodiversidad agrícola en el Perú: Patrones, amenazas y prioridades. Conferencia presentada en el IV Congreso Latinoamericano de Ecología y el Congreso Peruano de Ecología. Universidad Nacional San Agustín, Arequipa. Perú, 20–25 de Octubre de 1998.
- República del Perú. 1999a. *Estrategia Nacional para las Áreas Naturales Protegidas*. Plan Director. Instituto Nacional de Recursos Naturales INRENA. Lima. Perú.
- República del Perú. 1999b. *Plan Maestro del Santuario Histórico de Machu Picchu*. Instituto Nacional de Recursos Naturales (INRENA) e Instituto Nacional de Cultura (INC). Lima. Perú.

*Germán I. Andrade is a biodiversity and protected area consultant and member of the regional steering committee of IUCN/WCPA, and Chief Technical Advisor of the Machu Picchu Program, a debt-for-nature swap between Finland and Peru, for the conservation of the Sanctuary: www.machupicchu.org.pe and www.metsa.fi
Germán I. Andrade, AA 101447 Santafé de Bogotá, DC, Colombia. Email: gandrade@aya.yale.edu*

Résumés

Les connexions culturelles à la terre - un exemple canadien

ELLEN LEE

Le concept de paysage culturel est très largement utilisé aujourd'hui dans un grand nombre de circonstances qui vont des plus générales aux plus spécifiques. C'est un terme commode permettant d'intégrer les valeurs culturelles et naturelles propres à un territoire et qui dénote un sens de totalité organique et pas seulement une somme d'éléments. Cependant, certains types de paysages culturels peuvent être difficiles à définir en termes physiques et concrets du fait des valeurs culturelles intangibles qui leur sont associées. Si nous désirons définir les paysages culturels afin de les gérer d'une manière respectueuse de leur intégrité, il nous faut trouver une méthode de définition appropriée. Dans cet article, je discute certains des problèmes inhérents à ce type de définition et à l'évaluation et à la gestion des paysages culturels associés à l'histoire des peuples indigènes du Canada. Et je suggère une démarche permettant d'intégrer le naturel et le culturel, le tangible et l'intangible.

Un Emu dans le Trou : Explorer le lien entre la biodiversité et l'héritage culturel aborigène dans l'état de New South Wales, Australie

ANTHONY ENGLISH

Au NSW, la gestion du patrimoine aborigène est centrée sur les sites antérieurs à la période de contact, tels que les 'middens' et l'art pariétal. L'importance de ces sites a dominé à la fois les programmes d'évaluation d'impact sur l'environnement en dehors des parcs et la gestion du patrimoine aborigène dans les zones protégées. L'importance essentielle de la biodiversité et de l'intégrité de l'environnement pour l'identité et le style de vie des communautés d'aborigènes a été largement ignorée. La nature dynamique de la culture des peuples aborigènes qui met en œuvre des stratégies de contact continu avec la terre a été obliérée par l'accent mis sur les reliques et sur les sites antérieurs à la période de contact.

Cela a eu pour conséquence la négligence d'un grand nombre de valeurs sociales inhérentes à la culture aborigène. Cet article examine les valeurs associées à l'utilisation de denrées et de ressources naturelles et le rôle de ces activités dans le processus de transmission de la connaissance culturelle et de cohésion entre les diverses familles aborigènes. L'importance de ces activités au NSW est généralement très mal connue et elle n'est que rarement prise en compte dans le cadre de l'évaluation de l'impact des développements proposés sur les valeurs du patrimoine aborigène. De même, la participation des aborigènes à la gestion des parcs a été restreinte pour l'essentiel à la conservation des sites et des vestiges physiques.

Le Service de l'Environnement des Parcs Nationaux du NSW a travaillé en collaboration avec deux communautés d'aborigènes à l'investigation de l'importance culturelle essentielle de la biodiversité et à la mise en place de techniques permettant d'incorporer ces valeurs culturelles à la gestion de l'environnement de NSW.

Quelques principes généraux de gestion des zones montagneuses protégées ayant une signification culturelle et spirituelle

LAWRENCE S. HAMILTON

Les membres de la communauté des professionnels de la conservation de l'environnement parviennent à promouvoir avec une efficacité de plus en plus grande les valeurs de protection de la diversité biologique dans les zones protégées. La Convention sur la Diversité Biologique a largement contribué à confirmer cette réussite. Nous n'avons pas su cependant conserver avec la même efficacité les valeurs culturelles et spirituelles associées aux environnements naturels et intégrer ces valeurs aux protocoles de gestion des zones protégées. Cet échec est d'autant plus déplorable que ce sont souvent ces valeurs mêmes qui fournissent la motivation du souci de conservation de la biodiversité naturelle. Ceci est particulièrement vrai dans les zones de montagne où abondent les sites riches en signification culturelle : les sommets de montagne, les grottes, les promontoires escarpés, les vieux arbres nouveaux, les formations rocheuses inhabituelles ou les vallées cachées. Conscients du

problème et des opportunités afférentes, un groupe de professionnels des zones montagneuses protégées s'est réuni pour un séminaire d'étude dans le Parc National des Volcans d'Hawaii, sous l'égide de la Commission Mondiale sur les Sites Protégés de l'IUCN et du 'East West Center' et il a défini un ensemble de principes de gestion de ces zones spéciales. Ces principes ont été résumés par Duncan Poore et publiés dans le cadre de la Série No. 2 du Programme sur les Zones Protégées de l'IUCN, *Principes généraux de gestion des zones protégées de montagne*. Ce document est maintenant épuisé mais ces principes conservent toute leur validité et ils sont reproduits en détail dans le texte qui suit.

La signification culturelle et spirituelle des montagnes comme base de développement de matériaux éducatifs et interprétatifs dans les parcs nationaux

EDWIN BERNBAUM, PH.D.

En tant qu'éléments dominants du paysage par leur hauteur, les montagnes sont naturellement associées aux idéaux et aux aspirations les plus élevés de toutes les sociétés partout dans le monde. Aux Etats-Unis, le caractère intact des régions montagneuses dans les parcs nationaux comme Mount Rainier et Rocky Mountain en fait les dépositaires naturels des valeurs essentielles à la société américaine. Comme le démontrent les textes de John Muir, les paysages de montagne en tant que symboles d'inspiration, de liberté et de renouvellement ont joué un rôle important dans l'essor du mouvement écologique américain et ils ont largement contribué à disséminer dans le grand public le souci de la conservation des zones sauvages. Alors que la majorité des parcs nationaux sont situés dans des régions montagneuses qui n'ont connu qu'un développement économique rudimentaire, les matériaux interprétatifs basés sur la signification culturelle et spirituelle des montagnes font le plus souvent défaut. L'Institut des Montagnes travaille donc en collaboration avec le Service des Parcs Nationaux des Etats-Unis à la production de matériaux et d'activités éducatifs et d'interprétation qui mettent en valeur la signification culturelle et spirituelle des zones montagneuses et de leurs écosystèmes. La présentation de ces matériaux contribuera à enrichir l'expérience des visiteurs confrontés à la nature et à approfondir leur souci de conservation de l'environnement – à la fois dans les parcs nationaux et sur leurs lieux de résidence. Afin de toucher le grand public, les Américains de souches culturelles et ethniques différentes, ainsi que les visiteurs étrangers, le projet mettra en œuvre le pouvoir d'évocation de la poésie, des textes, de la photographie, de l'art et de la musique ainsi que d'autres matériaux tirés de trois grands domaines culturels, la culture américaine moderne, la culture des indiens d'Amérique et les diverses cultures mondiales. L'Institut de la Montagne est en train de sélectionner plusieurs grands parcs qui serviront de sites pilotes pour le développement d'un large éventail de produits et d'activités qui serviront de modèles à implanter par la suite à travers l'ensemble du réseau de parcs nationaux et de zones protégées aux Etats-Unis et de par le monde.

Incorporer des valeurs non matérialistes à la planification du Parc National et de la Réserve de Denali, Alaska, USA

MICHAEL J. TRANEL

Comme un grand nombre d'autres zones protégées, le Parc National et la Réserve de Denali se trouvent confrontés à plusieurs défis. En tant que zone de conservation de l'Alaska qui a été élargie de manière considérable dans le cadre de l'Acte de Conservation des Territoires d'Intérêt National de 1980 (ANILCA), Denali se doit d'assumer son rôle de parc modèle dont les décisions dans plusieurs domaines controversés affectent la gestion des autres zones protégées sur tout le territoire national. A travers les positions prises sur des problèmes difficiles comme celui de la nature des restrictions à imposer à l'usage des motoneiges et les modifications apportées à son plan de gestion général, le parc a reconnu l'importance des valeurs non matérialistes au niveau des options de mise en valeur de cet écosystème arctique. Ces valeurs non matérialistes comme les valeurs récréatives, y compris la possibilité de faire l'expérience de la solitude et des bruits naturels, les valeurs esthétiques et les valeurs d'existence se sont imposées récemment comme facteurs d'évaluation importants bien plus que cela n'a jamais été le cas dans toute l'histoire du parc. Dans le cadre des lois qui régissent le parc, des programmes de gestion, de l'histoire administrative du parc et des préoccupations manifestées par le public, ces valeurs ont été incorporées au plan de gestion de l'arrière-pays et à l'amendement du plan de gestion général et elles constituent des facteurs essentiels pour le futur du Parc National et de la Réserve de Denali.

Les valeurs non matérialistes de Machu-Picchu, site du patrimoine mondial. En reconnaissance envers les mesures prises.

GERMÁN I. ANDRADE

Le sanctuaire historique de Machu-Picchu fait partie de notre liste de référence des sites du patrimoine naturel et culturel et il est inclus dans le système de zones protégées du Pérou et couvert par l'Accord sur le Patrimoine Mondial administré par l'UNESCO. Bien qu'il soit facile de le visiter et qu'il constitue un atout financier remarquable pour le Pérou, le site souffre de problèmes écologiques graves tels que la dégradation de son écosystème et la prolifération d'infrastructures officielles et officieuses développées en réponse à la demande croissante des visiteurs. La cause de ces problèmes réside en partie dans le succès matériel du site, mais aussi dans l'absence de réglementation adéquate et dans le conflit permanent au niveau des droits de propriété entre l'Etat et la population régionale. Récemment, des mesures légales importantes ont été prises avec l'approbation du premier Plan de Gestion et la création d'un Comité de Gestion. Il est important de trouver une solution aux problèmes de l'environnement, mais cela ne suffit pas pour préserver ses valeurs non matérialistes. Celles-ci incluent les valeurs culturelles, l'existence même du site et sa qualité, les valeurs récréatives, esthétiques et éducatives, sa dimension spirituelle et son statut de symbole de l'identité nationale. Pour que le site achève son potentiel, il est nécessaire de formuler une vision complète de l'ensemble de ces valeurs sur lesquelles fonder une nouvelle gestion intégrée, l'expansion des opérations existantes et la protection du vaste écosystème naturel et culturel régional ainsi que la promotion et l'approfondissement du soutien social envers le projet. Il est proposé pour ce faire de créer un Institut International rattaché à l'UNESCO qui, en plus de l'assistance nécessaire qu'il sera à même d'offrir au Pérou, aura pour vocation de déterminer et de promouvoir ces valeurs non matérialistes et universelles.

Resúmenes

Las conexiones culturales con la tierra - Un ejemplo canadiense

ELLEN LEE

Hoy en día, el concepto de paisajes culturales es usado extensivamente dentro de una gran gama de circunstancias desde lo muy general hasta lo muy específico. Es un término conveniente para integrar los valores naturales y culturales de un lugar y trasmite no sólo la sumatoria de los elementos de un sitio sino también su totalidad. Sin embargo, algunos tipos de paisajes culturales pueden ser muy difíciles de definir en términos físicamente concretos debido a su intangible valor cultural. Si queremos determinar los paisajes culturales para poder evaluarlos y manejarlos, tenemos que encontrar modos culturales apropiados que los definan. En esta publicación, discutiré algunas de las cuestiones que rodean la identificación, evaluación y manejo de los paisajes culturales asociados con la historia de los Pueblos Aborígenes de Canadá. Sugeriré una aproximación que integra lo tangible con lo intangible, lo cultural y lo natural.

Un emú en el hoyo: explorando la unión entre la biodiversidad y el patrimonio cultural de los aborígenes de New South Wales, Australia

ANTHONY ENGLISH

En NSW, el patrimonio de los aborígenes ha sido definido como el poseedor de un enfoque en sitios de pre-contacto tales como muladares y arte en rocas. Este enfoque ha dominado tanto las evaluaciones del impacto del entorno fuera de los parques como el manejo del patrimonio de los aborígenes en las áreas protegidas. La continua importancia de la biodiversidad y de la salud del ambiente para la identidad y estilo de vida de las comunidades aborígenes ha sido en gran parte ignorada. La naturaleza dinámica de la cultura de los pueblos aborígenes que ha incluido estrategias diseñadas para permitir el contacto continuo con la tierra ha permanecido escondida debido al énfasis que se puso en reliquias y en los sitios aborígenes de pre-contacto.

Esto ha resultado en que dentro del manejo del entorno se han descuidado una serie de valores sociales aborígenes. Esta publicación observa los valores asociados con el uso de alimentos y recursos silvestres y el papel que esta actividad juega en la transmisión del conocimiento cultural y en la unificación de las familias aborígenes. La extensión de esta actividad en NSW es poco comprendida y la importancia para las comunidades aborígenes se considera sólo raramente cuando se mide el impacto de los desarrollos propuestos en los valores patrimoniales de los aborígenes. Igualmente, el involucramiento de los pueblos aborígenes en la administración de los parques se ha restringido en su mayor parte a la conservación de los sitios y de los residuos físicos.

El Servicio de los Parques Nacionales y de la Vida Salvaje de NSW ha estado trabajando con dos comunidades aborígenes con el propósito de explorar la continua importancia de la biodiversidad y desarrollar mecanismos capaces de elegir valores culturales asociados dentro de la administración del entorno de NSW.

Algunas líneas directrices para el manejo de áreas protegidas montañosas que poseen un significado espiritual o cultural

LAWRENCE S. HAMILTON

Los miembros de la comunidad internacional para la conservación han logrado creciente éxito en la promoción de interés en la protección de la diversidad biológica en áreas protegidas. La Convención de la Diversidad Biológica ha incitado este proceso de una manera significativa. Sin embargo, no hemos sido tan efectivos en el logro de la conservación de valores culturales y espirituales asociados con los entornos naturales o en la integración de estos valores dentro de los protocolos administrativos de las áreas protegidas. Este hecho es deplorable, particularmente si se toma en consideración el hecho de que estos valores son frecuentemente responsables por la conservación de gran parte de la biodiversidad natural nativa. No hay otro sitio en que este hecho sea más evidente que en las zonas montañosas, donde abundan los lugares de significado especial: cimas de montañas, cuevas, promontorios acantilados,

árboles viejos y retorcidos, formaciones rocosas inusuales o valles escondidos. Durante un taller de trabajo que tuvo lugar en el Parque Nacional de Volcanes en Hawaii, patrocinado por la Comisión Mundial de Áreas Protegidas de la UICN y el Centro Este-Oeste, y reconociendo el problema y la oportunidad, un grupo de profesionales especializados en áreas montañosas protegidas, desarrolló una serie de líneas directrices para la administración de estas áreas especiales. Estas fueron resumidas por Duncan Poore y fueron publicadas como parte de las Series No. 2 del Programa de Áreas Protegidas de la IUCN, bajo el título: *Líneas directrices para las áreas montañosas protegidas*. Esta publicación está ahora agotada, pero las líneas continúan teniendo validez y se presentan palabra por palabra en lo que sigue.

El significado espiritual y cultural de las montañas como base para el desarrollo de materiales interpretativos y educacionales de los Parques Nacionales

EDWIN BERNBAUM

Por el hecho de ser el rasgo distintivo más alto del paisaje, las montañas tienden a ser asociadas con los más altos ideales y aspiraciones de las sociedades alrededor del mundo. En los Estados Unidos, entornos montañosos prístinos dentro de los parques nacionales, tales como Mount Rainier y Rocky Mountains cobijan, con respeto y amor, valores espirituales y culturales que son centrales en la sociedad americana. Como demuestran los escritos de John Muir, las montañas son vistas como lugares de inspiración, libertad y renovación y esto ha contribuido a elevar el movimiento americano del entorno y son uno de los elementos más efectivos para motivar el soporte público en la preservación de las áreas silvestres. Mientras la mayoría de los parques nacionales están situados en regiones montañosas subdesarrolladas, los materiales interpretativos basados en el significado espiritual y cultural y en otros rasgos de la naturaleza están normalmente ausentes. Por lo tanto, el Instituto de la Montaña está trabajando con el Servicio Nacional de Parques de los Estados Unidos para desarrollar materiales interpretativos y educacionales y actividades que extraen información sobre los distintos puntos de vista del significado cultural y espiritual de las montañas y de los rasgos distintivos de los entornos montañosos y de los ecosistemas. La sumatoria de estos materiales ayudará a enriquecer la experiencia de la naturaleza de los visitantes y les dará razones profundas para la conservación del entorno, tanto en el parque como en el hogar. Para poder alcanzar al público en general, tanto los norteamericanos de diferentes orígenes étnicos y culturales como los visitantes extranjeros, el proyecto hará uso de poesías evocadoras, escritos, fotografías, arte, música y otros materiales procedentes de los tres grupos generales que comprenden: la mayoría de los norteamericanos, los americanos nativos y las culturas mundiales. El Instituto de la Montaña está seleccionando varios parques importantes como áreas piloto con el fin de desarrollar una serie amplia de productos y actividades interpretativos que se usarán como modelos para la réplica y adaptación a través del sistema nacional de parques así como en otros parques y áreas protegidas de los Estados Unidos y de otras partes del mundo.

Incorporando valores no materiales en el planeamiento de áreas silvestres para el Denali National Park and Preserve, Alaska, USA

MICHAEL J. TRANEL

Al igual que muchas áreas protegidas, el Denali National Park and Preserve enfrenta una serie de desafíos en lo que se refiere al manejo de su planeamiento. Como una unidad de conservación de Alaska que ha sido extendida de un modo considerable a través del Acto de Conservación de Tierras de Interés Nacional de Alaska de 1980 (ANILCA), Denali enfrenta la responsabilidad adicional de reconocer que su manejo de cuestiones controversiales afecta el modo en que otras áreas silvestres son administradas a través del Estado. Cuando se trata de discusiones tales como el tipo apropiado y los niveles de uso del nieve móvil y de la reforma del plan general de administración, el parque ha reconocido la importancia de los valores no materiales en el significado global del ecosistema subártico. Los valores no materiales tales como los valores recreativos, incluyendo oportunidades para experimentar soledad y sonidos naturales, valores estéticos y valores existenciales han entrado en las discusiones a un nivel más importante que nunca en la historia del parque. Basados en leyes que afectan el parque, las normas de administración, la historia administrativa del parque y el interés público, estos valores han sido incorporados dentro del plan administrativo de las tierras aledañas y en el plan general administrativo modificado y se consideran críticos para el futuro del Denali National Park and Preserve.

Los Valores no materiales de Machu Picchu, Sitio de Patrimonio Mundial. Del reconocimiento a la acción.

GERMÁN I. ANDRADE

El Santuario Histórico de Machu Picchu pertenece a la corta lista de sitios que comparten el carácter de patrimonio cultural y natural; y como tal fue integrado al sistema de áreas protegidas del Perú y a la convención del Patrimonio Mundial administrada por la UNESCO. A pesar de su gran visibilidad y de ser un activo económico muy importante para el Perú, el sitio está plagado de problemas ambientales básicos, tales como la degradación de sus ecosistemas y la proliferación de infraestructura formal e informal, como respuesta a la creciente demanda de visitas. Las causas se deben en parte en el éxito de su valoración material, a un inadecuado arreglo institucional y a la persistencia de conflictos de derechos de propiedad entre el Estado y los pobladores rurales. En tiempos recientes se produjeron importantes avances legales, con la aprobación del primer Plan Maestro y la creación de una Unidad de Gestión. La solución de sus problemas ambientales, es sin embargo condición necesaria, pero no suficiente, para la conservación de sus valores no materiales. Estos incluyen valores culturales vivos, de existencia, cualidad estéticas, funciones recreativas y educativas, dimensiones espirituales y de identidad nacional. Los retos inmediatos para realizar este potencial, se refieren a la construcción de una visión holística de sus valores, de la cual se derive una renovada gestión integrada, la expansión del manejo hacia el gran ecosistema natural y cultural regional, y la ampliación y calificación de la base social de apoyo. Para ello se propone la creación de un Instituto Internacional, adscrito a la UNESCO, el cual además de proveer apoyo al Perú, tendría como misión central la vigilancia y promoción de sus valores no materiales y universales.

IUCN - The World Conservation Union

Founded in 1948, The World Conservation Union brings together States, government agencies and a diverse range of non-governmental organisations in a unique world partnership: over 950 members in all, spread across some 139 countries.

As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

IUCN, Rue Mauverney 28, CH-1196 Gland, Switzerland

Tel: ++ 41 22 999 0001, fax: ++ 41 22 999 0002,

internet email address: <mail@hq.iucn.org>

World Commission on Protected Areas (WCPA)

WCPA is the largest worldwide network of protected area managers and specialists. It comprises over 1,300 members in 140 countries. WCPA is one of the six voluntary Commissions of IUCN – The World Conservation Union, and is serviced by the Protected Areas Programme at the IUCN Headquarters in Gland, Switzerland. WCPA can be contacted at the IUCN address above.

The WCPA mission is to promote the establishment and effective management of a worldwide network of terrestrial and marine protected areas.

Advertisements

Camera-ready copy:
full page (208×138 mm) £240;
half page (100×138 mm) £138;
quarter page (NB 48×138 mm) £80.

Black and white reproduction of photos £10 extra each. VAT extra, where applicable.
Further details available from the PARKS office (see inside front cover).

Subscribing to PARKS

Each Volume of **PARKS** consists of three issues, published in February, June and October. **PARKS** is produced and managed on behalf of WCPA by the Nature Conservation Bureau Ltd. ISSN: 0960-233X. Subscriptions are £25.60 in UK, £28.15 in Europe, £32.65 in rest of world; reduced rates for 10 or more copies delivered to a single address.

- Each issue of **PARKS** addresses a particular theme. In 2000 the themes are:
Vol. 10 no. 1: Protected Areas in the North Africa/Middle East Region
Vol. 10 no. 2: Non-material Values of Protected Areas
Vol. 10 no. 3: Partnership and Exchange Programmes

■ **PARKS** is the leading global forum for information on issues relating to protected area establishment and management

■ **PARKS** puts protected areas at the forefront of contemporary environmental issues, such as biodiversity conservation and ecologically sustainable development.

PARKS is published by the World Commission on Protected Areas (WCPA) of IUCN – The World Conservation Union. **PARKS** aims to strengthen international collaboration among protected area professionals and to enhance their role, status and activities.

Some back issues are still available, at £8.85 (UK), £9.40 (Europe) or £10.95 (rest of world) each (postage included). Please contact the PARKS office for a list of available issues.

Order form/Invoice proforma

Return to: **PARKS**, 36 Kingfisher Court, Hambridge Road, Newbury, RG14 5SJ, UK. Each subscription lasts for a year (three issues), and includes postage and packing. There is a reduced rate for multiple subscriptions.

Please enter _____ subscription/s to **PARKS** for _____ (year)

1–9 subscriptions:

- UK: £25.60 each
- Europe: £28.15 each
- Rest of world: £32.65 each

10+ subscriptions to a single address:

- UK: £18.30 each
- Europe: £22.00 each
- Rest of world: £26.30 each

I enclose a cheque/money order in £ sterling made payable to The Nature Conservation Bureau Ltd.

I wish to pay by Visa/Mastercard, please charge to my account no.

Expiry date _____

Name on card _____

Signature _____

Delivery address: (please print clearly)

Name _____

Organisation _____

Address _____

Post/Zip Code _____ Country _____

PARKS

Vol 10 No 2 • June 2000

Non-Material Values of Protected Areas

© 2000 IUCN, Gland, Switzerland.

ISSN: 0960-233X

Contents

Editorial

ALLEN PUTNEY 1

Cultural connections to the land - a Canadian example

ELLEN LEE 3

An emu in the hole: exploring the link between biodiversity and Aboriginal cultural heritage in New South Wales, Australia

ANTHONY ENGLISH 13

Some guidelines for managing mountain protected areas having spiritual or cultural significance

LAWRENCE S. HAMILTON 26

The cultural and spiritual significance of mountains as a basis for the development of interpretive and educational materials at national parks

EDWIN BERNBAUM 30

Incorporating non-material values in wilderness planning for Denali National Park and Preserve, Alaska, USA

MICHAEL J. TRANEL 35

The non-material values of the Machu Picchu World Heritage Site from acknowledgement to action

GERMÁN I. ANDRADE 49

Résumés/Resumenes

63

Subscription/advertising details

inside back cover