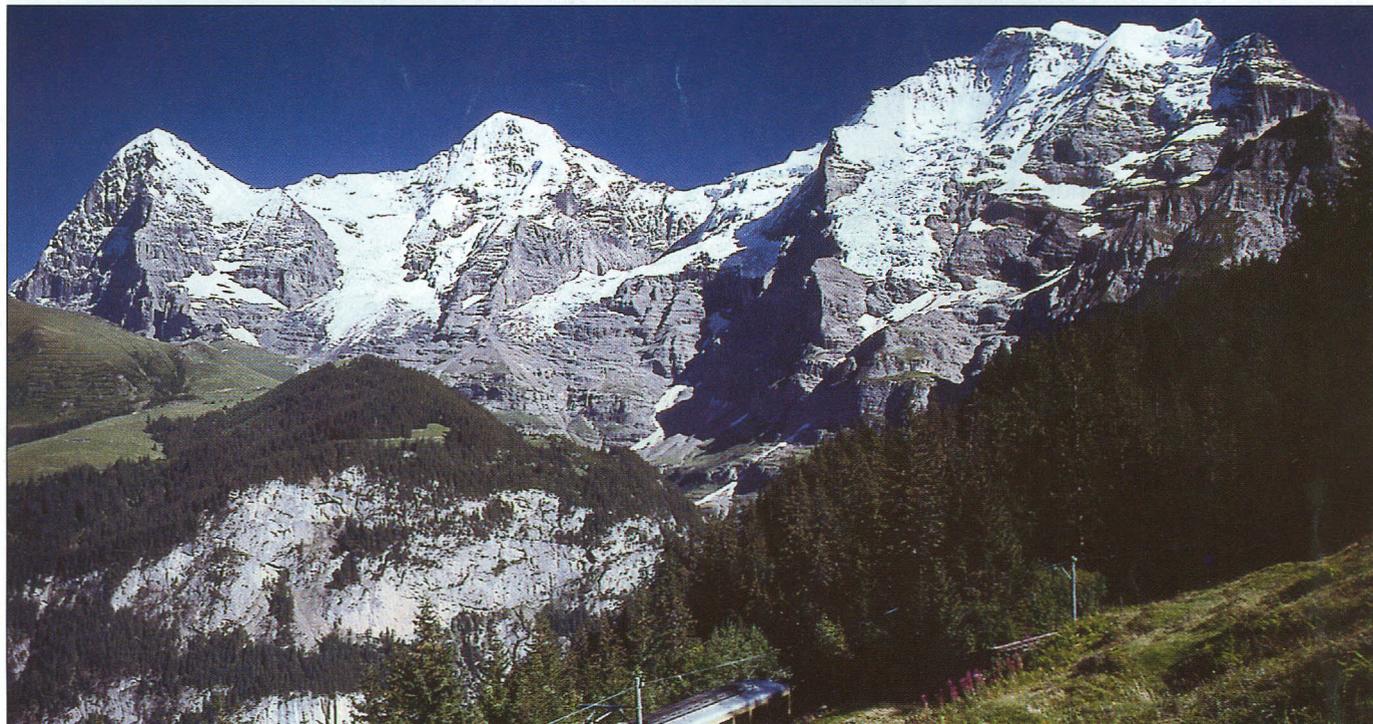


National Park International Bulletin



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The Eiger, Mönch and Jungfrau peaks: part of the projected World Heritage Site in the Swiss Alps.

ALPS HOPES TO GET ITS FIRST NATURAL WORLD HERITAGE SITE

*by JAMES THORSELL,
IUCN Senior Advisor, World Heritage.*

MID-December of this year will be a key date in the conservation calendar for Switzerland. By then the 21-member World Heritage Committee will have made their decisions on this year's crop of new world heritage nominations.

Among them is the Jungfrau-Aletsch-Bietschorn (JAB), located in the cantons of Valais and Berne in the south-central Swiss Alps. If inscribed by the committee at this year's annual meeting, JAB will be the first natural site in the Alps to achieve this prestigious status.

Within the Alps, a region spanning →

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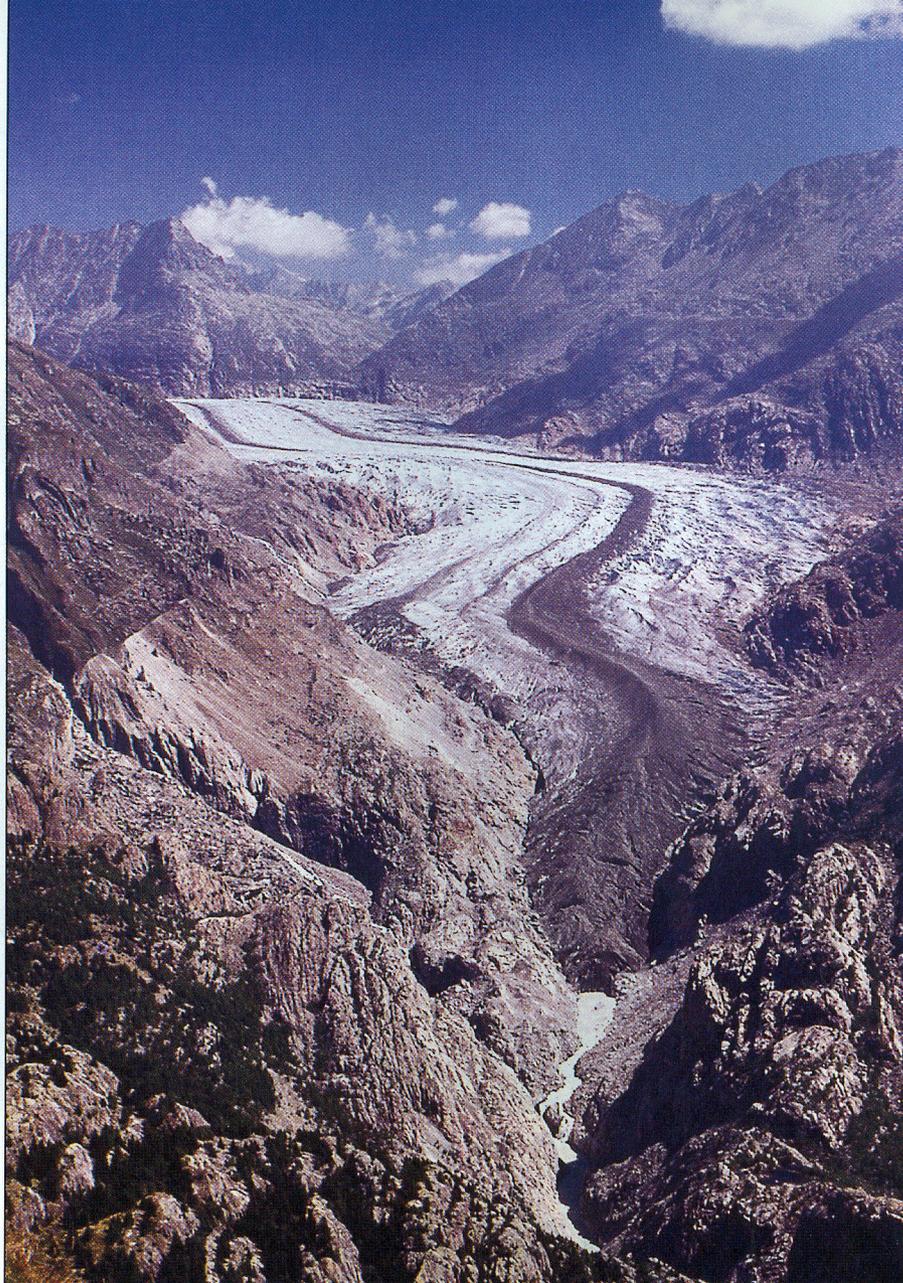
SUBSCRIPTION FORM 24

1100 km/685 miles and seven countries, no natural World Heritage Site has yet been inscribed. An inventory conducted by the International Centre for Alpine Environments in 1991 identified a total of 305 protected areas within the Alpine arc. Most of these were small nature reserves and regional parks (IUCN category V), which may have cultural landscape values but would not appear as likely candidates under World Heritage natural criteria. In the 1997 UN List of Protected Areas (IUCN/WCMC), there are seven areas listed in the Alps under IUCN categories I and II.

IUCN's evaluation has concluded that the JAB area stands out from all of these and other mountains in the High Alps in having the following four qualities:

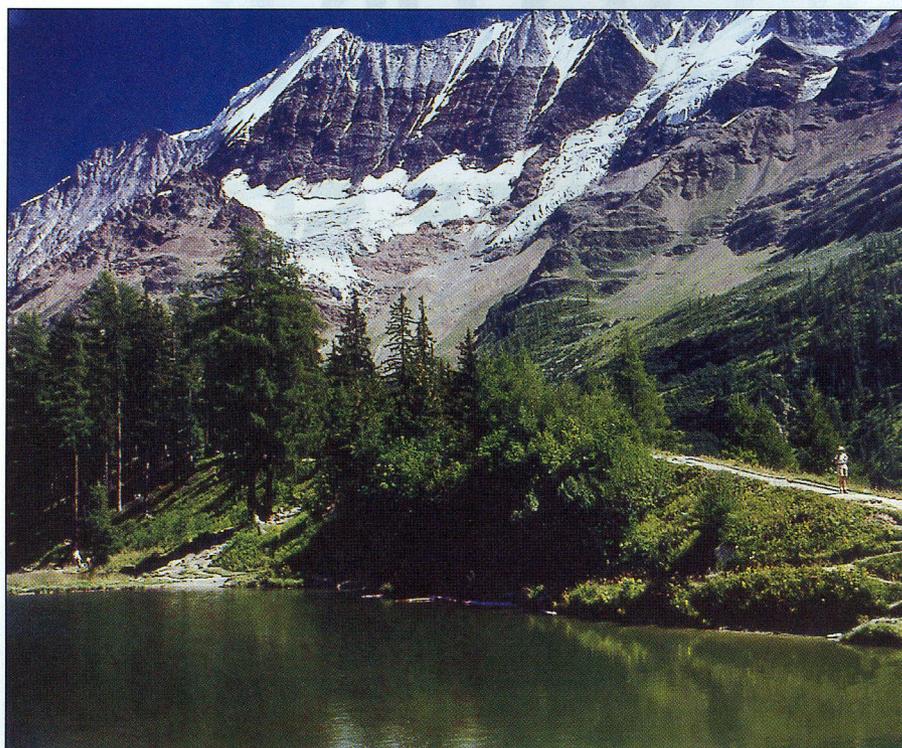
- The scenic aesthetic appeal of the JAB area is one of the most dramatic in the Alps chain as evidenced by the long history of international visitation to the area. The impressive northern wall of the site with the panorama of the Eiger, Mönch and Jungfrau mountains provides a 25 km/15 mile-long signature classic view of the north face of the High Alps. There are a number of other impressive peaks such as the Finsteraarhorn, Aletschorn, Breithorn and the Bietschorn, as well as the extensive views of the Aletsch glacier basin from the Eggishorn ridge. The only other areas in the Alps that rival JAB for sheer scenic splendour are in the Pennine Alps around the Matterhorn/Monte Rosa and Mont Blanc. Both these areas have been much altered by human activity and are not under protective status. High natural scenic values exist throughout the Alps chain but are most dramatically expressed in the JAB region.

- Glaciation within the JAB area is the most extensive of any area in the Alps. The Aletsch is the largest glacier in Europe in terms of area (128 sq km/48 sq miles), length (23 km/14 miles), and depth (900 m/2950 feet). By comparison, the largest glaciers on Mount Blanc are less than 10 km/6 miles in length. The study of the Aletsch began early in the 20th century and precise mass balance studies at the hydrological station below the tongue are ongoing. Comparative studies on the fast-reacting small glaciers on



Pictures: Jim ThorSELL and Rolf Hogan

Above: the Aletsch Glacier would be included in the World Heritage Site area. Below: the upper Lötschental valley, looking towards the proposed site.



National Park International Bulletin



DEAR READER,

We received a very positive response to our launch issue and hope you will find much of interest in this second issue.

While we continue to add to our distribution database — already our subscribers span the globe from Alaska to Australia — there will still be many national park and protected area professionals, environment and conservation groups and academic institutions who we have not yet reached.

If you know someone who would like to see NPIB, let us know and help us expand our worldwide readership.

As you will see in this issue, editorial contributions from our expert readers are already flowing in — but we would like MORE! If you don't have the time to write an article, why not send a letter with your comments on subjects already covered — or topics you would like to read about in future issues?

Editor — Stewart Bonney

* For subscription details please turn to back page.

the northern exposure have provided further indications of climatic change. Along with the extensive glacial cover of the area, an exceptionally wide variety of glacial features also occurs.

- The extensive glaciation and rugged topography found in the JAB, as well as protection measures which date back to 1933, have resulted in its being one of the most (if not the most) undisturbed natural areas in the Alps. The intact status of such a relatively large area within a long-occupied and intensively-used economic region is another distinctive feature of the JAB.

- For its record of productive scientific research on geology, geomorphology, climatic change, biology and atmospheric physics, the JAB area is unsurpassed in the Alps and, in certain fields, at the global level. Observations on some of the glaciers go back to the 12th century and have allowed reconstructions of historical fluctuations, particularly of the highly sensitive glaciers on the northern slopes of the site. The scientific importance of the area is also indicated by the selection of the Grindelwald and Aletsch areas as two of four study sites in the Swiss Alps for MAB programme studies in the period 1977-1989. The research station at the top of the Jungfrauoch is also one of a network of global sites studying astronomy, high altitude atmospherics, radiation and air quality. The Centre for Nature Protection

at the Riederalp also has facilitated natural history research in the JAB. While other areas in the Alps and Pyrenees have been important areas for research, scientific activity in the JAB area has been particularly impressive, with a particular emphasis on monitoring and understanding glaciological, geomorphological and ecological processes.

Although the site has not been nominated for its biological values

* *JAMES THORSELL, a Canadian originally from Banff, Alberta, was former head of IUCN's Natural Heritage Programme and continues to serve as Senior Advisor on World Heritage. He has visited almost 600 parks and reserves in 106 countries. He was assisted on the site inspection of the JAB by Dr Martin Price of the Centre for Mountain Studies in Perth, Scotland.*

(Criterion IV), it does contain a wide range of species typical of the Alps. However, floral diversity is higher in the calcareous massifs of the western and southern Alps where Mediterranean affinities are stronger. It is important to note, however, that the nominated area is much more than just glaciers and geology. In fact, almost 20% of the area is in the forest zone, and these lower altitudinal belts contribute to the overall natural features of the site.

The preparation of the JAB nomination is a model case study in the 'bottom-up' approach. Due to the structure of the Swiss system with most responsibility over land use in the hands of local authorities (communes), decision-making begins at that level and then proceeds up through the cantonal and then federal levels. Support for the nomination at the local level was first initiated by a businessman from Wengen, Andrea Cova. It was then subject to a community vote in favour of proceeding with a nomination. Then came approvals by the cantons before reaching the federal authorities. The major benefit of such an approach is that local support for the site is assured.

Throughout the Alps there is a strong historical and cultural presence. The JAB area, while predominantly natural, is surrounded by outstanding historical monuments and a harmonious cultural landscape. Indeed, where the JAB site is not bordered by uninhabited precipitous topography, it abuts a landscape with a harmonious blend of pastoral uses, historical routes and small villages. The immediate regional land uses are carefully regulated and serve a *de facto* buffer function to the site.

The nomination process for the JAB region has already led to a number of new conservation initiatives. For example, a management planning process has begun which will attempt to more effectively harmonise the heterogeneous mix of protection measures from all three levels of government. The Plan is being developed in true Swiss-style with a lengthy consultative process over two to three years. Stakeholder involvement will include non-governmental organisations such as the Swiss Alpine Club and Pronatura, who have responsibility for managing a portion of the site under lease agreements with the cantons. It will probably also result in the size of the site being expanded from its current 54,000 hectares/208 square miles.

From my own experience in visiting most of the major parks in the Alps, if you had to pick the most outstanding site it would be the Jungfrau-Aletsch-Bietschorn region. From the original vision of one man in Wengen, the Swiss have nominated a site that richly deserves world recognition under the Convention.

australia

TURNING THE TIDE FOR SYDNEY'S PENGUINS

by Andrew Donnelly

IN a northern suburb on the edge of Sydney Harbour National Park, a rather remarkable couple are attempting to raise a family. Each day Mr and Mrs P (we'll call them) of 2a Marine Parade, Manly, leave their seafront home in Sydney's Northern Beaches to earn their living, commuting up to 30 km/18 miles a day.

They return through the evening traffic, climb the four flights of stairs to their apartment to feed the children and try and get some rest before the next day's work. The apartment is small, but it is close to the beach, and besides, the housing market in Manly is ridiculously

expensive. Maybe as their social standing rises they might look to move, but for the moment the current place will do.

And what is so remarkable about this familiar suburban domestic scene? Well, a number of things. Both Mr & Mrs P go fishing for a living for one, and during the course of the day either might be killed by sharks, seals, fishing nets, dogs as well as road traffic. They do live at 2a Marine Parade apartments, but their home is in the back garden under a shed.

This is because Mr & Mrs P are penguins — little or fairy penguins (*Eudyptula minor*) to be exact, and

they are a part of the only urban colony in the world. Each night the colony members return to their underground burrows, which are commonly in the gardens or under the sheds and houses of their human neighbours. They get to them even if it means climbing flights of stairs or negotiating roads and other man-made obstacles. They are determined little animals; after all they were here first.

There have been penguin colonies on the beach areas surrounding Sydney for possibly tens of thousands of years, long before people were around. Even following man's appearance in Australia they lived alongside the aboriginal communities. It is only over the course of the last 200 years, since European settlement of Australia, that the penguin colonies of the Sydney area have declined dramatically.

It is likely that there were many thousands of penguins inhabiting the pre-settlement Sydney beaches: now one colony of 70 pairs (including Mr & Mrs P) remains at Manly. The rapid population decline was caused through a combination of intentional slaughter, deaths caused by introduced predators like dogs and foxes, and the loss of burrowing grounds.

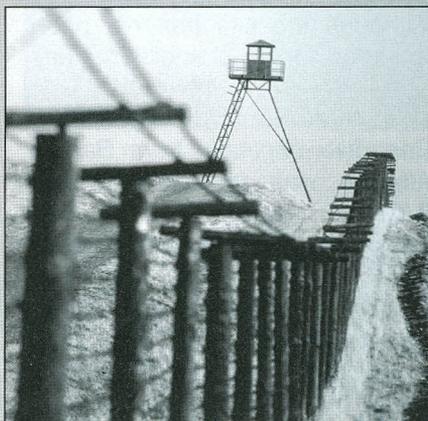
While little penguins are fairly common in Australian waters, over the last 50 years the Sydney colony has teetered on the brink of elimination. In 1952 an estimated 500-plus birds were nesting in and around Manly, but this fell to around the 200 mark by the mid-1960s and only a remnant population survived into the 1990s. At this point penguin-friendly members of the local human community, particularly John McGarry (an established Manly resident), raised the alarm and brought together the local council, the New South Wales National Parks and Wildlife Service (NPWS) and other bodies in an attempt to protect the colony. Because of their efforts, the colony is now listed and protected as an endangered population.

Historically, however, the odds are against the penguins. Despite its rich biodiversity and ever-growing awareness of its important natural heritage, Australia has a poor record in protecting its native wildlife. Since the arrival of Europeans to the continent there

IN THE NEXT NPIB

Features in ISSUE 3 of National Park International Bulletin will include:

- Working with the people — how local communities are being encouraged to help protect natural heritage in IUCN development projects at Banc d'Arguin National Park, Mauritania and Bystrinsky Nature Park, Russia.
- Report on the 10-year project between the Alaska region of the US National Park Service and Russia to establish a ground-breaking international park.
- Where East meets West: Thayatal National Park on the Austrian-Czech border.
- Concluding part of the International Trends in Parks Tourism report.
- World Heritage Committee verdict on new site nominations.



Thayatal



USA - Russia project

HAVE YOU SUBSCRIBED YET?

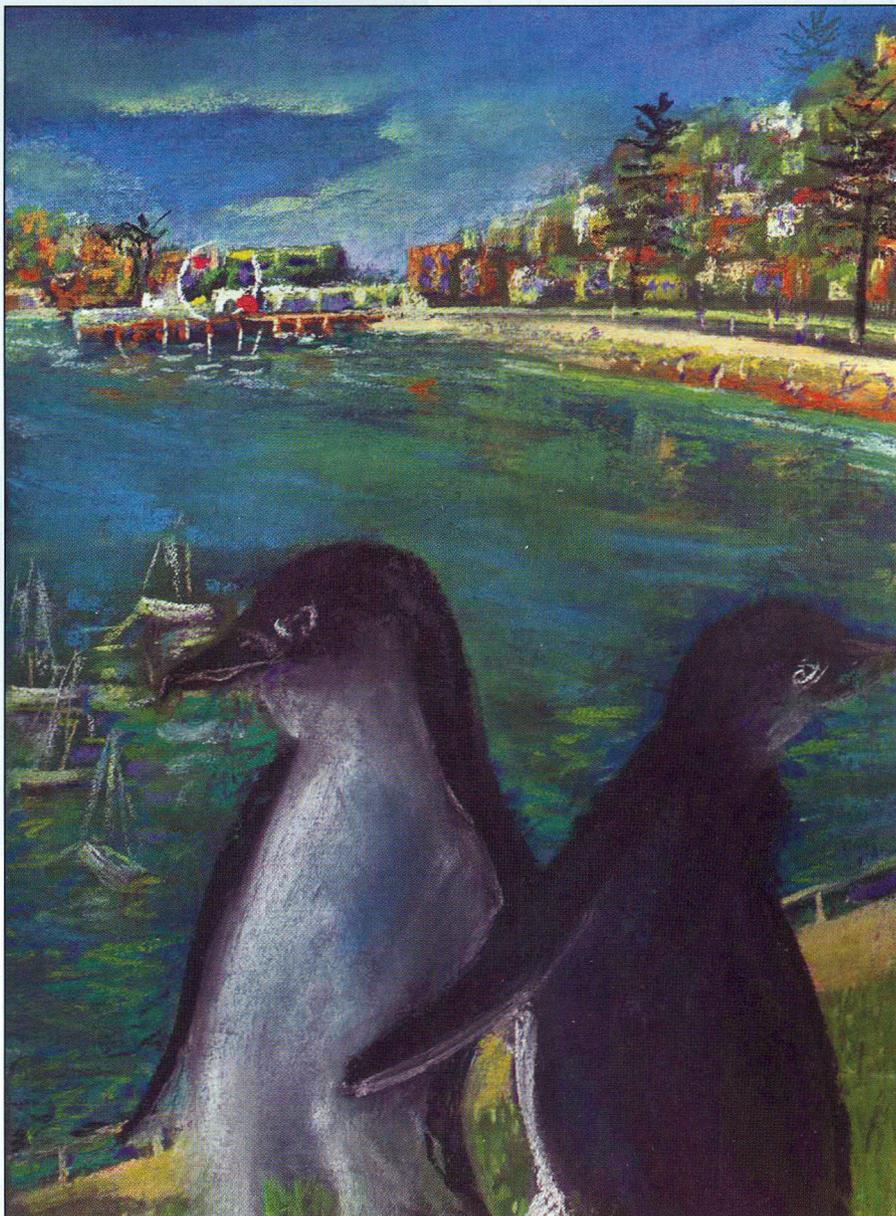
have been more mammal extinctions than anywhere else over the same period of time. Urbanisation means increased housing, roads and domestic pets, which inevitably lead to the loss of suitable burrow sites and increased penguin mortality rate.

Julie Bourne, a NPWS ranger, is determined that through education and awareness programmes on the needs of urban wildlife the tide will turn in favour of the native animals. Protecting the little penguin colony at Manly has become a flagship project. The penguins offer a unique opportunity to show that with appropriate protection we can live side by side with wildlife, even in our busiest cities. Speaking recently at the Australian Museum in Sydney, Julie said: "we live in one of the greatest national parks in the world. It is vital we learn the lessons of the past to conserve the still staggering biodiversity it contains".

While optimistic, Julie realises the enormity of the task if the penguins are not to share the fate of the more unfortunate mammals of Sydney. They face similar problems; habitat loss and increased predation. But the penguins have a better chance. In the last century we were ignorant of many endangered animals' needs, and even if the will to protect them had been present, the knowledge of how to do so was not.

Julie feels we are in a better position now. While she studies the penguins' ecology, feeding and nesting behaviours to learn how best their needs can be served, an intensive public awareness campaign is underway. It involves NPWS and Manly Council working together with local volunteers. It aims to increase awareness of the colony and how and why it should be protected. "Raising the profile of the penguins has been a great success. The problem is that while doing this we still have to keep the burrow locations secret if they are to be protected," said Julie.

So Mr and Mrs P's real identity and address must remain hidden. But we can say that this year they have two noisy, healthy chicks in the burrow. Having just survived into this century, with a little help it looks as if the world's only urban penguins may continue to grace Sydney Harbour's waters, gardens and sheds well into the next.



Above: Paul Gosling's painting of little penguins in Sydney Harbour, courtesy of Manly Environment Centre.



Left: the only urban penguin colony in the world, the birds return every night to their burrows in gardens or beneath buildings.

canada

IN Canada's Northwest Territories, the South Nahanni and Flat Rivers surge through a vast swathe of boreal wilderness, rich in scenery and wildlife. Recognised as a place of global significance, a corridor along these rivers was protected in 1976 as Nahanni National Park Reserve. Since then, the South Nahanni River has been designated as a Canadian Heritage River and a World Heritage Site.

The Nahanni region is a landscape of rich diversity and rugged beauty. The South Nahanni River flows through canyons over one kilometre deep, plunges over Virginia Falls — a cataract twice the height of the Niagara Falls, and flows past hot springs and giant tufa mounds. Grizzly and black bears, woodland caribou and trumpeter swans are just a few of the wildlife species that live in the park. Plants rare to northern boreal forests cling to mist-bathed cliffs below waterfalls and nestle around hot springs. The spectacle of the landscape and the challenges of the river have made the Nahanni one of Canada's premier wilderness canoeing rivers.

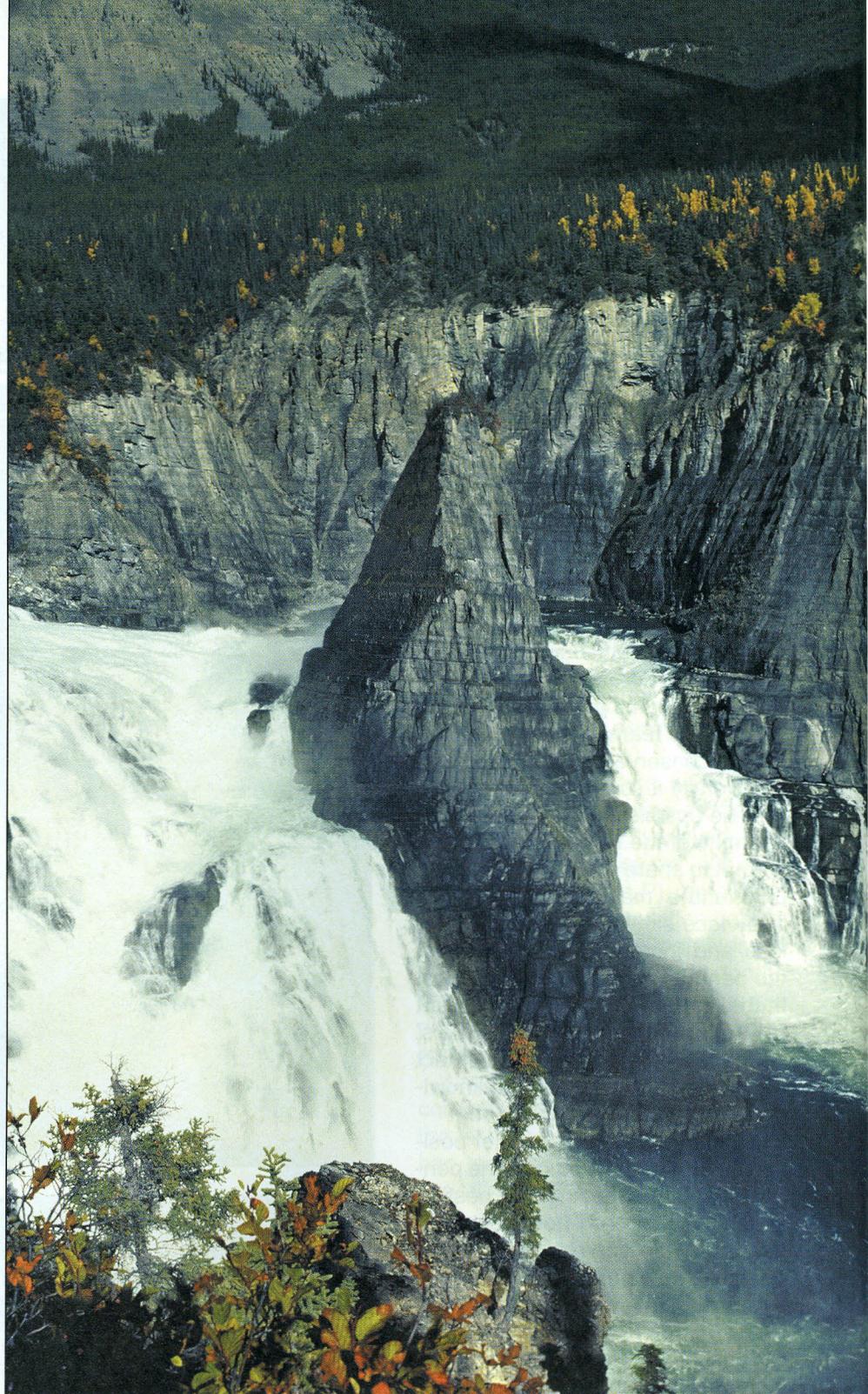
PARK ESTABLISHMENT

In the early 1970s, a massive hydro-electric power project was proposed for the South Nahanni River at Virginia Falls. This proposed development galvanised public support for permanently protecting the wilderness character of the river. Pressure to create a national park in the Nahanni region was generated from the conservation and the recreational canoeing communities. But the final push to protect the river can be traced to a single canoe trip.

In the early 1970s, then Prime Minister of Canada and avid wilderness canoeist, Pierre Trudeau, paddled the South Nahanni River and was so moved that he directed his government to protect the area as a national park. In 1972, a national park was announced, and in 1976 one seventh of the South Nahanni watershed (4766 sq km/1840 sq miles) was legally protected as a national park reserve.

In 1978, UNESCO designated Nahanni National Park Reserve as the first natural World Heritage Site, before even the Grand Canyon or the Great Barrier Reef, for its globally significant natural features and wilderness values. Nahanni was

Pictures: Mike Beedell



Virginia Falls, on the South Nahanni River, are twice the height of the Niagara Falls.

GREATER ECOSYSTEM PROTECTION: THE KEY TO NAHANNI'S FUTURE

*By Alison Woodley,
Federal/Northern Campaigner, Canadian Parks and
Wilderness Society National Office
and Greg Yeoman,
Conservation Director, Canadian Parks and Wilderness
Society — NWT Chapter.*

designated under two different criteria: as “an outstanding example representing significant ongoing ecological processes or biological evolution” and for its “superlative natural phenomena, formations or features or areas of outstanding natural beauty”. Nahanni’s World Heritage designation brings with it an international responsibility on the part of the Canadian government to protect this area’s ecological and scenic values.

THREATS TO NAHANNI’S ECOLOGICAL INTEGRITY

Twenty-five years later, in spite of its vast size and remoteness from urban centres, Nahanni National Park Reserve is under serious threat. Industrial development is rapidly approaching the borders of the park. Mine sites are being developed upstream from the protected area of the watershed, and oil and gas exploration activities, particularly seismic lines, are being cut through the area south of the park.

Parks Canada, in its 1997 State of the Parks Report, found that Nahanni had potential significant impacts to its ecological integrity from external stressors. They ranked mining as the most significant threat to the ecological integrity of the park.

In the early 1970s, when the process of establishing the national park was underway, little was known of the ecological values of the region. As a result the original park boundaries were not based on a systematic evaluation of these values. Parks Canada recognised that the initial boundaries would need to be adjusted as detailed studies of the region became available. However, to date, the boundaries remain the same as they were 25 years ago when the park reserve was established.

Parks Canada has identified three general areas of interest for expanding the park to improve its representation of the Mackenzie Mountains Natural Region, but they have yet to be protected from industrial development. And more work is needed to assess the ecological requirements of wide-ranging wildlife species like grizzly bear and woodland caribou, and how well they are protected within the present park boundaries.

The most immediate threat to the ecological integrity of Nahanni National Park Reserve is the on-

going development of a mine on the shores of Prairie Creek, an upstream tributary of the South Nahanni River. This lead-zinc-copper-silver mine site has infrastructure on-site dating back to the early 1980s when a proposed silver mine came close to operating, but was abandoned at the last minute in response to plummeting silver prices. Now owned by a small mining company called Canadian Zinc, the mine has been gearing up for operation and the company has been applying for permits for drilling and other development activities. In spite of concerns about the mine from First Nations and Parks Canada, and calls for a comprehensive examination of the potential impacts of the mine from conservation groups, no environmental review considering the full cumulative impacts of the mine on the World Heritage Site next door has been commissioned.

In addition to the Prairie Creek mine site, there are several other mining development or exploration projects underway in the watershed. Outside of the park, a number of sites have recently been staked and have begun exploration activities, and several old mine sites exist in the watershed which may become active at any time.

The risk of water contamination as a result of mining development in the South Nahanni Watershed is significant. Environment Canada and Parks Canada released a report in 1991 concluding that “the cumulative impacts of mining activity could be considerable” and that mining activity has “the potential to adversely affect the water quality of the basin and disrupt the life processes that depend on it”.

The other serious threat to the ecological integrity of the Nahanni ecosystem is oil and gas exploration. While there has been a moratorium on any oil and gas rights issuances in the Deh Cho Region since 1994, seismic exploration activity has been allowed to proceed. Over 400 km/250 miles of seismic lines have been permitted inside the South Nahanni Watershed in the past year, and an additional 87 km/54 miles of seismic lines are currently under review. This presents concerns about fragmentation of the boreal forest ecosystem, and its impact on wildlife populations. And of course, if seismic activity results in oil and gas potential, the pressures to

develop the ecosystem for fossil fuels, with its inevitable roads, drilling pads, fuel spills and supply depots, will only increase.

FIRST NATIONS AND NAHANNI

Nahanni was one of the first national parks created north of the 60th parallel in Canada. Creating parks in the north led to a shift in thinking and policy direction for new national parks in Canada. It was recognised that northern lands considered wilderness to southern Canadians are homelands to northern aboriginal peoples.

Both the federal and territorial governments agreed that proposed parks should not infringe on the traditional use of wildlife by northern aboriginal peoples. In addition, national park creation should not compromise self-government negotiations between Canada and First Nations. As a result, the National Parks Act was amended to respect the process of settling land claims.

Lands set aside for national park purposes are given the legal status of national park reserves until all land claims are settled. Then they may become legally known as national parks. Since Nahanni is in a region where First Nation self-government negotiations are still underway, it is known as a national park reserve.

Most of the Nahanni Region is in the traditional territory of the Deh Cho First Nation — Dene people who live in small communities along the Mackenzie and Liard River systems — downstream of the Nahanni National Park Reserve. The Deh Cho First Nation is presently negotiating a self-government arrangement with the Government of Canada through the Deh Cho Process.

Unlike a typical land claim negotiation where some land would be allocated to the First Nation in exchange for extinguishing rights over other lands, the Deh Cho are negotiating power sharing arrangements with the federal government over all of their traditional territory. In the spring of 2001, the Deh Cho and the Government of Canada signed an Interim Measures Agreement setting out how lands will be managed in the region during future negotiations. They have also signed a Framework Agreement identifying topics for future negotiation. From the beginning of their negotiations, the Deh Cho people have expressed a





Prairie Creek mine site: one of several mining and exploration projects under way in the South Nahanni Watershed.

strong desire to protect the entire South Nahanni watershed for the sake of future generations.

OPPORTUNITIES FOR PROTECTION

The Deh Cho Process, along with Parks Canada's long-stated interest in expanding Nahanni National Park Reserve, provide powerful common ground to move towards greater protection for the Nahanni region. An additional piece of the protection puzzle exists in the far north-western reaches of the Nahanni ecosystem, in the traditional territory of the Begaeë Shuhtagot'ine (Mountain Dene) people of Tulita, in the Sahtu Settlement region. The Mountain Dene are advancing the northern part of the watershed as an area of interest under the Northwest Territories Protected Areas Strategy (NWT PAS).

This strategy, in its early phases of implementation, aims to protect representative examples of each of the eco-regions of the NWT. It is a community-based approach to protected area selection, where communities nominate areas they are interested in protecting for ecological and cultural reasons, and then partner with a sponsoring agency to formally protect the area through existing legislation.

Between the Deh Cho First Nation, the Mountain Dene proposal, and Parks Canada, substantial

support exists for further protection of the Nahanni region, although the precise areas are not yet defined. The Deh Cho Process offers a powerful opportunity for Parks Canada and the Deh Cho people to work together towards common goals.

In spite of these opportunities, huge challenges still exist. The lands outside the national park reserve are federally owned and controlled by the Department of Indian and Northern Affairs. Responsible for both environmental protection and advancing industrial development in the north for economic reasons, the mandates of this department can, at times, conflict. It is unclear how the department will address the conflict between protection and development in the Nahanni region.

Typically, self-government negotiations can take years to advance to a final agreement. The Deh Cho Process is moving ahead, but much more slowly than industrial development in the watershed. Even if all parties eventually agree to protect the Greater Nahanni Ecosystem, the damage done by industrial activities in the meantime may be irreparable. Also, compensating industrial interests currently pursuing both mining and oil and gas exploration in the area could result in huge additional costs for long-term protection if they continue to proceed.

CONCLUSIONS

The threats facing Nahanni National Park Reserve are typical of many national parks in Canada. As parks become islands of wilderness in seas of development, even northern parks need to look outside their boundaries to maintain their ecological health. Most national parks in Canada were created before protecting ecological integrity became their primary objective, and their boundaries reflect this.

To protect sites like Nahanni for future generations, Parks Canada will have to work with other agencies and landowners to ensure parks don't suffer a slow decline in health due to stresses from outside their borders. In some cases, like Nahanni, there is still an opportunity to expand the park to better protect its ecological values. There is also an opportunity to work with First Nations and other government departments to achieve common goals.

The present precarious state of Nahanni National Park Reserve illustrates a fundamental responsibility that Canadians need to recognise and work towards. This national park is a global resource. The responsibility for protecting this special place lies not just with Parks Canada, but with the Canadian government as a whole. The opportunity exists. All that is needed to get there is the political will.

australia

NEW PARK AT ARAKWAL

THE newest national park in New South Wales, Arakwal, has been officially opened by State Premier, Bob Carr. The 183 hectare/452 acre park at Byron Bay — 60 km/37 miles south of the Queensland border — will protect significant Aboriginal cultural heritage sites, the largest remaining coastal clay heath left in the state and

numerous threatened plant and animal species.

Environment Minister Bob Debus said that the National Parks & Wildlife Service would now “commence work on a number of plans to improve and manage the park, including a rehabilitation plan to conserve biodiversity and enhance natural regeneration”.

usa

STEWARDSHIP AWARDS

THE presentation of the annual National Park Service Natural Resource Stewardship Awards for Excellence took place recently at a ceremony in Cape Canaveral, Florida.

The recipients were Mike Finley, superintendent of Yellowstone National Park; Tamara S. Naumann, botanist at the Dinosaur National Monument; Chris V. Case, facility manager at Pictured Rocks National Lakeshore; Samantha E. Weber, chief of Natural Resource Science,

Cabrillo National Monument; J.T. Tim Tunnison, resource management specialist, Hawaii Volcanoes National Park; and Dr Charles Roman, research scientist, USGS Biological Resources Division.

National Park Service Director, Fran Minella, said: “We are all very proud of what these exceptional individuals have accomplished. These awards highlight the contributions of these employees and our strong commitment to protect our natural treasures for future generations.”

austria

MONITORING VISITOR FLOW

JANUARY 16 is the registration deadline for the international conference on Monitoring and Management of Visitor Flow in Recreational and Protected Areas, to be held in Vienna between January 30 and February 2, 2002.

Organised by the Institute for Landscape Architecture and Landscape Management, Univer-

sity of Agricultural Sciences, Vienna, the conference will explore efficient and cost-effective monitoring, recording methods and associated analysis.

(Web: <http://ifl.boku.ac.at/conference>)

kenya

FOREST THREAT

IUCN members in Kenya have urged the government to postpone moves to “degazette” (privatise) 68,800 hectares/170,000 acres of forest land.

They have issued a position statement pointing out that such a move would “negatively impact on a range of very important environmental functions, especially catchment protection and biodiversity conservation, as well as water quality and quantity, in areas which are important for conservation”.

denmark

NATURE INTERPRETATION

A WORLD conference on Nature Interpretation as a Tool in Promoting Sustainable Development will be held at Helsingør between September 9 and 13, 2002.

Organised by the Danish Nature Interpretation Service and The Green Fund, the conference will result in a code of conduct for nature interpretation as a tool in promoting sustainable development and present examples of “best practice” and guidelines for nature interpretation in a handbook.

The deadline for the submission of papers is April 1, and for registration May 15.

(Web: www.interpretation2002.dk)



nepal

NEW FACILITIES

IUCN Nepal, in collaboration with the Department of National Parks and Wildlife Conservation and the Parks and People Project (HMG/UNDP), has helped establish a visitors' centre and souvenir shop at Sauraha, in the buffer zone of the Royal Chitwan National Park, to promote the involvement of local people in the park's management.

uk

EUROPARC EXCHANGE

A VISIT arranged through the Europarc Expertise Exchange Programme brought four people from eastern Europe to England's most northerly national park, Northumberland.

During their fact-finding tour, Petr Bouska (from the Czech Republic's Bohemian Switzerland National Park), Marget Partel (Ribla Nature Reserve, Estonia), Cornel Meilescu (Romanian Environmental Protection Agency) and Stefan Kirilov (Rila National Park, Bulgaria) visited Iron Age hillforts in the Cheviot Hills and looked at erosion control work on the Pennine Way, one of the country's most popular long-distance footpaths.

new zealand

HUTS TO BE REPLACED

PLANS have been announced to replace six ‘backcountry’ huts in the Canterbury region of South Island following the government's budget commitment of NZ \$16 million to enable the Department of Conservation (DOC) to manage and upgrade visitor facilities.

europarc 2001 MEMORANDUM LINKS WITH USA

EUROPARC 2001, the General Assembly and Conference of the Federation of Nature and National Parks of Europe, was hosted in October by the Hohe Tauern National Park, Austria, with the support of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management.

The main objectives of the conference, which was attended by 270 delegates from 35 countries, included a review of developments in tourism in protected areas since the 1993 publication of the Europarc sustainable tourism study *Loving Them to Death?* and to provide ideas and input for continuing work in this field leading into the United Nations International Year of Ecotourism and the International Year of Mountains in 2002.

Speakers at the conference included Dr Patrizia Rossi, Europarc President; Werner Wutscher, Secretary General of the Austrian Federal Ministry; Norbert Heukemes, Chairman of Europarc Federation's Sustainable Tourism Working Group and Prof Paul Eagles, whose keynote speech on international park tourism trends is reported on Page 16.

A significant ceremony performed at the conference was the official signing of a Memorandum of Understanding between the Europarc Federation and the United States National Park Service - North East Region.

The two organisations have agreed to develop a co-ordinated co-operative strategy, the two strands of which are the development of an integrated communication strategy and the development of a technical and scientific mutual learning process and actions.

Each organisation has agreed to identify points of contact through which information will be disseminated to park managers in both Europe and the United States and to create a strategy that will be internet based.

The organisations will also develop a strategy to promote and encourage shared learning experiences, the exchange of learning opportunities, ideas and experiences on the management of national parks in general for the improvement of:

- visitor and community understanding of the value of parks and heritage areas;
- environmental and heritage education;
- ecotourism and eco-development strategies; and
- sustainable practices.

The memorandum was signed by Europarc President, Dr Patrizia Rossi, and on behalf of the US National Park Service by Doug Morris, Superintendent of Shenandoah National Park, deputising for NPS Regional Director, Marie Rust, who was unable to attend due to flight restrictions imposed following the terrorist attacks on New York on September 11.

irf GIVING RANGERS A WORLD VOICE

GORDON MILLER, who was a ranger at England's Peak District National Park for 35 years, is now executive director of the International Ranger Federation after serving eight years as its inaugural president. He gives this overview of the IRF's progress and achievements during the past decade and offers an insight into its future development plans.

RANGERS around the world may work in very different circumstances, but basically they have a lot in common.

This fact was confirmed when I was chairman of the Association of Countryside Rangers for England and Wales, and one of the things we did was to start building international links.

In 1985 we helped start some European ranger training courses and, following a meeting in 1991 at Loch Lomond in Scotland, a decision was taken by representatives from the Association of National Park Rangers (US), the Scottish Countryside Rangers' Association and the Association of Countryside Rangers (now known as the Countryside Management Association and representing England and Wales) to form a federation. One year later, the IRF was formally created.

Rather than organise an international body that individual rangers could join, we wanted to establish a federation of national ranger associations so that we could actually set about increasing the growth of these associations in individual countries where they did not exist, and build a world network.

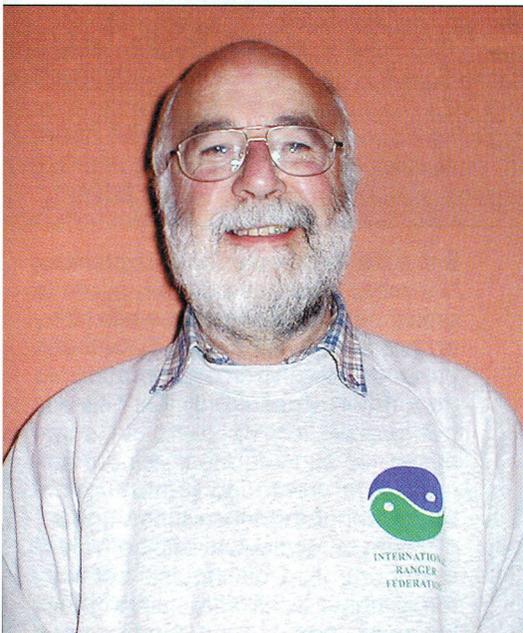
And that is what has happened since. The number of our member associations is now approaching 40 and we have other countries coming on line all the time. We expect Chile and Bolivia to join at a meeting we are arranging for Latin American rangers in Argentina. Hungary and Zambia are also about to join, and by the end of next year — or certainly by the time of our 2003 world conference in Victoria, Australia — we expect to have 50 countries involved.

Basically our role is to raise the professional standards of rangers working in protected areas around the world. One of the simplest ways of achieving this is through networking, and by face-to-face contact through our World Congresses and other meetings. Others involve facilitating twinning arrangements between member associations, getting them to work with and understand each other, and helping them look at how they might improve their training.

Also this year we established the IRF Consultancy* so that we could become more actively involved in ranger training. This limited company enables us to bid for contracts to undertake training using the immense practical experience within our worldwide membership. Already this year we have been involved in programmes in Albania and Russia, and there is a possibility of further work in Latin America, Africa and the Far East during the next 12 months.

We are basically financed by member associations committing 1% of their membership dues to the IRF, but that money remains in the country of origin for the purposes of networking the Federation, so our core functions have to be financed by what we can make from the consultancy, from conferences and other sources.

After serving eight years as IRF president I decided to stand down last year but was persuaded to stay on in an active capacity as an executive director and this summer took early retirement from my job as a ranger. My work at the moment is being financed through the IRF Consultancy but we are seeking funding to maintain the future of the post and the general administration of the Federation.



Gordon Miller: "the number of our member countries is now approaching 40."

When we formed the Federation back in 1992 we decided that one of our first tasks would be to organise a world conference to bring rangers together. We succeeded in doing that in Poland in 1995 and that was a resounding success. Our second world conference was held in Costa Rica in 1997, and the third at Kruger National Park, South Africa in 2000 was attended by people from 60 countries.

If you were to talk to anyone who attended these conferences, they would tell you that they are life-changing experiences. Australians meet Africans, South Americans meet Chinese: it's incredible how quickly they gel. I refer to the Federation as the "world family of

rangers", and that's exactly what it is. We are like brothers and sisters. Our common thread is the shared empathy we all have for protecting nature in the parks and protected areas we work in. We all have a very deep commitment to that.

If you were to ask most rangers you would probably find that they are pretty low down the pecking order from the wage-earning point of view, which emphasises that they don't work for the pay but for the love of the job they are doing. To give just one example, rangers in the Democratic Republic of Congo who have not been paid for months are not only fighting to protect their animals from poachers but also from rebel soldiers. Recently our contact there told me that he had lost eight gorillas to rebel soldiers who had killed them for food.

Rangers like these are staying at their posts in spite of the dangers to their life because they are so strongly committed to what they are doing, and similar commitment is shown by rangers on every continent. That's what binds us all together.

I often quote the example of our current vice-president, Juan Carlos Gamborotta. When he came to our first world conference in Poland, we discovered that he was the only ranger in Uruguay and that his mother had designed and made his uniform for him. He had spent every penny he had to make the trip and went home inspired and determined to battle on. Now he is making things happen. Today there are many more rangers in Uruguay and he has fired up other people in South America to follow his lead.

That is how we can measure our success as a Federation — by making people realise that they are part of a much bigger family, that we can only make things happen by improving the way we do things, by looking at best practice elsewhere and sharing our knowledge with each other.

We initiate exchanges between rangers where possible, and at the moment we are creating an Exchange Bureau through which

individuals belonging to our member associations will be able to register if they want to arrange or host an exchange visit.

Finding out how many individual rangers are represented by the Federation's member associations is an important priority. Two new member associations which came on board at Kruger last year, the Tamil Nadu and Assam Ranger Associations, both have in the region of 1500 members each — and they represent just two states in India.

At the moment we still do not represent the majority of the rangers in the world, but we certainly represent a lot, and one of my prime jobs is to further build our membership base. One of the reasons that our next world conference will be in Australia is so that we can target South East Asia and the Pacific Rim.

We are also now looking at establishing a series of continental conferences and after the one already planned in South America, others in Europe and Africa will hopefully follow between world conferences.

Our goal is to get more and more rangers around the world involved with the Federation. The more representative that we become, the more we can reflect the views of those working at the grass roots in protected areas, both natural and cultural, around the world. International organisations are already keen to work with us, and it is my wish that we raise the profile of rangers, not only on the world stage but also within their own countries.

National parks and other protected areas are likely to become more precious in the future — not only as genetic banks but as sources of inspiration and peace; this makes the role of their protectors even more crucial. By bringing rangers together in a "world family" the Federation is seeking to safeguard and enhance that role.

** Details of the IRF Consultancy can be found on its website: www.ranger-irfc.com*

The IRF's current president is Rick Smith, who has long been associated with Yellowstone National Park and, prior to his retirement, he was the South West Associate Director for the US National Parks Service. The Federation has an international executive council comprising members elected to represent North, Central and South America, Australia, Africa, Europe and Asia.

germany

BERCHTESGADEN BAL FARMS AND FOREST

by
Stewart Bonney

SINCE 1923, when as many as half a million overnight visitors were recorded as staying in the Berchtesgaden area annually, the magnet for tourists has been the spectacular lake of Königssee.

National park director Dr Michael Vogel and his 65-strong staff now see 1.1 million annual visitors, of which some 700,000 go to Königssee, while the number of hikers and climbers who stay overnight in mountain huts is only about 30-40,000.

He said: "People are drawn here by nature, and it is our job to provide a good infrastructure that will encourage them to explore other parts of the park."

From Hintersee, one of the three entrances to the park beyond which no cars are allowed, a forest track provides a three to four-hour hiking route up the Klausbach valley to a plateau standing at 1800 m/5900 feet.

"This is the only upper area of the park where we have a high concentration of visitors," said Dr Vogel. "Many areas are too exhausting for most people to reach as they involve a full day of strenuous hiking."

Much of the park's 230 km/140 miles of hiking paths and climbing trails are restricted to walkers only, but mountain bikes are allowed on some forest roads including a demanding uphill climb to Kühroint,

CONTAINED within the 210 sq km/82 sq mile area forming Berchtesgaden National Park is the 2714 m/8900 feet Watzmann peak (Germany's second-highest mountain), large areas of deciduous and mixed mountain forest, and Königssee, the country's highest altitude lake. The latter is also Germany's deepest lake, having a maximum depth of 190 m/625 feet, and — due to a policy introduced in 1909 of only allowing electric powered boats — is also said to be its cleanest.

Located in the south-east corner of the Bavarian Alps, Berchtesgaden — which is bordered on three sides by Austria — is classified as "a nearly natural terrestrial ecosystem", and in 1990 was declared a UNESCO biosphere reserve. It contains an exceptionally rich range of flora and fauna including almost 1700 species of fungi, 600 lichen species, 500 moss-

es, 1000 vascular plants and 1000 species.

Although the national park was not created until recently as 1978, the special protection area of Königssee Nature Park, a 8600 hectare/33 sq mile area was created. In 1990, the Königssee Nature Park was designated a national protection area for its natural protection of forestry, alpine fauna and flora.

Once a favourite hunting spot of the Bavarian King Ludwig II, the area was designated a hunting reserve by Hermann Göring, who built the nearby Kehlstein mountain road, the 'Eagle's Nest'.



Dr Michael Vogel heads the 65-strong staff at Berchtesgaden.

a popular destination for walkers and cyclists which offers extensive panoramic views of the surrounding limestone and dolomite peaks.

Where this road reaches the level of the alpine pastures, an integral part of Dr Vogel's long-term plans for

the park is revealed. He explained: "Farmers here have certain rights to graze pasture and forest which they do not own. These rights have been passed down from generation to generation and are only lost if land is not grazed for 10 years. In some cases we know farmers without animals who rent cows from neighbours rather than lose these rights.

"From an ecological point of view it is important to distinguish between those rights within forests and those linked to open pasture. On one hand it is pretty clear that biodiversity decreases due to cattle grazing, but if pastures were abandoned they would revert to forest, and already more than 50% of the park is forest.

"So we support the continued utilisation of the mountain pastures by farmers: they amount to only 4% of the park area and are an important part of the cultural landscape, but we want to stop the practice of cows grazing in the forest."

Pointing out two former pasture areas recolonised by spruce, where trees have recently been felled to expand an existing open pasture, he said: "Through agreement with a farmer we can provide him with two additional hectares of open pasture in exchange for 15 hectares of his forest grazing rights.

"This will meet the same food needs for his stock and where we have removed cattle from the forest we have seen at least 10 species of



An aerial view of Königssee, a magnet for 700,000 visitors which is Germany's highest and deepest lake.

PLACES TRY

r, plants, and 80 bird and 55 mammal

national park was formed as
the area has been the subject of
measures since 1910, when an
sq mile alpine plant protection
d. In 1921 the establishment of the
Reserve extended plant and ani-
n while permitting traditional
farming, hunting and fishing to

rite deer hunting ground for the
udwig I, a large part of the area was
hunting reserve in the 1930s by
g, who built a holiday retreat on the
n mountain, close to Adolf Hitler's

trees and plants emerge within a few
years."

Similar exchanges are being
effected in the low-lying fringes of
the park, where in one instance the
creation of a 20 hectare/50 acre
open pasture allowed a forest area
of 350 hectares/865 acres to be
brought under full nature protection
management, enabling new tree
planting and natural regeneration to
take place.

Dr Vogel explained: "This is impor-



A traditional farm inside Berchtesgaden National Park.

tant because much of the spruce in
our forests was planted between
1810 and 1820, after the area had
become deforested to provide fire-
wood for the salt mining industry.

"As these trees need to be
replaced a natural forest will be cre-
ated, and that rebuilding process
has already begun."

To help the establishment of this
natural forest, newly planted and
naturally regenerated saplings will

require protection, even in areas
where cattle grazing has ceased.
The park has an estimated popula-
tion of up to 1600 chamois, and
around 250 a year are likely to be
culled in regrowth areas where they
are known to feed in winter.

In the words of Dr Vogel: "One day
we will have a natural mountain for-
est back in Berchtesgaden. It may
take 150 years, but we must give
nature time."



WHERE GOLDEN EAGLES FLY

ALONGSIDE many alpine national
parks, Berchtesgaden provides an
ideal habitat for golden eagles.

But Dr Ralf Bögel, Berchtes-
gaden's resident field biologist, said:
"While the number of golden eagles
has increased in recent years, there
are now indications that the popula-
tion is reaching saturation point.

"An important factor in this high
alpine environment is that the land-
scape divides into natural cham-
bers, from the mountain ridges
down to the valleys, and it is within
these spatial units that a pair of
eagles will establish their hunting
territory.

"They tend to establish nest sites
at quite low levels, between 1200



and 1600 metres/3900 and 5250
feet, and hunt at higher levels so
that they can drop down to their
nests with prey that may weigh up to
6 kilos/13 lbs.

"They will not share their territory,
and unless an adult member of the

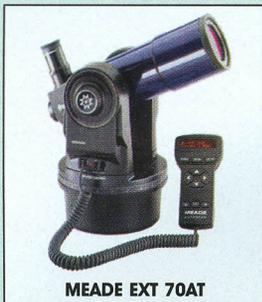
breeding pair dies, there is no place
for juveniles. As a result, there are
hostile encounters between imma-
ture birds, and some of them die
fighting over territory."

A long-term monitoring pro-
gramme of the golden eagle, which
was established in 1999 by mem-
bers of the Network of Alpine
Protected Areas, is co-ordinated by
Ulrich Brendel at Berchtesgaden.

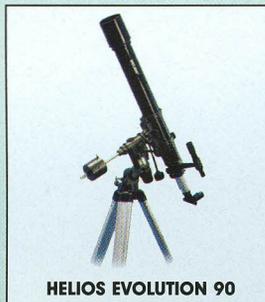
"Our aim is to assess trends in
terms of breeding success and pop-
ulation density, and their influencing
factors in the Alps," he said.

At least four breeding successes
among 13 monitored pairs were
recorded this year in the Berchtes-
gaden area.

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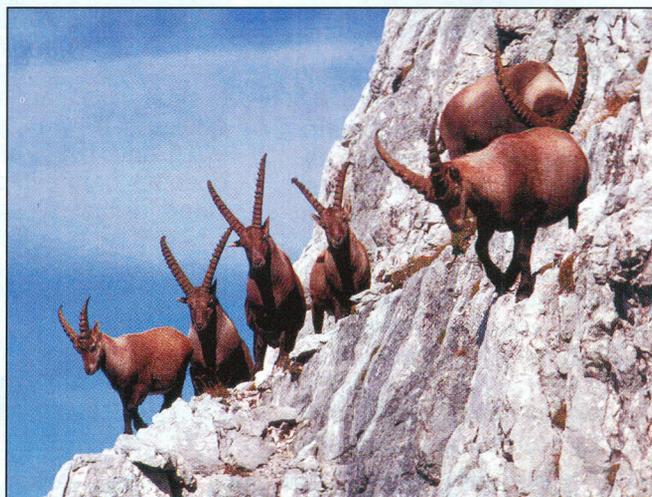
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LAKESIDE PILGRIMAGE

One day each summer hundreds of pilgrims from Austria follow an ancient and arduous mountain route which takes up to eight hours to complete before attending an annual service in the lakeside St Bartholomä Chapel on Königssee.

They are welcomed with a free glass of beer poured from a large wooden barrel which is rowed down the lake to their arrival point by foresters and other members of the national park staff.



Ibex are among Berchtesgaden's 55 mammal species.

Linked to the long-term forestry management plan is the shorter-term target of extending the park's present core zone from 66% to 76% of its area to meet IUCN criteria.

Dr Vogel said: "We have a temporary management zone extending over about 10% of the park where work started 10 years ago on a series of initiatives involving the rebuilding of the natural forest and special plant species protection programmes. Within another 10 years we hope we will be able to add the whole of this zone to the core area.

"Unfortunately, due to the complex administration system which we must work under, discussions concerning any changes can be extremely time-consuming. Although I am responsible to the district administrator, many matters have to be agreed by four separate government bodies — the Ministries of the Interior, Environment, Agriculture and Forestry, and Finance.

"I am sure this position must be unique, and not one that other national park directors would wish to exchange with me."

east africa SECURITY SCARES HIT VISITOR FIGURES

"If you don't visit Africa's best birding forests over the next year or two, there will be no forests left to visit."

That's the stark message from GILES MULHOLLAND, Director Operational Support, Gauteng Provincial Legislature, Johannesburg, South Africa, who has just returned from a five-week trip to Uganda and Rwanda.

BOTH Uganda and Rwanda are facing severe land shortages given that they are land-locked countries, and are totally reliant on producing all their food requirements internally.

This land shortage means that forest areas are invariably surrounded by high-intensity agriculture, even on the steepest slopes, or in apparently inhospitable areas.

Many people are even moving from these countries into the Democratic Republic of Congo — where forest preservation is not such a major issue — in order to find more land.

In Uganda a serious effort has been made in terms of community projects to save the major forests, supported by many organisations in Europe as well as the Wildlife Conservation Society and USAID.

Perhaps the most visible community projects are at the Bwindi (Impenetrable), Budongo and Mabira Forests — although there are many others. In these areas, the tourist facilities (camping, cutting of trails and guiding services) have been carried out by the local communities.

All income from these areas (other than gorilla tracking in Bwindi) go to the local community to allow them to maintain the tourist facilities and hence protect the environment. From the early 1990s until recently, this has proved sufficiently beneficial that the communities have protected the forests and only harvested enough wood for their own essential needs, hence preserving some of the best birding forests in Africa.

However, over the last couple of years, tourist numbers have dropped off to such an extent that the communities want to give up

their projects and chop down the forests to allow more profitable use of the land.

Uganda and Rwanda have some of the most significant natural heritage in the world. In the 1960s, Uganda's Murchison Falls National Park had the highest biomass per hectare of anywhere on Earth.

While much of this was destroyed in the 1970s, the environment is rapidly returning to its previous status — because the local authorities and communities have the will to manage it.

So what has gone wrong? Quite simply, too many people have become neurotic over the security issues in Africa. Let me give one example of what happened while I was in the area a few weeks ago.

In early June, there was a single incursion by guerrillas in the north-west of Rwanda, in a national park that had been closed for some time due to these security problems. However, one tourist company (according to information supplied to me by the local authorities) sent out a message saying that they were closing all their operations in Uganda due to the risk to tourists.

As a result, many other companies cancelled all their Ugandan operations, even though there was no problem in that country. The facts that no park in Uganda was affected, nor even closed as a precautionary measure, were ignored. Given a single incident a few years ago, the Ugandan authorities have become so cautious about security issues that they will close a national park (Semuliki, for example) for up to six months after the last security-related incident, just to ensure the safety of tourists.

The net effect of this one incident is that the Buhoma community campsite has been virtually deserted for weeks, and the gorilla tracking trips are virtually empty. Only three years ago there was a 30-day waiting list to track gorillas; now you don't even have to book.

I met several tourist groups with VERY unhappy clients who were not allowed to visit the gorillas by their tour companies, even though they had already paid to do so. And yet there was nothing stopping them from going gorilla tracking other than the "western" perception that it was "too dangerous".

And my personal experience? Well, in Rwanda, the facilities were excellent, and the Nyungwe Forest Reserve was quite unbelievable. I have never experienced better or easier birding. Yet the average number of visitors to this area was ONE PERSON PER WEEK. So how long can the existence of this huge forest — the tarred road runs for 60 km/37 miles through the forest — be expected to continue? Probably less than five years?

Security issues? None — even when I drove to within 100 metres/110 yards of the DRC border.

In Uganda the same was true, although in Bwindi they offered a (free) armed soldier to accompany every walk, even though there had been no incident within miles for two years.

The only area where security was taken seriously was in the Semuliki National Park, which is still officially closed. Here, I was provided with a 10-soldier guard (again free), even though the last incident there was over six months ago.

To conclude, tourism in Rwanda and Uganda has reached levels so low that the preservation of the environment is no longer economically viable. Unless tourist numbers increase NOW, the forests will be destroyed. Too many "western-centric" (and especially western-owned) tourist companies react irresponsibly to rumours, without a thought to the effect they are having on the environment.

There are plenty of African-based companies which are more responsible and actually know what is happening. If there is a genuine risk to their clients, they will cancel visits to those areas. If the current trend is not reversed, Africa's best forests will soon be destroyed — not through vandalism, but because the western world has told the



locals that they don't value the forests, so they might as well chop them down to feed themselves.

For those who are interested in visiting, bird species I saw on my trip included Nahan's (forest), francolin (Latham's), forest francolin, red-chested owlet, white-crested hornbill, black-throated barbet, green-breasted pitta, green (Grauer's) broadbill, violet-backed hylia, yellow-footed flycatcher (a first record for Semuliki NP), red-collared (mountain) babbler, fox weaver and Shelley's crimson-wing.

So please, visit Africa soon.

* If you need any further information please contact me and I will try to help as much as possible — or will ask someone else here to assist.

e-mail:

GMulholl@Gautengleg.gov.za

IMPACT ON MANAGEMENT

REACTING to this report, David Sheppard, head of the IUCN Protected Areas Programme said: "The issue is that African — particularly southern and eastern African — countries have geared their park systems to a revenue base, which is largely based on tourism. Government support has been adjusted accordingly downwards, sometimes to zero, such as in Tanzania.

"The likelihood of governments adjusting their revenue upwards to compensate for decreased tourism revenues is zero in most cases. A decrease in tourism will thus have an impact on park management."

Paul Eagles, chair of the WCPA Task Force on Tourism and Protected Areas, drew attention to the positive role played in the Bwindi Forest region by the IUCN in the past.

He said: "The IUCN raised the money to bring in Ron Seale from Yellowknife, Canada, to develop a management plan. This work helped put together a functional park organisation that was returning the park to operations after the earlier Idi Amin years of destruction.

"However, that work was largely undone with the guerrilla invasion of the park and the killing of park staff and tourists. Later Ron died suddenly in Canada and his fine work should not be forgotten."

tourism INTERNATIONAL TRENDS IN PARK TOURISM

Extracts from a paper prepared for the Europarc 2001 conference by PROFESSOR PAUL EAGLES, Department of Recreation and Leisure Studies, School of Urban & Regional Planning, University of Waterloo, Ontario, Canada, and Chair of the World Commission on Protected Areas Task Force on Tourism & Protected Areas. (Further extracts will be carried in Issue 3).

IN his introduction, Professor Eagles discussed the nature-based tourism market globally and, more specifically, the segment of this tourism occurring in parks and protected areas which he said was dependent on two fundamental components — appropriate levels of environment quality and suitable levels of consumer service.

Focusing on four niche nature tourism markets, he believed that **ecotourism** and **adventure tourism** had considerable growth potential, **wilderness travel** was reaching capacity in many areas because of the requirement of very low-density use in wilderness destinations, and **car camping** was — or soon could be — in decline, largely due to the peak population profile of the developed world passing beyond the age groups in which camping was popular.

He told delegates: "Nature-based tourism is a large and growing component of international tourism. Several countries in the world have nature-based tourism as a key component of their most important export industry, tourism. These countries include Australia, Kenya, Nepal, New Zealand, Tanzania, Costa Rica and Botswana, to name a few.

"The economic importance of the tourism industries in these countries is leading to more thoughtful policy and institutional development.

"Three examples are worthy of note: Australia, Tanzania and New Zealand.

"The national ecotourism strategy for **Australia** succinctly summarises the background to the aggres-

sive and successful policy development in that country. Ecotourism offers the potential to generate foreign exchange earnings, employment, and other economic and social benefits, particularly in regional areas. It presents Australia with the opportunity to make the most of its competitive advantage, with its spectacular and diverse natural features, unique flora and fauna and diverse cultural heritage. Ecotourism can also provide resources for environmental conservation and sustainable use of public and private land."

The Australian government committed Aus \$10 million over four years for the implementation of the strategy and, following this lead, each state started to develop a similar regional policy, the latest being New South Wales.

"**Tanzania** has a draft national tourism policy document, an integrated master plan and an infrastructure plan, a key part of which is to develop a southern tourism loop to exploit the national parks and wildlife reserves such as Ruaha National Park. This new loop will complement the very successful northern loop that contains sites such as the Kilimanjaro and Serengeti National Parks and the Ngorongoro Conservation Area.

"**New Zealand** has a very successful nature-based tourism policy that involves high levels of public and private co-operation in the protection of landscapes, the management of protected areas, and the delivery of tourism resources.

"These countries have government policy as the framework for a whole range of public and private activities, and this policy has helped

foster a suitable environment for the development of nature-based tourism generally, and park tourism specifically.”

Professor Eagles, who acknowledged the valuable research assistance and provision of information on recent tourist trends from many park management bodies and universities, said that while preparing his paper he had made site visits to observe park tourism in 16 countries.

PARK ESTABLISHMENT

Referring to recent trends in park establishment, he said that by 1996, following a period of considerable growth, the world's network of 30,361 parks — ranging from nature reserves to protected landscapes — covered an area of 13,245,527 sq km/5,114,103 sq



Professor Paul Eagles in Rwanda, meeting indigenous Masai people.

miles, representing 8.84% of the total land area of the planet.

Of this total 3,386 had the well-known name of a national park, and it was clear that any country — or province within a country — now had a major task to get its sites recognised globally.

“Unfortunately there is no global tabulation of park usage as there is for park area. Therefore it is not possible to comprehensively report on the total volume of recreational use in recent years, or its change over time. However, individual country reports and personal communication with many scholars and park managers suggest that park tourism volume has increased considerably over time.”

Referring to research indicating that during 1996 there were an estimated 2.6 billion visitor days of recreation activity in national and provincial/state parks and protected areas of Canada and the United States, Professor Eagles stated that this large and impressive activity had had a major economic, social and environmental impact.

But, he warned: “Until there are international standards for park tourism data collection and management, and global tabulation of these data, this important international activity will suffer from a lack of co-ordination in data reporting and an associated void in public policy profile.”

PARK ECONOMICS

“Economics is an important component of societal decision-making, but it is often given low priority in the parks' world. Usually the very strong emphasis given to ecology is seen by many park proponents as sufficient justification for public policy action.

“However, nature tourism is becoming increasingly important within sustainable development because of the potential of contributing to local and national economic development while also providing incentive for nature conservation and biodiversity conservation.

“Most of the world's protected areas charge low entry and use fees. These fees typically cover only a portion of the cost of protecting the resource and providing the features on which the park visitation depends.

This pricing policy developed during a period when resource protection was seen as the overwhelmingly important objective, a public objective that benefits all of society.

“If a public good benefits all, it can be reasonably argued that it should be paid for by taxes on society.

“However, this logic falters when applied to outdoor recreation in parks, as only those who participate in outdoor recreation are beneficiaries. In a time of widespread government financial retrenchment, it is increasingly difficult to justify public expenditure to subsidise the recreation of one segment of the population.

“Governments around the world are using this logic, in part, for the reduction or freezing of grants for park management.

“The Parks Canada business plan summarises this concept with the statement that ‘subsidies will be phased out on services of benefit to individuals by transferring the operation to the non-profit voluntary or private sectors, or these services will be stabilised on a full-cost recovery basis’.”

Among the world's parks there were dramatic differences in terms of pricing policy, tourism income and financial management. A global study of biosphere reserves (*Tye and Gordon 1995*) found that only 32 of 78 responding sites charged visitors admission fees. These fees ranged from less than US \$5 to \$110, with the vast majority at the lower range.

There was a statistically significant relationship between total direct income and the numbers of visitors for all biosphere reserves. Higher visitor numbers corresponded to higher budgets, and the authors concluded: “better financed biosphere reserves are likely to be better managed, thereby attracting more tourists”.

It could be presumed that those reserves with more tourists gained a higher political profile, giving them the political strength to argue for more budget allocation from government. Some sites also earned income from user fees.

Professor Eagles argued that the study was important because it showed a strong and positive relationship between protected areas' budgets and tourism levels. Generally, those parks with high levels of tourism clients gained high levels of political power. That power was then translated into higher budget allocations.

It was important to recognise that substantial management budgets were necessary in areas of high usage to avoid excessive damage to the natural environment of the parks.

The low entry and use fees in parks were the result of many factors, one being the effect of a centralised budget allocation process in many governments. With this form of government financial management, the park management did not keep earned fees within its internal financial structure, and therefore saw little benefit in comprehensive fee collection. This also contributed to a lower emphasis on park visitor management.

He said: "Such issues as return rates, length of stay, visit satisfaction and service quality all suffer when the financial return from the visitors is not tied directly to the financial operation of a park. This lack of proper emphasis on visitor management results in a dwarfed park tourism industry, one not fulfilling its potential.

"Most national tourism agencies do not keep statistics on market sectors, such as those associated with nature-based tourism and park-based tourism. Other management units such as park agencies seldom fill this information void.

"Looking at the **Canadian** situation illustrates this. Clearly nature-based tourism is one of the key elements of Canadian tourism. Filion *et al* (1994) estimated that as much as one quarter of the tourism expenditures in Canada can be attributed to wildlife tourism. However, there is no system for the collection and distribution of information on nature-based or park-based tourism, therefore the importance of nature tourism in the country is severely underrated due to lack of adequate information.

"This situation is common throughout the world. The economic impact of park tourism is not well known, not well documented and, where known, not well communicated. This leads to severe under-representation of the importance of park tourism within the fiscal sectors of government and business.

"It is useful to look at some of the park tourism economic impact studies that have been done.

"Recent research (*Bowman 2001*) documented the expenditure level of park users to Algonquin Provincial Park, Ontario's oldest and most visited provincial park. Expenditures per person per day varied dramatically, with day visitors spending the most at \$208 and car campers the least at \$27.7. This research showed that the park management earned the most income from car and interior campers, the groups that spent the least per day. Conversely, the management earned the least from the people who spent the most — day visitors and lodge visitors. This analysis shows the need for a complete re-evaluation of the pricing and income policy of this important park."

The findings of an economic benefits study for the British Columbia park system in Canada (*Coopers & Lybrand, 1995*) showed that in 1993 the parks generated 5,300 jobs directly and 4,000 jobs indirectly, and the BC provincial parks system contributed about Can \$430 million to the provincial gross domestic product.

In addition, the park visitors reported significant benefits from recreational activities beyond the market transactions. These non-market benefits were estimated at Can \$670 million beyond the cost of operating the system by the province.

Parks Canada now conservatively estimates the economic impact of national parks, national historic sites and parks, and national canals to Canada's GDP at Can \$1.25 billion per year.

"The implications of such a large economic impact on public policy making in Canada are immense.

"Yet this has not convinced the Canadian government to maintain the tax-based grant levels upon which most of the park systems depend. There have been massive budget cuts on the 13 national, territorial and provincial park systems in Canada over recent years. All systems lost staff numbers, 10 closed facilities, nine operated a smaller programme, did less maintenance on facilities, privatised services and undertook programme efficiencies such as replacement of staff with mechanised processes.

"The management effectiveness of the park agencies in Canada was impaired by the budget cuts and by the associated reductions in services and programmes.

"Research (*Driml & Common 1995*) has shown that the economic benefits of nature-based tourism in five Australian World Heritage Areas — Great Barrier Reef, Wet Tropics, Uluru National Park, Kakadu National Park and Tasmanian Wilderness — far exceeded the government expenditures to manage the sites.

"The five areas studied experienced tourism expenditures in 1991/2 of Aus \$1.372 billion. The total management budgets were Aus \$48.7 million and the user fee income to the management agencies was Aus \$4.16 million. Therefore the management bud-

gets were only 3.5% of the tourist expenditure in these areas and the revenue raised by government through users' fees represented only 8.5% of the government expenditures."

COST RECOVERY

"In Canada the recovery of management costs from tourist charges varied six years ago from only 1% in British Columbia to slightly more than 50% in Saskatchewan. This variation was largely due to government policy dictating the financial structures of the agencies, not to the volume of tourism, nor to the amount of area being managed.

"Those with the lowest level of cost recovery had very weak tourism expertise within the park agencies, with the result that most tourism income was earned by the private sector.

"However, since that time the situation has changed. British Columbia now has a cost recovery of close to 30% and Ontario is now the national leader, with 80% cost recovery on operating expenses. These dramatic changes are the result of new institutional and financial structures encouraging more financially efficient methods of operation. This more recent data shows that most park agencies have the financial elasticity in their recreation market to earn substantially higher income, without lowering use levels or lowering client satisfaction.

"In fact the much higher incomes in Ontario are associated with higher tourism charges and higher use levels. The higher use levels are taking place because of the new and better services provided. Most specifically, a new telephone and internet registration system provides much more assurance of camp site access, and thereby encourages people to plan ahead for their vacation. The first year of this new system saw a half million person night increase in campsite use across the system. Each subsequent year sees a further increase in campsite use rates. Therefore, park recreationists will pay for the services that fulfil realistic needs.

"Globally, the trend is for government to demand that parks earn much higher amounts of their budget from tourism sources. Corresponding to this is the development of forms of management, such as parastatals, that allow for



Killarney Provincial Park in Ontario, Canada, is one of the most popular wilderness canoeing parks in the world. It also has a popular car campground.

park agencies to function with the efficiencies of a private corporation.

“Parks Canada has designed a management structure that encourages increasingly higher levels of cost recovery from tourists. New legislation passed by the Canadian government in 1998 allowed Parks Canada to retain and reinvest all revenues, to plan and operate on a multi-year, non-lapsing basis, to

increase non-tax revenues from products and services, to borrow against future revenues, to link revenues to costs and to depreciate assets.

“By the fiscal year 2000/1 Parks Canada had gross revenues of Can \$84.7 million — a 111% increase since 1994/5. Three sources of income were prominent revenue sources: entry fees \$30.1 million,

rentals and concessions \$14.3 million and camping fees \$10.9 million.

The studies which have been carried out in Canada, Australia, the USA and other countries show the significance of parks to economic life in those areas. However, there is generally a lack of national and provincial economic data on parks, and this is a major inhibitor in public policy making across the world.”



Tendele, an eco-lodge in South Africa's Royal Natal National Park, provides important visitor services and a significant income.

uk

COUNTING THE COST OF FOOT-AND-MOUTH

By Stewart Bonney

THE devastating outbreak of foot-and-mouth disease in the UK, which resulted in the slaughter of more than 4 million sheep and cattle, has had serious repercussions for a number of national parks in England and Wales.

Those areas worst hit — Yorkshire, Cumbria, Northumberland and Devon — are counties where the rural economy is heavily dependent on agriculture and tourism. Apart from the severe impact on thousands of small farmers, holiday businesses were forced to shut down for many months as a result of road and footpath closures, and the national park authorities are still assessing the environmental and financial costs of the outbreak.

In the **YORKSHIRE DALES** National Park, although 65% of footpaths and bridleways were re-opened to the public in July, the national park authority reported that a substantial fall in visitor numbers had resulted in car park and retail income being “well below budget”, reducing the amount of money available for conservation and rights of way work in the park.

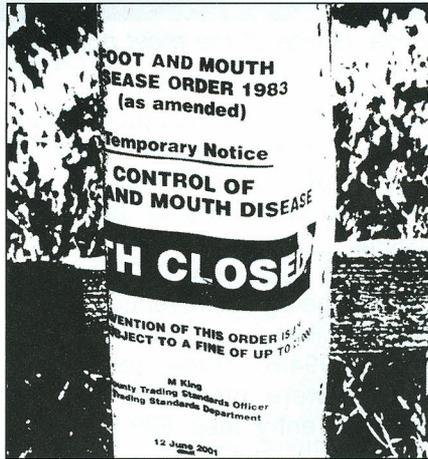
Chief Executive, David Butterworth, said: “Foot-and-mouth disease (FMD) has bitten to the core of this area and our farming and tourist industries continue to count the cost as do we, but it will be next year before we can assess the full environmental cost.”

Restrictions imposed to halt the spread of the disease prevented conservation staff undertaking research work and surveys on “under threat” species including black grouse, yellow wagtail, red squirrel and peregrine falcon and delayed a survey of plant life in the park’s internationally important limestone pavement areas.

The first FMD outbreak was confirmed on February 23 at Heddon-on-the-Wall, 16 miles from the south-eastern boundary of **NORTHUMBERLAND** National Park.

Chief Executive, Graham Taylor, said: “By mid-afternoon that day, we had posted notices closing all footpaths, car parks, picnic sites and other facilities, and by the end of the day the national park was effectively closed to visitors.”

As hopes rose nationally that the spread of the diseases was finally under control, a phased opening of footpaths in the park began and Roman sites and paths on the Hadrian’s Wall World Heritage Site were re-opened in November.



Addressing a national seminar on the future of upland areas, Mr Taylor said: “The way in which we manage the countryside is going to change, and that change will have been accelerated by foot-and-mouth disease. The consensus is that radical changes are due.”

In the **NORTH YORK MOORS** National Park, there were blanket rights of way closures from the outset of the FMD outbreak although the first case within the park was not reported until June, by which time there had been a 41% fall in visitors and a 38% drop in park income.

With many of the FMD outbreaks involving farms with flocks of sheep on the open moors, widespread closure of footpaths continued until October 1. During this period, the park authority undertook risk assessments and was able to re-open 12% of rights of way.

While no FMD cases occurred

within **SNOWDONIA** National Park, sections in the north and south of the park fell within infected areas, and access was closed to all paths after an outbreak on Anglesey in March.

Following “complex and lengthy risk assessment procedures”, four of the six footpaths to Snowdon summit were re-opened in early May and access opened throughout the park in late May. The park authority reported a 29% decline in income from car parks and a 20% fall in the number of visitors to information centres.

Of the 2030 reported FMD outbreaks in the UK, a total of 893 (44%) were recorded in Cumbria, of which 63 fell within the boundaries of the **LAKE DISTRICT** National Park. But a spokesman said: “These figures understate the effect of the disease on farms in the park. We estimate that at least twice that number of farmers, and perhaps many more than that, have had their stock slaughtered because of the ‘dangerous contacts’ procedure and the cull policy.”

Head of Park Management, Bob Cartwright, said: “Our ranger team has been in the front line of the foot-and-mouth work. The closure, then gradual re-opening of public rights of way, was a major undertaking and they have also liaised with farmers, landowners and the public within an ever-changing situation.”

Assisted by the appointment of four temporary rangers, part-funded by the Countryside Agency, the ranger team’s work during the crisis also involved monitoring disinfectant points, updating signs as fells and footpaths were re-opened and clearing overgrown paths not used for many months.

There were 173 confirmed FMD cases in Devon effecting 1% of the county’s farms although a total of 6% of farms lost their stock due to a contiguous cull policy. Only two were within **DARTMOOR** National Park boundaries, with a further 12 close to its boundaries. Access restrictions were lifted in early October and almost all public rights of way were re-opened.

When access restrictions were lifted in the Derbyshire **PEAK DISTRICT** National Park in late May, rangers were called on to change more than 6,000 signs on its vast network of countryside paths.

new zealand THE BATTLE TO REGAIN CAMPBELL ISLAND

by Tom O'Connor,
Department of Conservation

EACH spring for the past 200 years the clamouring call of a million seabirds has combined with the wind's ceaseless war song to muffle the rustle and squeak of tiny, deadly invaders below them on a remote Southern Ocean island. But this breeding season the invaders have gone.

The birds are drawn by an irresistible force to Campbell Island, as they have been for centuries, to take part in the bustling, confused and hazardous business of nesting. Waiting for them were one of mankind's most destructive introductions: rats by the countless thousand. Of all man's travelling companions down evolution's harsh road these small rodents, which held the island for almost 200 years, are among the most dangerous.

Larger birds can keep these little killers at bay most of the time, but eggs and chicks are vulnerable if left unattended. The seabirds were fortunate they were not dependent on the island for food — the cold Southern Ocean provides them with rich and extensive feeding grounds. But land birds, and many of the insects they relied on, had nowhere to escape marauding rats.

Ground-nesting birds in particular had little chance against the rats, which have ousted many of the island's original inhabitants and modified the centuries-old ecology by eating plants and their seeds. Some of the more vulnerable species have been driven to the very edge — and some probably over the edge — of extinction.

New Zealand's five sub-Antarctic island groups, which lie beyond latitude 47 south in the middle of the famous Roaring Forties in the Southern Ocean, are some of the last relatively unspoiled havens for a number of endemic species unique to this part of the world. Campbell Island and some of the other groups also have a fascinat-

ing human history in spite of their harsh and desolate nature.

Acidic peat soils, endless freezing winds, few warm sunny days and isolation meant even the most determined farming and permanent settlement attempts would eventually fail. The results of both early Maori and European settlements and exploitation are still visible. Some of the monuments to human courage and tenacity have been preserved for their historic value while others — derelict farm buildings and sad, lonely graves — will be left to nature.

However, descendants of the animals which early seafarers and settlers carried with them to these gale-battered, remote islands fared much better than the people who brought them. Among them were the rats, no doubt accidentally included in consignments of livestock and farming equipment or escapees from rat-infested whaling and sealing ships in the early 1800s.

Some of these introduced species have been eradicated, amid controversy, in recent times. Cattle on Enderby Island in the Auckland Islands group were shot and there are plans to eradicate pigs from the same location. The impact of introduced animals on the endemic flora and fauna has been dramatic in some cases, as has their recovery once the exotic species were removed.

Until recently it was assumed that Campbell Island was too large and too far away from mainland New Zealand for an attempt at eradicating the rats. The expense of the operation was also prohibitive. However, a team of determined conservation officers has been developing techniques for eradicating introduced pests from offshore islands and this year they took on the biggest project in the world.

New funding, announced with the New Zealand Biodiversity Strategy

in March last year, made the huge project possible. The government committed an extra 187 million NZ dollars to biodiversity protection over the years from 2000 to 2005. Eradicating rats from Campbell Island is the largest of the new projects made possible by the new funding, with 2.6 million NZ dollars budgeted over the next four years. The eradication project brings to an end nearly two centuries of damage and modification by introduced animals.

As well as being the largest of the new projects, Campbell Island rat eradication is also likely to be the largest island restoration project anywhere in the world, and follows the success of similar operations on Kapiti Island near Wellington and Whenua Hou off the north west coast of Stewart Island.

At 700 km/435 miles south of mainland New Zealand, and with winds which can gust to 240 km per hour/130 knots, Campbell Island posed a number of difficulties for project leader Peter McClelland and his team. Although the department has perfected eradication techniques on several smaller islands, Campbell Island's at 11,300 hectares/28,000 acres is the largest by a considerable margin.

In addition to the problems of working on a remote and rugged island in the often bitterly cold Southern Ocean environment, the department also had to deal with the toughest and largest of the three rat species in New Zealand.

All three have had a serious effect on native birds, which had evolved without terrestrial predatory pressure. The largest, the Norwegian rat, is the only species on the island where they had adapted very well to the harsh environment. In the absence of natural predators they developed the highest rat population density known anywhere in the world.

To ensure the team got enough poison bait on the ground at the right time, to guarantee every one of the thousands of rats on the island received a lethal dose, took meticulous planning. Unlike the smaller islands closer to New Zealand, there was only scope for one precisely-timed bait drop from helicopters using satellite navigation for pin-point accuracy. The drop also had to be completed

LONELY ISLANDS OF THE SOUTHERN OCEAN

NEW Zealand's five sub-Antarctic island groups have evolved in complete isolation from each other and the mainland. Some of the least modified landforms in the world can be found here and they became New Zealand's third World Heritage Area last year.

Recognition by UNESCO's World Heritage Committee followed years of research by New Zealand scientists, Conservation Department staff, scientists from around the world and the Maori people. Listing as a World Heritage Area is only available to outstanding examples of evolutionary or biological history, or significant natural habitats where threatened species of animals or plants of unique natural value survive.

While the principal reason for World Heritage status was the unique biodiversity of New Zealand's sub-Antarctic islands, all other criteria are met in these magnificent wild places.

The two other World Heritage Areas in New Zealand are Tongariro National Park in the North Island and Te Wahi Pounamu, which covers south Westland and Fiordland in the South Island. These two areas are internationally popular visitor destinations and relatively easy to get to, but visitors to the sub-Antarctic islands were usually dedicated scientists on field studies, a few hardy tourists and early optimistic farming pioneers.

Today about 600 tourists take part in a carefully-managed annual visitor programme. Few come



away without a sense of awe at the wild magnificence of these lonely islands and the realisation of what we have lost from the rest of New Zealand.

The islands are home to the most diverse community of seabirds in the world, including 10 species which are found nowhere else. Countless millions of seabirds, about 11% of the world's total population, breed here. There is also the threatened New Zealand sea lion which is still

recovering from a mysterious disease epidemic in 1998, and a population of the threatened southern right whale which was almost hunted to extinction by whalers in the last century.

Over the years there have been many scientific expeditions to the islands starting with major explorations in the late 19th century to early 20th century. Some of the very important work in this area was carried out during the Second World War when teams of coast-watchers were stationed on the Auckland Islands to keep a look-out for enemy warships.

The government of the day had the foresight to assign experienced biological scientists to coast-watching duties, knowing they would take an interest in the natural surroundings of the region and have something to do during the long days of the southern summer. Much of the present-day scientific work in the islands is based on the work these people carried out.

The work of the department in the sub-Antarctic islands is supported by a close-working relationship with the Royal New Zealand Navy, which provides transport during their regular patrols into the Southern Ocean and active participation in a number of projects. The Royal New Zealand Air Force also provides vital air surveillance and monitoring.

The universities of Auckland, Otago, and Canterbury along with Landcare, the National Institute of Water and Atmosphere (Research) and the Institute of Geological and Nuclear Sciences have played — and continue to play — a very important role in the research of the islands' flora and fauna.

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(Continued from Page 21)

before the thousands of large seabirds returned to parts of the island for nesting, and before female rats went underground to have their own young. While the risk of poisoning large seabirds can be avoided, they do pose a navigation risk to low-flying helicopters.

The team planned to be on the island for about three months, but unusually clear weather and skilful flying by the team of four helicopter pilots saw them back on the mainland by mid-August.

Peter McClelland and some of his team spent five weeks at the end of 1999 surveying the extensive rat population in preparation for the massive eradication programme. Field tests included spreading specially dyed cereal pellets and then trapping rats to see how readily the baits were taken. Some rats were trapped alive and fitted with radio transmitters to see how far they travelled in search of food.

Once the island has been cleared there are plans to return some unique birds to their former home. Among them will be the rare Campbell Island teal, a flightless relative of the endangered New Zealand brown teal.

A small population of these little native ducks has been bred in captivity at the Mount Bruce Wildlife Centre for several years and a new breeding colony has been established on Whenua Hou as an interim measure. There are also plans to re-establish a population of Campbell Island snipe, a tiny member of the wading bird family. This newly discovered bird was found on a small rock stack off the coast of the island in 1997.

Although there are no reliable records, it is almost certain that other birds like kakariki and a small rail — relative of the weka — have also been wiped out by the rats. These birds thrive on similar, predator-free islands, but rats were well established on Campbell Island before surveys of small birds were carried out.

The project is part of the drive to extend the number of offshore islands where some of the world's rarest bird, insect and plant species can continue the long trek back from the edge of extinction. It is an ambitious plan and one of the key elements in a long-term strategy to turn the tide of extinction while there is still time.



Above: Campbell Island has long been a busy location for ground-nesting seabirds.



Left: the rat has fed on birds' eggs and chicks.

Below: searching for rats which were fitted with radio transmitters.



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