

# National Parks and Protected Areas International Bulletin



ISSUE No. 12

FEBRUARY 2004

# ACT NOW OVER CLIMATE CHANGE



Picture: WWF-Canon / Michèle Dépraz

Monteverde Cloud Forest Reserve, Costa Rica: loss of two species has been attributed to climate change.

A VAST array of scientific literature makes it abundantly unambiguous that the climate is changing, and ecosystems are being impacted by these changes.

That was the message delivered by Dr Claude Martin, WWF Director General, when a new study *No Place To Hide: Effects of Climate Change on Protected Areas*, was launched at the 2003 World Parks Congress in Durban.

Dr Martin called on Congress participants to send a clear message to the world that climate change was already affecting national parks, and stressed the need for urgent action to reduce global emissions and increase the resilience of protected areas to the threat.

*(The following report is based on a paper he presented to a symposium on climate change threats.)*

It is now our responsibility as conservation practitioners to adopt strategies to mitigate the impact of climate change on protected areas. We require a two-tiered approach to reduce this threat — rapid reduction of carbon dioxide emissions and rapid implementation of damage control plans for protected areas.



## ON OTHER PAGES . . .

### CLIMATE CHANGE

Glaciers and reefs .....	3
Ski resorts .....	4
Ecosystems at risk .....	5
Threat to wildlife .....	6
MEXICO	
Sierra Gorda Biosphere .....	7

### CANADA

Saving boreal forest .....	9
----------------------------	---

### TRANSBOUNDARY PARKS

Links across frontiers .....	11
------------------------------	----

### WORLD HERITAGE CONVENTION

A force for conservation .....	13
NEWS REVIEW .....	16, 17, 22

### RED LIST

More species threatened .....	18
-------------------------------	----

### NETHERLANDS

Zuid Kennemerland Park .....	20
------------------------------	----

### ITALY

Abruzzo's protected areas .....	23
---------------------------------	----

### EUROPE

Mountain research projects .....	25
----------------------------------	----

SOUTH ASIAN ROUND-UP .....	26
----------------------------	----

READERS' LETTERS .....	27
------------------------	----

# CLIMATE CHANGE

6 pages of reports

WE require a two-tiered approach to reduce this threat — rapid reduction of carbon dioxide emissions and rapid implementation of damage control plans for protected areas.

These plans will buy some time for ecosystems while the world hopefully recognises this overarching threat to the integrity of the biosphere over social and economic systems, and engages in a long-term strategy to phase out fossil fuels.

Protected areas are rooted in the concept of permanence: protection only makes sense as a conservation tool if the area remains protected at least for the foreseeable future. But under climate change scenarios, species and biotic communities for which a particular protected area was established may no longer survive there.

Other protected areas — for instance in coastal, arctic and montane regions — may disappear altogether in their current form.

Protected areas' authorities could be faced with the difficult task of having to shift protected areas to keep up with moving habitats and ecosystems if the full range of biodiversity is to be preserved. Some may have to retrench on to higher ground as water rises.

The practical difficulties of such measures can hardly be underestimated. As protected areas do not exist in an empty landscape, replacement areas will often not be available. Moving them, if at all possible, would therefore have enormous implications for their infrastructure, surrounding human communities and the many businesses associated with parks.

In order to mitigate such impacts, we must ensure the global temperature increase stays well below a 2 deg C threshold above pre-industrial levels. Anything above that would have devastating consequences for the entire world community. Remaining within the 2 deg C limit will require urgent action at the global level over the next two decades.

We must adopt a two-track approach to climate change in order to ensure ecosystem integrity

and the long-term viability of protected areas. Track 1 is the top priority — deep cuts of emissions now.

Staying well below the 2 deg C threshold will require keeping carbon dioxide concentrations well below 450 ppm, thus signalling the need for rapid and substantial emission reductions. While the Kyoto Protocol makes a good start at bending the emissions curve, it is clear that we must go further.

To do so, WWF has launched Power Switch, a new initiative to bring down emissions in the world's largest carbon dioxide emissions sector — the power generation industry, which is responsible for 37% of all global emissions and is currently undergoing major changes.

## PREDICTING THE FUTURE

A STUDY of Canada's national parks found that in virtually all climate scenarios, substantial vegetation shift will occur in over half the protected areas, with tundra species replaced by taiga species and temperate forests moving into taiga.

Analysis of South African protected areas suggests that increased drought and aridity could lead to huge losses of biodiversity.

In the United Kingdom, the Institute of Terrestrial Ecology estimates that 10% of nature reserves could be lost to climate change-induced habitat degradation within 30 to 40 years.

And in the USA 11,265 km/7,000 miles of protected shoreline, including 80 coastal parks, are at risk from sea level rise.

The opportunity is there to make the switch from coal to clean power around the world. Such a switch would not only curb climate change, it would also improve the health and welfare of millions of people around the globe.

Through Power Switch we are challenging the major actors — utilities, banks, politicians and consumers — to instigate the switch themselves. We have already recruited a group of pioneer utilities who have committed to do just that, and we are looking for more.

Track 2 is also a priority but of a different nature. We must introduce damage control measures for

many protected areas and implement plans NOW to allow ecosystems to increase their resiliency to the impacts of climate change that are already occurring and will come faster every day.

We must look to a new paradigm of thought that takes the impacts of climate change into account now when we set boundaries, create management plans and raise funds for protected areas.

We are already seeing glaciers melting. This may require changes in downslope management and extraction of water resources to better protect reliant biodiversity.

*(Citing the increasing occurrence of coral bleaching — see Great Barrier Reef panel — Dr Martin said:)*

There is preliminary evidence that limiting secondary stresses can increase coral resilience to bleaching. Reduction of secondary stresses, such as terrestrial nutrient runoff, may require improved co-ordination between land-use management and marine conservation effort.

It is projected that many invasive species will have even greater advantage as climate change continues. For two of the ecosystems most affected by invasive species — freshwater and grasslands — this will require greater action be taken and new efforts made to limit invasive spread.

Failure to begin taking these sorts of actions may be fatal for conservation.

*(Referring to the WWF's new manual for natural resource managers — Buying Time: A User's Manual for Building Resistance and Resilience to Climate Change in Natural Systems\* — Dr Martin said:)*

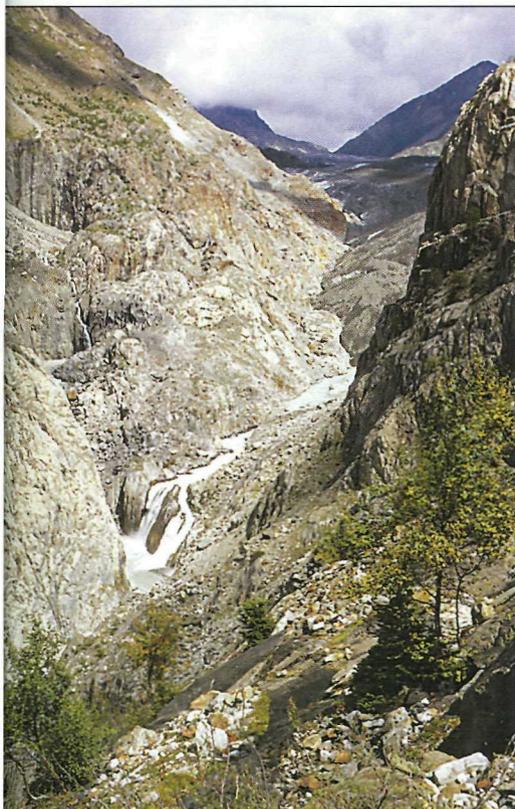
This is the first manual of its kind, written by experts in all the major biomes with practical suggestions on how to increase the resilience of ecosystems and plan protected areas according to the threat of climate change.

Specifically we have identified three general strategies that should be applied across the biomes: protect adequate and appropriate space; limit all non-climate stresses; and active adaptive management and conducting pilot projects to begin testing resilience-building strategies.

*\*The manual can be found at [www.panda.org/climate/pa\\_manual](http://www.panda.org/climate/pa_manual). For further information, contact: [lara.hansen@wwfus.org](mailto:lara.hansen@wwfus.org)*

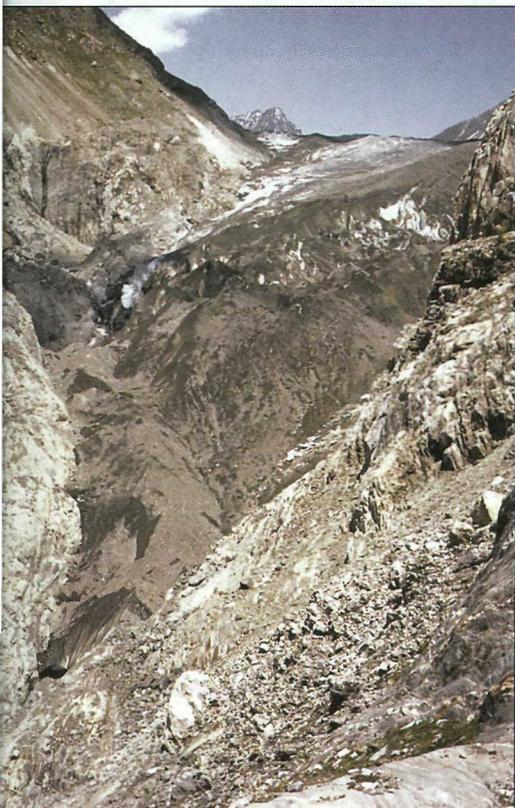
**CLIMATE CHANGE**  
6 pages of reports

# GLACIERS SHRINK BY ONE THIRD



Above: the Aletsch Glacier, Switzerland, in 2002, shows considerable glacial retreat from its 1979 position (below).

Pictures: Pro Natura Zentrum Aletsch/  
Laudo Albrecht



AT a WPC press conference attended by a large group of international journalists, Dr Martin said: "No-one would have ever predicted 10 years ago that climate change would be what we see now all around the world.

"I have been a mountaineer in the Swiss Alps for 40 years, and in that period alone half of the ice mass has disappeared and glaciers have lost one third of their length. 2003 was a particular disaster, with a maximum temperature of 13 deg C/55 deg F recorded on the 4,500 m/14,763 ft summit of the Matterhorn — probably something that has not happened in the last 1,000 years.

"Of course, we cannot relate individual weather events such as the particularly hot summer we had in Europe in 2003 to climate change, but changes are very clear to see all around the world. I think there are very few protected area managers who would not admit that in their lifetime they have not seen tremendous changes either in vegetation, or even tectonic changes.

"Climate change is happening. It will effect protected areas and it would be very short-sighted not to anticipate what we, as stakeholders, could do to mitigate some of the disasters that lie ahead."

Lara Hansen, senior scientist for WWF's Climate Change Programme, referred to several examples of climate change impact contained in the *No Place to Hide*

study, ranging from the destructive fires which last year ravaged vast drought-hit areas of alpine forests in Kosciuszko National Park, Australia, to the alarming prediction by scientists measuring ice changes in Mount Kilimanjaro National Park that all its glaciers will be gone by 2020.

In the European Alps, she said that plant species in the Swiss National Park were moving up mountain slopes to cooler habitats at the rate of 1-4 m/3-13 ft per decade, and some species once found at the highest points of the park were actually disappearing.

Referring to the *Power Switch* initiative, Jennifer Morgan, director of WWF's Climate Change Programme, said: "WWF, other NGOs and some governments around the world believe that if we are going to avoid these worst impacts, the global average temperature needs to stay below a 2 deg C threshold over the long term.

"Two degrees sounds small, but the impacts we are hearing about have occurred following a very small temperature increase. What this means for emissions, and for the world's future energy supply, is the immediate need for deep cuts in the next 10 to 20 years of global carbon dioxide emissions from the burning of fossil fuels, the need for a switch into renewable energy, and the need to use energy much more efficiently."

## BLEACHING PLAGUES GREAT BARRIER REEF

(Based on an IUCN report by Dr Paul Marshall, Manager, Climate Change and Coral Bleaching Issues, Great Barrier Reef Marine Park Authority.)

FOLLOWING an unusually hot summer resulting in the sea off northern Queensland warming to 1.5-2 deg C above the long-term seasonal average at several locations, aerial surveys in April 2002 confirmed that almost 60% of the Great Barrier coral reefs were affected by bleaching (loss of sym-

biotic algae). At some of the inshore reefs surveyed, up to 90% of the corals were dead.

Dr Marshall said: "At the onset of the whitening of the corals, we started to implement our Bleaching Response Strategy which monitored the stress and its impact on the reef. Documenting coral bleaching is a critical step in flagging the issue and in promoting international efforts to address it."

Scientists agree that the main reason for large-scale coral

## CLIMATE CHANGE

6 pages of reports

bleaching is above-average sea temperatures. On the north-east Australian coast where the Great Barrier Reef is located, sea temperatures have risen by 0.4 deg C over the past century.

Other stress factors such as water pollution through nutrient run-off, freshwater discharge and sediments are added pressures which affect the ability of corals to withstand and recover from mass bleaching.

The Great Barrier Reef, which comprises over 2,900 coral reefs spanning more than 2,300 km/1,430 miles, makes up 20% of the global reef area. It is inhabited by some 350 coral species, making it one of the greatest storage houses of marine biodiversity worldwide.

"We can't directly address climate change," Dr Marshall added, "but what we can do is try to mitigate other stress factors that can exacerbate the effects of coral bleaching. If the pressure on coral reefs through terrestrial run-off, over-fishing and losses in biodiversity is alleviated, the reefs will better cope with the stress in warmer waters under a changing climate."

\* Bleaching is a stress condition which involves a breakdown of the symbiotic relationship between corals and their unicellular algae (*zooxanthellae*) — microscopic organisms which live within the coral tissue and provide the coral with food and its normal healthy colour. Rising sea temperatures disrupt the photosynthetic process within these algae, and when they are expelled from the coral tissue, the coral loses colour and become white.



These two photographs of the Pacific Ocean off American Samoa show the dramatic difference between a healthy coral reef (above) and one affected by bleaching (below).



Pictures: WWF/Eric Mielbrecht

## SKI RESORTS FACE RUIN

A STUDY undertaken by experts at the University of Zurich for the United Nations Environment Programme (UNEP) has warned that up to half of the Alps' low-altitude ski resorts could be forced to close within the next 50 years as global warming makes snowfall increasingly unreliable.

The researchers considered a ski resort 'snow reliable' if, in seven out of 10 winters, it received at least 30-50 cm/12-20 inches of snow on at least 100 days

between December 1 and April 15.

Currently in Switzerland, 85% of the country's 230 ski resorts are classed as 'snow reliable', and these are in areas where the snow line is at or above 1,200 metres/3,940 feet. Under one scenario, snow in ski resorts will become unreliable at 1,500 metres/4,920 feet in 30 to 50 years as a result of climate change. If snow reliability rises to 1,800 metres/5,900 feet under a more acute warming scenario, only 44%

of resorts would be snow reliable.

Impacts were already being felt in mountain areas. Glaciers used for both winter and summer skiing have been in retreat for the past century and a half of Swiss glaciers have lost more than a quarter of their surface. The report indicates that by 2030, between 20% and 70% of Swiss glaciers may have disappeared.

The researchers, who included precipitation models in their calculations, also suggest that avalanches may become more common above 2,000 metres/6,560 feet, which may increase risks to skiers

# WORLDWIDE THREAT TO ECOSYSTEMS

**CLIMATE CHANGE**  
6 pages of reports

THE WWF study *No Place To Hide: Effects of Climate Change on Protected Areas* notes that ecosystems are often quite resilient, and that some climate change problems are likely to be surmountable through management, adaptation or evolution, while others face more intractable threats. Examples given include:

- Total disappearance of habitat due to rising sea levels:

USA. One third of the Blackwater National Wildlife Refuge marshland on Chesapeake Bay has disappeared since 1938 and the remainder of the marsh, which provides winter habitat for many waterfowl species, is expected to be flooded within 25 years.

INDIA. The vast area of seasonal salt lakes in the Great Rann of Kutch, Gujarat, which supports huge populations of flamingos and is the only remaining habitat for 2,000 wild asses, is threatened with inundation by the sea.

- Ecosystems threatened with serious and irreversible changes (see also Great Barrier Reef panel):

AMERICAN SAMOA. In March 2003, WWF reported that coral bleaching was occurring at all of its seven research sites, including those within the National Park of American Samoa, Fagatele Bay National Marine Sanctuary and Maloata Bay Community Reserve.

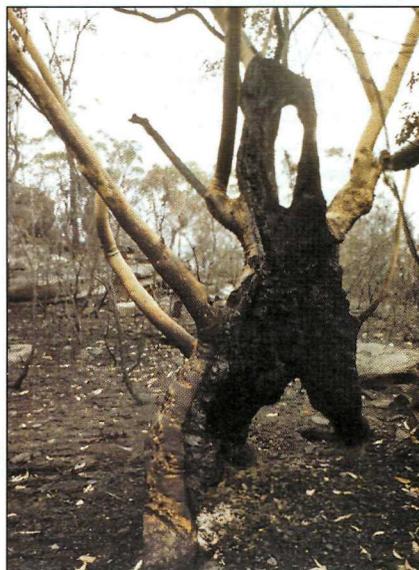
ANTARCTICA. Adélie penguin populations have shrunk by one third in the past 25 years due to a decline in winter sea ice habitat.

COSTA RICA. Observations sug-

gest that tropical montane cloud forests are highly at risk due to fewer, higher clouds and warmer temperatures. Climate change is thought to be the cause of amphibian losses in Monteverde Cloud Forest Reserve. Two species have disappeared and a further six species have suffered population crashes.

- Catastrophic, temporary changes to ecosystems, such as droughts:

AUSTRALIA. In 2002, Australia experienced its worst drought since reliable records began in 1910, and bushfires in New South Wales destroyed 500,000 hectares/1,930 sq miles of parkland. In Kosciuszko National Park, over 50 separate fires started with-



*Remains of a forest one week after a fire in the Royal National Park, near Sydney, Australia.*

Picture: WWF-Canon/Michèle Dépraz

in an hour due to lightning strikes following months of drought (see *NPIB issues 3 and 4*).

- Dramatic changes to habitats and ecosystems:

Some of the most intense climate change-related habitat alterations are those affecting glaciers and ice-fields. Glaciers are retreating at an unprecedented rate, changing the entire ecology of mountain habitats.

In the Hohe Tauern National Park in AUSTRIA (*NPIB issue 1*), the Pasterze Glacier has retreated by several hundred metres since the 1970s and a similar pattern is seen throughout the European Alps, where an upward movement of some plant species of 1 to 4 metres per decade has been observed.

- Individual changes to species and local food webs:

Shorter winters and variations in season length are producing long-term trends towards earlier bird breeding and spring migrant arrival and later autumn departure dates observed in North America, and changes in migratory patterns in Europe.

USA. California, a 90% decline in sooty shearwaters between 1987 and 1994 has been linked to a warming of the California Current.

CANADA. In Jasper National Park, British Columbia, salmon in the Fraser River, which rely on cool water for adult survival and successful reproduction, have experienced up to 50% mortality rates in years with warm water temperatures.

and other sports people as well as damage the infrastructure.

The researchers said that effects of climate change may be even more severe in countries such as Germany, Italy and Austria due to the lower altitudes of their ski resorts. In Austria the present snow line is likely to rise 200-300 metres/655-985 feet higher over the next 30 years. In Italy and Germany, the many winter sports villages which lie below 1,300 metres/4,265 feet are already facing major snow cover problems.

The report — compiled by Rolf Burki, lecturer at the International

School of Tourism; his Zurich University colleague Hans Elsasser, professor of Economic Geography; and travel journalist Dr Bruno Abegg — was presented at the Vth World Conference on Sport and the Environment in Turin.

Dr Burki said: "Climate change will have the effect of pushing more and more winter sports higher and higher up mountains, concentrating their impact in ever-decreasing, high altitude areas. As ski areas in low altitudes face bankruptcy, so the pressure in environmentally sensitive upper altitudes rises, along with the pres-

ures to build new ski lifts and other infrastructure."

The research has used temperature forecasts produced by the Inter-governmental Panel on Climate Change (IPCC) which was established by UNEP and the Meteorological Organisation to model the impact of rising levels of carbon dioxide and other greenhouse gases in the atmosphere.

The IPCC estimates that temperatures will rise by 1.4-5.8 deg C/2.5-10.4 deg F by 2100 unless action is taken to significantly reduce emissions from sources such as vehicles, industry, offices and homes.



# ON THE EDGE OF EXTINCTION

**CLIMATE CHANGE**  
6 pages of reports

A STUDY produced by IUCN — published in the science journal, *Nature* — argues that climate change could rival habitat loss and other major threats to land animals and plants unless greenhouse gas emissions are drastically reduced.

The study, *Extinction Risk from Climate Change*, produced by the largest scientific collaboration ever to apply itself to this problem, was promoted by a series of workshops in which scientists studied six biodiversity-rich regions around the world, representing 20% of the Earth's land area.

Using the current distributions of 1,103 plants, mammals, birds, reptiles, frogs, butterflies and other invertebrates, they developed computer models to simulate the ways species' ranges are expected to move in response to changing temperatures and climatic conditions.

The study found that between 15%

and 37% of species sampled in the regions could be driven to extinction as a result of their inability to adapt to the climate change that is likely to occur between now and 2050.

Lead author Chris Thomas, of the University of Leeds, United Kingdom, said: "If the projections can be extrapolated globally, and to other groups of land animals and plants, our analyses suggest that well over a million species could be threatened with extinction as a result of climate change."

In the latest IUCN annual update of its Red List of Threatened Species (see Page 18), of 12,259 species classified as threatened, very few have climate change cited as a threat — but this is because the impacts are only just starting to be recognised.

Craig Hilton Taylor, IUCN's Red List programme officer, said: "Our scientists are only just beginning to

understand what signs to look for to say that climate change is a threat to a particular species. We need to further identify the characteristics of plants and animals, such as limited mobility, which make them vulnerable to the effects of climate change."

The last major analysis of the Red List data, carried out in 2000, revealed that the greatest threat to birds, mammals and plants was habitat loss, but the study suggests climate change could be an equally pervasive threat. Report co-author, Lee Hannah, said: "The combination of increasing habitat loss and climate change together is particularly worrying. Increases in temperature can force a species to move towards its preferred, usually cooler, climate range. If habitat destruction has already altered those habitats, the species will have no safe haven."

SEARING heat throughout the past year has led to an increase in refrigerator and air conditioner use, adding to the ingredients which damage the ozone layer and so worsening the greenhouse effect. If this process continues, the snowline of the Himalayas will start receding at the rate of three kilometres/two miles per annum.

In India last summer's temperatures peaked at a record-breaking 49.2 deg C at Titlagarh in Orissa, and much of the country sizzled in temperatures above 48 deg C. A combination of ground water over-exploitation and scanty rainfall between 2000 and 2003 has seen the water table in India fall by between 10 and 25 metres/33 and 82 feet.

All of these statistics have increased concerns over global warming, and the changing climate has become evident over the past decade or so, as temperature peaks have increased year upon year.

This change in climate has posed a tough challenge for India's wildlife managers, who have taken several steps to help wild animals cope with high temperatures and dwindling sources of drinking water. Measures taken have included:

## SAVING WILDLIFE IN INDIA

by **DINESH DUBEY**,  
*Senior Ranger,*  
*Madhya Pradesh Wildlife Wing*

- improvement of habitat to help survival of both captive and free-ranging animals;
- provision of an adequate supply of drinking water;
- provision of shelter from hot winds;
- supply of adequate green fodder to herbivores, and a suitable diet to captive carnivores;
- creation of waterholes and dams in forest areas;
- construction of, and improvements to, artificial and natural lakes in protected areas.

Madhya Pradesh, in central India, is known as the Tiger State because it is home to the country's highest Bengal tiger (*Panthera tigris*) population. In the state capital, Bhopal, Van Vihar is a protected area of 445 hectares/1.7 sq miles which has been

referred to as the city's green lungs. It enjoys the status of a national park as well as being a modern zoo.

Throughout the heatwave the non-meat eating animals of Van Vihar were given a glucose additive to their green fodder at various feeding stations, while the amount of meat given to carnivores was decreased, and chicken and goat meat substituted for the harder-to-digest beef. To further combat the harmful effects of hot winds, water channels were dug to irrigate the drier areas of the park.

In the extremely hot months of May and June, Bhopal's Divisional Forest Officer R.G. Okhandykar and Senior Ranger R.G. Pateria received national press coverage when, with public support, they arranged for a supply of drinking water to be made available for rural wildlife.

In Kanha National Park, home to more than 130 Bengal tigers, bathing tubs were constructed at several locations to help tigers keep cool. The park was intensively patrolled during summer, when wild animals requiring medical aid were given appropriate treatment and later released.



Pictures: Roberto Pedraza

*The Extoral River canyon, in Sierra Gorda Biosphere Reserve.*

**mexico**

# CONSERVATION AND SOCIAL PARTICIPATION

by **ROBERTO PEDRAZA,**

*Technical Assistant, Sierra Gorda Biosphere Reserve*

THE Sierra Gorda Biosphere Reserve is located in the northern part of the state of Querétaro, in the Eastern Sierra Madre mountain range. The reserve has a surface area of 383,567 hectares/1,480 sq miles, representing 32 per cent of Querétaro state.

It ranks top in eco-diversity among all the natural protected areas of Mexico with 14 vegetation types, including semi-desert scrub, temperate forests of conifers and pines, riparian forests, cloud forests and three varieties of tropical forests.

To date 131 species of mammals, 322 of birds, 71 of reptiles, 23 of amphibians, 127 of macromycetes and 2,308 of vascular plants have been registered. Among the species of fauna which take refuge in the reserve are the black bear, green macaw, great curassow, emerald toucanet, kinkajou, brocket and white tail deer, and all six species of felines present in Mexico. Plant species include magnolias, barrel cacti, Douglas fir, sweetgum, white cedar, and yew.

A social movement for conservation of this bioregion was initiated in 1987, when the current director of the reserve, Martha Isabel Ruiz Corzo, together with her husband and a small group of Sierran

residents, founded the non-governmental organisation Grupo Ecologico Sierra Gorda. The objective of the group was to reverse the alarming deterioration and impoverishment of the area's natural resources. This damage was a result of traditional uses by a rural population which had led to deforestation of wide areas for agriculture and livestock, the proliferation of open-air garbage dumps, contamination and depletion of water sources, and illegal hunting.

Said Martha Isabel Ruiz Corzo: "The Sierra Gorda Biosphere has the biggest social participation of any reserve in Mexico by its own inhabitants. Annually 23,000 people take part in conservation activities, making it a new model of how to manage a protected area between government and the people.

In response to the accelerated degradation of the area's resources and the urgent need for its protection and regeneration, the Grupo Ecologico initiated a broad range of conservation programmes, including environmental education reaching at least 130 schools and 12,000 children every month for the past 10 years. A community improvement programme includes the creation of backyard vegetable gardens,



classes on nutrition and on the use of herbs and traditional medicine, community clean-up campaigns, and the operation of a network of 60 rural recycling centres.

Productive diversification projects include carpentry, community eco-tourism, ceramic production, drying of flowers, and the management of commercial forest plantations in previously degraded areas. Other programmes include forest fire prevention, wildlife protection, and conservation land purchases which provide strict protection of threatened areas with high biological value.

In 1996, the Grupo Ecologico began to seek formal protection of the Sierra Gorda by the federal government and initiated a consensus-building process that included all levels of the Sierran society. After more than 100 meetings involving communities, municipal governments, educators and other sectors of the local society, the Grupo Ecologico announced its support for the creation of a biosphere reserve. A year later, on May 19, 1997, Mexican President Ernesto Zedillo issued the decree creating the reserve and, in recognition of her roots in the area, acceptance by local society and profound knowledge of the region and its environmental problems, named Martha Isabel Ruiz Corzo as its federal director.

Since then, there has been a fruitful alliance between the Grupo Ecologico Sierra Gorda and the federal management of the reserve, which is part of the National Commission of Natural Protected Areas (CONANP) of the Ministry of Environment and Natural Resources. This partner-



*Learning the lesson: environmental education at a rural school in Mexico.*

ship has resulted in a natural protected area with the capacity to effectively operate in the field and involve the communities in multiple tasks.

In 2000, the experience and prestige accumulated by the Grupo Ecologico permitted it to obtain the approval of a full-size project of the Global Environment Facility (GEF), a financial mechanism of the United Nations and World Bank with the objective — among others — of providing finance to developing countries in order to comply with international commitments to biodiversity and climate change. The United Nations Development Programme (UNDP) is the implementing agency of the GEF in the Sierra Gorda.

“Protection of Biodiversity in the Sierra Gorda Biosphere Reserve” is a seven-year project with U.S. \$6.7 million from the GEF, for which the Grupo Ecologico must raise a 3:1 matching fund. The Sierra Gorda project is being integrated with another GEF project, Three Priority Ecoregions, involving other

priority conservation areas in the country. The projects are co-ordinated by a steering committee comprising representatives of the Grupo Ecologico Sierra Gorda, CONANP, the Three Priority Ecoregions project and the UNDP. The steering committee manages by consensus and is unique in Mexico for its scope and composition.

The Sierra Gorda project represents a unique model of co-management of a natural protected area between the federal government and civil society, represented by the Grupo Ecologico. The project has significantly increased the number of personnel assigned to the management of the reserve and strengthened operational capacity. It is considered a pilot project which can be copied in other natural protected areas and mountain zones.

There has been a substantial increase in the range and reach of the reserve’s conservation programmes, including monitoring and evaluation, research, inspection and vigilance, communication and public education, productive projects, control of forest diseases and fires and environmental education. Indispensable in this effort is the enthusiastic participation and commitment of the local society, whose inhabitants are being transformed through their direct participation in the regeneration and protection of the reserve’s natural resources.

In an area with a population of 100,000 people, more than 23,000 Sierrans annually participate in conservation projects of one type or another. As they learn new practices and habits in the management of their natural resources, a solid foundation is being built for continued sustainable development in the Sierra Gorda Biosphere Reserve.



*Dry tropical forest forms an important part of the Sierra Gorda reserve.*

canada

# PARTNERSHIP AGREES FOREST SAFEGUARD MOVE

A GLOBALLY significant initiative to safeguard Canada's vast boreal (northern) forests and wetlands has been agreed by a coalition of environmental groups, First Nations communities and industry.

The Boreal Forest Conservation Framework sets out a new and balanced approach to nature conservation and development in what is one of the largest remaining intact forest ecosystems in the world.

Monte Hummel, President and CEO of WWF Canada, widely acknowledged as the prime mover behind the Framework vision, said that the goal of protecting this boreal region, which stretches from Newfoundland to the Yukon and covers in excess of 500 million

hectares/1,930,000 sq miles — more than half the total area of Canada — made this the largest conservation agreement yet made in the world.

He said: "We are proud to have played a lead role in seeing this special partnership come together and to sign on to this extraordinary vision for Canada's environmental future. This country, indeed the world, has never seen such a diverse group of organisations come together with a common vision for an area of this size."

The Framework envisages that at least half the boreal forest would be exempt from industrial development of any kind — including logging and oil and gas exploration —

and the remainder would be open to sustainable development only within tight environmental controls. The groups who helped develop and publicly endorse this shared vision, and who have become founding members of the Boreal Leadership Council, include one of the largest pulp mill companies in North America, a paper producer and an oil-gas company. However, several of the largest companies active in the boreal forest are to date not represented in the coalition.

Canada's boreal region is home to more than 90% of the country's remaining large, intact forestlands — dominated by pine, spruce, aspen, poplar and larch trees — and more than 4 million people including more than 600 First Nations communities. Some 7,000 forest-related businesses operate in the country's forests, providing jobs for nearly 400,000 people.

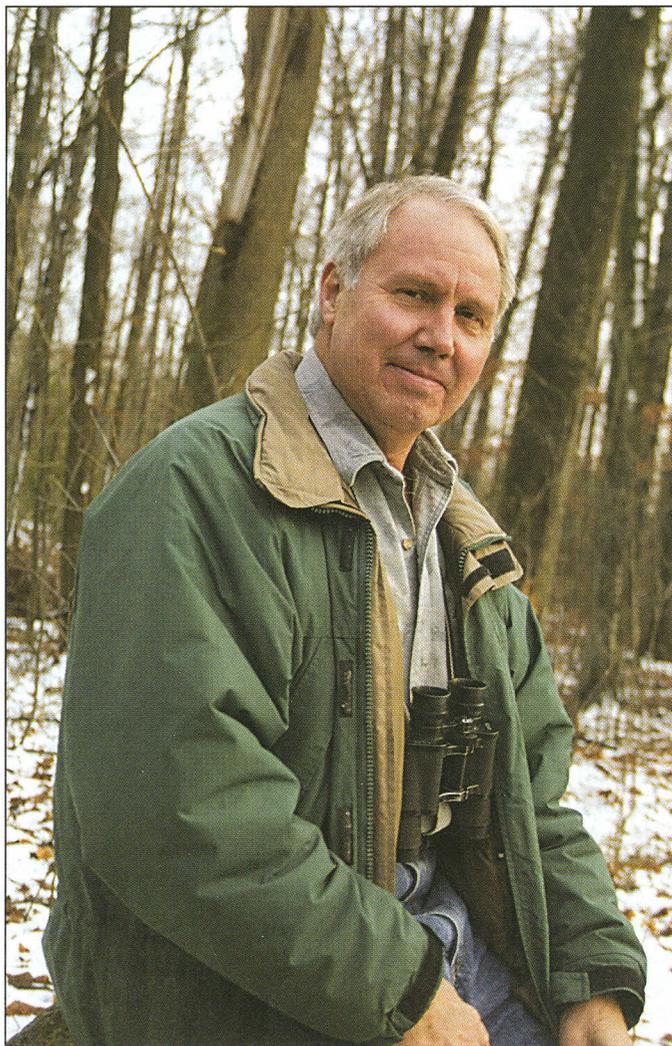
One third of the boreal region is covered by wetlands, consisting of bogs, fens, marshes, an estimated 1.5 million lakes and some of Canada's largest river systems. It is a crucial breeding habitat for one third of North America's birds and contains some of the world's largest populations of woodland caribou, bears and wolves.

It also plays a particularly vital role in mitigating the impacts of climate change. With its forests and wetlands storing massive amounts of carbon, it is one of the planet's few intact natural areas still large enough to buffer the changes in habitat that climate change will bring about for many northern species.

Cathy Wilkinson, director of the Canadian Boreal Initiative, said: "We are confident that our work will be an inspiration and source of creative solutions to governments and all who depend on the future of the boreal region." She added that with more than 90% of the region under public ownership, governments would have to play a central role in making the Framework's vision a reality.

"Our plan now is to move into a broader dialogue with governments and others to explore collaborative approaches, particularly in the area of effective land use planning."

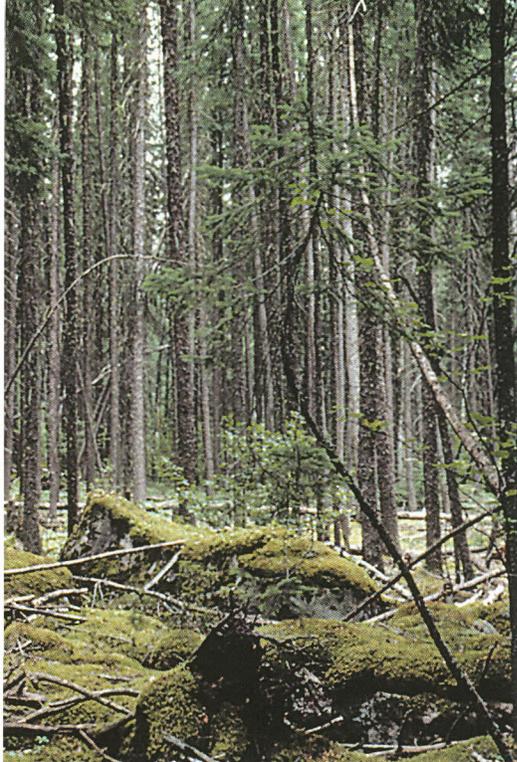
She said that there was an urgent need for a holistic approach towards boreal conservation because land use and resource management decisions in every



*Monte Hummel, President of WWF Canada and widely acknowledged as the prime mover behind the Framework vision.*

Pictures: WWF Canada





Canada's boreal forest is the world's second largest.

province and territory would determine the fate of much of the region within the next three to five years.

"By acting now, we can safeguard one of the world's remaining large ecosystems while it is still for the most part ecologically intact. We have a unique opportunity to pursue a balanced vision to conserve the entire Canadian boreal region, while providing for extensive economic benefits."

With less than 10% of Canada's boreal region strictly protected from development currently, the Framework calls for the establishment of a network of large interconnected protected areas covering about half of this vast area

The CBI has been supported by the US-based Pew Charitable Trusts, which have donated US \$4.5 million to help the plan come to life.

Apart from the taiga of Russia, Canada has the largest, almost-intact boreal forest in the world. Covering an area of 5.2 million sq km/2 million sq miles, it is a vitally important ecosystem for between 1 and 3 billion landbirds which nest there each spring.

A report commissioned by the CBI, *The Importance of Canada's Boreal Forest to Landbirds*, published in May 2003, by Peter Blancher, former chief of the migratory bird populations division of the Canadian Wildlife Service and now on secondment to Bird Studies Canada, found that 186 species of landbirds — of which 93% were migrants — regularly breed in the boreal forest, and a further 41 species were occasional visitors. This total of 227 species represented 80% of all landbird species that occur in Canada.

## A ROAD BACK TO NATURE

YEARS ago, on a remote patch of land in the northern part of Fundy National Park, human hands turned a section of Acadian forest into a strip of gravel road.

As time progressed, the Lavery Road was used less and less, providing the park with a natural restoration opportunity. Thanks to the current focus on returning our national parks to a more natural condition — a state of ecological balance — human hands have helped restore this road to the Acadian forest it once was. It is one step on a road back to nature.

Canada's national parks were established over a hundred years ago as "islands of civilisation in a sea of wilderness". Human intervention was high. Land was cleared for manicured lawns. Decorative flowerbeds were planted and maintained. Ski resorts, golf courses and other such unnatural attractions were constructed, primarily to provide places of leisure.

While our national parks are still intended for human enjoyment, they have taken on a decidedly more ecological bent. Today, their prime mandate is to maintain the balance of nature, or ecological integrity. They are becoming "islands of wilderness in a sea of

by **ED JAGER**,  
**Fundy National Park**

civilisation". The restoration of the Lavery Road in Fundy Park, in the Atlantic province of New Brunswick, is a good example.

"The Lavery Road split the northern half of the park down the middle," explains Jane Watts, a park warden at Fundy and co-ordinator of the restoration project. "It acted as a barrier to the natural movement of animals. Under Parks Canada's ecological integrity mandate, we felt it was important to return this four-kilometre/2.5 mile road to its natural state."

Giving a road back to nature required big helping hands. Like an overgrown garden tiller, a scarifying machine turned the soil in the road, loosening it and allowing the restoration team, some of them summer students, to transplant small trees and other plants from the adjacent area.

"Because they are growing right here, these plants are representative of the natural Acadian forest," says Watts. "We don't want to disrupt the ecological integrity of the area by introducing new species." Some are planted through biodegradable erosion-control blankets that cover steep grades, such as those at the banks of

Caines Brook. "The blankets will disappear naturally in a couple of years, by which time these plants will have anchored the soil enough to prevent erosion," says Watts. Erosion concerns also prompted the cutting of a number of trenches across the former road in places where water ran naturally.

In the section of the road restored two years ago, nearly 95 per cent of the transplants have survived, and other natural vegetation has seeded itself in successfully. It's a sight that makes Jane Watts happy. "In 20 years, it should look as though we were never here in the first place," she beams. "That's a good thing."

On what had been a gravel road, the tracks of moose and deer have replaced the tracks of tyres. The song of birds has replaced the rumble of cars and the trickling of Caines Brook is like the sound of nature smiling. Human hands built the road, and human hands have given it back to the forest. The restoration of Lavery Road is a big step in Fundy National Park's journey back to nature.

\* This article is presented in cooperation with Parks Canada. For more information about ecological integrity, contact Ed Jager at Fundy National Park, (+1) 506 887 6102; ed\_jager@pch.gc.ca



Picture: David Sheppard/IUCN

The uKhahlamba/Drakensberg National Park in South Africa will be linked in a transboundary park with nature reserves in Lesotho.

## transboundary

# WORLDWIDE PAs NETWORK IS CREATED

THE creation of a Global Transboundary Protected Areas Network was announced at the Durban World Parks Congress in response to calls for the development of new tools for transboundary practitioners and the need for an effective global network to help co-ordinate projects around the world.

A paper presented by Trevor Sandwith, IUCN-WCPA Transboundary Protected Areas Task Force Leader, noted that the number of TBPA's had doubled since 1990. There were now 169 TBPA's worldwide on every continent and in many marine areas, and many others were set to launch within the next few years.

He said: "The idea of managing protected areas which straddle international borders is not necessarily new, yet the rapid pace of adoption of this new paradigm, coupled with the lack of resources available for practitioners, create great challenges.

"Due to differences in culture, legal systems, natural resource

availability, land tenure and because of unique socio-political and historical contexts, there can be no 'cook-book' approach to transboundary conservation."

Answering the urgent need for a storehouse of transboundary knowledge responsive to the needs of the emerging TBPA community and continually updated, he said that the backbone of the Global TBPA Network would be a set of internet resources located on the website: (<http://www.tbpa.net>).

This new web resource would include a comprehensive database of TBPA publications; a database of known TBPA's worldwide; a global communication and dialogue system which will allow managers to communicate with other managers; and an extensive contact list of NGOs and individuals involved with TBPA's.

IUCN's global network partners include the World Bank, UNDP, UNESCO, UNEP-World Conservation Monitoring Centre, GTZ

(Deutsche Gesellschaft für Technische Zusammenarbeit), InWent, Peace Parks Foundation, the International Tropical Timber Organisation (ITTO), Italian and Swiss government agencies, Conservation International, Euro-parc Federation, WWF, African Wildlife Foundation and Flora and Fauna International.

A portfolio containing a compendium of current thinking on TBPA's includes the outcomes of an ITTO/IUCN workshop held in Thailand in February 2003, which was the first international forum to review experiences in transboundary conservation.

Among working examples of TBPA's it provided were:

**SARAWAK (MALAYSIA) and KALIMANTAN (INDONESIA)**  
(From a case study based on a paper by Dr Paul Chai, project leader and forest ecologist, Lanjak Entimau Project, Sarawak.)

THIS transboundary rainforest conservation area of 1.1 million hectares/4,250 sq miles was established on the island of Borneo in 1994 to protect critically important natural forest habitat in an area almost wholly transformed by commercial timber operations and oil palm plantations.

Incorporating the Lanjak Entimau Wildlife Sanctuary and Batang Ai National Park in Sarawak and the Betung Kerihun National Park in West Kalimantan, Indonesia, this TBPA — which is the largest single

protected area in Borneo — is exceptionally rich in biodiversity and is the largest known stronghold of the orang-utan.

The International Tropical Timber Organisation has provided support for the project since its inception, providing funds for baseline data collection, socio-economic studies, community-related activities and the development and implementation of protected area management plans.

The initial success of this protected area complex has led to the two governments exploring the possibility of creating another transboundary complex involving the Pulong Tau National Park in north-east Sarawak and the Kayan Mentarang National Park in North Kalimantan.

#### **LAOS, THAILAND and CAMBODIA**

*(From a case study based on a paper by Dr Yongyut Trisurat, Faculty of Forestry, Kasetsart University, Bangkok.)*

THE Pha Taem Protected Forest Complex (PPFC) programme, which covers an area of 174,000 hectares/670 sq miles, has the goal of developing transboundary conservation between the three countries. It currently includes four of Thailand's protected areas — the Pha Taem, Kaengtana and Phu Jong Na Yoi National Parks and the Yot Dom Wildlife Sanctuary.

Further expansion of the complex, which lies in an area that is low-lying, undulating and forested and is bisected by the Mekong River, is planned with the addition of another wildlife sanctuary in Thailand, a 120,000 hectare/463 sq miles national biodiversity conservation area in Laos and a 190,000 hectare/734 sq miles protected forest in Cambodia.

The programme's aim is to develop a bio-regional management plan and develop greater transboundary research co-operation, joint action to reduce poaching and illegal wildlife trade, and to support efforts to boost regional economic growth in this economically depressed area where the main occupations are farming, livestock and fishing.

#### **DEMOCRATIC REPUBLIC OF CONGO,**

#### **RWANDA and BURUNDI**

*(From a case study based on a paper by Cleto Ndikumagenge of IUCN.)*

MANAGERS and staff of three national parks which cover 835,000 hectares/3,225 sq miles — Virunga (DRC), Kibara (Burundi) and Volcanoes (Rwanda) — are work-

ing together to develop a transboundary initiative in the framework of the IUCN Peace Parks Initiative.

Ten years of armed conflict have created enormous problems for this biodiversity-rich cluster of separated protected areas in the Great Lakes region of central Africa, which are critical for gorilla conservation and in providing environmental services such as watershed protection. One of the major problems they have faced in recent times has been a huge influx of refugees from civil wars, poaching and incursions. Between 1994 and 2002 more than three million displaced people have lived temporarily in or around Virunga National Park, leading to high biodiversity loss.

Now park managers are co-operating on the monitoring and surveillance of key species such as the mountain gorilla, implementing the IUCN code for protected areas in times of war and co-ordinating action on conservation and refugee issues.

#### **SOUTH AFRICA and LESOTHO**

*(From a case study written by South Africa project co-ordinator, Kevan Zunckel, Lesotho project co-ordinator, Chaba Mokuku and South Africa project planner, Greig Stewart.)*

THE Maloti Drakensberg Transfrontier Project addresses conservation and community development issues in a 300 km/186 mile-long alpine and montane zone along the northern, southern and eastern borders of Lesotho and the Republic of South Africa. It involves an area totalling almost 1.5 million hectares/5,790 sq miles within the uKhahlamba/Drakensberg and Golden Gate Highlands National Parks in South Africa, and the Sehlabathebe National Park and two nature reserves in Lesotho.

Aims of the project are to develop a comprehensive biodiversity conservation plan, and to involve local communities in the conservation and development of the region in actions such as the establishment of range management areas and grazing associations.

The Maloti Drakensberg Mountains, the location of hundreds of sites containing the world-famous rock art of the San or Bushmen people, have globally significant plant and animal biodiversity with unique habitats and high levels of endemism which are increasingly under threat from commercial uses, timber plantations and cropping.

Local populations on both sides of the international boundary are dependent on the mountains for all or part of their livelihoods. The challenge conservationists face is to conserve this exceptional and unique mountain region while ensuring that the development needs of the local people are met.

At present there are extensive areas on the South African side of the international boundary without formal protection, and in Lesotho — which has the lowest protected area coverage of any nation in Africa — there is no formal protection of the mountain ecosystems.

#### **PERU and ECUADOR**

*(From a case study based on a paper by Carlos Ponce of Conservation International.)*

THE Cordillera del Condor TBPA is being developed on a mountain chain with cloud forest habitat rich in endangered and endemic species in a region which has long been a site for border disputes between the two countries. Peace and reconciliation are being pursued via the twin vehicles of joint protected area management and the promotion of sustainable development for indigenous communities.

Following a presidential pact signed in 1998 between the two countries, two International Tropical Timber Organisation (ITTO) projects — one on either side of the border — have been initiated to help implement the 2.42 million hectare/9,345 sq mile TBPA. Conservation International, Peru's National Institute for Natural Resources (INRENA), Ecuador's Ministry of Tourism & Environment, the NATURA Foundation and indigenous organisations are co-operating in the implementation of the programme.

The TBPA currently includes two small protected areas on each side of the border — El Condor Park, Ecuador, and a zone of ecological protection in Peru — which are linked to the 1.6 million hectare/6,180 sq mile Santiago-Comaina Reserved Zone in Peru.

The long-term goal is to develop a far larger El Condor-Kutukú Conservation Corridor along the entire border area, linking three national parks and a fauna reserve in Ecuador with the Tabaconas-Namballe National Sanctuary and the Cutervo National Park in Peru, which will protect at least a further 1 million hectares/3,860 sq miles.

## world heritage convention

# AN INTERNATIONAL FORCE FOR NATIONAL PARK CONSERVATION

by **FRANCESCO BANDARIN**,  
*Director, UNESCO World Heritage Centre*

ONE peek over the edge of the Grand Canyon, one gaze up the thundering Iguazu waterfall, one jeep ride through the Serengeti, one sunrise hike up the Krakatoa volcano, or one starlit night in the Sahara Desert, and anyone would agree that there are places on Earth which need to be protected for future generations.

The founders of the Convention Concerning the Protection of the World Cultural and Natural Heritage had the foresight to develop an international framework to preserve the sense of wonder which our natural and cultural heritage sites elicit.

The World Heritage Convention is profoundly original in that it links together the conservation of nature and culture, thus challenging the limited perception that nature and culture are in opposition. In the more than 30 years that have passed since its adoption, 177 UNESCO member states have signed the Convention, making it the most universal legal instrument for heritage protection.

In signing the Convention, countries make a commitment to protect all of their natural and cultural heritage sites, regardless of whether they are inscribed on the World Heritage List. The Convention encourages its signatories to reinforce their national laws for environmental protection, to formulate management plans to preserve and protect the biodiversity of their

natural areas, and to promote sustainable development.

There are currently 754 properties in 129 countries inscribed on UNESCO's prestigious World Heritage List — 582 of them cultural, 149 natural and 23 mixed (both cultural and natural). Their inscription carries extraordinary implications since it signifies that, in view of their outstanding universal value, transcending national boundaries, they have been offered to all humankind. Whilst fully respecting the national sovereignty, and without prejudice to property right provided by national legislation, the states which are parties to the Convention recognise that the protection of the World Heritage is the duty of the international community as a whole.

The application for a site to be inscribed in the World Heritage List must come from the country itself; UNESCO makes no recommendations for listing. The application has to include a plan detailing how the site is managed and protected. The World Heritage Committee meets once a year and examines the nominations on the basis of technical evaluations. These independent evaluations of proposed sites are provided by two advisory bodies, the International Council on



*Ha-Long Bay: a World Heritage Site of exceptional beauty on the coast of Vietnam.*

Picture: Patrick Werquin

## WORLD HERITAGE SITE REPORTS

AMONG the five sites added to the List of World Heritage In Danger last year were:

### AFGHANISTAN

The cultural landscape and archaeological remains of the Bamiyan Valley is the site of the tragic destruction of the two standing Buddha statues by the Taliban regime in March 2001. The area contains numerous Buddhist monasteries and sanctuaries, as well as fortified edifices from the Islamic period. The site is in a fragile state of conservation as a result of neglect, military action and, most recently, deliberate destruction.

Major dangers include the risk of imminent collapse of the Buddha niches with the remaining fragments of the destroyed statues, further deterioration of still existing mural paintings in the caves, looting and illicit excavation. Parts of the site are inaccessible due to the presence of anti-personnel mines.

### CÔTE D'IVOIRE

One of the largest protected areas in west Africa, the Comoé National Park is characterised by its great plant diversity. Due to the presence of the Comoé River, it contains vegetation which is normally only found much further south, such as shrub savannahs and patches of thick rainforest.

The recent civil unrest in the country has had an adverse effect on the site. Poaching of wildlife, fires caused by poachers, illegal logging, overgrazing by large herds of cattle and the absence of effective management all present major risks to the park.

### AZERBAIJAN

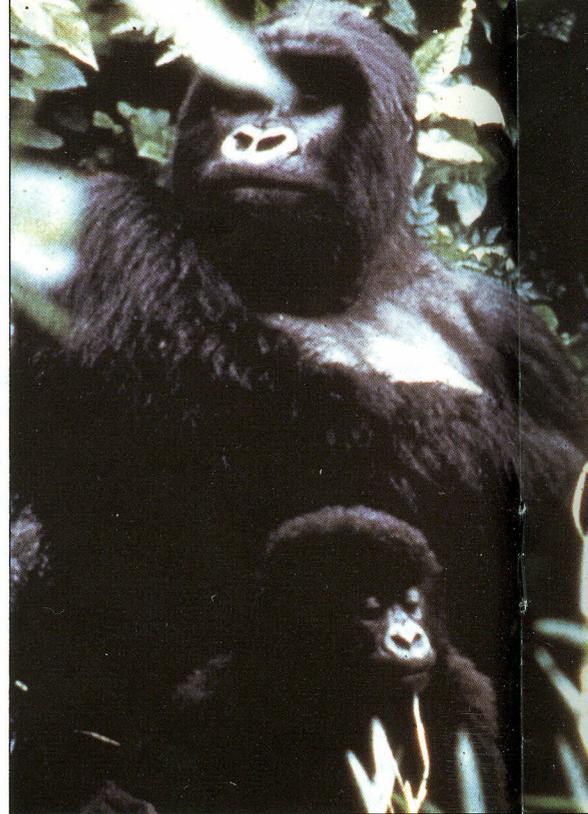
Built on a site inhabited since the Palaeolithic period, the Walled City of Baku contains cultural remains including 12th century defensive walls and towers and the 15th century Shirvanshah's Palace, one of the pearls of Azerbaijan architecture. The site sustained significant damage during the earthquake of November 2000 and is increasingly affected by the pressure of urban development, the absence of conservation policies resulting in the demolition of historic buildings and by dubious restoration efforts.

Monuments and Sites (ICOMOS) for cultural properties and the World Conservation Union (IUCN) for natural properties. A third advisory body, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), provides expert advice on restoring monuments and organises training courses.

UNESCO adopted the World Heritage Convention in 1972. In the same year, the global protected areas community was celebrating the centenary of the world's first national park, Yellowstone in the USA, and meeting for the Second World Parks Congress in Yellowstone. Since then the decennial World Parks Congresses and the World Heritage Convention have had a close relationship. Moreover, last September for the first time, World Heritage was a cross-cutting theme at the Vth World Parks Congress in Durban, South Africa.

When the World Heritage Committee began inscribing sites in UNESCO's World Heritage List in 1978, flagship protected areas like Yellowstone, and others such as the Galápagos Islands (Ecuador) and Nahanni National Park (Canada) were the first ones to be included. Today the 172 natural and mixed World Heritage Sites contain well over 500 individual protected areas; together they cover around 12-13% of the world's protected area coverage.

More and more World Heritage properties unify many protected areas, such as the Greater St Lucia Wetland National Park (South Africa), the Wet Tropics of Queensland (Australia), or the Atlantic Forest



*Gorillas in Bwindi Impenetrable*

Southeast Reserves (Brazil). Even some of the World Cultural Heritage Monuments, such as the archaeological remains of Butrint in Albania, have regionally-significant protected areas like the Butrint National Park surrounding them.

Through the co-operation and commitment of its signatories, the Convention has been the legal instrument behind several successful international safeguarding campaigns. On the Galápagos Islands the delicate biological balance was threatened in the 1990s by excessive fishing and by the introduction of alien species of plants and animals. The UNESCO World Heritage Committee seriously considered adding the



*America's Grand Canyon needs to be protected for the enjoyment of future generations.*

Picture: Patrick Werquin



Picture: UNESCO

*... National Park, Uganda, still face major threats to their survival.*

islands to the list of World Heritage in danger, but the government took immediate action to remedy the situation. In 1998 Ecuador enacted a 'Special Galápagos Law' to improve conservation in the islands and surrounding waters.

In 1999, the World Heritage community campaigned against a plan for enlarging an existing salt factory to commercial scale in Laguna San Ignacio, in El Vizcaino Bay on Mexico's Baja California peninsula, the last pristine birthing lagoon for the Pacific grey whale. El Vizcaino is also home to many endangered species of flora and fauna. The UNESCO World Heritage Committee forewarned the Mexican government of the threats posed to the whales and the overall marine ecology at this World Heritage Site by locating a saltworks inside the sanctuary. As a result, the Mexican government refused permission for the saltworks in March 2000.

Despite these success stories, looting, war, deliberate destruction, industrial pollution, uncontrolled urbanisation, mining, land speculation, unchecked tourist development and natural disasters continue to pose major problems for World Heritage Sites. Threatened by one or several of these situations, 35 properties are currently inscribed on UNESCO's List of World Heritage in Danger. Almost half of these are national parks and nature reserves, including the Rio Plantano Biosphere Reserve (Honduras), Manas Wildlife

Sanctuary (India), Comoé National Park (Côte d'Ivoire), Rwenzori Mountains National Park (Uganda), and Ichkeul National Park (Tunisia).

Through the danger listing, UNESCO aims to draw the attention of the international community to the need to reinforce protection of these sites. Once on this list, sites generally benefit from more effective national measures and increased international funding. For example, the five natural World Heritage Sites in the Democratic Republic of Congo (DRC) were all inscribed on the danger list between 1994 and 1999, and are now part of a US\$ 4.3 million four-year UNESCO-United Nations Foundation (UNF) project for

'Biodiversity Conservation in Regions of Armed Conflict'. UNESCO and the UNF have been rallying political support from the government authorities in the DRC and in neighbouring countries involved in the conflict, while an international donors' conference for preserving Congolese heritage is planned to take place at UNESCO headquarters in September 2004.

Since the UNESCO-UNF partnership began in 1999, UNF has mobilised, through the work of UNESCO World Heritage Centre, the United Nations Development Programme and a number of other inter-governmental and non-governmental partners, US\$ 30-40 million for biodiversity conservation in designated and potential World Heritage sites harbouring globally significant biodiversity. Several other UNESCO and UN agency projects financed by the UNF and a number of partners, including the private sector, implement projects linking sustainable tourism and biodiversity conservation and provide ample opportunities for the involvement of local communities.

In November 2002 — when the World Heritage Convention celebrated its 30th anniversary in Venice, Italy — UNESCO, UNF and Conservation International (CI) of USA announced a US\$ 15 million partnership for World Heritage biodiversity conservation for the period 2003-2005. In a workshop held in Trieste, Italy in connection with the 30th anniversary celebrations in Venice, Fauna and Flora International (FFI) of the



Picture: Claire Servoz

*The Galápagos Islands have benefited from five years of stricter conservation measures.*

United Kingdom pledged that it will work with the World Heritage Centre of UNESCO and IUCN to set up a Rapid Response Facility to mitigate threats to World Heritage of great biodiversity importance.

A new initiative called PACT (Partners for World Heritage Conservation) was also launched by the World Heritage Centre on the occasion of the 30th anniversary in 2002. The upkeep and protection of World Heritage constitute a major responsibility in the long term for which UNESCO has called for the development of a network of partners, including the private sector, in order to meet the challenge of the fourth decade of the Convention which is about to begin.

Everyone on Earth has an interest and a stake in preserving our World Heritage: it is our shared heritage. From the Congo's gorillas and China's giant pandas to Australia's coral reefs and the Amazon's rainforest, the whole is greater than the sum of the parts. Preserving this treasured and fragile heritage is the challenge now facing the international community as a whole and, on its behalf, UNESCO and its partners.



Picture: UNESCO

## A WORLD OF EXPERIENCE

BORN in Venice, Italy in 1950, Francesco Bandarin graduated from the University Institute of Architecture of Venice and received a Masters in City and Regional Planning from the University of California, USA. He is currently on leave from his post as Professor of City Planning at the School of Planning of Venice.

He has conducted research and training programmes at numerous universities in Italy and abroad, notably at Johns Hopkins

University and Harvard University in the USA. He has lectured at many universities in the developing world — in particular in Algiers (Algeria), Luanda (Angola) and Maputo (Mozambique) — and has 20 years' experience in urban and environmental project design and management, in Italy and abroad.

Since 1985 he has been a consultant to the World Bank in urban management, and since 1997 has collaborated with the World Bank in cultural heritage conservation.

## NEWS REVIEW

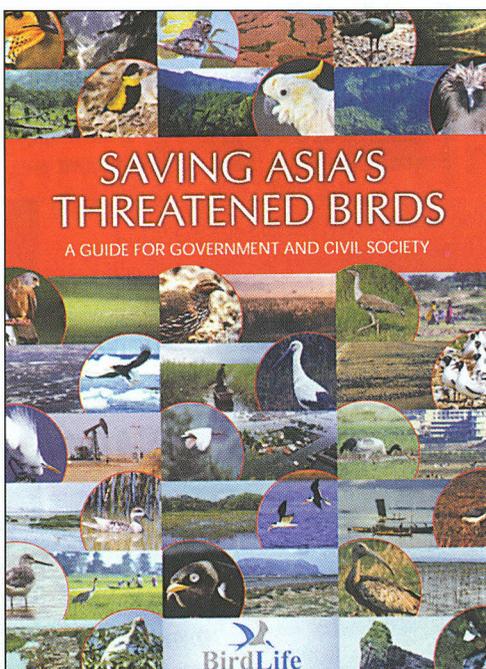
[NPIB@powdene.com](mailto:NPIB@powdene.com)

### STRATEGY TO SAVE ASIA'S BIRD LIFE

DRAWING together the recommendations contained in Birdlife International's comprehensive 3,000-page Red Data book *Threatened Birds of Asia*, published in 2001, the Birdlife Asia Partnership has published a new book, *Saving Asia's Threatened Birds*.

This new guide for government and civil society, compiled by Mike Crosby, targets not just individual species but whole assemblages of threatened species in their preferred habitats, and defines a strategy for saving Asia's threatened birds.

Some 324 species — about 12% of the Asian avifauna — are already at risk of global extinction, and 41 of these are critically endangered. The territories with the highest number of bird species facing



extinction are: Indonesia (117 species), China (78), India (73) and the Philippines (70).

Analysis of the distributions and habitat requirements of Asia's threatened birds has identified nine

forest, three grassland and 20 wetland regions as priority areas for conservation, and the guide argues that it is more efficient to consider the conservation of these regions than to individually cover more than 300 species.

This approach makes it easier to relate bird conservation issues to land-use planning processes and enables these habitat regions to be related to other conservation analyses, including Conservation International's Hotspots and WWF Ecoregions.

More than 100 species in Asia are currently close to extinction, and this publication identifies the main reasons why this is the case and proposes actions needed to avert the extinction crisis.

Funding for the book was provided by the Critical Ecosystem Partnership Fund, a joint initiative of Conservation International, the Global Environment Facility, the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank.

For more information see [www.nhbs.com/services/birdlife](http://www.nhbs.com/services/birdlife)

## **brazil**

# IMPORTANT COASTAL SITE PURCHASED

A 970-HECTARE/2,400-acre area of critically important Atlantic Forest habitat on the Brazilian coast in Bahia state has been purchased by The Nature Conservancy using half of a US \$600,000 donation given by the multinational corporation, 3M.

TNC's Brazilian conservation partner, the Institute for Social and Environmental Studies of Southern Bahia (IESB), will own the land and work with the Conservancy's scientists and other partners to manage and protect it from environmental threats.

The tract of land, which is located within the Environmental Protection Area of Itacare-Serra Grande, one of the most biologically diverse forest areas on Earth, will link two state-protected areas and create a continuous swathe of forest linking

ancient remnants and serving as a corridor for animal migration.

One study carried out in the region found 458 tree species in a single hectare, and the forest is home to dozens of threatened bird species and endangered species such as the golden-headed lion tamarin and the maned three-toed sloth.

Less than 8% of the original Atlantic Forest remains today. In Bahia state alone, several million acres of the forest have been cleared in less than 50 years.

TNC and IESB intend to use additional funding provided by 3M to purchase neighbouring Atlantic Forest areas and to launch restoration projects on land which has already been damaged by cattle ranching and illegal logging, and work with local communities on sustainable development activities.

## **south africa**

# LAND SALE WILL RAISE FUNDS

THE Game Rangers' Association of Africa (GRAA) is involved in an ambitious project to raise funds by assisting in the sale of land plots on the Silonque Game Farm, situated on the western boundary of Kruger National Park.

The owners of the 1,300 hectare/3,210 acre estate are offering 63 plots — approximately 21 hectares/52 acres in size — for sale in this wildlife-rich area which is likely to be part of the Great Limpopo Transfrontier Park. When fully completed, the park will extend over 9 million hectares/34,750 sq miles.

There is an abundance of game at Silonque including buffalo, zebra, giraffe and kudu, and negotiations are at an advanced stage to remove the fence between Silonque and the 50,000 hectare/193 sq miles Lataba

Ranch on its northern boundary. Following the removal of the fence between Lataba and Kruger which is planned in the near future, the "big five" (elephant, lion, rhino, leopard and buffalo) will be able to move freely in the area for the first time.

The GRAA has been requested to act as sales agent and will receive 5% sales commission to assist their work in field ranger training and maintaining wildlife management standards.

They will also be responsible for maintenance of roads and the security of Silonque Game Farm, on which they will have an office. In the near future it is hoped that the GRAA will also take over the wildlife management of the adjacent Lataba Ranch.

\* Further information from [schreiber@intekom.co.za](mailto:schreiber@intekom.co.za)

## **seychelles**

# ISLAND WINS TOURISM AWARD

COUSIN Island (see NPIB, Issue 5) has received a Highly Commended award in the Protected Areas and National Parks category of British Airways' Tourism for Tomorrow Competition.

The 27 hectare/66 acre island, which is owned and managed by environmental NGO, Nature Seychelles, was judged to be a model example of a self-financing Special Reserve, successfully balancing biodiversity conservation and tourism.

Conservation measures have helped to bring back two bird species on the verge of extinction — the magpie robin and the Seychelles warbler, whose numbers have increased from 30 when the island was purchased as a reserve to more than 300 today.

Strict controls are imposed on the number of tourists allowed to visit the island, which is the most important nesting site for hawksbill turtles in the western Indian Ocean and hosts the longest-running monitoring programme for this species.

## **tanzania**

# NEW CARNIVORE RESCUE CENTRE

INVESTORS and likely partner organisations are being asked to contact Terry Harnwell, president and founder of the African Conservation Foundation, if they would like to participate in a brand new conservation project in northern Tanzania.

A new carnivore rescue centre will occupy 485 hectares/1,200 acres of virgin bush on the borders of Tarangire National Park (in the Manyara-Tarangire migration corridor). The project will comprise the rescue and rehabilitation centre, plus an educational facility, a research facility and an adjoining lodge.

For further details contact Ms Harnwell at the African Conservation Foundation, PO Box 11577, Meru, Arusha, Tanzania. Tel: (+255) 744 653881,

e-mail:

[terry@africanconservation.org](mailto:terry@africanconservation.org)

website:

[www.africanconservation.org](http://www.africanconservation.org)

## red list

# 2,000 MORE SPECIES ARE THREATENED

MORE than 12,000 animals and plants are now known to be facing the real possibility of extinction, according to the 2003 update of the IUCN Red List of Threatened Species.

Since the release of the 2002 Red List more than 2,000 new entries have been added, based on information supplied by IUCN's Species Survival Commission (SSC), a network of 7,000 experts and data from a number of partner organisations.

The 2003 List includes a total of 12,259 species falling into the 'critically endangered', 'endangered' or 'vulnerable' categories. A total of 762 plant and animal species are now recorded as extinct, with a further 58 known only in cultivation or captivity.

IUCN Director General, Achim Steiner, said: "While we are still only scratching the surface in assessing all known species, we are confident that this figure is an indicator of what is happening to global biological diversity. The Red List provides the best available knowledge necessary for sound conservation action. We now need the political will and resources to stem the loss of biodiversity. Human activities may be the main threat to the world's species but humans can also help them to recover — the Chinese crested ibis, the Arabian oryx and the white rhino are just a few examples."

Many islands famed for their rich biodiversity and wide range of endemic species are facing serious problems due to invasive alien species and human destruction, which are undermining the future of thousands of native species.

On ASCENSION ISLAND, invasive species have caused the extinction of four plants found nowhere else on Earth. On the GALÁPAGOS ISLANDS some 35 snail species are now critically endangered — and some possibly already extinct — due to invasive

species such as goats, pigs and fire ants.

In HAWAII 125 endemic plant species have been added to the Red List this year. One critically endangered tree, *Maui hesperomani*, is on the edge of extinction due to habitat degradation by pigs, competition with alien plant

species, predation by rats, and from trampling or collecting by humans.

Three species which have in the past year been reclassified from endangered to critically endangered are:

- The *variegated spider monkey*, found only in Colombia and Venezuela, which faces continuing habitat loss due to urban growth, agriculture and cattle grazing.

- South Africa's *riverine rabbit* which, due to habitat loss, trapping and predation by feral cats and dogs, is now estimated to number fewer than 250 breeding pairs.

- Asia's *Mekong giant catfish*, one of the world's largest freshwater fish, up to 3 metres/10 feet in length and weighing up to 300 kg/660 lbs, which is found only in



Picture: Tony Palliser

*The black-browed albatross is suffering a long-term decline, due partially to longline fishery practices.*

the Mekong River basin area of Vietnam, Cambodia, Thailand and Laos. Due to over-fishing, habitat loss and obstruction of migratory routes through dam construction, its population has declined by more than 80% in the last 13 years.

Also moved into a higher risk category, from 'vulnerable' to 'endangered', is the *Mexican black howler monkey* due to a 56% loss of habitat. With continuing habitat loss feared, the population is expected to decline by over 70% in the next 30 years.

#### PLANT FIGURES WORSEN

An increased number of plant assessments has been included in the 2003 Red List. All known cycad species have now been assessed and there is also now complete coverage of the conifers. New additions include 1,164 plant species from Ecuador, of which 813 are categorised as threatened.

Cycads, the oldest seed plants on Earth, are now also among the most threatened plants; 303 species were evaluated and 155 classified as threatened.

A conifer only discovered by botanists in Vietnam in 2001, *Xanthocyparis vietnamensis* has been assessed as endangered, based on its restricted range and ongoing deforestation in the area.

Once thought extinct in the wild, another conifer, *Thuja sutchuenensis*, which was rediscovered in China in 1999, has only a single remote and largely inaccessible sub-population remaining and is listed as critically endangered.

#### MARINE LIFE

On the marine front, six species of albatross now face a greater threat of extinction than previously thought, largely as a result of long-line fishing, and all 21 of the planet's species are now considered to be globally under threat.

Joining the List as endangered is the Mediterranean sub-population of the short-beaked common dolphin, following a population decline of more than 50% over the last 30 to 40 years due to reduced dolphin prey because of over-fishing and habitat degradation.

The 2003 Red List is maintained as a searchable database on its own website: [www.iucnredlist.org](http://www.iucnredlist.org). A major analysis of the Red List will be conducted this year to highlight where the most threatened species occur and what the major threats are. These findings will be presented to the 3rd IUCN World Conservation Congress in Bangkok in November.



*The golden-lion tamarin: saved by a unique worldwide partnership.*

## REVERSING THE TREND

ONLY one primate species has moved into a lower threat category in the new Red List.

The golden-lion tamarin, endemic to the lowland coastal Atlantic forest in Rio de Janeiro state, Brazil, has — thanks to nearly 30 years of conservation efforts — dropped in category from critically endangered to endangered.

When WWF, the Smithsonian Institute and other partners started working to protect this primate species, only around 200 animals were left in the wild. In March 2001 a milestone was reached when the 1,000th baby tamarin was born in the wild.

The project became a unique worldwide partnership involving

40 organisations and 148 zoos, using techniques such as reintroduction of zoo-born animals into the wild and translocation of isolated animals to larger forest protected areas.

Studies have concluded that a population of 2,000 animals is needed to ensure the long-term survival of the species, and this will require increasing the tamarin habitat in the region from 17,000 to 25,000 hectares/66 to 96 sq miles by 2025.

A major step to reach this target was achieved in June 2002 when a new protected area of 145,000 hectares/560 sq miles, which includes the areas where the tamarin lives, was established in the Sao Joao river basin.



Listed as critically endangered, the *Maui hesperomani* is a small, shrubby tree found on only two Hawaiian islands. A combination of factors including humans, rats, pigs and invasive alien plants have seen its numbers almost halve in three years.

Picture: Vickie L. Caraway



Sand dunes in the Kraansvlak area of Zuid Kennemerland National Park.

## netherlands

# A NATURAL OASIS ONE HOUR FROM CENTRAL AMSTERDAM

THE stark, dull-gold beauty of Zuid-Kennemerland's scrubby dunescape has evoked a passionate response from many people, perhaps none more eloquently than the Dutch environmentalist Jac P. Thijssse.

In 1944 he wrote: "Our dunes are the product of the interaction between sea and sand, wind and water, flora and fauna. Where this process is allowed to take its natural course, it makes a landscape of magnificent beauty and wealth, of everlasting appeal, which none of the best landscape designers could even come close to creating, no matter how hard they try."

Prompted by a cholera epidemic in Amsterdam, 20 km/12 miles to the east, this unpopulated region in the province of North Holland began pumping water out of the large pool beneath its dunes in 1898, thereby supplying the city of Haarlem with drinking water. The original pumping station is today's visitor centre: De Zandwaaier (the sand-blower).

Ranger Ruud Maaskant explained that in 2002, as part of a long-term strategy to return the dunes to their natural state, the Provincial Water Company of North

by **SUSAN BURKE**

Holland (PWN) discontinued this practice. North Holland's water supply is now drawn from Heemskerk, north of IJmuiden (the industrial port on the park's northern boundary), with the IJsselmeer also contributing. Amsterdam has its own separate water company.

A few years after water extraction began, the appearance of the area suffered a gradual change due to

parching. Woodlands began to die, moist dune slacks to disappear, and the dune grasses to wither. This, together with the eutrophication of the rainfall through air pollution, allowed better quality grasses — today's problem — to establish.

An attempt to address the dehydration of the dune aquifer took place in the 1950s with an unwanted outcome. Pre-filtered water which fed into a particular dune area came from the River Rhine. Unfortunately, although the flow stabilised the water table, it introduced nutrients which caused an excess of unsolicited plant growth. A positive help to the area's regeneration has been that its role as a provider of potable water has ensured that no development has been permitted. Policies to counter the negative effects of drinking water production resulted in a complete halt to filtration and withdrawal of water in the national park in 2001.

Although recognised as a national park since the 1950s, it was not until 1995 that official status was conferred. Today the park's 3,800 hectares/15 sq miles cover the original Kennemerland National Park, Slingerduinen, Duin en Kruidberg, Heerenduinen and Midden-Heerenduinen, Kraansvlak, Koningshof and Elswout. Some beaches, estate land and a cemetery are also included. Management is carried out jointly by:

- PWN, which manages land owned by the provincial government. Funding is sourced from parking and campsite charges, and admissions to the Kennemer dune area. Ways are being sought to boost income.



Picture: Susan Burke

*Ranger Ruud Maaskant: hopeful that the dunelands will recover their former balance.*

- NATUURMONUMENTEN (Dutch Heritage Service) funded by lottery money and subscriptions.

- STAATSBOSBEHEER (Dutch Forestry Service), in receipt of government funding. Some private forestry owners and one municipality are involved in the management process.

Ruud Maaskant said: "Prior to designation cultural differences in land management and practice had caused some difficulties, but it is to be hoped that co-operation will, over time, allow the dunelands to recover their former balance."

Several successful measures have been taken to achieve this. A grass mowing programme designed to reduce nutrient levels has led to the reappearance of the wetland plants grass of parnassus (*Parnassia palustris*) and orchid species. There are hopes that gentian (*Gentianella spp.*), marsh hellebore (*Epipactis palustris*) and bog rushes will also re-establish.

The increase in damp habitat levels should herald the return of several bird species — particularly water rail (*Rallus aquaticus*), snipe (*Gallinago gallinago*) and the well-named bull-of-the-bog or bittern (*Botaurus stellaris*). Marsh harrier (*Circus aeruginosus*) and hen harrier (*Circus cyaneus*) are also expected to benefit, with a consequent rise in their numbers. To enhance the wading bird environment, the Vogelmeer is being dredged, which will maintain the sheltering reed beds of the swamp area.

In a further effort to reduce nutrients topsoil is being removed. To protect people and animals and to minimise environmental disturbance, this is pumped through pipes into lorries waiting on the park boundary to dispose of it.

Animals also have a role to play in the park's naturalisation process. Through grazing and trampling, the park is recreating a variety of habitats to suit various animals, including sand lizards and rabbits.

Ruud told me: "A virus outbreak has led to a decline in rabbit numbers, which in turn has caused a decrease in population of shelduck (*Tadorna tadorna*) which nest in their burrows. We hope that by bringing in Tarpan horses, and probably Highland cattle — and keeping roe deer (*Capreolus capreolus*) and fallow deer (*Dama dama*) numbers stable — we can control the tougher grasses,



The buzzard: there are five nesting sites in Zuid Kennemerland.

## BATS AND BIRDS

IT was discovered recently that bats are using Second World War bunkers for hibernation, attracted by the constant cool temperatures of the underground tunnel network. Former ice cellars, dug deep into the ground on country estates, have also been colonised. Bat entries have been cut into the doorways to assist the creatures. Bat boxes are not provided.

Species occurring in the park include the noctule (*Nyctalus noctula*), Natterer's (*Myotis nattereri*), Daubenton's (*Myotis daubentoni*) and common long-eared (*Plecotus auritus*).

Of the bird population present, there are five buzzard (*Buteo buteo*) nesting sites and three sites for goshawk (*Accipiter gentilis*). There are two pairs of nesting hobby (*Falco subbuteo*), although it is uncertain whether these have bred successfully. Osprey (*Pandion haliaetus*) are occasional visitors when on

migration. The chicks of a lone pair of sparrowhawks (*Accipiter nisus*) last year fell prey to a goshawk. A single honey buzzard (*Pernis apivorus*) spent last summer in the park.

Green woodpecker (*Picus viridis*) are regularly seen, as are their greater spotted relatives (*Dendrocopos major*).

The widespread song of the nightingale (*Luscinia megarhynchos*) attracts many visitors in May. Whinchat (*Saxicola rubetra*) and stonechat (*Saxicola torquata*) frequent the shrubby heaths, while in autumn fieldfare (*Turdus pilaris*) and redwing (*Turdus iliacus*) feast on berries.

The yellow fruit of the dune thorn (*Hippophae rhamnoides*) is particularly abundant. Traditionally they have also been a favourite of the local human population, and after they have been frosted the taste is said to resemble that of pineapple.



Constant cool temperatures have attracted a colony of bats to former Second World War bunkers for hibernation.



A rainbow over Kraansvlak: Zuid Kennemerland now attracts more than three million visits each year.

allowing more tender species to flourish. This will enable the rabbits and shelduck to continue their relationship.”

Known as “the lungs of Holland”, this popular park attracts more than three million visits each year. Visitors accompanied by dogs are expected to limit themselves to special dune areas set aside on the park periphery. The Dutch government recommends that admission to its national parks should be free to those who visit on foot, by bicycle or arrive by train. Polluters will pay through increased parking fees.

The indications are that in the setting and achievement of its present goals, Zuid-Kennemerland is satisfying Jac P. Thijsse’s emotive words.

\* *Ruud Maaskant, Natuur en Dagrecreatie Zuid, Tetterodeweg 25, 2051 EG Overveen, Netherlands. Tel (+31) 235 411111, fax (+31) 235 258573.*

*Public Relations: Jajanneke Claessen. Tel (+31) 235 411116.*

## NEWS REVIEW

NPIB@powdene.com

### africa

# THREE COUNTRIES ‘FLOUT IVORY BAN’

THE countries of Nigeria, Côte d’Ivoire and Senegal have virtually ignored a worldwide ban on ivory trade and are allowing flourishing illegal markets to “drive elephant poaching” in west and central Africa.

This is the assertion made in a joint 78-page report produced by Traffic — the organisation which monitors trade in endangered species — and the World Wildlife Fund (WWF), which claims that more than 4,000 kg/3.9 tons of illegal ivory is on sale in the three countries.

The UN Convention on International Trade in Endangered Species, CITES, banned the worldwide ivory trade in 1989, listing elephants as an endangered species but allowing limited ivory trade in several countries which already had stocks to dispose of. The CITES ban is currently applied in 164 countries, including Nigeria, Côte d’Ivoire and Senegal.

Susan Lieberman, director of WWF International’s Species Programme, said: “Not only is there a lack of political will to implement CITES, allowing traders to act with immunity from prosecution, but corruption is preventing effective controls on the ivory trade.”

The report states that these three countries have nearly wiped out their own elephant populations (there may be as few as 550 in Nigeria and Côte d’Ivoire and possibly none in Senegal) and that most of the illegal ivory is now coming from Congo (both Democratic and Popular Republics), Cameroon, the Central African Republic and Gabon.

In Senegal, customs agents have “systematically barred” wildlife authorities who were trying to enforce the worldwide ban, and in a market in the capital, Dakar, traders openly sell carved ivory tourist ornaments.

### usa

## JOBS SHIFT TO PRIVATE SECTOR

FOR several reasons, new types of threats to protected area integrity and values seem to come first to PAs in the United States — like snowmobiles, helicopter air tours, cell phones, cellular towers and radios in wild areas. As such, US parks can often sound warnings of potential things to come.

The latest threat is the outsourcing to the private sector of jobs in the PA system. The Bush administration is pushing a plan through Congress to privatise as many as 58% of the jobs in the US National Park Service. These would be perhaps seasonal positions — including rangers and maintenance workers — but could extend to specialist, dedicated employees such as archaeologists, museum curators and biologists.

Some outsourcing has been in place for several years as an “efficiency measure”. Fewer ranger-led interpretive activities are already the result of budget shortfalls, and downgrading of professional seasonal positions is decimating the ranks of experienced personnel.

*(from Professor Lawrence S. Hamilton, Mountain Protected Areas Newsletter Editor, (WCPA-IUCN), Charlotte, Vermont, USA.)*



Picture: Silvia Scozzafava

Ski resorts like Ovindoli, in the Sirente-Velino Regional Park, aren't such an attraction for visitors when the snow has melted.

**italy**

# CONFLICTING INTERESTS CLOUD ABRUZZO'S FUTURE PROSPECTS

by **SILVIA SCOZZAFAVA**,  
*Environmental Consultant,*  
*European policies and sustainable development*

ABRUZZO is the Italian region with the highest concentration of protected areas on its territory. Indeed, no other European region can boast 30% or more of its territory devoted to conservation.

In this mountainous region of central Italy three national parks and one regional park encompass most of the High Appennines, including all the major peaks of the chain: Gran Sasso-Laga, Majella, Abruzzo-Lazio-Molise (formerly named Abruzzo National Park, in the times when it was the only one!), and the Sirente-Velino Regional Park.

Many unique species like the Appennine wolf, the brown bear and the Abruzzian chamois (to mention three of the best-known) roam among wide karst plateaux, rocky crags, wooded valleys and steep gorges. Man himself has left his footprint since the most ancient times: remains of prehistoric settle-

ments can be found throughout the hills, and ancient Roman roads wind their paved ways through fields of wheat and lentil scattered with almond trees which must have looked very similar to their present-day equivalents, when driving from one medieval village to the other.

The history of conservation in Abruzzo is the history of Italian and European conservation itself: in 1922 one of the first ever national parks was established here, following the lead of the United States and Switzerland. Unlike the American and Swiss parks, however, the Abruzzian territory is not totally without human settlement: although much reduced by emigration, a significant population is still present in many ancient villages which cling to mountain sides and perch on rocks often more than 1,000m/3,280 feet above sea level. This difference may seem small, but it's important, as will become clear later on.

The other parks in Abruzzo were founded much later, with the

issuing of the National Framework Law on Protected Areas (No 394) of 1991. In the meantime, the wolf has shifted from the status of pest to that of protected species, and the whole cultural framework has considerably changed.

Despite great advances in conservation culture, the newly-created parks have immediately faced huge difficulties. They were formally established but they lacked everything from personnel to offices. They were assigned huge funds, but nobody was there to administer them: and even when a president and director were appointed, they still had no staff and no structure to direct. The new parks were called "paper parks": they existed only on paper. Over-complicated administrative procedures hindered early attempts to get things moving. This situation lasted for years, amid ever-growing opposition from the residents who perceived parks only as sources of new rules, restrictions and prohibitions. The park authorities were made the scapegoat for all problems, from economic underdevelopment to an excess of wild boar.

Anti-park factions were further agitated by false rumours about park authorities parachuting Siberian wolves into the mountains, and releasing boxes of vipers from helicopters: tales which had already been circulating in Abruzzo National Park years before and which spread to all newly protected areas, gathering credence as they were passed on by word of mouth. In addition to these imaginative

tales, most people thought that the park authority would forbid residents to pick mushrooms and gather wood for fuel.

It is not known how this storytelling started, but it seems certain that the creation of the park annoyed not only hunters but also building speculators who would have filled the mountain valleys with hotels and ski resorts in the name of economic development.

#### **WRONG STRATEGY**

The tale of the wolf paratroops may seem laughable, but the projects which were put forward to develop resorts are not: they were so real that some even managed to gain approval, and on occasions attracted public finance. So the Abruzzo region showed a kind of schizophrenia about conservation: there was a lot of publicity about the new parks and how proud the region was of being “the Green Region” of Europe; but at the same time a series of huge car parks was built on a beautiful mountain plateau with European funds, to provide parking facilities for a privately-owned ski resort.

The funny side of the story is that the whole project was arbitrarily labelled as “eco-compliant” because the parking area would have been covered with turf. Maybe the designers didn’t foresee that an alpine meadow at an altitude of 1,400 m/4,600 feet cannot be planted and grown like a golf course: the years have gone by and not a single strand of grass has replaced the beautiful upland meadow. Following this test case,

against which neither campaigning nor appeal to the European Union was effective, more plans and projects followed — all alike — about ski resort development, all labelled as “eco-compliant”. It seems that our gorgeous land is fit for nothing but skiing, even in the wake of climate change, which is giving all skiing resorts a really hard time. But then there are public funds available to foster artificial snow, and even to finance cableways as “sustainable means of transport for mountain residents”!

The truth about ski resorts in Abruzzo is that they are only doing well thanks to large amounts of public funding — and then only in the few areas within easy reach which receive the right amount of natural snow. Proximity to villages is an important factor, as the building of hotels and residences will never replace the attractions of true village life.

Other resorts located in more remote locations will never reach the Alpine levels of profitability, not even if endowed with huge hotels and Alpine quantities of snow. In fact, the profitability of such resorts is extremely low, if not non-existent. Recently the resort with the big EU-funded car park was sold by its founder due to meagre profits; another resort, which is owned by a public body, is kept alive only through continuous injections of public funding.

Several tens of millions of euros from public funds have been devoted uniquely to the ski slope business over the past few years. The

parks were unable to withstand this tide, or to propose and foster alternative forms of tourism like wildlife watching and cultural activities. This was partly due to the fact that they still hadn’t laid down their park plans which, as we have seen before, had become entangled in bureaucracy.

As the park authorities finally took their first steps, studies were made and draft plans prepared. At present their approval is being held back by the Abruzzo regional government. The final delimitation of the Sirente-Velino Regional Park was severely cut before being approved, which meant that hunting continued on one of the most important corridors between the regional park and the neighbouring national parks.

#### **NEW DANGERS AHEAD**

The latest blueprint for Abruzzo park management comes from Gran Sasso-Laga National Park; it is a very interesting and, at the same time, a very dangerous strategy. The idea is to divide the park’s territory into districts, and then issue a European directive to lease out their management and economic exploitation to private enterprise.

This could provide Abruzzo with foreign expertise on landscape management and conservation from countries with a stronger tradition and scientific expertise in this field. But it’s also risky, especially in relation to ski development plans, as big tourist operators could answer the call and feast on our territory. It all depends on how the directive will be drafted — whether the selection criteria will favour scientific expertise or economic investment.

A worrying signal is the recent approval by the park authority of a plan which foresees a huge extension of the skiing area, with the opening of a new slope and the building of new cableways and chalets on the highest and widest highland plateau, within the core of the park.

An environment of international importance like Abruzzo cannot be managed in disregard of national and international rules of nature conservation, just to benefit a few private enterprises.

We hope that the international community will remain vigilant to ensure that the unique Abruzzian ecosystems are preserved for everyone to enjoy, and that Abruzzian people can continue to live there as they have done for centuries before.



Picture: Marco Scozzafava

*Rocca Calascio is a fine example of Abruzzo’s ancient fortified hill villages.*

# MONITORING MOUNTAIN RESEARCH PROJECTS

THE Alpine Network of Protected Areas (Reseau Alpin des Espaces Protégés) started the European Mountain Pool project in 1999. Its aim was to establish a database for the documentation of ongoing research into all types of European mountain protected areas, to provide a tool to enhance research co-operation and co-ordination, information exchange and common project planning among protected areas all over Europe.

Financial support was given by the Swiss Federal Agency of the Environment, Forests and Landscape and the French region Rhône-Alpes. Project leaders are Guido Plassmann, Alpine Network of Protected Areas, and Thomas Scheurer, Research Council of Swiss National Park.

Up to May 2003, 57 protected areas and 323 research projects with 356 scientists involved have been registered in the European Mountain Pool database.

Of the 57 protected areas contributing data, 29 were in the Alpine region and 28 outside. 48% of the research projects were science-based, one third of the projects were oriented to or initiated by park management, while one sixth were concerned with monitoring.

Taking a closer look at the difference between those protected areas located within or outside the Alps, it was found that a large majority of the monitoring projects took place in the Alps, while management-oriented projects were more numerous outside the Alps.

Looking at the people leading research projects, it was found that the largest category in non-alpine parks were from the protected areas themselves. In Alpine parks, however, the largest category — nearly 40% — were from universities or other research institutions. It is thought this was due to the traditionally very active research in the Alps and the great number of universities in or near that region. In other mountain protected areas, project leaders from academic institutions accounted for only 11% of the total.

A total of 27 projects involved the co-operation of several protected

areas, nationally and internationally, which form a good base for further co-operation and exchange. There were nine alpine projects involving national co-operation and seven in non-Alpine parks. All 11 projects involving international co-operation were in the Alps.

The report notes that this may be due to the fact that the Alpine region is perceived as an entity and that the existence of institutions and structures linking all the Alpine countries could be an explanation for this sense of cohesion, which is reinforced and facilitated by institutions such as the Alpine Network of Protected Areas.

Analysis of all the research projects registered found that 80% involved natural sciences, and within this discipline general

***From the report RESEARCH IN EUROPEAN MOUNTAIN PROTECTED AREAS — CURRENT SITUATION AND CHARACTERISTICS, by Tatjana Reeg, Guido Plassmann and Thomas Scheurer, printed in the Alpine Network Newsletter, No. 15.***

biology was by far the most significant. Half of the general biology projects were related to zoology and another quarter to botany.

Environmental sciences such as soil sciences, geomorphology, meteorology and climatology were also widely represented and within this category, hydrology, limnology and glaciology accounted for 47% of the projects. Within the engineering discipline, most projects were related to forestry.

Within social sciences and economics, more than half of the projects were related to geography while economics was hardly represented, despite the fact that a large number of parks are concerned with regional development.

Projects involving cultural aspects were noticeably absent, with only one project in history. Remarking on the absence of projects on archaeology, languages or ethnology, all fundamental to cultural heritage, the authors note: "Although the main objective of

protected areas traditionally has been to conserve nature, nowadays this objective has evolved to include the preservation of historical values as well as sustainable human activities. In this regard, a strong imbalance within the registered research disciplines is evident."

Within Alpine parks and protected areas the evaluation of research project disciplines found that nature conservation is the major topic of interest, followed by spatial planning (management plans, landscape planning) and forestry. The authors describe the small number of projects related to tourism as "astonishing".

In their conclusions, they say: "Regarding research inside and outside the Alps, outstanding similarities can be found in terms of the project disciplines. At the organisational level, differences are more evident, as is apparent in the project types, the institutions involved and the co-operation level. In view of future research and research co-operation among protected areas, we would like to outline the following gaps:

"International co-operation is still weak, especially outside the Alps, and should be enhanced. Research in protected areas is predominantly disciplinary, focused on natural sciences and dominated by zoology and biology. Consequently efforts should be undertaken to integrate humanities and to build up co-ordination structures for inter- and transdisciplinary research.

"Regional structures — natural/regional parks and reserves — should become more active in research and therefore need specific support to promote research.

"Most protected areas should improve their information on research on the web. The Alpine Network could support protected areas in directly publishing on the web the projects they have registered in the European Mountain Pool database.

"Lastly, the database European Mountain Pool should be completed and project information needs to be updated in order to serve as a reliable instrument for future project planning and research co-operation."

\* For further information contact Dr Guido Plassmann, ([guido.plassmann@alparc.org](mailto:guido.plassmann@alparc.org)) or Dr Thomas Scheurer ([icas@sanw.unibe.ch](mailto:icas@sanw.unibe.ch))

# STRATEGY AIDS SURVIVAL OF SNOW LEOPARDS

INTERNATIONAL conservation organisations, Traffic, WWF and the International Snow Leopard Trust have launched a snow leopard survival strategy with the support of more than 70 conservationists from 18 countries. The strategy includes anti-poaching patrols and a scheme to pay compensation to owners of livestock killed by snow leopards.

Other proposals include building stone night shelters for livestock, the creation of alternative sources of income for herders and improving herding practices to reduce conflict

## SOUTH ASIAN ROUND-UP by Pankaj Sekhsaria

situations. A report issued by the three organisations, *Fading Footprints, the Killing and Trade of Snow Leopards*, estimates that their numbers have declined to between 4,000 and 7,000 due to illegal trade in leopard skins mostly used in fashion garments and accessories.

## pakistan

### ACTION OVER LAKES

THE Saiful Malook and Lolusar Lakes and their catchment areas in the North West Frontier Province, located in the Mansehra district and covering areas of 4,856 and 30,375 hectares/12,000 and 75,058 acres respectively, have been declared national parks. The move has been prompted by the rapid decay of the lakes due to pollution, and overgrazing and deforestation in catchment areas. Hunting, trap-

ping of wildlife, collecting of fuel, burning of plants, land reclamation and mining is now prohibited in these areas.

Wildlife Department staff will encourage the active involvement of local communities in conservation efforts around both lakes, as is already happening in the province's three existing national parks, Chitral Ghor, Sheikh Badin and Ayubia.

## india uttaranchal

### TOURISM FIGURES UP

STATISTICS recently collected by the state's Centre for Ecotourism indicate that wildlife tourist traffic increased by over 20% between October 2002 and September 2003.

Corbett National Park recorded the highest increase with 87,000 visitors, an increase of 17% over the previous year. In response, park officials have decided to allow only 60 vehicles a day to enter the park during the current tourist season.

Park director, Digvijay Singh Khati, said that this move would help reduce the degradation of roads and pollution levels. The move was welcomed by environmentalists but

some tour operators have voiced concern that the vehicle restrictions will hamper tourism. Covering an area of 520 sq km/200 sq miles, the park has seen annual vehicle numbers top 20,000 vehicles.

## assam BODIES FOUND

Following a report received by Juan Carlos Gambarotta, vice-president of the International Ranger Federation, that a ranger and a member of forestry staff had been kidnapped in the Kuklung Forestry Reserve in Assam state, it has since been reported that police have found the bodies of the two men.

## india/bangladesh TIGER STUDY BACKED

UNESCO and the United Nations Foundation have announced that they will participate in a joint tiger-related biodiversity project in the Sundarbans. US \$125,000 is to be spent on a feasibility report on the project, which will involve the study of tiger feeding habits and breeding behaviour, and research into why some become man-eaters.

A joint Indo-Bangladesh exercise to determine tiger numbers will be undertaken shortly in the forests of the Sundarbans that straddle the boundaries of both countries. The tiger count in the Indian forests, which stretch across nearly 4,200 sq km/1,620 sq miles, stood at 271 last year.

## kerala/rajasthan NEW NATIONAL PARKS

THE Kerala state government has issued a notification declaring a 1,281 hectare/5 sq mile area of pristine shola forests in Idukki district as the Mathikettan-Shola National Park. It also announced draft plans for the creation of two further national parks involving a further 880 hectares/3.3 sq miles in the district.

The Rajasthan state government has announced plans for a new Rajiv Gandhi National Park in the Hadauti region of the state which will encompass three existing wildlife sanctuaries. Extending over an initial area of 100 sq km/38 sq miles, the park contains 10 villages whose occupants are said to have reached agreement with the state forest department to be relocated outside the park.

## west bengal RED PANDAS RELEASED

TWO red pandas bred in the Padmaja Naidu Himalayan Zoological Park in Darjeeling have been released in Singalila National Park. The captive red panda breeding project was initiated by the zoological park in the late 1980s.

The pandas were kept for several months in a large pre-release enclosure for acclimatisation and had radio collars fitted before their release into the wild. A further two pandas are scheduled for release in March. The state forest department is also considering the release of more captive bred pandas in Senchal Wildlife Sanctuary near Darjeeling, where the species is believed to be locally extinct.



*Red hartebeest: annual culls on individual farms.*

## letters

# CONSERVATION WORK IN NAMIBIA

WHILE working for 10 weeks in Namibia, in the 45,000 hectare/175 sq mile Seeis conservancy east of the capital Windhoek, as part of a four-strong team of researchers studying red hartebeest, I was given a first-hand insight into wildlife conservation efforts.

Just over 15% of the country's surface area is devoted to national parks and game reserves, yet well over 75% of Namibia's wildlife is found outside these protected areas, placing a large responsibility on conservancies which make up a far larger proportion of the country.

On these conservancies, whether they be commercial groupings of farms or conservancies comprising areas of communal land, landowners and members of local communities have pooled natural resources for the purpose of conserving and using wildlife sustainably.

The commercial conservancies which dominate the landscape in

Namibia, especially in the south and central regions, are run by farmers who, despite fighting increasing bureaucracy to obtain permits and licences for hunting and conservancy certification, work on in a remarkably efficient manner.

Although government funding is understandably being put towards fledgling community conservancies, whose people have a greater need for tourism income than the commercial farmers, I believe that the well-established, commercial conservancies could, if given proper government backing, become prime conservation areas.

Despite high cattle numbers, these conservancies are havens for wildlife. Leopard, cheetah, caracal, kudu, jackal, oryx, springbok, aad-wolf and bat-eared fox are prevalent alongside a huge diversity of birds and reptiles.

While Namibia has burgeoning tourism centred around ecotourism,

this is underdeveloped in many conservancies. Farmers will continue to raise cattle and limit wildlife numbers to preserve grazing areas, unless financial incentives are offered to encourage them to reduce livestock numbers and allow free-ranging game populations to increase.

The few farms which are centred around wildlife are trophy hunting-based and some of these have areas of up to 100 sq km/38 sq miles game-fenced. This is promoting inbreeding in the game herds and is certainly not a long-term solution to conserving large areas.

The Seeis conservancy, which is made up of 46 farms, holds the most viable herd of red hartebeest in southern Africa, yet culls that reduce herds on individual farms by between 10% and 15% are carried out annually to keep their numbers down and preserve grassland.

So while the main threat to the hartebeest is increased cattle farming by white landowners and Namibian herders, worse still for the future of the species would be the collapse of the commercial conservancy system which could lead to the degradation of the land under the wrong management.

Although close-knit community programmes are working throughout the country, commercial conservancy involvement and communication is minimal. A crossover of knowledge from commercial conservancy to community conservancy is essential to help the community conservancies develop.

It is to be hoped that whatever changes lie ahead will not be to the detriment of the red hartebeest and Namibia's other remarkable wildlife and diverse peoples.

— **Michael Riddell, Dept of  
Biology & Nutritional Sciences,  
Newcastle University, UK.**

## RANGER SAFETY STRUCK A CHORD

I HAVE just read several articles in Issue 10 of NPIB and was particularly struck by the Ranger safety issue. You may know of Canada's recent (actually a two-decades-old struggle) attempt to resolve just such an issue. The commentary by the US Park Rangers' Association spokesperson on allowing "amateurs to manage the law enforcement programme" is a familiar line to the Warden Service in Canada, although we don't agree internally within our own profession on the need to arm.

The article about Georgian Bay Islands National Park's reptiles from Darlene Upton was very modest. She has played a very central role in the recovery efforts with one other colleague, ostensibly the GIS specialist, who has spent more time afield than the 'field personnel'! Their accomplishments are very significant.

And... I always enjoy reading about Scottish protected area management. The piece on the Cairngorms was a nice summary

of the challenges, and it triggered lots of issues for me: birthplace (actually south of the Highland Line), a visit with Countryside Rangers all over Scotland in 1998, and landscape memories of Gros Morne National Park in Newfoundland where I started my career with Parks Canada; lots of physical and even floral and faunal similarities.

— **Keith Wade, Senior Park  
Warden/Wildlife Projects,  
Pukaskwa National Park,  
Ontario, Canada.**

**Africa ~ Americas ~ Australasia ~ Asia ~ Europe**

# National Parks and Protected Areas International Bulletin



Published on a quarterly basis. Issue No. 13 will be posted to subscribers in May.  
Subscribers paying the Corporate rate will receive 2 copies of the magazine.

## NEW VALUE-FOR-MONEY SUBSCRIPTION RATES

I wish to take out an annual subscription – starting with issue 13

- |   |                          |                              |                          |
|---|--------------------------|------------------------------|--------------------------|
| UK: Corporate rate (2 copies) £15.00            | <input type="checkbox"/> | Personal subscription £10.00 | <input type="checkbox"/> |
| Europe: Corporate rate (2 copies) £17.00        | <input type="checkbox"/> | Personal subscription £11.00 | <input type="checkbox"/> |
| Rest of World: Corporate rate (2 copies) £18.00 | <input type="checkbox"/> | Personal subscription £12.00 | <input type="checkbox"/> |

## PAYMENT WITH ORDER

Please debit Visa  Mastercard  Other

Card no.

Start date ..... Expiry date .....

I enclose an international money order in £ sterling for £ .....  
made payable to publisher-**Powdene Publicity**.

Name .....

Address .....

E-mail address .....

## ORDER TO BE INVOICED

Name .....

Park or organisation .....

Address .....

Post/zip code .....

Country .....

**EASY ORDERING – just e-mail [NPIB@powdene.com](mailto:NPIB@powdene.com) with your name, address and credit card details or a request for an invoice.**

Please return to NPIB, Unit 17, St Peter's Wharf, Newcastle upon Tyne NE6 1TZ, United Kingdom.  
Telephone (+44) 191 265 0040 or fax (+44) 191 275 2609

ISBN No. 0-9520226-5-6