National Park
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Restored fishermen's cottages at Altja, in Estonia's Lahemaa National Park.

ON OTHER PAGES . . .

SYMBOL OF ESTONIA'S NATIONHOOD

by STEWART BONNEY

AS a young forestry graduate, Arne Kaasik started work as a ranger in Lahemaa in 1971, the year in which this north Estonian coastal area became the first national park in the former Soviet Union.

Appointed director 15 years ago, he has witnessed many changes in the park's status and role during the past three decades and remembers the frustrating years when the park's coastline was classified as a sensitive border zone, a no-go area for all but a privileged few, when local villagers were only allowed access to beaches during daylight hours in summertime.

Today, the abandoned watchtowers once manned by Soviet border guards are a stark reminder of the era which ended when Estonia gained independence and the Soviet army departed in 1993.

And with some justification, Arne believes that Lahemaa played an important role in bolstering national pride during the Soviet era.

"When the park was established, one of its main aims — in addition to the protection of ecosystems — was the preservation of historical and cultural heritage," he said. "This area has one of the most characteristic and diverse natural landscapes in Estonia with old farming and fishing villages and historic manor houses typical of our national culture.

"It was recognised in the 1960s that protection was needed from the threat posed by planned new recreation areas, demand for summer cottages, land reclamation, timber harvesting, mineral extraction and agricultural pollution.

"But the ideologists of the Communist party had strong suspicions that the national park would considerably support the building of national awareness and the revival of the traditions of the Estonian people. Their opposition was quite serious and in time their suspicions were proved to be true."

While Moscow did not officially recognise national parks until the

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Woodland meets water at Laukasoo, largest of the mires in Lahemaa National Park.

establishment of Losinyi Ostrov and Sochynsky — Russia's first national parks — in 1983, he maintains that Lahemaa, together with the creation of Gauja National Park in Latvia in 1973 and Aukstaitija National Park in Lithuania the following year, "played a considerable role in the promotion of national identity through the joint preservation of nature and national heritage".

In Lahemaa during the late 1970s and throughout the 1980s, alongside the development of a nature trail network and the introduction of guided tours for visitors, a major programme of work was undertaken to preserve historic buildings within the park, including the restoration of three 18th century manor houses and numerous traditional buildings including farmhouses, a thatched tavern and fishermen's cottages.

And in the late 1980s, the park continued to play an important role in the rise of national awakening by staging music and folklore festivals, displays of local crafts and nurturing the involvement of local people in community councils.

Land reclamation, clear felling of forests and mineral extraction were prohibited and strong controls imposed on the construction of new buildings. But in the 1990s, following the departure of the Soviet military presence, property and land reforms brought renewed economic pressures from commercial forestry interests and developers eager to create new recreation complexes and residential property.

Outlining the park's current strategy to deal with these pressures, Arne said: "Estonia now lies within Europe, where the remaining wild nature and undeveloped coastline is scarce. Consequently our activities have shifted towards the preservation of natural communities within the park.

"However, Tallinn has a population of more than 400,000 people. This is their favourite area for outdoor recreation and there is now a very great demand to build summer houses here.

"We can control development within the national park as new building needs our approval, and we allow no building on coastal land which is state-owned, but elsewhere some landowners are developing around existing settlements — even though many local people want to save this traditional landscape.

"Ten years ago at least 100 people worked in the park. Today, I have a staff of only 12 people and much of our work involves liaison with the 5,000 individual landowners."

The park now attracts around 100,000 visitors annually, of which about 10,000 are overseas visitors, and an impressive visitor centre and management complex have been recently completed in the grounds of Palmse Manor House. The 18th century mansion now houses a museum, the estate brewery has been converted into a comfortable hotel and a nature trail runs through the landscaped grounds.

Nearby, the park's newly-constructed headquarters are housed in an impressive stone building built in the style of a traditional stable block, but reduced funding is delaying completion of a new visitor centre which features a 350 square metre/3,770 square foot exhibition area.

To compound the financial difficulties, a tourist law passed two years ago prevents the park from earning income from visitors either by offering guided tours or through the sale of any goods other than information leaflets.

"The focus of our work now is very much more about nature conservation," said Arne, "but in the present economic climate we are restricted in producing new interpretation material, and we will not be able to create any new nature trails in the near future because the money we have must go towards the upkeep of existing trails."

He explained that one unexpected problem to arise in the post-Soviet years has been the decline in farming activity due to the removal of all agricultural subsidies. The large collective farms built in Soviet times stand empty and many of the area's small farmers, who are unable to compete with cheap food imports, have stopped rearing cattle and sheep.

"Today many of them would prefer to sell their land for housing," he said. "We estimate that between 3,000 to 4,000 hectares/7,400 to 9,900 acres of grass pasture in the park is not now being grazed, and since last year we have started offering small payments to encourage some farmers to graze animals in special areas where it will assist landscape protection."

During a walk along the 4.7 kms/three miles of paths and boardwalks of the Oandu Natural Forest Nature Trail, opened five years ago, Arne highlighted some of the changes he has observed in this old pine forest which, as a strict nature reserve, had previously been closed to the public since 1971.

National Park International Bulletin

DEAR READER,

THIS sixth issue contains a wide range of articles largely contributed by professionals working in national parks and protected areas around the world.

Despite the excellent communications link provided by the web and e-mail we have realised that it is often difficult for our contributors to meet our tight editorial deadlines when they have very busy working lives.

For that reason — as we complete our first year of publication in which we have attracted subscribers from 28 countries — we intend to change the frequency of publication to a quarterly basis.

This, we hope, will reduce the time pressure on our contributors and enable us to gradually increase the number of pages in each issue.

This change will also enable us to reduce the annual subscription rates, which we hope will lead to a continued growth in our global readership.

NEW READERS

Every week we hear from people who have heard about NPIB for the first time. Our distribution database continues to grow, but we know there will be many more potential readers out there. If you know someone who may not yet have seen a copy of NPIB, please let us know and we will be pleased to send them a complimentary copy.

YOUR NEWS

As mentioned above, we realise busy people do not always have time to sit down to write feature articles or news stories about their parks or organisations. Where this is the case, we can help. Just send us by e-mail or fax (see back page) any printed information available, or simply a few notes. Our writers can follow up with supplementary questions and draft an article for your approval before publication.

Editor — Stewart Bonney

Please e-mail editorial contributions to:

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Erratic boulders in the forest at Palmse were transported from northern Finland by continental ice flows.

Bark marks on trees along the trail tell a variety of stories. Clawed trunks marking brown bear territorial boundaries can still be seen, but while their numbers within the park were estimated to be as many as 50 some 15 years ago when the forest was less disturbed, today the population is thought to be as low as 10.

Territorial bark scratch marks made by lynx and wild boar are also found along the trail. The park's lynx population is thought to number around 30, but wild boar are far more numerous and in recent years population control measures have had to be introduced to prevent the destruction of young trees and privately-owned potato fields.

A limited cull is also carried out annually on the forest's resident moose population. One section of the trail passes through an area where serious tree damage was caused in the 1980s when the moose population was uncontrolled, and when stress and a shortage of food led to numbers of these 500-kilogram/half-ton animals destroying many trees.

One animal now absent from the Lahemaa forest brooks is the European mink. This was its last habitat in Estonia until it was ousted by the introduced American mink 10 years ago, but a project has been launched on the island of Hiiumaa, in western Estonia, to reintroduce the species and hopefully return them to Lahemaa in the near future.

Beavers, which had disappeared from the area at the beginning of the 19th century, returned to the park in the late 1980s. Now the population is currently estimated at more than 40, but as their dam-building activities are affecting water levels in mire areas and the spawning of sea trout, measures are under consideration to regulate their numbers.

Arne Kaasik believes that the long-term strategy for Lahemaa National Park which was formulated in 1972 by Edgar Tönurist, the then deputy head of Estonia's Council of Ministers, is still valid today.

This stated: "Within several generations, Lahemaa can become a real national park where the changing of natural ecosystems due to human activity is minimised, where the untouched virgin forests and raised bogs within beautiful natural landscapes are preserved as well as the ancient human settlements, and where relations between man and nature are harmonic."

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LAHEMAA FACT FILE

FOUNDED on June 1, 1971, Lahemaa National Park, on the northern coast of Estonia, extends over 72,500 hectares/280 square miles, of which almost one third is a marine area. A one-hour drive east of the capital city, Tallinn, it stretches for 30 km/18 miles along the southern shore of the Gulf of Finland.

Lahemaa, the Land of Bays, has a landscape typical of northern Estonia, consisting of peninsulas and bays formed by Baltic Glint limestone cliffs, coastal plains with pine forests, mires, dune ridges, coastal terraces, six lakes and eight rivers. Shallow shore lakes of brackish water including the park's largest inland water, the 346 hectare/855 acre Kahala Lake, attract vast numbers of migrating birds.

Within the park there are three different zones of protection. Two small zones, with a total area of 100 hectares/250 acres, are categorised as strict nature reserves which are closed to visitors.

An area totalling 12,700 hectares/49 square miles, largely consisting of state-owned forest and bog areas where there is no human settlement, is classified as a Special Management Zone, where the aim is to ensure natural development of ecosystems and access is not usually restricted.

The remainder of the park, much of it privately owned and inhabited by 4,000 people, is a Limited Management Zone where sustainable economic activity is permitted.

Erratic boulders and stone fields are the most ancient natural objects in Lahemaa. Transported by continental ice flows from the north of present-day Finland, the oldest are estimated to be 1,600 million years old. Lahemaa is considered to have the highest concentration of erratics in northern Europe and its largest boulder — Majakivi, on the Juminda peninsula — stands seven metres/23 feet high and has a volume of 580 cubic metres/20,500 cubic feet. The largest stone field, at Käsmu, covers 400 hectares/990 acres.

Arne Kaasik, director of Lahemaa National Park.

The first settlers came to this part of northern Estonia at the end of the Stone Age and it has been inhabited continuously for 4,000 years. Surviving stone burial mounds at Hundikangrud are 2,000 years old.

Three villages, Kahala, Palmse and Vihula, were established as large settlements in the first century AD and many fields, pastures and meadows have remained unchanged for centuries.

The oldest coastal villages, Pärispea and Juminda, are mentioned in 13th century records and in the late 19th century the area's strong seafaring roots led to the establishment of a naval school at Käsmu where ships' captains continued to be trained until its closure in 1931. One of the school buildings now houses a maritime museum.

More than 800 plants have been registered in the park including 250 species of lichen, more than 100 mosses and 150 species of fungi.

Among 50 species of mammal recorded are moose, beaver, wild boar, lynx and brown bear. A total of 222 bird species have been recorded in the park and an estimated half a million birds visit Lahemaa during the migratory season, including big flocks of long-tailed duck, scoter, barnacle goose, brent goose, black-throated diver, red-necked grebe, great crested grebe, common crane and common goldeneye.

Almost two thirds of the park is covered by dry pine and spruce forest with small areas of broadleaf primeval forest. Resident birds include the great spotted, black and three-toed woodpeckers, hazel grouse, black grouse, capercaillie and common crane.

Lying on the former shoreline of the post-glacial Baltic Ice Lake, nine per cent of the park consists of mires, the largest of which — Laukasoo — extends over 810 hectares/2,000 acres.

Sagadi Manor is a renovated 18th century building in the park.

The Bonneville cut-throat trout: a native species marginalised by European incomers.

usa

FISH IN THE DESERT

by GRETCHEN SCHENK, Biological Science Technician, Great Basin National Park.

WHAT are trout doing in the Great Basin desert? Fish and arid lands usually do not go together, but the Great Basin surprisingly offers many miles of fish habitat.

The Great Basin is so named because water does not drain out of this area. Instead, all streams evaporate or go into the ground, never reaching the ocean. The Great Basin covers 518,000 sq km/200,000 square miles, stretching across Nevada into Utah, Idaho, Oregon and California. It consists of sagebrush-covered valleys and north-south mountain ranges that on a physical map look like numerous caterpillars marching along. To preserve a segment of the Great Basin ecosystem, Great Basin National Park was established in 1986, expanding the previous Lehman Caves National Monument to include 310 sq km/120 square miles.

Ten thousand years ago, the area would not have been considered a desert, since Lake Bonneville covered much of the eastern Great Basin. This large lake, of which the Great Salt Lake is now a remnant, hosted a large population of Bonneville cut-throat trout *(Oncorhynchus clarki utah)*, the only trout native to eastern Nevada. As the climate warmed and the lake dried up, Bonneville cut-throat trout moved into alpine streams to survive. They adapted to flash floods, late summer low water levels, high sediment loads and other conditions in which many other fish species cannot survive.

How to reintroduce a native fish in a national park

Bonneville cut-throat trout eventually met other challenges to their survival. When European settlers arrived in the area in the early 1800s, they stocked many streams with non-native trout, including rainbow, brown and brook trout. In addition, land use changes such as cattle grazing, mining and logging put added pressure on the Bonneville cut-throat trout, and 90 per cent of their population disappeared within a few decades.

In the 1980s, plans were developed to reintroduce Bonneville cut-throat trout into some of their native habitat. Since the Bonneville have been isolated in mountain streams for thousands of years, each population has evolved differently, which can be detected by genetic testing. Four general distinctions have been made, with the Bonneville in western Nevada making up one of the sub-groups. The Bonneville cut-throat trout was petitioned for listing under the Endangered Species Act twice and is considered a species of concern by the US Fish and Wildlife Service.

The park encompasses 10 perennial streams, all of which flow out and across lands administered by multiple governmental agencies and private individuals. Therefore, in order to protect and restore the Bonneville cut-throat trout, the effort was co-ordinated as an inter-agency plan. Partners include the United States Forest Service, Bureau of Land Management, Nevada Division of Wildlife, the United States Fish and Wildlife Service, the volunteer group Trout Unlimited, and private landowners. Having partners is a critical part of the Bonneville cut-throat trout reintroduction — each partner contributes something that no other partner can.

Streams in Great Basin National Park were studied to determine which would be suitable for reintroduction efforts. Of a total of 48 km/30 miles of fishable streams in the park, 29 km/18 miles were designated as

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potential areas for Bonneville cut-throat trout reintroduction.

During these preliminary studies, a population of Bonneville were found in one of the park streams! This small population had been overlooked in part because the stream is difficult to access, only about one foot wide in most places and averages about two inches deep. In addition, the cut-throat look slightly like rainbow trout, so it had been assumed that the fish were hybridised. Samples were sent to two different genetics labs, both of whom confirmed that the population is pure.

After the potential reintroduction areas are identified and prioritised, the next step is to sample for macroinvertebrates (aquatic insects), molluscs and amphibians to determine what lives in the stream. Macroinvertebrates are particularly important to identify and quantify, since they form the major part of the food base for fish. Mollusc searches focused on looking for the Great Basin spring snail, a snail that is endemic to the Great Basin desert. Amphibian searches have revealed no amphibians in the park, much to our surprise.

After these initial surveys have been completed and follow-up surveys done for an additional year, the stream is ready to have the non-native fish removed. This is usually done using a chemical piscicide, which effectively removes every fish from the selected stream areas. This is important, since if just one non-native fish is left, it can possibly hybridise with the Bonneville cut-throat trout. Following treatment, the stream is monitored until the food base reaches 75 per cent of the pre-treatment levels of diversity and population size, and then Bonneville cut-throat trout are released to the stream.

Bonneville cut-throat trout currently live in three park streams and five streams on National Forest Service land to the north of the park. Within the next three years, this native species will be reintroduced to an additional three streams. Two of these streams are substantially larger than the current streams in the park where the Bonneville cut-throat live, so it is expected that they will grow to larger sizes.

Five to 10 years after reintroduction, the Bonneville cut-throat trout should be well-enough established to support a fishery. Anglers from across the country and from around the world will be able to catch (and release) Bonneville cut-throat trout in their native habitat.

Pictures: Great Basin National Park

Electrofishing survey for cut-throat trout at South Fork Baker Creek.

poland

MOTORWAY THREATENS MARSHLAND

by STEWART BONNEY

A SECTION of a new European super-highway, the Via Baltica, is posing a major threat to an internationally important marshland area in Poland's largest national park, Biebrza.

Lying north-east of Warsaw, 50 km/30 miles from the border with Belarus, the Biebrza marshes are home to bitterns, corncrakes, white and black storks, cranes, spotted eagles and marsh harriers.

It is widely accepted that a new road is urgently needed to cope with the huge growth in trans-national lorry traffic which has developed following the collapse of the Warsaw Pact, and resulted in serious congestion, noise and air pollution on the narrow roads passing through old villages in this corner of Poland.

The new motorway — funded by the European Union — was originally set to pass safely to the west of the national park, but following intensive lobbying its route was altered to link up with the regional capital of Bialystok, taking it through the heart of the park and through the important Augustowska and Knyszynska primeval forests.

The Via Baltica will form part of a pan-European motorway system which is part of the EU's planned transport network for accession countries — those seeking full membership of the EU. There has already been major investment in Lithuanian and Latvian sections of the route in areas which were said to be "without significant environmental impact".

Ironically Poland, along with other eastern European countries, is being told that as a condition of entry to the EU, it must comply with legislation to ensure that the environment is not damaged before or during entry.

Supporters of the new route are suggesting that the national park's boundaries be redefined to allow the road to pass through this protected area — a proposal that appals Biebrza National Park director, Adam Sienko.

He said: "To start removing protection would be an unbelievably dangerous precedent. Fragmentation destroys habitats. This area is of unparalleled national and international significance. We have 280 recorded species of bird, of which 50 are on Bird Life International's list of species with high priority conservation status.

"The forests in this region are also the last migratory corridors of wolf and lynx from Belarus towards the west. These species won't survive if they cannot disperse."

Zoltan Walinszky, whose work assessing the effect on wildlife of developments linked to accession to the EU is funded by the Royal Society for the Protection of Birds,

Picture: Nigel Bean

The aquatic warbler, one of the globally-threatened species whose major stronghold is the Biebrza marshes.

said: "The stakes are very high in eastern Europe because it still has amazing biodiversity and an abundance of species which are rare or have totally disappeared in western Europe.

"The EU's role is very contradictory. On one hand it insists that accession countries draw up a list of Natura 2000 sites which would guarantee protection to the most important areas before entry into the European Union. On the other hand it is promoting a transport network which takes no account of these areas."

Local opinion in the Biebrza region is divided, with some communities viewing the new motorway as an opportunity to bring development — particularly tourism — to an area with high unemployment. Others have been co-operating with the national park in radical measures to extend the protected areas through agri-environment schemes.

Farmers have been financially supported to continue traditional haymaking, and local communes have been co-operating on projects to use the by-product as biomass to heat schools and homes.

Zoltan Walinsky added: "Bird life does not stop on the marshes. The health of their populations depends on surrounding agriculture, the traditional hay meadows. Biebrza has what could be an exemplary scheme of sustainable development which the EU is promoting elsewhere. Yet this area, with so much to teach us and which is so important for wildlife, is threatened by an EU-funded infrastructure project.

"The latest information we have is that the Polish government has announced that construction work on the controversial section of the Via Baltica between Augustów, Bialystok and Warsaw will start in 2004. We will continue to work with our Polish partner organisation to push for an alternative route."

poland

PRIMEVAL FOREST LOGGING FEAR

THE Bialowieza Primeval Forest, the largest and best preserved fragment of ancient European palaearctic mixed lowland forest, is facing a renewed threat from commercial logging operations.

The forest, which straddles the Poland-Belarus border, occupies an area of 625 sq km/240 sq miles in north-east Poland, but only 105 sq km/40 sq miles lying within the boundaries of the Bialowieza National Park are formally protected.

In recognition of the fact that the forest — which dates back to 8000 BC and contains maple, ash and elm trees up to 400 years old — is of unique importance, the park has been on the list of World Biosphere Reserves since 1977 and was inscribed as a UNESCO World Heritage Site in 1979.

Discussions about the expansion of the Bialowieza National Park in order to protect a greater area of the ancient forest began 10 years ago and led in 1994 to the country's General Director of State Forests issuing a regulation prohibiting the felling of trees more than 100 years old.

But a report in Pan Parks Courier (Spring 2002) by Bialowieza's Dr Bogdan Jaroszewicz and Stefan Jakimiuk, of WWF Poland, has revealed that a draft version of a new State Forest management plan now under consideration will abolish this regulation and allow for tree harvesting in the primeval forest to almost double up to the year 2010 — from 130,000 cubic metres/170,000 cubic yards to 200,000 cubic metres/260,000 cubic yards.

Environmental organisations have expressed the fear that after one or two decades of this new so-called "sustainable forestry management", Bialowieza Forest will cease to be primeval.

WWF Poland has produced a report discussing alternatives to logging in the ancient forest and helped publicise the Bialowieza Charter which focuses on the necessity for a complex protection of the area's biological and cultural values.

In an effort to gain international support, WWF is preparing a special report on the present legal and environmental situation of the forest which will be presented to the European Union.

usa

A BALANCING ACT BETWEEN SUPPORT AND SOLITUDE

by MICHAEL HAYNIE, Guadalupe Mountains National Park

A LAND of extremes constantly generates contradictions. It is ironic that Guadalupe Mountains National Park is world famous and at the same time one of the lesser-visited national parks in the United States.

An estimated 200-220,000 visitors a year would suggest a park with lots of elbow room, but the same general statistic belies the sheer diversity of the visitors who do make the journey to the remote and rugged land to be found in west Texas.

Scientists from Asia, Europe, and Africa conduct research in the park because of the recent recognition of the Guadalupian Global Stratotype. (A stratotype is a layer of rock recognised by an international committee of geologists as the best representative of a geological time period, in this case, the middle Permian, 260-270 million years ago). The exposed cliffs reveal a cross-section of a textbook example of a transition from shelf crest to basin deposits formed when a sea used to cover the area. However, for every scientist there are thousands of backpackers and hikers from across the globe who come to enjoy one of the last wildernesses of the American Southwest.

Guadalupe Mountains National Park was designated by Congress and President Johnson in 1966 in recognition of its scenic beauty, geological significance, biological diversity and historic value. Geologists have been studying the area since 1855. The International Union of Geological Sciences (IUGC) recently recognised three type sections within the park. An important chapter of the Earth's history is now protected by its inclusion within lands with national park status.

To protect resources park employees inventory and monitor fossil sites frequently. Public access means scientists who want to work here have easier access. After careful review by park management, research permits are granted, thus allowing scientists to benefit from the value of national parks as outdoor laboratories. The park geologist documents collection sites and ensures that disturbance to the resource is minimal.

"Even though the park was established at a time when its scenic value was emphasised by the American public, its ecological value takes on added significance as the world's population continues to increase and the functioning of ecosystems is impaired."
– Park Superintendent Ellis Richard

In April this year, scientists from Germany and Hungary visited to conduct research. Their findings on carbon/oxygen isotope ratios, brachiopod shell composition and conodonts (fish teeth) will add to the current stock of correlative data and help create a more accurate understanding of the Permian reef's evolution.

More recent geological activity in the form of basin and range block faulting (vertical movement of pieces of the Earth's crust) has created a wide range in elevation, 1,100-2,650+ metres/3,600–8,700+ feet, which in turn allows a wide array of plant and animal species to live in the park.

The park is home to desert-adapted animals such as kangaroo rat, javelina, rattlesnake and tarantula along with surprising species such as black bear, mountain lion, and elk. It was recently recognised as a Globally Important Bird Area because of its habitat and species diversity, and the presence of rare or endangered birds such as peregrine falcon, Mexican spotted owl, yellow-billed cuckoo, and Bell's vireo.

Pictures: John Cwiklik

A high country vista: Guadalupe Mountains.

Animals such as mountain lion, black bear, and elk need lots of space to thrive and fortunately for the populations within the park the core (18,600 hectares/46,000 acres) of the park is Congressionally designated as wilderness. As such, it is one of the few wild places in Texas to which the public has access.

Over 98 per cent of Texas land is private property and less than 0.5 per cent is protected as wilderness. The nearby urban population of El Paso and Juarez has increased to more than 500 times its historic level in the mid-19th century. The park, being only two hours away, provides a great weekend escape from the pressures of city life and the

chance to experience the Chihuahuan Desert in its natural splendour.

The fact that the park is relatively undeveloped has other benefits as well. Visitors to historic sites such as the Frijole and Williams Ranches are able to immerse themselves in a vast and silent landscape that is similar to the one encountered by Spanish explorers, Mescalero Apaches, Buffalo soldiers, and ranchers of the 1800s and early 1900s. The park now preserves these areas because of the national significance of the closing of the frontier and the lives of those who settled here.

Early settlers' attitudes towards wilderness and nature were significantly different from today's ever-growing and increasingly urban population. Species such as Merriam's elk, bighorn sheep and wolf were extirpated. Black bear and mountain lion populations were greatly reduced. The combination of overstocking cattle on desert grasslands and a drought in the 1880s encouraged the growth of shrubs such as creosote and mesquite. Today, the land is being given a chance to make a comeback. Populations of black bear and mountain lion are improving and the American public is supportive of the idea of wilderness and open space.

"It does not take an arduous backpacking trip to recognise the value of wilderness. Visitors can still gain a sense of a vast and undisturbed landscape from shorter visits to the wilderness threshold. There is solace in knowing that some of the Earth's ecosystems are being preserved in their primeval conditions."

The imposing rockface of El Capitan overlooks the arid landscape of the national park.

From a Permian reef, to Ice Age forests, to today's desert lowlands and high country woodlands, the Guadalupe Mountains have experienced dramatic changes. As a wilderness, change is recognised as a valuable and necessary process, but certain changes brought by humans present challenges to park management.

Air quality has been monitored within the park since 1982. Although the last 10 years show statistically significant improvement on clear days and no change in the worst visibility days, there is still concern as urban populations continue to grow and the pollutants from as far away as Los Angeles are transported to the region. Night-time visibility is also a concern. Currently, visitors to the park enjoy pristine night-time skies. The National Park Service has retrofitted its facilities with light shields, high-efficiency fixtures and low-pressure sodium lights to minimise light pollution and provide a leading example for nearby communities.

Returning fire to the environment as a natural part of change is another challenge park managers face. Very little is known about the historic role of fire in the Guadalupe Mountains. It is unclear whether Native Americans used fire here like they did in other parts of the country, or to what extent the area's ranching history changed the fire regime.

Today, relict woodlands in the high country and canyons have accumulated dangerous levels of fuels which could potentially burn at catastrophic levels. Scientists are currently studying scarring in cross-sections of trees to determine fire history, so that all fire management decisions have a scientific basis. In order for park managers to allow fire to return to its natural role, fuels will be reduced (through prescribed natural fire, controlled burns, and

mechanical removal) to prevent catastrophic fires from occurring. However, when lives, property, or unique resources are threatened fires will be suppressed.

Being a lesser-visited national park presents park managers with a dilemma. Park management is aware of the changing demographics of the United States and the need to win supporters in populations unaware of nearby park resources. Winning supporters through increased visitation is one way of garnering support, but it must be done without sacrificing the wilderness values of solitude that make Guadalupe Mountains National Park unique.

"The park may be remote, but it is not detached from the rest of the world. Global processes can affect the local area. Dust from the Gobi and Saharan Deserts can travel thousands of miles. Migratory birds pass through these mountains on their way to Central and South America."

Park management and the National Park Service as an agency have had to balance the dual mandate of conserving the scenery and providing for the public's enjoyment since the passage of the Organic Act of 1916. Today, tools such as the Internet allow the park to reach non-traditional audiences and convince them of the stake they hold in their national parks' future. If outreach efforts are not increased, if we do not bring the idea of parks

"One of the most important issues is returning the park's land to its natural fire regime."

to the people, then the public's indifference endangers the notion of public space itself. Due to urban sprawl and low-density housing, 90 per cent of the U.S. population cannot see the Milky Way at night or visit a pristine natural environment easily. The greatest challenge of national parks is to cultivate a land ethic and encourage lifestyle changes that will guarantee that once people journey to national parks and wildernesses, their experience is not marred by activities from outside park boundaries.

Above: trees cloak the side of McKittrick Canyon.
Below: the western diamond-back rattlesnake is a park resident.

Picture: Michael Haynie

global warming

GLACIER RETREAT ACCELERATES

IAN McNaught-Davis, president of The International Mountaineering and Climbing Federation (UIAA) which has 80 member associations representing several million climbers, recently took part in a fact-finding mission funded by UNEP.

(IN a report by Joanna Walters, carried in The Observer newspaper, London) he said that he had found Himalayan glaciers beneath Mount Everest, the world's highest mountain, to be retreating at an alarming rate. The Khumbu glacier — used by Sir Edmund Hillary and Tenzing Norgay as a base camp during their successul attempt to conquer Everest in 1953, had in the intervening years retreated three miles up the valley.

McNaught-Davis climbed up to a glacial meltpool at 5,000 metres/16,400 feet that was marked on maps 20 years ago as a series of small ponds to find that the ponds had merged into a vast lake more than 1.6 km/one mile long.

"It is a harbinger, a clue that something terrible is happening," he said. "Some scientists say 'it must be other factors' but when you talk to people who have lived and climbed in these mountains for 60 years they say it is getting warmer and the glaciers are shrinking at a sprint."

Mountaineers in the European Alps are also reporting accelerated ice melt. On a recent visit to Switzerland, McNaught-Davis was shocked to find that the north face of the Eiger, which once held three large ice fields, now has only one — and that was rapidly diminishing.

Reports from other mountaineers describe similar dramatic retreats of glaciers on the African peaks of Kilimanjaro and Mount Kenya, and in the South American Andes.

NASA scientists in America have said the rate at which the Greenland ice sheet is melting has increased by 20 per cent in the last two decades, and for the first time they have suggested a link with global warming.

Friends of the Earth international climate campaigner, Kate Hampton, has warned that without serious strategies to reverse global warming, the next few decades could see tens of millions of "climate refugees" fleeing regions in Africa and Asia where extreme droughts and floods would become the norm.

The Inter-Governmental Conference on Climate Change established that the average temperature on Earth rose by 0.6 deg C/1.1 deg F in the 20th century and predicted it would be between 1.4 deg C and 1.8 deg C/2.5 and 3.2 deg F warmer by 2100 than it was in 1990.

Picture: Rob Jordan

European Alps: rapidly diminishing ice fields.

WORLDWIDE EVIDENCE

* ***In our recent news information survey, NPIB readers were asked whether they had detected any evidence or signs of global warming in national parks. We print here some of their responses.***

From Kenai Fjords National Park, Alaska, USA, Anne D. Castellina reported: "All of the park's glaciers have seen a notable loss of mass. This recession began in the 1950s but a solid link to global warming has not been determined as yet."

Elsewhere in the USA, a "significant retreat of glaciers" was reported by Olympic National Park, Washington State. Sequoia and King's Canyon National Parks (California) said current research into global climate change was underway through tree ring and soil core analysis, and Great Basin National Park (Nevada) also reported signs of global warming.

Further reports of glacial retreat came from Aoraki-Mount Cook National Park in New Zealand and from Hohe Tauern National Park, Austria.

In Canada, there is ongoing research to determine the impact of climate change at Fundy (New Brunswick) and Riding Mountain (Manitoba) National Parks.

At Biebrza National Park in Poland, changing weather patterns recorded include shorter, milder winters and reduced occurrences of spring floods. Water level changes are resulting in shrub encroachment in open fen areas.

Other reports mentioning some evidence of global warming were received from Australia (Tasmania), the National Parks Administration in Argentina, and the UK (Snowdonia, Northumberland and North York Moors National Parks).

australia

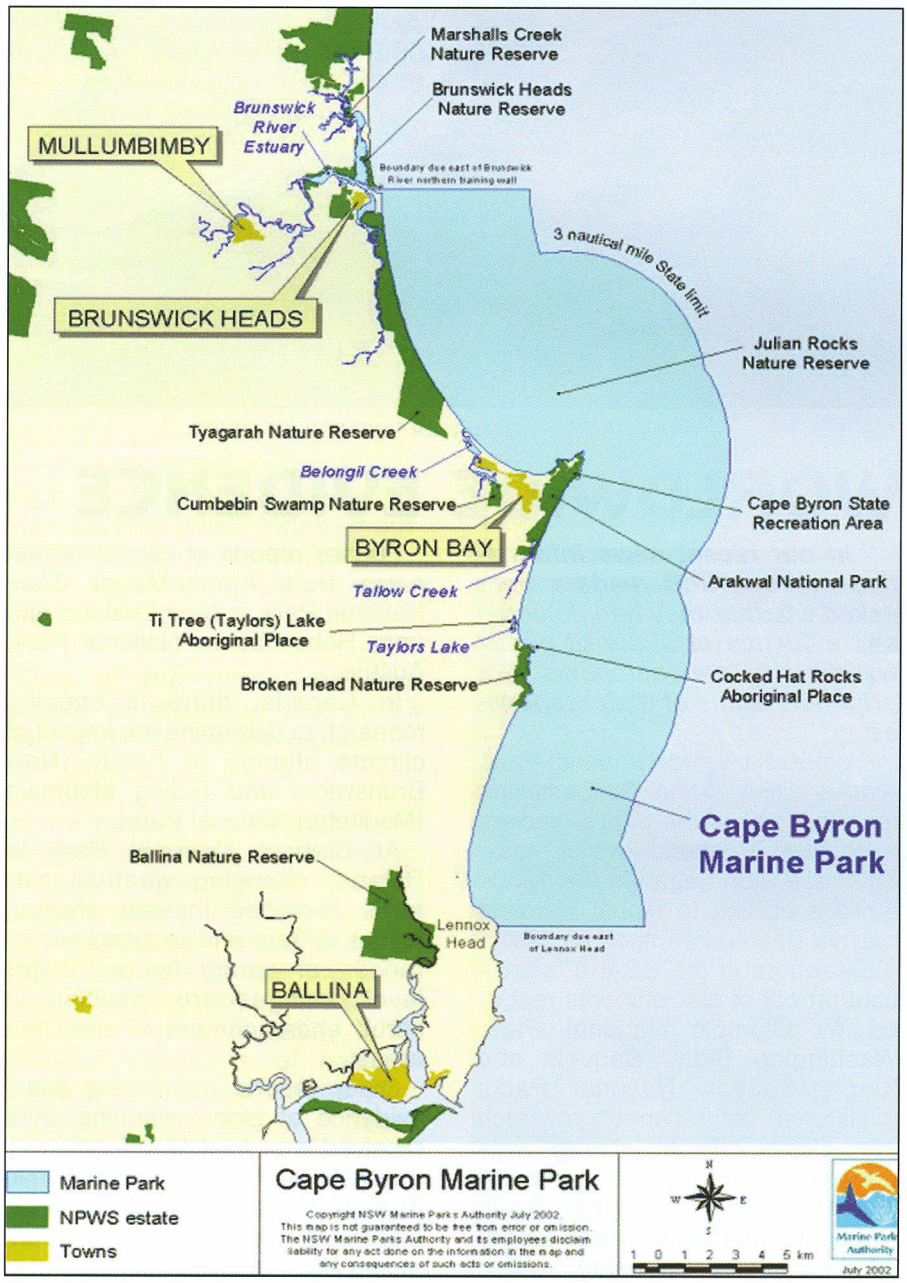
NEW SOUTH WALES CREATES NEW MARINE PARK

by ANDREW DONNELLY

THINK of the Australian marine environment for a minute. Probably the first thing to come to mind is tropical Queensland's Great Barrier Reef with its clear waters and coral formations interwoven by shoals of brightly coloured fish.

The picture is right, but you could equally be thinking of underwater New South Wales, where coral reefs, sponge gardens, underwater cliffs and rocky reefs are home to a massively diverse array of marine life.

Off New South Wales the tropical waters of the north meet cooler southern waters, resulting in species from both regions mixing. At certain times of the year this coastline is also one of the best places in the world to see migrating humpback whales and the rare southern right whale.

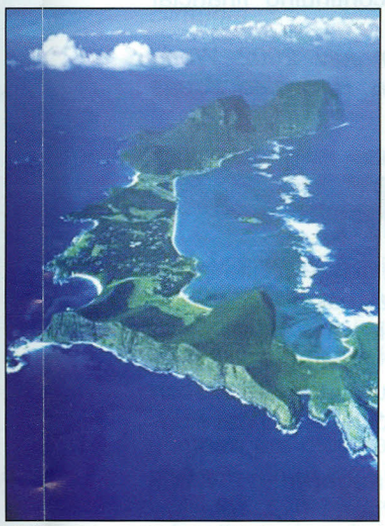


As part of a long-term strategy to recognise and protect New South Wales's marine natural heritage, in July the government announced its decision to create the state's fourth marine park. The new park covers approximately 22,700 hectares/88 square miles of marine habitats off the most easterly point of mainland Australia and will be known as the Cape Byron Marine Park; it will come into being formally on November 1. Marine habitats include a range of exposed and sheltered sandy beaches, rocky shores, rocky reefs, islands, and coral communities.

The new park is the penultimate area to be granted protected status as a result of a programme of marine biodiversity assessment by the New South Wales government. Four areas representing all the major marine habitats have been selected and a fifth is likely in the near future. To date, the Solitary Isles, Jervis Bay, Lord Howe Island and now Cape Byron have been identified and are at various stages of administrative system under the Marine Parks Act legislation of 1997. Each of the established New South Wales bio-regions will be represented by at least one large marine park, declared under the Act. It aims to be representative of the ecosystems and habitats found in that bio-region.

In a recent statement Edie Obeid and Bob Debus, the state's Ministers for Fisheries and the Environment respectively, said: "In recognition of the important contribution of the coast and our oceans to our Australian way of life, the New South Wales government is developing a representative system of marine protected areas to conserve the marine biodiversity of New South Wales."

The programme evolving aims to be one of the premier examples of marine protection in the world. A range of other mechanisms that are to complement the marine protected area sys-



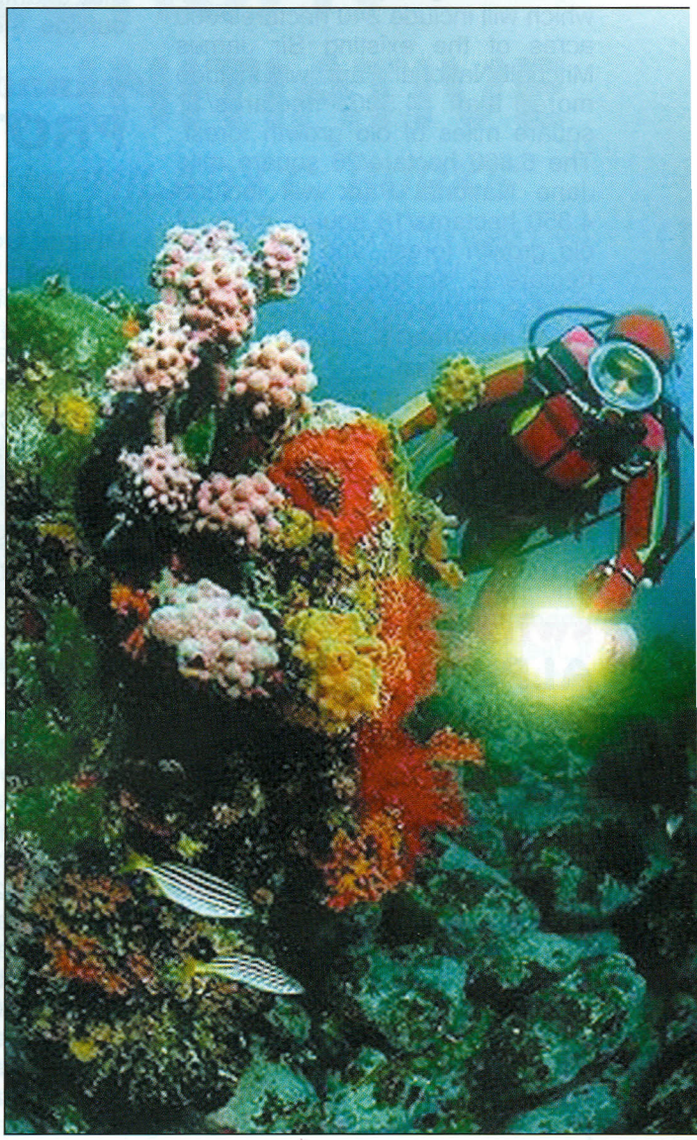
Other New South Wales marine parks: (above) Lord Howe Island and (below) the Solitary Isles.

tem include fishery management plans, fishing closures, estuary and catchment management plans, conservation agreements, threatened species recovery plans, threat abatement plans, and habitat protection plans.

By integrating these measures more effective management of the processes that may affect marine biodiversity should be achieved. Zoning is used within marine parks to identify conservation and management priorities for the newly-formed Marine Parks Authority. Four generic zones will be used in the Marine Parks — sanctuary zones, habitat protection zones, general use zones and special purpose zones, with the ultimate aim that conservation of biodiversity will not suffer from economic and social uses of the parks.

Mr Debus stated his intention to raise the profile and level of protection of the New South Wales marine environment. "These marine protected areas aim to conserve marine and estuarine ecosystems, rare and threatened species and communities, and other areas of high conservation value," he said. "They also provide for ecologically sustainable use of marine resources and opportunities for public appreciation, understanding and enjoyment. Our commitment is a significant step towards the establishment of a world-class, representative system of marine protected areas in New South Wales and will provide a lasting legacy for future generations of Australians."

Habitats to be protected in the Cape Byron Marine Park include (above) sandy beaches and (below) rocky reefs and coral communities.



western australia
NEW PARKS

BOUNDARIES for three new national parks in Western Australia's south-west region have been announced by the state government as part of its ambitious "Protecting Our Old Growth" forests policy.

The three proposed parks — Greater Dorgadup, Jane and Boorara-Gardner — extend over more than 24,200 hectares/90 square miles and include extensive areas of old growth forest.

A community advisory committee will be set up to assist in determining the final boundaries of the parks, as well as laying the foundations for proposed management plans.

The 6410 hectare/24 square mile Greater Dorgadup National Park, which will include 240 hectares/600 acres of the existing Sir James Mitchell National Park, will include more than 4,500 hectares/17 square miles of old growth forest. The 6,860 hectare/26 square mile Jane National Park will include 4,850 hectares/18 square miles of old growth forest, and the 10,980 hectare/42 square mile Boorara-Gardner National Park will include 4,320 hectares/16 square miles of old growth forest.

Predominant trees in the three proposed parks are jarrah, marri and karri which provide a habitat for quokkas, chuditch, brushtail and western ringtail possums, brush wallabies and phascogales.

costa rica
ISLAND SITE EXTENDED

THE IUCN World Heritage Committee has extended the boundaries of the Cocos Island National Park World Heritage Site, which lies 535 km/330 miles off the south-west coast of Costa Rica.

Inscribed on the World Heritage List in 1997, the park provides critical habitats for marine wildlife including large pelagic species, especially sharks, and is the only island in the tropical eastern Pacific to support a humid tropical forest.

At the time of inscription, when the site included a terrestial area of 23.9 square km/9$^{1}/_{4}$ square miles and a surrounding protected marine area extending some 15 km/nine miles off the coast, IUCN and the World Heritage Committee noted that sharks were heavily exploited outside the park and encouraged the extension of boundaries.

Last year, the Costa Rica State Party officially extended the marine reserve surrounding Cocos Island to 22 km/14 miles in order to increase the protection of marine resources, and this increased the total area of the marine reserve from 977 square kms/377 square miles to 1,997 square kms/770 square miles.

The recent prosecution of an Ecuadorian vessel underlined the commitment of the State Party and the courage and dedication of rangers who have been tackling the poaching threat for a number of years despite continuing financial constraints.

(Extract from July 2002 World Commission on Protected Areas "What's New".)

canada
PROTECTING MARINE LIFE

THE passage through parliament of Bill C-10, the Canada National Marine Conservation Areas Act, has been described as "a crucial and welcome step forward" in protecting Canadian waters by World Wildlife Fund Canada and Canadian Parks and Wilderness Society (CPAWS).

In a statement from the two organisations it was said that Canadian waters were showing clear signs of stress. Fish stocks in parts of the Atlantic and Pacific have collapsed, some wildlife in the Arctic and Great Lakes show high levels of toxicity and have birth defects, and habitat is being destroyed through activities such as dredging and industrial development.

Joshua Laughren, WWF Canada's Director of Marine Conservation, said: "This bill paves the way for establishing a network of Marine Conservation Areas (MCAs). Now the real job is for Parks Canada to put this legislation to work by creating MCAs, starting in western Lake Superior and Gwaii Haanas, on Haida Gwaii (in the Queen Charlotte Islands, off the British Columbia coast)."

CPAWS Executive Director, Stephen Hazell, said: "Bill C-10 has a number of strengths, including the prohibitions on hydrocarbon and mineral development in marine conservation areas and the requirement that they include zones that fully protect special features or sensitive elements of ecosystems."

switzerland
ALPINE SITE CEREMONY

THE official UNESCO certificate for World Heritage was presented to the Swiss authorities for the Jungfrau-Aletsch-Bietschhorn region last month. Inscribed by the World Heritage Committee last December *(see NPIB issue 2)*, the site is the first Natural World Heritage Site in the Alps.

At the ceremony in the small alpine village of Bettmeralp in Valais, Dr Mecthild Rössler of the UNESCO World Heritage Centre presented the official certificate to Dr Philippe Roch, President of the Swiss Agency for the Environment, Forests and Landscape, and to the local municipalities of the region.

Covering an area of 54,000 hectares/208 square miles, the site lies at the heart of the Alps and contains the Aletsch glacier, which is the largest, longest and deepest in Europe. Over 95 per cent of the area exists in its natural state with no facilities except foot/ski trails and mountaineering huts.

MORE NEWS: TURN TO PAGE 22

Lesser-known mountain areas, such as Riano to the south of the Picos de Europa, are now being targeted by climbers.

spain PICOS DE EUROPA PRESENTS I.Y.M. INITIATIVE

by HILARY C. BURKE

THE Ministry of Environment in Madrid, through Spain's National Parks Authority (Organismo Autónomo Parques Nacionales) has organised a year-long series of events to mark the International Year of the Mountains (IYM).

Many of Spain's protected natural areas (over 600 in number) are mountainous, as are six of the 12 national parks. Each of the six hosts a programme of public lectures and conferences at some stage during the year.

For three days in June it was the turn of the Picos de Europa National Park to present the IYM initiative to the public in the city of Oviedo, in the province of Asturias. The conference opened with a presentation by Joaquín Fernández, radio journalist and writer, who outlined the history of the park, and Spain's role as one of the pioneers in the creation of protected areas. The conference closed with a detailed discourse on the history and tradition of upland grazing in the area by Francisco Ballesteros, Professor of Constitutional Law at Oviedo University. Both subjects require a wider treatment than is possible here.

The bulk of two evening sessions were, however, given over to the mountaineers. Pedro Antonio Ortega, a climber who also runs a tourism-based business in the Asturian town of Arenas de Cabrales, explained why the area was so important to Spanish mountaineers.

The park's most emblematic peak, the imposing limestone tower of Picu Urriellu (more commonly known as El Naranjo de Bulnes), remained unconquered until 1904, 40 years after the first ascent of the Matterhorn. Although modest in height at 2,519 metres/8,264 feet, it remained a challenge throughout the first half of the 20th century, its north face unscaled until the early 1960s.

It became headline news during this period after a succession of accidents, some fatal, and the subsequent ban on climbing imposed by the local civil guard commander. Sr Ortega was, however, of the opinion that pressure from serious climbers on the park's rock faces had now diminished as the more ambitious sought new routes outside the better-known mountainous areas.

César Pérez de Tudela, one of the most famous mountaineering names from that era, explained the attraction of the mountains to himself and his colleagues. By the late 19th century ascents of Pyrenean peaks, such as Vignemale, had become almost routine.

sweden PAN PARKS

THE second conference involving staff of the PAN (Protected Area Network) Parks Foundation, a joint initiative of WWF and the Molecaten Group, and representatives of all partner protected areas will be held in Fulufjället, Sweden, between September 14 and 17.

Participants will discuss verification, with valuable input from certified parks offering their fieldwork experience, and verified parks will lead discussions on further steps, such as the establishment of local PAN Parks organisations.

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For Spaniards the Picos de Europa became the goal, not so much because they were "there" but because they had not been "done".

The mountaineers' search for the ultimate challenge appeared now to be leading them to the lesser known and perhaps even more sensitive parts of the world. Although Pérez de Tudela had led climbs in Jordan, the Amazon and the Sahara's Hoggar, they had always been small "man against the mountain" expeditions. He and his fellow speakers agreed that the surge in commercial expeditions, where large groups of unprepared and inexperienced tourists were transported into remote areas, posed a threat not only to the mountains but also to their own sport.

Joan Garrigós i Toro, President of FEDME (Federación Española de Deportes de Montaña y Escalada), stressed the willingness of his organisation to work together with other agencies to strike a balance between public access and protection.

Mountaineers by nature tended to be independent and adventurous, but were ready to acknowledge the debt they owed to other sections of society, especially the public rescue services. The sport had a long tradition — longer, in fact, than that of the national parks — and, he claimed, had always defended the current IYM aims.

Alpine clubs were in the forefront of the movement to protect both Mount Olympus and Mont Blanc from insensitive development and had fought, successfully in many cases, against the introduction of "helicopter skiing". Fully supportive of the 1992 Geneva agreement, elimination and removal of waste generated by the sport itself was now a priority issue. Expeditions in future would have to show more respect to the people and the environments they visited. This meant that clubs were now reviewing their internal systems and introducing codes of conduct. In Cataluña, for example, the activities of the Federation were in the process of certification.

The Federation did, however, have some complaints. Some authorities and conservation groups were endangering the future of the sport, it was claimed. In the case of Spain, mountaineers had to deal with different legislation in each of the 18 autonomous regions, within which the interpretation of the law could also vary.

As well as a long tradition, the sport had a recognised governance structure and a proven record in training, according to Sr Garrigós. Was it right, he asked, to view it in the same light as rafting and off-road rallying? The Federation had set up a working group with the University of Zaragoza to study these problems.

The attitude of the Posets-Maladeta Natural Park in the Pyrenees was put forward as evidence of the sort of compromise that could be reached. Instead of a total ban on camping within the park, it was now permitted, if necessary, between 8pm and 8am, above 2,000 metres/6,560 feet. If a balance between free access and protection was not achieved, concluded Sr Garrigós, we would all be the losers.

The speakers were followed by the short but impressive audio-visual display *Montañas Protegidas,* produced by the Ministry in Madrid. The photography of Esteban Anía Albiac and the script of Eduardo Vinuales Cobos was complemented by a fine choice of sensitive and evocative music — ample reward for any members

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CONFERENCE REPORT

kenya

PROTECTED AREAS IN AFRICA

by HUMPHREY KISIOH, Co-Ordinator, East African Protected Areas Programme, IUCN.

THE African Protected Areas Initiative (APAI) idea was first mooted during the Convention on Biological Diversity at UNEP Nairobi, Kenya, in May 2000.

Protected Areas are the principal means for conserving biodiversity in Africa, with over two million square kilometres (about nine per cent of the land area) set aside for this purpose.

The APAI Workshop was held in Nairobi, from July 22-24, 2002 with financial assistance from GEF/UNEP and Conservation International. It was formally opened by Dr Eldad Tukahirwa, Regional Director of the World Conservation Union (IUCN) for Eastern Africa (EARO) and the keynote address was given by Dr Walter Lusigi, senior environment advisor, World Bank/GEF.

Distinguished experts from 23 countries across Africa were joined by representatives from international and national non-governmental organisations including WWF, CI and IUCN. The multilateral agencies, GEF/UNDP and the World Bank were also represented.

The meeting was called to facilitate dialogue between experts from different countries and institutions in Africa, to share views and experiences on the challenges facing protected areas and to build a consensus on the way forward. Challenges identified include:

- role of Protected Areas in poverty alleviation;
- sustainable financing for Protected Areas;
- governance and integration in planning at all levels;
- regional co-operation in management of shared resources;
- capacity building for effective management.

Main outcomes of the APAI workshop were:

- APAI was formally launched as a Pan-African process with a proposal that it operates under the Algiers Convention and the New Partnership for African Development (NEPAD);
- an APAI vision was developed which is: "Africa's biodiversity is securely conserved in perpetuity and contributing to sustainable livelihoods and economic development";
- institutional mechanisms for the operation of the APAI and the co-ordination and implementation of its programmes were adopted;
- a strategy for communicating APAI and for linking it with other institutions and processes was agreed;
- a list of priority protected areas issues to be addressed through APAI was identified;
- a statement addressed to the World Summit on Sustainable Development (WSSD) urging African governments and other stakeholders to give protected areas the highest level of political and financial support was prepared.

* *For further details, e-mail: hkk@iucnearo.org*

Pictures: Hilary C. Burke

Government delegate Sra Mercedes Fernández (left) and park director Sra Victoria Delgado close the Picos de Europa conference.

of the public who may not have been totally absorbed by the discussions.

The director of the Picos de Europa National Park, Sra Victoria Delgado, invited the government delegate in Asturias, Sra Mercedes Fernández, to close the conference.

"It has taken nature three million years to form the Picos de Europa, our best loved and most visited national park," said Sra Fernández. "Centuries of history are etched in its churches, its forests, its villages, but more so in its people — the people who live and work in the park.

"Their life here is a modern life, with the services we all expect and deserve. Now that the Council of Ministers has approved a Plan of Sustainable Development for the area, our next step must be to further increase environmental awareness."

FURTHER INFORMATION
Websites:
www.mountains2002.org (United Nations)
www.mma.es (Ministry of Environment, Spain).
e-mail:
ana.tornos@oapn.mma.es

FUTURE DATES
September: conference, Teide National Park (Canary Islands).
October: conference, Aigüestortes i Estany de Sant Maurici National Park (Cataluña).
October: conference, Sierra Nevada National Park (Andalucia).

FORTHCOMING CONFERENCES

france

PROTECTING EUROPE'S PEAKS

THE Protected Areas of European Mountains — Place of Life, Sanctuary, Recreation and Exchange international conference will be held in Chambéry, France from November 13 to17.

Organised by the European Mountains Network of Alpine Protected Areas, the objectives of the conference are:

- to outline the applied measures of mountain conservation;
- to identify the common issues in the conservation of protected areas, and
- to foster co-operation between protected areas situated in the mountains of Europe.

An official contribution to the International Year of Mountains by the French Ministry of Environment, the conference will provide a forum to discuss and exchange experiences concerning topics including biodiversity management, protected areas as places of habitation and tourism, and co-operation in and between mountain protected areas.

Mountain protected area professionals from 17 countries and representatives of many international organisations are expected to attend.

Speakers will include: Marija Zupancic-Vicar, of IUCN's World Commission on Protected Areas, and directors or managers from national parks in Austria, Bulgaria, France, Germany, Italy, Portugal, Romania and Switzerland. Other speakers lined up for the conference are Haral Egerer, UNEP; Andreas Gatz, Director CIPRA, the International Commission for the Protection of the Alps; Elisabeth Samec, WWF Danube-Carpathian Programme; Prof Z.Witkowski, Polish Academy of Sciences; and Jan Seffer, Daphne Institute of Applied Ecology, Slovakia.

A fee of 80 Euros will cover participation in two days of conference proceedings – in English and French – at the Congress Centre Le Manège, Chambéry, and field trips on Saturday, November 16, to Parc National de la Vanoise, Parc Naturel Régional des Bauges, or Parc Naturel Régional de la Chartreuse.

Situated in the heart of the northern French Alps, Chambéry can be reached by train from Paris (three hours) and has a local airport served by national flights.

** For further details e-mail: sylvia.unterreiner@alparc.org*
Internet: www.alparc.org

australia

ECOTOURISM

THE 2002 Ecotourism Association of Australia International Conference will be held in Cairns, Queensland from October 21 to 25.

Marking the closure of the International Year of Ecotourism, the conference will build on the work of the preparatory meetings and forums of the World Ecotourism Summit and the Québec City Declaration on Ecotourism to draft a Cairns Charter on Public Private Partnerships for Ecotourism.

Further details are available from the conference convenor, Tony Charters,
e-mail: tony.charters@tq.com.au

Pictures: Anthony Toole

In midsummer the Snowy Mountains look anything but snowy: the view towards Mount Kosciuszko (right, distance) from Seaman's Hut.

australia

SUMMER IN THE SNOWY MOUNTAINS

by ANTHONY TOOLE

EVERY corner has a name. Every name tells a story. Smiggin Holes, Blue Cow Mountain, Perisher Valley, Sawpit Creek, Widow's Creek, Dead Horse Gap: the list goes on. Wild West names, redolent of Klondike days or cattle drives. There must be a hundred stories of courage, hardship or desperation hiding among the eucalypts between Jindabyne and Charlotte Pass.

The Snowy Mountains are Australia's closest approach to an Alpine region, and then only for a few weeks from July to early September. Skiing was introduced here in the 1860s, and despite the unreliability of snow, the town of Kiandra claims to be the first in the world to have held competitive ski races.

Jindabyne, a four-hour drive from Sydney, is the main centre for winter sports in the Snowy Mountains. In June, its population of 4,000 would swell to 30,000. The hotel manager later told me that he often had up to 1,400 in the bar on an evening during a good season.

The road led past a tollbooth that marked the entry to the Kosciuszko National Park, then on to a gentle uphill gradient through thick eucalypt forests. I passed a dead wallaby that had jumped into the path of a car and, farther on, a dead wombat. Elsewhere, a dingo skulked suspiciously along the roadside.

Jindabyne, though quiet, had a sprinkling of summer tourists to give it life. In contrast, a few villages I drove through were ghost towns, their hotels and supermarkets locked up and cable cars stilled. I seemed to have the road to myself.

It was around midday when I reached Charlotte Pass. Two Scottish visitors were just getting into their car: they had climbed Mount Kosciuszko after a dawn start, but were disappointed that the summit had been covered in cloud and blown by a strong wind. Nevertheless, I was here, and would probably never be again, and this was Australia's highest mountain, at a height of 2,228 metres/7,313 feet. I waved them goodbye and set off on the broad summit track.

I usually prefer to get on to the hills early in the day. This day, however, I benefited from my late start.

The track passed through the upper reaches of the snow gum forest for a few hundred metres. Cloud rested on the distant tops, but as I approached them it thinned and began to rise. The gradient was gentle.

After about three kilometres/two miles, I came to a bridge over a stream. A plaque on a nearby boulder informed me that this trickle was the Snowy River, the source of which was only a similar distance away. The plaque also referred to peculiar, rock-climbing fish — mountain galaxias — that swam there. I did see some small fish, but none seemed willing to crawl out on to the boulders.

A little higher, I arrived at Seaman's Hut. This stone refuge was built with the aid of a donation by the parents of a Laurie Seaman of New York, who with his companion, Evan Hayes, died here in a blizzard in August 1928. Inside the hut was a memorial to the four victims of a more recent tragedy — snowboarders who had died in similar circumstances not far from here in August 1999.

The track led round a bend beneath a small crag and levelled out at Rawson's Pass; the summit trig point was now in sight. The clouds that had threatened earlier were now gone and, after a further spiralling kilometre, I reached the highest point on the island continent in brilliant sunshine.

It seems incongruous that such a large landmass as Australia should rise no higher above sea level. The American couple who joined me on the summit told me that their home in Wyoming stood at a greater altitude.

They had set off earlier than I from Charlotte Pass, and had come by way of the longer route, north to Blue Lake and Carruthers Peak, then south-west to Kosciuszko. I felt that theirs was probably a more interesting route than mine, and certainly more demanding. I made the mental suggestion that I might try at least part of it the following day.

The Snowy Mountains are neither particularly rugged nor precipitous. They are, however, very isolated. Their lower slopes are covered by near impenetrable forests, and were it not for the winter sports infrastructure, would be very difficult to access. They form the southernmost end of the Great Dividing Range, which snakes for more than 2,000 kilometres/1,250 miles down the eastern side of Australia, and

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On top of Mount Kosciuszko, the highest peak in Australia.

KOSCIUSZKO FACT FILE

THE Australian Alps comprise a 1.6 million hectare/6,180 square mile chain of mountains, stretching from the Australian Capital Territory (ACT) through New South Wales to Victoria. It is the main catchment area for the Snowy Mountains Hydro-Electric Scheme, which was built during the 1950s using workers from 28 nations, and generates more than 3,500 megawatts of electricity for south-eastern Australia.

Within this area lie six National Parks. The largest of these, Kosciuszko, covers 675,000 hectares/2,600 square miles in a strip averaging 45 km/28 miles in width reaching from the latitude of Canberra to the Victoria border, a distance of 160 km/100 miles. It was declared a State Reserve in 1944 and became a National Park in 1967.

It contains caves, limestone gorges and the highest mountains in Australia and is home to many species of Alpine flowers. Rare animals, such as the pygmy possum and the boldly coloured corroboree frog, live here as well as the more common kangaroos, wallabies and wombats.

Six regions within the National Park are designated Wilderness Areas, in which development in the past has been minimal. These areas are allowed to evolve their own ecosystems without interference. The whole National Park is recognised internationally as a UNESCO Biosphere Reserve.

Mount Kosciuszko itself lies 40 km/25 miles north of the Victoria boundary.

Kosciuszko National Park is contiguous with Namadgi National Park in ACT and the Alpine and Snowy River National Parks in Victoria. It is controlled by the New South Wales National Parks and Wildlife Service.

THE POLISH CONNECTION

AUSTRALIA'S highest peak was named by the Polish explorer, Paul Strzelecki, after he climbed it in February 1840. Its profile reminded him of the tumulus built over the tomb of the patriot Tadeusz Kosciuszko at Kraków, in his home country.

It is unlikely, however, that Strzelecki was the first person to reach the summit, as the area had been visited for thousands of years by Aborigines, and stockmen began visiting the mountains in search of summer pasture from the 1830s.

For more than a century the mountain's name was written as Kosciusko, until in 1997 the Geographical Names Board of New South Wales agreed to change the spelling to incorporate the z, which was the correct spelling of the name of the Polish freedom fighter.

presented a formidable barrier to the early European settlers.

To the north of Kosciuszko, and still within the national park, are numerous peaks and large wilderness areas that would repay a visit by those prepared to undertake the many long, high-level treks they have to offer.

I returned to the Jindabyne Lake Hotel, which was inexpensive, and situated to give a beautiful view over the lake. A flock of red and green parrots squawked in a tree just below the picture window that filled the lakeside wall of my room.

The next morning looked as though it might bring rain, so I decided to head for Thredbo, along a valley parallel to the one I had driven up the previous day.

Thredbo is a small but thriving town and, unlike those leading to Charlotte Pass, was open for summer business. Its houses climbed up the wooded slopes to give it an Alpine appearance, and may of its cable cars were running. From the highest point reached by one ski lift, a track leads to Rawson Pass and so to Kosciuszko. The more energetic could reach the same point by way of Dead Horse Gap, farther up the valley.

The threatened rain began to fall, but remained showery rather than persistent, and its effects were mitigated by the heat of the day.

Bushwalking is one of the many attractions around Thredbo. Walks can be as long or as short as one wishes: I followed a track for two or three hours, first along the river bank, then up and across the hillside through the dense forest of eucalypts.

Wildlife was abundant. A great variety of birds flew around me, sporting varied and vivid colours. Some of the biggest beetles and winged insects I have ever seen crawled across the track. The air was filled with the constant chirp of crickets.

I saw several spiders, one of them with a brilliant red patch on its back. As many of these are poisonous, even lethally so, I treated them with some caution.

While I was photographing some creepy-crawlies, my companions pointed into the undergrowth at the side of the track. A dark brown snake about a metre/three feet long, with bright yellow markings along its sides, wound its way slowly through the fallen leaves. It was unperturbed by our proximity, and we watched its unhurried progress until it disappeared into the thicker vegetation of the forest floor. Nothing would have persuaded us to follow it.

The following morning we left Jindabyne. Cloud hung low over the mountains and mist thickened above the trees. We stopped at the dam and looked back across the lake where, as a parting gesture, a rainbow hung over the fast disappearing slopes.

A view over the roof of Australia, to the west from the summit of Mount Kosciuszko.

Salvadora Morales extracts a bird from an early morning mist net before measuring its size and attaching a leg band. The nets are checked every 30 minutes.

usa

PARTNERS IN PROTECTION

by RACHEL MAZUR, Wildlife Biologist, Sequoia and King's Canyon National Parks, California.

ON July 31, Sequoia and Kings Canyon National Parks (SEKI) completed a two-year project titled "Partners in Protection: A Co-operative Approach to Conserving Migratory Birds". The project had three main components — education, biological monitoring, and international exchange. For the education component there were public, bilingual bird walks, International Migratory Bird Day celebrations, and bird talks for visitors and employees. The monitoring aspect involved peregrine falcon monitoring, the re-establishment of two bird banding stations and two Breeding Bird Survey routes, and monitoring for willow flycatchers in a remote backcountry area.

Probably the most exciting aspect of the programme was the international component. We felt that the only way to truly work to conserve migratory birds was to have a connection between their breeding and wintering grounds, and the way we did this was by connecting people. In 2001, we implemented the project with one National Park Service biological technician, Chris Dodge, and one intern from Nicaragua, Salvadora Morales. In 2002, we hired two interns, Alexis Cerezo and Miguel Ramirez — both from Guatemala.

Each year there was one individual who was bilingual and one who spoke only Spanish. Our reasoning was to allow the latter individual to learn English while encouraging SEKI staff to learn Spanish. Not only did that happen, but they also learned about each other's cultures, food, and even local dance steps. Together, the interns provided SEKI with over 1,500 hours of work.

All three interns were biologists and therefore brought with them a wealth of knowledge about the birds' wintering grounds as well as knowledge about monitoring techniques. They left us with some of that knowledge while bringing home other techniques, refining sampling designs, and a knowledge of the birds' breeding habits and songs. Through visits to other projects in California, the interns also learned about shorebird and owl monitoring.

In order to make this project happen, we involved many people and many partnerships. Within SEKI, the Division of Natural Resources provided supervision, logistics, and technical assistance. Interpreters provided training and oversight for the education and outreach components and put out press releases for public programmes. Maintenance provided housing and Administration provided administrative support. Outside SEKI, the NPS Office of International Affairs coordinated the logistics of bringing interns to the United States and the Institute of Bird Populations, a non-profit organisation, provided training and oversight for the bird banding portion of the project.

"All three interns were biologists and therefore brought with them a wealth of knowledge about the birds' wintering grounds as well as knowledge about monitoring techniques."

Funding for this project came from a Park Flight grant. Park Flight is a partnership between the NPS, the National Park Foundation, the National Fish and Wildlife Foundation, the US Agency for International Development and the University of Arizona. It is made possible by a generous grant from American Airlines and the NPS Natural Resource Challenge.

Next year, if funding allows, we will continue this project in addition to initiating a related one — a park-wide bird survey. Together, the two projects will represent a full-scale monitoring and assessment programme.

NEWS REVIEW

tanzania
AFTER 70 YEARS — A SIGHTING

A US Wildlife Conservation Society scientist working in the Udzungwa Mountain National Park has rediscovered a carnivore that has remained undetected for the last 70 years.

Captured on film by a camera trap, the Lowe's servaline genet, a 90 cm/three foot long relative of the mongoose family, was previously known only from a single skin collected in 1932.

WCS researcher, Daniela de Luca, who was conducting a carnivore survey in the park, said: "We now hope to find out more about the animal and thus help ensure its survival.

"Compared with larger carnivores, the smaller species such as genets and mongooses are very poorly understood. One of our aims is to shed more light on this important and secretive group of animals."

indonesia
SAVING REEFS

FUNDING for a development to help reduce damage to coral reefs and seagrass beds on Bunaken Island, a 1300 hectare/3200 acre area of land and reef within the Bunaken National Park, has been approved by the US-based Seacology organisation.

One of Asia's best known dive destinations, the island's reef and seagrass beds have continued to degrade due to intense resource-use pressures involving the island's 3,000 fisher-farmers and dive tourism.

The Bunaken Concerned Citizens' Forum has worked with the national park office to formulate a locally-managed marine conservation plan including no-take zones and areas where only traditional, non-destructive fishing techniques are allowed. In exchange, Seacology is providing the community with a landing dock which will help prevent damage to the reefs and seagrass beds caused by anchoring boats in shallow waters.

south africa
PRESSURE ON RESOURCES

A WARNING that South Africa's biodiversity status is "sliding down an unsustainable path" is contained in a report published by The Green Trust, a subsidiary of WWF South Africa in partnership with Nedbank Green, and the Endangered Wildlife Trust.

The Biodiversity of South Africa 2002, Trends, Indicators, Human Impacts uses a conceptual index in which the environmental pressures caused by the average per capita consumption of natural resources, and resultant waste, is expressed in terms of global hectares of biologically productive space.

This indicates that on average South Africans consume four global hectares per capita per annum, whereas the country's biologically productive capacity is only 2.4 global hectares per capita per annum. These figures compare with a worldwide average consumption of 2.8 global hectares against an available 2.2 hectares of biologically productive space.

The report indicates that South Africa's current consumption of renewable resources far exceeds its domestic replacement capacity and that a doubling of the country's population over the past 30 years has resulted in a halving of the amount of biological resources available to each person.

The impacts of this are widespread, not just for the natural flora and fauna of the country but also from a human capacity perspective and especially in the fight against poverty. One example given is that water usage by the human population in the Western Cape will outstrip storage capacity within 30 years.

south australia
MINING MOVE CRITICISED

A TEST case decision taken three years ago to allow low-impact mineral exploration activities in Yumbarra Conservation Park, in South Australia, has been a failure according to The Wilderness Society and the Conservation Council of South Australia.

When the park — which is home to a number of threatened species including the sandhill dunnart, pink cockatoo and the malleefowl — was opened up to mining in 1999, mines minister Wayne Mathew described it as a test case for mining in national parks.

The conservation groups' investigations have revealed that the exploration activity has resulted in an increase in feral cats and foxes and weed invasion as a result of new tracks created in the wilderness park.

Dr Greg Ogle, Campaigns Co-ordinator of The Wilderness Society (SA) said: "The best science, and now the test case of Yumbarra, shows that it is not possible to mine sustainably in areas of high conservation value, but only five per cent of South Australia's lands are fully protected for conservation. Three quarters of our national parks and conservation parks allow mining inside.

"We are calling for an end to mining in South Australia's wilderness and high conservation value areas."

uk
RURAL RECOVERY

RURAL Affairs Minister, Alun Michael, has pledged to give £125,000 to each of the eight areas containing national parks in England and Wales to fund sustainable development and rural recovery projects in the wake of last year's devastating outbreak of foot-and-mouth disease.

The fund, which will be administered by the national park authorities, will make money available to organisations, local community groups, parish councils and those in the public, private and voluntary sectors for projects which connect community interests more closely with the environment and sustainable economic growth.

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new zealand
STORMS DAMAGE FOREST TRACKS

WALKERS in South Island have been warned that it could take months to clear damage caused by torrential rain and heavy snowfalls in the Arthur's Pass and South Canterbury areas.

Waimakariri Area Manager, Bryan Jensen, reported that problems caused by ground slippage and damaged trees were first being tackled in roadside areas, and that it would be some time before remote areas were reached.

He said: "Beech forest usually gets hammered by snow but it is particularly bad this year. Many of the tracks in the foothill forests and within the Waimakariri Basin are virtually impassable.

"Signs have been placed at more than 40 track entrances to warn walkers of the potential risks. Many trees have snapped part-way up, or have toppled to become hung up in other trees. Dead standing spars that have become waterlogged are probably even more dangerous as they are likely to fall with little warning."

Arthur's Pass had one of the wettest Junes on record and the heavy rain softened earth around tree roots, which made them extremely vulnerable to the snow that followed.

(Department of Conservation, South Island)

canada
WETLAND GRANT

THE Friends of Lac Saint-François National Wildlife Area, Québec, (see Issue 5, NPIB) has received a grant of $143,500 from the Canadian Federal Government towards a summer programme of constuction, repairs and maintenance work budgeted at $244,000. A further $70,000 has been pledged by private donors and the remaining $30,000 from non-profit organisations.

The programme, which employs 13 students and other young people, involves building or repairing walkways through swamp and wetland areas.

LETTERS

uruguay
RANGERS FACE VIOLENCE AND VANDALISM

THE International Ranger Federation is very worried about the violence that many rangers suffer and incidents where they are casualties. While we know of some scattered cases, there may be more around the world and we certainly do not know how big this problem is.

I am collecting data on violence against rangers, but to avoid misinterpretation, I am interested only in the following forms:

1. physical violence;
2. vandalism to rangers' living accommodation;
3. vandalism to equipment used by the ranger to perform his or her duties.

Please send me information about any cases which have happened during the last five years for use at the World Congress in Australia next year. I will mention all people who have co-operated unless this is not desired.

Your co-operation will help us show to the world the existence of this problem and will help to stop it.

Juan Carlos Gambarotta, Castillos, 27.200, Uruguay.
E-mail: jgambarotta@adinet.com.uy

* *SINCE Sr Gambarotta wrote to us, a guard employed by the Bali Barat National Park in Indonesia was shot and seriously injured when a gang of armed men attempted to steal Bali starlings being held in pre-release cages. Despite suffering gunshot wounds in the leg, the guard, Komang Astika, disarmed one of the men and — before collapsing due to loss of blood — pursued the gang as they fled the scene.*

thailand
THAI NOMINEE

I WOULD like to thank you for Issue 5 of NPIB. We found that it is very informative for our work.

We would like to nominate a marine national park to receive future free copies. Its name is Tarutao National Park which has a reputation for pristine natural resources and beautiful beaches.

Prayut Lorsuwansiri, Director,
Marine National Park Division, Thailand.

seychelles
FUNDING BOOST

MANY thanks for publishing the article about Cousin Island *(NPIB, Issue 5).* I think you will be pleased to know that the director of a grant donor organisation read this article and has subsequently solicited a project from us for possible funding. This is an exciting and practical outcome of the article.

Nirmal J. Shah,
BirdLife Seychelles.

australia
KEEPING IN TOUCH

CONGRATULATIONS on a fantastic magazine. It's great to read what is going on in other parts of the world. I hope the subscriptions are rolling in.

Elaine Thomas, Wilson's Promontory National Park, Victoria, Australia (member of the IRF 4th World Congress Organising Committee).

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