

**International**

**Forensic tests to help tackle rhino poaching**

Poaching has reduced the population of black rhinos by >90% in the past 60 years and reduced the population of Javan rhino to <200. Two forensic tests may now help to curb the illegal trade in poached rhino horn. The tests look for genetic or chemical signatures of rhino horn in products such as powdered Asian medicines and Yemeni ornamental daggers. The first test detects rhino DNA in various products. Each of the five rhino species has a unique version of the *cytochrome b* gene in mitochondrial DNA. The other test chemically fingerprints seized samples of raw rhino horn, revealing both the species and individual game reserve from which the horn came. The chemical test is not yet admissible as evidence in court but the two tests together should assist in the detection of illegal trade.

Source: *New Scientist* (2003), 179(2411), 9.

**Whale numbers may historically have been much higher**

A recent genetic survey of three species of North Atlantic whales has suggested that the oceans may have contained ten times as many great whales as previously thought. The study looked at genetic diversity of mitochondrial DNA, which is inherited from the mother, in fin, minke and North Atlantic humpback whales. Researchers estimated the likely rate of genetic mutation and from that calculated how many females would be needed in the past to accumulate the diversity in each species. The researchers then estimated the size of historical populations. Before commercial whaling began in the mid-19th century, there may have been 240,000 humpback whales in the North Atlantic, 12 times previous estimates, 360,000 fin whales (more than nine times previous numbers) and 265,000 minke whales (compared to 149,000 today).

Source: *New Scientist* (2003), 179(2406), 4.

**Miscalculation may drive beluga sturgeon to extinction**

The caviar from the beluga sturgeon may fetch US \$3,000 per kg but critics argue

that a recent decision by CITES to continue to allow the species to be fished may lead to its eventual extinction. The critics' argument revolves around the estimate of current population numbers in the Caspian Sea, the species' last stronghold. CITES argues that numbers have increased from 7.6 million in 1998 to 11.6 million in 2002. Critics believe there may be fewer than 0.5 million fish left and the continuing fishing and trade in caviar will hasten the species' decline. The US Government, the world's leading importer of beluga caviar, is considering an outright ban on trade. Ironically, however, beluga are largely cut off from their natural river spawning grounds by dams, and c. 90% of the fish are from artificial hatcheries that are expensive to build and maintain. A total ban on trade could stop the money that pays for the hatcheries and may itself lead to the species' extinction.

Source: *New Scientist* (2003), 179(2413), 6-7.

**Good and bad news on world's protected areas**

At the 5th World Parks Congress in Durban in September 2003, the United Nations Environment Programme and IUCN reported that nearly 19 million km<sup>2</sup> worldwide is now included in protected areas, an area larger than China (see also pp. 1-2). This is a big improvement on the 2.4 million km<sup>2</sup> protected at the time of the 1st World Parks Congress in 1962. However, Conservation International has reported that many protected areas are too small or isolated to effectively conserve species. More than 700 bird, mammal and amphibian species included in *The IUCN Red List of Threatened Species* remain completely unprotected. The situation may be even worse in the oceans.

Source: *Nature* (2003), 425(6955), 230.

**Concern over acidification of the oceans**

Scientists studying the world's oceans have highlighted the threat from climate change. If CO<sub>2</sub> emissions keep rising, surface waters could become more acidic than they have been for 300 million years. As the amount of CO<sub>2</sub> in the atmosphere rises, more of the gas reacts with seawater to produce bicarbonate and

hydrogen ions, increasing the acidity of the surface layer of the water. Ocean pH was 8.3 after the last ice age and 8.2 before CO<sub>2</sub> emissions took off during the industrial revolution. The pH is now 8.1. Primary productivity in the oceans has dropped sharply in the past 20 years. Since the 1980s ocean productivity has dropped by an average of 6%. This may be part of a natural cycle, but very little is known about the factors that control ocean productivity.

Source: *New Scientist* (2003), 179(2414), 8.

**North east Atlantic and Baltic Sea need more protection**

The joint HELSCOM-OSPAR Ministerial Conference to protect the marine environment of the North East Atlantic and Baltic Sea has been crippled by apathy, according to WWF, who also argue that the conference has failed to address issues of shipping accidents, pollution and destructive fishing practices. Russia has opposed the establishment of a Particularly Sensitive Sea Area for the Baltic Sea, despite strong political consensus from other states in the Baltic area. The Baltic States also failed to agree a recommendation to ensure the protection of seals in the Baltic. The OSPAR countries failed to adequately address the need to better manage fisheries, despite the fact that fishing is seen as a major threat to oceans and seas.

Source: *Marine Pollution Bulletin* (2003), 46(8), 929.

**'Non-destructive' aquarium trade fishery - a misnomer**

Methods of reef fish collection for the aquarium trade have moved from destructive forms, such as cyanide or dynamite fishing, towards so-called non-destructive methods, such as traps and hand nets. The impact of non-destructive methods had been unknown prior to a study published recently on the Bangaii cardinalfish *Pterapogon kauderni* in Indonesia. The study investigated eight sites in the Bangaii archipelago. Through the combination of data on fish abundance and information on fishing methods, non-destructive techniques were shown to have halved fish populations in heavily fished areas. With the large reductions in numbers of *P. kauderni* shown by the research, the authors suggest that the

use of the term non-destructive by the aquarium trade is highly misleading in terms of the conservation status of reef fish sold.

Source: *Conservation Biology* (2003), 17, 910–914.

#### **Translocation – a useful tool for conservation?**

Transferring individuals between populations of the same species may not always be the answer to improving genetic diversity and population stability. An experimental translocation has led to the extinction of a local population of the freshwater shrimp *Paratya australiensis* in Queensland, Australia. Scientists at the Cooperative Research Centre for Freshwater Ecology have shown that within seven generations a resident genotype was eliminated following the transfer of shrimp between pools in the same catchment area. The translocation was conducted to establish the extent of shrimp movement along streams. The find came as the result of an investigation at the genetic level, as no morphological or behavioural distinctions were apparent in the pre-transfer shrimp populations. Translocations are often regarded as a means of maintaining genetic diversity and viable populations of threatened species. The results of this research indicate that such transfers may have the converse effect and facilitate extinction by the selective elimination of locally-adapted genotypes.

Source: *Conservation Biology* (2003), 17(4), 1007–1012.

#### **Quantified collapse of shark populations**

Shark populations have been increasingly exploited in recent decades but the consequences for populations were unclear. A recent study provides objective quantitative evidence for rapid declines in large coastal and oceanic shark populations. Analysis of the largest dataset in the Northwest Atlantic showed that scalloped hammerhead *Sphyrna lewini*, great white *Carcharodon carcharias* and thresher sharks *Alopias* spp. are each estimated to have declined by >75% in the past 15 years. Due to their low maximum intrinsic rates of increase, recovery is expected to be slow, even if exploitation is reduced.

Source: *Science* (2003), 299(5605), 389–392.

#### **Soil invertebrates play a vital role in the restoration and conservation of biodiversity**

Drivers of succession in ecosystems are known to include resource limitation,

herbivory and symbiotic soil microbes, but the role of invertebrate soil fauna has been unclear. Recent research from The Netherlands shows that soil fauna such as nematodes, collembola, mites and click beetle larvae enhance succession and diversity in grassland ecosystems. The biomass of dominant plant species at early- and mid- successional stages was reduced by selective feeding of the invertebrates on root systems, thus indirectly benefiting subordinate species and also those from later successional stages. The effect is considered analogous to that of above-ground vertebrate herbivores. These findings suggest that the success of restoration and conservation programmes may be enhanced through a better understanding of the contribution of soil fauna to the predictability of succession.

Source: *Nature* (2003), 422(6933), 711.

#### **Wildcats and dingoes are 'not worth protecting'**

It has been suggested that efforts to protect the Scottish wildcat and the Australian dingo may be misguided because the two have been interbreeding with their domestic relatives for so long that it makes no sense to preserve them as pure-bred animals. Domestic cats appeared in Britain 2,000 years ago and interbreeding with their wild cousins has resulted in two groups of wildcats, those that resemble domesticated cats and those that show typical wildcat features of bushy ringed tails and stripes. Dingoes arrived in Australia with humans from Asia 4,000 years ago. They became feral, were recaptured and bred by Aborigines and then mated with European dogs, raising doubts as to what now constitutes a pure-bred dingo. It is suggested that wildcats and dingoes should only be protected if they play a critical role in shaping an ecosystem.

Source: *New Scientist* (2003), 179(2407), 6.

#### **Celebrated sailor to highlight threats from longlining**

John Ridgway is a celebrated sailor who has spent the last 60 years traversing the world's oceans. He is now setting sail in his yacht *English Rose VI* to raise awareness of the threat to albatrosses from longlining. At each port of call he plans to address the media, give lectures and meet with politicians and other interested partners. A daily log of the yacht's progress will appear at <http://www.savethealbatross.org> as Ridgway sails from Scotland to South Africa via the Canary Islands. From Cape Town, Ridgway will sail to Melbourne, Wellington, the

Falkland Islands and South Georgia before returning to Cape Town in mid-May 2004.

Source: *Africa Birds & Birding* (2003), 8(5), 72.

### Europe

#### **Iceland is condemned for restarting whaling**

In August 2003 the Icelandic Government announced its intention to resume a so-called scientific whaling programme. This has been condemned by conservationists who see the action as a way of moving towards the culling of whale stocks to preserve fisheries. The Icelandic Ministry of Foreign Affairs has argued that it is impossible to ignore the impact of whales on the ecological balance and that scientific whaling is therefore a necessity. Conservationists argue that abundant whale stocks and abundant fish stocks have coexisted for millennia and it is human activities that are upsetting the balance.

Source: *Whale and Dolphin Conservation Society*, Press Release 8 August 2003.

#### **Calls for moratorium on logging in Finland**

Environmental groups are calling for a long-term moratorium on the logging of ancient forests in Finland. Metsähallitus, the state-owned Finnish forestry enterprise that is logging old-growth forests, has agreed not to log in any of 476 areas of forest currently in dispute. The disputed areas are outlined in detailed maps presented to Metsähallitus by Finnish environmental groups. Greenpeace has been campaigning intensively for a halt to logging of old-growth forests.

Source: *Taiga News* (2003), 44, 2

[also available at

<http://www.taigarecue.org>].

#### **ARKive project launched**

In May 2003 Sir David Attenborough launched the *ARKive* project that will use the latest digital technology to gather in one safe place natural history films, photographs, associated recordings and memories of the world's most endangered animals and plants. By the end of 2003 c. 1,500 species will be featured in *ARKive* and eventually the site will include information on the 11,000 animal and plant species threatened with extinction. *ARKive* is an initiative of the

Wildscreen Trust and the £3 million project is supported by the world's leading conservationists and environmentalists. It is to be funded by the UK's National Lottery Heritage Fund and New Opportunities Fund with Hewlett-Packard providing technical research, support and hardware.

Source: *World Birdwatch* (2003), 25(3), 11.

#### Reedbed refuges for water voles

Water voles *Arvicola terrestris* show improved survival in reedbeds, where they can escape predatory American mink *Mustela vison*. Analysis of 70 radio-tagged water voles in the UK showed that voles 150 m from a main water channel had half the risk of predation compared with voles 10 m from a main channel. Conservationists are now planning to increase the number of steep sided earth banks in reedbeds, thereby creating more suitable sites for water vole burrows.

Source: *Biological Conservation* (2003), 111, 371–376.

#### Urban development and disturbance affects nightjar

Urban development is a major threat to declining heathland in the UK. A recent study has examined how urbanization specifically affects the nightjar, a priority species under the UK Biodiversity Action Plan and of conservation concern across Europe. The study of 36 disturbed heathlands showed that nightjar nesting density is related to local housing density. The survey suggested that direct disturbance (from people, cats, dogs, and urban predators such as foxes, magpies and hedgehogs) reduced nightjar nesting success. Interestingly, the total area of the heathland was not related to nightjar density, suggesting that even small heathland reserves can sustain nightjar populations, as long as disturbance is controlled.

Source: *Biological Conservation* (2003), 114, 219–230.

#### Report highlights threat to Overseas Territories birds

The latest survey of the status of UK bird populations, *The State of the UK's Birds 2002*, was published recently by the Royal Society for the Protection of Birds. For the first time the report looks not only at UK mainland birds but also at those found on the 14 Overseas Territories. Although the Territories are small in area, they hold 34 globally threatened species including 24 endemics such as

the Montserrat oriole and the Bermuda petrel. Increased monitoring in recent years has raised concern for some species, particularly regarding the negative impact of longline fisheries on albatrosses on Gough Island and South Georgia. In the UK 40 species are now on the red list (of highest conservation concern), 121 on the amber list and 86 on the green (of lowest concern). The red list has grown by four species and the amber list by 11 since the last review in 1996.

Source: *The Status of the UK's Birds 2002* [available from [http://www.rspb.org.uk/Images/State\\_of\\_UK\\_Birds\\_2002\\_tcm5-45531.pdf](http://www.rspb.org.uk/Images/State_of_UK_Birds_2002_tcm5-45531.pdf)].

#### Inventory of Britain's woodlands is published

The Forestry Commission has published the latest assessment of woodland cover in Britain. It shows that the area of woods has more than doubled during the last century. The *National Inventory of Woodlands and Trees – Great Britain* shows that 11.6% of Britain is covered by woodland totalling 2.6 million ha, which represents an increase of 26% in woodland cover since the last inventory in 1980. Scotland has the most woodland with 16.4%, much of it coniferous, followed by Wales with 13.8% and a more even balance of coniferous and broadleaved woods. England has 8.4% woodland cover, with broadleaved woodland the most dominant type and oak the most common tree.

Source: <http://www.forestry.gov.uk/inventory>

#### Road threatens key protected areas in north-east Poland

A proposed motorway linking Helsinki with Warsaw will cut across key protected areas in Podlasie Province in north-east Poland. The four-lane road will cross the western part of the extensive old-growth Augustowska and Kny-szynska forests, species-rich wetlands, farms and inland sand dunes of the River Biebrza marshes and the River Narew. This region, part of Poland's pristine, unpolluted 'Eastern Wall', is home to beaver, elk, lynx, wolf and rare birds such as golden eagles, cranes and corn-crakes. Conservationists have proposed an alternative route that skirts the protected areas. Poland will join the EU in May 2004 and be able to access funds for the so-called Via Baltica. However, there will also be an obligation to undertake a full environmental impact assessment along the entire route.

Source: *Plant Talk* (2003), 33, 16.

#### Rare butterflies colonize quarries

A recent study in the Moravian region of the Czech Republic has shown that several regionally rare species of butterflies have colonized man-made limestone quarries. These butterflies had undergone local population declines due to agricultural intensification. Both young active quarries and older quarries close to warm steppe grasslands contained 39 species of butterflies, 19 of which are considered threatened in the Czech Republic. Thus the quarries, which have long been associated with landscape loss, are now gaining credibility as early successional habitats for these butterflies. The possibility exists that old and disused quarries could be converted into biodiversity sanctuaries.

Source: *Conservation Biology* (2003), 17(4), 1058–1069.

#### Hydrological plans threaten Spanish fauna and flora

In 2001, the Spanish Parliament passed a law to support the National Hydrological Plan. The Plan contains details of major plans to canalize most of the lower stretches of rivers that drain into the Mediterranean and to transfer freshwater from some rivers to the driest parts of Spain through hundreds of kilometres of pipelines. These plans have raised major concerns over their possible impacts on wildlife habitats and species. The canalization plans will remove all natural vegetation along river banks and could completely destroy several relict vegetation types. The transfer of water from Spain's longest river, the Ebro, to Valencia, Murcia and Andalusia will destroy currently unprotected important sites for endemic species. The reduction in the flow of the Ebro could create long-term problems for coastal species in the delta. Of more concern is the fact that the Ebro is presently infected by many exotic species and the transfer of waters to another area could spread these exotics to other areas with potentially serious consequences. The regions receiving the water would extend their irrigated land at the expense of their last steppe valleys.

Source: *Plant Talk* (2003), 33, 14–15.

#### Call for restriction on use of military sonar

Scientists from Spain and the UK have uncovered evidence of how cetaceans exposed to military sonar develop nitrogen bubbles in their vital organs, a classic symptom of the decompression sickness

known as the bends. Lesions caused by bubbles were found in 14 beaked whales stranded in the Canary Islands after sonars were used in a major military exercise in September 2002. It is thought that bubbles may have formed because deep-diving whales were startled by the sonar and surfaced too quickly or changed their diving patterns. Marine scientists are now calling for a complete re-evaluation of the threat to marine life from sonar.

Source: *New Scientist* (2003), 180(2416), 10.

## North Eurasia

### Oil drilling to commence in the Barents Sea

The Italian oil company AGIP is expected to start drilling in the first oil field to be worked in the Barents Sea. There are plans to start extraction in the Goliath Field in 2004, despite the field's proximity to environmentally sensitive Arctic coastlines, valuable fish-stock breeding areas and important seabird colonies. Conservationists are concerned that this will lead to further drilling in the Barents Sea that until now has not seen its hydrocarbon reserves exploited. Source: *BBC Wildlife Magazine* (2003), 21(9), 19.

### Forests around Chernobyl still affected by fallout

In 1986 the reactor accident at Chernobyl in Ukraine showered trees in the surrounding area with a huge amount of radioactivity. Scots pines *Pinus sylvestris* that received high doses of radiation died, turned brown and became known as 'the red forest'. Trees exposed to smaller doses survived and it is now suggested that these trees have altered their DNA in response to the fallout as a defence mechanism to prevent the tree's genome from being destabilized by radiation. Experiments have shown that trees transplanted from uncontaminated areas into the highly contaminated soil where Chernobyl's radioactive debris was buried increased their levels of methylation, the process in which methyl groups are added to DNA. Methylation is a response to stress that prevents genomic instability and enables survival in an extremely hostile environment.

Source: *New Scientist* (2003), 179(2411), 10.

## North Africa and Middle East

### Northern bald ibis stages a comeback

The northern bald ibis *Geronticus eremita* was once widespread across North Africa, the Middle East and even the Alps. In 1997 the bird's population was <50 pairs and was largely confined to the Souss-Massa National Park, near Agadir in Morocco. Thanks to an ongoing emergency conservation programme the population has increased by almost 60% to 85 pairs in 2003 and these birds between them reared 100 young. Conservation measures have included the employment of local staff as wardens to protect the birds from disturbance, and the construction of drinking points to provide clean water close to the breeding cliffs. The birds breeding at the Park are the only wild ones in the world apart from a remnant, genetically distinct population recently rediscovered in Syria (see also pp. 106–108).

Source: <http://www.rspb.org.uk/international/science/northernbaldibis/comeback.asp>

### Opposition to transfer and release of lions

It has been suggested that lions held in Iraqi zoos should be transferred to game parks in South Africa. This has been opposed by the World Association of Zoos and Aquariums and the Pan-African Association of Zoological Gardens, Aquaria and Botanic Gardens. The two organizations emphasize that such actions must be in keeping with guidelines issued by the Species Survival Commission of IUCN. Concerns have been expressed over the risk of disease transmission and 'genetic pollution' of African populations by animals of unknown lineage. No release programme should take place until the animals have been thoroughly examined by a vet and their post-release welfare has been guaranteed. This should follow protocols established by IUCN. Only animals of known and demonstrable genetic status should be returned to and released in a range state of the species.

Source: *Aliens* (2003), 17, 36.

## Sub-Saharan Africa

### Outlook not good for Raso lark

The Raso lark *Alauda razae* is one of the most threatened birds in the world,

confined to the tiny island of Raso in the Cape Verde Islands. In 2001 and more recently in 2003, researchers from the Royal Society for the Protection of Birds together with those from the Spanish and Portuguese BirdLife partners landed on Raso to study the species in detail. There were thought to be 130 birds in 2001 but this fell to just 98 in 2003. Population size appears to be determined mainly by rainfall, decreasing after long droughts and recovering rapidly after rain. There is no prospect of establishing a new population on a large neighbouring island as this is overrun with cats. The best hope at present is to continue monitoring. The Cape Verde Government has asked for a management plan for Raso to be developed.

Source: *Conservation Science in the RSPB 2002*. Available from: [http://www.rspb.org.uk/Images/21-1187-02-03\\_science\\_report\\_2002\\_distilled\\_tcm5-45097.pdf](http://www.rspb.org.uk/Images/21-1187-02-03_science_report_2002_distilled_tcm5-45097.pdf)

### Liberia timber trade is prohibited

On 6 May 2003 the United Nations Security Council adopted Resolution 1478(2003) prohibiting imports of wood products from Liberia. The ban came into effect on 7 July 2003 and will run for 10 months. It has been argued that revenue from timber exports was being used for illegal arms transactions following restrictions placed on diamond imports from Liberia. In 2001 Liberia exported 225,000 m<sup>3</sup> of logs. The Security Council identified 37 countries that have been buying timber from Liberia.

Source: *ITTO Tropical Forest Update* (2003), 13(2), 28.

### Forest cover increases at Kilum-Ijim in Cameroon

In 1988 a project began at Kilum-Ijim in the Bamenda Highlands in north-west Cameroon to establish forest boundaries and draw up plans for the sustainable use of forest resources and to improve agricultural practices. This has now borne fruit and good regeneration of forest has occurred in the area. A study has shown that between 1958 and 1988 more than 50% of montane forest was lost. Between 1988 and 1995 forest started to recover on the eastern (Kilum) side and since 1995 significant regeneration has also occurred on the western (Ijim) side. Since 1995 the overall regeneration rate (2.3%) has far exceeded the rate of deforestation. The forest is a key area for biodiversity and particularly for Endangered species such as Bannerman's turaco *Tauraco bannermani* and banded wattle-eye *Platysteira laticincta*. Source: *World Birdwatch* (2003), 25(3), 3.

### US \$1 million for Arabuko-Sokoke forest

The United States Agency for International Development (USAID) has awarded nearly US \$1 million for ongoing conservation work at the Arabuko-Sokoke forest in coastal Kenya. BirdLife has been working in the forest since the 1980s and has had a number of notable successes, including increasing revenue from non-timber forest products, production and publication of a 25-year Strategic Forest Management Plan and establishment of sustainable nature-based businesses. The three-year USAID-funded project will involve local people in developing natural resource management strategies, with improvements to decision-making processes and nature-focussed businesses. Arabuko-Sokoke has been ranked as the second most important forest for threatened bird conservation in Africa.

Source: *World Birdwatch* (2003), 25(3), 4.

### The São Tomé grosbeak – alive but critically endangered

Before 1992 the São Tomé grosbeak *Neospiza concolor* was known from a single extant specimen, and had long been considered extinct. Endemic to the small island of São Tomé in the Gulf of Guinea, West Africa, it was classified by BirdLife International as Critically Endangered based on a small number of reported sightings in the 1990s. However, it was not until 2002 that its continued existence was indisputably proven with photographic evidence from the heart of São Tomé's remaining lowland primary rain forest. The new observations described conspicuous behaviour at easily observable heights in the forest, challenging previous reports that had suggested the lack of records may be due in part to the species being an unobtrusive canopy dweller. Therefore it appears that the species is genuinely rare with a very restricted range. Clarification of the species' range and population size are critical, particularly given the rapidly increasing threats to the remnants of its lowland habitat.

Source: *Bulletin of the African Bird Club* (2003), 10(1), 23–25.

### Hippos under threat

An upsurge in hippo poaching in central Africa is threatening a species previously thought safe from extinction. A breakdown in law and order has meant that poachers can target the hippo, which is fast becoming a fashionable dish in upmarket central African restaurants.

Hippo teeth are also being seen as a legal alternative to elephant tusks. The world's biggest hippo population, in the swamps of the Virunga National Park in the Democratic Republic of Congo, has fallen from 29,000 30 years ago to only 1,300 today. An estimate of a world population of 160,000 hippos that was made 10 years ago is now thought to be well wide of the mark.

Source: *New Scientist* (2003), 179(2411), 9.

### Illegal fishing vessel finally captured

On 28 August 2003 Australian and South African officers finally boarded the *Viarsa 1* after a 20-day chase across the Southern Ocean. The Uruguayan vessel was first seen fishing illegally for Patagonian toothfish in Australian waters and fled westwards, ignoring radio orders for it to stop. It was finally stopped 2,000 nautical miles south-west of Cape Town. The actions of Australian, South African and UK authorities was praised by TRAFFIC and illustrated the importance of international cooperation in tackling so-called pirate toothfish operators. Patagonian toothfish is highly prized in restaurants in Japan and the US, where it is known as Chilean sea bass.

Source: *TRAFFIC News Release*, 28 August 2003.

### Rescuing oiled seabirds can be worthwhile

Historically it has been thought that de-oiling seabirds affected by major oil slicks is ultimately a futile exercise. However, research presented at the International Effects on Oiled Wildlife Conference in Germany in October 2003 suggested that when well-trained relief teams were able to quickly reach a disaster they could make a significant difference. The research draws on recent oil catastrophes including the *Apollo Sea* (1994) and the *Treasure* (2000) off the South African Cape. Monitoring of jackass penguins released at Robben Island, South Africa, showed that almost 90% of the birds survived. It was recognized that birds needed to be rehydrated, treated for hypothermia and have their body weight restored before they were cleaned.

Source: *BBC Wildlife* (2003), 21(10), 22.

### Madagascar triples protected areas

On 16 September 2003 President Ravalomanana of Madagascar pledged to increase the nation's protected areas by

an additional 5 million ha, effectively tripling the existing area (see also pp. 1–2). The protected sites will include tropical rain forests, tropical dry forests, mangrove swamps and coral reefs. The government is working with local communities to find sustainable solutions to conserving Madagascar's diverse habitats as well as protecting her natural resources. Conservation International, WWF and the Wildlife Conservation Society in collaboration with local grassroots organizations will assist in selecting the new protected sites and in establishing management plans for all of the protected areas.

Source: [http://www.panda.org/news\\_facts/newsroom/other\\_news/news.cfm?uNewsID=8824](http://www.panda.org/news_facts/newsroom/other_news/news.cfm?uNewsID=8824)

## South and South-east Asia

### Veterinary drugs may have caused vulture declines

In some parts of South Asia vultures belonging to the genus *Gyps* have declined by >90% in the last 10 years. A recent study has suggested that the cause of these declines may be related to a drug recently introduced into veterinary medicine in Pakistan and India. The study reported that autopsies on dead birds showed they were frequently suffering from gout, caused by uric acid crystallising in the body. Birds with gout had high levels of the anti-inflammatory painkilling drug diclofenac in their kidneys. However, there are still a number of unanswered questions about the declines. Diclofenac usually has a rapid effect on birds, whereas observations in the field have shown vultures suffering prolonged illness. Birds also showed evidence of an infectious disease and there was no evidence of declines in other scavenging species known to be susceptible to the drug.

Source: *World Birdwatch* (2003), 25(3), 9.

### India and Bangladesh to begin joint tiger census

Wildlife officials from India and Bangladesh are to begin the world's largest tiger census in the Sundarbans, an area of mangroves that straddles the two countries. The project, partly funded by UNESCO, will study the breeding and feeding behaviour of tigers in an attempt to discover why some animals become man-eaters. Tigers kill about 50 people a

year in the Indian part of the Sundarbans and are thought to kill about half that number on the Bangladeshi side. Wildlife officials blame the killings on poaching and illegal logging, which has destroyed the tiger's habitat and forced them to attack humans and forage for food in villages. There has been no regular tiger census in Bangladesh but there were thought to be 271 tigers in the Indian part of the Sundarbans in 2002.

Source: [http://www.enr.com/news/2003-07-29/s\\_6993.asp](http://www.enr.com/news/2003-07-29/s_6993.asp)

#### **Olive ridley turtles begin nesting again on the coast of India**

There was widespread relief when 50,000 olive ridley turtles began nesting on the beaches of Orissa state in eastern India. There had been concern when no animals were observed nesting in the previous year. Turtle experts believe that widespread illegal fishing along the 480 km coastline has resulted in the deaths of 100,000 olive ridley turtles in the past 10 years.

Source: *Marine Turtle Newsletter* (2003), 101, 53 [also available at <http://www.seaturtle.org/mtn>].

#### **Gurney's pitta rediscovered in Myanmar**

Gurney's pitta *Pitta gurneyi* is a Critically Endangered species found only in peninsular Thailand and adjacent southern Tenasserim, Myanmar. Recently, the bird was rediscovered in southern Myanmar after 89 years. Following a month-long survey in the lowland forest in southern Tanintharyi Division (Tennaserim), pittas were found at four lowland forest sites, including one that held c. 10–12 pairs of birds. Prior to this survey, only c. 30 birds were known at Khao Nor Chuchi in southern Thailand. Gurney's pittas are threatened in Myanmar by the rapid clearance of forest to make way for oil palm plantations.

Source: *World Birdwatch* (2003), 25(3), 12.

#### **Changes to Indonesian law may promote mining in protected areas**

Mining in protected forests in Indonesia will be permitted if controversial exceptions to national legislation are agreed. Forestry Law No. 41/1999, which prohibits open-pit mining within protected forests and areas of higher conservation designation, is already freely circumvented and 15 mining companies already hold licences to exploit minerals in

conservation areas, with many more waiting should the amendment become law. The governments of the UK, Australia and Canada have all been lobbying for greater access to protected areas for mining companies. Areas under threat include the Lorenz National Park, a World Heritage Site, the Kutai National Park on Kalimantan and the Kerinci-Seblat National Park in Sumatra.

Source: *BBC Wildlife Magazine* (2003), 21(9), 18–19.

#### **Bird biodiversity hotspot in Negros in the Philippines**

A recent survey by Coral Cay Conservation through the Negros Rainforest Conservation Project has revealed an extremely high number of forest-dependent and endemic bird species within a 1,000 ha forested watershed. Over 137 bird species have been recorded within the montane forests of the North Negros Forest Reserve, Philippines. The total inventory represents 20% of the bird species known to occur in the Philippines, and approximately 65% of all species and subspecies recorded were Philippine endemics. The inventory included many restricted range species found only on a handful of islands within the Philippines. These included species such as the Visayan tarctic hornbill *Penelopides panini panini* that is also one of seven IUCN Red List species recorded in the watershed, which represents nearly 15% of the Philippines threatened bird species. The area surveyed forms one of the last significant remaining areas of moist tropical forest in the central Philippines. This habitat is currently listed as the eighth most vulnerable forest ecoregion in the world and the latest surveys underline its biological importance.

Source: *The Biodiversity of the Upper Imbang Caliban Watershed, North Negros Forest Reserve, Negros Occidental, Philippines* (2003). Available from [http://www.coralcay.org/library/publications/philippines\\_t\\_2003\\_bio\\_caliban.pdf](http://www.coralcay.org/library/publications/philippines_t_2003_bio_caliban.pdf)

### **East Asia**

#### **South Korean wetland project threatens bird populations**

Environmentalists are in a legal battle with the South Korean Government over

the country's largest land reclamation project that, it is claimed, ignores the plight of endangered birds. The project began in 1991 and involves building a 33 km sea wall around the Saemangeum wetlands in the south-west of the country. Environmentalists won a court ruling in July 2003 that called for an end to the work on the grounds that the land would not be agriculturally viable, but the government is appealing. It is argued that the project would virtually destroy the value of the area for fisheries production and as a wetland habitat for birds, particularly endangered species such as the spotted greenshank and spoon-billed sandpiper.

Source: *Nature* (2003), 424(6952), 988.

### **North America**

#### **Bird migration affected by global warming**

Global warming has been linked to changes in the arrival times of migrant bird species in North America, according to a recent study. Twenty-eight out of the 103 species studied at two locations in the US showed a significant trend towards earlier arrival dates in the period 1951–1993, as compared to 1903–1950. This coincided with an upward trend in temperatures at both locations. On average species arrived 8.4 days earlier in the second half of the century. It was suggested that the long-term effect of increases in temperature could mean certain species spending the winter at their breeding grounds, rather than migrating south.

Source: *Ibis* (2003), 145, 484–495.

#### **Swift foxes depend on native grasslands**

The endangered swift fox *Vulpes velox* has experienced a severe reduction in its distribution since the mid-1800s. Reintroductions have already been necessary in Canada following extirpation there by the 1930s. A recent study, which radiotracked 42 individuals over a 3-year period in the western Great Plains region, concluded that they are habitat specialists that depend almost exclusively on native short-grass prairie grasslands, avoiding agricultural areas and ungrazed non-native grasslands. In contrast, coyotes, red foxes and gray

foxes, which negatively affect swift foxes, are habitat generalists and have benefited from human induced habitat changes, leading to an increase in their ranges. The long-term viability of the swift fox is therefore likely to depend on the protection of the native short-grass prairie habitat.

Source: *Journal of Mammalogy* (2003), **84**, 989–995.

### **Grand Banks cod fishery has still not recovered**

In 1992 the Grand Banks cod fishery off Newfoundland in Canada was closed following a crash in stocks. Scientists thought that the fishery would take 5–10 years to recover. In 2003 the fishery still shows no sign of recovery and scientists believe this is because depleted stocks are much less productive than healthy stocks. Depleted stocks are composed mainly of young fish spawning for the first time and are much less productive. The stock is also very vulnerable to predators. Five years was thus too short a time to expect recovery and this has caused problems as the government only provided financial aid to coastal fishing communities for 5 years. The pressure to reopen the fishery has been great and small catches from the depleted stocks have been allowed. However, fishing these stocks has once again been banned this year. The situation for European cod stocks is similar and the parallels with the Canadian experience are ominous.

Source: *New Scientist* (2003), **179**(2414), 9.

### **US Senate agrees to study of coastal oil and gas reserves**

The US Senate has called for a comprehensive inventory of the country's offshore oil and gas resources. This has caused serious concerns amongst coastal state senators who are convinced that the inventory would be the first step towards pushing for an end of the offshore drilling ban that has been in operation for 20 years. A new survey of the Outer Continental Shelf energy resources has been sought by the oil and gas industry who argue that resources can be exploited without harming the environment. The Shelf moratoria were first imposed in the 1980s and were extended to 2012 by President Clinton in 1998. Under the moratoria, waters along the East and West Coasts as well as the eastern Gulf of Mexico and some waters off Alaska are protected from oil and gas development.

Source: *Marine Pollution Bulletin* (2003), **46**(8), 932.

### **Network of ecological research stations may be established**

The US National Academy of Sciences has endorsed the creation of a network of ecological research stations (the National Ecological Observatory Network) that will provide a system for continental-scale experiments on ecological systems and will assist in predicting environmental change. Funding for the Network, whose observatories will cost US \$20 million each to build and US \$3 million a year to run, has been stalled but supporters hope the support from the Academy will encourage Congress to fund the US \$12 million first phase. The Academy has recommended that the Network should concentrate on six major observatories: biodiversity, biogeochemical cycles, climate change, infectious diseases, invasive species and habitat alteration.

Source: *Nature* (2003), **425**(6956), 332.

### **Gibson USA leads musical industry in use of SmartWood**

Gibson USA, a division of the Gibson Guitar Corporation, is more than halfway to its goal of using certified wood in all of its guitars. By the end of 2003, 80–90% of Gibson's regular production electric guitars will contain mostly SmartWood-certified wood. SmartWood is endorsed by the Forest Stewardship Council (FSC) and the Rainforest Alliance. Currently, all of the plain maple, ash and poplar wood used by Gibson is certified. Gibson first introduced an environmentally-friendly guitar back in 1996, the Les Paul Smartwood Standard. To maintain its certified status, Gibson is audited annually by an FSC certifier.

Source: <http://www.gibson.com/whatsnew/pressrelease/2003/sept24a.html>

### **US threatens ban on shrimp imports**

The US has said that it will bar some shrimp imports from Honduras and Venezuela because fishermen may be drowning sea turtles in their nets. The State Department said US law bans imports of shrimp harvested in a way that harms turtles unless a country has a sea turtles protection program such as in the US or has a fishing environment that does not pose a threat to turtles. The key element of the US sea turtle conservation program is that commercial shrimp boats must use sea turtle excluder devices.

Source: *Marine Turtle Newsletter* (2003), **101**, 51 [also available at <http://www.seaturtle.org/mtn>].

### **US group challenges climate change warning**

A right-wing lobby group, the Competitive Enterprise Institute, is taking legal action against the US Government over the publication of a report that predicts rises in sea level and temperature in the US as a result of global warming. The Environmental Protection Agency published *Climate Action Report 2002* which is based on predictions from a model run by the respected Hadley Centre for Climate Prediction and Research in the UK. The Institute has accused the Agency of publishing 'knowingly fictional' science and is suing the White House Office of Science and Technology Policy for failing to block the report. President George W. Bush disowned the report and there are suggestions that the Institute's action is an attempt to undermine scientific claims about global warming.

Source: *New Scientist* (2003), **180**(2416), 12.

### **Call for tracking as mammal numbers fall**

More than 50 marine mammal experts met in Portland, Oregon, in August 2003 to consider priorities for research on dwindling populations of mammals such as whales, porpoises, sea lions, seals, otters, manatees and polar bears. The meeting was sponsored by the US Marine Mammal Commission who will make recommendations to Congress, which is considering changes to the Marine Mammal Protection Act. The meeting backed the development of a comprehensive monitoring and systematic sampling network to identify health issues and aid remedial plans and the creation of reservations in US waters. However, there was little confidence that the Bush administration or the Republican-controlled Congress would provide the money necessary for these actions.

Source: *Nature* (2003), **424**(6950), 715.

### **Scientists repeat historical Sierra Nevada survey**

From 1914 to 1920 the biologist Joseph Grinnell led one of the most extensive wildlife surveys ever conducted in the western US. His team collected tens of thousands of animal specimens, took about 2,000 photographs and produced 13,000 pages of notes. Scientists are now planning to repeat the survey in the Sierra Nevada to assess the effect of human activity on California's wildlife. The survey will begin in the Yosemite

National Park, which contains 20% of Grinnell's original survey sites. The survey team has already found some changes. Several small mammals such as squirrels now seem to live at higher elevations. This may be due to a warmer climate or because fire suppression has caused a buildup of undergrowth and pushed these species uphill.

Source: *Nature* (2003), 424(6952), 987.

#### **Survival of California condor hinges on lead issues**

California condors are highly susceptible to the effects of lead that paralyzes the birds' digestive systems and causes them to starve to death. This was one of the causes of the species' dramatic decline. Condors may pick up lead from carcasses left behind by hunters or by being shot, even though this is illegal. The recent discovery of a piece of lead 4 mm long inside the gut of a free-flying female condor has highlighted the continuing problem. Lead poses the greatest threat to the California Condor Recovery Program. Critics of the programme argue that US Fish and Wildlife Service officials are nervous about upsetting hunters and the powerful National Rifle Association through a demand for a ban on lead ammunition. The military already use a 'green' bullet made from tungsten, tin and nylon because lead pollution has caused the closure of many of their firing ranges. These bullets are not available to the public and will not become so unless government officials press for their use.

Source: *International Zoo News* (2003), 50(5), 302–303 [also available at <http://www.zoonews.ws/IZN/index.htm>].

#### **Sea otter numbers continue to rise in California**

A census of sea otters in California conducted in spring 2003 recorded 2,505 animals, an increase of 17% on the 2002 figure. This is the highest count of adult and young adult sea otters since current standardized methods came into practice in 1983. However, the results of the survey do not necessarily mean that the overall population size is increasing. The US Fish and Wildlife Service's Southern Sea Otter Recovery Plan recommends that trend analyses be based on 3-year running averages, and these averages indicate a gradual but statistically significant population increase of c. 0.9% per year since 1998.

Source: *Marine Pollution Bulletin* (2003), 46(7), 799.

#### **Effectiveness of Turtle Excluder Devices in the western Gulf of Mexico**

Following concerns over levels of turtle strandings, 1991 saw the implementation of Turtle Excluder Device regulations in the US shrimping industry. However, research carried out in 1994 for the western Gulf of Mexico detailed how, in subsequent years, overall stranding numbers actually increased. A recent study has now shown that the main contributors to this were increased turtle populations and an increase in inshore shrimping activity. Furthermore, the analysis of long-term stranding data sets for loggerhead and Kemp's ridley turtles show that variability in annual figures can be accounted for by variability in adherence to Excluder Device regulations: low adherence was correlated with high levels of strandings. Projections using a regression model suggest that improved compliance with the regulations will, in conjunction with other measures, promote population recoveries for both species in question.

Source: *Conservation Biology* (2003), 17(4), 1089–1097.

#### **Plans to restore the Everglades may be hindered**

In 2001 a comprehensive Everglades Restoration Plan, costing nearly US \$8 billion, was approved to capture freshwater and direct it back to restore the health of the ecosystem. Now the Florida legislature has passed a bill, backed by the sugar industry, that may threaten the health of the Everglades. The restoration plan envisaged phosphorus levels reaching an acceptable figure by 2006 but the new law extends that deadline to 2016 at the earliest. The wording of the law also makes water standards less rigid. Governor Jeb Bush has argued that under the new law Florida will meet its goals and that 95% of the Everglades will reach strict water quality standards by 2006. The remaining 5% will have higher phosphorus levels until technology is available that will allow the most polluted areas to be cleaned. Opponents say the legislation threatens the federal-state partnership agreed upon in the restoration plan, possibly jeopardizing future federal funding.

Source: *Plant Talk* (2003), 33, 15.

#### **World's biggest woodpecker may be extinct**

The imperial woodpecker *Campephilus imperialis*, at 60 cm long the biggest in the

world, may now be extinct. The bird was formerly found throughout the Sierra Madre Occidental mountains of north-west Mexico but the last confirmed sighting was in 1956. There have been eight subsequent local reports of sightings in two remote areas. A recent expedition to north-central Durango State, where the bird had been seen in a pristine canyon in 1996, returned without finding any evidence of a resident population. The imperial woodpecker has declined due to loss of its pine forest habitat and hunting.

Source: *Africa Birds & Birding* (2003), 8(4), 15.

#### **A high priority region for bird conservation in Mesoamerica**

A recent study has shown that the bird fauna of the Chimalpas Region in eastern Oaxaca, Mexico is by far the most diverse for any region of comparable size in the country. The region has at least 464 bird species representing 44% of the species known from Mexico. Within the region, the humid Atlantic lowlands hold 317 species, the montane regions 113 species and the southern dry forested lowlands 216 species. Much of the region is forested and in a good state of preservation. The lowland rainforests and cloud forests rank among the largest and best preserved in all of Mesoamerica including a complete lowland to highland continuum with entire watersheds more or less intact.

Source: *Bird Conservation International* (2003), 13, 227–253.

### **Central America and Caribbean**

#### **Humans benefit Cuban rock iguana densities**

Populations of the Vulnerable Cuban rock iguana *Cyclura nubila* have increased due to the close proximity of humans. A recent study compared six locations, categorized according to disturbance; one type was used extensively by military personnel at Guantánamo Bay Naval Base, while the other type was closed to humans. Surveys showed that the number of iguanas at the disturbed sites were three times higher than at the sites without human activity. However, the rise in iguana population density

leads to a negative effect on social interactions, resulting in higher aggression and stress between dominant males and subadult males, females and juveniles. In addition, male iguanas at the Naval Base interacted with females four times less frequently than the males found at low-impact areas. Accordingly, while human proximity causes local population increases in Cuban iguanas, numbers may reach unnaturally high densities that then compromise reproductive rate.

Source: *Animal Conservation* (2003), 6, 3–9.

## South America

### New Ramsar Site in the Pantanal

Brazil has announced the designation of 87,871 ha of the Pantanal in Mato Grosso State as a Ramsar Site. This complements the related 135,000 ha Pantanal Matogrossense Ramsar Site. The new site is largely a privately owned protected area. The area is a mixture of permanent rivers, seasonal streams, permanent and seasonal floodplain freshwater lakes, shrub-dominated wetlands and seasonally-flooded forests. The area contains several endangered species including hyacinth macaws *Anodorhynchus hyacinthinus*, giant otters *Pteronera brasiliensis* and marsh deer *Blastocercus dichotomus*.

Source: *Tapir Conservation* (2003), 12(1), 5–6.

### Road threatens key area of Peruvian rainforest

Plans are being discussed for a trans-oceanic highway that would stretch from Sao Paulo in Brazil to a major city on Peru's Pacific coast. The most likely route would pass close to Tambopata National Reserve in Peru's south-eastern Amazon. The reserve was established in 2000 to protect some of the world's last remaining cloud forests, Andean highlands and pristine rainforests in the Amazon basin. The area surrounding the reserve is suffering pressure from immigrants who are clearing tracts of land for farming and human settlement. Wood cutters are harvesting valuable mahogany trees *Swietenia macrophylla* and since 1991 Peru's exports of mahogany have increased 20-fold (see also pp. 84–90). Brazil has offered Peru financing for the road. If it is built the natural resources of the Tambopata National Reserve will be threatened.

Source: *Plant Talk* (2003), 33, 16.

## Pacific

### New Caledonia's dry forests are the most threatened on earth

Tropical dry forests are severely threatened in all of the 11 global biodiversity hotspots in which they occur. However, a recent analysis shows that those of New Caledonia are probably the most threatened of all. Researchers compared transect data from nine of the hotspots and showed that New Caledonian sites held more threatened plant species than sites anywhere else, even though total species richness was lower than in continental dry forests. Both the total area of remaining forest and the reserve coverage were lower than for any other dry forests. Remaining fragments cover only 10,000 ha, less than 7% of which is included within three existing reserves. Two of these reserves are city parks and the third has been severely degraded by fire and grazing animals. As New Caledonian dry forests also hold the highest proportion of endemic species, urgent action is needed to prevent a huge loss of biodiversity. Alongside the existing WWF initiative to form cooperative agreements with local landowners, forest regeneration programmes will probably be needed.

Source: *Biodiversity & Conservation* (2003), 12(8), 1687–1697.

## Australia/Antarctica/New Zealand

### Fence may be built to control cane toads

Australia is considering building a 9 km-long exclusion fence at the neck of the Cobourg Peninsula north-east of Darwin to stop the northward advance of the cane toad. Cane toads were introduced into Queensland in 1935 and have steadily spread north and west at a rate of c. 30 km per year. The toads have recently been found in Kakadu National Park, one of the few areas of Australia not colonized by the species, and scientists argue that if the fence is not built cane toads could easily reach Darwin and the peninsula. Critics argue that the fence would be expensive and ultimately futile. The toads multiply rapidly and have no natural predators, and so even if

only a few made it across they would eventually colonize the region.

Source: *New Scientist* (2003), 179(2411), 11.

### Murray cod is threatened

The Murray cod is Australia's largest freshwater fish and a wildlife icon for the Murray-Darling Basin. However, the species has now been added to the national list of threatened species. Murray cod are known to live up to 100 years and can grow to 1.8 m in length and weigh 110 kg, although fish of this size are now extremely rare. The species occurs in warm water habitats in the Murray-Darling Basin waterways. Murray cod are the most popular target fish for anglers and there is now a need for protection and careful management of this increasingly exploited species. The species has seen a dramatic decline since European settlement and scientists believe that the current population is only 10% of that existing prior to European arrival.

Source: *Marine Pollution Bulletin* (2003), 46(8), 930.

### Warning of impending catastrophe in Australia's tropical rainforests

Australia's tropical rainforests are facing a loss of biodiversity that is unprecedented in any montane ecosystem. A recent study using bioclimatic models predicted that, even with a 1°C temperature increase, all endemic vertebrates would face a significant decline in their distributions due to habitat loss. Resultant extinction rates are likely to be high, with losses rising rapidly beyond a temperature increase of 2°C. This loss is predicted to be on such a large scale due to a combination of several factors, such as the particularly low resilience of the ecosystems as a result of introduced species and habitat fragmentation. Endemic marsupials, such as the tree kangaroo and ringtail possum, have also been found to be particularly vulnerable to extreme temperatures. The impacts of temperature changes were specifically studied, but it was predicted that corresponding climatic changes, such as rainfall, would further affect the rain forests.

Source: *Proceedings of the Royal Society London B* (2003), 270, 1887–1892.

### Campbell Island teal is to return

A successful campaign to exterminate brown rats *Rattus norvegicus* from Campbell Island, 700 km south of New

Zealand (see *Oryx* 37(4), 400), has meant that it will be possible for the endemic Campbell Island teal *Anas nesiotis* to return. Rat predation and competition had reduced the teal population to only 25 pairs in 1990. A captive breeding programme was established in the 1980s and birds bred on Codfish Island will

now be released on Campbell Island. Campbell Island was thought to hold the world's densest population of brown rats, *c.* 200,000 on 11,300 ha, and the New Zealand Government spent NZ \$2.6 million (US \$1.5 million) on the eradication programme.

Source: *World Birdwatch* (2003), 25(3), 4.

The *Briefly* section in this issue was written and compiled by Simon Mickleburgh and Martin Fisher, with additional contributions from Lauren Alexander, Chris Bowden, Sally Fisher, James Jones, Tony King, David Kuria, Aleks Maljkovic, Peter Moore, Sarah Nash, Angelo Pernetta, Dorothea Pio, Toby Ross, Deepa Senapathi, Craig Turner, Nicholas Wilkinson, Thomas Worthington and Stuart Wynne. Contributions from authoritative published sources (including web sites) are always welcome. Please send contributions to Martin Fisher, Fauna & Flora International, Great Eastern House, Tenison Road, Cambridge, CB1 2TT, UK, or by e-mail to [oryx@fauna-flora.org](mailto:oryx@fauna-flora.org)