

International

Economic reasons for conserving wild nature

A review of progress in the conservation of nature in the 10 years between the World Summits in Rio de Janeiro and Johannesburg has demonstrated that the loss and degradation of remaining natural habitats has continued largely unabated. However, evidence has been accumulating that such systems generate marked economic benefits (from the provision of ecological services and the direct harvest of wild species), which the available data suggest exceed those obtained from continued habitat conversion. The study estimated that the overall benefit:cost ratio of an effective global program for the conservation of remaining wild nature is at least 100:1. The relentless conversion and degradation of remaining natural habitats is eroding overall human welfare for short-term private gain. Retaining as much as possible of what remains of wild nature through sustainable use, conservation and, where necessary, compensation for resulting opportunity costs, makes overwhelming economic as well as moral sense.

Source: *Science* (2002), **297**, 950–953.

Bycatch is the greatest killer of whales and dolphins

Despite a continuing worldwide ban on commercial whaling, 60,000 whales and dolphins are killed each year by becoming entangled in various types of nets (this is known as 'bycatch'). This is the single biggest cause of death in cetaceans. A coalition of the world's leading cetacean scientists have formed the Cetacean Bycatch Action Network to tackle this problem. It has been shown that concerted efforts to tackle the problem can have dramatic effects. In the Gulf of Maine fishermen using a series of methods were able to reduce the bycatch of harbour porpoises by 77% in 1 year, achieved without the need for new legislation. In some areas, however, tougher legislation is needed. Recently, in the Galápagos Marine Reserve a fish-

ing boat, the El Dorado, was found with a bycatch of eight yellowfin tuna and 70 dolphins, despite existing legislation. The website <http://www.cetaceanbycatch.org> provides resources for a range of stakeholders.

Source: *Marine Pollution Bulletin* (2002), **44**(9), 840–841.

New parties to CITES

Kuwait and Bhutan have ratified CITES to become its 159th and 160th Parties. Kuwait ratified the Convention on 12th August 2002, which enters into force on 10th November 2002, while Bhutan acceded on 15th August 2002, with entry in force on 13th November 2002.

Source: *CITES Convention Support Unit* (<http://www.cites.org>), 21 August 2002.

Europe

Snowdonia plant found for first time in 50 years

The Snowdonia hawkweed was identified in the 1880s, and once grew only on seven mountain ledges in the Snowdonia National Park in North Wales. It was last seen in 1953, but in summer 2002 a single plant in flower was seen in the Cwm Idwal National Nature Reserve in Snowdonia. Staff from the Countryside Council for Wales have taken ripe seed from the plant in the hope of producing a small stock that will guarantee its survival.

Source: <http://www.rhs.org.uk/publications/pubs/garden1002/newshawkweed.asp>

UK wildflower meadows still in decline

In the last 100 years England has lost more than 95% of its ancient unimproved grassland, and government attempts to reverse this decline have failed according to a report by the UK NGO Plantlife. There are now thought to be no more than c. 97,000 ha of wildflower meadows remaining, and what is left is often isolated fragments. The government has offered financial incentives to farmers to

retain wildlife-rich habitats, but severe economic pressure and the impact of the foot and mouth disease epidemic in 2001 have meant that such incentives are not enough to ensure the maintenance of important habitats. Inflexible management prescriptions and government bureaucracy are also blamed for the decline. Large areas of the UK countryside now lack unimproved old grassland and are effectively deserts for wildflowers and wildlife.

Source: *Plant Talk* (2002), **29**, 17.

Britain launches investigation into seal virus

The British Government has launched a research project into the phocine distemper virus that has affected seal populations in northern European countries. The outbreak is thought to have started in May 2002 on Anholt Island off the east coast of Denmark, and has spread to the Dutch, Belgian, Norwegian, French and British coasts. The disease was detected on British shores in August 2002 and the government will fund a £250,000 research project that will measure infection levels in dead animals as well as monitoring the progress of the disease. Phocine distemper virus has no known cure, and an outbreak in 1988 killed 18,000 seals.

Source: *Nature* (2002), **418**, 811.

Declines in the numbers of taxonomists: implications for conservation

To ensure the effective conservation of biodiversity the distribution of species needs to be accurately characterized and areas of high species richness located. For many taxa this can be achieved only by experienced taxonomists. Taxonomic research has a large input from non-professional or amateur researchers, in addition to professionals working at museums or universities. Although the decline of taxonomy and the number of taxonomists within the professional community has been widely publicized, the trends in the activities of amateur taxonomists are unclear. An examination of research by both amateur and professional taxonomic entomologists in the UK over the past century has shown

that both amateur and professional taxonomy have undergone a long and persistent decline since the 1950s, in terms of both the number of contributors and the number of papers contributed.

Source: *Animal Conservation* (2002), 5, 245–249.

Britain's birds afflicted by mental disease

Sparrows and starlings in Britain are dying from an unknown disease. Ornithologists in Scotland have reported cases of a strange neurological condition since 1994. Young birds with the disease cannot fly but instead walk around in tight circles doing somersaults and twisting their heads in a bizarre fashion. Conservationists have been worried about widespread declines in sparrows and starlings but this unknown disease is not thought to be the cause.

Source: *New Scientist* (2002), 175(2358), 5.

Germany takes the lead in tackling bird electrocution problem

Electrocution is one of the main causes of death in migratory bird species, especially storks and raptors. Many birds use electricity structures as a response to loss of habitats such as trees and cliffs. The electrocution working group of NABU (BirdLife in Germany) has been active on this subject for 20 years, and German Nature Conservation Law now requires new electricity poles to be constructed in a way that is harmless to birds. Electricity companies must abolish dangerous types of poles within 10 years. This success is being transferred to other European countries. There is a severe problem in eastern European countries where there has been a large increase in the network of power lines. Regulations controlling the construction of poles are still missing in most European countries particularly those that are important flyways for migratory birds.

Source: *BirdLife in Europe* (2002), 7(2), 3.

Nesting platforms for pelicans in the Danube

An initiative has been launched by ROS (BirdLife in Romania) to tackle the issue of declining numbers of nesting places for white pelicans *Pelicanus onocrotalus* in the Danube Delta, which hosts Europe's most important colonies of this and another species, the Dalmatian pelican *P. crispus*. White pelicans mostly breed

on floating reed islands that can reach a thickness of 1.5 m. However, these islands are disintegrating and eventually the pelicans will be left with insufficient places to nest. ROS is working with other bodies to provide artificial nesting sites on elevated islands using construction materials from the area. The new nests provide a potential nesting area for 250 pelicans.

Source: *BirdLife in Europe* (2002), 7(2), 2.

Fight to save salt pans in Portugal

The Tejo Estuary near Lisbon in Portugal is one of the most important European wetlands for waterbirds but is being threatened by urban development. On the edge of this area is a complex of ancient salt pans, Salina de Alverca, which is an important site for wintering waterbirds. SPEA (BirdLife in Portugal) and other NGOs are contesting plans to build a sewage farm and associated developments. SPEA is requesting national and local authorities to find an alternative site and recognize Salina de Alverca as an Important Bird Area and designate it as a Special Protection Area.

Source: *BirdLife in Europe* (2002), 7(2), 4.

Sub-Saharan Africa

Anambra waxbill rediscovered

The Anambra waxbill *Estrilda poliopareia* has been seen for the first time since 1987. A group of 40 birds were seen in the grounds of a nursing college in Tombia, southern Nigeria. This bird is a Vulnerable species known from only a few localities in southern Nigeria and is seemingly rare despite large areas of apparently suitable habitat.

Source: *World Birdwatch* (2002), 24(3), 2.

Elephant repellent may help to reduce human-animal conflict in Zimbabwe

Crop raiding elephants *Loxodonta africana* were repelled from fields more than twice as fast by a pepper spray deterrent than by 4–7 people guarding with dogs, whips and multiple large firearms. In an attempt to develop a new approach for defending crops, the effectiveness of the spray, based on oleoresin from peppers *Capsicum* spp., was compared with traditional methods. Although damage to subsistence crops by elephants is a

localized problem in rural Africa, it still causes major economic losses for those affected, and wildlife managers are keen to limit the number of elephants shot for crop protection. A pressing social and economic need exists for a reliable, low cost and non-lethal elephant-repellent system, which is why these findings are so significant (c.f. this issue, pp. 80–84). Source: *Journal of Wildlife Management* (2002), 66, 674–677.

Conservation of the Congo Basin

In September it was announced that the US will commit \$36 million over the next 3 years to conservation of the Congo Basin. In addition to the US funds, Conservation International, the Wildlife Conservation Society and WWF are joining efforts to raise another \$37.5 million by 2012. These funds will support a wide range of activities within 11 targeted areas, including conservation of local communities, management of protected regions and the Gabon's new national park system that will safeguard 10% of the entire country.

Source: http://www.conservation.org/xp/CIWEB/newsroom/press_releases/090402a.xml

New estimate of the numbers of golden-crowned sifaka in Madagascar

A survey of the Critically Endangered golden-crowned sifaka *Propithecus tattersalli*, one of the smallest species in the genus *Propithecus*, of Madagascar has estimated that its population numbers 6,100–10,000. It is restricted to the region between the Loky and Manambato rivers, within which it is locally abundant and can even be found in small forest fragments. It was not observed above elevations of 700 m. Though sensitive to forest destruction, the species seems to be resilient to current levels of landscape fragmentation. The major threats to the sifaka include slash-and-burn agriculture, uncontrolled grass fires, wood extraction for housing, firewood production, logging, gold mining and hunting.

Source: *Biological Conservation* (2002), 108(3), 325–334.

Spectacular recovery of the Rodrigues fody

The Rodrigues fody *Foudia flavicans*, a songbird, is one of the last three endemic vertebrates persisting on the Mascarene

island of Rodrigues. By 1968 the population had declined to only 5–6 pairs, most probably as a result of massive deforestation of the native forests and high grazing pressure. Little native forest remains on Rodrigues and so fences have been put up around important forested areas, and both native and exotic trees have been planted. The present fody population consists of a minimum of 911 birds, an almost 100-fold increase. Surveys of habitat type showed that the fody density was correlated with increasing canopy cover, tree height and tree species diversity. The species occupied both native and exotic forested areas. The ideal management is thought to be to protect existing forested areas to allow forest maturation, and encourage expansion of afforested areas. In the short term the management also needs to aim at maintaining mature exotic forests because these seem to benefit the fody population.

Source: *Biological Conservation* (2002), 107, 299–305

South and South-east Asia

10,000 olive ridley turtles die in India

In early 2002 at least 10,000 endangered olive ridley turtles were reported to have been killed in the waters of the Bay of Bengal. The carcasses of turtles had been washing up on the shores of the Indian state of Orissa. Turtles are killed when they are trapped in the nets of fishing trawlers during the mating season, when large numbers congregate in the nesting grounds. In 2001, 18,000 turtles were reported to have been killed.

Source: *Marine Turtle Newsletter* (2002), 97, 26 (also at <http://www.seaturtle.org/mtn>).

Increase in illegal pangolin trade

Thailand has emerged as a hub for smugglers bringing pangolins from Cambodia, Malaysia and Indonesia to China, where they are consumed as food and medicine. The number of pangolins confiscated by Thai officials leapt from 1,944 in 2001 to 10,763 in the first 7 months of 2002, according to the Thai Forestry Department. The penalties typically issued in Thailand – 10,000 baht

(less than US \$250) – are an inadequate deterrent because each shipment can generate a million-baht profit. In April c. 1,200 frozen pangolins hidden in fish containers bound for Viet Nam were seized by Malaysian customs officials. In October 2001 c. 2,700 kg of pangolin scales from Indonesia were seized in Hong Kong.

Source: Reuters, 21 August 2002 (also at <http://forests.org/articles/reader.asp?linkid=14588>)

Poached tortoises returned to India

More than 1,800 illegally traded Indian star tortoises *Geochelone elegans* have been flown from Singapore back to India where they will be reintroduced into their natural habitat. The tortoises will initially be cared for in a facility at Hyderabad Zoo. Prior to their release the animals will be tested by the Hyderabad-based Centre for Cellular Molecular Biology to ascertain their geographical origins.

Source: *International Zoo News* (2002), 49(6), 354 (also at <http://www.zoonews.ws/IZN/index.htm>).

New parks designated in Viet Nam

Two important areas for biodiversity in Viet Nam have been designated as national parks. Lo Go Sa Mat National Park was designated in July 2002. It contains several forested wetland habitats that have been almost eradicated elsewhere in Viet Nam and is an important stopover point for Vulnerable Sarus cranes *Grus antigone* as they migrate between their breeding grounds in northern Cambodia and wintering grounds in Viet Nam's Mekong Delta. The Government is also to designate Chu Yang Sin Natural Reserve in the Central Highlands as a National Park. This 59,000 ha reserve is home to almost 1,000 species of plants, 54 of them listed in the Viet Nam Red Book for Endangered Species. The area is also of great ornithological importance.

Source: *World Birdwatch* (2002), 24(3), 9.

Novel tool use by wild orang-utans.

A population of wild Sumatran orang-utans *Pongo abelii* (see also this issue, pp. 49–54) have devised a previously undescribed tool to aid them in forest locomotion. This tool is described as a branch 'hook' and is used to gain extra grip on branches during brachiation. A second tool, a leaf pad, used to protect their feet from thorny branches

whilst feeding, has also been recognized. This second tool is similar in function to a tool used by a nearby population of orang-utans, unlike the new branch hook. It is thought that the disturbed habitat of these apes has prompted the development of the newly discovered tool, which assists locomotion through the forest.

Source: *American Journal of Physical Anthropology* (2002), 119(2), 186.

Feathers from captive hornbills help conserve their wild relatives

The Wildlife Conservation Society has been collecting tail feathers from captive hornbills and shipping them to Sarawak to be distributed to indigenous people for use in traditional headdresses and ceremonies. This aims to offset the need to hunt hornbills in the wild. Populations of hornbills have plummeted in recent years. The programme has involved a range of zoos and other institutions throughout the US.

Source: *International Zoo News* (2002), 49(5), 292 (also at <http://www.zoonews.ws/IZN/index.htm>).

Philippines identifies key areas for conservation

The Philippine Department of Environment and Natural Resources (DENR) has announced a plan that identifies key areas of biological importance and conservation priority. The plan is the culmination of the Philippine Biodiversity Conservation Priorities Project that has been undertaken by 300 local and international scientists from more than 100 institutions. In total 170 terrestrial and inland water and 26 marine priority areas have been identified by the project. The Philippines is recognized as one of 17 so-called mega-diversity countries that together include two-thirds of the world's biological diversity.

Source: *Marine Pollution Bulletin* (2002), 44(7), 581.

Philippines Hornbills Conservation Programme

At least nine species and 10 subspecies of hornbills are known from the Philippines. All are endemic and all have relatively small ranges, with particular forms occurring only on particular islands or groups of islands. Because of destruction of native forests coupled with hunting of these birds for food and the live bird trade, all Philippine

hornbills are now regarded as threatened. In recognition of this situation a new Memorandum of Agreement formally signifying the establishment of a Philippines Hornbills Conservation Programme has been signed by the Department of Environment and Natural Resources of the Government of the Philippines, Vogelpark Avifauna of the Netherlands, and the North of England Zoological Society. Activities, which are being developed and coordinated under the auspices of the Fauna & Flora International Philippines Biodiversity Conservation Programme, include status surveys, habitat protection and restoration, development of conservation breeding and research programmes, production and distribution of public awareness and education materials, organisation of local biodiversity conservation workshops and teachers' training programmes, and personnel training.

Source: *International Zoo News* (2002), 49(6), 353–354 (also at <http://www.zoonews.ws/IZN/index.htm>).

East Asia

Survey highlights consumption of snakes in China

A survey by the China Wildlife Conservation Association (CWCA) found that over 10,000 tons of snakes are eaten each year in China, not including parts used in traditional Chinese medicine. As a result, species such as Fea's pit viper *Azemiops feae* and king cobra *Ophiophagus hannah* may face extinction. The CWCA has urged a revision of outdated wildlife legislation that protects only rock python *Python molurus*. It is proposed to include species with limited distributions or with small or rapidly declining populations on the protected list.

Source: *Living Forests* (2002), June 2002, 38.

Mortality of migratory waterbirds on Lashihai Lake

Lashihai Lake Reserve in China is an important wintering site for waterbirds, and is also an important fishery. Over a 6-month period an estimated total of 6,164 waterbirds were killed as a result of being caught in fishing nets, with diving species being the most susceptible. The three commonest affected species

were the black coot *Fulica atra*, the common pochard *Anthya ferina* and the little grebe *Podiceps ruficollis*, together accounting for 79% of the total number of birds trapped. For the conservation of wintering waterbirds on the Lake a non-fishing zone is needed during the winter. Source: *Biological Conservation*, 2002, 108, 273–279.

Cross-border smugglers arrested

In November 2001 three men were arrested smuggling pelts of 23 tigers, 33 leopards and 134 sea otters from Myanmar to south-west China's Yunnan Province. The men, two Chinese and one from Myanmar, had claimed their cargo was jellyfish.

Source: *Cat News*, 36, 27.

Last-ditch plan for the Yangtze river dolphin

Scientists trying to save the Yangtze river dolphin or *baiji* are planning to bring the last animals into 'captivity'. The species has declined from c. 6,000 in the 1950s to fewer than 100 today, largely through accidental entanglement in nets and hooks. The relocation is to be overseen by the Institute of Hydrobiology in Wuhan, Hubei Province, with approval from the State Forestry Administration. In the plan, 50 million yuan (US \$6 million) will be spent to hire 50 professional fishermen to search a 1,700 km stretch of the Yangtze and capture the dolphins using nets. The animals will be released into the newly created Tian'erzhou nature reserve, built on a 21-km meander of the river that was separated when the main river changed course. Previous efforts to hold the dolphins in captivity have been largely unsuccessful.

Source: Associated Press, 12 July 2002 (also at <http://forests.org/articles/reader.asp?linkid=13111>)

Taiwan implements first whale shark harvest monitoring system

The world's first monitoring system for the harvest of whale sharks has been implemented by Taiwan but there are still concerns that the Whale Shark Harvest Reporting System (WSHRS) will not pick up on the possibility of unreported or under-reported catches and significant amounts of shark meat entering Taiwan's market through unofficial channels. Taiwan has been identified as possibly the world's largest market for whale shark meat. Data from the

WSHRS have indicated that reported whale shark harvests and imports are far lower than levels of meat found on the market. In order to tackle this issue TRAFFIC has urged Taiwan to further enhance management measures for whale sharks, increase the constructive dialogue between the fishing community and conservation stakeholders, as well as improving the monitoring systems and data collection for the species' catch and markets.

Source: TRAFFIC Press Release, 3 October 2002.

Spoonbill nesting sites in the Korean Demilitarized Zone

Satellite tracking has revealed nesting sites of the Endangered black-faced spoonbill *Platalea minor*, a rare species endemic to east Asia. These nesting sites are located in the west of the Korean Demilitarized Zone (DMZ), on the border between North and South Korea. Field surveys are impossible over much of the area because of the presence of land mines or because access is forbidden. Earlier satellite tracking showed that two other rare species, the white-naped crane *Grus vipio* and the red-crowned crane *G. japonensis*, are using the DMZ. This new finding further highlights the importance of the DMZ for nature conservation.

Source: *Ibis* (2002), 144, 340–343.

Continuing depletion of protected minke whales.

Minke whales *Balaenoptera acuturostrata* in the western North Pacific comprise two genetically distinct stocks. Although in 1986 the East Sea/Sea of Japan stock was considered depleted and declared protected by the International Whaling Commission, a recent study has shown that products from this stock are widely sold in commercial markets in Japan and Korea. The Japanese Whale Research Program captures up to 100 minke whales per year from pelagic waters off the Japanese coast, and products of this scientific hunting are sold on domestic markets. Information provided by this programme suggested that no more than 5% of the minke whales sold in Japan come from the protected stock, but recent DNA analyses have shown that more than 30% of the products sold in Japan between 1998 and 1999 belonged to the stock. These results suggest the sale of products from Japanese scientific

hunting may be acting as a cover for the sale of products of protected whales, and indicate that undocumented exploitation is greater than previously assumed.

Source: *Animal Conservation* (2002), 5, 143–152.

North America

Introduced brook trout threaten Chinook salmon

Non-indigenous brook trout *Salvelinus fontinalis* have a detrimental effect on the numbers of Chinook salmon *Oncorhynchus tshawytscha* in the US Columbia River Basin. The first systematic examination across 15 populations shows the survival rate of juvenile Chinook salmon is nearly double in river systems that are free of brook trout. Eight of the 15 populations examined are heading towards extinction, but the researchers calculate that this trend would be reversed if brook trout were absent from their systems. Brook trout have been introduced into these rivers by fishery agencies for recreational and sport fishing. It is thought that these non-native fish are predators of Chinook parr and eggs, and compete directly for food.

Source: *Biological Sciences, Proceedings of the Royal Society* (2002) 269(1501), 1663–1670

US government refuses to release mahogany shipments

In May 2002 the US Government reversed a decision to release 18 shipments of Brazilian mahogany imported into the US (see also this issue pp. 85–90). Approximately 7,000 m³ of big-leaved mahogany *Swietenia macrophylla* worth US \$8–10 million have been impounded at six US ports to allow time for confirmation that CITES export permits were valid and that the wood was legally acquired. The US Department of Agriculture and the US Fish and Wildlife Service had originally approved the release of the wood but the Brazilian minister of the environment then asked for the shipments to be detained until further notice. The US Government is now waiting to hear if any of the wood was illegally harvested or exported from Brazil.

Source: *The TRAFFIC Report* (2002), 1(1), 5.

Fears about environmental impact of transgenic animals

A committee of the US National Academy of Sciences has expressed strong concerns that transgenic animals could damage their wild surroundings. In a report to the Food and Drug Administration the committee put concerns about the environmental impact of genetically modified animals at the top of their list. Scientists have already expressed concerns about transgenic salmon, which can reach adult size three times faster than other domesticated salmon, and the effect they could have on wild fish. The report says that there is not yet enough scientific evidence that transgenic salmon would be environmentally safe and that there are worries about how to remove invasive species if they cause problems. Environmental groups have hailed the report as a critique of current US regulations on transgenic animals.

Source: *Nature* (2002), 418, 805.

US expands shark finning ban

In March 2002 the US ban on shark finning was expanded to take effect in the Pacific Ocean. A ban on finning has been in place in federal waters in the Atlantic Ocean, Gulf of Mexico and Caribbean Sea since 1993. The new regulations implement the Shark Finning Prohibition Act of 2000 that aims to eliminate the wasteful practice of shark finning by prohibiting any federally regulated fishing vessel from carrying or landing shark fins without the entire carcass.

Source: *The TRAFFIC Report* (2002), 1(1), 7.

Bush's clear skies plan will be bad for parks

The Bush administration has announced its intention to relax air pollution laws affecting 17,000 of the oldest and dirtiest power plants, oil refineries and other industries in the US. Park and public health officials view this move as the worst attack on the Clean Air Act in the Law's 32-year history. The announcement has followed years of industry lobbying. There has been growing concern over levels of air pollution in National Parks. For example, summer days in the Great Smoky Mountains National Park often have higher levels of smog than in a major city. The Bush administration introduced the Clear Skies Initiative (CSI) in July 2002 but

opponents have argued that CSI does not go far enough fast enough. Another piece of legislation, the Clean Power Act, would require deep cuts in emissions of three pollutants included in the CSI in less time. Unlike the CSI it would also cut CO₂ emissions that can have a significant impact on national parks through global climate change. The Clean Power Act has already been adopted by the Senate Environment and Public Works Committee that considered it an essential step to protect America's parks and people.

Source: *National Parks* (2002), 76(7–8), 12.

Snowmobiles to stay in Yellowstone National Park

Despite objections from the public and evidence from scientists of the damage they cause, snowmobiles will continue to be allowed access to Yellowstone and Grand Teton national parks. In June 2002 the National Park Service announced that the machines would stay with "very strict limitations". In November 2000 the Clinton administration decided to phase out use of snowmobiles by 2001–2002 but this was halted by a lawsuit from the snowmobile industry. The Bush administration ordered further study of snowmobiles in parks and invited public comment. More than 350,000 comments were received with c. 80% favouring a ban on snowmobiles. This issue has been running at Yellowstone since 1997, and in 2001 rangers at the park began wearing gas masks because of the choking fumes emitted by the machines.

Source: *National Parks* (2002), 76(7–8), 8.

More indictments for big game trafficking in the US

In May 2002 eight indictments were announced in Illinois for the trafficking and killing of endangered species. Eight people were caught as part of Operation Snow Plow, a multi-state crackdown in big game trafficking. In all, 19 tigers *Panthera tigris*, seven leopards *P. pardus*, one snow leopard *Uncia uncia*, and one Asian swamp deer or barasingha *Cervus duvauceli* were traded or killed in the late 1990s. The animals were purchased from licensed dealers, small zoos and wildlife refuges in Oklahoma, Missouri and Arkansas. If convicted those indicted face up to 5 years in prison and fines of up to US \$250,000 for each count.

Source: *The TRAFFIC Report* (2002), 1(1), 4.

Alaska provides more evidence of global warming

A recent study has presented evidence that Alaska's glaciers are melting faster than previously thought. The rate of glacial melting in Alaska has doubled in the past 5 years compared to the previous 40 years. The Alaskan contribution to sea level rise has been estimated at 0.27 mm per year over the last decade, about twice as much as originally predicted. Alaska's glaciers represent c. 13% of the world's total mountain glacier area and contribute about half of all sea level rise caused by glacial melt. This is about twice as much as the amount lost from the entire Greenland Ice Sheet.

Source: *Science* (2002) 297, 382–386.

Father oak gets a low count

Recent work examining how woodlands are affected by fragmentation has turned up some surprising results. A study of the California Valley oak *Quercus lobata*, a species that prefers level, fertile sites that are ideal for agriculture, has found that the remaining pockets of this high profile woodland have a lack of potent pollen donors. Over 1944–1999 there was a 20% reduction in the number of effective pollen donors per female. This has extensive implications, not only with lower seed production but also with reduced genetic fitness of offspring because of increased self-fertilization. In order to counteract this, planting needs to be undertaken using seed from densely populated areas where this problem is unlikely to be occurring. This work highlights the need to consider pollen dispersal when managing threatened tree species, and further shows the importance of having protected areas where 'strong' genetic stock can be maintained.

Source: *Molecular Ecology* (2002), 11, 1657–1668.

New species of whale discovered

A new species of beaked whale has been discovered through DNA analyses. The previously undescribed species has been named Perrin's beaked whale *Mesoplodon perrini*. Five specimens of Perrin's beaked whale, stranded on the coast of California, were initially identified as Hector's beaked whales based on cranial morphology and a neonate Cuvier's beaked whale based on external features. However, following analysis of mitochondrial DNA

sequences it became apparent that these specimens were a new species. As a result of the DNA evidence, the skulls from the stranded Californian whales were re-examined and were found to be subtly different from Hector's beaked whale specimens. To date, all records of Hector's beaked whale are from the Southern Hemisphere, whereas these records of Perrin's beaked whale are from the North Pacific. Cuvier's beaked whales have a broad distribution occurring in all but the polar seas.

Source: *Marine Mammal Science* (2002), 18(3), 577–608.

New report on Chihuahuan Desert cactus trade

TRAFFIC North America has published a report *Prickly Trade: Trade and Conservation of Chihuahuan Desert Cacti* focusing on the trade in cacti from the Chihuahuan Desert, an ecoregion of outstanding biological diversity that stretches from the Mexican Central Plateau to the south-western US states of Arizona, New Mexico and Texas. Nearly a quarter of all cactus species (350) are found in this desert. Mexico contains c. 85% of the desert and has the richest diversity of rare, endemic and recently discovered cactus species. A substantial trade-related threat to Mexico's rarest and most threatened cactus species is foreign hobbyists who visit the country in search of highly prized cacti. Tourists are also encouraging the harvest of species from the Chihuahuan Desert by purchasing souvenirs. TRAFFIC has identified several localities that are high priorities for cactus conservation. The report makes a number of recommendations aimed at improving the conservation of cacti in the Chihuahuan Desert.

Source: *The TRAFFIC Report* (2002), 1(1), 1–2 & 10.

Illegal caviar trade uncovered in the US

In May 2002 two operators of Royaloff Caviar in Tennessee were found guilty of six violations of the Lacey Act in respect of the illegal harvesting of caviar from the paddlefish *Polyodon spathula*. A joint investigation by the Tennessee Wildlife Resources Agency and the US Fish and Wildlife Service found that over 8,400 pounds of paddlefish caviar valued at US \$483,000 were taken illegally and

sold. The two were to be sentenced in August 2002, and penalties for violations of the Lacey Act include up to 6 years imprisonment and a US \$250,000 fine for individuals or US \$500,000 fine for an organization.

Source: *The TRAFFIC Report* (2002), 1(1), 8.

Non-native pitted against non-native to save native hemlocks

Officials at the Great Smoky Mountains National Park are using one non-native species, a tiny black predator beetle, to control another, hemlock woolly adelgid, in order to prevent the loss of the park's hemlock trees. Park officials have released 10,000 beetles *Pseudoscymnus tsugae* in an attempt to battle infestations of the adelgid, an Asian import that sucks sap from the tree's needles and causes defoliation. The beetle has been shown to prey only on adelgids. Woolly hemlock adelgid infestation was first found in the eastern US 50 years ago and has killed 75% of the hemlocks in the Shenandoah National Park in Virginia. It is a close relative of the balsam woolly adelgid from Europe that destroyed c. 80% of Fraser firs in the Great Smoky Mountains National Park.

Source: *National Parks* (2002), 76(7–8), 14.

Damaged coral reef to be repaired

Molasses Reef is one of the most famous coral reefs in the Florida Keys National Marine Sanctuary but it was severely damaged in 1994 when a freighter, the Wellwood, ran aground on the reef destroying 5,085 m² of living coral and damaging 644 m of reef framework. Now, the National Oceanic and Atmospheric Administration (NOAA) is to restore the grounding site. NOAA will place 22 modules at 14 locations. Each module is a preformed concrete cast that is used to rebuild the reef foundation and is designed to replicate the features of the grounding site as closely as possible and provide the maximum amount of habitat for fishes, coral and other marine life.

Source: *Marine Pollution Bulletin* (2002), 44(8), 724.

Call for Vatican ban on turtle meat

Conservationists claim that a Mexican tradition of eating sea turtles during the Lenten season is killing 5,000 animals

per year, and have called upon the Pope to reinforce the ban on consumption of turtle meat. Many Mexicans and Mexican-Americans eat turtle meat during *Semana Santa*, or the days leading up to Easter Sunday, considering it to be fish because turtles can swim. A coalition of conservation groups has asked the Pope to officially clarify that sea turtle flesh is meat, and thus inappropriate for consumption during Lent.

Source: *Marine Turtle Newsletter* (2002), 97, 25 (also at <http://www.seaturtle.org/mtn>).

Central America and Caribbean

Priority conservation areas for birds in El Salvador

El Salvador has the smallest protected areas system in Central America. High levels of habitat destruction and disturbance throughout the country make the reserve system especially important for conservation of biodiversity. An assessment of the conservation importance of 10 reserves for nationally threatened bird species has indicated that Montecristo National Park is the most important area, with 42% of all nationally threatened birds present. El Imposible National Park, El Salvador's largest park (5,000 ha), is second in importance, followed by Laguna El Jocotal wildlife refuge and Barra de Santiago wildlife refuge. In all, these four areas provide refuge for 83% of El Salvador's 268 nationally threatened bird species, in less than 7,600 ha of natural habitat. Because of small reserve sizes, all of El Salvador's threatened birds may need additional protection.

Source: *Animal Conservation* (2002), 5, 173–183.

Costa Rica rejects oil exploration

The National Technical Environmental Secretariat (SETENA) of Costa Rica's Ministry of the Environment and Energy have rejected an Environmental Impact Assessment prepared by the Harken Energy Corporation in relation to its plans to drill for oil off the country's Caribbean coast. SETENA unanimously rejected the EIA as the project was deemed "not environmentally viable". The potential negative impacts the proposed drilling would have had on

the area's globally important sea turtle population and turtle-related tourism were important factors in SETENA's decision.

Source: *Marine Turtle Newsletter* (2002), 97, 25 (also at <http://www.seaturtle.org/mtn>).

Marine reserves likely in US Virgin Islands

In January 2001, the then US President Bill Clinton signed an order creating the US Virgin Islands Coral Reef National Monument, protecting almost 4,900 ha of coral reefs and designating marine reserves that would protect the extraordinary marine life of the area. This was fiercely opposed, particularly on the grounds that it would hurt fishermen who depend on coastal fishing grounds. Following a review, it now appears that the creation of the National Monument will go ahead. Before Clinton's order the Department of the Interior had said that overfishing had reached crisis point. Under the new designation fishing would be off-limits in all but two areas of the new Monument.

Source: *National Parks* (2002), 76(5–6), 10.

South America

'Lost' parrot rediscovered

A team of six Colombian students funded by the BP Conservation Awards programme has photographed a parrot that was last positively sighted over 90 years ago. Fuerte's parrot *Hapalopsittaca fuertsi* is Critically Endangered, and the latest sightings were in a tiny patch of cloud forest in Colombia's remote Central Andes, close to where the species was originally discovered in 1911. The team leader Jorge Velásquez described the moment when 14 birds swooped through the mist and landed in front of him as "a miracle from heaven". The area where the birds were found is in danger of being destroyed because it is being cleared for agriculture.

Source: *World Birdwatch* (2002), 24(3), 9.

New Colombian park

The Colombian Government, the Association of Ingano Councils, and the US-based Amazon Conservation Team have worked together to create the 76,000 ha Alto Fragua-Indiwasi National Nature

Park in the southern department of Caqueta at the headwaters of the Fragua River in the Colombian Amazon. The area contains highly endangered humid sub-Andean forests and will not only protect wildlife but also the sacred sites of the Ingano tribe. This park is unique in that it is the first time indigenous peoples in Colombia have taken a leading role in the management of a national park.

Source: *Plant Talk* (2002), 29, 13.

Amazon Region Protected Areas Program launched

The largest tropical conservation initiative ever, the Amazon Region Protected Areas Program (ARPA), was launched on 3 September 2002 at the Earth Summit in Johannesburg, South Africa. Over the next 10 years this Government of Brazil programme plans to establish a protected areas system in the Brazilian Amazon by creating 28.5 million ha of new strictly protected areas and 9 million hectares of sustainable use reserves while supporting more effective management in 12.5 million hectares of existing strictly protected areas. \$81.1 million is committed to cover the first 4-year phase of ARPA's 10-year plan, with \$18.1 million from the Brazilian Government, \$30 million from the GEF, \$16.5 million from WWF, \$14.4 million from the German bilateral agency Kreditanstalt für Wiederaufbau (KfW), and \$2.5 million from others. The first product of the ARPA initiative – the creation of Tumucumaque National Park – was announced in Brazil on 22 August 2002 by President Cardoso. Located in the north-eastern state of Amapá, Tumucumaque National Park covers 3.886 million ha, making it the world's largest tropical forest park.

Source: <http://www.worldwildlife.org/news/headline.cfm?newsid=419>

Parasites pose new threat to Darwin's finches

Darwin's finches are facing a new and, for some species, potentially major threat from parasitic fly larvae that feed on nestling birds in the islands of the Galápagos archipelago, Ecuador. At least three species of fly are thought to have been accidentally introduced to the islands, the first having been found in 1997. Seven of the 13 Darwin's finch species were found to have the new parasitic fly larvae in their nests. Most worrying is the presence of these new parasites on

Isabella Island, the only place in the world where the Critically Endangered Mangrove Finch *Camarhynchus heliobates* occurs. This is the most threatened of the Darwin's finches and numbers 110 individual birds in the wild.

Source: http://www.birdlife.net/news/pritem_display.cfm?NewRecID=709&NewType=P

Deforestation rates in Brazil are declining

The rate of destruction of the Amazon forest of Brazil has fallen by 13.4% from a 5-year peak in 2000 but still a total of 15,787 km² was believed to have been lost in 2001. Such an annual destruction rate is still a major concern. Most of the destruction was from farmland cut out of the forest, an activity authorised by local authorities.

Source: *Plant Talk* (2002), 29, 13.

Galápagos threatened by second major oil spill

On the 4th July 2002 the second major oil spill in 2 years threatened the unique wildlife of the Galápagos Islands. A small vessel, BAE Taurus, spilled 2,000 gallons of diesel fuel into the shallow bay of Puerto Villamil on Isabela Island. Strong onshore winds pushed the surface spill into the protected beach and mangrove-lined bay. Volunteers and officials from the Charles Darwin Research Station and the Galápagos National Park Service help tackle the spill, and the early effects seemed to be light. The monitoring of possible long-term effects has begun. This spill had similarities to that caused by the Jessica in 2001, when favourable winds prevented an ecological disaster. However, long-term mortalities have been detected in vulnerable species such as the endemic Galápagos marine iguana on the small island of Santa Fe (see below).

Source: *Marine Pollution Bulletin* (2002), 44(9), 838.

Delayed effects from Jessica oil spill in the Galápagos

A recent study has highlighted high mortality amongst marine iguanas on the island of Santa Fe in the Galápagos as a result of effects from the Jessica oil spill in 2001. Mortality was compared between iguanas on Santa Fe that

were affected by oil and those on Isla Genovesa that received no oil. Over 11 months all the iguanas on Isla Genovesa survived, whereas 62% of those on Santa Fe disappeared. The effect of the oil on the iguanas was subtle, and one suggestion is that it affected the micro-organisms within the animals' digestive tracts that help them digest plant material. A \$14 million claim is being made by the Galápagos National Park against the owners of the Jessica, although it has been claimed that the ship was uninsured because the owners had not paid their premiums. However, under Ecuadorian law the insurer would still be liable because it should have notified the authorities that the Jessica was no longer covered.

Source: *Marine Pollution Bulletin* (2002), 44(7), 581–582.

New data on current extinction rates in Ecuador.

A recent study has shown that between 19 and 46 endemic plant species have gone extinct in the last 250 years in Ecuador. Another 282 species are considered Critically Endangered. This constitutes the first quantitative estimates of current extinction rates in a modern Neotropical flora. The extinction rate suggested by this analysis is 24 to 115 times higher than the natural background rate. Extinction rates may actually be even higher, because the study was restricted to species that have been known for at least 80 years, and extinctions in poorly studied areas were probably underestimated. Although it is now widely recognized that significant areas of tropical forest are being lost each year, actual data on current extinction rates have proved extremely hard to gather. Given its extremely diverse and well-studied flora, and the fact it has lost c. 40% of its original vegetation (mostly over the last 50 years), Ecuador provides a model for monitoring the mass tropical extinctions anticipated by scientists.

Source: *Conservation Biology* (2002), 16(5), 1427–1431.

Key bird area in Bolivia

Researchers from the Wildlife Conservation Society have confirmed that 1,010 species of birds live in a 41,440 km² area of mid-western Bolivia that includes the Madidi National Park, and where the

altitude ranges from 200 to 6,035 m. It is predicted that the area contains a total of 1,150 bird species or 12% of the world's total. A number of these are threatened, including the Andean condor, harpy eagle, military macaw, Bolivian recurve-bill, Yungas antwren, Bolivian swallow-tailed cotinga and the Bolivian form of wattled curassow. The area also protects the royal cinclodes, a Critically Endangered bird species.

Source: *Wildlife Conservation* (2002), 105(4), 12.

Pacific

Live reef fish market unsustainable

The Asian market for live reef fish is leading to unsustainable exploitation of reef fish across the Pacific. Asian countries are consuming up to 50,000 tons of live fish each year, and with a decline in resources in Asia the pressure is increasing on small reefs on atolls in the Pacific. The global ornamental fish export trade has also increased exponentially, with the US alone importing 1,000 species of fish for tropical aquaria. Data on the origin of reef fish is sometimes falsified. In 2000, 45% of the total live reef fish catch was reported as originating in Singapore, a country with no reefs or a significant fishery. The Hawaii-based International Marineline Alliance (web site <http://www.imamarineline.org>) has developed a regional network to establish a system of monitoring and supervision of the industry. The Alliance has estimated that in 1997 25 million fish with an average weight of 1 kg were exported to Asia, a large percentage of which came from the Pacific.

Source: *Marine Pollution Bulletin* (2002), 44(9), 841.

Longlining moratorium could save leatherback turtles

In April 2002, delegates at the Leatherback International Survival Conference called for a moratorium on longline fishing in the Pacific Ocean to prevent the extinction of leatherback turtles. Delegates passed a resolution calling on the United Nations, United States and all other nations "to institute a moratorium on pelagic longlining, gill-net and other fisheries harmful to Pacific

leatherback turtles until such activities can be conducted without harm to the species and provide allocations of transitional aid to affected fishermen and communities''.

Source: *Marine Turtle Newsletter* (2002), 97, 26 (also at <http://www.seaturtle.org/mtn>).

Australia/Antarctica/ New Zealand

France arrests illegal longlining vessel

In July 2002, France arrested the longlining vessel *Arvisa 1* for fishing illegally for Patagonian toothfish in sub-Antarctic waters around Kergulen Island. Pirate longlining vessels are responsible for the deaths of tens of thousands of seabirds in the Southern Ocean each year. The *Arvisa 1* is being held at Port aux Francais on Kergulen Island, a French Overseas Territory. The same vessel was arrested in 1999 off the Crozet Islands, and was seen in Australian-claimed Antarctic waters in early 2002, flying a Uruguayan flag. Though Uruguay is a member of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), which manages the Southern Ocean ecosystem and requires that toothfish are caught according to CCAMLR conservation measures, it agreed to release the *Arvisa 1* and effectively authorised its CCAMLR documents, allowing the laundering of its cargo into the legal market place. Illegal fishing boat owners evade conservation rules by changing the names of their vessels and the countries under which they are flagged.

Source: *World Birdwatch* (2002), 24(3), 4.

Mangrove mapping project in Queensland is completed

A major project to map the wetlands along Queensland's coast has been completed after 9 years of work. The project is consistent with the objectives of Australia's Oceans Policy that sets a framework for ensuring the long-term health of Australia's oceans by sustainably managing the use and conservation of marine resources. The Australian Government committed over A\$ 340,000 to the project, which has already contri-

buted to the declaration of Baffle Creek and Burdekin Fish Habitat as Marine Protected Areas. Other additional areas have been proposed.

Source: *Marine Pollution Bulletin* (2002), 44(7), 580.

Recovery Plan for grey nurse shark in Australia

The Australian Government has announced a Commonwealth Recovery Plan for threatened Grey Nurse Shark. The east coast population of this species is Critically Endangered while that on the east coast is listed as Vulnerable under the Environment Protection and Biodiversity Conservation Act. Large numbers of grey nurse sharks were killed in the 1950s and 1960s by spear fishermen or by being caught in shark nets.

Source: *Marine Pollution Bulletin* (2002), 44(8), 725.

GM fish as a conservation tool?

It has been suggested that genetically modified carp *Cyprinus cyprino* could be used to control feral populations of this species in Australia. Carp were introduced into Australia and have had numerous deleterious effects that have increased markedly over the past 30 years. The Commonwealth Scientific and Industrial Research Organization is suggesting the incorporation of a single copy of a mutated gene called "daughterless" into carp eggs that would then be fertilised and released into the wild. Offspring from these fish would produce 80% male fish. It is hoped this would reduce carp numbers or even lead to their extinction. There are concerns however that the gene may transfer to other species through hybridization, although the family Cyprinidae, of which carp is a member and within which hybridization is most likely, has no naturally occurring members in Australia.

Source: *Marine Pollution Bulletin* (2002), 44(7), 579–580.

Rabbits develop tolerance to 1080

Recent research in Australia has shown that certain wild rabbit populations are developing a tolerance to Sodium monofluoroacetate (1080) the main poison currently employed for their control. Economic damage by rabbits in Australia

is estimated at \$600 million per year, and the species is implicated in the extinction of many plants and animals. Many Australian shrubs naturally produce fluoroacetate for defence, and over time native animals have evolved varying degrees of tolerance to the compound. This makes 1080 ideal, as the potential for poisoning non-target species is greatly reduced. Less specific and more expensive baiting regimes are likely to be developed to counter the recorded effect, the implications of which could be severe for native animals and the economy.

Source: *Journal of Applied Ecology* (2002), 39, 549–560.

Threat to Christmas Island

The Australian territory of Christmas Island is located c. 300 km south of Java in Indonesia. This tiny island (135 km²) is threatened by two major developments. The Australian Government has approved plans to build a satellite launching facility and associated port, and an Immigration Processing and Reception Centre. The location of this latter facility, on the north-western tip of the island, is adjacent to a crucial breeding area for the Critically Endangered endemic Abbott's booby *Papadula abbotti*. It is feared that the facility will interfere with the recovery of the species. Christmas Island's wildlife is already threatened by the introduced yellow crazy ant *Anoplolepis gracilipes*. Five endemic bird species (Abbott's booby, Christmas Island frigatebird *Fregata andrewsi*, Christmas Island imperial pigeon *Ducula whartoni*, Christmas Island hawk-owl *Ninox natalis* and Christmas Island white-eye *Zosterops natalis*), and five endemic bird subspecies on the Island are categorized as Critically Endangered. Source: *World Birdwatch* (2002), 24(3), 6.

New Zealand aims for 'zero waste' future

New Zealand has recently released a national strategy that encourages progress towards a 'zero waste' future for the country. New Zealand is one of the biggest per capita producers of waste in the world and nationally disposes of 3.4 million tonnes of waste per year. A working group including representatives of the waste industry, the environmental movement and local authorities have spent

2 years developing the strategy, which sets out 30 national targets including waste minimization, dealing with hazardous wastes and encouraging local authorities to close or upgrade all substandard landfills by 2010, and close, upgrade or replace all substandard wastewater treatment facilities by 2020. Targets also encourage waste 'generators' to pay the true cost of waste treatment and disposal.

Source: *Forest & Bird* (2002), 305, 6.

New Zealand's Chinese community launch a conservation trust

A new trust in New Zealand aims to take conservation messages to the growing Chinese community in Auckland and to change the perception that Chinese people do not care about the environment. The Chinese Conservation Education Trust is working in partnership with the Department of Conservation's Auckland Conservancy and has a range of activities planned. The trust has already proved its worth through planting 4,000 trees on Motutapu Island,

contributing to the Miranda Shorebird Centre and the CITES hotline. As a result the wetlands of Miranda have become a favourite spot for many Auckland Chinese.

Source: *Forest & Bird* (2002), 305, 12.

Albatross islands gift

Two islands in the Falklands, Steeple Jason and Grand Jason, have been given to the Wildlife Conservation Society by their owners, the Judy and Michael Steinhardt Foundation. Both host important populations of breeding seabirds. Steeple Jason has the world's largest colony of black-browed albatrosses *Thalassarche melanophris*. The 157,000 breeding pairs represent almost a third of the global population, and a smaller colony of 52,700 pairs is found on Grand Jason. Both also have important populations of rockhopper penguins *Eudyptes chrysocome* and southern giant petrels *Macronectes giganteus*. The black-browed albatross has declined by c. 86,000 breeding pairs in the Falkland Islands in the last 5 years

and is now listed as Vulnerable by IUCN. A major cause of the decline has been the accidental drowning of birds during longlining operations.

Source: *World Birdwatch* (2002), 24(3), 8.

The *Briefly* section in this issue was written and compiled by Simon Mickleburgh and Martin Fisher, with additional contributions from Jennifer Ah-King, Oliver Bennett, Elizabeth Biott, Fiona Caryl, Eric Chan, John Fellowes, Mi Ran Kim, Viola Kimmel, Johanna Maughan, David Redding, Anthony Rylands, Begonia Sastre, Alvaro Soutullo and Nadim Taleb. 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