

International

New signatories to CITES

The Republic of Moldova, Qatar, Sao Tome and Principe, Lithuania, and Ireland have acceded to CITES, bringing to 157 the number of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora. These accessions entered into force on 27 June, 6 August, 7 November, and 9 March 2001, and 8 April 2002, respectively.

Source: *TRAFFIC Bulletin* (2001), 19(1), 3 (also at <http://www.traffic.org>, and <http://www.cites.org>).

Suspension of trade with Fiji, Viet Nam and Yemen recommended

Fiji, Viet Nam and Yemen have been identified as Parties to CITES whose national legislation is believed generally not to meet the requirements for implementation of CITES, and that are engaged in significant amounts of international trade in specimens of CITES species. These countries have been aware, since the eleventh meeting of the Conference of the Parties held in April 2000, that they may be subject to a recommendation to suspend trade in specimens of CITES species. Despite all the efforts made by the CITES Secretariat, including technical assistance, it appears that Fiji, Viet Nam and Yemen were unable to adopt the necessary legislation before the given deadline of 31 October 2001. Therefore the Secretariat has informed the Parties that, from 14 January 2002, all Parties should refuse any import from and export or re-export to Fiji, Viet Nam and Yemen of specimens of CITES-listed species, until further notice.

Source: <http://www.cites.org>

Reevaluation of leopard subspecies

Leopards are widely distributed across Africa and southern Asia. This extensive geographical distribution, and their varied coat patterns and morphological characteristics, led to the recognition and description of some 27 subspecies. A

study conducted in the early 1990s, involving the use of molecular genetic methods and morphological measurements, recommended that this number be reduced to eight. More recently, an analysis of mitochondrial DNA and microsatellites has corroborated these earlier findings and revised the number of subspecies to nine, including one African, *P. p. pardus*, and eight Asian subspecies: *P. p. saxicolor* (Central Asia), *P. p. fusca* (India), *P. p. kotiya* (Sri Lanka), *P. p. melas* (Java), *P. p. orientalis* (Russian Far East), *P. p. japonensis* (North China), *P. p. delacouri* (South China), and *P. p. nimr* (Arabia). The results also suggest that recent demographic reductions have probably led to genetic impoverishment in *P. p. orientalis* and in the island *P. p. kotiya*. Such genetic investigations, coupled with ecological information, could aid in setting priorities and developing management strategies for leopard subspecies conservation.

Source: *Molecular Ecology* (2001), 10, 2617–2633.

Enterprise strategy for community-based conservation

A study of 39 community-based conservation projects in Asia and the Pacific was used to test the hypothesis that if people can benefit financially from enterprises that depend on natural habitats, then they will take action to conserve and sustainably use them. It was found that a community-based enterprise strategy can lead to conservation, but only under limited conditions and never on its own. It was also found that an enterprise strategy can be subsidized and still create a net gain that pays for conservation.

Source: *Conservation Biology* (2001), 15(6), 1585–1595.

Europe

EU Strategic Environmental Assessment Directive now in force

On 21 July 2001 the EU's Strategic Environmental Assessment (SEA) Direc-

tive came into force. SEAs must now be carried out during the preparation of plans and programmes in a wide range of sectors including agriculture, forestry, transport and tourism. Activities likely to affect nature conservation sites of European importance will also require SEAs. The Directive will strengthen project-base Environmental Impact Assessment by identifying potential impacts and alternative options at an early stage, so that damaging projects do not come forward. Member states need to implement the Directive by 20 June 2004. Source: *BirdLife in Europe* (2001), 6(3), 6.

Urgent need to protect the Wadden Sea

The Wadden Sea, Europe's largest coastal wetland, is under constant threat from shipping accidents. WWF is now calling on the governments of the Netherlands, Germany and Denmark to take action by declaring the Sea a Particularly Sensitive Sea Area (PSSA). According to WWF, in the wider surroundings of the Wadden Sea there are 260,000 ship movements per year and hundreds of accidents or near accidents. WWF believes that the Wadden Sea qualifies for PSSA designation on the basis of the area's ecological vulnerability, productivity, critical spawning and breeding grounds, and economic benefit. Designation as a PSSA would bring heightened awareness of its environmental value, the introduction of additional measures to minimize potential environmental damage, and the recognition of local priorities by international interests.

Source: *Marine Pollution Bulletin* (2001), 42(12), 1282.

Transport developments in Europe threaten Important Bird Areas

A report prepared by BirdLife International and published in summer 2001 raises concerns over the threat to Important Bird Areas (IBAs) from Europe's blueprint for future transport developments – the TINA (Transport Infrastructure Needs Assessment) network. A total of 21% of all the sites investigated (85 in total) could be severely

affected by TINA proposals. Most are affected by road developments but a significant number are also threatened by waterway development. The 85 IBAs hold internationally important populations of 128 bird species including Dalmatian pelican *Pelecanus crispus*, red-breasted goose *Branta ruficollis* and great snipe *Gallinago media*.

Source: *BirdLife in Europe* (2001), 6(3), 1.

Habitat management projects in Lithuania

A 2-year project on habitat management of key Important Bird Areas (IBAs) in Lithuania was begun in 2001. LOD (BirdLife in Lithuania), in collaboration with DOF (BirdLife in Denmark), has started practical work on two IBAs, the Novaraistis exploited peat bog and Kretuonas Lake Islands, and is continuing management of one other IBA, the Prienai IBA. Novaraistis is an important stopover site for migratory cranes *Grus grus*, where up to 2,000 birds have been seen. Kretuonas is important because of breeding colonies of gulls and common terns *Sterna hirundo*. However, rapid growth of woody vegetation at the sites has reduced their suitability for birds, and in 2000 the gull and tern colonies disappeared at Kretuonas Lake. Vegetation removal in 2001 from two small islands at Kretuonas Lake has allowed colonies of black-headed gull *Larus ridibundus*, little gull *Larus minutus*, common gull *Larus canus* and common tern to settle again. In addition, several pairs of black-tailed godwit *Limosa limosa*, redshank *Tringa totanus* and lap-wing *Vanellus vanellus* have returned after an absence of more than 10 years. LOD has also begun removal of woody vegetation from Nemunas River Islands in the Prienai IBA, which is an important breeding area for common and little terns *Sterna albifrons*. Effective management in this area has resulted in a three-fold increase in the number of breeding pairs.

Source: *BirdLife Europe* (2001), 6(4), 7 (also at <http://www.birdlife.net>).

Six and a half years for bird smuggler

Two men caught smuggling wild birds of prey into the UK from Thailand, stuffed inside 6 inch diameter plastic tubes, were sentenced on 18 January 2002 to six and a half years and 22 months. A third man was acquitted. The

three men were intercepted by Customs at London Heathrow Airport with 23 birds, including eagles, kites, harriers and owls, hidden inside plastic tubes in two suitcases. Six of the birds were dead on arrival and two more died later. Following a search of one of the men's address, police made a further seizure of birds and blood-stained tubes and suitcases, as well as a threatened gibbon.

Source: <http://www.rspb.org>

Great bustards threatened by irrigation project

One of the world's most important sites for great bustard *Otis tarda* is being threatened by an irrigation project. The Villafáfila reserve in Zamora, Spain is home to about 2,700 great bustards, c. 8% of the world population. The proposed irrigation project, promoted by the Consejería of Agriculture of Castilla and León, would affect 4,000 ha of steppe within the reserve. The main threat to great bustards is habitat changes because of agricultural intensification, and the irrigation project would affect areas used by bustards for courtship, mating, nesting and feeding. A campaign has been launched by BirdLife International to reject the irrigation project.

Source: *BirdLife in Europe* (2001), 6(3), 3.

Northern Eurasia

Illegal fishing in the Western Bering Sea

A report published by TRAFFIC in December 2001 highlights the threat from illegal fishing to the fishery in the Russian Bering Sea that supplies Russia and the US with more than half their harvests of fish. *Trawling in the Mist: Industrial Fisheries in the Russian Part of the Bering Sea* shows that organised crime has infiltrated the Russian fishing industry, and widespread poaching is costing Russia up to \$US 5 billion each year and placing numerous species at risk. The report found evidence of fishing in prohibited areas, use of prohibited gear and concealed harvests. The most widespread violations were the distortion of data on the volume and size of fish caught and the species composition of the catch. The report calls for greater cooperation between Russia and the US to jointly develop a precautionary

commercial fishery strategy and create marine protected areas where commercial fishing would not be allowed during critical periods.

Source: *TRAFFIC Press Release* (2001), 13th December 2001 (also at <http://www.traffic.org>).

North Africa and Middle East

Threat to winter feeding ground of bald ibis

Talks have recently taken place on the proposed Club Med holiday development at Tifnit, Morocco, in the immediate vicinity of the main winter feeding grounds of the Critically Endangered northern bald ibis *Geronticus eremita* in Souss Massa National Park. BirdLife International, through RSPB and partners in France and Spain, are currently involved in negotiations with Club Med and the Moroccan Government to ensure that any development takes full account of the impact on the bald ibis. Studies have exposed major concerns over the development, and the original provisional development plans have already been modified to avoid construction near the most important area for the ibises. Although there is concern at the prospect of any development that could affect the ibises, the proposed plans could provide an opportunity to resolve the long-standing threat of a bigger tourism development on the adjacent steppe, ensure better implementation of current regulations within the park, and provide compensation measures that the park badly needs.

Source: <http://www.rspb.org>

Sub-Saharan Africa

Concerns over lion populations in Central and West Africa

A workshop held in Limbé, Cameroon, in June 2001 concluded that there may be fewer than 1,000 lions in five countries in West and Central Africa. Regional representatives from Benin, Cameroon, Mali, Senegal and Uganda declared that lions were threatened by habitat loss, poaching and genetic inbreeding. The

workshop was organised by the African Lion Working Group (ALWG) and is one of a series aimed at detailing the decline in lions in sub-Saharan Africa. There have been no studies from which an overall population estimate could be made, but figures collected by the ALWG suggest there are now fewer than 20,000 lions left, with the largest sub-population in Tanzania.

Source: *CAT News* (2001), 35, 6.

African manatee proposed for listing on Bonn Convention

At a meeting in April 2001 the Scientific Council of the Convention on Migratory Species of Wild Animals (Bonn Convention) suggested that the African manatee *Trichechus senegalensis* should be listed on Appendix II of the Convention because of its poor conservation status. It was recommended that a formal listing proposal be submitted to the next Conference of the Parties in 2002 in Bonn. The representative from Ghana agreed to carry forward this proposal to his government.

Source: *Sirenews* (2001), 36, 7–8 (also at <http://www.sirenian.org/sirenews.html>).

Small mammal fauna of Djibouti

A recent biodiversity survey in Djibouti, north-east Africa, collected 19 small mammal species, including six bat species and three rodent species not previously recorded from the country. The survey also documented the second record of the maned rat *Lophiomys imhausii*. The survey brings the number of species of Insectivora, Macroscelidea, Chiroptera, Rodentia and Hyracoidea known from the country to 39.

Source: *Mammalia* (2001), 65(3), 387–409.

Animal-dispersed trees suffer in forest fragments

A recent study in the East Usambara Mountains, Tanzania, has provided support for the idea that tree recruitment in forest fragments is negatively affected by loss of dispersal agents. A comparison of continuous forest with fragments of various sizes showed that recruitment of 31 animal-dispersed tree species was over three times greater in the continuous forest and large fragments than in small fragments. Furthermore, recruitment of 10 endemic animal-dispersed trees was 40 times greater in the continuous forest and large fragments than in the small fragments. Recruitment of

eight wind- and gravity-dispersed species was, however, unaffected by fragment size. Counts of diurnal primates and birds indicated that frugivorous species have declined with decreasing fragment size.

Source: *Conservation Biology* (2001), 15(6), 1733–1741.

Large mammals in the Kilombero Valley

Kilombero Valley is a nationally important ecosystem in Tanzania, consisting of a seasonally inundated flood plain, miombo woodland and fragments of eastern arc evergreen forest. The valley is included within the Kilombero Game Controlled Area (KGCA) that forms part of the Selous ecosystem. The area has populations of a variety of large mammals, including three quarters of the world's remaining puku antelope *Kobus vardonii*. Wildlife populations are under pressure from the increasing human population in the area and the high levels of disturbance caused by commercial teak development since 1992. A recent study has investigated the effect that the planned conversion of some 10,000 ha of miombo woodland into teak plantation will have. The results suggest distinct differences in species composition between the three habitats (miombo, forest and teak plantation). This conversion will probably have the most detrimental impact on sable and waterbuck, while other large mammals like buffalo, elephant, aardvark and warthog will face reduction in the availability of open habitat (see also this issue, pp. 161–169).

Source: *African Journal of Ecology* (2001), 39, 318–21.

Support for Endangered riverine rabbit

In August 2001 WWF-South Africa became officially involved in the Riverine Rabbit Conservation Project (RRCP) in South Africa. The project grew out of concerns for the Endangered riverine rabbit *Bunolagus monticularis*, which has been classified as a threatened species since 1981. The rabbit occurs only on private farmland, inhabiting riverine vegetation along seasonal river courses. This fragile habitat is fragmented and rapidly deteriorating. Little is known of the animal's biology and ecology, and it has been recognised that it is vital to involve local people and farmers in pro-

tecting the remaining habitat. The RRCP aims to form conservancies whereby private landowners along river courses agree to prescribed conservation strategies.

Source: *Species* (2001), 36, 12 (also at <http://www.iucn.org/themes/ssc/species/spec-int.htm>).

Poaching of hawksbill turtles in Seychelles

The recent discovery of >200 hawksbill turtle carcasses on the island of St Francois in the Seychelles has prompted a tightening up of legislation against poaching and an increase in fines. The maximum fine has been increased from R(Rupees)1,000 to R500,000, with the introduction of a minimum R5,000 fine and the potential imposition of a 2-year prison sentence and the seizure of vessels and vehicles. However there has also been a call in the National Assembly for 'special exceptions' that would allow a limited number of turtles to be culled each year for their meat.

Source: The Seychellois newspaper *Regar*, 9 & 26 October 2001, supplied by R. Gerlach (E-mail npts@seychelles.net).

Fears over illegal poaching of abalone in South Africa

Environmentalists in South Africa are becoming increasingly concerned about the poaching of abalone, a valuable shellfish. Poachers are thought to have shifted their efforts from the Western Cape to the Eastern Cape as a result of depletion of stocks and stricter anti-poaching measures. Abalone can command a huge price, and it is feared that poachers will exploit the shellfish until it is no longer worthwhile, which will result in depleted populations that will be unable to recover naturally.

Source: *Marine Pollution Bulletin* (2001), 42(11), 1006.

South and South-east Asia

Dugongs seen at Aldabra Atoll

In August and October 2001 four separate sightings of dugongs were reported from Aldabra Atoll in the Indian Ocean. Although there have been sightings previously, multiple sightings in such a short space of time are rare. It is thought that the dugongs might have migrated

to the atoll during the north-west monsoon. Aldabra is a large atoll with a total area of 35,000 ha, of which 18,000 ha is land, 2,000 ha mangrove and 14,200 ha sea. It is almost uninhabited and has a population of 150,000 giant land tortoises. The Seychelles Islands Foundation is currently planning to initiate a research project on the dugong in Aldabra. Source: *Sirenews* (2001), 36, 19 (also at <http://www.sirenian.org/sirenews.html>).

Marine conservation action in the Philippines

The Philippine Department of Environment and Natural Resources (DENR) and WWF-Philippines has undertaken the joint management of the Sulu-Sulawesi Marine Ecoregion (SSME) that aims to protect the habitat of turtles and dugongs. The Philippines has jurisdiction over 70% of the SSME, which has the most species of corals in the world. The area has, however, deteriorated in recent years. An important feature of the project is the establishment of a Tri-National Turtle Reserve between the Philippines, Indonesia and Malaysia to conserve one of largest nesting grounds of green and hawksbill turtles. Other programmes include improving the conservation of the Sulu and Celebes Seas, joint conservation management of turtles and dugongs, and a marine ecological assessment in the North Sierra Madre National Park. Source: *Marine Pollution Bulletin* (2001), 42(11), 1004.

East Asia

Asiatic cheetah in danger of extinction

The New York-based Wildlife Conservation Society has announced that the Asiatic cheetah *Acinonyx jubatus venaticus* is in serious danger of extinction. There are thought to be fewer than 60 animals in the whole Asian continent, most of them on the edge of Iran's Kavir Desert. A WCS team spent a month surveying three protected areas where cheetahs still exist (Kavir National Park, Khar Touran World Biosphere Reserve and Daranjeer Hunting Prohibited Area). Although there is a variety of suitable

habitat, prey species such as gazelles *Gazella dorcas* and urial sheep *Ovis orientalis* are scarce. Poaching and degradation of habitat has brought the cheetah to the brink of extinction. Source: *CAT News* (2001), 35, 10.

Chinese action for alligator

An International Workshop on Captive Breeding and Commerce Management in Crocodylia was held in Guangzhou, China in August and September 2001. It was attended by 98 participants including 35 overseas IUCN Crocodile Specialist Group members. A draft conservation plan for the Chinese alligator was discussed and significant advances were made in establishing the concept that commercial use of crocodylians in China must be structured in such a way to support the conservation both of the endemic alligator and of species occurring outside China that may be affected by trade.

Source: *Species* (2001), 36, 11–12 (also at <http://www.iucn.org/themes/ssc/species/spec-int.htm>).

China establishes new reserve for tigers and leopards

A new reserve has been established at Hunchun in Jilin Province in China that will help protect tiger and leopard populations. It will adjoin a protected area in Russia. There are 30–40 Amur leopards *Panthera pardus orientalis* and fewer than 10 Amur tigers *Panthera tigris altaica* on the Russian side of the frontier. Only a few leopards survive in Jilin Province and the new reserve is intended to extend their living space. The Hunchun Tiger-Leopard Reserve is seen as a first step in the long process of rebuilding tiger and leopard populations in China. A provincial official in Jilin has said that 38 new nature reserves for rare wild animals and plants will be established in the next 10 years. This would increase the Province's protected area to 2.25 million ha or 12% of the total land area. Source: *CAT News* (2001), 35, 5.

Giant pandas have plenty of genetic diversity

Even though there are only about 1,000 giant pandas left, a comprehensive genetic analysis of three wild giant panda *Ailuropoda melanoleuca* populations has

shown that they still have enough genetic diversity to recover. The 'poster animal' of threatened species once lived in forests from China to northern Burma and Viet Nam, but extensive deforestation has restricted the species to six alpine forest fragments in the rugged mountain ranges along the Tibetan plateau in western China. The remaining giant pandas are divided into c. 25 populations with fewer than 20 individuals in each. Analysis of the genetic variation in giant pandas from populations in three mountain ranges found that the giant panda has moderate genetic diversity compared to other carnivores, being comparable to the genetically healthy Serengeti lion population and far greater than the genetically compromised Asiatic lion from India's Gir forest or the Florida panther. However, to stabilize the decline of this Endangered species, ecological management to increase available habitat, population expansion, and gene flow is required.

Source: *Conservation Biology* (2001), 15(6), 1596–1607.

Taiwan ratifies Biological Diversity Action Plan

On 15 August 2001 in Taiwan, the 2,747th meeting of the Executive Yuan ratified and passed the country's Biological Diversity Action Plan. A special editing and drafting group had been established within the Council of Agriculture, and after 2 years discussion the Plan was finally accepted. Taiwan has a relative abundance of species; there are an estimated 150,000 species in the whole island. This is partly a result of its geographical position straddling the tropics and subtropics.

Source: *International Conservation Newsletter* (2001), 9(3), 1–2.

Vets to help tackle viruses threatening rare Japanese cats

Two temporary clinics have been set up in Japan in an effort to curb the spread of viruses that threaten the Endangered Tsushima cat *Prionailurus bengalensis euphilura* and Iriomote cat *P. b. iriomotensis*, endemic to the islands of Tsushima and Iriomote respectively. The clinics have been set up by a group of vets active in the eight prefectures of Kyushu Island in an attempt to stop the spread of feline immunodeficiency virus (FIV) and the

virus that causes feline leukaemia. Sampling of house cats and strays in Tsushima recently showed that 22% were infected with FIV, and it is felt that there is a high risk that these cats may pass the diseases on to their wild cousins. The two clinics will operate for 2 years. At present each of these threatened cat species is thought to have a population of just 100.

Source: *CAT News* (2001), 35, 21.

Threat from proposed Disney theme park

Environmentalists and fishermen in Hong Kong are concerned about plans to build a Disney theme park at Penny's Bay. The \$1.8 billion park is due to open in 2005, and major land reclamation work is about 50% complete. It is alleged that the main dredging and reclamation work that began in May 2000 has killed large fish stocks and coral reefs around Penny's Bay. Waters around the bay are a muddy brown on some days.

Source: *Marine Pollution Bulletin* (2001), 42(12), 1284.

North America

Native unionid mussels extirpated by zebra mussel introductions

Native freshwater mussels (Unionidae) in small river systems in eastern Canada are highly vulnerable to the introduction of the non-indigenous zebra mussel *Dreissena polymorpha*. An 8-year study assessed the impact of the *D. polymorpha* invasion on unionids of the Rideau River (recently designated the 'Canadian Heritage River'), a small (100-km) river system in eastern Ontario, during an 8-year period (1993–2000). In 1993–1994 three unionid taxa were commonly found in the 30-km stretch of river surveyed, but by 2000 all three taxa had been essentially extirpated, with only one live individual collected during extensive diving surveys. The study reveals that the introduction of the zebra mussel into a small river system where limnological conditions are favourable to this exotic pest mollusc can cause the complete extirpation of all unionids in a 6–7 year period. There is fear that as zebra mussel abundance keeps increasing at upstream locations the richest unionid communities of the Rideau River (nine

taxa) could be imperiled. To conserve unionids, as well as the integrity of aquatic ecosystems in Canada and elsewhere in North America, this pest mollusc must be prevented from being introduced into new river or lake systems.

Source: *Tentacle* (2002), 10, 10–11 (also at http://bama.ua.edu/~clydeard/IUCN-SSC_html/index.htm).

Great Lakes cleaning themselves

Recent work by the Integrated Atmospheric Deposition Network (IADN) shows that the Great Lakes in the USA and Canada are cleaning themselves of pollutants. Since 1992 significant quantities of polychlorinated biphenyls (PCBs) and pesticides have been released into the atmosphere from the five lakes. The lakes have acted as a soak for pollutants over the past 50 years and as atmospheric levels of these chemicals have fallen the lakes have released these pollutants back into the atmosphere. The total surface area of the Great Lakes is 244,100 km² and they together contain about 20% of the world's surface fresh water. In Lake Ontario, the smallest of the Great Lakes, almost 2 tonnes of PCBs were released into the air between 1992 and 1996 as well as significant amounts of the banned insecticide dieldrin.

Source: *Marine Pollution Bulletin* (2001), 42(11), 1004–1005.

Further protection for Rota bridled white-eye

In October 2001 the US Fish and Wildlife Service (USFWS) announced that the Rota bridled white-eye would be proposed as an endangered species. This bird is found only on the island of Rota in the Commonwealth of the Northern Mariana Islands, and there has been an estimated 89% decline in numbers since the early 1980s. Fewer than 1,200 birds now remain, concentrated in four areas of old-growth native limestone forests above 200 m elevation. The exact causes of the decline are unknown but are thought to include degradation or loss of habitat, agricultural activities, natural events such as typhoons, disease, predation, and the use of pesticides. If the USFWS proposal is accepted the bird will benefit from Federal protection and a Recovery Plan will be developed and implemented.

Source: *Elepaio* (2001), 61(7), 72.

Five indicted for trafficking in leopards and tigers

A federal court in the US has charged five people with the illegal trafficking of six tigers and five leopards following a lengthy undercover investigation by the US Fish and Wildlife Service and the US Attorney's Office. The five are also charged with violating the Lacey Act that makes it a crime to import wildlife or wildlife products taken, possessed, transported or sold in violation of any US law or treaty. If convicted, each defendant faces a maximum penalty of 5 years in prison and/or fines of up to \$250,000. This latest indictment is part of an ongoing investigation into a black market trade in animal parts in the Midwest. Various animals, including snow leopards, mountain lions and black bears have been bought and killed with the intention of selling their meat and skins.

Source: *CAT News* (2001), 35, 5–6.

Concern over industrial development near Mammoth Cave

Mammoth Cave in Kentucky in the US is the world's longest cave system, with almost 590 km of underground passageways. Farmers, cavers and National Park staff have questioned the environmental soundness of a proposed 4,000 acre industrial park, shipping complex and airport about six miles south-west of Mammoth Cave. Environmentalists say that development is not compatible with the region's unique karst geology. Because the ground is predominantly soluble limestone, water and any other liquids immediately drain into the underground water system that runs for hundreds of square miles. It is feared that airport runoff, de-icing solution or a possible fuel spill will contaminate the cave's waters. Mammoth Cave has been designated as a World Heritage Site and an International Biosphere Reserve.

Source: *National Parks* (2001), 75(11–12), 10–11.

South America

Brazil suspends mahogany trade

The Government of Brazil has suspended all logging, transport and trade in bigleaf mahogany *Swietenia macrophylla* until an investigation into the industry

is completed. The ban follows the publication of a report prepared by Greenpeace, with the help of the Brazilian Government, that reveals a chain of illegality in the mahogany industry. The port of Pará is the conduit through which most of the illegal timber is channelled following logging on lands reserved for Indian tribes. The USA and Japan are the biggest importers of this species. The UK is the third largest importer, typically importing 1,729 m³ per year through Pará.

Source: *TRAFFIC Bulletin* (2001), 19(1), 3 (also at <http://www.traffic.org/publications>).

Pacific

Whale sanctuary created in the South Pacific

The government of the Cook Islands in the South Pacific has approved turning 2 million km² of ocean surrounding the tiny nation into a whale sanctuary. The Cook Islands has a population of 19,000 scattered over 13 islands north-east of New Zealand, and the new sanctuary will cover the country's Exclusive Economic Zone. There are already two large sanctuaries for the world's dozen great whale species in the Indian and Southern Oceans.

Source: *Marine Pollution Bulletin* (2001), 42(11), 1006.

Nature tourism on Fiji supported by New Zealand

A New Zealand overseas aid programme has helped four small villages on Taveuni island in Fiji to establish a 'profitable sustainable tourism product'. As well as benefiting the villagers, Fiji's largest remaining tract of indigenous forest, the Bouma rainforest, has thus been protected. In the 1960s the Fiji Government offered monetary incentives for villagers to fell the forest and establish coconut plantations. Since then, hundreds of native plants have been replanted in the area. In addition to the forest, an area of coral reef and lagoon has been declared by the villagers to be off limits for fishing and reef walking. The four tourism ventures are the Waitabu Marine Reserve, the Vidawa Rainforest Hike, the Tavarua Falls and Lavena.

Source: *Forest & Bird* (2001), 302, 12.

Australia/Antarctica/ New Zealand

Rainforests harvest the skies

Australian scientists have discovered that upland rainforests harvest vast amounts of water from the clouds in addition to that which falls directly as rain. The finding has major implications for the care and management of the world's remaining rainforests and tropical river systems, as well as for global water security. In high, wet tropical regions above 900 m, low cloud, mist and fog blow constantly through the forest, condensing on trees and running or dripping down them to the ground. This condensation is additional to normal precipitation and does not occur where the forest has been cleared. Because these upland rainforests transpire very little, they contribute a disproportionately large volume of water to their catchment. This contribution is greatly reduced when the forest is cleared and the water can evaporate. To work out how much moisture falls as rain and how much is harvested by the forest, rain gauges were set up in open areas at Longlands Gap and Mt Lewis in North Queensland, and 'throughfall' troughs and collar gauges around trees in the forest. The throughfall troughs measure water that directly reaches the forest floor, dripping through the canopy. The collars measure 'stemflow', or water running down the tree trunks. If the cloud banks that currently contribute water to the forest via cloud stripping rise in altitude, as they are forecast to do with global warming, there could be a major loss in water gathering by the forest and its catchment, with consequences for communities downstream that rely on these resources.

Source: <http://www.csiro.au>

Australia to assess new areas for marine conservation

The Australian Government is to assess the conservation values of 11 unique marine areas in Commonwealth waters. Most are characterised by unique geological formations or high levels of biological diversity. Some contain critical seagrass and sponge bed habitat. The Government is committed to establishing a National Representative System of Marine Protected Areas, and reserves have already been created at Macquarie,

Lord Howe and Cartier Islands and the Tasmanian Seamounts. A fifth reserve in the region of Heard Island and Macdonald Islands is nearing completion. The 11 new assessments will provide information that will be used to decide if any should be declared as marine protected reserves. Each assessment will identify the conservation values of the site, threatening processes, and issues for consideration in potential reserve design. The assessments are likely to take between 6 and 24 months to complete.

Source: *Marine Pollution Bulletin* (2001), 42(11), 1003–1004.

Improved wildlife protection in Australia

In December 2001 a Bill came into force that will improve Australia's capacity to enforce wildlife protection laws. The Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection Bill) 2001 integrates the existing *Wildlife Protection (Regulation of Exports and Imports) Act 1982* within the *Environment Protection and Biodiversity Conservation Act 1999*. The new legislation will improve the Australian Government's capacity to prosecute offenders for illegally importing threatened species, and it will restrict the commercial use and export of non-threatened Australian plants and animals.

Source: *TRAFFIC Bulletin* (2001), 19(1), 3 (also at <http://www.traffic.org/publications>).

Critical habitat listing for the Australian camaenid land snail

Mitchell's Rainforest Snail *Thersites mitchellae* has a restricted distribution, occurring only in lowland subtropical rainforest and swamp forest habitats on the coastal plain of far north-eastern New South Wales (NSW), Australia. The species' historical extent of occurrence is estimated as <400 km², but habitat has been drastically reduced through land clearing, and the species' current area of occupancy is estimated to be <5 km². Much of the surviving habitat is in small, fragmented remnants. *T. mitchellae* is listed as an endangered species under the NSW *Threatened Species Conservation Act*, and is categorized as Endangered on the 2000 IUCN *Red List of Threatened Species*. The largest known population of *T. mitchellae* and largest remaining single area of habitat is in Stotts Island Nature

Reserve, a 165 ha rainforest island in the Tweed River. In November 2001 the NSW government declared the entire island as critical habitat for *T. mitchellae*. Declaration as critical habitat gives Stotts Island Nature Reserve the highest protection possible under NSW legislation. Source: *Tentacle*, 10, 13–14 (also at http://bama.ua.edu/~clydeard/IUCN-SSC_html/index.htm).

Australia protects the whale shark

The world's largest fish, the whale shark, has been included on the list of Australia's nationally threatened species under its Environment Protection and Biodiversity and Conservation Act 1999. The Australian population is shared with other countries, and a substantial regional decline in numbers has had an impact on Australian sharks. Whale shark fins are highly prized, with a single fin reportedly on sale for \$15,000 in China in 1999. The whale shark, which can grow to 20 m, is globally rare and prior to the mid-1980s there had been only 350 sightings worldwide. Australia is a stronghold for the species, with animals congregating at Ningaloo in Western Australia, Christmas Island and in the Coral Sea. These seasonal aggregations, thought to be related to food availability, are rare elsewhere in the world.

Source: *Marine Pollution Bulletin* (2001), 42(12), 1282.

Antarctic warming – evidence from scallops

Scientists at the University of Michigan and Ohio State University are filling gaps in Antarctica's temperature record for the last century using growth bands in the shell of the Antarctic scallop. The ratio of oxygen isotopes is being used to follow temperature changes in hitherto unknown detail. This is particularly useful for the early part of the twentieth Century. The changes in isotope ratios reflect changes in the chemistry of coastal waters produced as glaciers melt and retreat. The research has already confirmed a long-term warming trend in the Antarctic continent in the last 100 years, with a major shift occurring in the 1950s. Analysis of the growth bands will produce a seasonal and year-by-year picture

of temperature changes in different parts of Antarctica over the past century.

Source: *Marine Pollution Bulletin* (2001), 42(12), 1283.

Overfishing continues in New Zealand

Conservationists have expressed concern that the New Zealand Minister of Fisheries has failed to take a precautionary approach when setting catch limits for key species, including orange roughy and hoki. The orange roughy is a long-lived (>100 years) and slow growing species. Poor management has meant that in the last 20 years most stocks have been reduced to less than 20% of their original estimated size. Despite this, catch limits are being doubled for the main fishery on the Chatham Rise. Recent assessments in this area have shown that only 25% of the initial population levels remain. For hoki the 20% cut in catch limit to 200,000 tonnes is thought to be inadequate to halt a continuing decline, as fisheries scientists estimate the sustainable yield for hoki as less than 150,000 tonnes per year. However, the cuts in the hoki catch may help fur seals and seabirds killed by the fishery. Up to 1,000 fur seals and 1,000 petrels and albatrosses are killed each year.

Source: *Forest & Bird Conservation News* (2001), 124, 1–2 (also at <http://www.forest-bird.org.nz/consnews/index.asp>).

Progress on protecting North Island Hector's dolphin

In August 2001 the Minister of Fisheries in New Zealand announced a range of measures that will protect the Critically Endangered subpopulation of North Island Hector's dolphin *Cephalorhynchus hectori* of which there are only about 100 left in the wild. The measures announced include prohibiting gill nets on 400 km of the west coast of North Island. A survey in 1999 confirmed that Hector's dolphins were caught in gill nets in this region. The prohibition will also protect other dolphins, seals, penguins and shags that are drowned in set nets. It has been recommended that part of the area from which set nets have been prohibited should be established as a marine mammal

sanctuary. Further controls on set nets are being considered for the east coast of South Island and Southland.

Source: *Forest & Bird Conservation News* (2001), 124, 3 (also at <http://www.forest-bird.org.nz/consnews/index.asp>).

Ngunguru Spit under threat

Ngunguru Spit, one of the last undeveloped sandspit habitats north of Auckland, is under threat again. A developer who has owned the sandspit since 1974 has reapplied to subdivide it. The Spit is home to a number of threatened species, including the New Zealand dotterel, the variable oyster-catcher, and the native pingao grass. The Spit is also listed as a coastal hazard zone and is completely inappropriate for development. Ngunguru was designated as 'future open space' at the time the current owner bought it. The Crown negotiated to buy the Spit on a number of occasions, but the owner has asked for a price 6–10 times greater than the Government Valuation. Ngunguru Spit needs to be protected as a public open space. This could be done jointly by Whangarei District Council, Northland Regional Council and the Department of Conservation, with assistance from funding agencies and other groups.

Source: *Forest & Bird Conservation News* (2001), 125, 3 (also at <http://www.forest-bird.org.nz/Consnews/index.asp>).

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