

**International**

**No-fishing zones are a success**

In a recent review of 69 worldwide marine reserves scientists have discovered that protected areas produce bigger fish and a greater diversity of species, and restore plummeting fish populations. Population densities are 91 per cent higher in marine reserves than in unprotected areas, the average animal is 31 per cent larger, and species diversity is 23 per cent higher. Even more encouraging is that these changes seem to occur within 2–4 years and last for decades. However, perhaps the most important finding is the benefit to waters outside a reserve. Fish larvae are reseeded adjacent, overexploited waters. This finding has led to suggestions that marine reserves should be designed with a series of loosely connected 'no-take' zones that can restock the waters in between them. This network design will be used for a reserve off the coast of California's Channel Islands. *Source: Audubon (2001), May–June, 15.*

**Active protection reduces nest poaching in neotropical parrots**

Poaching of parrot nestlings for economic gain is a widespread and significant source of nest mortality in neotropical parrots, but active protection appears to reduce its impact. A review of poaching of nestlings for the pet trade brought together data from 23 studies, covering 4024 nesting attempts in 21 species of neotropical parrots across 14 countries. The average poaching rate across all studies was 30 per cent of all nests observed. Thirteen studies reported poaching rates of  $\geq 20$  per cent, and four reported rates of  $>70$  per cent. Only six studies documented no poaching, four of which were on islands in the Caribbean and two were species with low economic value. Active nest protection was successful at reducing poaching rates, which were significantly lower after the enactment of the US Wild Bird Conservation Act. This result suggests that the legal and illegal parrot trades

are positively related, rather than inversely related as has previously been suggested. *Source: Wright, T.F. et al. (2001) Conservation Biology, 15, 710–720.*

**Forest certification increases around the world**

Tembec Inc. of Canada is applying for Forest Stewardship Council (FSC) certification on 13 million ha of land. The Brazilian Federal Attorney's Office plans to make FSC certification a requisite for all logging companies in the Amazon, partly to control illegal activities. Russia intends to certify 2 million ha of state forest in 2001. Austria, Estonia, Hungary and British Columbia all carried out their first FSC certifications in 2000, and the Latvian State forest has announced that 50 per cent of its holding will be FSC certified by 2002. Major new forest areas were certified during 2000 in, amongst other places, Germany, Switzerland, Sweden, Brazil, Russia and the USA. FSC group certification schemes have been established in France, Latvia and Japan. The FSC has approved Peru's standard for Brazil nuts – the first ever for a major non-timber forest product. *Source: Arborvitae (2001), May, 15.*

**FAO launches climate change network**

The FAO have recently established an electronic list server in response to requests for them to facilitate the exchange of information on forestry and climate change. The managers of the list server, entitled CLIM-FO-L, welcome all interested individuals to subscribe to the network and make contributions. To subscribe to CLIM-FO-L send an e-mail message to [mailserv@mailserv.fao.org](mailto:mailserv@mailserv.fao.org) containing the following message SUBSCRIBE CLIM-FO-L, but leaving the subject line blank. *Source: Forest News (2001), 15(1), 6 (in Tiger Paper (2001), 28(1)).*

**53rd Meeting of the International Whaling Commission in disarray**

At the recent 53rd meeting of the International Whaling Commission (IWC) there was unprecedented hostility

between pro- and anti-whaling nations, with many countries indicating their concern for the future of the organization. A proposal, led by Australia and New Zealand and backed by the majority of Pacific Island nations, for a sanctuary to protect whales in the South Pacific, was blocked for the second year running. The proposal was rejected by pro-whalers, including Japan, Norway and six Caribbean countries. The Caribbean nations have been accused of receiving financial aid from Japan in return for backing its pro-whaling position. Japan, which wants to overturn the 1986 international moratorium on commercial whaling, uses the relative abundance of minke whales to justify its push for a return to a commercial hunt, but new surveys on Southern Ocean minke populations by the IWC's scientific committee suggest that there may be only 268,000 minke whales in the Southern Ocean, down from a 1991 estimate of 760,000. A further controversy was the rejection of Iceland's application to rejoin the commission while reserving the right to resume commercial whaling. *Source: New Scientist (2001), 2302, 4.*

**Overfishing of the world's oceans began over 1000 years ago**

An investigation of archaeological and historical data to estimate the full extent of pre-industrial fishing has indicated that the harvesting of turtles, otters and oysters eventually triggered the collapse of many coastal marine ecosystems. These effects were then exacerbated by the fishing of post-industrial societies, and centuries of overfishing have inflicted more damage on coastal marine ecosystems than the modern ills of pollution and climate change. However, these ecosystems have not yet been lost and could be restored with proper management, though recovery would take a long time. *Source: Science (2001), 293, 629 (reported in New Scientist (2001), 2302, 4).*

**Logging a lake to save the forest**

A Canadian engineer, Gary Ackles, has designed and built a robotic underwater

'lumberjack' that is operated from a barge. The new 'lumberjack' is being used to salvage hardwood trees from the Tucurui dam on the Tocantins river, a tributary of the Amazon. When the dam was completed in 1984 it flooded an area of rainforest larger than Greater London, and the valuable hardwood timber was not felled before closing the dam. The flooded area contains an estimated 1.5 million trees, worth about \$600 million. More 'lumberjacks' are being built, and the aim is to 'log' the whole lake over the next 20 years. The wood is naturally cured as the oxygen-free water of the lake replaces the resin of the trees. Wood from 36 species of trees from the lake is being offered for sale, including Brazil nut wood, mahogany, ipe, jatoba and massaranduba. In April, New York-based environment group Rainforest Relief forced authorities in Asbury Park, NJ, to use hardwood from Tucurui, rather than from live rainforests, for boardwalk renovation. Ackles is hoping to gain official approval from the Forest Stewardship Council, which issues certificates for timber operations that do not destroy natural forest.

Source: *New Scientist* (2001), 2303, 38–41.

## Europe

### Tourism boom bad news for monk seals

The World Tourism Organization recently released a report showing that international tourism grew by 3.2 per cent last year, generating \$455 billion. Countries in the western Mediterranean fared particularly well, but this increase in tourism is bad news for the Mediterranean monk seal *Monachus monachus*. Tourism has been implicated in the extirpation of the monk seal in several regions, including Spain, France, Corsica, Italy, Sardinia and Croatia, and continues to be a danger in Cyprus, Greece and Turkey. Although international conferences and intergovernmental institutions have consistently urged the tourism industry to meet its obligations towards the Mediterranean monk seal, it has so far conspicuously failed to do so. There is growing resentment that conservation organizations are actually subsidizing the tourism industry by setting up protected areas, guarding

monk seal refuges and distributing information to the public, while the tourism industry itself will not provide funds to help the seals.

Source: *The Monachus Guardian* (2000), 3, 4.

### New protected areas for Mediterranean monk seals

Of 17 sites in Turkey classified as important for monk seals, five are likely to become Monk Seal Conservation Areas. In addition, detailed proposals for the environmental protection and sustainable development of four target areas in Greece were submitted to the authorities. Following the passing of relevant legislation, a Network of Special Conservation Areas will be established in Greece, affording protection to some of the world's most important surviving monk seal colonies.

Source: *The Monachus Guardian* (2000), 3, 11 & 16.

### Important monk seal area under threat

The Küdür Peninsula in Turkey is one of the last surviving habitats of the Mediterranean monk seal around Turkey's heavily touristic Bodrum Peninsula. It was protected in November 1998 but now a tour operator based in Germany is challenging this decision and pushing for a down-grading of the site to allow coastal development. The tour operator has commissioned an environmental reassessment of the decision to disallow coastal development. The final report from this study raised the possibility of 'coexistence of monk seals and tourism' but failed to take into account the ecological importance of the area, and studies that show that monk seals cannot survive under increasing tourism disturbance and development pressures.

Source: *The Monachus Guardian* (2000), 3, 52.

### WWF demands responsible approach to fishing in African waters

The European Union (EU) currently spends 270 million Euro to buy fishing rights in other countries. A number of agreements with African countries are up for renewal, and the WWF is demanding a responsible approach to the negotiations. The EU wants to increase its share of the already heavily exploited Senegal fisheries by

60 per cent, which will take fishing levels well beyond sustainable levels. The European Commission's own Green Paper on the Future of the Common Fisheries Policy clearly states that any fishing rights in the waters of developing countries should not threaten the sustainability of those waters. WWF are calling on them to honour this aim and ensure that both West Africa and Europe can benefit from sustainable and equitable fisheries co-operation.

Source: *Marine Pollution Bulletin* (2001), 42, 422.

### Conservationists challenge wolf culls in Scandinavia

Concerns about wolf control measures in Scandinavia have prompted a combined protest to the Bern Convention from six leading conservation organizations. The groups, which include WWF and the Swedish Carnivore Association, are calling for an evaluation of the Fennoscandian wolf population following the recent cull in Norway and plans for further culls. They are also urging Norway, Finland and Sweden to review wolf management practices. The groups point out that although the Fennoscandian wolf population is threatened and listed on Annex 2 of the Convention, Norwegian authorities have granted hunting permits for 14 out of the country's estimated 30 wolves since last May. Authorities are expected to grant further permits this winter.

Source: <http://www.large-carnivores-lcie.org>

### Greenpeace warns of pollution levels in Baltic Sea

Greenpeace warned in late April that pollution levels in the Baltic Sea are above critical levels and that the entire region is a global toxic hotspot. Although the nine countries bordering the Baltic Sea have made efforts to reduce pollution over the past three decades, a recent report alleged that the state of the Baltic Sea is still critical. Levels of toxic chemicals that authorities have been trying to reduce, including dioxins and PCBs, did not drop during the 1990s, and others, such as brominated flame retardants, have increased dramatically. These chemicals are persistent organic pollutants (POPs) and are amongst the most dangerous chemicals to which ecosystems can be exposed. POPs do not break down easily in the

environment, and build up in the fatty tissues of wildlife and humans. They contaminate the food chain and human breast milk and have been linked with a variety of human diseases, including cancers and reproductive disorders. The levels of dioxins and other POPs in Baltic fish have caused Finland and Sweden to issue health warnings, advising people to restrict their consumption of Baltic salmon, trout and herring. *Source: Marine Pollution Bulletin (2001), 42, 421.*

#### **PEFC leaves a lot to be desired in Finland**

Logging of old-growth forests in Finland continues, and the timber continues to be certified under the Pan-European Forest Certification (PEFC) system. Several ecologically detrimental logging plans have been implemented, known habitats of endangered species have been logged, and further logging is planned in several areas. Only 3.6 per cent of productive forest land in Finland is protected from logging. Further protection is essential to maintain biodiversity in Finnish forests. *Source: Taiga-news (2001), 35, 3.*

#### **Organic farming increases biodiversity**

A recent study in England by the Soil Association has found considerable evidence that organic farming increases biodiversity. Organically cultivated fields contained five times as many wild plants as non-organic fields and 57 per cent more species, including some rare plants such as corn buttercup and red hemp nettle. In addition 25 per cent more birds live on the edges of organic farms, primarily because there are more insects to eat. More than 75 per cent of the land in the United Kingdom is farmed, and so organic farming could be an important factor in the conservation of the country's biodiversity. *Source: Audubon (2001), July–August, 15–16.*

#### **New UK fisheries conservation measures**

The introduction of technical conservation measures designed to provide extra protection for haddock and other whitefish in the North Sea and the west of Scotland have been announced by the UK Fisheries Minister. Their primary importance is to protect young haddock,

and the measures will improve the selectivity of fishing nets, which is important for conserving fish stocks. *Source: Marine Pollution Bulletin (2001), 42(5), 335.*

#### **Increase in lynx populations**

A recently published study concluded that from 1990 to 1998 the population of Eurasian lynx *Lynx lynx* on the borders of the Czech Republic, Germany and Austria increased from under 20 to nearly 70 resident animals. During this time reproduction also increased, with a maximum of 55 kittens observed in the rearing period of 1998–99. Mortality data indicated, however, that illegal hunting was widespread. *Source: Wölfel, M. et al. (2001) Acta Theriologica, 46, 181–194.*

#### **Wolf faces eradication in Bulgaria**

Conservationists in Bulgaria fear new legislation being hurried through Parliament ahead of June elections could have devastating consequences for the country's predators and could lead to the total extermination of the wolf. The Balkani Wildlife Society and Semperviva Society have launched a campaign to stop the drafting of a proposed new Law for Hunting and Conservation of Game being adopted in its current form. The conservationists – given just 7 days to comment on the draft regulation – warn that many articles in the text contravene international agreements, and they fear that sanctioning the use of poisons, selective traps and nets to kill wolves and other predators will have disastrous impacts for many species. Conservationists are particularly concerned about the threats posed to wolves by the draft regulation. According to the proposed law, wolves, which have been listed in the country's Red Data Book since 1975, can be hunted throughout the year without any restrictions or reporting requirements. *Source: http://www.large-carnivores-lcie.org*

#### **Study provides tool for wolf management in Croatia**

The first major study into the human dimensions of wolf management in Croatia has revealed that most of the general public support the maintenance of wolf populations. The project examined public attitudes and beliefs about wolves, and wolf management, in three

areas inside the Croatian wolf zone: Gorski Kotar, Lika and Dalmatia. Quantitative and qualitative data was collected from 1209 randomly selected residents, together with 209 hunters, 190 foresters, 19 shepherds and 339 students. The survey, designed to assist decision making on wolf management issues, is particularly timely, with the Croatian wolf population (estimated at 100–150 animals) now increasing after years of decline. Most respondents from the general public, hunters, foresters and students across the three zones agreed that livestock owners should receive money for living in a wolf zone, instead of receiving compensation for livestock losses. Although the wolf has been a protected species in Croatia since 1995, a majority of respondents across all interest groups stated that hunting of wolves should be allowed in specific seasons, although there was strong opposition to allowing unrestricted hunting of wolves. While the 19 shepherds included in the survey revealed a strong dislike of wolves, nearly half still believed it was important to maintain them. *Source: http://www.large-carnivores-lcie.org*

### **North Eurasia**

#### **Russian Red Book thickens**

The newly published Red Book of Rare and Endangered Animal Species in Russia contains 414 animal species compared to the 246 that were listed when the first edition of the book was issued in 1983. The new edition lists 155 invertebrates and 259 vertebrates, including 65 mammals, 39 fishes, 123 birds, 21 reptiles and 42 molluscs. *Source: Taiga-news (2001), 35, 3.*

#### **Oil, gas and environmental ruin in Siberia**

Last June a World Bank study concluded that 'intensive energy resource exploitation has caused great damage to the nature of the Russian Federation, especially to the northern parts... The accumulated amount of oil emulsions and sludge is estimated to be 1.2 billion tons. Every year about 30,000 ha of land is damaged'. Rivers have been polluted by oil, forests are fragmented, occurrence of forest fires has increased and indigenous

families have lost access to adequate pastures for reindeer herding. A wave of foreign investment in 1996 caused a rapid expansion of the Russian oil and gas industry, but the collapse of the rouble in 1998 resulted in western bankers losing their confidence. During 2000 this situation gradually changed and western finance is once again supporting the Russian oil and gas industry, including the controversial 'rehabilitation' of the Samotlor oil field, which the World Bank states 'is now classified as an ecological catastrophe zone'. While the West now has access to the Siberian oil and gas reserves, the Siberian environment is still in the same deplorable state as it was under the Soviet regime. Source: *Taiga-news* (2001), 35, 3.

### Sub-Saharan Africa

#### Pack size crucial to survival of African wild dogs

The African wild dog continues to decline, and faces extinction. Recent evidence suggests that there may be a critical minimum threshold, below which packs face an increasing probability of extirpation – the so-called Allee effect. This effect is associated with obligate cooperative breeding, which makes the African wild dog more sensitive to anthropogenic mortality. The species' behavioural ecology is characterized by a reliance on helpers, including cooperative hunting, defence from kleptoparasitism, pup feeding and babysitting. Consequently there are strong, positive relationships between pack size and the production and survival of pups. Pairs of wild dogs are more successful at raising offspring with the assistance of helpers. An extensive review of the literature indicated that a pack in which membership drops below a critical size may be caught in a positive feedback loop: poor reproduction and low survival reduce pack size thereby resulting in the failure of the whole pack. Source: Courchamp, F. & Macdonald, D.W. *Animal Conservation* (2001), 4, 169–174.

#### Large mammals on the decline in Comoe

In Comoe National Park, Ivory Coast, large mammal species have suffered a

significant decline in numbers between 1978 and 1998. During this period the 11 most abundant ungulate species experienced decreases of between 60 and more than 90 per cent. Duikers and other small antelopes up to the size of kob suffered most. The substantial decline of the smaller species resulted in changes to the ungulate community, which in turn could affect the carnivores and eventually the entire ecosystem. Decreases were attributable to continued intensive poaching taking place throughout the park.

Source: Fischer, F. & Linsenmeier, K.E. (2001) *Biological Conservation*, 101, 131–135.

#### Conflict in Kenya over conversion of forests

The planned conversion of 167,000 ha of forest land (10 per cent of Kenya's forest area) for settlement and farming has caused heated debate within Kenya. Many divergent groups have officially complained about the plan, including non-governmental and community-based organizations, the Parliamentary Group on Natural Resources/Environment, big business, commercial farmers, donors, IUCN and the general public. Much of the opposition has been centred on the plans to convert 1825 ha of forest at the foot of Mount Kenya, an area already seriously affected by illegal logging – as shown in an aerial survey conducted last year by the Kenyan Wildlife Service. Huge areas of the Mau are also in the proposal and there is concern about the effects that such large-scale conversion will have on water supplies.

Source: *Arborvitae* (2001), May, 4.

#### Wildlife distribution and density in northern Kenya affected by livestock and water sources

Drought-tolerant wildlife species, such as oryx and Grevy's zebra, frequently occur in arid rangelands where conservation efforts are required to ensure the survival of their populations. The development of drinking water sources for local people and their livestock, which must drink almost every day, represents one of the main interventions in these rangelands, although the impact of water points on wildlife in non-protected areas is not well known. Certainly livestock may compete with wildlife for both water and forage, and herders may scare away wildlife. A study of the

distribution of wildlife and livestock in northern Kenya in relation to distance to permanent water has revealed that livestock were concentrated in areas close to permanent water, while wildlife were frequently farther away. Also, wildlife congregations were more diverse farther from the water. This suggests that livestock and human activities related to waterpoints have a negative impact on the distribution and diversity of wildlife. Source: De Leeuw, J. *et al.* (2001) *Biological Conservation*, 100, 297–306.

#### Black rhino densities still low in Masai Mara

Black rhinos *Diceros bicornis* have undergone a significant decline in much of their range since the 1960s, largely as a result of illegal killing to supply the international demand for rhino horn. It is estimated that over 95 per cent of the population that existed in the 1960s was exterminated. A recent study has assessed the population recovery of the black rhino in the Masai Mara (subspecies *D.b. michaeli*) since 1980, using daily monitoring data. Results indicate a partial recovery to 35 individuals in 1994 (a growth rate of 9.8 per cent per annum), but the population then declined to 23 individuals in 1999 (a mean annual decline of 7.5 per cent). At no stage did the number or density of animals approach pre-poaching levels (about 160 animals in 1960). Although population structure and breeding performance appear to have been normal through the last decade, population density was low. The decline is suggested to be a result of death, dispersal, or an increased reclusiveness of some individuals. It is recommended that foot patrols be implemented in the Masai Mara National Reserve and that monitoring be extended beyond the borders of the reserve.

Source: Walpole, M.J. *et al.* (2001) *Biological Conservation*, 99, 237–243.

#### Village collaborators provide a more 'sustainable' human resource than government employees

A study in the Gamba Protected Area Complex in Gabon analysed the perseverance of all those who had participated in training sessions on ecological survey techniques and participatory rural appraisal. Seventy-six per cent of the members of local communities who received training, continued ecological surveys 2 years after training, compared

with just 8 per cent of government employees. Similarly for the participatory rural appraisal, 60 per cent of local community members continued the work compared with none of the government employees. These results suggest that village collaborators are a more 'sustainable' human resource than government employees. The communities cannot be solely responsible for managing protected areas, but conservation professionals must acknowledge both the strengths and limitations of village collaborators.

Source: Thibault, M. & Blaney, S. (2001) *Conservation Biology*, 15, 591–595.

#### **Low density of bonobo in Salonga National Park**

Salonga National Park in the Democratic Republic of Congo is the largest African rainforest park (36,560 sq km) and was proclaimed in 1970 to protect endemic species such as bonobo *Pan paniscus*. In December 1997 and January 1998 a survey was conducted in the northern sector of Salonga to determine the presence of bonobos; prior to this survey it had not been established whether bonobos were present in viable numbers. Bonobo density in the area was estimated at about 1.15 per sq km, lower than in the Lomako Forest (2.98) and Wamba (1.7) 200–300 km further north, but higher than those in Yalosidi (0.45) and Lilunga (0.43), roughly 100 km east and 150 km north-east of the park, respectively. However, hunting pressure is high in the park. Considering that Salonga is the only area within the bonobo range that is theoretically protected by law, active conservation programmes for bonobos need to be undertaken as soon as possible.

Source: van Krunkelsven, E. (2001) *Biological Conservation*, 99, 387–391.

#### **Mammoth roost of non-breeding straw-coloured fruit bats in Zambia**

A mammoth roost of the straw-coloured fruit bat *Eidolon helvum*, has been found in Kasanka National Park in Zambia. The roost is situated in a stand of moist evergreen forest on the eastern side of the Kapabi swamp, and it has been estimated that the total number of bats leaving the roost at sunset is around 1.5 million.

Source: Sorenson, U.G. & Halberg, K. (2001) *African Journal of Ecology*, 39, 213–215.

#### **White rhinoceros mortality caused by African elephant**

The role of delinquent young orphan male elephants in the high mortality of white rhinoceros in Pilanesberg National Park, South Africa, has been investigated. Reconstructing records from a range of historical sources, researchers estimate that up to 49 rhino were killed by elephants, with confirmed mortalities in 1994 and 1996. Both sexes and all age classes were victims. The culprits were young male elephants that entered musth about 10 years younger than is normal. This was attributable to the lack of a mature bull hierarchy in the park, because these elephants had been translocated from Kruger National Park (as orphans from culling operations) when less than 10 years old.

Source: Slotow, R. & van Dyk, G. (2001) *Koedoe*, 44(1), 85–94.

#### **Increase in bovine tuberculosis in Kruger National Park**

Bovine tuberculosis (BTB) was first detected opportunistically in Kruger National Park in a single African buffalo *Syncerus caffer* in 1990. In 1991 and 1992, some 2070 buffalo were examined for BTB as part of a culling program that removed some animals from all known herds in the park. BTB prevalence was estimated to be 0 per cent, 4.4 per cent and 27.1 per cent in the north, central and south zones, respectively. In 1998, the prevalence was 1.5 per cent, 16 per cent and 38.2 per cent for the same areas, which represents a significant increase in prevalence in the south and central zones, but not in the north. Continued monitoring is necessary to understand disease transmission risks, population effects and the efficacy of disease management strategies.

Source: Rodwell, T.C. et al. (2001) *Journal of Wildlife Management*, 37(2), 258–264.

### **South and South-east Asia**

#### **Vulture disease crisis**

Concern has been growing over mysterious declines that have been occurring in vulture populations in India and beyond. At least three species are now

Critically Endangered: white-backed vulture *Gyps bengalensis* and both species of long-billed vulture (*G. indicus* and *G. tenuirostris*). The precise cause of the vulture fatalities has not yet been ascertained, but it seems likely that it is due to a viral disease that has 'jumped' from another species, rather than to changes in the processing of dead livestock, the misuse of pesticides or other factors. The disease appears to be spreading westwards; some populations of white-backed vulture are declining in Nepal and the first symptoms have been observed in white-backed vultures in Pakistan. The Eurasian griffon *G. fulvus* in countries between India and the Middle East is likely to be the next victim, and the continued spread of the disease now appears inevitable. The white-backed vulture population in South-east Asia plummeted in the early 20th century, and there is speculation that whatever caused that decline could be causing the current problems. If so, surviving birds from South-east Asia may be immune to the disease and could therefore hold the key to preventing its further spread.

Source: *International Zoo News* (2001), 48(4), 257.

#### **Furniture from milk cartons**

TetraPak Co. in Thailand recently announced that it will co-operate with Bangkok city authorities in developing a recycling plant to convert empty UHT milk cartons into 'green board' suitable for making furniture and other products. The plant would be capable of processing 800,000 UHT cartons a day. It is estimated that Thai consumers empty more than 2 billion UHT cartons annually, most of which currently end up in landfills.

Source: *Forest News* (2001), 15(1), 13 (in Tiger Paper (2001), 28(1)).

#### **Reduced impact logging conference produces cautious optimism**

More than 260 people from 36 countries attended the International Conference on the Application of Reduced Impact Logging to Advance Sustainable Forest Management, in February this year in Kuching, Sarawak, Malaysia. Participants included representatives from government, forest industry, universities, non-governmental organizations and international organizations. The conference was intended to further

increase awareness and build political and institutional support for effective implementation of the Code of Practice for Harvesting in Asia-Pacific, reduced impact logging (RIL) and improved forest management in general. The conference assessed past and ongoing efforts to implement RIL, and considered options for future adoption and application. The conference presentations highlighted the need for more studies related to the financial and economic aspects of RIL, emphasized that RIL is an essential component of sustainable forest management, and called on governments, industry, research institutes and international organizations to cooperate in furthering the adoption and application of RIL.

Source: *Forest News* (2001), 15(1), 1–2 (in *Tiger Paper* (2001), 28(1)).

#### **Indonesia admits that it cannot keep its forestry promises**

Indonesia's newly installed Forestry Minister, Marzuki Usman, has acknowledged that the country will fall short of commitments made to donor countries last October. Donors pledged US\$4.8 billion to Indonesia in return for promised reforms, including a crack-down on illegal logging activities. The World Bank estimates that Indonesia is losing US\$650 million per year in uncollected royalties because of illegal logging and trade.

Source: *Forest News* (2001), 15(1), 15 (in *Tiger Paper* (2001), 28(1)).

### **East Asia**

#### **China's wood imports rise dramatically**

China is now the third-largest importer of forest products. It imported 13,612 million cubic m of logs in 2000, valued at US\$1.66 billion, up by 25 per cent from 1999 levels. Hardwood log imports comprised 53 per cent of the volume and 77 per cent of the value. The biggest single supplier was Russia, which supplied 44 per cent of China's log imports. Malaysia and Gabon each supplied more than 1 million cubic m, and other major suppliers included Papua New Guinea, Indonesia and Myanmar. China's sawnwood imports also rose in 2000 – 3614 million cubic m, an increase of over 65

per cent compared with 1999 levels, with a value of US\$982 million, nearly double that of 1999. The major suppliers of this sawnwood included Indonesia, Malaysia, United States, Canada, Russia and New Zealand.

Source: *Forest News* (2001), 15(1), 15 (in *Tiger Paper* (2001), 28(1)).

#### **Plans to increase plantations**

China's State Forestry Administration will soon issue new administrative regulations to encourage overseas investment in forest plantations in China. The new regulations are expected to provide secure land-use rights for 50 years, low-interest loans, rebates and tax breaks. Plantation development in China has expanded rapidly in recent years with Guangdong province being particularly successful in attracting foreign investment (more than US\$154 million to date).

Source: *Forest News* (2001), 15(1), 13 (in *Tiger Paper*, 28(1)).

### **North America**

#### **Landmark fine for caviar company**

On 20 February 2001, US Caviar & Caviar Ltd., one of the nation's largest importers of sturgeon roe from the Caspian Sea, was fined US\$10.4 million – the largest fine ever imposed in a wildlife trafficking case. Three employees received prison sentences of 41, 21 and 15 months, respectively, for their parts in the 5-year smuggling operation that involved caviar with a retail value of more than US\$7.5 million. The company imported black market caviar from the United Arab Emirates using forged Russian caviar labels and false documents. They were also found guilty of fraudulently selling eggs from puddlefish and shovel-nose sturgeon by mail to US customers as authentic Russian *sevruga* caviar.

Source: *TRAFFIC North America* (2001), 4(1), 5–6.

#### **Amateur radio-trackers causing concern in North America**

A new threat that is jeopardizing the use of telemetry in mammal research: the ready availability of hand-held receivers makes the technology available to poachers as well as scientists. This is

becoming a particular worry in North America where radio collaring is a useful tool in much mammal research, and instances of poachers using the signals to track their quarry have been known. Source: *Audubon* (2001), May–June, 18.

#### **Difference in opinion on salmon extinction times**

A controversy is brewing concerning the probable forthcoming extinction of the wild spring–summer Chinook salmon. Different organizations, using different survey techniques, have predicted that it will become extinct anywhere between 2016 and 2100. Federal studies, which determined that the timing of this event will be in about 100 years, measured the entire salmon population and defined extinction as the point when only one individual remained. However, 'Doomsday Report 2001' commissioned by Trout Unlimited, a national conservation group, disputes these findings. In their model a population is considered to be on the verge of extinction when there are 100 members of the population remaining and extensive inbreeding has begun to occur. The group studied the number of spring–summer Chinook salmon returning each year to breed in Snake River, and predicted the potential reproductive success of the population. In 1999 no fish returned to breed at all. Federal agencies have cut back on several salmon protection measures in order to increase the generation of electricity in the area. In view of the report's findings this has been met with considerable concern.

Source: *Marine Pollution Bulletin* (2001), 42, 423–424.

#### **Roadless areas**

The Bush administration has announced that it will implement the Clinton era Roadless Area Conservation Rule, restricting logging and road building activities in over 25 million ha of national forest lands. However, the administration opened up the possibility for local officials to alter the implementation of the law allowing resource development in some areas. Conservation organizations are concerned that this will undermine the new law, but several organizations, including logging giant Boise Cascade, believe this weakening does not go far enough and have filed lawsuits against the new ruling. The state of Alaska has also filed a lawsuit

because it opposes restrictions on roadless areas of the Tongass National Forest. *Source: Taiga-news* (2001), 35, 2.

#### **Company seeks approval for genetically engineered salmon**

Greenpeace activists sealed off a research facility, owned by A/F Protein, at the end of March this year in an attempt to halt the further development of genetically modified salmon. Leading marine biologists expressed grave reservations about the development of genetically engineered (GE) fish and warned that even a small number released into the wild could have potentially devastating effects. Escapes from fish farms are frequent and virtually impossible to prevent. In the past 10 years over half a million fish escaped from just a handful of facilities in the US and Canada. There are no published studies on the health risks of engineered fish, nor are there specific regulations governing release of GE fish into the wild. A/F Protein's application to commercialize GE salmon for the aquaculture industry is currently being considered by the United States Food and Drug Administration (FDA) under their regulation on 'animal drugs', and a ruling is expected anytime this year. The manipulated Atlantic salmon have an additional gene for growth hormone production and an antifreeze gene promoter sequence. As a result the GE salmon grow all year round, rather than just in summer, and develop two to three times faster than normal salmon. *Source: Marine Pollution Bulletin* (2001), 42(5), 335.

#### **Nature reserves do not capture the full range of America's biodiversity**

Less than 6 per cent of the coterminous United States is in nature reserves, which are most frequently found at higher elevations and on less productive soils. The distribution of plants and animals suggests that the greatest number of species is found at lower elevations. A preliminary assessment of the occurrence of mapped land cover types indicates that approximately 60 per cent have less than 10 per cent of their area in nature reserves. Areas of lower elevation and more productive soils are most often privately owned and already extensively converted to urban and agricultural uses. Efforts to capture the full geographical

and ecological range of land types and species in nature reserves must therefore fully engage the private sector.

*Source: Ecological Applications* (2001), 11(4), 999–1007.

#### **National Parks Service ordered to reduce boat traffic**

The US Court of Appeals has unanimously overturned a US District Court ruling that supported the National Park Service's (NPS) decision to allow a 72 per cent increase in boat traffic inside Glacier Bay National Park and Preserve, Alaska, without adequately analysing the environmental effects. The court ordered NPS to return boat traffic to its 1996 levels and complete a full environmental impact statement before implementing its Vessel Management Plan, which had authorized the increase. NPS had adopted the plan even though its initial environmental assessments concluded that impacts to much of the park's wildlife and environment were unknown. *Source: National Parks* (2001), May/June, 10–11.

#### **Sex-switching salmon**

A recent study has shown that 84 per cent of chinook salmon in Washington's Columbia River undergo a sex change. The fish start life as males but then develop to become female. The cause of the change is unknown, but pesticide runoff and rapid temperature change caused by hydroelectric power generation are being investigated: plutonium from the Hanford Nuclear Reservation has been ruled out. This phenomenon has caused concern among scientists about the development of 'Super Males'. The sex-switched females, instead of carrying the usual XX sex chromosomes, carry XY – the signature of a normal male. If these altered females were then to mate with normal males they could produce Super Male offspring with YY chromosomes capable of producing only male offspring.

*Source: Audubon* (2001), May–June, 17–18.

#### **Horseshoe crab fishing banned in Delaware**

Fishing for horseshoe crabs *Limulus polyphemus* off the mouth of Delaware Bay was banned as of 7 March 2001. The ban will protect local stocks of the crab and will benefit the large numbers of migratory birds that stop at Delaware Bay

to feed on horseshoe crab eggs on their way north to their breeding grounds. A recent rise in the number of crabs being caught led to concern for the welfare of the crab population and in turn, the birds that rely on the abundant, fatty eggs to fuel them on their journey north.

*Source: TRAFFIC North America* (2001), 4(1), 15–16, & *Audubon* (2001), May–June, 50–54.

#### **Ospreys return to Chesapeake Bay**

The return of ospreys to Chesapeake Bay is largely attributable to the success of modern environmental protection measures. Since their severe decline in the 1970s, as the use of DDT rose, efforts have been made to save these birds. DDT nearly wiped out many birds because it caused them to lay eggs that thinned and broke during incubation. DDT was found to be extremely stable and it has remained in the environment. However, since the ban on DDT in 1972 its concentration in the environment is much lower, and many birds have made a reappearance and their reproduction is now unaffected. The return of the osprey reflects the restoration of health to a number of bays, estuaries, rivers, streams and other parts of the Chesapeake Bay ecosystem, which has numerous suitable nesting sites and is home to the largest populations of ospreys in the world. The construction of platforms by landowners has also had a positive effect.

*Source: Marine Pollution Bulletin* (2001), 42(5), 338.

#### **Sea urchins provide shelter for abalones**

A recent study has shown that juvenile abalones appear to use red sea urchins as shelter. In a study of abalone abundance in California, significantly more juveniles were found on protected reefs with urchins present than on reefs where urchin fishing is allowed. This juvenile abundance was not correlated with adult abundance or habitat rugosity. One-third of the juvenile abalones were found under the urchins' spine canopy. This example demonstrates how marine protected areas designed for one fished species may help other species, illustrating their usefulness for ecosystem-based fishery management and marine conservation.

*Source: Rogers-Bennett, L. & Pearse, J.S.* (2001) *Conservation Biology*, 15, 642–647.

### **Alpine lake fauna recovers only slowly from fish removal**

An investigation of the response by fauna in naturally fishless alpine lakes in the Sierra Nevada of California to fish introductions has shown that it takes up to 20 years for the lake fauna to return to normal following fish disappearance. Amphibians, benthic macroinvertebrates, and zooplankton were dramatically reduced in distribution and abundance by fish introductions but generally recovered to predisturbance levels. However, they remained markedly different from those in never-stocked lakes 5–10 years after fish disappearance, and converged on the configuration of never-stocked lakes only 11–20 years after fish disappearance. Recovery was facilitated by the winged adult stages of many benthic macroinvertebrates, resting eggs of zooplankton, and nearby source populations of frogs. However, as many frog populations have disappeared since the time that the lakes reverted to a fishless condition, and the viability of zooplankton egg banks should decline in fish-containing lakes over time, faunal resilience may be lower in lakes that revert to a fishless condition today than is suggested by the results of the study.

Source: *Ecological Monographs* (2001), 71(3), 401–421.

### **Grizzly bear and wolf extinction affect avian neotropical migrants**

Most large, terrestrial mammalian predators have already been lost from more than 95–99 per cent of the contiguous United States and Mexico, and many ecological communities are either missing dominant selective forces or have new ones dependent upon humans. The cascade of ecological events that were triggered by the local extinction of grizzly bears and wolves from the southern Greater Yellowstone ecosystem included the eruption of the moose during the last 150 years, the subsequent alteration of riparian vegetation structure and density, and the coincident reduction of avian neotropical migrants. The findings offer empirical support for the top-down effect of large carnivores and provide a scientific rationale for restoration options to conserve biological diversity.

Source: *Ecological Applications* (2001), 11(4), 947–960.

### **First-ever natural coral nursery to be created in Florida**

Worldwide, coral reefs are experiencing enormous losses. Ship groundings, destructive fishing practices, tropical storms, global climate change and pollution are killing off the creatures that create the reefs. Researchers have been growing coral in laboratories for many years, but this new project will hope to grow 2000 colonies in a natural bay at Biscayne National Park, South Florida. To initiate the project, researchers will collect spawn – small pieces of living coral from healthy structures – and fragments that have been torn from the reef. Coral less than three inches in diameter will be cultivated in one of four nurseries inside the bay, and larger pieces will be reattached to the reef if possible. The first challenge to the programme is to find a natural substance for reattaching the coral; the current glue does not allow the natural erosion that creates the crevices that shelter small creatures.

Source: *National Parks* (2001), May/June, 12–13.

### **Surprise appearance of leatherback in Florida**

A leatherback turtle bearing flipper tags applied when it was nesting on a beach in Costa Rica made a surprise appearance in Florida recently. Seven years after researchers tagged the turtle in Costa Rica the female leatherback was encountered inside the Indian River Lagoon on Florida's east coast, where leatherbacks have never before been recorded. The turtle emerged onto a beach during the middle of the day and dug an egg chamber but did not lay any eggs. Algal growth on the turtle's back suggested that it had been in the lagoon for as long as a week. A rescue team from Sea World and the US Coast Guard took the turtle to deep waters and released it.

Source: *Marine Turtle Newsletter* (2001), 92, 32.

## **Central America and Caribbean**

### **Economic solutions to the bushmeat trade**

Standardized surveys of household consumption, income, wealth and

education level among Amerindian societies in Central and South America suggested that: demand for bushmeat may follow an inverted U pattern with income; consumers, especially the most well-off, reduce their consumption of bushmeat as the price increases; and a small decrease in the price of meat from domesticated animals is likely to lead to a large decrease in the consumption of fish but not bushmeat. Policy makers may be able to reduce the demand for bushmeat by raising its price, increasing the direct costs of hunting, and raising household income.

Source: Wilkie, D.S. & Godoy, R.A. (2001) *Conservation Biology*, 15, 761–769.

## **South America**

### **Forest fragmentation may affect bird condition**

Forest fragmentation may have subtle but important effects on species that are relatively common after landscape alteration. Wedge-billed woodcreeper *Glyphorhynchus spirurus* and white-crowned manakin *Pipra pipra* are both common in fragmented landscapes. Individuals captured in forest fragments, where microclimatic conditions are hotter and drier than continuous forest, were in poorer physiological condition, as measured by feather growth rate, than individuals captured in continuous forest.

Source: Stratford, J.A. & Stouffer, P.C. (2001) *Conservation Biology*, 15, 721–728.

### **Illegal sea turtle trade in Uruguay**

Sea turtles in Uruguay are protected by presidential decree and the import and export of sea turtle products is regulated under Appendix 1 of CITES. Despite this, during 1999 and early 2000, sea turtle carapaces were found for sale in seven seaside resorts. In addition the heads of an adult loggerhead *Caretta caretta* and a leatherback *Dermochelys coriacea* were discovered for sale for \$1500 and \$1700, respectively. The selling of carapaces, although illegal today, has been going on for more than 30 years and continues because of demand from Uruguayans who use carapaces as decoration. The trade in heads, however, was recorded for the first time in December 1999 and as such is extremely worrying because

traders are trying new types of sea-turtle products.

Source: *Marine Turtle Newsletter* (2001), 91, 10.

### Australia/Antarctica/ New Zealand

#### Dugong sanctuaries appear to be successful

A massive decline in dugong numbers in the southern Great Barrier Reef occurred between 1986 and 1994, resulting in a 50–70 per cent drop in population size. At the end of this period only 1682 dugongs remained. In 1999, the figure was 3993 and this encouraging increase is thought to be, in part, the result of the establishment of 16 dugong sanctuaries in 1997. The 1999 survey supports the location of these sanctuaries by demonstrating that they consistently support a significant proportion of the dugongs in the region. The Australian government has increased surveillance and enforcement measures by targeting dugong sanctuaries and other high conservation value areas. Unfortunately, although numbers in the Great Barrier Reef area have increased, the overall numbers are seriously down. The Australian dugong population is estimated at around 85,000, which is 50–80 per cent less than it was in the early 1980s. This is the largest remaining dugong population in the world and it continues to be threatened by human activities, including habitat destruction, pollution, accidental capture and drowning, and hunting for their meat, oil, leather and ivory.

Source: *Marine Pollution Bulletin* (2001), 42(5), 337, & *International Zoo News* (2001), 48(4), 258–259.

#### Rainforest reserves expanded in New Zealand

Two major gifts of forest in Northland and a gift and purchases near Auckland have expanded the number of public reserves that protect the surviving rainforests of New Zealand. Totara, rimu and two of Northland's key forest trees,

towai and taraire, dominate the 753 ha gift that will be known as the Hilel Korman Scenic Reserve. It is home to several precious species of native wildlife, most notably the North Island brown kiwi, kukupa or native pigeon, kauri snail and the forest ringlet butterfly. The second gift, 245 ha of largely virgin hardwood podocarp forest, contains a wide range of native trees, including northern rata *Metrosideros robusta*, flowering white rata vines, and yellow-flowering rata *M. fulgens*. The three blocks near Auckland total just over 350 ha and include kauri-beech, taraire-tawa forest with scattered puriri, and tanekaha and kanuka vegetation.

Source: *Forest and Bird* (2001), 300, 6–7.

#### Cause of cabbage tree deaths revealed

A cause has been found for the 'sudden decline' disease that has been mysteriously killing New Zealand's native cabbage trees *Cordyline australis*, also known as ti kouka. The disease caused the leaves to yellow and fall off, usually followed by the death of the tree 3–12 months later. Large numbers of trees were affected and in some areas, particularly in the north, no big trees are left. The cause of the disease has now been identified as a phytoplasma *Phytoplasma australiense*, an elusive type of bacterium that lives in plant sap. The pathogen is native to New Zealand flax and caused massive epidemics of yellow leaf disease early last century. It has now spread to other native species, including the karamu *Coprosma robusta*, and is suspected to cause dieback and death of the black tree fern or mamaku, kohuhu *Pittosporum tenuifolium* and puriri. The phytoplasma has also been found in strawberries in New Zealand, and in Australia it is linked with diseases of grape and papaya.

Source: *Forest and Bird* (2001), 300, 10.

#### Green globe scheme to curb excesses of tourism

In response to concerns that the consistent increases in the number of tourists visiting New Zealand will put pressure on natural resources, the New Zealand

Government has recently sanctioned an environmental certification programme called Green Globe 21 for the tourism and travel industry. There are also signs that tourists themselves want operators to 'clean up their acts'. Research by international tourism organizations suggests that travellers are seeking proven 'green' travel operators, and are prepared to pay more for their holidays to ensure a commitment to environmental protection.

Source: *Forest and Bird* (2001), 300, 12.

#### Conservation park for tussock grassland

New Zealand's first tussock grassland conservation park is being put together in Otago by the Department of Conservation (DoC). The park is being formed in large part from land surrendered to the Crown on the Lammermoor Ranges, inland from Dunedin. To be named Te Papanui, this is also the first conservation park to be formed by DoC since its establishment in 1987. Altogether some 17,000 ha of high country will form the park, including existing reserves such as Deep Stream Conservation Area, Nardoo Conservation Area and the Halwyn Conservation Area. Te Papanui is mountain-top country, with extensive flat-topped areas worn down by erosion into an upland plateau where tussock grasslands are interspersed with peat bogs and tarns.

Source: *Forest and Bird* (2001), 300, 4.

The *Briefly* section in this issue was written and compiled by Josephine Morley and Martin Fisher, with additional contributions by Guillaume Chaperon and Michael Hoffman. 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; Fax: +44 (0)1223 461481; E-mail: martin.fisher@fauna-flora.org