

International

1998 worst year for coral bleaching

Coral reefs in at least 32 countries across the world were affected in 1998 by bleaching (which occurs when coral lose the symbiotic algae that give them their characteristic colour), with up to 90 per cent of corals dying in some areas. It is the most geographically widespread bleaching event ever recorded. Bleaching is most commonly caused by high temperatures; only 1–2 °C higher than the mean is sufficient to break down the symbiotic link between coral and algae. The corals frequently recover but not if the causal factors are unchanged. Higher ocean temperatures may be due to the El Niño event or human-induced global warming.
Source: The World Conservation Monitoring Centre, 4 December 1998.

Amphibian discoveries

At a time when many amphibian taxa are experiencing world-wide population declines or extinctions, new species of amphibians are being discovered at a greater rate than are many other vertebrate taxa. The number of formally described species increased from 4003 in 1985 to 4780 by the end of 1995 and is predicted to reach at least 5000 by the year 2000, exceeding the number of extant mammals. Some of the new taxa have been discovered by the now almost routine application of molecular tools for systematic and taxonomic analysis. These have been particularly effective in revealing large numbers of morphologically cryptic species within taxa that were previously recognized as comprising single species.
Source: Hanken, J. (1999) Trends in Ecology and Evolution, 14(1), 7–8.

Quotas increased for depleted tuna

At its meeting in November 1998, the International Commission for the Conservation of Atlantic Tunas (ICCAT) failed to take appropriate action to help severely depleted

populations of bluefin tuna *Thunnus thynnus*. While acknowledging that Western Atlantic bluefin tuna are severely overfished the Commission increased the catch quotas of the three nations involved in this fishery (Canada, Japan and the USA).
Source: National Audubon Society, 24 November 1998.

Fish farms undermine fisheries

While many fish stocks world-wide have declined, fish farming has boomed and produces one-quarter of all fish consumed by humans. It is commonly assumed that aquaculture relieves pressure on wild fisheries and adds to the world's food supply. While this is valid for herbivorous species, it may not be so for species raised as carnivores. Farmed shrimp and salmon are fed with large amounts of fish meal and fish oil extracted from wild-caught fish, and deplete rather than augment fisheries resources. Conversion of coastal ecosystems to aquaculture destroys nursery areas for ocean fish, pollutes water through discharge of nutrients and chemicals, and introduces exotic species.
Source: Naylor, R.L. et al. (1998) Science, 282, 883–884.

Sea-bed destruction

Bottom-trawling and use of other mobile fishing gear have effects on the sea bed that resemble forest clear-cutting on land. They crush, bury and expose marine animals and structures on and in the substratum, sharply reducing structural diversity. The effects on biodiversity are particularly severe where natural disturbance is least prevalent, particularly on the outer continental shelf and slope. Recovery is often very slow and mobile fishing gear can have large and long-lasting effects on benthic communities, including young stages of commercially important fishes. As a result of improvements in fishing technology and inadequate regulation, there are few places in the world's continental shelves that have not been

trawled or dredged. Given the rapid progressive collapse of commercial fish stocks and the loss of biodiversity world-wide, more research should be devoted to understanding the effects of mobile fishing gear and action should be taken to ameliorate impacts on the world's marine biodiversity.
Source: Watling, L. & Norse, E.A. (1998) Conservation Biology, 12(6), 1180–1197.

Temperate woodland gains

While tropical forests are still being lost, many woodlands in temperate zones are growing. In the USA, forest growth has outpaced forest clearing over the last 50 years, increasing the country's total timber volume by 30 per cent. In Europe, including European Russia, Finnish researchers estimated that the growing stock of wood increased 25 per cent between 1971 and 1990.
Source: Moffat, A.S. (1998) Science, 282, 1253.

US ban on shrimp imports outlawed

The World Trade Organization has ordered the USA to lift its embargo on imports of shrimp caught in nets that ensnare and kill an estimated 150,000 endangered sea turtles a year. India, Malaysia, Pakistan and Thailand claimed that the embargo on their shrimp exports was discriminatory and an unfair barrier to free trade. The USA may face retaliatory trade sanctions if the embargo is not lifted.
Source: Marine Turtle Newsletter, No. 83, 20–21.

Combating Argentine ants

Findings that some colonies of Argentine ants *Linepithema humile* are less aggressive to each other when they establish outside their natural range may help in the control of invasions of this species. Argentine ants are common pests world-wide, often disrupting ecosystems and reducing biodiversity by wiping out indigenous ants. Argentine ants show

high levels of intraspecific aggression in their normal range and colonies that lose this when outside their natural range are significantly larger than those that retain intraspecific aggressive behaviour.

Source: Holway, D.A., Suarez, A.V. & Case, T.J. (1998) *Science*, **282**, 949–952.

Europe

Fish restoration in Sweden

Improvement in water quality in streams in southern Sweden since the 1960s has been reflected in increases in the number of sites with brown trout *Salmo trutta*, stone loach *Barbatula barbatula* and eel *Anguilla anguilla*. The increases in trout were best explained by increased oxygen concentrations.

Source: Eklöv, A.G. *et al.* (1998) *Freshwater Biology*, **40**, 771–782.

Logging the wilderness

The Finnish Forest and Park Service started logging Malahvia wilderness area in eastern Finland in November 1998. The 3000-ha state-owned area comprises old-growth forests, peatlands, small lakes and streams in their natural state. The area contains many endangered species and its location next to the border with Russia makes it essential to the Finnish–Russian Green Belt protection project; the planned Kalevala National Park is located on the Russian side of the border.

Source: *Taiga News*, No. 26, 3.

Peatland decline in Finland

Approximately 60,000 of a total of 100,000 sq km of Finland's peatlands have been drained for forestry. In the southern part of the country only about 10 per cent of the original peatland area remains in a natural condition. Peatland species have declined as a result—willow (red) grouse *Lagopus lagopus* have declined by over 80 per cent, while many peatland Lepidoptera and plants are threatened.

Source: *Suomen Luonto*, 11/98, 66.

UK's poor forest record

The World Wide Fund for Nature, in a report produced in 1998, concluded that Britain has one of the poorest

records on forest conservation in Europe, with around 50 per cent of ancient woodlands being lost or damaged in the last 50 years.

Source: *British Wildlife*, **10**(2), 136.

UK meadows still in decline

Seventy-five per cent of flower-rich meadows known to have existed in the Peak District National Park, UK, in the 1980s have either been lost completely or have suffered serious decline in their plant diversity.

Apparently, current national agri-environment mechanisms and incentives are insufficient to halt such losses even in national parks. Major semi-natural grassland losses have also occurred in the last 5 years in the county of Herefordshire, especially of the Greater Burnet flood-meadow type that is listed for protection under Annex 1 of the EC Habitats Directive.

Source: *British Wildlife*, **10**(1), 59 & **10**(2), 132.

Extinct worm rediscovered

Prostoma jenningsi, one of two freshwater nemertean worms native to Britain, was thought to have become extinct 20 years ago during chemical macrophyte control. It was rediscovered in 1998 by Dr Ray Gibson of Liverpool John Moores University, who described the species in 1971. The species is on the UK's list of globally threatened/declining species, being restricted to only one pond in Lancashire and is apparently endemic.

Source: P. J. Wisniewski, The Wildfowl and Wetlands Trust, UK, 30 November 1998.

Controlling an alien alga

The general public is being asked to help to prevent the spread of a Japanese seaweed *Sargassum muticum* along the coast of Northern Ireland, UK, by reporting sightings. The accidentally introduced alga has affected thousands of kilometres of coastline in North America and Europe—it grows up to 5 m in a single season and puts native algal communities at risk.

Source: *Marine Pollution Bulletin*, **36**(12), 935.

Blennies suffer from gravel extraction

River blennies *Salaria fluviatilis* have a wide circum-Mediterranean

distribution but are mostly confined to small very localized populations. In the Iberian peninsula they are threatened by a variety of factors including gravel extraction. A study of the breeding requirements of these fish found that areas where gravel extraction takes place were unsuitable for breeding because of structural alteration to the river bed and the removal of the larger stones that males select for nests.

Source: Côté, I.M. *et al.* (1999) *Biological Conservation*, **87**, 359–367.

Risk to Spain's bears assessed

A population viability analysis on the brown bear *Ursus arctos* in Cordillera Cantabrica, Spain, showed that the population comprised 50–60 individuals, with 25–26 of these being independent females, and that it had suffered a mean annual decrease of 4–5 per cent during the period 1982–95. Mortality rates were higher than those known in other brown bear populations and if they continue at that level the population is not viable. The researchers recommended monitoring females with cubs to safeguard the most sensitive part of the population.

Source: Wiegand, T. (1998) *Ecological Applications*, **68**(4), 539–570.

North Eurasia

Russian forest protected

The head of the Komi Republic in Russia has announced the protection of the Pechora-Ilych Forest, representing 16 per cent of the republic's area.

Source: *Arborvitae*, The IUCN/SSC Forest Conservation Newsletter, No. 10, 4.

Biosphere reserve up for tender to oil companies

Some 850 people of the Khanty tribe in the Yugan region of Russian Siberian taiga are struggling to keep their forest homeland free from oil extraction and pollution. They had proposed, and it had been accepted by the authorities, that the area become a Biosphere Reserve, but now it is being put up for tender to oil companies.

Source: *Survival Newsletter*, No. 40, 1998.

Recreating the steppe

A group of Canadian, Russian and USA scientists are embarking on an experiment to test theories about the forces that shaped, maintained and ultimately destroyed the grassland ecosystem that existed in northernmost Russia during the last ice age. They are creating a 160-sq-km Pleistocene Park near Cherskii near the Kolyma River in which grazing animals—Yakutian horses, reindeer, moose and bison—will be used in an attempt to replace the current tundra-taiga ecosystem dominated by mosses and scrub with the steppe conditions in which mammoths once lived. The project also marks the first attempt to restock Siberia with bison, a species that went extinct in the region 2000 years ago. Wood bison *Bison bison athabasca*, from Canada will be used, a subspecies that should withstand the harsh conditions. Some scientists say that the experiment is doomed because some Pleistocene elements are impossible to reproduce: mammoths are extinct and the climate in the region was much drier in the Pleistocene than it is today.

Source: *Science*, 282, 31–34.

North Africa and Middle East

New protected area for Egypt

Lake Burullus and its adjacent sandbar in the Nile Delta east of Alexandria, Egypt, have been declared a protected area. The lake is one of the country's most spectacular Important Bird Areas. Source: *Sandgrouse*, 20(2), 85.

Waldrapp ibis bred

A breeding centre in Turkey (Kus Cenneti at Bayramoglu) bred the Turkish waldrapp ibis *Geronticus eremita* for the first time in 1998; one chick hatched on 12 June. The Turkish form of the species became extinct in the wild in 1989 and only 55 individuals were left at a breeding centre in Birecik in eastern Turkey. Some birds from the group were made available to three other Turkish breeding centres including Kus Cenneti in the hope that captive breeding would increase the number of birds for possible reintroductions.

Source: *International Zoo News*, 45(8), 504.

Yemen's leopards in trouble

Yemen harbours over half the total population (c. 200) of Arabian leopard *Pantherus pardus nimr*. A gorge, Al Wadi-A c. 120 km north of Sana'a, is an important area for the subspecies and there are moves to create a protected area there. As a result of hunting pressure much of the leopard's natural prey, especially dorcas gazelle *Gazella dorcas*, have been depleted and the remaining leopards prey on livestock. As a result they are shot, or trapped and captured. Although it is illegal to sell or kill them, or use them for commercial display without a licence, the law is seldom enforced.

Source: *Sandgrouse*, 20(2), 86.

Sub-Saharan Africa

Action needed for species used in traditional medicine

A survey by TRAFFIC East/Southern Africa in 17 African countries identified more than 100 plant species and 29 animal species as becoming scarce or difficult to obtain by vendors or practitioners of traditional medicine. They include species known to be threatened, such as the plant *Aloe polyphylla* from southern Africa, as well as common and widespread species, such as the baobab tree *Adansonia digitata*, which is becoming scarce in Sudan. Traditional medicine is important for millions of people, and something must be done about declining resources. TRAFFIC made several recommendations to tackle the problems and the first to be implemented was a workshop in December 1998 in Nairobi attended by people from diverse backgrounds: commercial game management, economics, traditional medicine practice, commercial herbal medicine production, biodiversity and conservation.

Source: *TRAFFIC Dispatches*, January 1999, 1 & 11.

Virus blamed for monk-seal deaths

A dolphin morbillivirus, similar to that which causes distemper in dogs,

is being blamed for the huge death toll among Mediterranean monk seals *Monachus monachus* off the coast of Mauritania. Only 600 monk seals survive in the Mediterranean, mostly in small groups, so the death of 200 of Mauritania's population of 270 is of concern. It is hoped that inoculation of the remaining seals with distemper vaccine may halt the spread of the disease.

Source: *Marine Pollution Bulletin*, 36(11), 867.

Conservation in Liberia

The Liberian Government has established a commission on environmental protection, which will also be concerned with nature conservation, and the sustainable management and use of natural resources. Members of the Commission include the Ministers of Agriculture and Planning, the Head of the Forestry Development Authority, and representatives from the Society for the Conservation of Nature in Liberia, farmers, mining and logging companies, chemical engineers, the European Union, UNDP and USAID. Source: Star radio news, Monrovia, 8 December 1998.

Aid for wildlife businesses

The African Wildlife Foundation (AWF) has launched a new programme to help African wildlife businesses become more profitable while improving their impact on conservation. Deriving financial benefit from the wildlife on their lands is a key incentive for African communities to protect the animals and their habitats, and wildlife-related businesses—such as tourism, sports hunting, regulated cropping of wildlife for commercial sale and wildlife farming—are essential to the economies of many African countries. Yet many wildlife businesses are failing to fulfil their commercial potential. With seed money from The Summit Foundation, AWF has opened the Wildlife Enterprise Business Services Center in Nairobi and has already pinpointed some common problems: the volatility of certain markets (such as tourism); the lack of access to market information and affordable business services; inadequate management and

marketing experience; insufficient investment capital; and limited ability to measure the effects of wildlife businesses on conservation. The center will initially offer its services in Kenya, eventually expanding to help enterprises in eastern and southern Africa.

Source: *Wildlife News* (African Wildlife Foundation), 33(4).

White rhinos survive war

At least 20 northern white rhinoceroses *Ceratotherium simum cottoni*, the most endangered rhinoceros subspecies, have survived the civil war in the Democratic Republic of Congo. Four young have been born since the conflict abated in May 1997. Congo's Garamba National Park contains the world's only remaining northern white rhinos. An estimated 27 to 30 rhinos lived there in 1996, up from 15 in 1984. The latest count, made from the air, identified 20 adults, including seven females and the four young.

Source: *Wildlife News* (African Wildlife Foundation), 33(4).

Wild dogs make a comeback in Zimbabwe's lowveld

African wild dogs *Lycan pictus* once thrived in south-eastern Zimbabwe's lowveld, but persecution and destruction of habitat after ranchers arrived in the 1930s led to their virtual elimination. Now they are back and thriving. In many parts of Africa, wild dogs are in direct competition with lions and spotted hyenas but in the lowveld the dogs have returned in significant numbers while lion and hyena populations remain small. The lowveld, with its periodic drought, is marginal for livestock and by the late 1980s many ranchers were looking for alternatives, and wildlife seemed the obvious choice. Fences were taken down, surviving cattle were moved out, and properties restocked with the wild herbivores. The wild dog probably recolonized from nearby Gonarezhou National Park. The long-term prospects for the region's wild dogs seem good, given the potential for linking these packs with other wild dog populations in southern Africa. A corridor is already being created between the lowveld and South Africa's Kruger Park, where

there is an estimated wild dog population of 350. With a major effort another corridor could stretch all the way to western Zimbabwe's Hwange National Park, a haven for wild dogs that is contiguous with other dog habitats in Botswana and Namibia's Caprivi Strip.

Source: African Wildlife News Service, 1998.

South Africa's succulent plants face lean future

Hundreds of succulent plant species face an uncertain future as a result of poor management by wildlife authorities and the demands of plant collectors from around the world, according to a study by the South African office of TRAFFIC East/Southern Africa. *South Africa's Trade in Southern African Succulent Plants* identifies 128 succulent plant species as being threatened by habitat degradation and plant collectors. The species range from the Lesotho endemic, *Aloe polyphylla*, used medicinally but also threatened by construction of the Lesotho Highlands Water Project, to *Gibbaeum esterhuyseniae*, a South African species considered extinct in the wild until 3 years ago. Improved government conservation management, enhanced law enforcement efforts and the encouragement of artificial propagation of rare species, especially those used for medicinal and horticultural purposes, are essential to ensure the survival of these species.

Source: TRAFFIC East/Southern Africa-South Africa, 19 November 1998.

Turtle shell stockpile burnt

On 26 November 1998 the Government of the Seychelles destroyed a 2.5 tonne stockpile of c. 3300 turtle shells that it had collected from artisans when it banned turtle exploitation 4 years ago. The artisans have been compensated. This event, a global first, was evidence of the nation's growing commitment to environmental conservation. Every school has an environmental club and 50 per cent of the land area of the archipelago's 115 islands is under conservation management. A Seychelles Goldcard was launched in 1998, a first in environmental tourism,

which calls for every visitor to the islands to make a one-off payment of \$US100 to become a 'Friend of the Seychelles' for life and help support the country's environmental efforts.

Source: Dr Jeanne A. Mortimer.

New project for tortoises

A new project to help protect two tortoise species *Astrochelys radiata* and *Pyxis arachnoides* in southern Madagascar near Tuléar is being started by SOPTOM (a tortoise conservation society based in France) with the help of the Madagascar Forest Department. The Sokake (the local name for *A. radiata*) Project has acquired a 5-ha plot of land in Ifaty, north of Tuléar, to construct a conservation and study centre for tortoises. The project aims to reduce trade in these animals and run public awareness programmes. The Ifaty Tortoise Village will also bring employment and economic benefits to the Tuléar region.

Source: *La Tortue*, No. 44, 2-23.

New treefrog

A new treefrog species *Boophis lichenoides* has been described from the rain forests of eastern Madagascar. It differs from the 40 other *Boophis* species by the presence of lateral dermal fringes on the legs and lower lip, and its lichen-like dorsal coloration.

Source: Vallan, D. *et al.* (1998) *Amphibia-Reptilia*, 19(4), 357-368.

South and South East Asia

Olive ridleys continue to die in Orissa

Marine turtles continue to die in Orissa, India, where three of the few remaining mass nesting sites for the olive ridley turtle *Lepidochelys olivacea* are situated. A record high of 13,575 olive ridleys were found dead on the beaches of Orissa in the 1997/1998 season. The major cause of death is entanglement in mechanized fishing gear, specifically that used for shrimp, even though mechanized fishing within 5 km of the Orissa coast is illegal.

Source: Pandav, B. & Choudhury, B.C. (1999) *Marine Turtle Newsletter*, No. 83, 10-12.

Endangered pheasant filmed

The western tragopan *Tragopan melanocephalus*, classified as Vulnerable by IUCN, is threatened by destruction of its forest habitat in the Himalayan foothills. This elusive bird has been filmed for the first time in the wild in the upper Palas valley in Pakistan by a member of a 16-strong survey team including personnel from the World Pheasant Association, World Wide Fund for Nature, and North-West Frontier Province Wildlife Department. *Source:* World Pheasant Association, 15 December 1998.

Marine turtle decline in Pakistan

The number of nesting green turtles *Chelonia mydas* and olive ridley turtles *Lepidochelys olivacea* have declined on the beaches of Hawkes Bay and Sandspit in Karachi, Pakistan, despite a conservation project operating there since 1979 in which nesting females, eggs and hatchlings are protected from feral dogs and poachers. The decline is particularly steep for olive ridleys—only two nests were recorded in 1996 and 1997, whereas 113 nests were laid in 1987. The reasons for the declines are not known. *Source:* Asrar, F.F. (1999) *Marine Turtle Newsletter*, No. 83, 13–14.

Flying lemur range extended

Since 1996 several freshly killed Malayan flying lemurs *Cynocephalus variegatus* have been found for sale in the daily food market in Ban Lak, central Lao PDR. These are the first records of this species in Laos. Much of the meat from wild animals at this market comes from the extensive forests of the Nakai-Nam Theun National Biodiversity Conservation Area (NBCA) and a proposed northern extension to the NBCA, which lies to the east of Ban Lak. The species has yet to be recorded from the field in Laos.

Source: Ruggeri, N. & Etterson, M. (1998) *Mammalia*, 62(3), 450–451.

Marine survey identifies new species in Indonesia

Six new fish species and 15 new reef corals have been found by a multi-national team of marine scientists surveying the Togean and Banggai Islands in Central Sulawesi, Indonesia. A preliminary finding is the

relatively high numbers of species found only in the Togean Islands. In less than 3 weeks the team found four marine fishes that are perhaps exclusive to these islands. The coral reefs there are in much better condition than those in other parts of Sulawesi and nearby Ceram. However, the team also observed destructive practices seen in many other areas of Indonesia and the Indo-Pacific that threaten coral reefs and endanger marine animals: dynamite fishing, the use of cyanide to catch live reef fish for export. The Central Sulawesi government is trying to conserve this region for its tourism potential. The Banggai Islands are even more biologically diverse than the Togeans, but they are under greater pressures from fishing, particularly dynamite and cyanide fishing. They are the only place in the world where the Banggai cardinal fish *Pterapogon caudermi* is found. This is highly valued by aquarium keepers in the USA and Europe, and during the survey scientists observed it being collected on a large scale by villagers. In one village, c. 5000 fish were being held in pens, awaiting a purchaser from Manado. Its limited distribution, extremely low reproductive rate, and collecting intensity make this species very endangered.

Source: Conservation International, 13 November 1998.

Threat to bird sanctuary

The Southern Palawan Board in the Philippines has received reports that fishermen are disturbing and killing birds in Ursula Island Bird Sanctuary and building shelters there. Ursula Island, in the municipality of Balabac 150 nautical miles south of Puerto Princesa City, holds 26 species of migratory and breeding birds. *Source:* *Marine Pollution Bulletin*, 36(11), 865–866.

Coral confiscated

The coastguard at San Vicente, Olanga Island, Cebu, the Philippines, seized a large quantity of coral found hauled up on a beach there, having received information that coral destruction in the area is rampant. *Source:* *Marine Pollution Bulletin*, 36(11), 867.

East Asia

Wildlife trade between Vietnam and China

A survey of trade in live wild animals along the Guangxi border between China and Vietnam in 1993–96 found that 55 species were involved including 15 species of mammals, 10 species of birds and one species of amphibian. Many of them are listed on Appendices I and II of the Convention on International Trade in Endangered Species and on China's list of protected species. Between 2.29 and 29.33 tons of wildlife were imported every day to China from Vietnam during the period, and 63 per cent of restaurants in three border cities and in Nanning in Guangxi sold 20 species of wild animals. *Source:* Li Yiming & Li Dianmo (1998) *Biodiversity and Conservation*, 7, 895–914.

Opinion changing on wildlife trade in Hong Kong

Fifty-nine per cent of Hong Kong Chinese who use traditional Chinese medicine (TCM) claim they would not take medicine containing wild animal parts, according to a survey by the Social Sciences Research Centre of the University of Hong Kong for TRAFFIC East Asia. The need for the survey became apparent after repeated instances of illegal trade of rhino horn, tiger bone and their medicinal derivatives in Hong Kong. For those TCM users who said they had used endangered species as medicine, 30 per cent stated they would stop using such medicines once they found out such species were protected by law. However, another 14 per cent of TCM users would knowingly continue to consume such medicines, while another 37 per cent might take such medicines 'depending on the situation'. Unfortunately, more than half of TCM users would not ask about the ingredients of the medicines they consume, but rather would rely on the judgment and advice of TCM practitioners and shop assistants. About 1 per cent of the population admitted previously consuming medicine purporting to contain tiger bone, and older men were more likely to be tiger-bone users. *Source:* TRAFFIC East Asia, 12 November 1998.

North America

Grizzly bear unsafe in British Columbia

Several environmental groups in British Columbia, Canada, have demanded a federal inquiry into the province's handling of its grizzly bear *Ursus arctos* population. The species is to be listed as Vulnerable—the lowest ranking on the endangered list—under the Endangered Species Bill to be introduced in March 1999 because the government claims that there are 10,000–13,000 grizzly bears in the province. Independent biologists say that the population is two to five times lower than government estimates, and that populations have fallen 40–88 per cent in recent decades. *Source: Taiga News*, No. 26, 2.

Alberta to lower protection of wilderness

The Alberta provincial government in Canada is considering allowing hunting in the three wilderness areas bordering the Rocky Mountain National Park and continuing to allow resource development in other protected areas. *Source: Taiga News*, No. 26, 2.

New US rhino and tiger product labelling legislation

The US Rhino and Tiger Product Labelling Act, signed into law on 30 October 1998, amends the Rhino and Tiger Conservation Act of 1994. Although the USA has prohibited imports of such products for many years, a significant number of manufactured traditional Chinese medicine (TCM) products labelled as containing rhinoceros and tiger parts continued to be available in the US. Among the principal reasons for the availability of these products in the USA is that under the US Endangered Species Act, the government bears the burden of proving that such products actually contain rhinoceros or tiger, and forensic techniques have not been able to identify tiger bone or rhinoceros horn in manufactured medicinal products. Further, the US Endangered Species Act only prohibits the import, export and interstate commerce in such products and does not specifically prohibit sale. The new legislation prohibits the import, export

and sale of any product for human consumption or application containing, or labelled or advertised to contain, any substance derived from any species of rhinoceros or tiger. It carries a penalty of up to 6 months in prison, and fines of up to \$12,000 per violation.

Source: TRAFFIC, 30 October 1998.

The redstart–mangrove connection

Studies on the American redstart *Setophaga ruticilla* have shown that the quality of a migratory bird's tropical wintering grounds can affect its survival and breeding success when it arrives in the north. The researchers measured levels of a naturally occurring stable isotope, carbon-13, in the birds' blood. Plants in certain habitats, such as wet mangrove or wet lowland forest, have less C-13 than plants typical of dry scrub. The birds that wintered in wet forest, 65 per cent of which were male, had low levels of C-13 and had maintained or gained weight, while the scrub dwellers (70 per cent of which were female) had lost up to 11 per cent of their body mass. Birds from the wet forest also reached the breeding grounds earlier. It appears that action to conserve migratory birds such as the redstart is needed not so much on the breeding grounds as in prime wet forest habitat in the tropics.

Source: Science, **282**, 1791 & 1793–1794.

Plea to ban seaweed imports

Marine scientists are pressing the US Interior Secretary to ban possession of, transport and sale of the aquarium plant *Caulerpa taxifolia*. This tropical species has already invaded Mediterranean coastal waters, choking out native life. France, Spain and Australia have already introduced bans.

Source: Science, **282**, 855.

Warbler site saved

One of the cerulean warbler's *Dendroica cerulea* most critical sites in New York—Salmon Creek in Lansing—has been saved thanks to a private landowner working with local conservationists. Between 40 and 50 pairs of this bird breed at Salmon Creek, one of 127 Important Bird Areas in the State. The migratory warbler is under pressure from loss of

winter habitat in Colombia and Peru as a result of the cultivation of coffee and other crops, as well as from habitat loss and fragmentation at breeding sites in the USA.

Source: National Audubon Society of New York, 15 December 1998.

Algal blooms follow mussel invasion

Blooms of the blue-green algae *Microcystis* spp. seem to follow an invasion of lakes in inland North America by zebra mussels *Dreissena polymorpha*, which first invaded the Great Lakes in 1980 after arriving on the hulls of ships from the Black Sea. In high numbers, the algae produce toxins that have the potential to harm wildlife as well as people. Observations of zebra mussels feeding have shown them to take up most microorganisms but to expel *Microcystis* untouched, which could result in a reduction of the populations of species that normally compete with *Microcystis* for resources. Over 75 inland lakes in Michigan alone are known to be contaminated with zebra mussels.

Source: Marine Pollution Bulletin, **36**(11), 867.

Protection for Adirondack parkland

The State of New York and Champion International have negotiated a land deal involving 583 sq km in the Adirondack Park. The land protection agreement combines fee acquisition for the major river corridors and remnant boreal forest on the Champion property with conservation easements over much of the land, thereby protecting sensitive environmental areas while continuing productive forestry.

Source: Audubon Society of New York State, 9 December 1998.

Plan for sturgeon

In an effort to restore the Atlantic sturgeon *Acipenser oxyrinchus* population in USA's Chesapeake Bay, the Atlantic States Marine Fisheries Commission has banned the taking of the fish along the entire coast for the next 40 years. The catch has dropped 90 per cent over the past century.

Source: Audubon, November–December, 1998, 27.

Seals die in New Jersey

An unidentified disease is killing seals off the coast of New Jersey, USA. One-third of the seals brought to the Marine Mammal Stranding Centre have died. The disease is infecting hooded seals *Cystophora cristata*, grey seals *Halichoerus grypus*, harbour seals *Phoca vitulina* and harp seals *P. groenlandicus*.
 Source: *Marine Pollution Bulletin*, 36(11), 867.

Ranchers oppose lynx restoration

In the USA ranchers, farmers and game-hunting outfitters have sued to stop Colorado's Division of Wildlife's plans to restore Canadian lynx *Lynx canadensis* to the San Juan Mountains because they fear that the lynx will prey on livestock and game animals. Colorado planned to release 15 lynx in January followed by further releases later in the year. The last confirmed lynx sighting in Colorado was in 1973.
 Source: *Outdoor News Bulletin*, 52(11), 3.

California condor update

There are now 33 California condors *Gymnogyps californianus* in the wild, 18 in California and 15 in northern Arizona. A total of 19 chicks were hatched from the captive flocks in 1998 and the total population, including both wild and captive birds, stood at 149.
 Source: *Endangered Species Bulletin*, XXIII(5), 29.

TCM community takes lead in tiger conservation effort

The World Wildlife Fund (WWF) and several leading Chinese Traditional Medicine (TCM) and conservation organizations have launched a major consumer awareness campaign to discourage the use of endangered species in traditional Chinese medicines. Sponsored by WWF, the American College of Traditional Chinese Medicine (ACTCM) and six other Chinese American associations, the campaign aims to educate both TCM practitioners and consumers about the links between traditional Chinese medicine and the illegal trade in endangered species. More than 50 Chinese pharmacies in the San Francisco area are participating in the initial stage of the campaign, which includes publication of a list of

alternatives to tiger-bone medicines and the distribution of special 'Save the Tiger' shopping bags to medical shops throughout the area.
 Source: *TRAFFIC*, 14 January 1999.

Threat from a cordgrass

A rare alien species, smooth cordgrass *Spartina alterniflora*, is hybridizing with the common native California cordgrass *S. foliosa* in the salt marshes of San Francisco Bay, USA, and threatening its existence. The alien species produces 21 times as much pollen as the native species and 28 per cent of the alien pollen germinates on stigmas of the native species. Alien pollen increased the seed set of native plants to almost eightfold that of native pollen, while native pollen failed to increase the seed set of the invader. Unlike California cordgrass, smooth cordgrass and the hybrids can grow in low intertidal habitats and cover the open mud that is necessary for foraging shorebirds and marine life.
 Source: Anttila, C.K. et al. (1998) *American Journal of Botany*, 85(11), 1597–1601.

US parks expanded

Bandelier National Monument in New Mexico has been enlarged by nearly 405 ha to protect the upper watershed of Alamo Canyon. In addition, it has been agreed to purchase the 384-sq-km Baca Ranch and Valles Caldera—an ecologically spectacular property in the heart of the Jemez Mountains of New Mexico and adjacent to Bandelier. In Utah, the boundaries of Arches National Park will now encompass Lost Spring Canyon, a 1272-ha addition that includes 10 free-standing arches, plunging canyons, and a maze of irregular redrock formations. It will be managed as wilderness. Yellowstone's free-roaming bison herd will be helped by the federal government's acquisition of land and conservation easements affecting nearly 3240 ha outside the north-west boundary of Yellowstone National Park. The land, belonging to the Church Universal and Triumphant (CUT), serves as a crucial year-round migratory corridor for the wildlife that populates Yellowstone's ecosystem and may now provide critical winter range for bison. Current Montana law allows

shooting of bison that roam outside the park because of an inadequately supported claim that they will transfer disease to cattle. The availability of the CUT property will help prevent contact between bison and cattle.
 Source: National Parks and Conservation Association, 19 January 1999.

Red wolf reintroduction abandoned

The US Fish and Wildlife Service and National Park Service have abandoned their attempts to restore red wolves *Canis rufus* in the Great Smoky Mountain National Park in North Carolina and Tennessee. The reasons for terminating the programme were low pup survival rates, disease, predator attacks and malnutrition among the wolf population. Of 37 wolves released since 1991, 26 were recaptured outside the park boundaries or died outside the park. The two adults and two pups that remain in the park will be recaptured.
 Source: *Outdoor News Bulletin*, 52(11), 4.

Everglades to be restored

The US Army Corps of Engineers has presented a 20-year plan to rebalance the delicate freshwater ecosystem of south Florida that includes Everglades National Park, which is among the most debilitated and vulnerable parks in the nation. A main component of the plan entails trying to re-establish south Florida's historic rainwater sheetflow—a critical process of slow, shallow drainage down the peninsula that naturally regulates water levels in the Everglades ecosystem. The process was severely disrupted when the corps altered Lake Okeechobee and built a system of canals, dykes and levees to drain agricultural areas and provide drinking water for residents of south Florida. Some Everglades experts are sceptical about the plan, saying that water volumes are well below what is needed, and management objectives remain spatially fragmented, making consistent hydrologic releases difficult.

Sources: *Arborvitae*, *The IUCN/SSC Forest Conservation Newsletter*, No. 10, December 1998, 3; National Parks and Conservation Association, 19 January 1999.

Mussel trader fined

In 1998 the Tennessee Shell Company pleaded guilty to purchasing thousands of kilogrammes of illegally taken freshwater mussels from rivers in Michigan, Ohio, Kentucky and West Virginia. Tennessee Shell was ordered to pay \$1 million in restitution to the National Fish and Wildlife Foundation for the establishment of the Freshwater Mussels Conservation Fund for mussel research and recovery. Tennessee Shell is the largest shell-buying and shell-exporting company in the USA and a subsidiary of Kogen Trading Company Ltd of Tokyo, Japan. The freshwater mussel family Unionidae is one of the most endangered animal families in the USA and the shells of species in the family are in demand in China and Japan, where they are cut, rounded into beads and implanted into live oysters to form the core of cultivated pearls.

Source: *TRAFFIC North America*, September 1998, 12–13.

Mexican grey wolf recovery programme in trouble

The Mexican grey wolf *Canis lupus* recovery programme has lost nine of the original 11 animals released in March 1998 into the Apache National Forest of eastern Arizona. Two were shot; two had apparent gunshot wounds; two, one of them a pup, are missing presumed dead; three were taken back into captivity when they failed to adapt to life in the wild; and two males remain in the wild. The US Fish and Wildlife Service is offering rewards for information on the killings and intend to press the investigation; the killing of these wolves is a criminal violation of both federal and state laws.

Source: International Wolf Center, Ely, Minnesota, USA, 10 November 1998.

Hurricane damage to coral

The hurricane that killed hundreds of people in the Caribbean in September 1998 also had a drastic effect on the coral reefs in the Florida Keys. Delicate corals were crushed and 50 per cent of the large stands of elkhorn coral destroyed. However, the hurricane also swept the area clean of destructive algae and sediment.

Source: *Marine Pollution Bulletin*, 36(12), 936.

Birds electrocuted at prisons

The erection of electrified security fences around California prisons, which began in 1993, saved taxpayers million of dollars but killed thousands of wild birds. Birds perching on two fence wires or a post and wire simultaneously were electrocuted and this resulted in the deaths of many house finches *Carpodacus mexicanus*, western kingbirds *Tyrannus verticalis*, Brewer's blackbirds *Euphagus cyanocephalus* and more than 140 burrowing owls *Speotyto cunicularia*, a species proposed for listing under the US Endangered Species Act. Now the US Fish and Wildlife Service, and the California Fish and Game Department and Corrections Department have installed netting on the security fences. Bird deaths have fallen by nearly 93 per cent as a result.

Source: *Wildlife Conservation*, December 1998, 12.

Endangered puaiohi breed for first time in captivity

The Critically Endangered puaiohi *Myadestes palmeri* (estimated population c. 150 individuals), has bred successfully for the first time at the Bird Conservation Centre on the Big Island of Hawaii. Eggs collected from the wild in 1996 hatched in captivity and these young formed the nucleus of the flock that produced the 1998 chicks. The first hatch occurred in March 1998 with a further 21 chicks hatching during the season. The young puaiohi were expected to be released in early 1999 into managed areas of the 'Alaka'i swamp, where the species used to occur.

Sources: *Re-introduction News*, No. 16, 7; *International Zoo News*, 45(7), 435–436.

New protection for Mexico's threatened forests

The President of Mexico has announced plans to protect forests affected by fires in Mexico. In the first 6 months of 1998 fires burnt approximately 2000 sq km of forest. Most of the fires are thought to have been caused by farming preparatory practices, including slash-and-burn agriculture. In some cases, fires were deliberately set to provoke changes in land use. The plan identifies 85 priority forests, covering a total of

1880 sq km, in 21 of the 32 Mexican states. These forests have been designated as 'Sites of Ecological Restoration' and will be subject to a legal status that prevents change in land use and enables the Ministry of the Environment to develop and implement forest recovery plans for each area.

Sources: WWF-International, 14 October, 1998; *Arborvitae*, The IUCN/WWF Forest Conservation Newsletter, No. 10, December 1998, 4.

Kemp's ridley record

More than 3600 nests of the world's most endangered sea turtle, Kemp's ridley *Lepidochelys kempii*, were recorded on Mexico's Gulf Coast in 1998—the highest number recorded since the late 1960s. The number of juvenile Kemp's ridleys found stranded on beaches remains high, however, and is a cause for concern for the future of the turtle.

Source: *Endangered Species Bulletin*, XXIII(5), 30.

Campaign to save Mexican turtle site

Conservationists from around the world are protesting about the sale to developers of X'cacel, Quintana Roo, Mexico, one of the most important green turtle *Chelonia mydas* and loggerhead turtle *Caretta caretta* nesting beaches in the country. After an international outcry the Quintana Roo State Governor created a 'reserve' from the 60-m isobath to 100 m up the beach but this does not satisfy the concerns of conservationists.

Greenpeace filed a lawsuit against one of the buyers, Sol Melia, a Spanish hotel chain. During the building of fences and paths, Sol Melia destroyed species protected by Mexican law.

Source: *Marine Turtle Newsletter*, No. 38, 19 & 20.

Central America and the Caribbean

First melonhead whale for Puerto Rico

Melonhead whales *Peponocephala electra* are well documented for the Pacific Ocean but their range in the Atlantic is poorly known; there are only 31

records ranging from the northernmost in the UK and the southernmost in Brazil. The first record from Puerto Rico has been reported—a stranded juvenile male on the north-east corner of the island.

Source: Mignucci-Giannoni *et al.* (1998) *Mammalia*, 62(3), 452–457.

Leatherbacks increase in the US Virgin Islands

In 1998, 118 leatherback turtles *Dermochelys coriacea* made 750 nests at Sandy Point National Wildlife Refuge on the south-west tip of St Croix in the US Virgin Islands. The substantial increase from a low of 82 nests in 1986 is a success for the turtle project there.

Source: *Endangered Species Bulletin*, XXIII(5), 30.

South America

Carbon sinks in the Neotropics

Long-term monitoring of plots in mature humid tropical forest in South America revealed that biomass gain by tree growth exceeded losses from tree death in 38 of 50 Neotropical sites. These forest plots accumulated 0.71 ± 0.34 tonnes of carbon per ha in recent decades. The data suggest that Neotropical forests may be a significant carbon sink, reducing the rate of increase in atmospheric carbon dioxide.

Source: Phillips, O.L. *et al.* (1998) *Science*, 282, 439–442.

Venezuela opens up forests to mining and logging

Defying its own environmental laws, the Venezuelan government has announced its intent to open up the previously protected Guyana Shield region to large-scale mining and logging. Identified by the World Resources Institute as one of the last large blocks of intact frontier forests, the Guyana Shield region includes Canaima National Park, a UNESCO World Heritage Site, and the Imataca Forest Reserve. The Imataca rain forest, a pristine 36,450-sq-km reserve, will be particularly hard hit. Canadian and Venezuelan companies plan to build South America's largest gold-mining complex there.

Source: Amazon Watch, 29 September 1998.

National park in French Guiana

The French Prime Minister has announced plans for a national park in French Guiana by 2000, which will cover 'thousands of hectares'. It will be run in co-operation with Brazil and could be used in part to facilitate research aimed at preserving the Amazon rain forest.

Source: *Arboretum*, The IUCN/WWF Forest Conservation Newsletter, No. 10, 4.

Caiman hunting sustainable?

Illegal hunting of black caiman *Melanosuchus niger* and spectacled caiman *Caiman crocodilus* is widespread in Mamirauá Sustainable Development Reserve in western Brazilian Amazon, and is particularly intense in the northern Panauá region. The hunt is entirely for meat, which is salted and sold to buyers who mix it with fish and sell it in Pará state, Brazil, and in Colombia. The annual harvest of c. 115 tonnes of meat could represent 5230 black caiman and 2865 spectacled caiman. Despite this, the black caiman has one of the highest reported densities for Amazonia and the impact of hunting may be reduced because hunters take mostly adult and subadult males from relatively accessible parts of the reserve.

Source: Silveira, R. Da & Thorbjarnarson, J.B. (1999) *Biological Conservation*, 88, 103–109.

Brazil's marsh deer holding on

An aerial survey in the Pantanal wetland of Brazil (140,000 sq km) resulted in an estimated population of 36,314 marsh deer *Blastocerus dichotomus*, with the highest densities to the north and north-east of Uberaba Lake and in the flood plain of the Negro River in the south-east of the Pantanal. There was no evidence of a decline in the population since 1974.

Source: Mauro, R.A. *et al.* (1998) *Revista de Ecologia Latinoamericana*, 5(1–2), 13–20.

New frog from Brazil

The second known species of the genus *Xenohyla* has been described from Bahia State, Brazil. The new species, *X. eugenioi*, is distinguished from the other known species, *X. truncatus*, by the retention of dorsal

longitudinal stripes and blotches in adults (present in young specimens and absent in adults of *X. truncatus*) and by inhabiting a completely different environment. The new species was found in terrestrial bromeliads in the transition zone (*agreste*) between the arid *caatingas* (the characteristic open plant formation of north-eastern Brazil) and the moist Atlantic forests, while *X. truncatus* occurs in bromeliads in coastal restinga vegetation and associated forest along small rivers.

Source: Caramaschi, U. (1998) *Amphibia-Reptilia*, 15(4), 377–384.

Oil spill in River Plate, Argentina

A Liberian tanker carrying 30,000 tonnes of crude oil collided with a German container ship in Argentina's River Plate on 15 January 1999. People on board ship did all they could to minimize the oil spill and the 5000 × 100 m slick is believed to have beached near the town of Magdalena between La Plata and Punto Piedras. There are several protected reserves in the region and species of concern include La Plata river dolphin *Pontoporia blainvillei*.

Source: World Conservation Monitoring Centre, 20 January 1999.

Australia/New Zealand/Antarctica

Logging and the Hastings River mouse

The Endangered Hasting River mouse *Pseudomys oralis* could face extinction as a result of new legislation in New South Wales, Australia, which permits extensive logging in diverse forest ecosystems in the north-eastern corner of the state. The logging goes against the State's innovative and internationally acclaimed scheme for reconciling conflicts over natural resources, which allowed stakeholders to negotiate an arrangement that could meet both conservation targets and timber quotas. Successful preliminary negotiations in 1996 led to nine new nature reserves in the eastern portion of the State and logging moratoria in areas likely to be declared national parks. However, in the second round of negotiations the process broke

down over 10 million ha in the north-east—state officials produced a plan that protected an area less than half the size necessary for conserving biodiversity and that doubled, from 10 to 20 years, the length of time logging could continue at its current rate.

Source: *Science*, **282**, 1968–1969.

Little penguins translocated

An oil spill at Low Head, northern Tasmania, in 1995 contaminated an unknown number of little penguins *Eudyptula minor*, which are endemic to southern Australia and New Zealand. Of these 1894 were taken into captivity and cleaned but the area was still contaminated when the penguins were ready for release. Prolonged captivity would have made the birds susceptible to disease and stress, so a trial was conducted to investigate if translocation would be appropriate. Groups of penguins were equipped with VHF transmitters and translocated to other parts of the coast: more than half of them returned to the breeding site in 4 months, giving time for the oil to be cleared. The results of the study suggest that translocation can be a useful tool in certain situations, although trials should be carried out beforehand.

Source: Hull, C.L. *et al.* (1998) *Biological Conservation*, **86**, 393–400.

Rat-kangaroo extinctions in New South Wales, Australia

Three of five species of rat-kangaroo (Potoroidae) have become extinct in New South Wales, Australia, since European settlement and a fourth, rufous bettong *Aepyprymnus rufescens*, now occupies less than 2 per cent of the state. The other surviving species is the long-nosed potoroo *Potorus tridactylus*. Potential causes include: pest control measures; the effect of introduced rabbits *Oryctolagus cuniculus*; and the effects of human settlement, including sheep grazing. However, the major factor appears to be the effect of introduced predators, notably the European red fox *Vulpes vulpes*. Rat-kangaroo decline is closely associated with the south–north advance of the fox and suggests that the impact of introduced predators on native prey populations should be taken very seriously.

Source: Short, J. (1998) *Biological Conservation*, **86**, 365–377.

Longline fisheries and seabirds

An estimated 1000–3500 seabirds are killed each year by being caught on the lines of Japanese fishing vessels targeting tuna in the Australian Fishing Zone. However, the process of incidental collection of seabird bycatch data, by observers whose priority is fish sampling, renders the data inadequate for reliable assessment of trends in total numbers of birds killed over time. Sixteen seabird species were recorded as killed by the longlines; 74 per cent of the dead birds were albatrosses.

Source: Gales, R., Brothers, N. & Reid, T. (1998) *Biological Conservation*, **86**, 37–56.

New rights for apes

A group of scientists, ethicists and lawyers in New Zealand is aiming to make the country the first to give great apes some of the same protective legislation hitherto reserved for humans. A proposal to parliament calls for the New Zealand animal welfare act, now under review, to recognize the rights of gorillas, chimpanzees and orang-utans not to be killed or experimented on without the permission of hominid welfare guardians.

Source: *Science*, **282**, 1255.

People

Lt. Col. C. L. Boyle, FFI Vice-President between 1975 and 1998, and Honorary Secretary and Editor of *Oryx* between 1950 and 1963 was 100 years old on 9 March 1999. He is a Life member of FFI.

The recipients of the Asahi Glass Foundation's 1998 Blue Planet Prize were **Dr Mikhail I. Budyko** of Russia, for the establishment of physical climatology and the quantitative analysis of climate change and **David R. Brower** of the USA, for outstanding achievements in environmental conservation and pioneering activities that set an important precedent for international environmental non-profit organizations.

Dr Maritta Koch-Weser will succeed **Mr David McDowell** as Director General of IUCN—The World Conservation Union in early 1999. Dr Koch-Weser, 51, and an anthropologist

by training, has expertise in the management of large multidisciplinary expert teams in environmental and natural resource management, planning and implementation of environmental projects and programmes in developing countries world-wide, project management for rural poverty alleviation, agricultural development, land tenure programmes, social planning and the elaboration of environmental and social policies.

Julie Packard was awarded the 1998 Audubon Medal for Excellence in Environmental Protection on 4 December 1998 for her achievements in conservation and her leadership of the Monterey Bay Aquarium, which she founded in the late 1970s.

George Rabb, director of Brookfield Zoo, Chicago, USA, was presented with the Zoological Society of London's Silver Medal at its 1998 AGM in recognition for his outstanding contribution to animal conservation at the world level.

In September 1998 **David Western** was replaced as Head of the Kenya Wildlife Service by **Richard Leakey**, who resigned from the KWS in 1994 after complaining of political interference.

On 29 January 1999 **Willem Wouter Wijnstekers** of The Netherlands was appointed Secretary-General of CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora. After 10 years working in the private sector and 4 years in the Dutch administration, Wijnstekers became responsible for wildlife trade legislation in the European Commission's Directorate General for the Environment, Nuclear Safety and Civil Protection in 1978. Working in this capacity for over 20 years, Wijnstekers has built up a great deal of expertise in drafting European Community wildlife conservation legislation, particularly on the implementation of CITES. Actively involved in a number of CITES committees and boards, Wijnstekers is also the author of several papers and publications on international environmental law.