Briefly

International

New Party to CITES

Grenada has become the 146th Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Its accession, on 30 August 1999, will enter into force on 28 November 1999.
Source: CITES Secretariat, 24 September 1999.

Tuna dispute

An international tribunal in August 1999 ruled that Japan's experimental fishing programme for the southern bluefin tuna *Thunnus maccoyii* was inconsistent with its obligations under the United Nations Convention on the Law of the Sea and with the provisions of the Convention for the Conservation of Southern Bluefin Tuna, 1993. Japan set itself a catch quota of 2000 tonnes in June after the three Parties to the Convention (Australia, Japan and New Zealand) failed to agree on a total allowable catch. The tribunal ordered the three Parties to resume negotiations on catches without delay, to undertake several provisional measures and to report on compliance with the measures by 6 October 1999.
Source: TRAFFIC Bulletin (1999), **18**(1), 1.

Call for ban on Japan's 'scientific whaling'

At their annual meeting on the Caribbean Island of Grenada, member states of the International Whaling Commission called for a ban on Japan's 'scientific whaling'. Japan caught 500 whales in 1998 and it is believed that whale meat was sold commercially after the completion of 'scientific research'. The Commission rejected Japanese claims that the catches were to investigate the level of whale stocks and voted for a non-binding resolution to ban such whaling. The meeting also rejected Japan's proposal to catch 50 minke whales *Balaenoptera acutorostrata* in the Antarctic.

Source: Nature (1999), **400**, 402.

Ten-year ban on ivory sales lifted

In April 1999, international sales of raw ivory resumed under tightly regulated conditions. Botswana, Namibia and Zimbabwe sold a total of 59.1 tonnes of their stocks of ivory to Japanese buyers at separate auctions in Gaborone, Windhoek and Harare, ending the 10-year ban on ivory sales imposed by CITES in 1989. CITES Parties had accepted in 1997 that elephant populations in the three countries were stable or growing and controlled trade should be allowed. Funds from the sales will be invested in conservation.
Source: *Resource Africa* (1999), **1**(7), 2.

Tributyltin ban may be a mistake

The proposed ban in 2003 on using tributyltin (TBT)-based antifouling paints on seagoing vessels may be premature, according to a recent study. TBT was shown to be toxic to marine molluscs and regulation of its use has reduced levels of contamination; serious pollution is now confined to areas close to centres of commercial shipping activity. A complete ban may lead to environmental costs—boats encrusted with marine organisms use more fuel, for example. The ban should be delayed until alternative products, which have been proven to perform at least as well as TBT in environmental and economic cost/benefit analyses, are available.
Source: Evans, S.M. (1999) *Marine Pollution Bulletin*, **38**(8), 629–636.

Rehabilitating coastal ecosystems

Research on coastal habitat rehabilitation has increased over the last two decades and while mangrove, salt marsh and dune rehabilitation techniques are reasonably well-established management tools, coral reef rehabilitation is still largely at an experimental stage, with seagrass restoration at an intermediate stage. A special issue of *Marine Pollution Bulletin* brings together applied research on rehabilitation of coastal ecosystems in temperate and tropical latitudes. Financial and broader economic aspects are often given insufficient attention, which makes it difficult to assess the cost-effectiveness of rehabilitation and translate experimental research findings into large-scale management interventions.
Source: Edwards, A. (1998) *Marine Pollution Bulletin*, **37**(8–12), 371–372.

Ecolabelling for fish?

With fish stocks and habitats declining globally, the livelihoods of many small-scale fishers are threatened by large-scale or industrial fishers. Don E. McAllister of Ocean Voice International suggests that ecolabelling may offer these fishers opportunities of finding a market niche, favourable sales or prices if they worked together, and outlines the steps that would be required.
Source: Sea Wind (1999), **13**(3), 2–9.

Trouble for the world's turtles

About half of the world's turtle species face possible extinction, partly as a result of a growing demand for turtles as a dining delicacy and for traditional medicines. Sixty of the world's experts on freshwater turtles reached that conclusion at an international conference in Nevada, 13–15 August 1999. So far, freshwater turtles have come through this century with the documented extinction of just one subspecies—a small mud turtle from Mexico. However, all sea turtles, most remaining tortoises and many freshwater turtles are endangered or threatened and require urgent conservation action. Some 12 turtle species are considered to be critically endangered, facing a high risk of imminent extinction unless long-term population trends are reversed.
Source: Conservation International Foundation, 15 September 1999.

Biggest reptile website

The World Wide Web's biggest reptile taxonomic database has been created by Peter Uetz at the European Molecular Biology Laboratory, Heidelberg, Germany. The EMBL Database, started in 1995, has photos

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of more than 1000 species and gives taxonomic information for nearly all 7900 living species of reptiles. The Web address is: http://www.embl-heidelberg.de/~uetz/LivingReptiles.html
Source: Science (1999), **285,** 1323.

Global Biodiversity Information Facility to be created
In July 1999, in Paris, France, the science ministers of 29 industrial countries agreed to create a Global Biodiversity Information Facility (GBIF) (renamed Global Science Forum), to convert incompatible databases, confusing terminology and uncatalogued material into a source of information that is accessible to anyone, anywhere. GBIF is the result of a request from the Parties to the 19992 United Nations Convention on Biological Diversity to the Organization for Economic Cooperation and Development (OECD) to come up with a program to give industrial countries access to the scientific information they need to carry out the terms of the convention.
Source: Science (1999), **285,** 22–23.

Europe

Global warming pushing birds north
Northern margins of many southern British breeding bird species have moved by 18.9 km over 20 years, and butterflies are also moving north in Europe. Research suggests that a period of climatic warming may be the cause.
Source: Nature (1999), **399,** 213.

Inadequate protection for non-marine molluscs
There is little correlation between threatened and protected status for non-marine molluscs, according to a recent study. Of the 641 species that have become extinct or extinct in the wild since 1600, 239 (nearly 40 per cent) were molluscs. However, of the approximately 3200 species in the European non-marine mollusc fauna, only 19 are currently protected under the Bern Convention and 25 (the same 19 and six more) under the European Habitats and Species Directive. The present IUCN 1996 Red List includes 145 species of European non-marine mollusc as threatened and correction for taxonomic and geographic imbalance could reveal an even higher number of threatened species. There is an urgent need to revise the European lists of protected molluscs.
Source: Bouchet, P. *et al.* (1999) *Biological Conservation*, **90,** 21–31.

Logging in old-growth forest in Sweden
The Swedish National Real Estate Board has conducted a logging operation in 40 ha of old-growth forest 40 km west of the village of Jokkmokk in northern Sweden. Local environmentalists found 10 red-listed species in the area and 30 stumps of 500-year-old pines. The logging has started an intense national debate on forestry on state-owned land in Sweden.
Source: Taiga News (1999), No. 29, 3.

Decline in flying squirrel population
The endangered flying squirrel *Pteromys volans* population in southern and central Finland has declined dramatically as a result of logging its habitat according to the Finnish Flying Squirrel Association.
Source: Taiga News (1999), No. 28, 4.

Logging reprieve for Finnish forest
Kukkuri forest in north-eastern Finland will not be logged in 1999 following action by Greenpeace. The Forest and Park Service (FPS) declared that it will not log in Kukkuri until further surveys of the area have been completed. The spruce-dominated sites in the forest are categorized as 'valuable forests for protection' and the sites dominated by pine are 'very valuable forest'. Endangered species of bracket fungi were found at a clear-felled site in May 1999. The FPS said, in March 1999, that the forest had not been found to possess any special nature value and had planned only to exclude 25 of the 400 ha of old-growth forest from logging.
Source: Taiga News (1999), No. 28, 5.

Questionable success of slow-worm translocation
Translocation is a controversial conservation tool with a dubious success rate, as shown by a recent study on slow-worm *Anguis fragilis* translocation in south-east England. Over a 3-month period, 103 slow-worms (a cryptic legless lizard), were removed from a site scheduled for development to a receptor site with no previous slow-worm population. While there was no significant depletion of the population at the original site, recaptures of translocated slow-worms declined during 2 years of subsequent monitoring. Recaptured lizards were in poorer condition than those in a nearby population and there was little evidence of successful reproduction.
Source: Platenberg, R.J. & Griffiths, R.A. (1999) *Biological Conservation*, **90,** 125–132.

Narrow-leaved cudweed back in England
As a result of Plantlife's 'Back from the brink' project, narrow-leaved cudweed *Filago gallica* is back in south-east England after an absence of 34 years. The plant became extinct in England in 1955, but survived in one site on Sark, Channel Islands. Native mainland material of *F. gallica*, maintained in cultivation since 1948, was used in the 1994 reintroduction at the last known site. By 1998 the annual plant was re-established successfully.
Source: Rich, T.C.G. *et al.* (1999) *Biological Conservation*, **91,** 1–8.

Conservation for the asper
A conservation action plan funded by the EU's Life Programme has been launched to save the critically endangered asper *Zingel asper*. This small fish is endemic to the Rhone river catchment in France and Switzerland but is found now only in 400 km of river compared with roughly 1700 km at the beginning of the century. Dam building, gravel extraction and water pollution are the main causes of its decline. The total population is estimated to be 2000–4000 individuals in genetically isolated subpopulations. The species is found in four nature reserves in France. The conservation plan includes a research programme looking at reproduction in natural conditions and genetic diversity of the subpopulations; a captive-breeding programme to enhance existing populations and for reintroduction;

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and actions to remove physical obstacles to migration.
Source: Lettre Réserves Naturelles, No. 48; Web: http://www.members.aol.com/apronfr (sent by david.brugiere@univ-rennes1.fr)

Sanctuary in the Mediterranean
After 10 years of effort by the World Wide Fund for Nature (WWF), France, Italy and Monaco have agreed to establish a sanctuary for cetaceans off the coasts of Provence, Monte Carlo, Ligury, Corsica and Sardinia. The sanctuary will increase the protected area of the Mediterranean from 0.22 to 4 per cent and will cover an area where cetacean numbers are at least twice as high as anywhere else in the Mediterranean. Eighteen cetacean species occur in the area, six of these are considered to be permanent or regular residents and up to 45,000 striped dolphins *Stenella coeruleoalba* and over 2000 whales frequent the area when food is abundant in summer.
Source: Marine Pollution Bulletin (1999), **38**(9), 748.

'Extinct' mollusc rediscovered
A mollusc *Discus guerinianus*, which was considered to be one of Madeira's most elegant land shells when it was described in 1878, and said to be rare and confined to damp wooded areas of Madeira at medium to high altitudes in the interior of the island, has been rediscovered.
Source: Cameron, R.A.D. & Cook, L.M. (1999) *Journal of Molluscan Studies*, **65**, 273–274.

North Eurasia

New reserve in Russia
The Vostochny reserve on Sakhalin Island, Russia, was established on 7 July 1999. It covers more than 650 sq km of forests, borders the Okhotsk Sea and protects two important fish spawning rivers. Logging is banned but non-timber forest products can be extracted, providing this is carried out in a sustainable manner.
Source: Taiga News (1999), No. 29, 3.

Tundra destroyed by oil and gas exploitation
Natural gas and oil exploitation in the Yamal-Nenets Autonomous District on Yamal Peninsula, which juts into the Kara Sea from the mouth of the Ob' river in north-west Siberia, is affecting wildlife populations in the area as well as traditional reindeer herding. Exploration and development activities have destroyed large areas of tundra and as a result reindeer *Rangifer tarandus* are overgrazing the remaining pastures, which are being eroded. Other animals are being affected: Arctic fox *Alopex lagopus* dens are destroyed by roads and other construction works. Workers on the oil and gas projects also poach wild animals.
Source: Forbes, B.C. (1999) *Polar Record*, **35**, 317–322.

Loggers threaten planned park in Russia
The planned Udege Legend Nature Park in Primorsky Krai in the Russian Far East is threatened. In 1999, several hundred hectares were logged by a local forest company, which has a long-term lease agreement for some plots within the planned park's territory. According to the Regional Forestry Agency, the company is allowed to log until the park is created. It appears that the local authorities are almost ready to give in to the loggers and refuse to create the park; their justification is that the difficult economic conditions are leading to a dependency on logging and that they do not see how a new protected area can help local people.
Source: Taiga News (1999), No. 29, 8.

Sub-Saharan Africa

Conserving black rhinos cheaper in the wild than in captivity
Protecting the black rhino in the wild is considerably less expensive than preserving the endangered animals in captivity, according to a study sponsored by the African Wildlife Foundation, which analysed costs and outcomes at seven sites representing various management approaches. The average annual cost of protecting one rhino was $US 1657 in protected areas, $US 3315–14,399 in sanctuaries and $US 16,300–28,176 in captivity.
Source: African Wildlife News, Summer 1999; Web: http://www.awf.org

Taiwan and Israel help to conserve scimitar-horned oryx
Conservationists from Taiwan and Israel joined forces to donate eight captive-bred scimitar-horned oryx *Oryx dammah* to the Guembeul Wildlife Protection Area in Senegal, for release into the wild in the 4000-sq-km Ferlo National Park. It is believed that Senegal's native oryx became extinct around 150 years ago as a result of hunting.
Source: International Conservation Newsletter (1999), **7**(2), 1–2.

New red colobus monkey in Niger Delta
A distinctive and geographically isolated population of red colobus monkey *Procolobus badius* discovered in the Niger Delta in 1993 (see *Oryx*, **31**[1], 7–9) has been described as a new subspecies: *P. b. epieni*. It most closely resembles the taxon on Bioko (*P. b. pennantii*) in having black hands and feet and lacking orange-brown tones on head and neck. It occupies low-lying marsh forest and is confined to an area of 1500 sq km, where it is vulnerable to increasing human pressures.
Source: Grubb, P. & Powell, C.B. (1999) *Journal of the Zoological Society of London*, **248**, 67–73.

Nigerian snake diversity threatened by oil industry
Forest snake communities may be under threat in southern Nigeria. A comparison of moist rain forest and savannah areas showed greater species diversity in the rain forest, although most species were found in only one of the two areas. The destruction of moist rain forest patches would cause serious loss of snake biodiversity, whereas destruction of savannah would have less serious consequences because snake diversity there is similar to that found in suburban and cultivated lands. Moist rain forest is critically endangered because it occurs in the south of the country and is under threat from oil industry activities. Conservation effort should be concentrated on persuading the oil

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companies to place their installations away from rain forest patches.
Source: Akani, G.C. *et al.* (1999) *Biodiversity and Conservation*, **8**, 629–642.

New protected area in CAR
A new protected area of rain forest is currently under study in the Central African Republic (CAR). Located in the Ngotto forest, the area covers 73,320 ha between the Mbaéré and Bodingué rivers. It has had hunting reserve status since 1996 but should be upgraded to a strict nature reserve. The reserve is in one of the last blocks of unlogged forest in CAR and covers extensive areas of swamp forests. Recent surveys carried out by the EU's Ecofac project have shown that, despite heavy poaching pressure, the area harbours high densities of primates (a total of nine diurnal species) with significant populations of gorillas *Gorilla gorilla* and chimpanzees *Pan troglodytes*.
Source: david.brugiere@univ-rennes1.fr; Ecofac Web: http://www.ecofac.org

Long trek to conserve Africa's wildlands
Mike Fay, a conservation biologist with the Wildlife Conservation Society, has set out on a 1-year-long 1400-km trek across Africa, from the Central African Republic, south-east across Congo to the coast of Gabon, in order to inventory plants and animals. Fay wants to document the land in the 'megatransect' before human activity changes it irrevocably. The data collected may assist conservationists to persuade African governments to set aside land valuable for conservation and vital habitat for imperilled species, while encouraging the use of other regions for sustainable logging and hunting.
Source: Science (1999), **285**, 825.

Six African countries join forces against wildlife criminals
The Republic of Congo, Kenya, Lesotho, Tanzania, Uganda and Zambia have established the world's first international task force to combat poaching and other wildlife crimes. 'African Interpol', which is headquartered in Nairobi, grew out of a recommendation by wildlife law enforcement officers from eight African countries who met in Lusaka in 1992. The unit functions under the Lusaka Agreement on Cooperative Enforcement Operations of 1996 and is expected to strengthen the effectiveness of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). National law enforcement officers from the six countries will work together on cross-border operations against wildlife crime.
Source: African Wildlife News, Summer 1999; Web: http://www.awf.org

Ant problem in Africa
The little red fire ant *Wasmannia auropunctata*, a native to the American tropics, has been used in central Africa as a biological control agent but its stings, which repel crop pests, are also killing native insects critical for tree pollination. At the Station d'Études des Gorilles et Chimpanzes in Lopé Reserve in Gabon, house cats have been found to have lesions on their eyes, which are believed to be caused by ant stings; elephants in the reserve and elsewhere in the country have been reported as having white eyes and acting as if they are blind. Reports from other parts of he world suggest that *Wasmannia* may be spread by logging operations.
Source: Wildlife Conservation (1999), **102**(5), 9.

Battle won against water hyacinth?
The Zambezi River Authority (ZRA) has sprayed the herbicide 2-4-D on about half the surface of Lake Kariba, mainly on the Zimbabwean side, to control the introduced, invasive plant water hyacinth *Eichhornia crassipes*. The ZRA claims to have achieved an 80 per cent success rate against the plant, which had covered almost the entire surface of the lake. Water analysis after spraying found no detectable residues of 2-4-D.
Source: Marine Pollution Bulletin (1999), **38**(9), 748–749.

Mozambique protects fish and coral
Mozambique's fishery law (1990) was updated in February 1999 to prohibit the capture, transport and export of ornamental fish and live coral in national waters. The ban will remain in place for 2 years to allow for a period of research to determine sustainable harvest levels for the marine organisms that are being exploited wastefully and fraudulently against a background of poor law enforcement.
Source: TRAFFIC Bulletin (1999), **18**(1), 2.

First Peace Park in southern Africa
On 7 April 1999, the presidents of Botswana and South Africa signed a historic treaty linking the Gemsbok National Park and the Kalahari Gemsbok National Park. It is the region's first formal Peace Park and will be called the Kgalagadi Transfrontier Park. With an extent of 37,991 sq km, the park sets a welcome precedent for other transfrontier projects in the region.
Source: Africa Environment & Wildlife (1999), **7**(3), 22–23; Web: http://www.peaceparks.org.za

New gladiolus
A new species of *Gladiolus* has been discovered along with its pollinator, a long-proboscid fly, itself a new species, near the summit of a remote mountain near Villiersdorp in the Western Cape, South Africa. While new species are still regularly discovered in the Cape Floral Kingdom, the simultaneous discovery of a new plant and a new insect is extremely unusual.
Source: Africa Environment & Wildlife (1999), **7**(3), 19.

Mountain zebras number rise but the species is not yet safe
Cape mountain zebras *Equus zebra zebra* numbers had fallen to 91 in 1950 in South Africa. Intense conservation efforts began to reverse the decline, gradually raising their numbers to more than 400 by 1984 and to 1200 today. However, the population is not yet safe, according to the Cape Nature Conservation, and there are still too few to guarantee survival of the subspecies. Once found in the arid mountain ranges of the South African Transvaal and into Angola, mountain zebras began dying out in the 1920s, as their traditional lands were used for sheep and cattle or for crops. The animals were also popular targets for hunters. The remaining animals are found in fenced national parks and private reserves in South Africa.

Source: African Wildlife News, Summer 1999; Web: http://www.awf.org

Roan antelope decline in Kruger National Park

Roan antelope *Hippotragus equinus* numbers in Kruger National Park, South Africa, declined from 450 to about 45 animals between 1986 and 1993. Long-term monitoring of herbivore numbers suggest that the increased predation by lions *Panthera leo* that had followed an influx of zebra *Equus burchellii* and wildebeeste *Connochaetes gnou* into the park was a contributory factor. The ultimate cause, however, was the provision of artificial waterpoints in the roan range, which attracted the influx of other herbivores, particularly during drought. Roan antelopes, which are locally endangered in South Africa, are now recovering where waterpoints have been closed.
Source: Harrington, R. *et al.* (1999) *Biological Conservation*, **90**, 69–78.

New plan for Kruger and its elephants

Culling, relocation and contraception are all options for keeping the elephant population of South Africa's Kruger National Park in check, according to a new management strategy approved in March 1999, but park officials say no culling will occur before 2000 at the earliest and then only as a last resort. Since the moratorium on culling began in 1995, Kruger's elephant population has increased by approximately 1300, to 8870. Before 1995, about 500 elephants were killed each year to protect the park's biodiversity, but the practice was stopped when it was acknowledged that there was insufficient evidence to determine how a fixed number of elephants might affect the park. Under the new plan, Kruger will be divided into six zones: two botanical reserves, two 'high-impact' zones where the elephant population will be allowed to increase unrestricted, and two 'low-impact' zones where elephant numbers will be limited so vegetation can recover. Vegetation 'indicators' will help determine how many elephants the park can sustain.
Source: African Wildlife News, Summer 1999; Web: http://www.awf.org

Grassland management threatens South African francolins

Investigation of population densities of the redwing francolin *Francolinus levaillanti* and greywing francolin *F. africanus* along a land-use gradient in Mpumalanga province, South Africa, showed that redwings cannot tolerate intensive grazing and frequent burning of grassland habitats. Redwings are becoming increasingly dependent on isolated patches of pristine grassland and populations of this species drop below sustainable hunting densities in even moderately grazed and burned grasslands. Greywing francolin densities were positively correlated with grazing intensity and populations were more evenly distributed, but always occurred at sub-utilization densities.
Source: Jansen, R. *et al.* (1999) *Biological Conservation*, **8**, 587–602.

Brown lemur essential for regeneration of Madagascan forests

Studies in the dry deciduous forests of western Madagascar have shown that regeneration of these forests with the complete set of primary forest tree species seems to depend on the presence of the brown lemur *Eulemur fulvus*. Apart from possibly the bush pig *Potamochoerus larvatus*, the brown lemur is the only vertebrate of the dry forest that ingests seeds >11 mm long and passes them through the digestive tract unharmed.
Source: Ganzhorn, J.U. *et al.* (1999) *Conservation Biology*, **13**(4), 794–804.

Current status of the angonoka tortoise

The angonoka tortoise *Geochelone yniphora*, one of the rarest tortoises in the world, occurs only in bamboo-scrub in the Baly Bay region in western Madagascar. Field surveys conducted from 1993 to 1995 found at least five populations within a 30-km radius of Baly Bay, in habitat fragments ranging from 50 to 6000 ha. Population density was estimated at 0.66 tortoises per ha. The remains of 22 juveniles found over the 2 years, coupled with low numbers of intermediate-size juveniles, suggests high juvenile mortality.
Source: Smith, L.L. *et al.* (1999) *Biological Conservation*, **91**, 23–33.

Madagascan rain forest among world's most biodiverse

Cartography, floristic inventory and vegetation analyses carried out in the Eastern Domain of Madagascar identified three original tropical rain-forest types that are among the world's most biodiverse sites for plants. Reserves should be created along the eastern coast, particularly on basalt, where only about 10,000 ha of a very ancient forest remain.
Source: Dumetz, N. (1999) *Biodiversity and Conservation*, **8**, 273–315.

South and South-east Asia

India and Nepal agree measures for transboundary conservation

India and Nepal have agreed to co-operate on transboundary protected areas and control of illegal trade in fauna and flora. A communication system is to be established between protected area managers for: Sukhla Phanta and Royal Bardia reserves in Nepal with Dudhwa and Katerniaghat in India; and Royal Chitwan and Parsa in Nepal with Sohagi Berwa and Valmiki in India. All the areas are important for tigers *Panthera t. tigris* and great one-horned rhinoceroses *Rhinoceros unicornis*.
Source: Cat News (1999), No. 30, 4.

Guerrilla groups disrupting Indian reserves

Manas National Park and Tiger Reserve in north-east India, a World Heritage Site, has been left to the mercy of extremists of the Bodo tribal community with the withdrawal of staff and paramilitary police. The 2840-sq-km reserve was estimated to have 80 tigers *Panthera t. tigris* and 80 great one-horned rhinoceroses *Rhinoceros unicornis* as well as one of the last subpopulations of wild buffalo *Bubalus arnee*. There were no sightings of rhinoceros in 1999, leading to fears that they had all been poached for their horns. The Forest and Environment Minister announced that armed police would be employed to protect wildlife from poachers, but the government then fell and no action was possible until after the October elections. Other groups also fighting for tribal rights are occupying other

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tiger reserves and their presence allows illegal timber operators and poachers to operate freely.
Source: Cat News (1999), No. 30, 2.

'Elephants love bananas' a myth?
There is a proposal to grow bananas in the buffer zone of Bundala National Park in Sri Lanka. The area is frequented by wild elephants, which are known to have a considerable appetite for bananas! Disregarding the authority of the Department of Wildlife Conservation, some 142 ha of forest land in the buffer zone has been set aside for an experimental project involving biotechnology. One of the banana project co-ordinators has said that it 'is a myth that elephants love bananas'.
Source: Santiapillai, C. & de Silva, M. (1999) *The Island*, **8**.

Siamese crocodile disappears from Vietnam
An investigation into the status of the Siamese crocodile *Crocodylus siamensis* in Vietnam, from 14 April to 10 May 1999, suggests that viable wild populations of this species no longer occur there. Spotlight surveys failed to locate crocodiles in Crocodile Swamp (Nam Cat Tien National Park) or in Lac Lake (Dac Lak Province). Crocodiles no longer occur in Upper or Lower Krong Pach Reservoirs and these sites contain no suitable habitat. A remnant population may occur in the Sere Pok River in Yok Don National Park. Reintroduction of *C. siamensis* to Nam Cat Tien National Park is strongly recommended because Crocodile Swamp offers excellent habitat and is wholly encompassed within the park. Captive *C. siamensis* from crocodile farms could be used for reintroduction.
Source: *Crocodile Specialist Group Newsletter* (1999), **18**(2), 6–7.

New rabbit species in Laos
The Annamite mountains of Laos and Vietnam have yielded several important mammal discoveries. Most recent is a striped rabbit related to *Nesolagus netscheri*, of which there has been only one confirmed sighting since 1916—in 1998 it was photographed by an automatic camera trap in Kerinci Seblat National Park, Sumatra, Indonesia. Annamite rabbits resemble this species but have probably diverged genetically for 8 million years.
Source: *Nature* (1999), **400**, 726.

Land mines used to kill tigers
Villagers and soldiers in north-eastern Cambodia are reported to be using home-made land mines to kill tigers for the illegal trade in their bones. The businessmen who buy the bones are supplying the soldiers and villagers with gunpowder to make the mines. The Governor of Ratanakiri province has ordered district officials to stop the killing.
Source: Cat News (1999), No. 30, 9.

Sarawak bans hunting by loggers
In an attempt to stop the illegal trade in bushmeat, in April 1999 the Malaysian state of Sarawak banned all logging company staff from hunting. It also ruled that after an area has been logged and left to regenerate, all non-essential roads must be rendered impassible by bulldozing trenches across them or by dismantling bridges. Logging company vehicles must not be used to transport wild meat and logging companies were reminded of the state-wide ban on all commercial sale of wildlife.
Source: Wildlife Conservation (1999), **102**(5), 9.

Indonesian forest fires return
Forest fires resumed in Kalimantan and Sumatra, Indonesia, in mid-1999. Forestry officers in West Kalimantan, where the number of fires is greatest, blamed the slash-and-burn practices of local farmers. Indonesia claims that 'economic and political uncertainties' prevent it from implementing a 'zero-burning' policy, which aims to prevent plantation companies using fire to clear land cheaply. The Indonesian Government has still taken no action against plantation companies responsible for the 1997–98 fires, which affected 10 million ha.
Source: *Down to Earth* (1999), No. 42, 16.

Forest threatened by plantations
At least 100 000 ha of forests on the island of Siberut, Indonesia, are once again threatened by plantation companies. Most of the indigenous Mentawai population oppose the plans but local officials have given the go-ahead. In 1993 it was a condition of funding the establishment of the national park there that no logging, plantation or transmigration schemes would be allowed anywhere in Siberut. The nature conservation agency responsible for protecting the island is administered by the Department of Forestry and Plantations, which is allowing logging and plantations to go ahead.
Source: *Down to Earth* (1999), No. 42, 9–10.

East Asia

Cloning attempt to save giant panda
Scientists from China's National Academy of Sciences announced in June that they had made a significant step towards cloning the giant panda *Ailuropoda melanoleuca*, the country's national animal. The process involves producing cloned hybrid embryos by transferring the nucleus of an adult giant panda cell into an egg from a rabbit and then attempting to implant the embryo into the uterus of a foster mother, thought to be a black bear. This is part of a national programme aimed at cloning the giant panda in a bid to save the species from extinction.
Source: Nature (1999), **400**, 10.

Migration of black-faced spoonbills tracked
In 1999, researchers tracked the movements of black-faced spoonbills *Platalea minor*, using satellite telemetry, from Taiwan, along the coast of China to breeding grounds in North Korea—the first successful recording of the species's migratory patterns. There are currently only around 600 black-faced spoonbills left in the world and the data will aid conservation efforts.
Source: *International Conservation Newsletter* (1999), **7**(2), 6–7.

North America

Hermaphrodite bear found in Greenland
The discovery of the first

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hermaphrodite polar bear *Ursus maritimus* in Greenland could mean the roughly 100,000 polar bears in the Arctic are seriously threatened by environmental pollution. The phenomenon is believed to be the result of ingesting organic poisons, such as polychlorinated biphenyls (PCBs), through the food chain. Levels of PCBs in the blood of seven hermaphrodite polar bears found since 1990 on the Norwegian island of Spitsbergen were six times higher than those found in bears in the Canadian Arctic.
Source: Nature, 16 September 1999, 205.

Merriam's shrew found in Canada
Merriam's shrew *Sorex merrami* has been found for the first time in Canada—in the Kilpoola Lake area of British Columbia. The site is in the dry grasslands of the Okanagan Valley and is protected by the Nature Trust of British Columbia. The 9-cm-long shrew is normally found in dry grasslands of the western USA.
Source: Nature Alert (Canadian Nature Federation) (1999), **9**(2), 2.

Coal mine not allowed near Jasper National Park
On 9 April 1999, the Canadian Nature Federation won a significant legal victory when the Federal Court struck down authorization to construct an open-pit coal mine near the eastern boundary of Jasper National Park, an important area for migratory birds and resident grizzly bears *Ursus arctos*. The challenge to the federal government's right to permit the mine was successful on the grounds that it did not conduct a proper environmental assessment.
Source: Nature Canada (1999), **18**(3), 46.

Gull management protects tern populations
Since the 1950s, herring gull *Larus argentatus* and greater black-backed gull *L. marinus* populations have been increasing in numbers, while populations of other seabirds, such as terns *Sterna* spp., have been declining. The suspected primary cause has been predation and/or territorial behaviour by the gulls. The two gull species were removed experimentally from a recently abandoned tern colony through a combination of poisoning and shooting. All three species of tern that had nested prior to the arrival of the gulls returned in increasing numbers and four other seabirds recolonized and/or showed significant increases in numbers.
Source: Anderson, J.G.T. & Devlin, C.M. (1999) *Biological Conservation*, **90**, 175–181.

Measures for sharks
The US National Marine Fisheries Service adopted new restrictions on 26 April 1999 to help stop overfishing of large coastal sharks in the Atlantic. The rules call for major cuts in commercial and recreational shark fishing quotas, and there is a moratorium on 19 species. Even with these restrictions it will take about 40 years for sharks to recover to half their original abundance.
Source: Marine Pollution Bulletin (1999), **38**(7), 521.

New regulations for swordfish
Traders bringing swordfish *Xiphias gladius* into the USA since 14 June 1999 need a Swordfish Certificate of Eligibility (COE), including the name of the ocean of origin and information about the harvesting vessel. The import of swordfish pieces of under 15 kg dressed weight is now prohibited unless the COE states that the pieces were derived from fish over that weight. The new restrictions are aimed at controlling the harvest of undersized Atlantic swordfish.
Source: TRAFFIC Bulletin (1999), **18**(1), 2.

Impact of non-native fish
Non-native fish have been implicated in 24 of 30 recorded extinctions of native fish in the USA. There are roughly 500 non-native fish species in the country, 40 per cent of which came from other countries; the rest are species translocated outside their natural range in the USA.
Source: Marine Pollution Bulletin (1999), **38**(7), 522.

Early breeding Mexican jay: response to global warming?
The Mexican jay *Aphelocoma ultramarina* in south-eastern Arizona, USA, is breeding earlier in the year, which may be linked to global warming. Between 1971 and 1998, the mean date of first clutch declined by 10.1 days and the date of the first nest in the population appeared 10.8 days earlier on average. These changes were associated with trends towards warmer minimum temperatures in the months before and during the initiation of breeding.
Source: Brown, J.L. *et al.* (1999) *Proceedings of the National Academy of Sciences, USA*, **96**, 5565–5569.

US to take part in carbon sequestration research
The US Department of Energy (DoE) is investigating whether the sequestration of atmospheric carbon dioxide in oceanic or terrestrial ecosystems might be effective in reducing global warming. Some nations, such as Japan and Norway, have been pursuing carbon sequestration research for some time but the US has funded little research in this area, partly because environmentalists felt that carbon sequestration would not curb the burning of fossil fuels. Terrestrial sequestration would involve carbon dioxide emissions being pumped into geological formations or old oil wells or being offset by planting more trees. Ocean storage of carbon dioxide has more potential because of the vast areas available but would involve pumping liquefied carbon dioxide into the ocean depths and may change the ocean chemistry, possibly with harmful ecological consequences. A $US 5-million 4-year project, funded by Canada, Japan, Norway and the USA, is being undertaken in Hawaii to investigate the effects of such action.
Source: Nature (1999), **401**, 315.

More introduced species problems in Great Lakes
Another introduced species is causing problems in the Great Lakes region of North America. The round goby (Gobidae), which is believed to have come from Europe, was first found in the lakes in 1990 and has since spread into all five of the Great Lakes. Although the gobies eat the introduced zebra mussel *Dreissena polymorpha*, which is also a problem introduced species, they devour eggs and fry of native fish. The goby has also become established in the Chicago and Calumet River

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systems, and attempts are being made to stop the advance to the Mississippi by installing electric barriers.
Source: Marine Pollution Bulletin (1999), **38**(9), 749–750.

Falcon and eagle soar to recovery
The US Fish & Wildlife Service has removed the peregrine falcon *Falco peregrinus* and the bald eagle *Haliaeetus leucocephalus*, America's national symbol, from the endangered species list. The birds were added to the list because DDT and other pesticides had caused a steep decline in their populations. The banning of DDT, coupled with efforts to protect nesting helped the recovery.
Source: National Audubon Society, 1 July and 20 August 1999.

Dams to go to save salmon populations
The US Government is considering taking drastic action to prevent the extinction of Snake River Basin chinook salmon *Oncorhynchus tschawytscha* populations. Four hydroelectric dams, built along the Snake River in Washington State during the 1960s and 1970s, have caused a nearly 90 per cent decline in salmon populations in the last 30 years. Remaining populations are protected under the Endangered Species Act. The National Marine Fisheries Service asked the Army Corps of Engineers, which is supposed to run the dams while protecting the salmon, to come up with a solution to save the fish by the end of 1999. The best remedy would involve removing the dams to allow the Snake River to flow freely, which could cost up to $US 1.2 billion.
Source: Science (1999), **284**, 574–575.

Vernal pool monkey flower back from extinction
The vernal pool monkey flower *Mimulus tricolor*, believed to have vanished in 1991, has been found growing in a former rye grass field on the outskirts of Corvallis, Oregon, USA. The flower used to appear around the vernal pools in Oregon's Willamette Valley until ploughing and stream engineering changed the habitat. A flood in 1998 recreated the kind of habitat in which the monkey flower once thrived, and dormant seed germinated. The botanists who found the plants are trying to save the species by collecting seeds and recreating the flood's effects.
Source: Science (1999), **284**, 2083.

Wolf alarm
When a trapper accidentally caught one of two wolves known to hunt in Montana's Bitterroot Valley, the wildlife authorities radio-collared and released it. Scientists at the National Wildlife Research Centre, acting on an idea of Montana rancher Ed Cummings, made a wolf alarm tuned to the frequency of the wolf's collar and set it up near the cattle herd. If the wolf approached the herd the alarm would be triggered and set off sirens and strobe lights. The prototype alarm appeared to work (no cattle kills occurred) and controlled studies are now taking place.
Source: Wildlife Conservation (1999), **102**(4), 12.

Swift foxes in Montana
Thirty juvenile swift foxes *Vulpes velox* released in the Blackfeet Reservation in north-west Montana, USA, in 1998 are becoming established. The reintroduction project is a partnership between Defenders of Wildlife, Canada's Cochrane Ecological Institute, the Blackfeet Nation and the Blackfeet Fish and Wildlife Department.
Source: Wildlife Conservation, (1999), **102**(5), 13.

Yellowstone grizzlies: threatened or not?
An argument is in progress in the USA regarding the current status and future health of the grizzly bear *Ursus arctos* population of Yellowstone National Park, Wyoming. The Interior Department, which runs the park, believes that the bear population has been increasing at an annual rate of 5 per cent over the last decade and there are plans to remove it from the threatened species list. However, recent demographic analysis has estimated that grizzly numbers grew only 1 per cent a year between 1975 and 1995 and suggested that population changes are linked to yields of whitebark pine seeds, with bear mortality rates double in years when the pine crop fails. Researchers suggest that strategies should include protecting whitebark pine, which is at present being devastated by a disease called blister rust, and recognizing that grizzly bear mortality is likely to increase as a result of increasing numbers of humans in Yellowstone.
Sources: Pease, C.M. & Mattson, D.J. (1999) *Ecology*, **80**, 957–975; and *Science* (1999), **284**, 568.

Edwards Dam is down
After more than 160 years, the Kennebec River in Maine, USA, is once again running free. Since 1837, the 289-m-long Edwards Dam blocked the river at Augusta, drowning 27 km of upstream habitat. In July 1999 the dam was demolished and it is hoped that fish migrations between the sea and ancient breeding grounds will be re-established.
Source: Wildlife Conservation (1999), **102**(5), 13.

Maine's Atlantic salmon in trouble
The number of Atlantic salmon *Salmo salar* returning to spawn in seven rivers in Maine, USA, has fallen from 20,000 a century ago to fewer than 100 in 1998. Federal officials declined to list the Maine salmon populations in 1997, partly because genetic studies suggested they were not 'distinct' enough from nearby Canadian populations to merit protection under the Endangered Species Act. However, new studies may undermine that position and the drastic reduction in numbers has prompted conservation groups to file suit in Washington, DC, to force the federal government to list the Maine salmon as endangered.
Source: Science (1999), **285**, 1191.

New regulations for ginseng exports
On 2 August 1999, the US Fish and Wildlife Service issued new rules for exports of wild and wild-simulated American ginseng *Panax quinquefolius* (a valuable medicinal plant species). Only roots of 5 years of age or older and harvested during the 1999 season from 18 approved states will be eligible. Cultivated roots of any age may be exported from 24 approved states.
Source: TRAFFIC Bulletin (1999), **18**(1), 3–5.

Trouble for monarchs?
Research at Cornell University has

shown that about 50 per cent of monarch butterfly *Danaus plexippus* larvae fed on milkweed (their natural food plant) that had been dusted with pollen from genetically modified corn, died within days, while those that were fed on untreated milkweed leaves all lived. The hybrid corn, known as Bt-corn, contains genes from the bacterium *Bacillus thuringiensis*, which give the corn resistance against the corn borer. Planting this corn was intended to reduce agricultural pesticide use and its detrimental effects on honeybees and spiders. The possible effects of wind-blown pollen on monarch butterflies, and perhaps other species, in the wild give cause for concern. One-quarter of the USA's corn belt is planted with an estimated 81,000 sq km of Bt-corn and more than half of monarch butterfly larvae feed on milkweed in the corn belt before they pupate and migrate as adults to Mexico.
Source: Wildlife Conservation (1999), **102**(5), 14.

Lynx reintroduction in trouble
A controversial $US 1.4-million programme aimed at reintroducing lynx *Lynx canadensis* to Colorado, USA, is being criticized because five of the 12 lynx caught in the Yukon and released in Colorado since February 1999 (see *Oryx*, **33**[3], 205) died from starvation. Apparently, the main winter prey, the snowshoe hare *Lepus americanus*, was in short supply before the lynx were released. More lynx were released later in the year and if they survive another 40–50 will be released in spring 2000. There are plans to close the programme if more than half starve to death.
Source: *Science* (1999), **285**, 320–321; and *Wildlife Conservation* (1999), **102**(4), 13.

Herbal-tea makers stop poisoning prairie dogs
Celestial Seasonings, a herbal-tea manufacturer based in Boulder, Colorado, USA, was caught poisoning black-tailed prairie dogs *Cynomys ludovicianus* that were building dens close to its plant. It is not illegal to poison prairie dogs in Colorado if they are causing property damage, but the company found itself at the centre of a debate over efforts to list the species as threatened under the US Endangered Species Act. The prairie dogs once were widespread and numerous in the American plains but today the remaining populations are imperilled by development and disease. Celestial Seasonings, which markets itself as 'green', agreed to stop killing the animals when it came under pressure from animal rights activists calling for a boycott of the company's tea. The company has promised to conserve prairie dogs on its 14 ha of property and has set up a $US 50,000-a-year grant programme for conservation groups in Boulder County.
Source: Audubon (1999), **101**(5), 20.

Decline in sea otter population
California sea otters *Enhydra lutris* have declined by 1.14 per cent since spring 1998, with young adults showing a drop of nearly 5 per cent. The cause of the decline is not known, although disease, starvation, entanglement in fishing gear and winter storms in 1982–83 and 1997–98 probably contributed. The sea otter population rose steadily, after being protected in 1911, until the mid-1970s, but has been in decline since then.
Source: Marine Pollution Bulletin (1999), **38**(7), 627–628.

Coyotes protect scrub-breeding birds from other predators
The disappearance of large mammalian carnivores from fragmented habitats may allow an increase in the numbers of smaller carnivores that are the principal predators of birds and other small vertebrates. In coastal southern California, intensive urbanization and the destruction of native sage-scrub habitat have resulted in the decline of the coyote *Canis latrans*, the most common large predator. A survey revealed that small habitat fragments had fewer coyotes and had more 'mesopredators': striped skunk *Mephitis mephitis*, raccoon *Procyon lotor*, and grey fox *Urocyon cinereoargenteus*, as well as the introduced domestic cat *Felis catus* and Virginia opossum *Didelphis virginianum*. Furthermore, there was a consistently negative correlation between mesopredator abundance and the number of native scrub-specialist bird species persisting in fragments, and these negative effects persisted even after accounting for habitat fragment age and area effects. The main problem appeared to be domestic cats, maintained in large numbers through feeding by their owners and able to prey on scrub-specialist birds even when populations were low. Coyotes were effective in two ways, directly by killing cats and indirectly by causing owners to keep cats indoors in areas where coyotes were known to be active.
Source: Crooks, K.R. & Soulé, M.E. (1999) *Nature*, **400**, 563–566.

Fish listings
The Sacramento splittail *Pogonichthys macrolepidotus*, a fish found only in California's Sacramento–San Joaquin Delta and Central Valley rivers, has been listed by the US Fish and Wildlife Service as threatened. Numbers have declined by 62 per cent over the past 15 years as a result of water diversions, periodic prolonged droughts, loss of shallow water breeding habitats, introduced aquatic species, and agricultural and industrial pollutants. The topeka shiner *Notropis topeka*, a fish that was once common in small prairie streams in Kansas, Iowa, Minnesota, Missouri, Nebraska and South Dakota, has been listed as endangered. As a result of loss and deterioration of habitat, it now occurs only in about 20 per cent of its former range, being restricted to a few tributaries in the Mississippi and Missouri river basins.
Sources: Endangered Species Bulletin (1999), **XXIV**(2), 27; **XXIV**(3), 27.

Plea to save threatened Salton Sea
The Salton Sea, the largest inland body of water in California, USA, is an important site for migratory birds but is under threat from expensive and misguided water projects. A report recently released by the University of California Institute for Mexico and the United States suggests that the projects, planned as a result of a new federal law designed to enhance the Salton Sea, will not improve the bird sanctuary and may damage sensitive ecosystems nearby in Mexico. An international panel of scientists has called for research to find new ways to integrate

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environmental and agricultural needs in the area.
Source: Nature (1999), **399**, 628–629.

Wind farms in California threaten condor population
The National Audubon Society is launching a campaign to stop the newest lethal threat to the California condor *Gymnogyps californianus*—a proposed wind farm adjacent to critical condor habitat. A captive-breeding programme has succeeded in restoring about 50 condors in the wild in California but Enron Corporation is proposing to build 53 wind turbines at the crossroads of the California condors' range.
Source: www.condor-pass.org; Audubon Society, 13 September 1999.

Action for little owl in Tucson
The ferruginous pygmy owl *Glaucidium brasilianum*, which is found from southern Arizona and southern Texas in the USA to northern Argentina, is so rare in Arizona that the state's population was placed on the federal Endangered Species List in 1997. Fewer than 40 individuals remain there, most on Tucson's north-west side and threatened by urban development. The owl listing caused Tucsonians to question development, which is also blamed for increased traffic, smog and taxes. Environmentalists drew up a Sonoran Desert Protection Plan, which is being backed by previously development-friendly county officials. The US Interior Secretary has also proposed using the federal Land and Water Conservation Fund to purchase important wildlife habitat in the Tucson area.
Source: Wildlife Conservation (1999), **102**(5), 18.

A city in Texas in trouble
City authorities in Carrollton, Texas, responded to complaints from citizens about excessive bird excrement at a local park by bulldozing part of a rookery and killing more than 300 egrets, herons and other migratory birds. In June 1999, the Federal Migratory Bird Conservation Commission fined the city $ 70,000 for violating the Migratory Bird Treaty Act and since then Carrollton has pledged to protect the rookery. The city also decided to forgo its annual 4th of July fireworks display to avoid disturbing the birds.
Source: Audubon (1999), **101**(5), 22–23.

Eastern indigo snake project
A project to study the eastern indigo snake *Drymarchon corais couperi* started in 1998 at Cape Canaveral, Florida, USA. Eighteen months later 41 snakes had been captured, implanted with radio transmitters and tracked across 3330 sq km and not a single nest or hatchling had been found. Seventeen snakes had been lost to a variety of causes or mysteriously disappeared, leaving scientists to speculate whether the animals had been killed or snatched for a private collection outside transmitter boundaries. The snake has been declining since the 1960s as a result of a combination of building developments, poaching and habitat fragmentation. It was once found from Alabama to Georgia and south through Florida but is now confined mostly to central Florida where its remaining habitat is in demand by developers.
Source: National Parks (1999), **73**(9–10), 40.

Florida man found guilty of smuggling Philippine coral
On 11 August 1999, a Florida importer, Petros Levantis, and his company, Greek Island Imports Inc., were found guilty of smuggling Philippine corals to the USA in the first federal conviction for trafficking in internationally protected corals. Levantis faces up to 15 years in prison and $US 750,000 in fines; his company could be fined up to $US 1.5 million.
Source: Sea Wind (1999), **13**(3), 24–25.

Hawaii bird first
A highly endangered native Hawaiian bird species, the puaiohi *Myadestes palmeri*, is breeding in the wild after 14 captive-reared individuals were released in the Alaka'i Wilderness Preserve on the island of Kaua'i, Hawaii, early in 1999. At least seven birds nested and four young fledged. The young puiaohi are the first endangered Hawaiian forest birds to be raised in the wild by birds raised in captivity. Apart from the released birds, only 200–300 individuals survive in the wild.
Source: 'Elepaio (1999), **59**(6), 49–50.

A Hawaiian bird on the edge of extinction
In an effort to prevent the extinction of the po'ouli *Melamprosops phaeosoma*, which is endemic to the island of Maui, Hawaii, the US Fish and Wildlife Service and State of Hawaii are proposing intensive habitat management and the translocation of one or more individuals in an attempt to bring isolated birds together to form a breeding pair. The species has been declining since its discovery in 1973 and the total population may number no more than three individuals, all in a restricted area of the island's remaining rain forest.
Source: Endangered Species Bulletin (1999), **XXIV**(3), 25.

Plan to save Hawaii's threatened biodiversity
A draft plan for a $US 200-million 5-year initiative to preserve Hawaii's threatened biodiversity was unveiled at the Hawaii Conservation Conference in Honolulu in August 1999. Hawaii has 297 species on the federal endangered list, more than any other state, mainly because of habitat loss and introduced species. The initiative, called Legacy 2000, is asking for $US 5 million a year for community-based conservation, $US 3 million a year for research on Hawaiian ecosystems and $US 4 million a year for a number of programmes to find Hawaii's rarest species, bolster endangered species through captive propagation and create a plant germplasm storage network. Conservation managers are seeking funds from Congress, non-profit foundations and the private sector.
Source: Science (1999), **285**, 817–818.

Introduced boa threatening Cozumel endemics
The boa *Boa constrictor* was introduced in 1971 on to Cozumel Island, Quintana Roo, Mexico, 17.5 km east of the Yucatán Peninsula in the Caribbean Sea. It now has a wide distribution with an encounter rate of 1.8 boas per 100 km of surveyed forest in the area. The boa, with few natural predators, is threatening the existence of island endemics, which include two species and four subspecies of

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mammals, four species and fifteen subspecies of birds and one reptile species.
Source: Martínez-Morales, M.A. & Cuarón, A.D. (1999) *Biodiversity and Conservation*, **8**, 957–963.

Central America and Caribbean

Manatees in trouble in Belize

Just after Belize celebrated Manatee Week in October 1999, the remains of three manatees *Trichechus manatus* were found by local fishermen in the Deep River area. The fishermen reported the find to Toledo Institute for Development and Environment (TIDE), a conservation organization that has been working to protect manatees by patrolling the waters where they occur and has also been pressing for the declaration of a marine park there for years. The poachers responsible for killing these and other manatees sell the meat openly at markets in Livingston and Puerto Barrios in Guatemala. The area where the manatees occur is very large and the Fisheries Department alone cannot patrol it effectively; TIDE has been patrolling it but had to cut back on patrols recently because of budgetary constraints. All the manatee killings have been in the proposed Port Honduras Marine Reserve, which the Minister of Fisheries has agreed to but has not yet declared as a protected area. If the area is formally protected more funds will become available for patrols but while it remains unprotected manatees will continue to be killed and could become locally extinct in the next few years.
Source: Wil Maheia, Executive Director, Toledo Institute for Development and Environment, pgwil@btl.net, 26 October 1999.

Caribbean plant listed

Catesbaea melanocarpa, a rare Caribbean spiny shrub in the family Rubiaceae, which has no common name, has been listed by the US Fish and Wildlife Service as endangered. It has been recorded from Antigua, Barbuda and Guadeloupe of the Lesser Antilles, and from the USA in Puerto Rico and St. Croix (US Virgin Islands) where much of its forest habitat has been destroyed.
Source: Endangered Species Bulletin (1999), **XXIV**(3), 27.

Jamaica court shocks environmentalists

In July 1999, the Jamaica Court of Appeals shocked environmentalists when it decided against the Minister of Agriculture's and the Natural Resources Conservation Authority's attempts to enforce restrictions on conch and lobster fishing. Jamaica is a Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), under which conch and lobster fishing have been restricted in Jamaica since the mid-1980s.
Source: Sea Wind (1999), **13**(3), 30–32.

Montserrat species caught for captive breeding

A rescue mission to Montserrat by Andrew Owen of the Durrell Wildlife Conservation Trust in July 1999 succeeded in capturing eight Montserrat orioles *Icterus oberi* and nine mountain chickens *Leptodactylus fallax* (a frog that is valued for its meat). The animals will be used for a trial captive-breeding programme; these two species have not been bred in captivity before. The initiative resulted from the co-operation of a number of conservation organizations (Durrell Wildlife Conservation Trust, Royal Society for Protection of Birds, Royal Botanic Gardens—Kew, Fauna & Flora International and World Wide Fund for Nature).
Source: Durrell Wildlife Conservation Trust press release, 21 July 1999.

South America

Crocodiles up in Venezuela

The population of the American crocodile *Crocodylus acutus* in the Tacarigua Lagoon National Park, the most important in the mangrove coastal zone of Venezuela, is increasing, with 45 and 20 individuals in the mouths of San Nicolas and St Ignacio creeks, respectively. These are the most important sectors of the mangrove habitat but 10 adults were also found in Cano Pirital freshwater creek. In order to reduce egg collection by local people, a voluntary Park Guard Group has been established, comprising 12–15-year-olds who adopt crocodile nests, observe hatching and help in a programme to mark hatchlings.
Source: Crocodile Specialist Group Newsletter (1999), **18**(2), 14–15.

Search for natural medicines in Brazil

The multinational pharmaceutical company, Glaxo Wellcome, and a small Brazilian biotechnology company signed a $US 3.2-million contract to screen up to 30,000 compounds of plant, fungus and bacterial origin from several regions in the country. The initiative is described as the world's largest natural product sampling and screening programme. Officials from the two companies say that the agreement conforms with the Convention on Biological Diversity, which specifies that the interests of local communities must be taken into account.
Source: Nature (1999), **400**, 302.

Fires causing deforestation of tropical forests

The incidence and importance of fires in the Amazon have increased substantially during the past decade. A study on forest-fire dynamics in two regions of the eastern Amazon revealed that accidental fires have affected nearly 50 per cent of the remaining forests and have caused more deforestation than has intentional clearing in recent years. Areas where forest fires have occurred are more susceptible to future fires of greater intensity because of increase in combustible fuels. The research shows that unless current land-use and fire-use practices are changed, large areas of tropical forest could be transformed into scrub or savannah.
Source: Cochrane M.A. *et al.* (1999) *Science*, **284**, 1832–1835.

Australia/New Zealand/Antarctica

Australia cuts finning

The Minister for Fisheries of New South Wales (NSW), Australia,

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imposed a ban on cutting off the fins of sharks and requires that all sharks landed by recreational or commercial fishers must have their fins attached. It will be an offence for fishers to be in possession of detached shark fins in NSW waters. Penalties for breaking the law include fines of up to $A 110,000 ($US 70,000) for offending corporations and up to $A 22,000 ($US 14,000) for individuals, and/or 6 months in prison. Sand tiger shark *Carcharias taurus* populations have still not recovered from the heavy impacts caused by spearfishers and fishermen in the 1950s and 1960s despite a 15-year ban on harvesting.
Source: TRAFFIC Bulletin (1999), **18**(1), 9.

Australian seal protection
The Australian Government has released an action plan to protect the 10 species of seal that inhabit Australian waters. It is about to declare a new marine park covering 160,000 sq km around the World Heritage Site of Macquarie Island. The park includes a 58,000-sq-km highly protected zone in which fishing and mining will be banned. The sea around Macquarie Island is a major breeding ground for the subantarctic fur seal *Arctocephalus tropicalis* and the southern elephant seal *Mirounga leonina* as well as providing a pristine habitat for royal penguins *Eudyptes schlegeli*, rockhopper penguins *E. chrysocome* and five species of albatross.
Source: Marine Pollution Bulletin (1999), **38**(7), 626.

Crazy ants and crabs on Christmas Island
An introduced ant, the crazy ant *Anoplolepis longipes*, from West Africa is attacking land crabs on Christmas Island, Australia. The ant has been present on the island since the 1930s but started to attack and eat the land crabs only 18 months ago. The crabs play a key role in the leaf decomposition cycle in the forest.
Source: Wildlife Conservation (1999), **102**(5), 13.

Excluding introduced species
The Karori Sanctuary Trust has erected an 8.6-km predator-proof fence round Reservoir Valley in the hills behind Wellington, New Zealand, to create the first urban 'mainland island' sanctuary in the country. The fence excludes all introduced mammals, including mice. Fourteen introduced species were to be removed from the valley by December 1999 and the podocarp forest will be restored. The sanctuary is expected to be opened officially on 1 January 2001 with the release of little spotted kiwis *Apteryx owenii*.
Source: Forest & Bird (1999), No. 293, 4.

Marine biodiversity threatened by fishing in New Zealand
Fishing is threatening an area of marine biodiversity unparalleled anywhere in New Zealand. The area, off Spirits Bay and Tom Bowling Bay in the far north, has a high diversity of invertebrates; at least 45 species are not yet described and include a large barnacle known previously only from fossil records. Forest & Bird is calling for the Minister of Fisheries to close the area to dredging and trawling.
Source: Conservation News (Forest & Bird) (1999), No. 115, 4.

Eradicating a seaweed
New Zealand's Department of Conservation is to lead a project to eradicate an Asian seaweed *Undaria* sp. from Stewart Island waters. The alga was believed to have arrived in New Zealand on hulls or in ballast tanks of ships and was first seen there in the late 1980s. A team of divers has spent a year removing the alga from mussel-farm ropes, buoys, fish cages and the sea floor, while marine farmers co-operated by removing a number of heavily infested barges.
Source: Forest & Bird (1999), No. 293, 7.

The sight of humans causes Magellanic penguins distress
Ecotourism should take note of a recent study showing that breeding Magellanic penguins *Spheniscus magellanicus* suffer physiological stress from human presence at the nest site. Interestingly, birds that have been exposed to very high levels of human visitation via tourism do not respond to human presence as a stressor, but those exposed to moderate levels of disturbance find the sight of humans distressing and show no evidence of habituation over time. The findings suggest that tourist visits should be concentrated in a small area of breeding colonies where birds can become habituated, leaving the remainder of the colony free from human interference.
Source: Fowler, G.S. (1999) *Biological Conservation*, **90**, 143–149.

People

On 1 September 1999, the eve of his 70th birthday, **William Conway** stepped down as President and General Director of the Wildlife Conservation Society and Director of the Bronx Zoo/Wildlife Conservation Park. He joined the WCS in 1956, as Associate Curator of Birds for the Bronx Zoo and became director of both the zoo and the society within 10 years. Under his leadership the society increased its conservation efforts from half a dozen projects to 326 in 52 nations. He will continue to advise WCS as Senior Conservationist. His successor as President is Christopher H. Smith.

Dr Hans Friederich was awarded Vietnam's Medal for Science and Technology for service to the environment on 6 May 1999. The medal was awarded 'in recognition of the assistance that he had provided during his days as advisor to the Director-General of the National Environment Agency from 1994 to 1996, and for his successful management of the IUCN Programme in Vietnam'. The medal has previously been awarded only to Vietnamese scientists who have completed a 30-year career and who have contributed significantly to the field of science, technology or environment.

Jim Holdaway of Auckland and **Lesley Shand** of North Canterbury have been honoured for their work in conservation in New Zealand. Jim Holdaway, awarded the Companion of the New Zealand Order of Merit, has recently retired from the Auckland Conservation Board; he promoted the concept of regional parks in the 1950s and 1960s. Lesley Shand was made a Member of the New Zealand Order of

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Merit in recognition of her largely unpaid work in the North Canterbury and West Coast areas.

Sir Ghillean Prance has left Britain's Royal Botanical Gardens at Kew after more than a decade as director. Under his directorship Kew developed the Millennium Seed Bank to house seeds from 25,000 plant species and participated in the revolution sweeping taxonomy in which flowering plants are classified according to their DNA sequence rather than their physical features. Prance has obtained a fellowship at the University of Reading to research the botany of the Amazon.

Two senior wildlife rangers in Sri Lanka, **Christopher S. Wickremasinghe** and **Ainsley B. Fernando**, were awarded gold medals on 20 May 1999 for their services to conservation by the Biodiversity and Elephant Conservation Trust. Christopher Wickremasinghe started his pioneering research on elephants in 1950 and Ainsley Fernando joined the country's Department of Wildlife in 1956 and retired in 19990 after 33 years of service.

Hamdallah Zedan of Egypt was appointed as Executive Secretary of the Convention on Biological Diversity with effect from 1 August 1999.

The *Briefly* section in this issue was compiled from various sources by Jessamy Battersby and Jacqui Morris. Contributions to this section are always welcome. Please send to the Editor, FFI, Great Eastern House, Tenison Road, Cambridge CB1 2TT, UK.

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