Briefly

International

Global warming could slow Gulf Stream

Models have shown that the Gulf Stream could be affected by the melting of glaciers as a result of global warming. Researchers at the National Science Foundation looking at the end of the last ice age 11.5 to 13 thousand years ago have found that the Gulf Stream shut down at this time. Today's figures indicate that the input of freshwater from melting glaciers and increases in rain and snow could slow the Gulf Stream, although it would be unlikely to stop it altogether. As a result Western Europe's climate would cool down. Another effect would be that an increase in input of fresh water would affect the deep circulation of ocean waters known as overturning.
Source: *Marine Pollution Bulletin* (2002), **44**(1), 4.

Whale skin points way to friendlier anti-foulants

German scientists studying the ultrastructure of whale skin may help in the search for low-toxicity anti-fouling paints for boats. It has been suggested that pilot whales *Globicephala melas* avoid bio-fouling of their skin through a combination of minute ridge structures interspersed with an enzyme-exuding gel matrix. Fouling microorganisms find it difficult to attach to such a structure and without this microscopic base, larger fouling organisms cannot establish themselves. It is hoped to produce a non-toxic alternative to traditional anti-fouling paints by mimicking the whales' skin ultrastructure using silica crystals embedded in a constantly eroding polymer base. Although tributyl tin (TBT) anti-foulants are due to be phased out on all vessels by 2003, there is concern that their copper-based replacements may also have adverse environmental effects.
Source: *Marine Pollution Bulletin* (2002), **44**(3), 182.

Good news from the IUCN Red List

The evolution of the IUCN Red List has highlighted some positive stories in terms of species whose threatened status has been downgraded. In several cases species that were thought to be extinct have subsequently been rediscovered. In the 1996 Red List the Madeiran land snail *Discus guerinianus* was listed as Extinct but it was rediscovered in 1999 and is now classified as Endangered. The Fernandina rice rat *Nesoryzomys fernandinae* from the Galapagos Islands was also listed as Extinct in 1996 but discoveries in the 1990s mean that its status is now Vulnerable. A 1999 sighting of the presumed extinct ivory-billed woodpecker *Campephilus principalis* has meant that its status is now Critically Endangered. Several other species have been downlisted or removed from the Red List altogether including the Mauritius kestrel, Bermuda petrel, white rhino and short-tailed albatross.
Source: *International Zoo News* (2002), **49**(1), 32–33 (also at http://www.zoonews.ws).

Attempts to identify mystery squid

A squid, known as the mystery squid, has been sited only eight times since it was first recorded in 1988. The most recent sighting was in the Gulf of Mexico at a depth of 6,300 ft. The first sighting was off northern Brazil in September 1988. Subsequently it has been seen west of Africa, in the Indian Ocean and off Hawaii at depths ranging from 6,300 to 15,390 ft. These squids are not just a new species but are very different from any squid seen before. No specimens have yet been captured and scientists cannot be certain of the squid's identity until one is caught. It has been suggested that the mystery squid may be the adult of a squid family presently known only from juveniles.
Source: *Marine Pollution Bulletin* (2002), **44**(2), 94.

Europe

A new species of European long-eared bat

Although the mammals of Europe are comparatively well studied, some cryptic groups such as bats and shrews still offer surprises. A new species of long-eared bat has recently been described under the name *Plecotus alpinus*. The new species differs clearly from the brown long-eared bat and the grey long-eared bat both genetically and in coloration: its pure white belly contrasts with its brown dorsum. This new species, the Alpine long-eared bat, is currently known to occur in the Alps in Austria, France, Italy, Slovenia and Switzerland, and also in Croatia and Greece. The conservation status of the European species of long-eared bats will need to be re-evaluated in the light of these new findings.
Source: *Myotis* (2001), **39,** 5–16.

Hedgehog threat to waders in western Scotland

The islands of the Outer Hebrides in western Scotland are important areas in the UK and wider Europe for nesting waders such as lapwing, redshank and snipe. Since the early 1980s wader numbers have undergone a serious decline particularly on South Uist and Benbecula. Research has now shown that the declines have been largely caused by egg predation by hedgehogs. Hedgehogs are native to the UK but not to the Uists. They were introduced in the mid 1970s and there are now thought to be up to 5,000 hedgehogs throughout the Uists, concentrated in South Uist and Benbecula. Various methods are being used to tackle the problem including live trapping, translocation and hedgehog-proof fencing.
Source: *Aliens* (2001), **14,** 18.

Norwegian whale trade controls suspect

Norway and Japan have DNA registers that are designed to prevent illegally caught whales slipping into the legal market. They are the only two countries with whaling industries, and are preparing to restart international trade. However, WWF has argued that the registers are not completely reliable and comprehensive. In June 2000 TRAFFIC sent 19 samples of whale meat bought on the Norwegian market to the government for matching with the DNA register. 15 months later the Norwegians had

not replied to confirm that the samples matched. WWF also warns that Japan's register is not complete as it does not yet include DNA from all whale meat held in frozen stockpiles. There are also concerns that if international trade is resumed, Norway will increase the self-allocated quota of whales it can catch, currently over 500 northern minke whales a year. Japan's whaling fleet set sail on 6 November 2001 for the Southern Ocean whale sanctuary for another season of 'scientific whaling'. Between November 2001 and April 2002 they plan to take up to 440 southern minke whales.
Source: *Marine Pollution Bulletin* (2002), **44**(1), 3–4.

UK role in wildlife trade

A recent report published by WWF, *Traded towards extinction?*, has highlighted the role that the UK plays in illegal wildlife trade. The report analyses the illegal imports of wildlife seized by HM Customs and Excise. More than one million items were seized between 1996 and 2000. The UK also plays a role in Europe's exploitation of more than 20 million live plants and animals every year, most of which are taken from the wild, and imports a greater proportion of wild-caught species for the pet trade than Europe as a whole. The report recommends that the issue be tackled by increasing sentences for illegal wildlife trade, and requests that sentencing guidelines be issued to ensure that the penalties act as a deterrent.
Source: Lawson, T. (2002). *Traded towards extinction?* WWF-UK, Godalming, Surrey, UK (also at http://www.wwf.org.uk/wildlifetrade).

Decline in Orkney hen harriers due to lack of food

In the early 20th century the Orkney Islands were an important refuge for the Hen Harrier during its decline on the British mainland, and individuals from the Islands are thought to have helped recolonize the British mainland in the 1930s and 1940s. However, since the 1970s the species has been declining on the Islands even though, as there is no commercial grouse shooting on Orkney, it is not persecuted there. A recent study has demonstrated that lack of food, rather than predation of harrier nests by crows, appears to be limiting reproduction. Conservation management for the species should therefore be directed towards increasing the harriers' food supply, perhaps by increasing the amount of rough grassland in order to encourage growth in Harrier prey such as the vole.
Source: *Animal Conservation* (2002), **5,** 21–28.

Arson suspected in Zakynthos fire

A fire that destroyed an area of forest around a national marine park on the island of Zakynthos in the Mediterranean is thought to have been a case of arson. The fire in October 2001 wiped out forest and shrubbery in the area of Vasilikos, where the protected beach in the Zakynthos National Marine Park is located. The beach is a nesting site for endangered marine turtles. The region is a prime tourist area and is sought after for development. The national park was established in December 1999 to protect turtles and Mediterranean monk seals.
Source: *Marine Turtle Newsletter* (2002), **95,** 32 (also at http://www.seaturtle.org/mtn).

North Eurasia

New Biosphere Reserves in Northern Eurasia

In September 2001 18 new sites in 13 countries were added to UNESCO's World Network of Biosphere Reserves. Four of these were in areas of the former Soviet Union. The largest in terms of area (4.3 million ha) is on the edge of Lake Issyk-Kul in Kyrgyzstan and consists of semi-desert and subalpine meadow and pastureland. The Vodlozersky National Park forms the core of a 862,360 ha reserve in the extreme north-west of the Russian Federation. It is primarily boreal forest and contains some of the last remaining uncut pine-spruce forest in Europe. Nerusso-Desnianskoe-Polesie is an area stretching across southern Russia to the Ukrainian border and includes wetlands and a mixture of sub-polar and broadleaf forests and woodlands. Finally, Visimskiy Zapovednik in the central Ural Mountains northwest of Ekaterinburg includes river basins and large expanses of coniferous forests.
Source: *Russian Conservation News* (2001), **27,** 41.

Sub-Saharan Africa

Genetic tests suggest two species of African elephant

Genetic analysis of specimens collected from 195 African and seven Asian elephants suggests that there is clear evidence of 'species level' genetic difference between forest and savanna elephants in Africa. The samples from African elephants were collected over an eight-year period from animals living in 21 widely separated groups. The genetic difference between forest and savanna elephants is about 58% of that between African and Asian elephants. Of the 21 groups analysed only one showed evidence of cross-breeding between the two types and that probably happened about 100 generations ago. It is estimated that there are 350,000 savanna and 150,000 forest elephants in Africa.
Source: *International Zoo News* (2002), **49**(1), 34–36 (also at http://www.zoonews.ws).

New gerbil species described from Mali

A new species of gerbil *Gerbillus rupicola* has been described from the Inner Delta of the Niger River in Mali on the basis of morphological and chromosomal data. This new species is very similar morphologically to another bare-footed gerbil species known from northern Africa, the North African gerbil *Gerbillus campestris*, but is distinguished from the latter by a different molar pattern and a specific karyotype. The three specimens on which the description was based were caught in a rocky outcrop, and coupled with behavioural observations of captive animals suggest an adaptation to life in rocky habitats. This is considered unusual as rodents of the genus *Gerbillus* are generally sand dwellers. This new species brings the numbers of *Gerbillus* species found in the Sahelian region to at least nine.
Source: *Journal of Zoology, London* (2002), **256**(2), 181–190.

Water hyacinth back in Lake Victoria

Despite the best efforts to eradicate it, water hyacinth has returned to Lake Victoria in Kenya. The unexpected return of the weed after a year's absence provides a new challenge to the Lake

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Victoria Environmental Management Project, which has spent large amounts of money trying to eradicate it. The Kenya Agricultural Research Institute recently announced that the use of weevils had resulted in a 60% destruction of the weed. This may be a critical tool in the continuing fight against this invasive plant.
Source: *Marine Pollution Bulletin* (2002), **44**(2), 93.

Massive die-off of fish in Kenya

Concerns have been expressed by WWF over massive fish deaths off the northern coast of Kenya. It is suspected that this was caused by a freak off-season bloom of naturally occurring toxic algae. The die-off started in late January 2002 off the coast of Kiunga near the border with Somalia. Huge numbers of fish including manta rays, sharks and tuna have been washed ashore and several green and hawksbill turtles have been found dead. Ocean bottom dwellers such as eels and octopuses were also dying. Marine experts in the region say that the problem is now affecting about 1,000 km of shoreline from Mogadishu in Somalia to the coasts of northern Kenya. The Kiunga Marine National Reserve is designed to protect its rich diversity by limiting unsustainable resource use, including industrial fishing, and WWF has been working with local fishing communities to establish a management plan for the area. Investigations are continuing as to the causes of the die-off.
Source: *Marine Pollution Bulletin* (2002), **44**(3), 181–182.

More exotic fish species found in Lake Naivasha

A new species has been added to the growing list of exotic fish species that are to be found in Lake Naivasha in Kenya, although there is a dispute over its identity. The carcass of a fish measuring almost 70 cm from head to tail and weighing about 6 kg was found in March 2001. Initially it was thought to be a grass carp *Ctenopharyngodon idellus*, an introduced species that has been raised on fish farms in Kenya. It was then identified as a common carp *Cyprinus carpio*. Carps have not been recorded from Lake Naivasha before and they are now part of an exotic mix of non-native species that include large-mouth black bass, at least two species of tilapia, guppies, rainbow trout, and killifishes. The only indigenous fish species left in Lake Naivasha is the straightfin barb *Barbus paluolinosus*.
Source: *Swara* (2001), **24**(3), 19.

Project to conserve forests in western Uganda

The Ugandan government and WWF have signed an agreement on a project that will conserve forests in the west of the country. This is the start of a campaign to safeguard the biodiversity of the Albertine Rift, the western arm of Africa's Great Rift Valley. The Albertine Rift is a natural barrier, and a political boundary between seven countries along its length. Some of the Albertine Rift forests are home to the threatened mountain gorilla whilst others are important for endemic bird species such as the itombwe or Congo bay owl. The forests have become increasingly fragmented as a result of unchecked encroachment and habitat clearance for settlement. The area has one of the highest human population densities in the world, in places exceeding 1,000 people per square km.
Source: *Swara* (2001), **24**(3), 22.

Bushmeat exploitation in the Congo and Amazon basins

A recent study has calculated extraction and production rates of bushmeat species in two key, moist tropical forest regions. Extraction rates were calculated for 57 and 31 mammalian taxa for the Congo and Amazon basins, respectively. The results suggest that Congo basin mammals must annually produce approximately 93% of their body mass in order to balance current extraction rates, whereas Amazonian mammals must only produce 4% of their body mass. On a basin-wide level, 60% of Congo mammals and no Amazonian mammals were exploited unsustainably. The authors estimate that over five million tonnes of wild mammal meat feeds millions of people in Neotropical (0.15 million tonnes) and Afrotropical (4.9 million tonnes) forests annually. These estimates for the Congo basin are four times higher than those previously calculated by other workers, and the conclusion is that bushmeat extraction from the Congo is even more catastrophic for African forest wildlife than previously thought.
Source: *Conservation Biology* (2002), **16,** 232–237.

Congo shrews re-discovered

The only evidence for the existence of Congo shrews has previously been a single specimen collected in 1955 in the Kasai province in southern Democratic Republic of Congo. The species was named *Congosorex polli*, but never seen again. During recent inventory work in the north-western part of the Congo Basin, 15 specimens of a small short-tailed shrew were discovered that turned out to represent a second species of *Congosorex*. The new species *Congosorex verheyeni* was found at three localities north of the Congo River in the Republic of Congo and in the Central African Republic. Two localities are inside the Odzala National Park. The status of *C. polli* in the Kasai province remains unknown.
Source: *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Biologie* (2002), **71** (Supplement), 7–16.

Impact of tsetse fly control on the Okavango Delta

In 2001 the Ministry of Agriculture in Botswana sprayed a large area of the north of the Okavango Delta with the insecticide Deltamethrin in an attempt to control tsetse fly. Aerial spraying of the area was conducted five times between the end of May and September. Numbers of tsetse flies were severely reduced but there have been concerns over which other insect populations might have been affected and whether there have been impacts on crayfish that are known to be susceptible to pyrethroid insecticides. BirdLife Botswana is concerned about the impacts on insect-eating birds such as palm swifts and scrub robins, and on rare slaty egrets that feed their young on insects and fish. It is planned that the southern half of the delta will be sprayed in 2002.
Source: *Africa/Afrique* (2002), **4**(1), 5.

Turtle protection in Mauritius proves effective

In 1998, the Government of Mauritius introduced the Fisheries and Marine Resources Act that amongst other things made the killing and selling of marine turtles illegal. Despite this, turtles continued to be killed at a rate of about 500 a year according to the Mauritius Marine Conservation Society (MMCS). Following a report prepared by MMCS

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in November 2000 that highlighted the continuing sale of stuffed turtles or turtle parts, the Ministry of Fisheries sent their officers to confiscate all turtle products. Re-inspection of the offending outlets in April 2001 found that there was no evidence of turtles for sale. However, turtles were still being offered for sale on Rodrigues, and these materials were confiscated by the authorities in June 2001.
Source: *Marine Turtle Newsletter* (2002), **95,** 21 (also at http://www.seaturtle.org/mtn).

Free-ranging domestic dogs outcompete wild scavengers

Numbers of free-ranging domestic dogs have reached unprecedented levels in Zimbabwean agropastoral rural areas. At the periphery of wildlife reserves they compete with vultures, and to a lesser extent with lions, leopards and spotted hyaenas, for animal carcasses. On the boundaries of wildlife reserve dogs outcompete vultures. With a population growth rate of 6.5% per annum the influence of dogs will intensify on the peripheries of reserves, exacerbating their existing threat to wild scavengers. This scenario is probably occurring in many other African countries.
Source: *Animal Conservation* (2002), **5,** 29–37.

South and South-east Asia

Lemur fossils cause controversy

A discovery of what are thought to be the oldest known lemur fossils in the Bugti Hills in central Pakistan has caused controversy. If the finds are authenticated it would suggest that lemurs originated in Asia not Africa as is commonly believed. The 30 million year old fossils consist of tiny teeth that resemble those of the modern dwarf lemur *Cheirogaleus*. The new lemur has been named *Bugtilemur mathisoni*. However, scientists have cast doubt on whether the teeth actually belong to a lemur and some have suggested that they came from a genus of now-extinct Eurasian primates *Sivaladapsis* that lived in India about 13 million years ago.
Source: *Swara* (2001), **24**(3), 14.

East Asia

Conservation of alligators in China

In December 2001 it was confirmed that the Chinese government had officially approved the draft plan for conserving Chinese alligators. The State Forestry Administration has allocated a budget of $2 million for the reintroduction programme in Anhui Province, and approval for a similar programme in Zhejiang Province is expected. However, before these plans can be implemented preliminary preparation and research needs to be undertaken, a process that requires external funding. The IUCN-SSC Crocodile Specialist Group is currently pursuing funding opportunities to provide matching funds to the $12,000 that has already been raised through the Chinese Alligator Fund.
Source: *Crocodile Specialist Group Newsletter* (2001), **20**(4), 71.

Most South China fauna hanging on

Since 1998 rapid biodiversity surveys have been conducted in most of the major forest nature reserves in South China's Guangxi, Guangdong and Hainan provinces. The surveys, by Hong Kong's Kadoorie Farm and Botanic Garden, with the provincial Forestry Departments and various research institutions, have improved knowledge of the distribution and status of fauna in this part of China. Several species of reptile, amphibian and dragonfly found are new to science, and many freshwater fish and ants require further study. Range extensions were recorded for many other species, including 25 species of birds. The biodiversity of the region faces many threats, within and outside protected areas, and the regional status of species not recorded in the surveys, including 17 native birds, nine chelonians, seven lizards, 25 snakes and 15 amphibians, is uncertain. But reserves such as Bawangling, Damingshan, Dayaoshan, Diaoluoshan, Huaping, Jianfengling, Nanling and Nonggang continue to harbour much of China's megadiverse tropical biota.
Source: *Living Forests* (2001), **3,** 13–18.

Native tree nursery in Guangdong

China's Guangdong Province has established an experimental native tree nursery at Zengcheng City, a joint project of the provincial and city Forestry Bureau and South China Agricultural University. Much afforestation in China occurs in uniform stands using non-native species, and the nursery, like its sister project at Kadoorie Farm and Botanic Garden in Hong Kong, seeks to improve and promote the techniques for natural forest restoration. In tests over 40 species have successfully germinated at Zengcheng, and 20,000 seedlings from 20 species are being propagated.
Source: *Living Forests* (2001), **3,** 8–10.

North America

Response of killer whales to whale-watching boats

A voluntary code for whale-watching boats off the coast of British Columbia requests that whale-watching boats do not approach whales closer than 100 m. An examination of the effect of boats on killer whales *Orcinus orca* in Johnstone Strait found that even boats that followed the voluntary code caused whales to alter their swimming speed, angle between successive dives or swim path, with males and females having different responses. These results emphasize that weakening whale-watching guidelines, or not enforcing them, would result in higher levels of disturbance.
Source: *Journal of Zoology, London* (2002), **256,** 255–270.

Judge refuses to overturn swordfish fishery ban

In August 2001 a federal judge refused to overturn the government's decision to close the swordfishing area in the Grand Banks off the coast of Newfoundland. The area had been closed in mid-July as an attempt to protect endangered leatherback and loggerhead turtles from fishing lines and hooks. Members of the swordfishing industry had asked for a preliminary injunction to re-open the fishery during the prime fishing season while litigation moved forward. This was refused.
Source: *Marine Turtle Newsletter* (2002), **95,** 30 (also at http://www.seaturtle.org/mtn).

Rock climbing decreases vegetation cover and diversity

An examination of the effect of rock climbing on the vascular plant, bryophyte, and lichen communities along the

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Niagara Escarpment in souther Ontario, Canada, has shown that density, percent cover, species richness and species diversity of vascular plants were lower on climbed than on unclimbed outcrops, and the proportion of alien plants was three times greater in climbed areas. Bryophyte and lichen communities were also negatively affected by climbing. Conservation plans need to be modified to include specific policies regarding rock climbing.
Source: *Conservation Biology* (2002), **16,** 389–398.

US biodiversity and species at risk

A new report from The Nature Conservancy indicates that almost one quarter of US states are facing the possibility of losing at least 10% of their native species. The report examines the status of more than 21,000 wild plants and animals and ranks each state by both its biodiversity, and the risks to that biological wealth. The report *States of the Union: Ranking America's Biodiversity* draws on ongoing species inventories conducted by state natural heritage programmes. The data was analyzed by NatureServe, a non-profit organization that provides scientific information about rare and endangered species and threatened ecosystems.
Source: http://nature.org/earthday/work

Ban on shark finning extended to Pacific Ocean

The US federal ban on shark finning has been extended to the Pacific Ocean by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. Finning, the practice of cutting off the fins and throwing the remainder of the shark overboard, is prohibited under state regulations on the West Coast, in a number of Atlantic states, and Hawaii, and has been prohibited in federal waters of the Atlantic Ocean, the Gulf of Mexico and the Caribbean Sea since 1993. The slow growth, late sexual maturity and low birth rate of sharks make them particularly vulnerable to overfishing. The new regulations, effective from 13 March 2002, implement the Shark Finning Prohibition Act of 2000, which make it unlawful for any federally regulated fishing vessel to carry or land shark fins without the entire shark carcass. This prohibition on shark finning in the Pacific Ocean will immediately reduce waste of shark meat and will also prohibit foreign vessels from landing fins in US ports without corresponding shark carcasses.
Source: http://www.publicaffairs.noaa.gov/releases2002/feb02/noaa02018.html

Essential fish habitat rules published

The US National Marine Fisheries Service have published final regulations implementing the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act. These provide guidelines for identifying and conserving necessary fish habitats for fish as part of federal fishery management plans. The Magnuson-Stevens Act aims to minimize adverse effects of fishing on EFH and identify other actions that may conserve and enhance EFH. The objective of the EFH programme is to conserve and enhance habitats that support sustainable fisheries and contribute to healthy ecosystems. Government agencies will work with industries, fishery groups, conservationists and the general public to help stop the disappearance and degradation of fish habitats.
Source: *Marine Pollution Bulletin* (2002), **44**(3), 183.

Replanting to aid grizzly bears in Montana

Scientists have started a replanting programme in Glacier National Park, Montana, to provide extra food supplies for the region's grizzly bears over the next 100 years. Whitebark pine saplings are being planted in patches of recently burnt subalpine forest in the hope of providing a sustainable food source for the grizzlies. It is also hoped that this will keep the bears at higher altitudes and reduce the incidences of conflict with humans. The population of whitebark pine, whose seeds are a favourite food of grizzlies, has declined severely in the past few decades because of fire suppression and white pine blister rust, a fungus introduced to the area in 1910. The disease has killed nearly 45% of the whitebark pines in Glacier, and of the remaining trees 85% are infected and unlikely to survive. Whitebark pines live for more than 1,000 years and need intense sunlight to grow. Fire suppression regimes have meant that the trees have become shaded by shrubs and other trees. The level of success of the planting scheme will not be known for some time.
Source: *National Parks* (2002), **76**(1–2), 23.

American burying beetle reintroduction programme

A recent reintroduction programme may be the largest ever undertaken for an endangered insect species. On 11–12 June 2001, 320 endangered American burying beetles *Nicrophprus americanus* were released on Nantucket Island off the Massachusetts coast, which was a historic locality for the species. Over 300 of the beetles had been raised at the Roger Williams Park Zoo in Providence, Rhode Island.
Source: *Endangered Species Bulletin* (2002), **27**(1), 24.

Killing fish to save a frog

The impacts of non-native fish that are used to stock once fishless lakes mean that a unique frog is threatened with extinction. The mountain yellow-legged frog *Rana muscosa* is found in high-altitude lakes in the Sierra Nevada in the western US. In the 1850s settlers began stocking these lakes with non-native species such as trout. As a result, nearly 80% of lakes in the Sierra Nevada now contain non-native fish. Tadpoles of the mountain yellow-legged frog have increasingly become prey for trout. Much of the frog's remaining habitat lies within Yosemite and Sequoia/Kings Canyon national parks where the Park Service has stopped stocking and started removing established fish populations. The fish are being killed using gill netting, a safer alternative to the previous use of poisons that killed many non-target species. Other factors in the decline of frog populations include increased pesticide use, and the impact of chytrid fungi that has also been linked to die-offs in other areas of the world. Initial results from fish removal have been encouraging, with one lake showing an increase in population from 20 in 1996 to 750 in 2001 following removal of the fish in 2000.
Source: *National Parks* (2002), **76**(1–2), 49.

Bush administration delays protection of turtles and whales

Environmental organisations have filed a 60 day notice of intent to sue the US National Marine Fisheries Service (NMFS) for its failure to protect endangered sea turtles and marine mammals from drowning in large numbers in the California drift gill net fishery for thresher shark and swordfish. In October 2000 the NMFS had concluded that the issuing

of Marine Mammal Protection Act permits and the continued operation of the fishery would jeopardize the continued existence of loggerhead and leatherback turtles. In order to avoid this it was stated that the NMFS should close the fishery or find a reasonable and prudent alternative. The NMFS argued that the fishery could only continue if new regulations were produced by August 2001 to reduce capture and mortality of the protected species. To date, no such regulations have been forthcoming.
Source: *Marine Turtle Newsletter* (2002), **95,** 28 (also at http://www.seaturtle.org/mtn).

60 tons of marine debris removed from around Hawaiian Islands

A team of scientists and researchers have removed more than 60 tons of nets and derelict fishing gear in a 90-day clean up operation in the sea off the north-western Hawaiian Islands. Scientists estimate that there are still more than 100 tons of derelict fishing gear that is destroying fragile coral reefs or threatening endangered species such as the Hawaiian monk seal, as well sea turtles and a variety of seabirds and other wildlife. This operation is in the second year of a three-year plan to remove the backlog of debris. A total of $3 million has been allocated for ocean debris removal.
Source: *Marine Pollution Bulletin* (2002), **44**(1), 5.

Artificial cavities assist in conservation of Hawaiian honeycreeper

The endangered Hawai'i 'Akepa *Loxops coccineus coccineus* is a Hawaiian honeycreeper that nests in naturally occurring cavities in large trees. There is evidence to suggest that populations of 'Akepa are declining because cavity-trees are falling at a faster rate than they can be replaced. It has been shown that the provision of artificial nesting cavities can help in the conservation of this species. In early 2001 an extended artificial cavity scheme was instigated at the Hakalau Forest National Wildlife Refuge using sewer pipes that had been sanded to produce a grey appearance. Initial results show that five of the 200 cavities were used and it also seems that the cavities may increase breeding success. It is expected that new cavities will be used in the forthcoming 2002 breeding season.
Source: *'Elepaio* (2002), **62**(2), 103.

Turtle nesting beach saved from development in Mexico

Environmentalists and local residents celebrated a victory after a sea turtle nesting beach on the Mexican Caribbean coast was saved from development. A Spanish firm had been planning to build luxury hotels on the site. This was one of the last pristine beaches on this rapidly developing coast. The hotel project would have closed the Xcacel beach to the public and possibly disturbed the nesting habits of sea turtles. The company, Sol Melia, had argued that the project would not affect the turtles but the authorities did not accept their arguments. It is now hoped that the beach, 60 miles south of the resort of Cancun, will be declared a nature reserve.
Source: *Marine Turtle Newsletter* (2002), **95,** 29 (also at http://www.seaturtle.org/mtn).

Storm kills migratory monarchs

Between 12–16 January 2002 a severe winter storm hit the monarch butterfly sanctuary region in central Mexico. Based on data collected from the two largest sanctuaries, over 75% of the population was killed by this single storm. At Sierra Chincua Sanctuary 74% of the butterflies were killed, and at El Rosario Sanctuary 80% of the population was killed. At the two colonies combined an estimated 200–272 million butterflies were killed. These two huge colonies are the winter sanctuaries of 2/3 of eastern North America's migratory monarch butterflies. The other 1/3 are spread among other smaller sites in the vicinity.
Source: http://www.learner.org/jnorth/spring2002/species/monarch

Central America and Caribbean

Plan to purchase private lands in the US Virgin Islands

The US National Parks Service is scrambling to buy more than 400 acres of land that is under imminent threat of large-scale development in the Virgin Islands National Park on the island of St John. The land is thought to be worth between $8 and $12 million. There are concerns that development in the national park will increase soil erosion, degrade water quality and destroy habitat for migratory birds. St John includes important nesting sites for green and hawksbill turtles, and coral reefs and seagrasses offshore could be negatively affected by increased sedimentation. There are also concerns about damage to the island's cultural and archaeological resources. The island has a rich history dating back to 710 BC when Indians from South America first colonized the area. Around 33 AD the island supported a small community of Arawak Indians and in 1694 Danish settlers arrived, attracted by the opportunity to grow sugar cane.
Source: *National Parks* (2002), **76**(1–2), 24.

Sawfish and Hawaiian insects proposed for protection under Endangered Species Act

The US Fish and Wildlife Service has proposed that the smalltooth sawfish *Pristis pectinata* and 12 Hawaiian insects in the Drosophilidae family be listed under the Endangered Species Act. The National Marine Fisheries Service has completed a status review of the smalltooth sawfish and concluded that the North American populations are threatened with extinction. Extensive degradation or loss of coastal habitats, water pollution and incidental capture during commercial fishing operations are believed to be responsible for the decline. The 12 Hawaiian insect species, known as picture-wings, are part of a group that may number 1,000 species, each one of which is adapted not only to a particular island but also a specific habitat type. Each of the 12 species to be proposed as endangered is found only on a single island and each breeds only on a single or a few related species of plants, some of which are also listed as threatened or endangered. Threats to these insects include habitat degradation by feral animals and alien plants, habitat loss from fire, biological pest control and predation from alien ants and wasps.
Source: *Endangered Species Bulletin* (2002), **27**(1), 26.

South America

White-winged guans reintroduced

In September 2001 six Critically Endangered white-winged guans *Penelope albipennis* were reintroduced to the Chaparri Private Conservation Area in

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Peru. The bird species had been presumed extinct until its rediscovery in 1977, and continued hunting pressure has meant that there are now possibly fewer than 100 individuals in the wild, with remaining populations small and fragmented. Captive breeding has produced more than 100 birds and this release is the first in the ongoing reintroduction programme. The 36,500 ha Chaparri Private Conservation Area is the first of its kind in Peru and is now one of the most important protected areas in the Tumbesian region of northern Peru, supporting 35 restricted-range and four threatened bird species. It is also the site of conservation programmes for spectacled bear, Andean condor and guanaco.
Source: *International Zoo News* (2002), **49**(1), 33 (also at http://www.zoonews.ws).

Australia/Antarctica/New Zealand

Protection for Australia's migratory birds

Australia's Natural Heritage Trust has pledged $210,000 for action in the Asia-Pacific region, where migratory shorebirds gather to rest, feed and breed on their way to Australia. Activities will be concentrated on the East Asian-Australasian Flyway that consists of a chain of different wetland sites along which the birds fly. Key areas of the Flyway include the Yellow Sea where huge numbers of birds rest during their migration to and from Australia. Around two million birds of 40 species make the round trip each year between Australia and their Arctic breeding grounds. A range of countries along the Flyway will cooperate with the conservation efforts. These conservation activities form part of the Shorebird Action Plan that began in 1998 and which aims to build up a network of 100 internationally significant habitat sites in 18 countries by 2005.
Source: *Marine Pollution Bulletin* (2002), **44**(3), 182.

Slaughter of seabirds continues

In late 2001 a New Zealand fishing boat using long lines caught more than 300 seabirds as by-catch on the Chatham Rise. Most were petrels though some were albatrosses. The vessel concerned was allowed to return to the area in January 2002, and also to go fishing in the Ross Sea. New Zealand is considered the 'seabird capital' of the world with more endemic albatross and petrel species than any other country. About 40% of albatross species breed only in New Zealand. The New Zealand NGO Forest and Bird is pressing the government to require all fishing boats to adopt international best practice to reduce seabird by-catch, to establish by-catch quota limits, to prohibit vessels from fishing in areas with high seabird numbers and in the longer term to establish oceanic marine reserves to protect areas such as seabird feeding sites.
Source: *Forest and Bird Conservation News* (2002), **125,** 2.

Calls for inquiry into impacts of air tourism

The New Zealand Conservation Minister is being asked to establish an inquiry into aircraft access and the need for stronger controls to protect the natural quiet and remoteness of protected areas. Noise pollution from aircraft is an escalating problem, particularly in the Aoraki/Mount Cook National Park and Fiordland areas. Scenic flights and aircraft landings for recreational activities all contribute to the problem. In the Aoraki/Mount Cook National Park, the Department of Conservation allows more than 7,000 aircraft landings annually. In Fiordland aircraft operators offer tourists champagne picnics beneath Mount Tutuko in the Darren Mountains, as well as jet boat trips in the wilderness of the Pyke, Lake Alabaster and Lake McKerrow areas, all part of the South West New Zealand World Heritage area.
Source: *Forest and Bird Conservation News* (2002), **125,** 3.

Fungus attacks rare New Zealand frogs

The chytrid fungus, which has been responsible for decimating amphibian populations worldwide, has struck one of New Zealand's endangered native frogs. In September 2001 a dead Archey's frog was found in the Coromandel Range of North Island. It exhibited skin lesions typical of chytrid fungus infection. The fungus was first found in New Zealand in two introduced Australian species in 1999. Archey's frog is one of four *Leiopelma* frogs that are of huge scientific interest because they are the most ancient left in the world. It is found only in the Moehau and Colville Ranges on the Coromandel Peninsula and at Whareorino forest west of Te Kuiti.
Source: *Forest and Bird* (2002), **303,** 6.

Calls for tougher bio-security controls

Repeated invasions by insect pests have highlighted the need for tougher bio-security measures in New Zealand. In 2001 the list of unwanted invaders included venomous black widow spiders found on imported Californian table grapes, fire ants discovered at Auckland International Airport, larvae and pupae cases of the disease-carrying Asian tiger mosquito found at wharves in Auckland and Wellington, and a yellow fever mosquito found in a container of used cars at Auckland wharf. Figures from the Ministry of Agriculture and Fisheries show that the rate of gypsy moth interceptions on imported used vehicles tripled from 1998 to 1999. The gypsy moth could have devastating consequences for native and plantation forests. It has been suggested that less than half of imported vehicles are checked before being shipped to New Zealand.
Source: *Forest and Bird* (2002), **303,** 9.

Massive icebergs may affect Antarctic sea life and food chain

Research using satellite data has shown that large icebergs, broken off from Antarctica's Ross Ice Shelf, are dramatically affecting the growth of minute plant life, vital to the food chain in the oceans around the region. The icebergs appear to have caused a 40% reduction in the size of the 2000–2001 plankton bloom in one of Antarctica's most biologically productive areas. The icebergs decrease the amount of open water that the plants need for reproduction. After the calving, or breaking off, of the B-15 iceberg in March 2000 researchers used imagery from NASA's SeaWiFS (Sea-viewing Wide Field-of-view Sensor) satellite and data from the Defense Meteorological Satellite Program to see the effect that large icebergs have on phytoplankton blooms. B-15 had a surface area of approximately 10,000 square km. The south-western Ross Sea

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is one of the most biologically productive regions in the Southern Ocean surrounding Antarctica. Phytoplankton are a critical part of the ecosystem in the Ross Sea, as they sustain marine mammals and birds in the region.
Source: http://www.gsfc.nasa.gov

Antarctic penguin colonies threatened

Enormous grounded icebergs and an unprecedented amount of sea ice have nearly isolated one of the Antarctic continent's most populous Adelie penguin colonies. The number of Adelie penguins at Cape Crazier is lower than in previous years, and it is feared that a colony at Cape Roads will fail totally in 2002. The icebergs broke away from the Ross Ice Shelf in March 2000 and have created a barrier that has altered wind and current patterns. Sea ice has increased the distance between breeding colonies and food sources in the open sea, meaning that birds must now walk rather than swim to their colonies. The Adelie colony at Cape Crazier is the sixth largest in the world.
Source: *Marine Pollution Bulletin* (2002), **44**(2), 92–93.

The *Briefly* section in this issue was written and compiled by Simon Mickleburgh and Martin Fisher, with additional contributions from Guillaume Chaperon, John R. Fellowes, Michael Hoffman, Rainer Hutterer and Anthony Rylands. Contributions from authoritative published sources (including web sites) are always welcome. Please send contributions to Martin Fisher, Fauna & Flora International, Great Eastern House, Tenison Road, Cambridge, CB1 2TT, UK, or by e-mail to oryx@fauna-flora.org