

International**Preserving top predators benefits biodiversity**

When it comes to the promotion of environmental awareness and fundraising, top predators are often used as flagship or umbrella species, a process that has been criticized in the past for not delivering enough benefits to biodiversity as a whole. Now, however, a study has compared biodiversity levels at sites occupied by breeding raptors with control sites, and found that the levels were consistently higher at sites containing top predators. Furthermore, a simulation of reserve selection showed that protected area networks based on the presence of top predators were more efficient than networks based on lower trophic level species.

Source: *Journal of Applied Ecology* (2006), 43, 1049–1055.

Rarity not necessarily a death sentence...

Rarity is not the most important issue when considering whether a species will go extinct, according to a study that looked at the fossil record of rare mammals at four North American sites. The extent of a species' range and how its population changes over time are more important when it comes to survival. In the case of the pika, for example, the fossil record indicates that this small grassland mammal has always been rare, but has existed in its mixed grassland/conifer forest habitat for almost 1 million years. Researchers suspect that rare species must have traits that help them to survive, and that communities may be linked in ways that are not yet apparent.

Source: *New Scientist* (2006), 192(2576), 14.

... although labelling something rare may well be

In economic thinking being rare, and therefore overexploited, would not be enough to cause a species to become extinct, because there would come a point when it would be unprofitable to continue hunting a species. However, research has shown that hunters will

continue to hunt for species because collectors are willing to pay huge prices for scarce species. In fact, the rarer a species is, the more expensive it becomes, and its acquisition becomes a matter of status. In the case of the Endangered Napoleon wrasse, for example, wealthy Asian businessmen who want to flaunt their affluence when closing business deals will buy a plate of Napoleon wrasse lips, a pair of which costs USD 250, with the result that this species became the most sought after reef fish in the world in the mid 1990s.

Source: *PLoS Biology* (2006), 4(12), e415.

Nomads know best

An IUCN report reveals that nomads make better use of land than farmers, and that their lifestyle also helps to combat climate change. Pastoralism can be up to 10 times more productive than ranching, and nomads dominate the export of a number of goods such as cashmere from China and camel milk from Mauritania. One reason for the success of pastoralism is the way it uses natural resources; in areas of water shortage, for example, following the rains is often the best way to capitalize on a scarce resource. The nomads' livestock are instrumental in increasing biodiversity through their grazing, as their dung is an excellent fertiliser, and rangelands lock carbon into their soils. The world's estimated 200 million nomads, however, are losing land to farmers and ranchers, often in the name of economic progress.

Source: *New Scientist* (2006), 193(2591), 4.

CO₂ prize gets a contender

A mere week after Richard Branson launched his USD 25 million competition to find a cost-effective technology to remove CO₂ from the atmosphere one person has already come up with an idea. Ian Jones from Australia's Ocean Technology Group has devised a project whereby a land-based fertiliser factory will feed urea into the ocean to boost the growth of photosynthetic plankton. While the plankton grows it will absorb CO₂ from the water, and subsequently from the atmosphere. Eventually the plankton will be eaten by fish or sink to the bottom of the ocean. A possible flaw in the project is that the carbon may in time be released by ocean processes, although Jones believes that it will be locked up forever.

Source: *New Scientist* (2006), 193(2591), 5.

Movers and shakers

If mankind had not invented ways of moving soil, the surface of the earth would be 6 cm higher than it is today. Geologists have calculated the natural rate of sediment erosion and deposition over the past 500 million years and found that at the height of the Roman Empire humans had already started moving more earth than all natural forces combined. The current rate of erosion in croplands is 10–15 times higher than the background geological rate. The researchers hypothesize, however, that soil erosion will not constitute the most serious threat to feeding the world population in the future; this dubious honour falls to increases in the population itself.

Source: *New Scientist* (2006), 192(2582), 17.

Barcoding reveals 21 new species

A trial run of a project that aims to classify all life on earth according to its DNA has already produced results, with the discovery of six new bat species and 15 bird species. Researchers examined the DNA of 643 bird species in North America and 87 bat species in Guyana as a test for the genetic barcoding project. In each species the *cytochrome c oxidase* gene, located in the mitochondrial DNA, was screened, as this is one of only two genes shared by all higher organisms. Because the precise sequence of the gene is different for each species, however, the *cytochrome c oxidase* gene is ideal for distinguishing cryptic species that, to all intents and purposes, appear to be the same as other species.

Source: *New Scientist* (2007), 193(2592), 5.

Positive interactions between species can underpin ecosystems

For decades ecologists have gone along with the idea of 'selfish' species that depend on another species doing badly, through competition for example, to profit. Now research has shown that in some cases groups of species exist together because of the presence of 'foundation' species that create a suitable habitat for others. Studies on the pebble beaches along Rhode Island's coast, an inhospitable environment, found that the presence of cordgrass had a beneficial effect on the other species in this ecosystem, probably through preventing the pebbles from rolling, and creating shade and crevices for the other species to use. Such often complex, beneficial interactions may be of great importance in harsh environments,

but may also exist in more benign environments too.

Source: *New Scientist* (2007), 193(2589), 13.

Other scavengers affected by painkillers

The recent focus on the anti-inflammatory drug diclofenac, now banned in India and Nepal because of its fatal effects on vultures, has caused researchers to consider the effects of painkillers on other scavenging birds. Britain's Royal Society for the Protection of Birds asked vets and zoos around the world for their experiences of the effects of painkillers on scavenging birds, and found that the alternative for diclofenac appears to be safe for most species. However, other painkillers such as flunixin and carprofen, used for livestock in Europe, have killed condors, owls, hawks, vultures, rails and a Marabou stork. There are also concerns that other drugs, including Ibuprofen, may have negative effects on scavengers too.

Source: *New Scientist* (2006), 192(2577), 7.

Study reveals sliver of hope for fishes

A study that combined data from many different sources, from small scale controlled experiments to global fisheries, to assess the impacts of biodiversity loss on ecosystem services in the oceans has found that rates of resource collapse increased, as did declines in recovery potential, stability and water quality in conjunction with declines in biodiversity. However, the researchers also found that these trends may yet be reversible; restoring biodiversity through the use of marine reserves and fisheries closures, for example, increased productivity fourfold and decreased variability by 21% on average. The findings suggest that action is needed urgently to halt the ongoing loss of biodiversity in the oceans.

Source: *Science* (2006), 314, 787–790.

Whale scat revelations

A project that analyses whale droppings collected with the aid of sniffer dogs is revealing much valuable information about the northern Atlantic right whale. Whale scats hang just below the surface before they break up and it takes a sensitive canine nose to detect them, in this case a Rottweiler previously trained as a drug sniffer specializing in cocaine and narcotics. The samples are being analysed for hormone levels, parasites,

and lipid levels to assess nutritional status, as well as for the whale's DNA. So far the study has revealed that a contributing factor to the right whales' inability to recover from centuries of hunting may be related to the high levels of paralytic shellfish poisoning that the whales ingest from their main prey *Calanus* copepods.

Source: *New Scientist* (2006), 192(2583/2584), 54–57.

Survival guides published for coral reefs and mangroves

IUCN and The Nature Conservancy have published two reports outlining strategies to help coral reefs and mangroves, respectively, survive the impacts of climate change. Both of these fragile marine ecosystems are vulnerable to climate change, among many other threats; corals can lose their symbiotic zooxanthellae as a result of changes in sea surface temperatures, and mangrove forests are threatened by climate change driven rises in sea level. The reports' recommendations for mitigating damage to corals include improved reef monitoring, creation of marine protected areas, and coastal and fishing management schemes; strategies for aiding mangrove protection include establishing green belts and buffer zones, and managing human demands on mangrove forests.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/sci/tech/6103314.stm>

Planting trees at higher latitudes may not combat global warming

New findings on tree-planting as a means to combat global warming suggest that the location of newly planted trees is critical. While trees planted in the tropics can help to reduce global warming by taking up CO₂ and increasing cloudiness, trees planted further away from the equator absorb heat through their dark foliage, thus trapping the heat near the ground. This problem is especially pronounced in snowy regions, where the drawbacks of planting new trees can outweigh the benefits brought by carbon absorption. Models show that planting more trees at mid and high latitudes, which include the United States and the majority of European countries, may lead to an increase in temperature of a few degrees by 2100.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/sci/tech/6184577.stm>

Action Plan for spoon-billed sandpiper

An International Species Action Plan has been drawn up for the Endangered spoon-billed sandpiper, a wader with a uniquely-shaped spatulate bill. The sandpiper, which breeds in Russia and overwinters in South and South-east Asia, has declined by 80% in the last 30 years, and researchers are unsure of the reasons behind the decrease in numbers. It is suspected, however, that the causes of the decline are to be found along the migratory flyways of the sandpiper, as large-scale wetland reclamation, urban expansion and industrial development are prevalent along the flyway. The Action Plan was drawn up under the auspices of the Convention on Migratory Species by experts from 10 Asian countries along the spoon-billed sandpiper's migratory route.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2007/01/sbs_workshop.html

EU fish quota decided for 2007

After much wrangling, EU Fisheries Ministers have come to an agreement on 2007 fishing quotas. The new deal includes a 20% cut in cod catches off the west coast of Scotland and in the Celtic Sea, and 15% cuts elsewhere, apart from the North Sea where the catches are to be cut by 14%. These figures are less than the original cuts proposed by Brussels, which recommended a 25% cut in quota size. In addition, the number of days spent at sea by fishermen is to be reduced by 7–10%. Other species' quotas have also been changed, with an increase in quotas seen for northern hake, of 20%, and for Bay of Biscay sole, of 12%. Environmental groups criticized the deal, saying the cod quotas in particular did not go far enough to protect the species, but the Fisheries Commissioner said that the commission had to take into account the livelihoods of those dependent on fishing.

Source: *BBC News* (2007), <http://news.bbc.co.uk/1/hi/world/europe/6197433.stm>

Census of marine life turns up oddities

A project that aims to record all marine life by 2010 made some extraordinary discoveries in 2006, including organisms that live in the hottest ocean waters ever discovered. Heat-resistant shrimps and mussels were found living near volcanic

fissures 3 km below the surface of the South Atlantic where the temperature can reach 407°C, and where instant temperature fluctuations of 80°C are not uncommon. Other organisms discovered during the project, which involves more than 1,700 researchers in 70 countries, include the yeti crab, which lives at depths of 2,300 m and has long hairs covering its pincers and arms that provide a home to colonies of yellow bacteria, and a rock lobster that weighs up to 4 kg.

Source: *National Geographic News* (2006), http://news.nationalgeographic.com/news/2006/12/061211-sea-creatures_2.html

Europe

Road to disaster

More than 90 million birds are threatened by a proposed scheme to build a cable-stayed road bridge to link Germany's Isle of Fehmarn and Lolland in Denmark. Currently the only transport between these two places is by ferry, but plans for the bridge would see most of the traffic between Central Europe and Scandinavia using the new route. However, construction of the bridge would affect one of Europe's most important migratory bird routes linking breeding sites in Scandinavia and overwintering sites in Europe. Additionally, marine mammals occurring in the waters around the area may be affected by sea flow changes arising from the development. Conservation organizations are calling for a suitable impact assessment to be carried out before any further plans are made or approved.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/bridge_to_disaster.html

UK marine species head north

A 4-year study into the effects of climate change on marine biodiversity has found that intertidal marine species are moving north in UK waters. The distributions of 57 species were mapped at over 400 locations across the UK, using data collected in the 1950s and more recently. Southern, warm water species have been moving north and east to cooler waters, while the southern range of northern species is contracting. The species with the greatest change in distribution include the purple acorn

barnacle, which has extended its range by 170 km to the east and the purple topshell, which has spread 85 km further north along the Scottish coast.

Source: *Marine Pollution Bulletin* (2007), 54, 119.

Iceland chastised after resumption of whaling

Diplomats from 25 European and American countries have sent a letter of protest to the Icelandic government over the country's decision to resume commercial whaling. Iceland's announcement in mid October that it would resume hunting makes it only the second country after Norway to hunt the great ocean-going whales openly on commercial grounds. The diplomatic demarche, one of whose signatories is the British ambassador to Reykjavik, said that Iceland should respect the global moratorium on whaling and reverse their decision.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/sci/tech/6107074.stm>

Balkan lynx needs urgent action

The largest of Europe's wild cats, the Balkan lynx, needs urgent attention to prevent it from becoming extinct. Only c. 100 individuals of this distinct subspecies remain in the wild, with the biggest population located in the hills of Macedonia. There are other populations in Albania, Serbia and Greece. A group of conservation organizations are working together to collect more information about the species using camera-trapping and, ultimately, DNA analysis. The group are also calling for more protection of the lynx's habitat; one of the reasons for its decline has been the removal of large areas of Albania's dense forests for firewood and grazing.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/world/europe/6114962.stm>

Aquatic warbler's wetland breeding habitat protected

Mainland Europe's rarest songbird, the aquatic warbler, looks set for a brighter future after a deal was struck to protect one of its key breeding sites. Four hundred and fifteen km² of land in Poland's Biebrza Marshes has been protected and within this area 28 km² will be restored to provide breeding habitat for the warbler. The Vulnerable aquatic warbler, which breeds in lowland marshes and migrates to west

sub-Saharan Africa in the winter, has suffered a marked population decline since 1970 as a result of the drainage of wetlands and canalization of rivers. The Biebrza Marshes are also home to other threatened warblers, as well as about half of Europe's greater spotted eagles.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/sci/tech/6191410.stm>

River Quaggy freed from concrete confines

Like many of London's rivers, the Quaggy flowed through man-made drains and culverts, particularly in Greenwich where the river disappeared into a tunnel beneath a park. However, a review of flood defences around Lewisham and Greenwich found that the risk of flooding was increasing and needed to be remedied. Rather than traditional widening and deepening of the artificial channels making up the river's course, the Environment Agency brought the Quaggy back up to the surface, making a new channel for it based on the river's previous course through the park. The restoration of the river has brought back many aquatic species, and provides a recreation space for people. The new floodplains are also effective in preventing flooding, and the scheme has now won the prestigious Living Wetlands Award.

Source: *RSPB and CIWEM press release* (1 February 2007)

Virgin birth for Komodo dragon

Five eggs laid by a Komodo dragon at Chester Zoo, UK, have hatched after a 9-month incubation period. What makes the hatching so unusual is that the female dragon had never mated with, or mated with, a male Komodo dragon, making this an example of parthenogenesis. While the laying of fertile eggs without mating is known in other groups of animals, this is the first time it has been recorded in a Komodo dragon, and the process has only been recorded in 0.1% of vertebrates. Zoo keepers suspect that the ability to reproduce parthenogenetically may be an advantage for Komodo dragons in the wild, as it would allow lone females to start new colonies in their native home of the islands of Indonesia.

Source: *National Geographic News* (2006), <http://news.nationalgeographic.com/news/2006/12/061220-virgin-dragons.html>

North Eurasia

International framework comes into effect for saiga antelope

After 4 years of negotiations under the auspices of the Convention on Migratory Species, Kazakhstan has joined Uzbekistan and Turkmenistan in signing a Memorandum of Understanding to work together to protect the Critically Endangered saiga antelope. Saiga, which used to range in huge herds across the central Asian steppe, had their population decimated mainly by unsustainable hunting and now only 60,000 remain. The Memorandum provides a framework for the range states of the saiga to work together to conserve and restore the remaining populations of the saiga, and will provide useful experience for other cross-border activities aiming to protect migratory species.

Source: *Convention on Migratory Species press release* (2006), http://www.cms.int/news/PRESS/nwPR2006/Saiga_sep06_E.pdf

Azerbaijan plans for ecotourism

Azerbaijan has become the first country to give prominence to Important Bird Areas (IBAs) in its official national tourism action plan, which covers the next 9 years. The recognition of the IBAs in the tourism plan means that the areas are protected, and even allows for the provision of infrastructure for bird-watching tours. The government's announcement complements the work of the Azerbaijan Ornithological Society, which has been running a nature-based tourism educational campaign since 2006. One of the activities of the campaign has been to provide training and support in eco-tourism to local people around three protected areas of Azerbaijan, with the view that eco-tourism may be an effective way of attracting tourists to the country.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/ecotourism_in_azerbaijan.html

Kazakhstan joins Ramsar Convention

Kazakhstan has become the 154th country to accede to the Ramsar Convention, thus enabling the country to ensure a suitable global strategy for wetland birds. Kazakhstan's first Ramsar site is the Tengiz and Korgalzhyn Lakes in Akmola Oblast, a shallow lake system with a mixture of salty, brackish and fresh water bodies of particular importance to migratory birds. While the

Tengiz-Korgalzhyn lake system was first designated as a wetland of international importance in 1976 by the Soviet Union, the new designation expands the area protected so that the total area of the site is now 353,341 ha. Among the species protected are 10% of the world population of the Dalmatian pelican and the northernmost colony of greater flamingos.

Source: *Environmental News Service* (2007), <http://www.ens-newswire.com/ens/jan2007/2007-01-16-01.asp>

North Africa and Middle East

Good news for Iraq's birds

Iraq's newly emergent conservation movement has taken off with the publication of the *Field Guide to the Birds of Iraq*, written in Arabic. The book covers all 387 bird species recorded in Iraq and is the first comprehensive, fully illustrated guide to the birds of an Arabic speaking country. The guide, published by BirdLife International and the newly formed Nature Iraq and funded by the Canadian government, reveals that despite the ongoing conflict in the country, no species has gone extinct in the Mesopotamian marshes since the last survey was carried out in the 1970s.

Source: *Environmental News Service* (2007), <http://www.ens-newswire.com/ens/jan2007/2007-01-26-03.asp>

Artificial islands criticized for damaging environment

Three groups of artificial islands being built off the coast of Dubai have come under fire for affecting the environment of the area. It is alleged that dredging has destroyed the only known coral reef off Dubai's coast, as well as turtle nesting sites. Additionally, the waters are full of silt because of all the activity in the area; so far 1.65 billion m³ of sand and 87 million t of rock have been moved during the project. The government-owned developer disputes the claims of environmental damage, pointing out that the seabed in the area was a poor habitat that supported few organisms. The development will increase the coastline of Dubai from 60 km to 1,200 km, and will include a new island to provide turtle nesting habitat.

Source: *Marine Pollution Bulletin* (2006), **52**, 1324–1325.

Sub-Saharan Africa

Madagascar pochard rediscovered...

The Critically Endangered Madagascar pochard, a diving duck last seen in 1991, has been recorded from a remote area of northern Madagascar. A survey team from The Peregrine Fund Madagascar Project found nine adults and four ducklings on a lake, and have since returned to the area to collect further data. The last time more than one individual Madagascar pochard was seen was in 1960.

Source: *World Birdwatch* (2006), **28**(4), 5.

... and new species of bat discovered

Scientists conducting fieldwork in the forests of Madagascar have found a new species of sucker-footed bat on the island, only the second bat species discovered with this kind of adaptation. The bat uses the sticky suckers on its feet and thumbs to climb up the large leaves of the tropical plants that occupy its habitat. Unlike the other sucker-footed bat, which lives in the humid woodlands of eastern Madagascar, the newly found species inhabits the dry forests of western Madagascar, which are fast disappearing as slash-and-burn agriculture spreads through the island. However, it appears that the new bat species has adapted to climb the slippery leaves of the traveller's palm, which grows in recently burnt areas, thus indicating that the new species is capable of living in degraded habitats.

Source: *National Geographic News* (2007), <http://news.nationalgeographic.com/news/2007/01/070108-bat-sucker.html>

Adverse weather affects flamingos

Malnutrition may be one of the factors responsible for the large numbers of flamingo deaths in Africa in recent years. A study by Earthwatch at Lake Bogoria in Kenya carried out post-mortem examinations on lesser flamingos, and found that the birds weighed only 63% of their normal body mass. This finding is corroborated by evidence of altered behaviour in Lake Bogoria's lesser flamingos, such as feeding from small rain puddles in fields. It is thought that heavy rains are to blame for the lack of flamingo food; these have caused high water and sediment levels in the lake, thus reducing the lake's concentration of spirulina (the main food source of the flamingos).

Source: *Earthwatch press release* (2007), <http://www.earthwatch.org/site/apps/nl/content2.asp?c=cr1QK3PHLsF&b=453237&ct=3355103>

Swallows threatened by airport development...

The winter roosting site of up to 3 million barn swallows is threatened with destruction to make way for an airport near Durban, apparently in preparation for the football World Cup in 2010. The roost, in the Mount Moreland reedbed, lies directly in the proposed flight path of incoming aircraft, leading to fears that the site will be cleared on safety grounds. The roost contains >8% of the European breeding population of the barn swallow, whose numbers are declining in many European countries largely as a result of an increase in intensive farming practices. Although the area will be subject to an environmental impact assessment, the jobs, trade and traffic that the project will generate may mean that it is granted permission despite the destruction of the swallows' roost.

Source: *Africa Birds and Birding* (2007), 12(1), 72.

... but may benefit from global warming

Barn swallows are showing a decidedly relaxed attitude to breeding, apparently as a reaction to warmer temperatures and a longer growing season. The breeding behaviour of swallows, two thirds of which produce one clutch in April and another in July/August, has been monitored in northern Denmark since 1971. Between the start of the study and 2005 the average gap between clutches increased by 8 days, more fledglings tended to be produced, and breeding also started earlier in the year. The researchers believe that this behaviour is related to global warming; the average April temperature in Denmark has increased by 2.2°C since 1971.

Source: *New Scientist* (2007), 193(2586), 16.

Congo's hippos face extinction

Congolese rebels have driven the Democratic Republic of Congo's hippo population to the brink of extinction, with a 98% reduction in population size since the early 1970s. A militia group, the Mai Mai, have apparently been killing hippos at an unprecedented rate of 150 hippos a week, both for their meat and for their ivory, which is sold on the black market. Recent developments in the area give rise to cautious optimism, however, as the Mai Mai have disbanded their camps and surrendered to government troops.

Source: *Congo Rangers Blog* (2006 & 2007), <http://www.wildlifedirect.org/congo-rangers/?cat=9>

Military technologies used in war against poachers

The World Conservation Society is carrying out a pilot study in the Democratic Republic of Congo using devices to detect poachers who persist in killing the area's elephants for their ivory. A small seismic detector called TrailGuard, previously used to detect enemy troop movements, will be buried along pathways and, when triggered, will send a signal to an antennae in the forest canopy that will relay the information to the forest rangers. As well as detecting movement, TrailGuard contains magnetometers that can detect iron in guns, thus providing an early warning system for when a poaching incident could be imminent. As well as TrailGuard, gunshot detectors in the form of specialized microphones hidden in trees may also be trialled.

Source: *New Scientist* (2006), 192(2581), 30.

EU accused of hindering Africa's carbon trading possibilities

At the 2006 UN climate conference, the EU pledged to help Africans benefit financially from carbon trading schemes, but less than 1 month later researchers at the World Agroforestry Centre (ICRAF) claimed that the EU was not interested in a simple method they had developed for calculating changes in the amount of carbon stored in soil and trees. Researchers at ICRAF believe their technique, based on combining satellite pictures and infrared spectrum analysis, can be used to calculate carbon capture by African farmers who have planted trees on their land. According to the researchers, the EU does not want to recognize their proposal, apparently because of concerns about verifying how much carbon is actually sequestered by farmers' trees and whether this carbon capture will be permanent. ICRAF staff do not believe that these concerns are valid, however, and have urged the EU to be more flexible.

Source: *New Scientist* (2006), 192(2581), 10.

CITES recommends ban on grey parrot trade

Following evidence that grey parrots are declining in the wild, the Animals Committee of CITES has recommended up to a 2-year ban from 2007 on the

export of African grey parrots from Cote d'Ivoire, Liberia, Sierra Leone and Guinea, where the subspecies *Psittacus erithacus timneh* occurs, and from Cameroon where the more widespread *P. e. erithacus* subspecies occurs. The Committee also called for surveys of wild grey parrot populations, and the development of National and Regional Management Plans before trade resumes. A review of the grey parrot trade had revealed that unsustainable numbers of African grey parrots were being traded, most of them destined for Europe.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/CITES_grey_parrot.html

Report into Kenya's IBAs provides pointers for future development

A report into the challenges and pressures facing the conservation of Important Bird Areas (IBAs) in Kenya has revealed that overgrazing and illegal grazing are the two most serious threats, with 57% of the IBAs in Kenya affected by these problems. In addition, illegal selective logging, vegetation destruction, and firewood collection were also cited as serious threats to the conservation of these areas. On a more positive note, the survey, the first of its kind for Kenya's IBAs, found that the state of the IBAs has not changed much between 2004 and 2005. The survey will provide a basis for developing ways of combating the threats to IBAs, and work is already underway to develop environmentally safe alternatives to firewood collection.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/iba_kenya.html

Over-used frankincense trees feel the strain

A new study has found that the tapping of *Boswellia* trees for their aromatic resin, frankincense, is affecting the regeneration of the trees. Frankincense is much valued as an ingredient in incense and perfumes, and has been used for over 2,000 years. However, a study carried out in Eritrea has found that intensive tapping of trees for frankincense production caused fewer flowers, fruits and seeds to be produced when compared to trees where tapping did not occur, probably because tapped trees divert too much carbohydrate into resin at the expense of reproductive organs. While frankincense collection is not ruled out, the researchers suggest that tapping

regimes should include rest periods to allow the trees to recover.

Source: *Environmental News Service* (2006), <http://www.ens-newswire.com/ens/dec2006/2006-12-13-01.asp>

Africa's first vulture sanctuary created

An area in the Fouta Djallon Highlands, in the Republic of Guinea, has been set aside as a vulture sanctuary. The Highlands are home to a significant number of West Africa's vultures, six species of which have undergone rapid population declines mainly as a result of human persecution, indirect poisoning and the increasing rarity of carcasses. The sanctuary is not the only measure being taken for the vultures; conservation organizations, including Fauna & Flora International, have been working with Guinée Écologie on a regional West African vulture project that aims to stabilize vulture populations in rural refuges and to help the species recover in the region.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2007/01/vulture_sanctuary.html

Outcry over killing of storks

Conservationists in Uganda have condemned the killing of Kampala's marabou storks after council workers chopped down the storks' nesting trees on traffic islands, causing chicks to die in the heat of the sun. Although the council workers had been instructed to fell trees near electricity lines, the NGO NatureUganda accused the council of breaching its own environmental guidelines by not waiting until the storks had fledged. The scavenging marabou storks are considered a nuisance by some, but they do perform a valuable role in helping the city to deal with its rubbish problem. Previous attempts to poison the birds were halted following a public outcry, and it is suggested that the only way to control the storks, which are a tourist attraction, would be to clean up the city.

Source: *BirdLife News* (2007), http://www.birdlife.org/news/news/2007/01/maribou_stork_chicks.html

One country's dust is another country's fertilizer

New research has found that the majority of dust fertilizing the Brazilian rainforest comes from a single valley in Africa. Satellite data enabled a team of researchers to measure the weight of the dust that is washed from the soil of the

Sahara by rain, and then blown across the Atlantic. The study showed that 50 million t of African dust are deposited in the Amazon every year, and that 56% of this dust comes from the Bodélé Valley north-east of Lake Chad. The shape of the Bodélé Valley may be the reason why so much dust from this particular area ends up in the Amazon; the valley is flanked on both sides by large mountain ridges that create a cone-shaped crater with a narrow opening, which creates a wind tunnel that picks up the dust and blows it towards the Atlantic Ocean.

Source: *Environmental Research Letters* (2006), **1**, (5 pp.) doi /10.1088/1748-9326/1/1/014005

South and South-east Asia

Man's best friend, especially when it comes to tigers

A research project in the Sundarbans, the world's largest mangrove forest and home to one of the biggest populations of tigers on the planet, has found that pet dogs can help reduce tiger attacks on people. The Sundarbans' tigers kill as many as 50 people per year, with the result that communities in the area are becoming increasingly more hostile towards the tigers. When dogs accompanied groups of fishermen, honey gatherers and woodcutters into the mangrove forest, they were able to detect large animals in the forest and provide enough warning for people to take evasive action. Although the dogs cannot distinguish between different species, their warnings are useful in preventing attacks by tigers, especially for honey gatherers, whose use of smoke makes them particularly vulnerable to attack.

Source: *Cat News* (2006), **45**, 20.

Snow leopard tagged

The shy and elusive snow leopard may soon give up some of its secrets, as a team of researchers have attached a GPS collar to a snow leopard for the first time. Both the habits of the Endangered snow leopard and its rocky, steep habitat in central Asia's mountains, make it hard to study and basic information on its ecology is still lacking. For example, the amount of space needed by a snow leopard is important when planning protected areas for the species, but estimates of the amount of space

required vary from 65 to 1,000 km². The GPS collar will calculate the cat's position several times every day, and this information will then be sent to researchers via satellite. The team behind the tagging hope to catch and tag five snow leopards over the course of the project.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/technology/6188482.stm>

Rats found in Bornean rainforest

The rainforests of Borneo are one of the most species-rich areas of the world, and home to many endemic species. Researchers fear that some species, particularly small endemic mammals, may now be at risk of competition or infectious disease after a trapping study in primary Bornean rainforest caught two black rats *Rattus rattus*. Although the black rat is known to be present on Borneo it was thought that the species was restricted to areas of human habitation, and the two individuals caught during the course of the study are the first to be found in primary rainforest on Borneo.

Source: *Malyan Nature Journal* (2006), **59**, 73–79.

Pygmy hog to be released back into the wild

The world's smallest and rarest pig species, thought to have been extirpated in the 1960s until its rediscovery in Assam in 1971, is to be released back into the wild following a successful captive breeding programme at Durrell Wildlife. From a founding population of six hogs captured in 1995 there is now a population of 70 hogs, which are kept in enclosures that mimic the hogs' natural habitat. A few individuals are being moved from the enclosures in Basistha, in Assam, into a pre-release area before being set free at the start of the next dry season in November. The release of these hogs will boost the wild pygmy hog population in Manas National Park, thought to number only c. 100 individuals.

Source: *Times online* (2007), <http://www.timesonline.co.uk/tol/news/world/asia/article1288862.ece>

Nepalese rhino numbers dwindle

The number of Endangered Indian rhinos in Nepal has fallen sharply since 2005 as a result of poaching in Chitwan National Park. The animals are targeted for their horn, which is believed to have aphrodisiac qualities. Before the creation of the National Park in 1976 the

population of this subspecies had fallen to less than 100 individuals but following the Park's designation numbers began to increase again, and a census in 2000 revealed that there were 544 individual rhinos in the Park. By 2005, however, this number had fallen to 372, as poaching levels increased. Conservationists are working with villagers in the area to try and enforce anti-poaching measures.

Source: *BBC News* (2006), http://news.bbc.co.uk/1/hi/world/south_asia/6111614.stm

Borneo's fires kill orang-utans

Forest fires on Borneo may have killed up to 1,000 orang-utans, according to the Borneo Orangutan Survival Foundation. While some orang-utans have been rescued after finding their way to the fires' edge, many are thought to have perished, and others have been killed by locals after eating from the area's oil palm plantations. Forest fires are an annual event in Indonesia, and are largely blamed on farmers and logging companies clearing land to grow oil palm plantations. Habitat loss is one of the main reasons for the decline of the Endangered orang-utan, and the lack of natural habitat means that orang-utans have few places to go to escape the forest fires.

Source: *BBC News* (2006), <http://news.bbc.co.uk/1/hi/world/asia-pacific/6123696.stm>

Largest flock of white-shouldered ibis recorded

Counts of the white-shouldered ibis at two sites in Cambodia recorded the highest number of individuals of this Critically Endangered species to date. The two sites, both in western Siem Pang District, yielded an overall count of 108 individuals. It is clear from this survey that western Siem Pang District is the single most important site in the world for the ibis, whose global population is thought to number only c. 250 mature individuals. The NGO BirdLife is working with government departments to secure western Siem Pang as a protected forest, and work is also ongoing with local communities to improve monitoring of wildlife populations and to encourage the management of the forest wetlands used as roosts by the white-shouldered ibis.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/white-shouldered_ibis.html

Kashmir insurgency good for wildlife

The separatist militancy that has been ongoing in Kashmir since the late 1980s has had a marked benefit for Kashmir's wildlife, with an average increase in the population of the area's native animals and birds of 20–60%. The Chief Wildlife Warden of the area puts the increases down to the request to locals to deposit their weapons with police stations at the beginning of the insurgency, which resulted in hunters being deprived of their weapons, and people not daring to go into the forests for fear of being caught in exchanges between militants and the security forces.

Source: *BBC News* (2006), http://news.bbc.co.uk/1/hi/world/south_asia/6169969.stm

Plan for seismic survey suffers setback

The Chief Wildlife Warden of Assam has written to India's Ministry of Environment and Forests to try and halt the proposed seismic survey of the Brahmaputra river bed. Oil India Ltd is planning to use boats, hovercrafts, all-terrain vehicles and explosives in the survey, which aims to locate new reserves of hydrocarbons within Assam. However, a number of organizations have raised fears about the effects of the seismic survey on the biodiversity of the area. Of particular concern is the Endangered gangetic river dolphin, as studies have shown that seismic surveys can have a detrimental effect on marine cetaceans.

Source: *The Indian Express* (2006), <http://www.indianexpress.com/story/18192.html>

Conservationists celebrate vulture chick

The first oriental white-backed vulture chick to be hatched in captivity in India has provided a boost for vultures in the Asian sub-continent, where the decline of three vulture species as a result of poisoning by diclofenac has been well documented. The vulture breeding centre, in northern India, is run by the Bombay Natural History Society and supported by government departments, as well as other organizations, including the Royal Society for the Protection of Birds and the Zoological Society of London. Despite the hatching of the chick, conservationists warn that there is still a long way to go before populations recover fully, and that even the

phasing out of diclofenac may take up to 10 years.

Source: *BBC News* (2007), <http://news.bbc.co.uk/1/hi/sci/tech/6241745.stm>

East Asia

Molecular monitoring reveals incomplete reporting of cetacean bycatch

A comparison of meat found in whale meat markets in the Republic of (South) Korea with official records has shown a number of discrepancies. Korea has no programme of commercial or scientific whaling, and so researchers assumed that all meat in these markets originated from cetacean bycatch. The meat was identified to species level using mitochondrial DNA or cytochrome *b* sequences, and it was found that products from eight species were recorded in 2003, and 11 species in 2004. However, official records only reported five cetacean species as having been caught as bycatch in 2003, and only six in 2004. In addition, there were further inconsistencies in the expected frequency of products from most species.

Source: *Animal Conservation* (2006), **9**, 474–482.

Chiru seem to be making a comeback

An expedition to the remote Chang Tang and Kekexili reserves in Tibet and Qinghai, China, has found signs that the population of the Tibetan antelope, or chiru, is slowly increasing following the cessation of heavy poaching that occurred in the 1990s. The antelope, prized for the fine wool that makes shahtoosh shawls, had suffered a decline in numbers to c. 75,000 individuals from an estimated one million in Chang Tang in the 1950s, but now the population is 100,000–110,000. The rise in numbers has resulted from China making chiru hunting illegal, and confiscating many guns. Likewise, strict anti-poaching measures have been implemented, and two additional nature reserves adjacent to the Chang Tang reserve have also been protected.

Source: *National Geographic News* (2007), <http://news.nationalgeographic.com/news/2007/02/070206-tibet-antelope.html>

Snakes take a leaf out of toxic toads' book

Rhabdophis tigrinus snakes on the Japanese island of Ishima have not only evolved to cope with the toxins produced by their toad prey but have also developed the ability to utilize this poison for themselves. Researchers have found that the snakes have bufadienolide compounds in the nuchal glands on the backs of their necks, whereas snakes on nearby toad-free Kinkazan island were free of the toad toxin. That the snakes obtain the poison from their diet was proved by feeding snake hatchlings on a toad-rich or toad-free diet; snakes fed on toads accumulated toxins, while the other hatchlings did not. A toad-toxin armoury has led to a change in snake behaviour also; on Ishima snakes stand their ground and spray toxins at predators when attacked, whereas on the toad-free island they turn and flee. *Source: New Scientist* (2007), 193(2589), 17.

Yangtze river dolphin functionally extinct

A 6-week survey of China's Yangtze River failed to find any river dolphins, or baiji, leading to fears that the species has been extirpated. The Yangtze river dolphin was once called the goddess of the Yangtze but habitat destruction, illegal fishing, collisions with boats, dam building and environmental degradation have all taken their toll. The decline of the dolphin has been swift; in the early 1980s there were still c. 400 individuals in the Yangtze, but now there has been no sighting since 2004. The survey also revealed dwindling numbers of the endemic Yangtze finless porpoise, and the researchers urged action before the porpoise suffers the same fate as the baiji.

Source: Environmental News Service (2006), <http://www.ens-newswire.com/ens/dec2006/2006-12-14-02.asp>

North America

World's most recently designated marine reserve already under threat

The world's largest and most recently designated marine reserve, the Northwestern Hawaiian Islands, appears to be at risk from another colossus; one of the world's largest floating rubbish dumps. Plastic rubbish gathered by

ocean currents ends up whirling unceasingly in the Trash Vortex in the North Pacific gyre. This floating dump can grow to an area the size of Texas, and is situated close to the marine reserve of the Northwestern Hawaiian Islands. The plastic threatens much of the wildlife of the reserve, presenting both an entanglement and choking hazard. Greenpeace are calling for governments to adopt a zero waste plan, to include waste reduction and recycling to try and reduce the amount of plastic entering the oceans.

Source: Marine Pollution Bulletin (2007), 54, 6.

Prozac is bad news for mussels

Freshwater mussels are having a difficult time of it; 70% of the 300 freshwater mussel species native to North America are threatened, declining or extinct. The causes are multiple, ranging from competition from invasive species to habitat loss and pollution. Now, the first study of the ecotoxicological effects of the anti-depressant drug Prozac (fluoxetine) has found that the drug affects the reproductive cycle of freshwater mussels by causing females to release their larvae prematurely, before they are able to survive. Prozac, remnants of which enter streams and river via wastewater, is one of America's most prescribed anti-depressants, and may also affect the development of fish and frogs.

Source: Marine Pollution Bulletin (2006), 52, 1326.

Cerulean warbler not listed by US Fish and Wildlife Service

Conservation organizations in the USA are concerned for the future of the cerulean warbler following the decision by the US Fish and Wildlife Service not to list the species as threatened. The National Audubon Society and other organizations have been campaigning and petitioning for 6 years to have the species listed, and they accuse the USFWS of having missed many deadlines required under the Endangered Species Act during this time. BirdLife International, the official Red List Authority for birds for the IUCN Red List, categorizes the cerulean warbler as Vulnerable, as its population has fallen by 82% over the past 40 years, mainly because of mining in its forest habitat.

Source: BirdLife News (2006), http://www.birdlife.org/news/news/2006/12/cerulean_warbler.html

Permanent protection sought for Alaskan park

Environmental campaigners are hoping that Congress will act favourably on legislation that aims to protect an area of the Alaskan coast so rich in wildlife that it has been compared to the Serengeti. The legislation would result in the protection of c. 500,000 ha of the Alaskan coast, home to polar bears, caribou and millions of migratory birds. However, the area is also rich in oil, with some estimates suggesting that it could supply up to one million barrels of oil per day at peak production. In the past, Congress has rejected attempts to make a ban on drilling in the area permanent, but the chief sponsor of the legislation, Representative Edward Markey believes that the new Democrat-led Congress will look favourably on the proposal. *Source: BBC News* (2007), <http://news.bbc.co.uk/1/hi/world/americas/6236367.stm>

Florida's loggerheads in decline

The last remaining loggerhead rookery in the USA is suffering a marked decline, with a decrease of 39.5% in the number of nests since 1998. While loggerheads nest on beaches all round the world, nearly 90% of the world's loggerhead population nest on Florida's beaches and on Masirah island in Oman, and Florida's beaches account for >90% of all loggerhead nesting in the USA. The cause behind the decline is not known for certain, but it is thought that the turtles are dying before they reach their nesting beaches, either drowning in fishing trawls or being caught as bycatch. It is apparent that the beaches are becoming less turtle-friendly, however, with burgeoning coastal development having a negative effect on the nesting beaches.

Source: Environmental News Service (2006), <http://www.ens-newswire.com/ens/nov2006/2006-11-16-02.asp>

Action needed to save world's smallest porpoise from extinction

Conservationists fear that the world's smallest porpoise, the vaquita, may be in danger of extinction, with only an estimated 250–400 individuals remaining. Surveys indicate that the population has declined by 30% since 1997, mainly because between 39 and 78 vaquitas die every year after becoming entangled in fishing nets. The number of vaquitas dying each year exceed the number of births, an ominous portent of the future of this cetacean. The vaquita has a very

small range of only 2,200 km², in the Gulf of California, and although a reserve has been set up in the northern part of the Gulf most of the vaquita live outside the protected zone, where fishing, both legal and illegal, remains a serious threat.

Source: *National Geographic News* (2006), <http://news.nationalgeographic.com/news/2006/12/061219-mexico-porpoise.html>

Central America and Caribbean

National Park set to become holiday resort

The Mount Hartman National Park in Grenada, which supports 22%, or 20 pairs, of the Critically Endangered Grenada dove's global population, looks set to be sold by the Government of Grenada to make space for a Four Seasons resort, complete with a 150 room hotel, 300 luxury villas, golf course, marina and conference centre. The National Park, an Important Bird Area, was selected for the development because of its unimpeded seaviews and biodiverse location. Conservationists have pointed out the inherent irony in the Government's decision to destroy the habitat of the national bird of Grenada to provide sea views for tourists.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/grenada_dove.html

South America

Guyana shield created

Following 6 years of discussion the governor of Pará state, Brazil, has announced legal protection for 15 million ha of Amazonian rainforest. This decision is the final jigsaw piece in the so-called Guyana shield, the largest unbroken stretch of protected rainforest in the world. The seven newly protected areas in Pará state, which include two that support 54% of all Amazonian plant and animal species, are flanked by protected areas in the neighbouring countries of Guyana and French Guiana. Despite assurances from the Pará government of increased satellite and

ground vigilance in the new protected areas, and increased support for conservation stewardship by forest-dwelling tribes in the area, conservationists believe that much effort will be required to combat the threat of illegal logging and agricultural encroachment in such a large area.

Source: *New Scientist* (2006), 192(2581), 6.

Remaining fragments of forest susceptible to change

The longest ever study of forest fragmentation, which has been running in Brazil since the early 1980s, has revealed that fragments of forest left after logging change more rapidly than expected. The study looked at plots within fragments of forest and found that those plots close to the fragments' edges were more likely to lose their original tree species to drought and wind damage than plots deep within the fragments, and were also more likely to be colonized by other, fast growing, species. This change means that, even though fragments retain the same number of trees on each plot, the trees tend to be smaller and have less dense wood than the original trees and, moreover, the plots are more vulnerable to degradation than undisturbed forest.

Source: *New Scientist* (2006), 192(2580), 4.

Waved albatross caught intentionally as well as by mistake

Vulnerable waved albatrosses, which breed almost exclusively on a small island in the Galápagos, are at risk from fishermen who have apparently caught and killed 1% of the world's waved albatross population in a year. A study that looked at the survival rates of the albatross on Española Island since 1999 found that waved albatrosses were killed in a number of ways; some drowned in submerged gill nets, and others were caught in gill nets and then killed for food instead of being released. Observers also found that fishermen caught albatrosses deliberately using baited hooks. Eighty-two percent of captures were male albatrosses, which bodes ill for a species that depends on both parents to raise their young.

Source: *Marine Pollution Bulletin* (2006), 52, 1549–1550.

Another 'lost' woodpecker is found

Hot on the heels of the ivory-billed woodpecker, rediscovered in North America in 2005, another woodpecker feared lost has reappeared, this time in South America. The Caatinga

woodpecker had not been seen since 1926, when it was first discovered in central Brazil. The species was long considered a subspecies of the rufous-headed woodpecker, until a recent review by ornithologists concluded that major differences in the plumage meant that the Caatinga woodpecker warranted full species status. The woodpecker was rediscovered by a Brazilian ornithologist who was surveying the Tocantins region of Central Brazil, an area about 200 km further east than the original record, leading to suggestions that there may be other individuals in similar habitats in central Brazil.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/caatinga_woodpecker_redisc.html

Penguins and fishermen after the same fish

Argentina's intention to expand its new anchovy fishery has not taken account of the effects of the expansion on the area's wildlife, most notably the Magellanic penguins whose diet consists of more than 50% anchovies. Anchovies are primarily caught to be turned into fishmeal, which is sold to fish farms in China and Europe, with the result that the anchovy industry is worth much less than the ecotourism revenue generated by the penguins and other megafauna of the region. While penguin populations are resistant to some fluctuation in the anchovy population, the birds may be unable to recover from permanently low anchovy numbers resulting from unsustainable fishing.

Source: *BirdLife News* (2007), http://www.birdlife.org/news/news/2007/01/anchovy_overfishing.html

Shorebird habitats designated in the Americas

A meeting in Ecuador in January 2007 culminated in the official announcement of the latest of a series of sites of global importance to shorebirds. The Lagunas de Ecuasal, a coastal lagoon designated as an Important Bird Area in 2004, has been elevated to the status of a Western Hemisphere Shorebird Reserve Network (WHSRN) Site of Regional Importance, the first such site in Ecuador. Lagunas de Ecuasal is an artificial wetland that has become important for many species, including 2% of the global population of Wilson's phalarope, which equates to up to 23,000 birds. Another site of importance to shorebirds, the Squaw Creek National Wildlife Refuge in Missouri, USA, was also designated as a WHSRN

Site of Regional Importance at the meeting.

Source: *BirdLife News* (2007), http://www.birdlife.org/news/news/2007/01/iba_shorebirds_conf.html

Miss Bolivia lends her support to ecotourism centre

A new ecotourism lodge in Bolivia, which is part of a conservation programme for the Endangered red-fronted macaw, attracted some celebrity endorsement in the form of Miss Bolivia 2006, who attended the launch of the centre, and indicated her support for the project. The ecotourism lodge is situated close to steep-sided cliffs that provide roosting and nesting sites for the endemic macaw, which has declined in recent years mainly as a result of habitat destruction. It is hoped that ecotourism will provide sustainable support to local communities, while at the same time giving long-term protection to the parrot.

Source: *BirdLife News* (2007), http://www.birdlife.org/news/news/2007/01/red-fronted_macaw_ecotourism.html

Pacific

Mitigation measures in place for Pacific seabirds

The Western and Central Pacific Fisheries Commission (WCPFC), which controls fishing in the international waters of the western and central Pacific Ocean, has passed new measures to prevent bycatch of seabirds by long-lining fishing vessels. The WCPFC oversees one of the most important areas for albatrosses in the world, as nearly half of the albatrosses' global distribution occurs in these waters. The Commission has become the first tuna commission to make the use of at least two mitigation measures mandatory on all vessels fishing in its 'albatross waters' (those above 23°N or below 30°S latitude). However, pressure from some of the large fishing fleets that operate in the area has meant that the introduction of these measures will be staggered over time.

Source: *BirdLife News* (2006), <http://www.birdlife.org/news/news/2006/12/wcpfc.html>

Attempt to regulate fishing in South Pacific blocked by northern nations

Talks that attempted to set up measures to manage the effects of bottom trawling in an area of the Pacific stretching from

the Indian Ocean to South America and from the Antarctic to an as yet undecided northern boundary have been scuppered by countries from the northern hemisphere. Proposals to limit fishing effort in the area to protect the bottom-dwelling life of these waters were put forward by Australia, New Zealand, Chile, Pacific Island States and the USA, but were blocked by the EU, Russia and South Korea, who refused to limit their current fishing effort in the region.

Source: *Environmental News Service* (2006), <http://www.ens-newswire.com/ens/nov2006/2006-11-13-03.asp>

Australia/Antarctica/New Zealand

Hihi laughing all the way to the mainland

A group of New Zealand's most threatened endemic birds are to be transferred from an island in the Hauraki Gulf to a 1,100 ha fenced area in the Waitakere Ranges. The Vulnerable hihi, or stitchbird, used to occur on parts of the North Island as recently as the 1870s, but habitat destruction, predation and possibly disease caused their extirpation, and at one point only one population remained. Conservation efforts have resulted in an increase in numbers, and stitchbirds now exist on three islands. The translocation is the first step in a recovery programme for the species, and will mark the return of the hihi to the mainland for the first time in over 100 years.

Source: *Forest & Bird* (2007), 323, 3.

Between a rock and a hard place

The most important global population of Vulnerable rockhopper penguins, in the Falkland Islands, has declined by nearly 30% in 5 years, indicating that there has been a dramatic change in the ecology of the Southern Ocean. Researchers speculate that the decline in rockhoppers, one of 10 penguin species considered at risk of global extinction, may be related to climate change. It is known that a number of penguin species were adversely affected by a bloom of poisonous algae in the waters around the Falklands in 2002/2003 but while some species such as the gentoo penguin were able to recover their numbers the rockhopper population seems to have been unable to bounce back from this population crash.

Source: *BirdLife News* (2006), http://www.birdlife.org/news/news/2006/12/happy_feet.html

Albatrosses tracked

Albatrosses are being used to collect data about surface temperatures in the north Pacific Ocean by means of GPS data loggers attached to their backs or legs. The tracking devices are attached to the Vulnerable Laysan and Endangered black-footed albatrosses at their breeding colonies in Tern Island, Hawaii, and Guadaloupe Island, Baja, Mexico. In addition to monitoring ocean temperature the tagging scheme, part of the Tagging of Pacific Pelagics project, will enable researchers to track the movements of the birds to the nearest 10 m. Mapping the precise distribution of threatened seabirds enables conservationists to show fisheries commissions where their activities overlap with seabirds, which is valuable information in the ongoing bid to reduce seabird deaths from bycatch.

Source: *BirdLife News* (2006), <http://www.birdlife.org/news/news/2006/12/data-logging.html>

Reef sharks protected by no-take zones, but decline continues

Coral reef sharks are apex predators on coral reefs, and therefore important for the functioning of reef ecosystems, but they are also vulnerable to overfishing. A study carried out at Australia's Great Barrier Reef has found that while reefs where fishing is banned can have 10 times more abundant reef shark populations than reefs where fishing is permitted, high shark abundance only occurred on reefs where the fishing ban was strictly enforced. This finding implies that even moderate poaching levels may affect reef shark populations. The study's authors fear that reef sharks are approaching ecological extinction, in they are now so rare they are unable to carry out their role in the reef ecosystem. Source: *Marine Pollution Bulletin* (2007), 54, 120.

All internet addresses were up to date at time of writing. This section was written and compiled by Elizabeth Allen and Martin Fisher, with additional contributions from E.J. Milner-Gulland and Anthony Rylands. Contributions from authoritative published sources (including web sites) are always welcome. Please send contributions by e-mail to oryx@fauna-flora.org, or to Martin Fisher, Fauna & Flora International, 4th Floor, Jupiter House, Station Road, Cambridge, CB1 2JD, UK.