

Briefly

INTERNATIONAL

Generational scale better for reporting of extinction risk

Stochastic computer modelling for 100 well-studied vertebrate taxa has revealed that extinction risk is strongly related to generation length but when examined over a fixed number of generations no evidence was found of a relationship between extinction risk and years. This finding has repercussions for conservation management; for example, the extinction risk for some long-lived species such as the Florida manatee, categorized as Vulnerable on the IUCN Red List, may be judged to be low over 100 years but when the manatee's extinction risk was measured on a generational scale, the computer model predicted extinction for this species in 76 generations. The authors acknowledge that years are a typical human-orientated time-frame but urge that they be combined with the more biologically appropriate time frame of generations. *Source: Animal Conservation* (2008), 11, 442-451.

IBAT for business launched

A 3-year collaboration between conservation NGOs and the private sector has resulted in the creation of the Integrated Biodiversity Assessment Tool for business. This is a web-based tool that will enable businesses to integrate biodiversity considerations into the preliminary stages of project planning, thus allowing them to consider alternative projects, approaches or locations while such changes are still financially viable. IBAT brings together information on high priority sites for conservation so that companies are able to ascertain, for example, why sites are important and obtain lists of key species at each site. This information, which businesses previously had to compile by contacting individual organizations and trawling through publications and websites, will help businesses in planning environmental impact assessments and management plans, both of which are often required by national and international laws and policies.

Source: BirdLife International News (2008), http://www.birdlife.org/news/news/2008/10/ibat_launch.html. See also <http://www.biodiversityinfo.org/ibat/>

No more ivory on eBay

The internet auction site eBay has pledged to ban the sales of ivory through all of its 39

sites worldwide, following the publication of a report by the International Fund for Animal Welfare based on a 3-month investigation of online trade in parts from endangered species, as well as live animals. The investigation discovered 7,122 wildlife products on 183 websites in 11 countries, with 63% of these products on eBay or affiliated sites. Seventy-three percent of these products were ivory products, a number of which openly flouted a ban on cross-border trade in ivory imposed by eBay in 2007. The company has now therefore decided to ban all sales of ivory from January 2009, except for pieces pre-dating 1900, and items containing small amounts such as pianos with ivory keys.

Source: New Scientist (2008), 200(2679), 10.

Links between climate and the deep-sea

An 18-year study of the seabed 4,000 m below the Pacific Ocean's surface indicates that not even the smallest denizens of the ocean floor are immune to events occurring at the surface above. Researchers discovered that 2 months after the start of a major weather event such as El Niño there was a decrease in the supply of plankton and other food for species living at the bottom of the ocean, and 4 months later there was a decrease in the number of small animals on the seabed. This finding illustrates the intricacy of the links between climate events, plankton blooms and deep-sea creatures.

Source: New Scientist (2008), 200(2679), 6.

Failure to act on environmental challenges can prove expensive...

Mismanagement of the many environmental challenges facing society can result in considerable economic costs to individual countries, a literature review of environmental policy by the Organization for Economic Cooperation and Development (OECD) has revealed. Furthermore, some of these costs are already making themselves felt in public budgets, company balance sheets, and household costs. For example, failure to manage natural disasters such as floods and earthquakes may cost the poorest countries as much as 13% of their annual GDP, and inefficient management of the bluefin tuna fishery in the east Atlantic may be resulting in reduced fishery yields of >USD 1 billion. The OECD report provides introductory perspectives on some of the issues involved in evaluating costs of inaction.

Source: OECD (2008), http://www.oecd.org/document/1/0,3343,en_2649_33713_41468801_1_1_1_1,00.html

... while the disappearance of forests may be more costly than the banking crisis

A study commissioned by the EU has revealed that the loss of the world's forests is costing more than losses accrued as a result of the banking crisis. The report estimates that when all forest services, such as watershed protection, are taken into account, the annual cost of deforestation is somewhere between USD 2-5 trillion. A key aspect of the report's conclusions is that forest loss goes hand-in-hand with the loss of services that have essentially been provided for free. Once the forests are no more, the human economy is forced to provide these services itself, or do without them, both of which options come at a financial cost. The report also points out that the cost of forest loss is borne disproportionately by the poor, as a greater part of their livelihoods is directly dependent on forests.

Source: BBC News (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7662565.stm>

Slender chance for curlew

A quest has been launched to find a shy, retiring heroine (or hero): the slender-billed curlew, one of the rarest birds in the world. Historically, records of this Critically Endangered species included flocks of >100 individuals but the most recent verified records have been of 1-3 birds only, and no verified records have been received since 1999. However, given the fact that the slender-billed curlew is easily overlooked, hard to identify and may occur in states such as Iran and Iraq that until recently have not been easily accessible to experienced birdwatchers, there is hope that new populations of the species may be discovered. To this end the slender-billed curlew working group has launched a toolkit to help in the search, which includes an identification leaflet and a downloadable mp3 file of the curlew's call.

Source: BirdLife International News (2008), http://www.birdlife.org/news/news/2008/12/sbc_launch.html

Amphibians to be given a helping hand in the wild

Experiments on tadpoles infected with the chytrid fungus that is decimating amphibian

populations around the world have shown that it is possible to eradicate the fungus by bathing the tadpoles in an anti-fungal drug for 5 minutes a day for 7 days. Furthermore, the tadpoles did not appear to suffer any of the ill effects that can be associated with the treatment. Plans are now afoot to use this technique on the Majorcan midwife toad, one of the 100 amphibian species most at risk of extinction, on the island of Majorca. Researchers will investigate how many tadpoles need to be treated, and how often the treatments need to be repeated for the population to survive at viable levels, bearing in mind that the infection may remain in the pools after the tadpoles have been dosed. *Source: New Scientist* (2008), 200(2684), 10.

Methane released as tundra freezes

Investigations that were made possible because the Zackenberg research station in north-east Greenland was kept open for 2 months longer than normal in the 2007 International Polar Year have discovered that a large quantity of methane is emitted from tundra regions as the soil freezes. The researchers suggest that the methane is squeezed out as the active layer of the tundra freezes, and that this is only observed at higher latitudes because the permafrost prevents the gas from diffusing downwards. The highest levels of methane emitted were $112.5 \text{ mg m}^{-2} \text{ h}^{-1}$, which are thought to be the highest rates from tundra ecosystems. Although these findings do not increase significantly emission estimates from high northern latitudes, they do throw new light onto the seasonal variation of methane emissions from these areas.

Source: Nature (2008), 456(7222), 628–630.

Medicinal plants need our help

Medicinal plants play a vital role in the lives of millions of people, with up to 80% of Africans using traditional medicine as their primary healthcare. Furthermore, the collection and sale of medicinal plants is an important source of income for many people; an estimated 232,000 households in Nepal alone are involved in their collection. About 15,000 species of medicinal plants are globally threatened, with factors leading to their decline including over-collection and loss of habitat. A new report by Plantlife International suggests that focussing on medicinal plants in development can have a beneficial result on the ecosystems in which the plants exist. The report provides descriptions and an analysis of lessons learnt from community-based projects aiming to conserve medicinal plants, carried out by local Plantlife partners in China, India, Kenya, Nepal, Pakistan and Uganda.

Source: Medicinal Plants in Conservation and Development: Case Studies and Lessons Learnt (2008), <http://www.plantlife.org.uk/portal/assets/News%20Sue%20Nottingham/Medicinal%20plants%20report%20Jan%202009.pdf>

Fishing fleets on a losing streak

A report by the World Bank and the FAO has estimated that the world's fishing fleets are losing c. USD 50 billion every year as a result of depleted stocks and poor regulation. The situation is so drastic that the world's fishing fleets could catch the same amount of fish using half the current capacity, with the added bonuses of increasing profits and reducing pressure on fragile fish stocks. Some countries, including New Zealand and Iceland, are managing to protect stocks with the result that their fishing industries are profitable but the report warns that even in these cases improvements could still be made. It is hoped that the report will aid decision-makers in making reforms to fisheries policy by providing them with economic arguments as to why reform is urgently needed.

Source: BBC News (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7660011.stm>

Launch of guidelines for using Protected Areas Management Categories

A 4-year consultation process involving the IUCN Secretariat, members of the World Commission on Protected Areas, indigenous people's organizations, and a number of IUCN members has culminated in a set of guidelines on using the IUCN system for Protected Area Management Categories. New features in the guidelines include more focus on ecosystem services and cultural values while maintaining an emphasis on biodiversity conservation, a more practical and comprehensive content, meaning that the guidelines will be easier to apply by practitioners, and an encouragement of the application of different innovative governance models for protected areas. The IUCN Protected Area Management Categories are seen as the global standard for protected areas, and when applied effectively, can strengthen the role of protected areas in conserving biodiversity and enhancing people's livelihoods.

Source: IUCN press release (2008), <http://www.iucn.org/about/union/commissions/wcpa/index.cfm?uNewsID=1794>

Wetlands not such good flood defences

The statistic that a storm surge loses 7 cm in height for every km it travels over coastal

wetlands has been called into question by evidence suggesting that high watermarks on buildings, the traditional way of measuring the relationship between landscape and storm surge, are not reliable. The exact relationship between these factors is still not really known, with researchers hoping to attach sensors in the paths of storm surges in the future to measure how these change over distance. Some researchers speculate that coastal wetlands may mitigate against smaller storms and everyday erosion, and their benefits to biodiversity are recognized, but as far as communities living in coastal areas are concerned, they recommend that governments draw up back-up plans for relocation of these coastal dwellers.

Source: New Scientist (2008), 200(2678), 9.

EUROPE

Faroe islanders to stop eating whale meat

Medical officers on the Faroe Islands have recommended that islanders stop consuming pilot whale meat after investigations showed that the whales' blubber contained dangerously high levels of PCBs, mercury and DDT derivatives. This follows evidence from the Faroese themselves that these chemicals, particularly mercury, are having detrimental and long-lasting effects, including damage to foetal neural development, increased risk of Parkinson's disease and high blood pressure. The Faroese claim whaling to be part of their culture, an argument adopted by whalers in Norway and Japan, and have in the past killed thousands of pilot whales every year for consumption.

Source: New Scientist (2008), 200(2685), 6.

Psyllid may be a front-line weapon in battle with knotweed

Research has identified a potential biocontrol agent that may be pivotal in putting a halt to the spread of invasive Japanese knotweed in the UK. Japanese knotweed was originally introduced as an ornamental plant but its fast growth and rate of spread means that it poses a real threat to native vegetation, as well as to anthropogenic structures including flood defences. A study looking at all the animals and fungi that feed on knotweed in its native Japan has identified a sap-sucking psyllid insect that fulfils the criteria for a successful biocontrol agent; most importantly it does not appear to have an appetite for other plant species, nor does it kill its troublesome host completely, which would mean making itself extinct.

Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7531221.stm>

Petrel split in the Azores

Investigations into the habits, life style and genetics of the Madeiran storm-petrel have resulted in the species being split into two. At several sites storm-petrel breeding occurs in two periods, during the hot and cold seasons. Hot-season birds have a different song to cold-season birds, and do not recognize the calls of cold-season birds when prospecting for mates. Hot-season birds are also smaller than cold-season birds, with longer and more deeply forked tails, and smaller heads and beaks. Molecular analyses have shown clear differences between some of the seasonal populations of storm-petrels, with two genetically distinct populations in the Azores seeming to have diverged at least 70,000 years ago. These cumulative differences are sufficient to warrant the description of hot-season birds as a distinct species: they have been named Monteiro's storm-petrel after Dr Luis Monteiro who initiated the research.

Source: *Conservation Science in the RSPB* (2008), 22–23.

Immunity gives hope for red squirrels

The luck may be turning for Britain's beleaguered red squirrels following the discovery of individuals with antibodies to squirrel poxvirus. The virus, carried by the introduced grey squirrel, can decimate red squirrel populations, with infected individuals dying within weeks. In areas where greys carry the virus, red squirrel numbers decline 25 times faster than in areas where the greys do not carry the disease. Eight red squirrels carrying antibodies to the pox were found in a total of 500 squirrels brought in to the Institute of Zoology for autopsy, indicating that they had been exposed to the virus previously but had not succumbed to it. This suggests that it might be possible to create a vaccine to protect the red squirrel population from pox-induced devastation. Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7573535.stm>

Eagles and falcons get Commission's backing

Of the six birds of prey threatened with extinction in Europe, two have become the focus of a new project in Bulgaria, with 75% of the project's EUR 2 million budget funded by the European Commission. The project aims to protect the Vulnerable imperial eagle and Endangered saker falcon, both of which breed in Bulgaria, through a number of approaches including remov-

ing the most dangerous power lines within a 5 km radius of all imperial eagle nests, and creating 30 artificial nests for imperial eagles and 80 for saker falcons within designated Natura 2000 sites. As well as reducing threats faced by these raptors, the project also aims to raise awareness of the species among the public.

Source: *RSPB press release* (2008), <http://www.rspb.org.uk/media/releases/details.asp?id=tcm:9-204312>

Stone curlews' future dependent on conservation action

One of the UK's most threatened birds, the stone curlew, has reached its Biodiversity Action Plan target 7 years early, with 351 pairs nesting in 2008; the target for 2015 was to have 350 pairs nesting in the East Anglian and Wessex brecklands that form this bird's strongholds. Set-aside combined with wildlife-friendly farming schemes have contributed to the recent success of the species. However, there is concern that the stone curlews fledged very few chicks in 2008, with an average of only 49 chicks fledged per 100 pairs. The wet spring and summer are thought to have hampered breeding efforts by reducing the amount of bare ground on which the birds nest. Conservationists are calling for swift implementation of measures to create suitable habitat for the stone curlew to ensure the birds' continued success in future years.

Source: *RSPB press release* (2008), <http://www.rspb.org.uk/news/details.asp?id=tcm:9-204016>

NORTH AFRICA AND MIDDLE EAST

Three Critically Endangered ibises found poisoned

Researchers are investigating the source of poison that killed three northern bald ibises in Jordan, and suspect that it may have been used by chicken farmers to kill rodents. The northern bald ibis is the focus of a project aiming to increase the numbers of this Critically Endangered species, with satellite tracking being used to determine where the birds migrate to from their breeding sites in Turkey and Syria. The death of the three birds in Jordan has nevertheless provided conservationists with some hope, as it indicates that these birds, which were from a semi-captive population and had been fitted with satellite tags, had not lost their migratory instincts. Researchers intend to tag more Turkish birds next year in continued efforts to determine the migratory routes of this elusive species.

Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/10/bald_ibis_poisonings.html

Mystery deaths in Egypt

Local birdwatchers came across the bodies of 27 lesser spotted eagles and > 30 white storks near a water treatment plant in Sharm el Sheik in December 2008, although it is not clear how these birds died. Both of these species migrate long distances, with the nature of their flight, which depends on thermals, precluding the use of flyways across high mountains or large water bodies. As a result thousands of birds are forced to use particular corridors while migrating, one of which crosses Egypt. Migrating birds face a number of threats such as poisoning, hunting, habitat loss and collision with man-made structures such as wind turbines and power lines. BirdLife International is launching a new project focusing specifically on soaring migratory birds, with the aim of addressing these threats.

Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/12/egyptian_bird_deaths.html

SUB-SAHARAN AFRICA

Two new species of mouse lemur

There are now 18 species of the smallest living primates, *Microcebus*, the mouse lemur, with 14 of them described since 1998. The latest additions, described for the first time in November 2008, came to light on the completion of an investigation of the phylogeny of the group using mitochondrial DNA sequence data. Margot Marsh's or the Antafondro mouse lemur occurs south of the Andranomalaza River and north of the Maevarano River, north-western Madagascar. It was named in honour of the late Margot Marsh, who contributed generously to many primate conservation initiatives. The Margot Marsh Biodiversity Foundation, dedicated to saving threatened primates, resulted from a bequest in her will. Arnhold's or the Montagne d'Ambre mouse lemur occurs in northernmost Madagascar, north-west of the Irodo River. It was named in honour of Henry Arnhold in recognition of his support for biodiversity conservation in Madagascar.

Source: *Primate Conservation* 23 (2008), <http://www.primates-g.org/PDF/PC23.new.microcebus.V3.pdf>

Year of the Gorilla launched

His Serene Highness Prince Albert II of Monaco has officially launched the Year of the Gorilla at the Convention on Migratory

Species Conference of the Parties in Rome. The Year, an initiative of the UNEP-CMS, UNEP/UNESCO's Great Ape Survival Partnership and the World Association of Zoos and Aquariums, aims to support gorilla conservation by improving the livelihoods and incomes of people who share the gorillas' habitat. Initiatives available for support by governments, businesses, civil society groups and individuals include the promotion of bee-keeping in Cameroon to reduce commercial bushmeat hunting, while guides and operators from thriving ecotourism programmes in East Africa are to visit West African countries to improve the success of ecotourism in these countries.

Source: *UNEP press release* (2008), http://www.cms.int/news/PRESS/nwPR2008/11_Nov/CMS_pres_release_Year_of_the_Gorilla.pdf

Zimbabwe's rhinos suffer as poaching increases

Rhino poaching is escalating in Zimbabwe, and is being exacerbated by poor enforcement of the laws governing poaching and trade in rhino horn. An example of lax law enforcement came recently when a group of poachers who had admitted to killing 18 rhinos in five different areas of central Zimbabwe were released on bail, following which they absconded. One Conservancy in southern Zimbabwe, home to three quarters of the country's surviving rhinos, has suffered the loss of 70 individuals since 2000, before which there had been no rhinos poached for 7 years. On this Conservancy poaching started when subsistence farmers moved in to the Conservancy and set snares for wildlife intended for consumption, which caught rhinos by mistake. Now, however, rhinos are being shot specifically for their horns, with 20 killed in this way on the Conservancy in 2008. Source: *WWF press release* (2008), http://www.panda.org/news_facts/newsroom/press_releases/index.cfm?uNewsID=146284

Ivory sale opens

The first official sale of ivory since 1999 opened in October 2008, with almost 100 t of ivory being auctioned by Botswana, Namibia, South Africa and Zimbabwe to buyers from Japan and China. The money raised will be put towards elephant conservation projects. The sale is of concern to a number of conservationists, however, who fear that it will provide an outlet for the illegal ivory trade. CITES have said that they will monitor the trade in China and Japan to ensure that illegally-sourced ivory is not mixed with legal shipments. In areas where protection and management have increased elephant numbers the sale of legally-acquired stockpiles and subsequent

financial benefits for local communities who look after elephant populations is seen as a good way of protecting the species. It is estimated that the sale may raise as much as USD 30 million.

Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7693816.stm>

Threatened bat heads into the clear

Conservation efforts on Pemba Island, off the coast of Tanzania, have resulted in a large increase in the number of endemic Pemba fruit bats, with the population currently standing at 22,000. Work carried out by FFI and its local partner, the Department of Commercial Crops, Fruit and Forestry, has included the creation of two new forest reserves and community awareness-raising. In the past the flying fox was considered a delicacy, and was widely hunted. Furthermore, 95% of the species' forest habitat had been destroyed, a combination of factors that led to the species being categorized as Critically Endangered. Thanks to the work carried out to protect the species the population has burgeoned and the bat is now categorized as Vulnerable.

Source: *FFI press release* (2008), http://www.fauna-flora.org/news_pemba_bat.php

Grasslands threatened by mining

Conservationists have applied to the South African High Court for a judicial review of Delta Mining's prospecting rights in the Wakkerstroom/Luneberg region, an area of grassland that is home to > 300 bird species and > 100 endemic plants. BirdLife South Africa, which made the application, claim that Delta Mining obtained the rights without proper consultation, and without adequately taking into account the impact of mining on the area. The company proposes extracting coal from nearly 200 km² of the Wakkerstroom/Luneberg region, which holds more than 85% of the world's population of the Vulnerable Rudd's lark, as well as a population of South Africa's national bird, the Vulnerable blue crane. BirdLife South Africa also fears that, should the mining go ahead, thousands of people working in the tourism and farming sectors in the region will lose their jobs.

Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/11/wakkerstroom_mining.html

Rangers return

Up to 70 park rangers have returned to their posts in the Democratic Republic of Congo's Virunga National Park following their enforced departure during the heavy fighting between rebels and government forces in October 2008. The return of the rangers, who intend to resume their gorilla-

monitoring work, is good news for the area's mountain gorillas, as the rangers' absence had prompted concerns for the gorillas' well-being. During the weeks of fighting the International Gorilla Conservation Programme (IGCP), of which FFI is a founding member and current funder, worked with the government and Park authorities to enable the rangers to have access to the Park again. Although the situation in the DRC remains volatile, IGCP is working towards increasing ranger staffing to allow monitoring activities to return to full strength.

Source: *FFI press release* (2008), http://www.fauna-flora.org/news_rangers_return.php

New Namibian National Park proclaimed

In December 2008 the Government of Namibia proclaimed the Sperrgebiet National Park, the largest single proclamation of a protected area in Africa for the past 25 years. The new 2.6 million ha Park is home to nearly one quarter of Namibia's plant diversity, despite covering < 3% of the country's land surface. One reason for the richness of species in the area is that the Sperrgebiet has for years been out of bounds to the public in a bid to prevent diamond smuggling from the area's mines. The government is now considering the creation of a network of existing protected areas, including Sperrgebiet. Should the proposed Namib Skeleton Coast National Park proceed it would cover the entire Namibian coastline, an area of 10.7 million ha, making it the eighth largest protected area in the world.

Source: *Conservation International press release* (2008), <http://www.conservation.org/newsroom/pressreleases/Pages/Namibia-National-Park-Former-Diamond-Mining-Area.aspx>

Seychelles success celebrated

The purchase of Cousin Island in 1968 is being celebrated by BirdLife International, with the intervening 40 years having seen the island become transformed from a coconut plantation to a Nature Reserve that benefits biodiversity and local people alike. The island was bought to rescue the Seychelles warbler from extinction, at a time when only c. 30 of the birds remained and much of the island's original vegetation had been lost. Habitat management, alongside measures to prevent alien predators arriving on the island, have led to it hosting many threatened species; it is the most significant nesting site for the Critically Endangered hawksbill turtle, supports over 300,000 nesting seabirds of seven species, and is home to five of the Seychelles' 11 endemic land-birds.

As for the original reason for the island's purchase, the warbler's population has risen by 300%.

Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/12/cousin_island.html

Cornucopia of species discovered in Tanzania

Surveys of the South Nguru Mountains, in Tanzania, have discovered 15 new species of amphibian and one new chameleon species (see also this issue pp. 174–175). The newly discovered creatures include a large toad with bulbous glands and variable colouration: green and yellow, orange and black, and red individuals have been identified. It is restricted to a few remote valleys in the mountains, and has a distinctive 'plink' call. Additional discoveries include a species of tree frog with red eyes, and a burrowing toad with a long snout. The fauna of this region are not safe from threats, however, as the region is also home to > 50 villages, many of which are dependent on agriculture, with the consequence that parts of the forests are at risk of agricultural encroachment.

Source: *KTA Public Relations press release* (22 January 2009).

SOUTH AND SOUTH-EAST ASIA

The Siau Island tarsier—a new and highly threatened species

A new species of tarsier, recognized as one of the world's 25 most endangered primates, has been described from the tiny island of Siau, North Sulawesi, part of the Sangihe Island chain, a volcanic arc stretching north from Sulawesi towards the Philippine island of Mindanao. The species is called *Tarsius tumpara*, with *tumpara* being the name for the tarsier used by the inhabitants of the island. Siau is about one-fifth the size of Singapore and has a human population density of 311 people km⁻². More than half the island is an active volcano and the remaining habitat for this species is minimal. It is also hunted. Local inhabitants eat the tarsiers as a snack food they call *tola-tola* and the species has been extirpated over much of the island as a result.

Source: *Primate Conservation* 23 (2008), <http://www.primate-sg.org/PDF/PC23.tarsius.tumpara.pdf>

Oil palm not so tempting for arthropods

The first study to investigate the impact of forest conversion to oil palm on arthropods

has found that oil plantations contain a lower abundance and biomass of arthropods than primary forest. The researchers investigated arthropod abundance, biomass, and composition in epiphytic bird's nest ferns, the canopy and leaf litter of primary forest, logged forest and oil palm plantations, with 20 transects in each habitat. Overall arthropod abundance was 67.2% lower in the epiphytic ferns, 2.3% in the canopy and 77.1% in the litter in oil palm plantations compared to primary forest. Arthropod decline was not uniform across all taxa, with some groups, including beetles and cockroaches, more common on oil palms.

Source: *Journal of Tropical Ecology* (2009), 25, 23–30.

Mekong's biodiversity revealed

A report by WWF documents the extraordinary diversity of the Greater Mekong Region of South-east Asia, where over 1,000 new species have been found in the last decade, equating to two new species every week. Many of the species are spectacular to look at too, such as the bright pink dragon millipede that produces cyanide, and the world's largest huntsman spider, with a leg span of c. 30 cm. Most of the species were discovered in the rainforests and wetlands of the Mekong. The report highlights the importance of ensuring that development and environmental protection combine to protect both local livelihoods and the area's spectacular biodiversity.

Source: *WWF press release* (2008), <http://www.worldwildlife.org/who/media/press/2008/WWFPresitem11027.html>

Pangolin products destroyed after raid

Following a raid on a warehouse in Palembang, south Sumatra, police officers confiscated 13.8 t of pangolin meat and hides. The confiscated meat and skins were later destroyed in the presence of high-ranking police officers and officials from relevant agencies. Had the raid not occurred the meat and skins would have been sent in containers on intercity buses to Bakauheni Port in Lampung where they would have been mixed with fish consignments or disguised using false fish documentation. The meat was destined for restaurants in China, Taiwan or Hong Kong, and the hides would be simmered to separate the scales from the hide, and the scales used in traditional medicine or cosmetics, or turned into wallets or shirt buttons. Three people were arrested shortly after the raid, with individuals from the police also questioned about possible involvement.

Source: *The Jakarta Post* (30 July 2008), <http://www.thejakartapost.com/news/2008/08/30/police-destroy-138-tons-rare-anteater-meat-south-sumatra.html>

Pledge to protect Sumatra's forests

Governors from the 10 Sumatran provinces, as well as four national ministries, have signed a commitment to carry out ecosystem restoration on Sumatra and protect the remaining natural forest. In recent years the island has suffered from floods and forest fires, thought to be the result of illegal forest clearance; c. half the island's forest cover, home to species such as tigers and orang-utans, has been lost in the past 20 years. Deforestation in Sumatra also has grave implications for climate change as > 13% of the island's forests lie on peat, which contains large amounts of carbon that would be released into the atmosphere should the forests be felled. Honouring the commitment may require help, some of it financial, from the West.

Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/sci/tech/7662186.stm>

Hairy-nosed otter cub found in Cambodia's coastal wetlands

A group of researchers has discovered a 4-month-old hairy-nosed otter cub living in the house of a fisherman on the south-west coast of Cambodia. This Endangered species was thought to be extinct in 1998 but since then small populations have been found in Cambodia, Vietnam, Thailand and Sumatra. However, it was thought that the species was restricted to freshwater swamps, so the discovery of the cub, called Oshi, is welcome news, as it increases the potential range of the species. Oshi will join the only other hairy-nosed otter in captivity, Dara, at the Phnom Tamao Zoo in Phnom Penh, to help raise awareness of the species. Like other otter species, hairy-nosed otters are at risk from the fur trade.

Source: *International Otter Survival Trust press release* (21 November 2008).

New population of Tonkin's snub-nosed monkeys found

Interviews with communities near the Chinese border have resulted in the discovery of a new population of the Critically Endangered Tonkin's snub-nosed monkey in Vietnam. Interviews revealed that villagers in the Tung Vai commune had observed the monkeys after seeing film footage of the species supplied by FFI to a national television network. Following the interviews an FFI-led team of researchers located a group of 15–20 individuals of the species, including three juveniles, in a small forest

patch in Quan Ba District. The monkeys seemed wary of people, and with reason: hunting for the bushmeat trade and habitat destruction are major threats to the species' survival. Work by FFI and partners is already having an effect in the area, with the expansion of cardamom plantations halted, and plans being developed to support rural communities, in order to reduce human pressures on the ecosystem.

Source: FFI press release (2008), http://www.fauna-flora.org/docs/Media_Release-Discovered-New_population_of_bizarre-looking_endangered_monkey.pdf

Evaluation of integrated conservation and development project undertaken

Integrated conservation and development projects (ICDPs) are popular with conservation agencies and donors but are rarely evaluated independently. Now a study of the India Eco-Development Project (IEDP) around Periyar Tiger Reserve has found that out of 90 respondents who had participated in the IEDP 71.1% were aware of the objectives of the Project but their receipt of community benefits did not influence their attitudes to conservation. Instead, attitudes were influenced by previous experience of human-wildlife conflict, their age, and involvement in an ecotourism-based profession. In addition, only 36.4% of 55 community benefits examined were still being maintained or used 2 years after the Project ceased. The IEDP, which spent 43.2% of its project budget on community development schemes, is credited in the study with addressing issues, such as gender empowerment, raised by critics of ICDPs in the past.

Source: *Environmental Conservation* (2008), 35(4), 1–9.

Green and turquoise frog discovered

Surveys in Cambodia's Cardamom Mountains by FFI have unearthed a species of frog previously unknown to science. Descriptions of the new amphibian, the Samkos bush frog, make it sound like something from a science fiction story, as it has green blood and turquoise bones that are visible through its translucent skin. The reason for this colouration is that the frog does not process the waste product biliverdin in its liver but instead this green pigment is passed back into the frog's blood. Since 2000 FFI's work in Cambodia has resulted in the discovery of more than 40 species, including four frogs, not previously seen in the country. In 2008 FFI published the first field guide to Cambodia's amphibians, which is available both in Khmer and English.

Source: FFI press release (2008), http://www.fauna-flora.org/news_frog_discoveries.php#

EAST ASIA

Camel distinctiveness proved

Phylogenetic analysis carried out on wild Bactrian camels has revealed that the wild population of these animals is genetically different to the domestic population. This knowledge will be crucial in devising an effective breeding programme for this Critically Endangered species, for which a captive breeding centre has been created in Mongolia at Zakhyn-Us. Since 2004 the number of camels in the captive breeding programme has increased from 12 to 21. The Wild Camel Protection Foundation is currently working with the Zoological Society of London and the Mongolian Ministry of Nature and the Environment on the possibility of releasing a small number of Bactrian camels into the Mongolian Gobi desert, where the species was known to occur a century ago.

Source: *Wild Camel Protection Foundation press release* (October 2008).

Chinese trade in wildlife in need of controls

A report produced by WWF and TRAFFIC that casts light on the trade in wildlife and wildlife products in China has called for more stringent trade controls. The report indicated that China is now the world's second largest importer of wood, which is fuelling the illegal timber trade in Africa, and also that the traditional medicine industry has grown at a rate of 10% per year since 2003. Furthermore, a survey of 25 markets in five southern Chinese cities found that 13 had wild animals for sale, as did 20 out of 50 restaurants. These results indicate that the consumption of wild animals, which had fallen after the SARS outbreak in 2003, is increasing once more. On a more positive note, the report also documents a decrease in the illegal ivory trade in China over the last year.

Source: WWF (2008), http://www.wwf.org.uk/what_we_do/safeguarding_the_natural_world/wildlife/illegal_wildlife_trade/index.cfm?uNewsID=2377

Crested ibises released in Japan

Endangered crested ibises are roaming wild once more in Japan, after an absence of 27 years. Once widespread in East Asia, hunting and habitat destruction have caused the population to dwindle, and the last five remaining wild birds in Japan were taken into captivity in 1981 for captive breeding

purposes. The captive population of crested ibises in Japan is now 120, with some individuals supplied by China, where the birds still occur. The 10 ibises released into the wild were selected from 15 that had been trained to live outside captivity, and were released into rice paddies on Sado Island. The Japanese Environment Ministry is aiming to return 60 ibises to the wild by 2015.

Source: *The Japan Times* (2008), <http://search.japantimes.co.jp/print/nn20080926a7.html>

NORTH AMERICA

Idaho's 'roadless' areas threatened

Idaho's federal government dealt a potentially heavy blow to the state's forests in October 2008, when it announced the opening up of over 1,600 km² of roadless forests to development. America's national forests contain over 230,000 km² of roadless areas, and conservationists rejoiced in 2001 when Bill Clinton banned nearly all development in these sites. However, the Bush administration overturned this policy in 2005, ushering in a state-by-state system of decision-making. The announcement in Idaho is particularly concerning as conservationists fear that phosphate mines may open in the roadless areas, some of which border Yellowstone National Park. Pollution from these mines could kill aquatic organisms in nearby rivers, and although unlikely to affect Yellowstone itself, may have detrimental effects on the greater Yellowstone ecosystem.

Source: *New Scientist* (2008), 200(2679), 7.

Atrazine identified as main driver of trematode infections for northern leopard frog

Using a combination of mesocosm experiments and field surveys researchers have revealed that the commonly used pesticide atrazine can be a significant driver of larval trematode infections in the declining northern leopard frog, and that phosphate-associated eutrophication may play a complementary role. Results from the field survey as well as from mesocosm experiments show that atrazine suppresses amphibian immune response, which increases their susceptibility to larval trematodes. The mesocosm experiments also revealed that atrazine reduces phytoplankton abundance, which leads to increased nutrient availability, water clarity and sunlight penetration to algae, which in turn leads to increased snail reproduction and thus augments the intermediate snail hosts of the trematodes. This research

highlights the value of identifying possible drivers of infectious diseases that influence population dynamics and may cause declines of wildlife species.

Source: *Nature* (2008), 455, 1235–1239.

CO₂ experiments to be closed down

A number of open-air experiments examining the effects of increased carbon dioxide concentration on forests, known as Free-Air CO₂ Enrichment (FACE) experiments, are to be closed down following a recent announcement by the US Department of Energy. The closures are seen as necessary by many researchers to make funds available for new experiments. The size and design of the experiments makes them expensive; the four FACE plots in Durham, North Carolina, costs the Department of Energy up to USD 3 million a year, with the bulk of this money spent on supplies of carbon dioxide and technical support. Some researchers have voiced disappointment at the closure of sites collecting long-term data but limited research budgets and infrastructure limitations means that many in the research community view the closure as necessary.

Source: *Nature* (2008), 456(7220), 289.

Bush gives albatrosses a helping hand...

The USA looks set to join the international treaty known as The Agreement for the Conservation of Albatrosses and Petrels following George Bush's presentation of the treaty to the Senate for approval. The treaty now needs to be ratified by the Senate, following which laws will be drawn up to implement the agreement. The migratory nature of albatrosses and petrels means that a concerted, international effort is required to protect them, and they are in need of all the protection they can get: 10 of the 22 albatross species are Critically Endangered or Endangered. The greatest threats to the species are long-line and trawl fisheries, and introduced predators at their breeding sites. Current parties to the treaty are Argentina, Australia, Brazil, Chile, Ecuador, France, New Zealand, Norway, Peru, South Africa, Spain and the UK. Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/10/USA_acap.html

... and sets aside three new marine national monuments too

Three areas in the Pacific Ocean, covering > 500,000 km², were designated as marine national monuments by George Bush just before he left office. The Marianas Trench Marine National Monument, in the western North Pacific Ocean centres around the

Marianas Trench, the deepest point on the planet, and extends to cover nearby undersea volcanoes and thermal vents. The Pacific Remote Islands Marine National Monument covers seven areas to the south and west of Hawaii, and includes Wake Island, an important breeding site for seabirds. The third Marine National Monument, the Rose Atoll, is located to the east of American Samoa, and its waters are home to a number of rare species, as well as rose-coloured corals. Bush said that the new monuments would receive the highest level of recognition and protection possible in America.

Source: *Environment News Service* (2009), <http://www.ens-newswire.com/ens/jan2009/2009-01-06-02.asp>

Walleye pollock up against the wall

Walleye pollock is at the centre of a debate between the US National Marine Fisheries Service and environmentalists regarding catch quotas for the species. The Fisheries Service has recommended an 18% reduction in catches in the eastern Bering Sea in 2009, bringing the total quota down to 815,000 tonnes. Walleye pollock is a white fish that is widely used as a substitute for cod, and as such has been heavily fished in recent years. Environmental campaigners believe that current quotas are still too high to prevent a collapse in pollock stocks, and recommend a quota of c. 500,000 t for 2009 to allow stocks to recover from years of overfishing. They suggest that the decrease in pollock numbers is one of the reasons for the 80% decline in the stellar sea lion's population since the 1970s.

Source: *New Scientist* (2008), 200(2684), 6.

Grubby oil attracts more criticism

Plans by Canada to extract oil from the oil sands in northern Alberta has been criticized in a report by the US National Resources Defence Council, which claims that development of the area could kill 100 million migratory birds over the next 50 years, predominantly through loss of habitat. Oil from oil sands is considered among the dirtiest on earth, because the extraction process requires three times as much energy as pumping conventional oil. Government agencies in the USA have already been banned from using fuel made from oil sands, and even the provincial government in Alberta, which is dependent on money from oil sands, has been galvanized into action. Not only is the government tightening its environmental oversight, it is also planning to invest CAD 2 billion towards capturing CO₂ emitted by the oil sands industry.

Source: *New Scientist* (2008), 200(2685), 7.

Exxon Valdez legacy examined

A study in the Prince William Sound in Alaska has found that, 20 years after one of the world's most high-profile oil spills, few patches of oil are still extant, and much of what does remain is degraded. More than 700 samples were collected from 25 sites known to have been heavily affected by the spill from the Exxon Valdez tanker in 1989. The vestiges of oil that remain on the beaches are located deep within cracks between boulders and pebbles, and the study's authors conclude that they are no longer in a chemical form that poses a threat to animals. However, some researchers speculate that the long-term effects of exposure to the oil by mammals and fish are still unknown, and therefore giving the area the all-clear may be premature.

Source: *New Scientist* (2008), 200(2687/2688), 6.

Lack of crop diversity deters aphid predators

The recent growth in the biofuels market has seen a corresponding decrease in crop diversity, with farmers planting nearly 20% more maize in 2007 than they did in 2006. Now 2 years of research from a team at Michigan State University has found that the more maize-dominated a landscape, the less impact predators had on soybean aphids. The researchers suspect that this is because maize hosts fewer aphids, and thus, by extension, there are fewer aphid predators such as ladybirds in the crop. Predictions suggest that in Michigan, Iowa, Minnesota and Wisconsin alone the increase in maize and associated decrease in aphid predators has cost farmers an additional USD 58 million in insecticide to tackle the soybean aphids.

Source: *New Scientist* (2008), 200(2687/2688), 6.

Bank of America backs mountain tops

Decried by some as a publicity stunt, the Bank of America has announced that it will no longer offer loans to mining companies that exercise the practice of blasting the tops off mountains to get to the coal beneath. Mountaintop mining, practised in the Appalachian Mountains among other places, damages ecosystems and causes pollution in water bodies. Some people have pointed out that the Bank of America is not a major source of capital for mining companies but it is hoped that other banks will follow in its footsteps.

Source: *New Scientist* (2008), 200(2686), 6.

CENTRAL AMERICA AND CARIBBEAN

Local scale habitat conservation crucial to lemon shark success

A recent molecular study of juvenile lemon sharks at Marquesas Key, Florida, highlights the often overlooked importance of habitat conservation to preserving genetic diversity in this species. Researchers found that many female lemon sharks exhibit strong site fidelity when returning to nursery areas to pup. Shallow sea grass beds and mangroves at Marquesas Key provide prey resources and refugia for juvenile lemon sharks, which rely almost exclusively on these habitats during their first 3 years of life. Habitat quality therefore becomes critical in determining the early life-history characters of lemon sharks, and combined with nursery site philopatry in females, has the potential to contribute significantly to genetic divergence in the lemon shark population as a whole. Conservation of critical nursery habitat at local scales is therefore crucial to both individual fitness and the maintenance of genetically diverse lemon shark populations.

Source: *Molecular Ecology* (2008), 17, 3337–3351.

SOUTH AMERICA

Flying penguins

The Brazilian air force has been drafted in to return hundreds of penguins to their native territory in the South Atlantic Ocean after at least 1,000 birds washed up on the Brazilian coast. Every year the penguins travel north from the cold waters of Patagonia in search of food, and it is usual for some to swim as far north as Brazil. However, the number that appeared in Brazil in 2008 was higher than normal, and birds were found further north than usual, prompting speculation that there was a problem with their normal prey supply. As well as return journeys by air, some penguins travelled home on a navy vessel, while others spent time recovering from their long journey in Bahia state.

Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/world/americas/7652171.stm>

Extinct Galápagos tortoise lives on in descendants

An examination of the DNA of museum specimens of the giant tortoise *Geochelone elephantopus* has proved that this species was evolutionarily distinct from all other Galápagos island tortoise populations. *G.*

elephantopus was endemic to the island of Floreana but became extinct following intense human exploitation. Investigations into the genetic data of extant giant tortoises from another island in the archipelago, Isabela, showed that some living tortoises on this island are genetically extinct from the rest of the tortoises on the island. Interestingly, the non-native tortoises from Isabela island are of recent Floreana island ancestry, and were found to have DNA that closely matches that of the extinct *G. elephantopus*, indicating that the genetic lineage of this extinct species persists in descendants occupying a different island.

Source: *Proceedings of the National Academy of Sciences* (2008), 105, 15464–15469.

Jaguar kills fisherman in Brazil

The first official incident of a jaguar killing a person in Brazil occurred in June 2008, in the Pantanal. Although reports of jaguars attacking humans have been recorded in the past, these incidents all involved provocation of the jaguar, often while it was cornered during hunting. In this instance the victim was sleeping in a tent at the edge of the Paraguay River when the jaguar attacked. Possible causes for the attack include increasing habituation of jaguars towards humans, resulting from calling and baiting of jaguars by local tour operators and fishermen, vulnerability of fishermen to attack, and the fact that the camp site where the attack took place appears to have had indications of territorial activity by the jaguar, in the form of scats and fresh foot prints.

Source: *Cat News* (2008), 49, 31–32.

Conservation measures being implemented for rare Bolivian birds

The futures of two Bolivian birds, the Critically Endangered royal cinclodes and the Endangered ash-breasted tit-tyrant are looking brighter thanks to initiatives being implemented in the *Polylepis* forests in the northern Titicaca Lake basin, and the Cordilleras of La Paz and Apolobamba. Prior to 2003 few records of the royal cinclodes existed from Bolivia and the ash-breasted tit-tyrant was virtually unknown in the country. Since then, however, conservationists have found a number of populations of each species in the region, and a project has been implemented that started by mapping *Polylepis* forests and key biodiversity areas within the c. 400 km² area of land owned by the Keara and Puina indigenous communities. The project is now working with communities to implement conservation activities, including the

provision of fuel-efficient stoves to reduce the demand for *Polylepis* trees as firewood. Source: *American Bird Conservancy* (2008), http://www.abcbirds.org/newsandreports/stories/0810_bolivian.html

National Park of Serra dos Órgãos doubled in size

On 13 September 2008 President Lula of Brazil signed a decree to double the area of the National Park of Serra dos Órgãos, in the state of Rio de Janeiro, from 10,650 to 20,050 ha, preserving an area of great importance for biodiversity in a region that is heavily impacted by human activities. The increased area includes places of ecotourism interest, augments the protection of the biological corridor between Serra dos Órgãos and the Biological Reserve of Tinguá, and makes more land available for threatened species such as the leopard *Panthera onca* and the muriquis *Brachyteles* spp. (the largest Neotropical primates, of which there are two species endemic to the Brazilian Atlantic Forest; see also pp. 254–257). The enlarged Park is one of the largest remaining tracts of Atlantic Forest in Rio de Janeiro.

Source: *Parque Nacional da Serra dos Órgãos news* (2008), http://www.icmbio.gov.br/parnaso/index.php?id_menu=3&id_arq=192

Yasuni gains temporary reprieve

Controversial plans to drill for oil beneath one of the world's last remaining untouched areas of land, in the Ecuadorian Amazon, have been put on hold for 6 months, just days after it was announced that the block was open for bids. The government will wait until July 2009 before deciding on a proposal that has been put forward, namely not to extract the oil under the Yasuní National Park in exchange for international compensation. International interest in the proposal has been forthcoming from the German and Norwegian governments, as well as from the European Parliament and the World Bank, among others. Some claim that the decision was made with the forthcoming presidential election in mind but all are agreed that the delay will provide an opportunity to strengthen support against drilling in this pristine area.

Source: *Yasuní Green Gold* (2009), <http://yasunigreengold.blogspot.com/>

Blue-throated macaw gets its own reserve

The world's first protected area for the Critically Endangered blue-throated macaw has been created in eastern Bolivia, as a result of work by the Bolivian conservation

organization Asociación Armonía, with support of the American Bird Conservancy and World Land Trust-US. The blue-throated macaw is thought to number only 300 individuals, with habitat destruction a major factor in its decline, along with capture for the pet trade. The species is endemic to the savannahs in Bolivia's Beni province, where it depends on motucu palms for nesting. These palms occur in clumps within seasonally-flooded grasslands. The new reserve, the Barba Azul Nature Reserve, covers c. 25 km², and is home to 20 blue-throated macaws during the breeding season. Asociación Armonía plans to develop a research station and ecotourism facility on the site.

Source: *American Bird Conservancy* (2008), <http://www.abcbirds.org/newsandreports/releases/081031.html>

Hacking into the rainforest

A report by Greenpeace has revealed that a computer system designed to monitor logging in Para state, Brazil, has been compromised by loggers who hacked into the system and issued fake permits to enable loggers to extract far more timber than environmental officials were prepared to allow. Hackers are believed to have been employed by 107 logging and charcoal companies, almost half of which have law suits pending for environmental crimes or the use of slave labour. Brazil's federal prosecutor is suing the companies behind the hacking for BRL 2 billion (GBP 564 million), the estimated value of 1.7 million m³ of timber that has been sold illegally. A total of 202 people are standing charge for their involvement in the scam.

Source: *BBC News* (2008), <http://news.bbc.co.uk/1/hi/technology/7783257.stm>

PACIFIC

Sluggish squids

Evidence has been published that paints a bleak picture for the future of the jumbo squid, a commercially and ecologically important predator in the eastern Pacific Ocean. Increasing ocean acidification will reduce metabolic rates (by 31%) and activity levels (by 45%) in the squid, while rising ocean temperatures will expand the oxygen minimum layer, with implications on the oxygen debt accrued by the squid as it moves through this layer. The decrease in activity levels and metabolic rates will make the squid more susceptible to predation, which will have implications on the long-term future of the species, especially when combined with the decrease in habitable

depth range resulting from ocean acidification, global warming and increasing hypoxia.

Source: *Proceedings of the National Academy of Sciences* (2008), 105, 20776–20780.

New iguana found on Fiji

Genetic studies of Fijian iguanas have shown there to be a wide genetic diversity within the group, as well as revealing the presence of a hitherto unknown species of iguana in the central regions of Fiji, named *Brachylophus bulabula*. The study also found that on 12 of the 13 islands where iguanas were studied there was at least one distinct genetic line unique to that particular island. Researchers have long wondered how iguanas came to occupy the Fiji islands, as their closest living relatives are nearly 8,000 km away in the New World. Evidence from the current study indicates that iguana ancestors were extant on the Fiji islands as far back as 13 million years ago. Despite this impressive tenacity, iguanas on the islands are now threatened with extinction as the result of anthropogenic habitat loss and alteration, and invasive species (see also *Oryx*, 41, 44–50).

Source: *USGS Soundwaves* (2008), <http://soundwaves.usgs.gov/2008/11/>

Reintroduced lorikeet breeds on the Cook Islands

Endangered Rimatarā lorikeets reintroduced on to Atiu Island in 2007 have fledged chicks successfully, despite conflict between the lorikeets and common mynas. Evidence suggests that the Rimatarā lorikeet used to be plentiful in the Southern Cook Islands but was extirpated from every island on account of its red plumage. The birds persisted on a nearby island in French Polynesia, Rimatarā, where they are protected by a taboo. Atiu Island was chosen as the site for reintroduction of the species because it has similar vegetation to Rimatarā, no native lorikeets and no ship rats. Common mynas, originally introduced to Atiu to control coconut stick insects, did prove to be a problem for the lorikeet chicks, and it has been recommended that the number of mynas on the island be reduced to enable the lorikeet population to flourish.

Source: *BirdLife International News* (2008), http://www.birdlife.org/news/news/2008/10/kura_breeding.html

Mice continue to bring down albatrosses

The Critically Endangered Tristan albatross has suffered its worst ever breeding season on Gough Island, with many chicks

being eaten alive by introduced house mice. A survey early in 2008 found 1,764 albatrosses incubating eggs but only 246 chicks survived to fledging. Another Critically Endangered species, the endemic Gough bunting, is also suffering as a result of the mice, which eat its eggs and chicks, and may compete with the species for food. Over the last 20 years the bunting's population has halved, and now stands at an estimated 400–500 pairs. A feasibility study has been carried out to see whether the mice could be removed from the island using poisoned bait, and so far appears promising, providing a sliver of hope for these threatened species.

Source: *RSPB press release* (2008), <http://www.rspb.org/media/releases/details.asp?id=tcm:9-205319>

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Murray-Darling river system takes a turn for the worse

Water flows in the Murray-Darling river system have been affected by drought and mismanagement for years but a new problem has now appeared: the formation of a crust of sideronatriite, a mineral that forms in acid soil, in wetlands at the mouth of the Murray. This follows findings in 2007 that falling water levels had resulted in the production of 240,000 t of sulphuric acid, as soils rich in iron sulphide became exposed to the air. Researchers are concerned that the acid will seep into nearby lakes, with disastrous effects on aquatic life. Techniques to combat the high acidity currently being trialled include spreading lime, and growing acid-resistant plants in an attempt to neutralize the soil.

Source: *New Scientist* (2007), 200(2682), 7.

South Orkney Islands reveal riches

The first comprehensive biodiversity survey of the South Orkney Islands has challenged the idea that biodiversity is greatest at the tropics, with over 1,200 species found on and around the islands, including over one third that had not been recorded there in the past, and five that were entirely new to science. The researchers used trawl nets and scuba divers to search the waters around the islands to a depth of 1,500 m. The surveys will be useful in that they provide a thorough baseline for future studies, particularly those that measure the effects of global warming. Warming ocean temperatures are expected to affect species living in these waters, with temperate species likely to move in, and Antarctic species

predicted to move further south to cooler waters.

Source: *New Scientist* (2008), 200(2685), 6.

Whaling clashes in the Antarctic

The head of the Japanese Whaling Association has called on the Australian and New Zealand governments to close their ports to the Steve Irwin, a ship run by the Sea Shepherd Conservation Society, following confrontations between the Steve Irwin and Japanese ships. Keiichi Nakajima claimed that not doing so would make the countries complicit in further attacks by the whaling protesters. According to the Japanese Institute of Cetacean Research the Steve Irwin rammed a whale-sighting vessel and threw bottles of acid at the crew. Protesters from the Steve Irwin deny the charges, claiming that their activities were limited to throwing rotten butter and slime onto the decks of the ships they accuse of carrying out commercial whaling.

Source: *New Scientist* (2009), 201(2690), 5.

Yellow-eyed penguins only colonized 500 years ago

Research has yielded a surprising fact about New Zealand's Endangered yellow-eyed penguins; they are relative newcomers to the South Island, thought to have arrived from the sub-Antarctic Auckland and Campbell islands c. 500 years ago. Evidence from penguin bones has revealed the existence of a previously unknown penguin, the Waitaha, which appears to have become extinct between 1300 and 1500 AD, shortly after Polynesian settlement of the islands. Previous analysis of fossil records suggested that the yellow-eyed penguin was more abundant in the past but this new evidence implies that the yellow-eyed penguins replaced the extinct Waitaha penguin, with competition between the two species possibly having prevented earlier colonization by the yellow-eyed penguin. There are currently c. 7,000 yellow-eyed penguins in New Zealand, where they are the focus of a concerted conservation effort.

Source: *University of Otago press release* (2008), http://www.otago.ac.nz/news/news/2008/19-11-08_press_release.html

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