

Briefly

INTERNATIONAL

Shellfish shocker

Research by The Nature Conservancy shows that shellfish reefs, once abundant in many temperate estuaries, may now be the most threatened marine habitat. An estimated 85% of oyster reefs have been lost worldwide, making them more imperilled than coral reefs and mangrove forests. In addition to their economic value shellfish reefs provide vital ecosystem services such as nutrient removal, shoreline protection, water filtration and fish habitats. The threats facing these reefs are manifold, and include destructive fishing practices, the introduction of non-native shellfish and coastal land reclamation. Upstream activities such as dam construction, urban development and agricultural run-off also have negative impacts on the quality and quantity of water entering estuaries. The report's authors identify a number of cost-effective strategies to reverse the fortunes of these embattled reefs.

Source: *Shellfish Reefs at Risk: A Global Analysis of Problems and Solutions* (2009), <http://conserveonline.org/library/shellfish-reefs-at-risk-report/@@view.html>

Evidence of overfishing stretches back through time

Population modelling combined with historical records including ships' logs, paintings and restaurant menus have revealed that fish stocks were probably already depleted before the trawlers and factory ships of the 20th century began their work. Evidence presented at the Oceans Past II conference, part of the Census of Marine Life, showed that freshwater fisheries in much of Europe were already in decline 1,000 years ago, prompting fishermen to start catching marine species, and Italian researchers revealed that coastal fish stocks had started to disappear by 1500. Elsewhere wind-powered whaling ships decimated the population of nearly 1 million bowhead whales in the eastern Arctic Ocean. Although this evidence casts a sombre light on the historical extent of mankind's effect on aquatic life it also illustrates that, should stocks recover, the oceans could teem with more life than we ever suspected.

Source: *New Scientist* (2009), 202(2710), 8.

Starfish bucks trend

Increased dissolved CO₂ levels in the world's oceans are thought to pose a serious

threat to marine species with calcified shells or skeletons. Now an investigation into the effects of increased CO₂ concentration and water temperature on the sea star *Pisaster ochraceus* has revealed that sea star growth and feeding rates increased as water temperature increased from 5 to 21°C. A doubling of CO₂ concentration, with or without an accompanying rise of water temperature from 12 to 15°C, also increased growth rates in this keystone predator. This study illustrates that changes in the oceans will affect different species in different ways; in this case it appears that because sea stars are less heavily calcified than other species such as corals they can substitute fleshy tissue for calcified mass.

Source: *Proceedings of the National Academy of Sciences of the USA* (2009), <http://dx.doi.org/10.1073/pnas.0811143106>, and *New Scientist* (2009), 202(2710), 13.

Whales bring home the bacon

The International Fund for Animal Welfare launched a report at the International Whaling Commission's meeting that shows how the global whale-watching industry has burgeoned over the last 10 years. In 2008 13 million people took part in whale watching in 119 countries and territories, generating a total expenditure of USD 2.1 billion. The industry has grown at a rate of 3.7% a year, although this rate varies across the globe. Asia's whale-watching industry has, for example, grown five-fold since 1998, with 8% of global whale-watchers now visiting this region. It is estimated that 3,300 operators offer whale-watching, employing an estimated 13,200 people worldwide. The report makes the case that protecting whales has generated significant economic benefits to communities around the world.

Source: *Whale Watching Worldwide: Tourism numbers, expenditures and expanding economic benefits* (2009), http://www.ifaw.org/Publications/Program_Publications/Whales/asset_upload_file639_55365.pdf

Seagrass meadows in decline

Coastal development, pollution and climate change are all contributing to declines in seagrass meadows across the globe but only now has a study provided a quantitative global assessment of seagrass loss. An examination of 215 case studies revealed that meadows have been disappearing at a rate of 110 km² yr⁻¹ since 1980 and 29% of their known area of extent has disappeared

since records began in 1879. Rates of decline were also found to have increased dramatically, from an average of 0.9% yr⁻¹ before 1940 to 7% yr⁻¹ since 1990. Seagrasses provide many crucial ecosystem services, such as supporting fisheries worth up to USD 3,500 ha⁻¹ yr⁻¹, as well as vital subsistence fisheries on which communities depend, carbon sequestration, sediment stabilization and feeding areas for threatened species such as manatees, dugongs and green turtles.

Source: *Proceedings of the National Academy of Sciences of the USA* (2009), <http://dx.doi.org/10.1073/pnas.0905620106>

World Heritage Site list grows

Two European sites have been added to UNESCO's World Heritage List, the Wadden Sea in Germany and the Netherlands, and the Italian Dolomites. Two existing natural sites have been added to the list of World Heritage Sites in danger: the Belize Barrier Reef System, which is suffering the effects of mangrove cutting and excessive development, and Colombia's Los Katíos National Park, which is undergoing deforestation within and around its boundaries to furnish the illegal trade in timber. Illegal hunting and fishing are also taking place in Los Katíos National Park, inscribed on the UNESCO World Heritage List in 1994 for its exceptional biodiversity.

Source: *UNESCO World Heritage News* (2009), <http://whc.unesco.org/en/news/536>

Extinction beckons for open ocean sharks

One third of open ocean sharks and rays are at risk of extinction according to a report by the IUCN Shark Specialist Group. Overall 32% (20 species) are threatened, with 6% categorized as Endangered and 26% Vulnerable. A major threat to pelagic sharks are fisheries; where sharks were once considered incidental bycatch, a growing demand for shark meat, and especially shark fins, means that these open ocean species are increasingly being targeted. Shark-finning, where the fins are removed and the body of the shark is thrown back into the ocean, is banned in most international waters but enforcement standards are lenient and thus these bans are not fully effective. Among the measures recommended by the report is that governments set catch quotas for sharks and rays based on

scientific advice and ensure an end to shark finning.

Source: *The Conservation Status of Pelagic Sharks and Rays* (2009), http://cmsdata.iucn.org/downloads/ssg_pelagic_report_final.pdf

Satellite tracking enables researchers to view spectacled petrels more clearly

Vulnerable spectacled petrels have been tracked by means of a satellite tag from their winter feeding grounds in Brazil to their breeding site in the South Atlantic. The birds were revealed to travel large distances, with one bird covering > 14,000 km in 49 days. Little is known about the spectacled petrel, only distinguished as a unique species 10 years ago, but in common with many other long-distance seabirds, the species is at risk of drowning on longline hooks. In fact, the satellite-tagging data revealed an overlap between the routes taken by the petrels and the preferred fishing grounds of the Brazilian longlining fleet. Furthermore, the petrels were recorded flying during both day and night, which, if confirmed, means that any mitigation measures deployed by longlining fleets will need to be used at all times.

Source: *American Bird Conservancy press release* (2009), <http://www.abcbirds.org/newsandreports/releases/090506.html>

Sea level rise from melting Antarctic overestimated

A new study has suggested that a collapse of the west Antarctic ice sheet would cause a rise in sea level of an average of 3.3 m, instead of 5 or 6 m as previously thought. Previous studies have hypothesized that if the floating ice shelves around the west Antarctic were to disappear, this would have the effect of 'un-damming' large parts of the ice sheet, triggering its eventual meltdown. The recent study used simulations to examine how the ice sheet would respond if the floating ice shelves drifted off, and found that only unstable parts of the ice sheet below sea level would collapse, while other, more stable parts of the sheet would remain intact. Under this new scenario the areas with the largest sea level rise would be around the Atlantic and Pacific seaboard of North America.

Source: *Science* (2009), 324, 901–903.

Recovery of ecosystems can be swift

An examination of 240 peer-reviewed case studies that investigated large, human-scale ecosystem recovery following disturbance has revealed that their recovery can be much faster than previously suggested.

The seven types of ecosystem examined had suffered a range of perturbations including those of an anthropogenic (e.g. logging, mining, overfishing, deforestation) and natural (hurricanes and cyclones) nature. Eighty-three of the studies showed recovery in all the variables measured, 90 showed a recovery in some of the variables measured, and 67 showed no recovery at all. The average recovery time was at most 42 years (for forest ecosystems) among studies that demonstrated a recovery in any variable, and the average recovery time was typically 10 years when recovery was examined by ecosystem type. Sites where agricultural activities and multiple perturbations had taken place were significantly slower at recovering than sites suffering from all other perturbation types.

Source: *PLoS One* (2009), 4(5): e5653, <http://dx.doi.org/10.1371/journal.pone.0005653>

Waders bowing out

The newly published *Wader Atlas* has revealed that > 50% of the populations of waders in Europe, West Asia and Africa are declining at an accelerating rate. Many waders undertake long-distance migrations between their breeding and over-wintering sites, and their decline has been linked to inadequate protection of some of the key sites on their migratory routes. While species can take advantage of a fairly comprehensive network of protected areas in many European Union member states, key sites beyond the EU's borders are not protected or managed adequately. For example, the wetlands along Africa's west coast are heavily affected by human activities, such as the construction of dams that drain wetlands and irrigation schemes that affect water flow. International cooperation is required along the migratory paths of these birds to safeguard their future existence.

Source: *BirdLife International News* (2009), http://www.birdlife.org/news/news/2009/06/wader_atlas.html

Natural pest control chemical works wonders on seeds

Experiments in which seeds were dipped in jasmonic acid have shown a distinct decrease in pest damage in the resulting crops, as well as increased crop yields. Jasmonic acid is produced by plant leaves when they are attacked by insects but previous studies in which crops were sprayed with the chemical found that the crops had a reduced yield. However, treating the seeds seems to prime the plants' response to attack, akin to the process of immunization, and has the advantage of being cheaper than spraying a growing

crop. Jasmonic acid, which has now been licensed for use by the American agricultural company Becker Underwood, is being billed as an alternative to genetically modified technology, hitherto seen as the best way to reduce pesticide use on crops.

Source: *Planet Earth Online* (2009), <http://planetearth.nerc.ac.uk/news/story.aspx?id=428>

Fisheries management not yet up to scratch

A study that investigated the effectiveness of fisheries management regimes from around the world has found that only 7% of coastal states develop their fisheries management policies using rigorous scientific assessment. This is despite the existence of widely-accepted international initiatives that have sought to improve fisheries management and prevent overexploitation. The study also demonstrated that it is the conversion of scientific knowledge into policy in a participatory and transparent process that is key to achieving sustainable fisheries; only 1.4% of countries currently employ such a technique for the shaping of policy. Marine fisheries play a vital role in many peoples' lives, providing 15% of the animal protein eaten by humans and demand is expected to rise by c. 35 million t by 2030.

Source: *PLoS Biology* (2009), 7(6): e1000131, <http://dx.doi.org/10.1371/journal.pbio.1000131>

EUROPE

No definite conclusions in stranding report

A detailed investigation of the UK's largest mass stranding of common dolphins shows that the 26 dolphins that died in June 2008 were in good health. The report's authors also rule out a number of potential causes of the dolphins' mass stranding such as decompression sickness, bycatch, boat strike and abnormal weather conditions. As the dolphins were seen unusually close to the shore on the days preceding the stranding the report's authors speculate that the group may have been at increased risk of stranding. The causes for such near-shore distribution may have been either natural or anthropogenic; the latter is significant because an international naval exercise, involving mid-level sonar, had been conducted in the days leading up to the stranding event.

Source: *Investigation of the common dolphin mass stranding event in Cornwall, 9th June 2008* (2009), http://randd.defra.gov.uk/Document.aspx?Document=WCO601_8031_TRP.pdf

Reptiles and amphibians suffer in Europe

Surveys by IUCN for the European Commission have indicated that Europe's herpetofauna is dwindling in number, with 21% of European reptiles and 23% of amphibians threatened with extinction, while overall 42% of reptiles and 59% of amphibians are in decline. These findings suggest that the region's herpetofauna is more at risk of extinction than other groups for which similar surveys have been carried out, with 15% of European mammals and 13% of birds under threat. The greatest threat to Europe's amphibians and reptiles comes from anthropogenic destruction of their habitats, with further problems caused by climate change, pollution and the presence of invasive species.

Source: *IUCN press release* (2009), <http://www.iucn.org/about/work/programmes/species/?3204/Europes-amphibians-and-reptiles-under-threat—IUCN>

Britain's woodland homogenizes

Research in a number of woodland patches in southern Britain has shown that their species composition is becoming increasingly similar, although mean species richness at the patch scale has not changed since a study carried out in the same patches in the 1930s. These findings are thought to be the first direct example of taxonomic homogenization in the UK. An analysis of the plant species occurring in the woodlands indicated that the native plant communities may have changed in response to eutrophication and increasingly shady conditions, changes that are likely to have been brought by changes in woodland management since the 1930s. Researchers point out that changes in native species distributions are likely to have an equally serious effect on biodiversity as the less subtle changes wrought by invasion by non-native flora.

Source: *Proceedings of the Royal Society B* (2009), <http://dx.doi.org/10.1098/rspb.2009.0938>

Deep ploughing detrimental to earthworms

A 10-year study in Germany that investigated the effects of five different soil preparation techniques on the size, number and community of earthworms in the soil has found that different techniques have a marked effect on the number of earthworms in the soil. Land subjected to conventional ploughing to a depth of 25 cm had 119 earthworms m⁻², while soil prepared

using a disc harrow, which loosens the soil slightly to a depth of 15 cm, had 160 earthworms m⁻². Furthermore, soil prepared using the less invasive techniques investigated in this study had higher species richness, with eight species found in these soils compared to six species found in deep-ploughed soil. Earthworms play a vital role in soil ecosystems, and researchers believe that declines in earthworm biodiversity will affect soil functioning.

Source: *European Journal of Soil Biology* (2009), 45, 247–251, and *Science for Environment Policy* (2009), 14, 6.

Lynx breeding centre opens in Portugal

A breeding centre for the Critically Endangered Iberian lynx has opened in Silves, southern Portugal, bringing the number of captive breeding centres in the Iberian lynx ex situ programme to four. The Silves centre, which is being prepared to receive its first lynx at the end of 2009, contains 16 breeding enclosures and is fitted with audio and video surveillance facilities, a clinic, laboratory and quarantine facilities. The network of captive breeding centres is expected to expand further in the future, with additional centres planned for the Spanish provinces of Andalucía, Castilla-La Mancha and Extremadura. The three existing centres currently contain a total of 77 lynx and have recently celebrated the fact that a subadult female bred in captivity has raised cubs successfully for the first time.

Source: *Cat News* (2009), 50, 21.

Pottering around in field margins suits bumblebees best

A survey of three different types of farmland habitats on farms supported by the Scottish Rural Stewardship scheme has found that field margins are the most attractive habitat for queen bumblebees. Queen bumblebees emerge from hibernation in the spring and require a suitable area in which to rear their first lot of workers, ideally surrounded by wild flowers that can provide a good source of nectar. Field margins are preferred by queens over hedgerows and grassland because these provide nest sites, such as disused mouse holes in tussocky grass, as well as opportunities to forage for nectar in spring flowers. Schemes to improve bumblebee populations often focus on supporting bees during the summer but this research suggests that this may not necessarily be the best approach to conserving bumblebees.

Source: *Biological Conservation* (2009), <http://dx.doi.org/10.1016/j.biocon.2009.03.032>, and *Planet Earth Online* (2009), <http://planetearth.nerc.ac.uk/news/story.aspx?id=432>

Warblers face longer migrations

A study that used models to investigate the effect of climate change on the migration patterns of European *Sylvia* warblers, most of which travel between Africa and Europe every year, has found that the distances these birds have to cover during their migration will lengthen, in some cases by as much as 400 km. The models showed that between 2071 and 2100 nine out of the 17 species examined are projected to face longer migrations, with birds that cross the Sahara particularly affected. While some *Sylvia* warblers, such as the blackcap, have started overwintering further north, not all of the migrants will be able to alter their migratory patterns. With predictions that long-distance migrants will need to increase their fuel load by 9% to compensate for the added distance to their journeys, it would appear that these species are facing a serious challenge to their survival.

Source: *Journal of Biogeography* (2009), 36, 1194–1208, and *Mongabay.com* (2009), http://news.mongabay.com/2009/0415-hance_birdmigrations.html

Conserving threatened plants in Europe

A recent study carried out by Botanic Gardens Conservation International (BGCI) has resulted in the identification of nearly 2,000 European plant species that are at risk of extinction. Target 8 of the Global Strategy for Plant Conservation calls for 60% of threatened plant species to be conserved in ex situ collections. However, the absence of a European plant Red List has severely constrained efforts to monitor progress towards this target. To address this gap BGCI developed a consolidated list of European threatened species based on national Red List information from 28 European countries. BGCI then screened this list against its database of plants in cultivation in botanic gardens (PlantSearch) and ENSCONET's (European Native Seed Conservation Network) database of plants conserved in European seed banks. This analysis allowed BGCI to identify 808 (42%) of the threatened plant taxa in ex situ collections in Europe.

Source: *Conserving Europe's threatened plants: Progress towards Target 8 of the Global Strategy for Plant Conservation* (2009), http://www.bgci.org/files/Worldwide/Publications/euro_report.pdf

Harlequin ladybird wreaks havoc

The harlequin ladybird, first seen in the UK in 2004, is spreading at an unprecedented rate, with individuals having spread to most parts of the UK in 4 years. The harlequin feeds on many insects, including the larvae of the UK's 45 native species of ladybird, and researchers fear that the species has the capacity to affect over 1,000 of Britain's native species. In the USA the species, which is native to Asia, has been associated with severe declines in native species in the 20 years since it first arrived. Researchers are now investigating possible ways to control the harlequin ladybird's spread, with one of the most promising consisting of a sexually transmitted mite that makes some ladybirds infertile. Other possible options include fungal disease, a parasitic wasp, two species of parasitic fly and a male-killing bacterium.

Source: *Centre for Ecology and Hydrology press release* (2009), <http://www.ceh.ac.uk/news/press/PressReleaseCEHLadybirdLadybird.asp>

Large pod of dolphins may point to climate change

A group of at least 400 short-beaked common dolphins seen in the Moray Firth, Scotland, is being viewed as an indication that warming seas are pushing this species further north. Witnesses who saw the huge dolphin pod described the sea as 'boiling' with animals, and noted the presence of new-born calves swimming with the group. Short-beaked common dolphins are normally found in more temperate waters around Britain, and sightings of so-called super-pods as far north as Scotland are rare, although smaller pods are seen in the Firth from time to time. Researchers who witnessed the super-pod in the Moray Firth believe that the dolphins were migrating north in search of food and breeding grounds.

Source: *Earthwatch Institute press release* (2009), <http://www.earthwatch.org/europe/newsroom/science/news-3-dolphinpod.html>

Radar discourages bats

The increasing use of wind turbines as a generator of renewable energy poses a problem in that many bats are killed following collisions with turbines, and as yet no method has been found to decrease bat strikes. Following evidence that bat activity is reduced in the vicinity of radar installations, researchers have demonstrated that the use of a radar antenna that produced a unidirectional signal had a significant effect in reducing bat activity and foraging effort per unit time within 30 m of the radar.

However, although the use of the radar did reduce bat activity significantly, the researchers still found that a substantial number of bats continued to forage within the radar's beam, and they speculate that it may be only a particular combination of the radar's attributes (e.g. wavelength, power output) that will cause a reaction among bats.

Source: *PLoS One* (2009), 4(7): e6246, <http://dx.doi.org/10.1371/journal.pone.0006246>

NORTH EURASIA

Aral Sea still shrinking rapidly

Photographs from the European Space Agency's Envisat spacecraft have shown that the Aral Sea is still disappearing. Once the world's fourth-largest inland body of water, the past 50 years have seen the sea shrink dramatically as the rivers that fed it have been diverted to provide water for irrigation projects. By the end of the 1980s the sea had split into two sections, the Small Aral Sea at the northern end, and the horseshoe-shaped Large Aral Sea. The Large Aral Sea subsequently split into two lobes in 2000 and the recent photographs show that the eastern lobe appears to have lost 80% of its water since 2006. The southern part of the Aral Sea is expected to disappear completely by 2020. The Small Aral Sea is faring somewhat better, with water levels having risen by an average of 4 m since the completion of the Kok-Aral dike in 2005.

Source: *European Space Agency* (2009), http://www.esa.int/esaEO/SEMGT6CTWF_index_0.html

Russian police discover Amur leopard skin

Police inspecting a car in Russia's Primorsky province early in 2009 discovered the skin of a Critically Endangered Amur leopard. Only 14–20 adult leopards and five or six cubs are estimated to exist in Russia's south-western Primorye region, with the species having been extirpated from China and the Korean Peninsula. The skin is likely to belong to an adult male, and damage to the pelt indicated that the animal had probably been shot. There are so few Amur leopards remaining that it may be possible to identify which individual the skin belonged to, by comparing photographs of the skin with a database of known surviving Amur leopards. The punishment for killing an Amur leopard in Russia is up to 2 years'

imprisonment and a fine of up to USD 15,100.

Source: *Traffic press release* (2009), <http://www.traffic.org/home/2009/4/7/amur-leopard-skin-seized-by-russian-police.html>

Effective population of Amur tiger stands at 35 individuals

An investigation into the genetics of the Endangered Amur tiger has found that, although up to 500 survive in the world, the genetic diversity among the remaining individuals is equivalent to a population of 27–35 individuals. The Amur tiger population reached a low of 20–30 wild individuals by the 1940s but a hunting ban and conservation efforts have resulted in the population increasing, although this recent evidence shows that the genetic diversity of the tiger has not increased to the same extent. The study also revealed a split between two populations of the tiger, with the majority living in the Russian Sikhotealin Mountains and 20 or fewer inhabiting south-west Primorye in Russia (see previous item). These two populations are separated by a corridor of developed land, with the result that there is little genetic mixing between these two populations.

Source: *BBC News* (2009), http://news.bbc.co.uk/earth/hi/earth_news/newsid_8128000/8128738.stm, and *Molecular Ecology* (2009), 18, 3173–3184.

NORTH AFRICA AND MIDDLE EAST

Barbary lion to make regal comeback?

A newly-published studbook of all Barbary lions in captivity is to be used to establish a captive breeding programme for this species, once common throughout north Africa. Opinion is divided as to whether the Barbary lion is a separate subspecies to the lions still extant in Africa and Asia; it had a more extensive mane than those lions still living wild and a slightly different-shaped head. The last record of a Barbary lion was an animal shot in Morocco in 1927, although some may have survived in the wilds of the Atlas Mountains until 1942. All descendants of the Barbary lion in captivity stem from the royal collection of the Sultan of Morocco, and it is hoped that the studbook will enable zoos to work together to plan breeding exchanges to safeguard the future of this species.

Source: *BBC News* (2009), http://news.bbc.co.uk/earth/hi/earth_news/newsid_8109000/8109945.stm

Prince lends his support to northern bald ibis

The Critically Endangered northern bald ibis (see *Oryx*, 43, 329–335) is to receive a 3-year grant from the Prince Albert II of Monaco Foundation. There are < 500 individuals of this species left in the wild, in two separate populations, one in Morocco and the other in Syria. The species suffers from a number of different threats including human persecution, habitat loss and poisoning. Radio-tracking has revealed many important facts about the ibis in recent years, including that the Moroccan population is resident in Morocco all year round and the Syrian population overwinters in Ethiopia. The grant from the Prince Albert II of Monaco Foundation will allow conservationists to build on the work currently being carried out to protect the ibis colonies, and will also be used to try and solve the mystery of the migratory route and wintering grounds of juvenile birds. *Source: BirdLife International News* (2009), http://www.birdlife.org/news/news/2009/07/nbi_champion.html

SUB-SAHARAN AFRICA

Potential palm oil boom in DRC

The Democratic Republic of Congo looks set to become a major player among palm-oil producing countries following the announcement by a Chinese firm, ZTE Agribusiness, of their intention to create a 1 million ha plantation that could generate 5 million tonnes of oil, much of which will be destined for use as biofuel. The DRC's climate and forests render the country particularly well-suited to growing oil palm but these attributes have also resulted in the country containing more biodiversity than any other African country, according to WWF. Although the DRC is already producing some palm oil, there are fears that a plantation of this scale will have a detrimental effect on biodiversity, with evidence from other countries where oil palm plantations have multiplied suggesting that plantations and high biodiversity are immiscible.

Source: New Scientist (2009), 203(2717), 6.

Baby gorilla seized at airport

Following a 3-month undercover operation a young lowland eastern gorilla has been rescued from suspected wildlife traffickers in the Democratic Republic of Congo. Undercover officers seized the female gorilla, which was hidden at the bottom of a bag and covered in clothes, at Goma airport near the Virunga National Park, although it

is thought that she may have come from Kahuzi Biega National Park, in the east of the country. The gorilla, estimated to be c. 2 years old, was dehydrated and had a puncture wound on her leg, but is apparently responding to treatment under the care of the Mountain Gorilla Veterinary Project. Baby gorillas can fetch up to USD 20,000 on the black market, and the taking of a juvenile gorilla from the wild normally results in the death of other gorillas in its family.

Source: FFI News (2009), http://www.fauna-flora.org/news_baby_gorilla.php

Peace Park project commences

A Transboundary Peace Park that straddles the boundaries between Liberia and Sierra Leone has been established to protect one of the largest blocks of intact forest remaining in the Upper Guinea Area of West Africa. The Upper Guinea Forest Ecosystem is one of the most biodiversity-rich ecosystems in the world, home to 240–250 forest-dependent birds and > 50 mammals, as well as providing vital ecosystem services such as watershed protection and protection against soil erosion. The Peace Park brings together the Gola Forest Reserve in Sierra Leone and the Lofa and Foya Reserves in Liberia, a total area of 255,000 ha, as well as forest corridors to allow movement between these forest blocks.

Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/05/peace_park_west_africa.html

Desert elephants feel the heat

The northernmost herd of elephants in Africa are suffering from the worst drought for 26 years, as one of their key water sources, Lake Banzena, has dried to a sediment-filled puddle only c. 30 cm deep. As a result the 350–450 elephants of Gourma are being forced to travel ever-longer distances in the Sahel to track down water. It is feared that juveniles are most at risk of death, because their trunks are not long enough to reach deep into the remaining wells that contain water. At a dry river bed east of Lake Banzena bull elephants are surviving by reaching water that is 3 m below the ground in a hole dug by the Touareg. The drought is also causing the normally harmonious relations between herds and the elephants to suffer as these two groups compete for access to dwindling water supplies.

Source: Save the Elephants press release (2009), <http://www.savetheelephants.org/news-reader/items/worst-drought-in-26-years-threatens-survival-of-last-desert-elep.html>

World's largest leatherback nesting colony located

Work by an international team of researchers has revealed that the world's largest nesting population of Critically Endangered leatherback turtles exists in Gabon. Land and aerial surveys revealed a population of between 15,730 and 41,373 female turtles nesting along Gabon's 600 km coastline. The study's thorough approach to surveying for the turtles, which involved taking videos during aerial surveys of the whole coast as well as ground-based assessments, was the first complete population assessment of the aggregation of turtles at this site. In addition, the nature of the survey enabled the researchers to map the extent to which turtles were using Gabon's protected area network, revealing that 79 ± 6% of turtle activity took place within protected areas.

Source: Biological Conservation (2009), 142, 1719–1727.

Bonobos get new rainforest reserve in which to romp

One of the largest populations of Endangered bonobos can look forward to a more secure future thanks to the establishment of the Kokolopori Bonobo Reserve in the Democratic Republic of Congo. This new reserve, 4,847 km² in size, will be managed by the local people, who will be able to benefit from training, employment and community development programmes, including a health clinic, a microcredit programme for women, and the first institute of higher learning in the region. The reserve will also be of interest to researchers, as it is one of the few sites where wild bonobos are habituated to the presence of humans, allowing them to be studied in their natural surroundings. The Kokolopori Bonobo Reserve is a pilot project for the Bonobo Peace Forest, a proposed network of community-based nature reserves supported by sustainable development.

Source: The Bonobo Conservation Initiative press release (2009), <http://www.bonobo.org/KOKOpress.html>

Noise pollution may affect Victoria Falls' elephants

Plans to increase the number of helicopter flights over Zimbabwe's Victoria Falls have been criticised by conservationists, who fear that the concomitant increase in noise pollution will have an adverse effect on elephant behaviour. Currently there is a maximum of five flights over the famous waterfall at any one time but this number is to increase to 20. Work has already

commenced on the construction of new helipads, despite no environmental impact assessment having been carried out. The scheme to increase the number of flights is thought to be part of a plan to capitalize on the influx of tourists to neighbouring South Africa during the football World Cup in 2010. *Source: BBC News* (2009), <http://news.bbc.co.uk/1/hi/world/africa/8105250.stm>

Newly discovered rainforest may be Africa's largest

A forest in Mozambique, which only came to the attention of the international conservation community 5 years ago through the auspices of Google Earth may turn out to be the biggest rainforest in Africa. Experts, including representatives from Kew Gardens, The World Bank and BirdLife International, have attended a workshop to discuss the future of Mount Mabu. Conservationists are hoping to persuade officials that the area is unique and warrants protection. Researchers believe they have discovered > 10 species new to science in the last year alone in Mount Mabu. Furthermore, the 7,000 ha forest is in a particularly healthy state, with no evidence of any logging or burning having taken place there, unlike most forests in the region.

Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/06/mount_mabu.html

Seychelles flycatcher on the up

Conservation action has resulted in four species of Seychelles birds being downlisted from Critically Endangered. Only one Critically Endangered species remains, the Seychelles paradise-flycatcher, and the future of this bird is now also looking better, with the first chicks to have hatched outside La Digue Island for > 60 years fledging successfully. The nine fledglings were hatched on Denis Island, a coral island in the inner Seychelles group. Twenty-three paradise flycatchers were translocated from La Digue to Denis Island in November 2008 as part of a 3-year project funded by the UK Government's Darwin Initiative. It is thought that Denis Island could eventually support 40–50 birds, and other islands in the Seychelles are also being assessed for their suitability for future reintroductions.

Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/06/seychelles_paradise_flycatcher.html

South African canned lion hunting industry loses its court battle

South Africa's lion breeders have lost their case to overturn the government's 2007

regulation that lions bred in captivity should only be hunted 24 months after their release. The breeders wanted the rules changed to allow hunting of captive-bred lions within a few days of their release. Until 2007, > 1,000 lions were being killed every year by tourists, with the canned hunting industry worth almost GBP 1 million per year. The South African Predator Breeders Association argued that hunting of lions bred in captivity promotes conservation objectives through reducing hunting pressure on wild lions. However, the court ruled that breeding lions in captivity for the canned hunting industry did not aid their protection, with the judge adding his opinion that lion breeders were only interested in making money.

Source: The Daily Telegraph (12 June 2009), <http://www.telegraph.co.uk/news/worldnews/africaandindianocean/southafrica/5516764/Canned-hunting-of-captive-lions-banned-in-South-Africa.html>

Wildlife declines seen inside protected areas as well as outside

A study that examined 270 multi-species ungulate censuses carried out over the last 25 years in Kenya has found that wildlife populations in Kenya's national parks showed a decline of 41% between 1977 and 1997, while the nationwide decline was 38%. Highly significant declines were observed in three of the seven parks examined: Tsavo East and Tsavo West National Parks, and Meru National Park. The authors suggest that these findings are not surprising, citing inherent shortcomings in the design of national parks such as the fact that only a small part of the annual migratory range of large herbivores is covered by the parks. On a more positive note, the study's findings tally with previous studies that suggest that parks associated with community and private conservation initiatives are more effective than those without outreach programmes.

Source: PLoS One (2009), 4(7): e6140, <http://dx.doi.org/10.1371/journal.pone.0006140>

SOUTH AND SOUTH-EAST ASIA

Wildlife farms bad for wildlife

A survey carried out by the Wildlife Conservation Society and the Forest Protection Department of Vietnam has revealed that commercial wildlife farms do not protect wild populations from exploitation. On the contrary, wild animals are removed from

the wild for these farms, contributing to the illegal wildlife trade. Out of 78 farms surveyed in Vietnam, 42% were regularly bringing animals in from the wild, and 20% admitted to escapes from captivity of dangerous animals such as crocodiles, hybridized animals such as soft-shelled turtles, and animals beyond their natural range. The report recommends prohibiting such farms from keeping nationally- and internationally-protected species, imposing strict penalties to wildlife farm owners found to be in breach of wildlife laws, and making it the owners' responsibility to prove the source of animals on their farms.

Source: WCS press release (2009), <http://www.bronxzoo.com/press/press-releases/wcs-finds-vietnams-commercial-wildlife-farms-hurting-not-helping-wildlife.aspx>

Debt becomes forest

The US Government has agreed to forgive nearly USD 30 million of Indonesian debt payments in return for increased protection of Sumatra's forests. The Government of Indonesia will contribute the money saved through this debt reduction to a trust over an 8-year period that will provide grants for forest restoration and conservation in 13 areas of rainforest. These forests are home to a number of threatened species including the Sumatran tiger, orang-utans and four endemic primates from the Mentawai Islands (see *Oryx*, 43, 419–426). This is the first debt-for-nature swap to occur in Indonesia, and the largest to occur so far anywhere. The US Government contributed USD 20 million under the Tropical Forest Conservation Act, and Conservation International and the Indonesian Biodiversity Foundation (Yayasan Keanekaragaman Hayati Indonesia, or KEHATI) each contributed USD 1 million.

Source: Conservation International press release (2009), http://www.conservation.org/sites/gcf/news/Pages/debt_for_nature_sumatra.aspx

Karst caves vital for bat assemblages

An investigation into bat assemblages at and around isolated karst caves in peninsular Malaysia has underlined the importance of these structures for bats. Researchers examined the influence of karst outcrops, which are used by many bats as a roosting site, on the surrounding fragmented landscape, and found that the local structure of insectivorous bat assemblages in forests was in part determined by the distance of the forest fragment to a karst outcrop. Small and isolated karst outcrops are at risk of being mined as a source for cement, basement minerals and marble, and the loss of

a karst outcrop would lead to large declines in bat abundance in the surrounding area. As insectivorous nocturnal predators bats perform an important pest-control function, so their disappearance would in turn affect farmers in neighbouring areas.

Source: *Biological Conservation* (2009), <http://dx.doi.org/10.1016/j.biocon.2009.04.005>

Conservation plans agreed for threatened Indonesian species

Two species of dwarf cattle, the mountain and lowland anoa, both categorized as Endangered on the IUCN Red List, as well as the Vulnerable Sulawesi babirusa and the Endangered banteng have been the subjects of two workshops held in Indonesia. The workshops, hosted by the Indonesian Ministry of Forestry and the IUCN/Species Survival Commission's Asian Wild Cattle Specialist Group, and sponsored by Earthwatch, drew up 10-year plans for the conservation of these species, and are the first action plans for species in eastern Indonesia. Poaching and habitat destruction and degradation are the major threats facing these species, three of which (the two anoa species and the babirusa) are endemic to the island of Sulawesi in eastern Indonesia, while the banteng occurs in isolated populations on Java and Kalimantan, as well as elsewhere in mainland South and Southeast Asia.

Source: *Earthwatch Institute News* (2009), <http://www.earthwatch.org/europe/newsroom/science/news-3-workshop05.html>

Carbon payments could protect threatened mammals

Research into forest protection through a Reduced Emissions from Deforestation and forest Degradation (REDD) scheme in Indonesia have shown that payments for REDD could offset the costs of stopping deforestation at prices of USD 10–33 per tonne of CO₂, or USD 2–16 per tonne if only cost-efficient areas for conservation are targeted. The researchers looked at an area of 3.3 million ha of forest currently threatened by the expansion of oil palm plantations and home to 40 globally threatened mammals including the Borneo orangutan and Borneo pygmy elephant. The research also found that 50% of the plantations where carbon is cheapest contain on average almost twice the number of threatened mammals per km than other areas, and that planned plantations that are home to orang-utans or elephants store more forest carbon than plantations without these species.

Source: *Conservation Letters* (2009), 2, 123–129.

Dolphins swimming towards extinction

Critically Endangered Mekong River Irrawaddy dolphins are suffering from high levels of environmental pollutants that are compromising their immune systems, according to research from WWF. Since 2003 88 dolphins have died, >50% of which were calves < 2 weeks old. Autopsies of the calves indicated that a bacterial disease, not normally fatal, was responsible for their deaths. The dead calves contained toxic levels of pesticides and contaminants such as PCBs, and some of the calves contained high levels of mercury, known to affect the immune system directly and thus making the animals more prone to infection. The length of the Mekong River makes it hard to pinpoint the origin of these pollutants, and they may originate from more than one country. Conservationists are calling for transboundary cooperation to protect the species.

Source: *WWF press release* (2009), http://www.panda.org/wwf_news/?167001/Mekong-dolphins-on-the-brink-of-extinction

Elephant dung harbours frogs

A researcher looking for seeds in Asian elephant dung has discovered three species of frog inside dung heaps, along with many species of invertebrates including beetles, ants, crickets and scorpions. Investigations of dung piles belonging to free-ranging domestic cows and buffaloes did not reveal any frogs within these dung piles. The researcher speculates that the frogs may be using the dung piles as substitutes for leaf litter, which is scarce in the waterholes and shrubland where these particular frogs are found. This is thought to be the first record of elephant dung being used as a daytime refuge by a vertebrate, and provides a neat example of how Asian elephants function as ecosystem engineers. Additionally, this observation illustrates that the current decline of Asian elephants may have unexpected effects on the ecosystems in which the elephants occur.

Source: *Biotropica* (2009), 41, 406–407.

EAST ASIA

Pangolins in peril

Chinese demand for pangolin meat and scales is depleting the populations of these anteaters in Cambodia, Viet Nam and Lao PDR. Trade in pangolins is forbidden under CITES and the species are protected at the national level in all of their Asian range states. However, demand in China, coupled with the decline of Chinese pangolin pop-

ulations, means that pangolins are being caught further afield and smuggled into China, indicating that the legislation is not providing adequate protection for these species. Recent seizures of pangolins in 2008, including 24 t of frozen pangolins from Sumatra seized in Viet Nam, illustrate the inadequacy of the legislation. Better enforcement of national and international laws and better monitoring of the illegal trade in pangolins are required, along with research to determine where viable pangolin populations remain.

Source: *IUCN press release* (2009), <http://www.iucn.org/about/work/programmes/species/?3522/Toothless-laws-fail-toothless-anteaters>

Pandas suffer from lack of dens

Researchers in China believe that a lack of suitable dens may be limiting panda populations, rather than the supply of bamboo previously considered to be the main limiting factor. Pandas traditionally rear their cubs in the hollows of ancient trees but logging has reduced the number of old-growth trees. Evidence from the Foping Nature Reserve in Shaanxi province, central China, show that female pandas are turning to caves as substitutes but these are in short supply and susceptible to flooding, which can result in the deaths of panda cubs. The researchers believe it should be possible to create more suitable dens from wood or rocks, built on ground less liable to flood, and a pilot study is currently underway.

Source: *New Scientist* (2009), 203(2717), 14.

Neighbours influence conservation thinking

Researchers examining the Grain-to-Green Program (GTGP) in Wolong Nature Reserve in south-western China have found that farmers' decisions to re-enroll in the scheme had a significant effect on their neighbours' re-enrolment decisions. The GTGP provides annual payments for a maximum of 8 years to farmers who convert cropland plots to forest or pasture, thus protecting the land against soil erosion. Household surveys of inhabitants of the Reserve indicated that people's re-enrolment into the programme was significantly influenced by both social norms and conservation payments: people's intentions to re-enroll were influenced by the decisions of their neighbours, with re-enrolment decisions tending to conform to the majority. This finding suggests that social norms may be used to leverage participation to enhance the sustainability of conservation benefits from schemes using payments for ecosystem services.

Source: *Proceedings of the National Academy of Sciences of the USA* (2009), 106, 11812–11817.

NORTH AMERICA

California's financial woes affect parks

One aspect of Governor Arnold Schwarzenegger's plans to address California's burgeoning state deficit has not found favour with conservationists, namely his proposal to cut funding for 80% of the 270 sites run by the California Department of Parks and Recreation. Sites that would be affected include the home of the giant sequoias, Calaveras Big Trees State Park, and Año Nuevo State Natural Reserve, where the threat of closure has prompted fears for the future of a 40-year study of an elephant seal breeding population. The closure of the parks would mean a cessation in the conservation work that currently takes place in these areas, such as the removal of invasive species.

Source: *New Scientist* (2009), 202(2713), 4.

Protection efforts for giant earthworm redoubled

A group of conservation organizations have filed a petition with the US Fish and Wildlife Service to request the listing of the giant pelouse earthworm as an endangered species. The earthworm enjoys an almost mythical status, having only been found four times in the last 110 years, and descriptions of the worm fit the status of a creature of legend: growing up to 1 m in length, it is white in colouration and is rumoured to smell of lilies. The earthworm appears to require moist soils with native vegetation, and is found in eastern Washington and northern Idaho. The US Fish and Wildlife Service rejected a similar petition under the Bush administration, on the grounds of insufficient information on the species but it is hoped that the new administration will look more favourably on this petition.

Source: *Centre for Biological Diversity press release* (2009), http://www.biologicaldiversity.org/news/press_releases/2009/giant-palouse-earthworm-06-30-2009.html

Costa Rican shrimps off the menu

Costa Rica's shrimps can no longer be imported into the USA following a decision by the US Department of State's Bureau of Oceans, Environment and Science. The reason behind the ban is Costa Rica's repeated failure to enforce its laws that require commercial shrimp fishers to use

Turtle Excluder Devices (TEDs) to prevent sea turtle bycatch. The State Department issued a report that showed that Costa Rica's Fishery Institute (Incopescas) was not providing sanctions for TED violations, meaning that these violations continued to occur. Furthermore, State Department officials warned Incopesca that they risked a trade embargo in December 2008 but, despite assurances that the problem would be resolved early in 2009, the situation did not change. This is fourth shrimp embargo to be applied to Costa Rica since 1999.

Source: *Pretoma* (2009), <http://www.pretoma.org/united-states-bans-shrimp-from-costa-rica-to-protect-sea-turtleseuu-impone-embargo-comercial-sobre-camaron-costarricense/>

Warning system for manatees

Researchers in Florida investigating how to lessen the number of boat strikes suffered by manatees have designed a device that fits onto boats and emits a beam of sound. Marine mammals in the path of a ship are unable to detect the sound of its propellers as this sound is deflected to the sides of the ship. In fact, manatees appear to seek refuge in the quiet zone in front of the ship, leaving them more vulnerable to collision with the propellers. Worse still, manatees do not learn from past experience, with some individuals having been hit 50 times. The new device fits on the ships' bows, and experiments indicate that when the siren sounded manatees always moved away. A larger system designed to prevent whale strikes is due to be trialled in 2010.

Source: *New Scientist* (2009), 202(2709), 17.

Toxic pesticide banned in USA

The USA's Environmental Protection Agency (EPA) has called time on the use of a pesticide responsible for the deaths of millions of birds since its introduction in 1967. After 31 December 2009, traces of carbofuran, sold under the name Furadan, will no longer be tolerated in any quantities in any foods, and the ruling also applies to food imported into the USA. The announcement by the EPA confirms a proposed action first announced in 2008 and has been made despite objections to the ban submitted by the company that sells the pesticide, FMC Corporation. As well as being highly toxic to birds, carbofuran also poses a threat to human health through contaminated food and drinking water. The pesticide has also been used in the past to poison raptors, including bald and golden eagles.

Source: *American Bird Conservancy press release* (2009), <http://www.abcbirds.org/newsandreports/releases/090511.html>

Disease spread by amphibian trade

Amphibian populations face a number of threats, among them diseases such as chytridiomycosis and ranaviruses, and a new study has now provided evidence for a link between the trade in amphibians and the spread of disease. Researchers examined amphibian import data from three US cities, Los Angeles, San Francisco and New York, and found that almost 28 million live amphibians were brought into these cities in 2000–2005. Samples from recently-imported bullfrogs in markets in these cities showed that both chytridiomycosis and ranaviruses were present, with an overall infection prevalence of 62% for chytridiomycosis and 8.5% for the ranaviruses. Frogs from all three cities were infected, and at every season of the year. This evidence suggests that the trade in amphibians may be responsible for the spread of these diseases to new regions.

Source: *Biological Conservation* (2009), 142, 1420–1426.

Crab pots' ghostly haul

A programme established by the Virginia Institute of Marine Science and funded by the Virginia Marine Resources Commission has made a start at clearing abandoned crab pots and other marine debris from the bottom of Chesapeake Bay and its tributaries. The programme employed out-of-work crab dredgers to use side-imaging sonar to detect the so-called ghost pots, which were found to have captured almost 5,000 animals over the winter surveyed, including crabs, eels, fish, turtles, a duck and a muskrat. One crab pot was found to contain native oysters estimated to be several years old. Research suggests that c. 20% of all crab pots set in a year are lost as a result of storms or boat propellers cutting the pots free from their buoys. Federal funds will be used to support the programme for the next 2 years.

Source: *Virginia Marine Resources Commission press release* (2009), http://www.mrc.state.va.us/news_releases/nr_ghost_pot_program_results.pdf

TransCanada supports IBAs

TransCanada Corporation has committed CAD 1 million (c. GBP 550,000) over 5 years as a sponsor of the Canadian Important Bird Area Caretakers Network. This initiative aims to establish a network of volunteers who will help protect and watch

over Canada's 597 IBAs through surveying bird populations, building nest boxes, removing invasive species and promoting awareness of the value of wildlife. Trans-Canada, which works in the development and operation of North American energy infrastructure, has been supporting the work of Nature Canada (BirdLife International's partner in Canada) for the last 6 years.

Source: *BirdLife International News* (2009), <http://www.birdlife.org/news/news/2009/06/transcanada.html>

Border fences spell trouble

An investigation into the effects of a fence currently under construction between the USA and Mexico has found that the fence affects the movements of two very different species in the area, the ferruginous pygmy owl and desert bighorn sheep. Radiotelemetry studies showed that the average height of flights made by the owl was 1.4 m, with only 23% of flights averaging < 4 m. Furthermore, juvenile pygmy owls were less successful at colonizing in areas with large vegetation gaps or higher levels of disturbance. The research into the movement of the bighorn sheep used microsatellite analyses to reveal that populations divided by an 11-km valley had relatively high levels of gene flow and migration, and models of gene flow indicate that the presence of the fence would isolate nine populations of bighorn sheep in north-western Mexico that are currently linked by dispersal with populations in Arizona.

Source: *Conservation Biology* (2009), <http://dx.doi.org/10.1111/j.1523-1739.2009.01277.x>

New salamander noses its way into history

The most distinctive amphibian to have been found in half a century has been discovered in a small stream in the foothills of the USA's Appalachian Mountains. A number of factors conspire to make this species distinct: for example, at 25–26 mm long it has the smallest body size of any salamander in the USA and it is also the only lungless salamander in the USA to show sexual dimorphism, a trait more usually associated with birds. The differences between this new species and extant lungless salamanders have led the researchers who discovered it to assign their find to a new genus. Only eight individuals of the species, nick-named the patch-nosed salamander after a yellow patch on the tip of its nose, were found, leading the researchers to speculate that it is either secretive, or has a highly restricted range.

Source: *BBC News* (2009), http://news.bbc.co.uk/go/pr/fr/-/earth/hi/earth_news/newsid_8140000/8140003.stm

CENTRAL AMERICA AND CARIBBEAN

Caribbean corals lose their fizz

The architecture of coral reefs is vital to many organisms that rely on reefs' 3-dimensional structure for shelter and other resources, and the loss of this structure is likely to have a detrimental effect on reef biodiversity and ecosystem functioning. Now a study of Caribbean reefs' architectural complexity from 1969 to 2008 has shown that the most complex reefs all but disappeared during this time period. The rate of reef-flattening was similar among shallow, mid- and deep water, as well as across the five subregions investigated in this study. The authors detail a series of events in the Caribbean that may account for the disappearance of complexity: the loss of *Acropora* corals, the mass die-off of the grazing sea urchin *Diadema antillarum* and the El Niño-induced coral bleaching event in 1998.

Source: *Proceedings of the Royal Society B* (2009), <http://dx.doi.org/10.1098/rspb.2009.0339>

(Ca)How marvellous

A pair of Bermuda petrels, also known as cahows, have hatched a chick on Nonsuch Island, the first time this has happened for nearly 400 years. Ninety per cent of the cahow population had disappeared by the early 17th century following the release of pigs on the islands by Spanish sailors in the early 1500s, and the remaining petrels were decimated by feral rats, cats and dogs introduced by the English settlers in 1609, as well as by the settlers themselves. Rediscovered in 1951, the birds have been the target of a translocation programme with 105 cahow chicks moved to the island between 2004–2008 after rats had been eradicated. In 2008 the first grown-up chicks returned to prospect the island for nesting sites, and this year a pair has hatched the island's first chick.

Source: *BirdLife International News* (2009), http://www.birdlife.org/news/news/2009/05/cahow_chick.html

SOUTH AMERICA

Brazilian president backs bill

The Brazilian president Luiz Inacio Lula da Silva has signed a bill that will allow farmers in the Amazon to acquire an area of public land larger than France. However, the president did veto some of the most controversial aspects of the bill, which had

been changed on its way through congress in such a way that its original aim, to benefit smaller farmers, had been altered. It is hoped that the law will put an end to the chaotic situation surrounding land occupation in the Amazon, where many farmers have no legal title over their land. Under the new bill small areas of public land will be handed over for free, while larger areas will be sold at market or reduced rates. Critics of the bill say it will lead to increased land speculation in the Amazon and federal prosecutors are amongst those who claim the bill is unconstitutional because it enables people to keep land they have acquired illegally.

Source: *BBC News* (2009), <http://news.bbc.co.uk/1/hi/world/americas/8120209.stm>

Reserve created for Niceforo's wren

The Colombian NGO ProAves, together with the World Land Trust–US, American Bird Conservancy and the Corporación Autónoma de Santander, have purchased c. 13 km² of dry forest in the Chicamocha valley of Colombia's eastern Andes to create a protected area in this important ecosystem. The new reserve is home to a number of endemic species, including the Endangered chestnut-bellied hummingbird, Colombian chachalaca and apical flycatcher, but has chiefly been created to protect the Critically Endangered Niceforo's wren. Studies undertaken by ProAves, supported by the BP Conservation Leadership Programme, estimate that the global population of this wren is < 25 pairs. The Chicamocha valley suffers from seasonal burning and livestock grazing, both of which are having a serious effect on the area's vegetation, including the Critically Endangered Chicamocha cavanillesia tree.

Source: *ProAves press release* (2009), http://www.proaves.org/article.php?id_article=656&lang=en

Deforestation ultimately not good for those who practice it

A study of 286 municipalities in different stages of deforestation in the Brazilian Amazon has found that these communities demonstrate a boom-and-bust pattern as areas are deforested. Researchers used the United Nations' Human Development Index, which looks at life expectancy, literacy and standard of living, and found that these increase as deforestation begins, thanks to the sale of harvested resources and access to the area brought about by new roads. As the deforestation frontier moves on, however, there is no more timber to sell, and the towns are often occupied only by the poor migrants who moved there during the

boom times. As a result the levels of human development start to decline again, so that pre- and post-frontier development levels are similar.

Source: *Science* (2009), 324, 1435–1437, and *Journal Watch Online* (2009), <http://journalwatch.conservationmagazine.org/2009/06/12/boom-towns-busted/>

Overestimation of Amazonian plant extinction risks

Past estimates have put the extinction rates of Amazonian trees at 20–33%, partly because many species have small ranges that leave them vulnerable to being wiped out in their entirety. However, a new study has found that the location of a plant's range is more important than its size. The study used data to create spatially explicit distributions for > 40,000 vascular plant species, > 80% of the estimated plant diversity in the Amazon. These habitat maps were then compared to models of future land-use changes and associated habitat loss. The results indicate that by 2050 the available habitat for Amazonian plant species will have reduced by c. 12–24%, with the consequence that 5–9% of species will be committed to extinction. Conservationists are urged to concentrate their efforts in the cerrado region, where the estimated extinction rate is far higher.

Source: *Journal Watch Online* (2009), <http://journalwatch.conservationmagazine.org/2009/07/07/location-location-location/> and *Proceedings of the National Academy of*

Sciences of the USA (2009), <http://dx.doi.org/10.1073/pnas.0900698106>

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Penguin poo visible from space

Emperor penguin guano has joined the list of earthly objects visible from space, a fact that has been used by researchers to map the population of this species in the Antarctic. These penguins breed on sea ice between May and December, and their droppings are visible on Landsat images as brown patches. The colour of these stains is unlike anything else on the sea ice, enabling researchers to locate a total of 38 colonies, of which 10 were new locations, while another six were found to be in different places than hitherto thought. Six colonies, known from old or unconfirmed records, were not found or had disappeared. Emperor penguins are suspected to be vulnerable to the effects of climate change, so this accurate way of mapping their populations has provided a valuable resource for future studies of the species.

Source: *Global Ecology and Biogeography* (2009), 18, 543–552.

Better an alien top predator than no predator

Research has shown that reintroducing or maintaining dingo populations in parts of Australia would have a net benefit for the

area's native wildlife, despite the fact that the dingo is not native to the country. Introduced to Australia c. 5,000 years ago, dingos are known to control herbivores such as kangaroos and red foxes, thereby reducing the pressure these species place on vegetation and small mammals, respectively. Dingos are now largely absent from large areas of Australia because of their appetite for sheep, and some argue that, as a non-native species, they should be removed. However, this study found that the presence of dingos benefited 16 threatened mammals, and would only be detrimental to three species, and that their presence may even benefit cattle-farming by removing the kangaroos that compete with cattle for vegetation.

Source: *Proceedings of the Royal Society B* (2009), 276, 3249–3256, and *BBC News* (2009), <http://news.bbc.co.uk/1/hi/sci/tech/8104955.stm>

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