Briefly

INTERNATIONAL

Warning of dramatic decline of common species

New research suggests that global biodiversity will be significantly affected if temperatures rise by > 2 °C. A study looked at the impacts of rising temperatures on the habitats of c. 50,000 common species of plants and animals, and mapped the areas that would remain suitable for them under different climate change scenarios. It concluded that if no significant efforts are made to limit emissions, 2100 global temperatures would be 4°C above pre-industrial levels. In this model c. 34% of animal and 57% of plant species would lose ⩾ 50% of their present climatic range by the 2080s. The projected impacts on species will be felt more heavily in areas such as sub-Saharan Africa, Central America, Amazonia and Australia. However, if global emissions are cut rapidly then the impact on biodiversity could be significantly curbed.
Source: Nature Climate Change (2013) http://dx.doi.org/10.1038/nclimate1887, and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22500673

Consensus statement from global scientists

The Millennium Alliance for Humanity and the Biosphere has released a statement —Maintaining Humanity's Life Support Systems in the 21st Century—endorsed by more than 500 global-change researchers whose work spans every continent. It warns that unless decisive countermeasures are put into place immediately, climate change, loss of ecological diversity, extinctions, environmental contamination, human population growth and overconsumption of resources will degrade our quality of life within a few decades. The statement was formulated from a 2012 review (*Nature*, 486, 52–58; http://dx.doi.org/10.1038/nature11018) of evidence that the global ecosystem is approaching a planetary-scale critical transition as a result of human influence.
Source: MAHB (2013) http://mahb.stanford.edu/consensus-statement-from-global-scientists/

Another good reason to conserve predators

Predators can influence the exchange of CO_2 between ecosystems and the atmosphere by altering processes such as decomposition and primary production, and it has now been demonstrated that they can also have this effect in freshwater systems. Monitoring of CO_2 fluxes and prey and primary producer biomass in food chains in experimental ponds, streams and bromeliads in the presence or absence of fish and invertebrate predators found substantially reduced CO_2 emissions in the presence of predators in all systems. This was despite differences in predator type, hydrology, climatic region, ecological zone and level of in situ primary production.
Source: Nature Geoscience (2013) 6, 191–194 (http://dx.doi.org/10.1038/ngeo1734)

Genetic consequences of overfishing

Scientists have found that over-harvesting larger fish triggers a rapid change in the gene pool of the fish stock, leading to a population of smaller, less fertile fish. Until now, observations of so-called fisheries-induced evolution have been based solely on phenotypic measures such as size, but genetic data have been lacking. Experiments using the Trinidadian guppy *Poecilia reticulata* across three generations of selection showed significant changes in individual genetic loci as the fish became fewer and smaller. These findings have major implications for the sustainability of fisheries, as well as for size-structured fish communities and ecosystem processes, and highlight the need for scientists and managers to reconsider the capacity of harvested stocks to adapt to and recover from harvesting and predation. A shift in the genetic make-up of harvested fish would have serious consequences for the environment and for the global fishing industry.
Source: Frontiers in Ecology and the Environment (2013) 11, 181–187 (http://dx.doi.org/10.1890/120229), and *BBC News* (2013) http://www.bbc.co.uk/news/uk-wales-21813736

Demand for shark fins continues…

Global mortality of sharks from reported and unreported landings, discards and shark finning was estimated to be c. 100 million in 2000 and c. 97 million in 2010, with a range of possible total values of 63–273 million per year. The major factor is ongoing demand for shark fins by Chinese communities. Although the number of sharks being caught did not change substantially in the decade, authors of a study published in *Marine Policy* argue that commercial fishing fleets are simply changing location and the species they target. The average annual exploitation rate of 6.4–7.9% of sharks killed exceeds the average rebound rate of 4.9% per year for many shark populations, estimated from data on 62 shark species. Whereas Canada, the USA and the EU have tried to restrict finning at sea, this has not had the desired effect as fishers are just retaining shark carcasses on board.
Source: Marine Policy (2013) 40, 194–204 (http://dx.doi.org/10.1016/j.marpol.2012.12.034), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-21629173

…and manta ray tourism worth 28 times killing for medicine

A new study has shown that manta rays are worth USD 140 million per year in tourism across 23 countries (see also pp. 381–388). This is more than the worth of their gill plates, which are the newest craze in Traditional Chinese Medicine. In recent years the two species of manta rays have been targeted for their gill plates, believed to be medicinal in East Asia. The trade in manta ray gill plate is worth c. USD 5 million per year, which is c. 3.5 percent of their worth as tourism species. Being slow breeders, manta rays are particularly sensitive to overfishing. In March both species were listed on Appendix II of CITES.
Source: PLoS ONE (2013) 8(5), e65051 (http://dx.doi.org/10.1371/journal.pone.0065051), and *Mongabay.com* (2013) http://news.mongabay.com/2013/0603-hance-manta-ray-tourism.html

Pacific canyon teems with microbes

An analysis of oxygen consumption levels in a sample of sediments taken by an unmanned submersible from the bottom of the Mariana Trench has revealed high levels of microbial activity. The Challenger Deep, which lies c. 11 km deep in the Pacific Ocean, is the deepest oceanic site and was once thought too hostile an environment for life to exist. Surprisingly, single-celled organisms were twice as active there than at a nearby 6 km-deep site. Analyses of sediment ^{210}Pb profiles revealed relatively high deposits of organic sediments in the trench and researchers concluded that these maintain intensified microbial activity at the extreme pressures that characterize this environment.

The amount of material found at the bottom of the trench was so high that it suggests the Mariana Trench could play a key part in the carbon cycle and therefore in regulating the planet's climate.
Source: Nature Geoscience (2013) 6, 284–288 (http://dx.doi.org/10.1038/ngeo1773), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-21806406

Arctic Ocean acidifying

CO_2 emissions are causing rapid acidification of Arctic seas. Absorption is faster in cold water, and recent decreases in summer sea ice have exposed more sea surface to atmospheric CO_2. The Arctic's vulnerability is exacerbated by increasing inflows from rivers and melting land ice because freshwater is less effective at neutralizing the acidifying effects of CO_2. Scientists from the Arctic Monitoring and Assessment Programme have monitored decreases in seawater pH of c. 0.02 per decade since the late 1960s in the Iceland and Barents seas. They estimate that the average acidity of surface ocean waters worldwide is now c. 30% higher than before the Industrial Revolution. They believe that even if CO_2 emissions stopped now, it would take tens of thousands of years for Arctic Ocean chemistry to revert to pre-industrial levels. There is huge uncertainty over what changes acidification may cause in the Arctic marine ecosystem.
Source: BBC News (2103) http://www.bbc.co.uk/news/science-environment-22408341

Invasive ladybirds wage biological war

German researchers have discovered the keys to the success of the Asian ladybird *Harmonia axyridis*, an invasive species that is outcompeting native ladybird species in many countries. Originally introduced to control aphids in greenhouses, it can devour > 200 aphids per day. In autumn they congregate in large groups searching for places to hibernate, and can cause serious allergic reactions in humans. A previous study has found that the insect's body fluid contains a strong antibiotic, harmonine, as well as antimicrobial peptides that allow it to fight off pathogens more effectively than native ladybirds. But the most powerful aspects of the Asian ladybird's biological armoury are obligate parasitic microsporidial fungi, which appear to become activated and lethal to native ladybirds when they eat the invader's eggs and larvae.
Source: Science (2013) 340, 862–863 (http://dx.doi.org/10.1126/science.1234032), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22554162

Turtle victory at CITES...

Some of the world's most threatened turtles were given additional protection at the recent Bangkok CITES meeting. Proposals on a large number of Asian freshwater turtles and tortoises, and other species popular in trade for food, pets and traditional medicines, were accepted by government negotiators. In all, 44 species of Asian freshwater turtles and tortoises and three species of North American pond turtles were upgraded by CITES. Some of the amendments were proposed jointly by the USA and China, marking the first time these two countries have cooperated to protect reptiles. The countries jointly submitted two proposals to increase protection for a number of Asian softshell and hard-shell turtle species.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21717503

...historic day for sharks...

Three types of Critically Endangered but commercially valuable sharks were given added protection at the Bangkok CITES meeting. Delegates voted by a two-thirds majority to upgrade the sharks' status to Appendix II. The oceanic whitetip, three species of hammerhead and the porbeagle are all seriously threatened by overfishing. Shark supporters have been attempting to get CITES to protect these species since 1994, against strong opposition from China and Japan. However, a number of factors have changed, including a shift in South American nations that now understand that sharks are more valuable alive than dead (see also pp. 381–388). Many West African countries that have seen their shark fisheries destroyed by large offshore operations also voted in favour of the restrictions. Another factor was a promise from the EU that funding would be made available to help poorer countries change their fishing practices. Campaigners hailed the move as a major breakthrough for marine conservation.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21741648

...and ebony beats ivory

The illegal trade in timber, said to be worth c. USD 30 billion annually, was addressed at the CITES meeting in Bangkok. Delegates agreed to upgrade the restrictions on trade in threatened hardwoods, including rare rosewood trees from South-east Asia and South America, as well as ebony species from Madagascar. A variety of rosewood grown in Thailand will now be listed in Appendix II. Growing demand from China's middle classes for luxury furniture has fuelled illegal logging of this tree, which can fetch up to USD 50,000 m^{-3}. Many ebony products from Madagascar also end up in China, despite domestic legislation banning exports. Campaigners welcomed the move, saying it stood in marked contrast to the slow pace of progress in tackling the ivory-poaching crisis.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21759988

Google must drop ivory advertisements

Speaking at the CITES meeting in Bangkok, Environmental Investigation Agency (EIA) campaigners claimed that Google is encouraging poaching of elephants by running advertisements promoting ivory products. EIA has already found > 1,400 ads, on the Google Japan site, promoting whale products, and when they carried out a similar search for advertisements for ivory products, they found > 10,000. More than 80% of the ivory ads were for *hanko*, Japanese name seals used to sign official documents. The campaigners say the advertisements are contrary to Google's own policies, which do not allow the promotion of products obtained from threatened species. The EIA said that they had written to Google informing them of the problem but that the ads were still up and running.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21673422

Eating insects: a possible solution to mitigate climate change and global food shortages

As pressure on natural resources increases and the global population continues to grow, entomophagy (insect-eating) has been proposed as a potential solution to food scarcity, environmental destruction and climate change. Although this practice is still generally abhorrent to the Western mindset, insects are part of the diet of c. 2 billion people worldwide and are a nutritious source of protein, fats, iron and zinc. With the world's food needs expected to almost double by 2050, a re-evaluation of food production methods is essential. Farming insects for food offers significant benefits and could help to mitigate deforestation and climate change. It produces fewer greenhouse gas emissions than traditional livestock farming and does not necessitate land clearance. The UN Food and Agriculture Organization has produced a 200-page report promoting insect-eating and outlining the nutritional, environmental and economic benefits of this

practice, and research by the Edible Insects Programme is ongoing.
Source: UN FAO (2013) http://www.fao.org/docrep/018/i3253e/i3253e.pdf, and *Mongabay.com* (2013) http://news.mongabay.com/2013/0514-hance-edible-insects.html

EUROPE

EU to ban neonicotinoid pesticides

Following concern about the collapse of bee populations the EC will restrict the use of neonicotinoid pesticides, despite a split among EU states on the issue. The chemicals act on insects' nervous systems and studies have shown that they may also affect the abilities of hives to produce queen bees. The EC says they should be restricted to crops not attractive to bees and other pollinators. Fifteen countries voted in favour of a ban and the EC will now have the option to impose a 2-year restriction on neonicotinoids, with no opt-out. The UK did not support the ban, arguing that the science behind the proposal is inconclusive; it was among eight countries that voted against, while four abstained. Some restrictions are already in place for neonicotinoids in France, Germany, Italy and Slovenia. The three neonicotinoids are clothianidin, imidacloprid and thiametoxam.
Source: BBC News (2013) http://www.bbc.co.uk/news/world-europe-22335520

Cold-tolerant wasp spiders spread to northern Europe

Do poleward expansions in species ranges reflect simple geographical shifts, or do new genetic adaptations also play a role? Since the 1930s wasp spiders *Argiope bruennichi* have expanded their range from the Mediterranean coast to Norway. DNA analysis of spiders across their current range and of museum specimens has revealed that the spiders diverged after the last ice age: part of the population stayed in the Mediterranean region, while a colony headed east to Central Asia. While these eastern populations adapted to live in climates as diverse as the tropical south of Japan and cold south-eastern Siberia, the spiders in the Mediterranean remained limited to warm areas. Rising temperatures across Europe in the last century have allowed the Mediterranean spiders to join up and breed with a previously isolated Black Sea population, restoring genetic variation within a few generations and allowing rapid adaptation to colder climates.
Source: Molecular Ecology (2013) 22, 2232–2248 (http://dx.doi.org/10.1111/mec.12223), and *BBC News* (2013) http://www.bbc.co.uk/nature/21877948

Ducks shift wintering grounds

Warmer European winters are causing some migratory ducks to stay closer to their summer breeding grounds all year round. Data from the 30 year-long International Waterbird Census show that at the northern end of their flyway, in Scandinavia, there were c. 130,000 more tufted ducks, goosanders and goldeneyes in 2010 than in 1980, whereas numbers have declined by a corresponding amount in Britain, France, Switzerland and Ireland, the southern part of their flyway. The shift in migration is known as short-stopping, whereby Arctic-breeding species that head to milder climates for the winter find they no longer need to travel so far for the unfrozen lakes that allow them forage. This confirms the need to re-evaluate conservation needs for these species as new important wintering areas are established further north and east.
Source: Global Change Biology (2013) http://dx.doi.org/10.1111/gcb.12200, and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22484907

ESA approves Biomass satellite

The Biomass satellite project, which will calculate the amount of carbon stored in the world's forests and monitor changes over the course of its 5 year mission, has been given the go-ahead by the European Space Agency. The data generated will provide a firm basis for treaties such as the UN REDD+ agreement that aim to help developing countries conserve their forests. The satellite will emit a 70 cm radar pulse that penetrates forest canopies but scatters off large woody parts of trees, and will sense the volume of material at a resolution of c. 200 m. Currently, Biomass will not be permitted to operate over North America, Europe or the Arctic but this restriction will not affect collection of data from the tropics, boreal forests, or the temperate forests of China, where the biggest regrowth is occurring. The satellite is expected to launch in 2020.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-22435656

Reforms too green for MEPs?

The European Commission, which drafts EU laws, says farmers should have to work for part of their subsidies by helping wildlife through diversifying crops, leaving grassland unploughed and creating special ecological areas. But the plans are under threat by the MEPs' agriculture committee after farmers persuaded it to reject key elements of the reforms. The committee infuriated critics by voting to pay farmers twice over for their greening activities, from two different budgets, and furthermore rejecting a proposal that farmers should lose subsidies if they break laws governing water, pesticides and hormones. Farmers argued that if they had been fined they should not be punished twice by also losing any subsidy.
Source: BBC News (2013) http://www.bbc.co.uk/news/world-europe-21718535

Deer cull necessary to protect countryside

About half of the UK's deer population, estimated at c. 1.5 million, may need to be culled each year to stop devastation of woodlands and birdlife. There are now more deer in the UK than at any time since the last Ice Age. In the absence of natural predators, deer populations are continuing to expand, threatening biodiversity and causing road traffic accidents and crop damage. Of Britain's six deer species, four have been introduced since Norman times. There is evidence that deer reduce the number of woodland birds such as blackcap, nightingale and willow tit. Although a census of roe and muntjac deer populations across 234 km^2 of woods and heathland in East Anglia, carried out by scientists from the University of East Anglia, showed that deer numbers appeared stable in the area, this was only because thousands were being pushed out into the surrounding countryside each year.
Source: Journal of Wildlife Management (2013) 77, 726–726 (http://dx.doi.org/10.1002/jwmg.530), and *BBC News (2013)* http://www.bbc.co.uk/news/science-environment-21688447

Ash dieback spreads in Wales

The fungus *Chalara fraxinea*, which kills ash trees, has been found at three newly-planted sites in private woodland in Pembrokeshire and Ceredigion. It was identified during an inspection of young trees sourced from known infected nurseries and its discovery represents an extension of the known distribution of the disease to 16 sites across Wales. There is as yet no evidence that it is present in Wales beyond new planting sites. The disease was first recorded in Britain in 2012 in Leicestershire and is known to have spread to the wider environment in the south-east of England from spores that may have been blown across the English Channel and North Sea. The UK government has drawn

up an interim disease control plan and has imposed a ban on imports and movements of ash plants and seeds into and within the country to try to slow the spread of the disease.
Source: BBC News (2013) http://www.bbc.co.uk/news/uk-wales-21648433

Weather blasts UK's rare spring butterflies

The UK's butterflies have suffered decades of decline, largely because of habitat loss, and they also appear to have been affected by last year's poor weather. This year, the second-coldest March on record contributed to the delayed emergence of many threatened butterfly species, according to the UK charity Butterfly Conservation. First sightings, recorded by the public, showed the insects typically appeared a fortnight later than normal. The grizzled skipper emerged a month later than last year, and pearl-bordered fritillaries, first spotted last year on 1 April, were not recorded until 27 April. Wood whites could be seen by 10 April last year, but this year they were delayed until early May. Late emergence is not necessarily a problem for the insects but the weather over the next few weeks may be crucial to their survival.
Source: BBC News (2013) http://www.bbc.co.uk/nature/22546675

Wildcat trap snaps rare bird in Scotland…

A camera trap set up by Oxford University's Wildlife Conservation Research Unit to capture images of wildcats has photographed a bird species rarely seen in Scotland. White's thrush breeds mainly in Siberia and Asia, and the Unit said it believed that it was the first recording of the species taken by a camera trap in Scotland. The camera trap was set up near Bonar Bridge, Sutherland.
Source: BBC News (2013) http://www.bbc.co.uk/news/uk-scotland-highlands-islands-22447693

…whiskers galore…

A walrus that turned up on the small Scottish island of Ronaldsey has returned to the sea. Its arrival became a sensation, and the whiskery visitor even found itself with its own social media account. It is extremely unusual for a walrus to be found so far south of the Arctic Ocean.
Source: BBC News (2013) http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-21653970

…first wild Scottish beaver in 400 years given DNA test…

Scotland's first wild beaver in > 400 years has been trapped at the Loch of the Lowes, a Perthshire nature reserve. The animal, identified as a 2–3 year old male European beaver, was taken to Edinburgh Zoo for a health check and DNA testing before being released back into the reserve. The Scottish Wildlife Trust and the Tayside Beaver Study Group have been monitoring the animal since it was first sighted and will continue to monitor its behaviour and ecological impact. Beavers became extinct in the UK towards the end of the 16th century. The current wild beaver populations in Scotland belong either to the government-licensed Scottish Beaver Trial in Argyll, or are the descendants of escapees from private collections in Angus and Perthshire over the past decade.
Source: BBC News (2013) http://www.bbc.co.uk/news/uk-scotland-tayside-central-21956439

…and urgent action needed to save Scottish wildcat

Pure-bred Scottish wildcats are among the rarest animals in the world, with fewer than 100 remaining according to recent estimates. An urgent conservation effort is now necessary to save the species, which faces extinction within 2 years as a result of interbreeding with domestic and feral cats. A test has now been developed to identify pure wildcats by genetic scanning of blood samples. The researchers searched through hundreds of museum specimens from the previous 140 years to find pure wildcat specimens without any hybridization, for use as reference samples. The team has proposed that pure-bred wildcats should be trapped and transferred to protected areas in the Scottish Highlands, and have called on people in remote Highland areas who may be keeping wildcats as pets to participate in the conservation effort.
Source: BBC News (2013) http://www.bbc.co.uk/news/uk-scotland-highlands-islands-22610869

Seed bank crucial for UK trees

Kew's Millennium Seed Bank is coordinating the UK's first national collection of tree seeds, which has been established to safeguard the genetic diversity of the country's trees. The scheme will initially target 50 native species, selected and ranked according to a range of criteria including conservation status, prevalence in the landscape, and vulnerability to pests and diseases. In partnership with the Forestry Commission the scheme will collect seeds of the priority species from 24 seed zones across the UK, and a species will only be considered to be fully represented in the collection when it has been sourced across its distribution or from all genetically distinct populations. The ash tree, threatened by ash die-back fungus, is considered a priority and seed will be collected from multiple populations throughout its UK range in the hope that disease-resistant populations will be found.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-22479567

UK nature reserves attract new bird species

Protected area networks may facilitate the colonization of new regions by species that are shifting their geographical ranges as the global environment changes. Scientists investigated the extent to which wetland birds such as whooper swans, Cetti's warblers and little egrets, which have colonized the UK since 1960, have exploited protected areas. Colonization commenced in a protected area for six species that established permanent (> 10 year) breeding populations in the UK during this period. Subsequently, colonizing species started to breed outside as well as inside protected areas, showing declining fractions of breeding within protected areas over time, a trend not seen in already resident species. Given future projections of range change across a number of taxonomic groups, protected areas can be expected to become increasingly important both as landing pads for newly arriving species and as establishment centres from which populations spread.
Source: Proceedings of the Royal Society B (2013) http://dx.doi.org/10.1098/rspb.2012.2310, and *BBC News* (2013) http://www.bbc.co.uk/nature/22064252

Biofuels become burning issue

British MPs have agreed new subsidies for burning wood and other plant materials in power stations. An all-party committee agreed new payments for renewable energy, including palm oil. Environmentalists say that palm oil production creates more greenhouse gases than it saves and destroys orang-utan habitat. They are also concerned at new subsidies for burning wood pellets to generate electricity, saying that the huge scale of imported wood is unsustainable. The UK government says biofuels are needed to meet greenhouse gas emission targets. Germany and the Netherlands have already decided to remove these types of subsidies.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21692673

NORTH EURASIA

Mercury threat to Arctic foxes

Arctic foxes feeding on marine prey are being exposed to dangerous levels of mercury. On the Russian island of Mednyi in the North Pacific the foxes survive almost exclusively on sea birds, with some also eating seal carcasses. The island's fox population declined mysteriously in the 1970s and, although the population is currently stable, many individuals are in poor condition. Screening for pathogens had negative results but tests on fox hair samples and samples of their food showed significant levels of mercury. However, Icelandic Arctic foxes, which live inland and prey on non-marine birds and rodents, had much lower levels of mercury. The Arctic Council says there has been a 10-fold increase in mercury levels found in top predators in the region in the last 150 years.
Source: PLoS ONE (2013) 8(5), e60879 (http://dx.doi.org/10.1371/journal.pone.0060879), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22425219

SUB-SAHARAN AFRICA

African forest elephant numbers plummet

Forest elephant *Loxodonta cyclotis* numbers decreased by c. 62% across Central Africa between 2002 and 2011. Teams spent a total of 91,600 days walking 12,875 km across forests in Cameroon, Central African Republic, the Democratic Republic of Congo, Gabon and the Republic of Congo. Their findings also indicate that large areas where the elephants ranged 10 years ago now have few remaining. The population is now $<10\%$ of its potential size and occupies $<25\%$ of its potential range. High human population density, hunting intensity, absence of law enforcement, poor governance, and proximity to expanding infrastructure such as logging roads are the strongest predictors of decline.
Source: PLoS ONE (2013) 8(3), e59469 (http://dx.doi.org/10.1371/journal.pone.0059469), and *BBC News* (2013) http://www.bbc.co.uk/nature/21655613

Free-range lions too costly?

Nearly half of Africa's lions living in unfenced reserves are facing extinction in 20–40 years unless measures are put in place to protect them from their worst enemy, people. A study of lion population densities and trends related to different management practices across 42 sites in 11 countries has shown that lion populations in fenced reserves are significantly closer to their estimated carrying capacities than those in unfenced areas. Whereas fenced reserves can maintain lions at 80% of their potential densities on annual management budgets of USD 500 km^{-2}, unfenced populations require budgets of $>$USD 2,000 km^{-2} to attain half their potential densities. Lions in fenced reserves are primarily limited by density dependence but lions in unfenced reserves are highly sensitive to surrounding human population densities and are frequently subjected to density-independent factors.
Source: Ecology Letters (2013) 16, 635–641 (http://dx.doi.org/10.1111/ele.12091), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-21687176

Illegal logging rife in Ghana

A report by the environmental watchdog organization Global Witness claims that most of the timber produced in Ghana does not meet the criteria of the EU's new timber regulation. In an analysis of c. 800 permits issued for logging in the country, most of the timber was found to be at high risk of being illegal under EU law. An overhaul of Ghana's permit system is needed, because currently only two of the six types of logging permits issued are legal according to the government's own legal framework for forestry. European importers should be wary of buying timber products from Ghana unless they can trace them back through the supply chain to a legal source. They could otherwise face a prison sentence for importing illegal timber. Annual deforestation in Ghana is $>100{,}000$ ha, and the country is one of Africa's major timber exporters and the largest exporter of plywood.
Source: Global Witness (2013) http://www.globalwitness.org/sites/default/files/library/GW_Ghana_logging_permits.pdf, and *Mongabay.com* (2013) http://news.mongabay.com/2013/0529-ghana-timber.html?utm_source=dlvr.it&utm_medium=twitter

Zoo team to hunt for new species in Nigeria

A team from Chester Zoo will carry out the first biodiversity assessment in the Gashaka Gumti National Park, which is home to the last viable population of the Endangered Nigeria–Cameroon chimpanzee *Pan troglodytes ellioti*. The Park, in eastern Nigeria on the border with Cameroon, is the country's largest and is considered to be one of Africa's most important biodiversity hotspots. The team will include experts on birds, small mammals, amphibians and insects. Chester Zoo has been funding core support facilities at the Park's research camp, set up to study the chimpanzees, for more than a decade.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21741911

Controversial palm oil project halted in Cameroon

A US-based investment firm, Herakles Capital, has halted work on a palm oil project in Cameroon after opposition from local communities and environmentalists. The firm has halted development of its 73,000-ha oil palm plantation pending a government review of the 2009 deal that granted the land to the firm. The move came after an order from the Forestry Ministry and after a joint report from Greenpeace and the Oakland Institute alleged that Herakles failed to obtain the proper permits prior to clearing rainforest for palm nurseries. Herakles denied the allegations and said it is working with the government to resolve the issue. The project has proved contentious because of opposition from villagers who say they will lose access to hunting areas and community forest plots. Nearly 90% of the plantation area is covered by dense forest according to aerial surveys conducted by Greenpeace, which has campaigned against the project.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0523-herakles-halted.html

Forest elephant slaughter in CAR

A heavily armed gang, thought to be Sudanese ivory poachers, has killed 26 elephants in the Dzanga-Ndoki National Park in the Central African Republic. The massacre took place at Dzanga-Bai, an area known locally as the 'village of elephants'. The poachers used an observation platform built for scientists and tourists from which to shoot the animals, which gather at Dzanga-Bai in large numbers to drink. Dzanga-Ndoki, a World Heritage Site, is located in the south-western corner of the Central African Republic, where it borders Cameroon and the Republic of Congo.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-22486152

NABU International launches fund to support families of rangers killed in action

Every year an estimated 40 African rangers lose their lives to poachers in search of ivory and rhino horn. NABU International–Foundation for Nature (BirdLife in

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Germany) has now launched a support programme to provide financial assistance to the families that are left behind. Rangers killed or severely injured while carrying out their duties leave behind families that are not only devastated by grief but suffer severe financial hardship as a result of losing their main bread winner. NABU International's Ranger Family Support Fund was recently launched, in Ethiopia, initiated in response to a generous EUR 50,000 legacy donation. The Ethiopian Wildlife Conservation Authority was first to benefit from the newly established fund. Since 1989 poachers have killed 35 Ethiopian rangers and seriously wounded 34.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/05/nabu-international-launches-fund-to-support-families-of-rangers-killed-in-action

New bat genus highlights biodiversity in South Sudan

Researchers and conservationists from Bucknell University and Fauna & Flora International, working with the South Sudanese Ministry of Wildlife Conservation and Tourism, have identified a new genus of bat. The rare and strikingly beautiful animal, reminiscent of a badger, with its bold striped pelage, was discovered in Bangangai Game Reserve. The new genus is *Niumbaha*, which means rare or unusual in Zande, the language of the Azande people in Western Equatoria State, South Sudan, where the bat was discovered. This finding suggests that this new country has many natural wonders yet to be discovered and protected.
Source: ZooKeys (2013), 285, 89–115 (http://dx.doi.org/10.3897/zookeys.285.4892), and *Fauna & Flora International Press Release* (2013) http://www.fauna-flora.org/news/striped-like-a-badger-new-genus-of-bat-identified-in-south-sudan

Kenya increases penalties for poaching

The Government of Kenya has passed a bill that allows much tougher action against poachers, significantly increasing both the fines and prison sentences that can be imposed. Kenya's poaching problem has reached a crisis level in recent years, driven by the demand for ivory and rhino horn in East Asia, and both elephant and rhino populations have suffered heavy losses. Since the 1960s Kenya's elephants have been decimated, and since the beginning of this year alone 117 elephants and 21 rhino have fallen victim to poaching. Previously, poachers were not heavily penalized in Kenya, and prison sentences were rarely imposed, but the government is now taking a hard stance on the issue in an effort to preserve Kenya's wildlife, which is a major tourist attraction. Under the new regulations poachers face fines of up to USD 120,000 and 15 years in prison.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0529-hance-kenya-poaching-penalties.html?utm_source=dlvr.it&utm_medium=twitter

Nesting site of endemic, Endangered Clarke's weaver found

Clarke's weavers are only found in Kilifi County, Kenya, in Arabuko-Sokoke Forest and in Dakatcha Woodland to the north. They are usually seen in small flocks, feeding on insects and fruits in forests of *Brachystegia spiciformis*. Their nesting site had never previously been found but monitoring teams from Nature Kenya and Dakatcha Woodland Conservation Group, a site support group working with Nature Kenya, made the discovery after years of searching. A team observing a large flock of Clarke's weavers in a seasonal wetland saw males and females perching in sedges and flying back and forth and a male weaving sedge strips onto a nest. Over 700 Clarke's Weavers were in the small seasonal wetland. Dakatcha Woodland Conservation Group, with support from Nature Kenya, is taking active steps to protect this first known breeding site.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/04/nesting-site-of-endemic-endangered-clarkes-weaver-found

New surveys for Grauer's gorilla

The Endangered Grauer's gorilla, occurring only in the montane and mid altitude forests of the eastern Democratic Republic of Congo (DRC), is the largest of the four gorilla subspecies. The range of this gorilla has been an area of conflict since 1996 and the populations have been largely unmonitored. A collective of international and local conservation organizations have now partnered with the Institut Congolais pour la Conservation de la Nature, the Ministry of the Environment, Nature Conservation and Tourism, national military and police authorities, and local communities, to support the implementation of a recently completed IUCN Conservation Action Plan for great apes in eastern DRC. One of the key activities identified, and being implemented by the Wildlife Conservation Society and Fauna & Flora International, is the need to assess the status of gorillas and chimpanzees in the region, with new surveys.
Source: Fauna & Flora International Press Release (2013) http://www.fauna-flora.org/news/gorillas-in-crisis-caught-in-the-cross fire-of-conflict/

Mad Max impacts for desert biodiversity

During 2012 areas of the Dorob and Namib Naukluft National Parks in the fragile Namib desert were utilized as locations for the filming of a sequel to the popular Mad Max film series. Vehicles were permitted to drive off official tracks, with the understanding that the area would be rehabilitated immediately thereafter. Observers say that the filming activities scarred the surface of topsoils and damaged biodiversity across many thousands of hectares. Rehabilitation efforts after filming consisted of dragging chains and nets across the landscape to partially erase the visual scars. These activities damaged an even wider area of unique biodiversity. Because no Environmental Impact Assessment was carried out to obtain a baseline prior to the filming, the damage to the ecosystem is not quantifiable.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0411-mad-max-sequel-namib-desert.html

Massive marine protected area announced in the Southern Indian Ocean

The South African Department of Environmental Affairs has declared a massive marine protected area in the sub-Antarctic territory of Prince Edward Island. At c. 18 million ha it is one of the largest marine protected areas. The islands are renowned for their important seabird colonies, including holding nearly half of the global population of wandering albatross, 13% of the world's king penguins, and one of the highest numbers of breeding seabird species (26) of any island. The new marine protected area overlaps with several proposed marine Important Bird Areas.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/04/massive-marine-protected-area-announced-in-the-southern-indian-ocean

2013 rhino slaughter may break records

South African officials at the CITES meeting in Bangkok warned that the poaching of rhinos is likely to reach record levels this year: 146 rhinos have so far been killed for their horns, 107 in Kruger National Park (see also pp. 311–312). The South

African delegates said it was time for a dialogue on legalizing the trade in rhino horn. Recently published research suggests that the global demand for rhino horn could be met by permitting trade in horn shavings, humanely harvested from the animals, which that can grow up to 1 kg of horn per year. But rhino welfare campaigners believe the idea is flawed and dangerous, as legalizing trade in horn will feed the growth of the market rather than reduce the demand, or poaching. Last year saw 668 rhinos slaughtered in South Africa.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21714270

Avaaz take legal action over lion bone advertisement in South Africa

The campaign organization Avaaz has taken legal action against airport authorities in South Africa following the removal of one of its advertisements, which calls directly on President Jacob Zuma to ban the trade in lion bones. The authorities claim that the advertisement implicates the president in the killing of lions and that it could be a 'public relations disaster' for the country. Lion bones are used in traditional medicine in Asia and, according to Avaaz, official statistics show a 250% increase in exports of lion bones between 2008 and 2010. The government denies that the lion bone trade is a threat to the survival of the species in the wild; meanwhile conservationists say that there has been an 80% decrease in the number of lions in the wild in Africa in the past 50 years. Other threats to lion survival include increased demand for land and prey.
Source: BBC News (2013), http://www.bbc.co.uk/news/world-africa-22680606

SOUTH AND SOUTH-EAST ASIA

Spoon-billed Sandpiper wintering site becomes Bangladesh's 20th IBA

Sonadia Island in Bangladesh, where 10% of the known population of the Critically Endangered spoon-billed sandpiper spends the winter, has been recognized as Bangladesh's 20th Important Bird Area by BirdLife International. Sonadia Island also supports the Endangered spotted greenshank, and other threatened and Near Threatened birds such as great knot, Asian dowitcher, Eurasian curlew and black-tailed godwit. BirdLife partners and others involved in the Saving the Spoon-billed Sandpiper project have been working at Sonadia since 2009, when hunting of waders on the mudflats was identified as a major threat to the spoon-billed sandpiper population. Local hunters have now been trained and equipped for alternative, more secure and sustainable livelihoods.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/04/spoon-billed-sandpiper-wintering-site-becomes-bangladeshs-20th-iba

Deadly poison threatens tigers

Poison is emerging as the latest and most dangerous threat to the survival of the last remaining wild tigers in Thailand. In Huai Kha Khang, Thailand's most important tiger sanctuary, wildlife rangers have reported mounting evidence of gangs setting traps baited with fresh meat laced with insecticide. Poison was first used in the sanctuary back in the 1980s and led to the extinction of red-headed vultures. It re-emerged as a threat in 2010 when poisoned bait was found in c. 10 separate locations along the boundary between the sanctuary and a neighbouring reserve. The sanctuary has only c. 200 rangers to guard its almost 3,000 km^2. In the country as a whole the best estimate is that no more than 200 tigers remain in the wild. In the Huai Kha Khang sanctuary statistical models suggest that the total might be 53–65.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21618346

Thailand's promise to end ivory trade

Speaking at the opening of the Bangkok CITES meeting Thailand's Prime Minister Yingluck Shinawatra said that she will amend her country's laws to ban the legal trade in ivory but gave no further details as to the timing and scope of any ban. There are c. 6,500 elephants in Thailand, of which 2,500 are wild. Ivory taken from domesticated elephants can be legally sold in the country but campaigners say this law is being used to launder ivory from Africa. Although some observers hailed the announcement others were more cautious, believing that the Prime Minister was talking about curbing the flow of ivory into Thailand by strengthening a DNA testing programme to validate the origins of tusks. With up to 5,000 outlets selling ivory to tourists across Thailand, many believe it will be impossible to stem the trade.
Source: BBC News (2013) http://www.bbc.co.uk/news/science-environment-21646863

HSBC orders review of its lending to rainforest logging companies

In response to a Global Witness report that linked it to companies that have been clearing rainforests in Sarawak, Malaysian Borneo, for timber and palm oil production, the bank HSBC is going to conduct an audit of its relationships with logging companies to see whether its lending has violated the bank's environmental policy. HSBC will engage environmental auditor Proforest to evaluate its forest policy and commission PricewaterhouseCoopers to conduct a compliance review of the bank's implementation of the policy. HSBC says it has already cut ties to 68 clients in Malaysia because their activities are not in compliance with its sustainability policy. There is, however, some scepticism amongst campaigners, with a call for an unambiguous commitment that HSBC will never bankroll companies logging or clearing natural tropical forests, and put credible measures in place to show its customers and shareholders that it is serious about delivering on that commitment.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0524-hsbc-logging-audit.html

Indonesian court upholds the rights of indigenous peoples and forest communities

Environmentalists and indigenous rights groups in Indonesia have welcomed a landmark ruling by the country's Constitutional Court that gives indigenous people and local communities the right to manage millions of hectares of customary forests. Indonesia has one of the highest rates of deforestation and conflict between local communities and logging, mining and palm oil companies over land rights is widespread and sometimes violent. The granting of concessions to private companies has been a substantial source of revenue for the Ministry of Forestry in recent decades but under the new ruling, free prior informed consent will be necessary before a permit can be issued for privately owned or customary forest. Although it is not yet clear how conflict between customary communities and companies will be resolved, the ruling strengthens the position of marginalized and impoverished communities, who can no longer be criminalized for accessing their forest lands.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0517-indonesia-customary-forest.html

Police corruption and illegal logging in Indonesia

The Environmental Investigation Agency is calling on the Indonesian government to prosecute a former police officer who was at the centre of an illegal logging ring in Papua. Labora Sitorus was arrested

following the seizure of illegally logged merbau timber linked to his company PT Rotua. The logging ring was also found to be involved in illegal trapping and trading of threatened birds. The case turns a spotlight on the involvement of police and government officials in the illegal timber trade and will raise concerns about the integrity of Indonesia's recently launched timber traceability scheme, known as the Timber Legality Verification System. This scheme has been supported by EU importers of timber products from Indonesia and has enhanced the country's reputation in the timber trade but its credibility is now in jeopardy.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0530-papua-illegal-logging-arrest.html

EAST ASIA

China approves another mega-dam

Chinese environmental authorities have approved construction plans for what could become the world's tallest dam, acknowledging that the project would affect threatened plants and rare fish species. The 314 m high dam will serve the Shuangjiangkou hydropower project along the Dadu river in south-western Sichuan province. China's environment ministry acknowledged that the dam would have an impact on the area's biodiverse flora and fauna but proposed countermeasures to mitigate the environmental impact, such as protecting fish habitats in tributaries, building fish ladders and increasing fish breeding and releasing. Scientists and environmental activists have raised concerns that a profusion of dams in south-west China could increase the area's risk of disasters such as earthquakes and landslides.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0521-gen-china-dadu-dam.html

NORTH AMERICA

Urban songbirds need higher tweets

Songbirds are vulnerable to anthropogenic noise because they rely on acoustic signals for communication. Recent studies suggest that anthropogenic noise reduces the density and reproductive success of some bird species but that species which vocalize at frequencies above those of anthropogenic noise are more likely to inhabit noisy areas. To investigate this a team surveyed species at 113 sites in natural areas in urban Edmonton, Canada. The number of species at each location tended to be lower when noise levels were higher. The study also focused on seven species to see if their abundance was affected by noise. The presence of lower frequency elements in a species' song was predictive of abundance. Female birds may perceive the song as abnormal if they cannot hear the lower frequencies, which compete with low frequencies found in traffic noise.
Source: Global Change Biology (2013) 19, 1075–1084 (http://dx.doi.org/10.1111/gcb.12098), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-21716030

Genetically modified salmon pose potential risk to wild populations

Although a rare occurrence, wild Atlantic salmon have been known to mate successfully with the closely related brown trout. A Canadian study has now found that hybridization between genetically modified Atlantic salmon and wild brown trout is possible, and this may have ecological consequences for wild populations. The genetically modified salmon grow more quickly than their wild counterparts, and this trait can be passed on to hybrid offspring. Under hatchery conditions in the laboratory hybrids outgrew and outcompeted both genetically modified and wild salmon, and this raises concerns about the potential consequences if transgenic fish escaped into the wild. The company that created the transgenic salmon, AquaBounty Technologies, maintains there is very little risk to wild populations because it produces only sterile female fish. The US Food and Drug Administration has yet to make a final decision on whether the transgenic salmon can go on sale for human consumption.
Source: Proceedings of the Royal Society B (2013) 280(1763) (http://dx.doi.org/10.1098/rspb.2013.1047), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22694239

Gold mine planned for Mexican biosphere reserve

The American mining company Vista Gold is awaiting approval from the Mexican government for a proposed open pit gold mine in Sierra la Laguna biosphere reserve. The UNESCO reserve is home to many endemic species of animals and plants as well as a pristine pine and oak forest, and thousands of people depend on the natural resources in the area for their livelihoods. If the mining goes ahead, 180 million t of rock will be excavated from the area and cyanide solution will be used to separate the gold from the ore. Although there is some support for the project from local landowners who rent mining rights to the company, most local people are opposed to the mining. The risk of contamination of groundwater is a major concern for many who depend on clean water for their livelihood, and civil society organizations and NGOs have united in protest against the project.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0528-dimitrova-mexico-gold-mine.html

CENTRAL AMERICA AND CARIBBEAN

Indigenous association to sue to shut down Panama's REDD+ programme

Panama's largest association of indigenous people is planning to sue the government to shut down the country's Reducing Emissions from Deforestation and Degradation (REDD+) programme. The National Coordinator of Indigenous Peoples in Panama (COONAPIP) announced its intent after it failed to reach agreement with the UN's REDD+ programme, which has been working to establish a forest conservation framework in the country. The dispute stems from COONAPIP's view that indigenous peoples have not been properly engaged in the REDD+ process. Citing the UN Declaration on the Rights of Indigenous Peoples, COONAPIP will file a lawsuit against the government of Panama to close down the REDD+ programme. While REDD+ aims to reduce deforestation and forest degradation it potentially limits some activities in forest areas, thereby affecting natural resource use. As Panama's indigenous population occupies c. 31% of the country's land it is a key stakeholder on any land-use and management issues.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0517-panama-coonapip-redd-suit.html

Pop song campaign highlights the importance of Cuban plants

A new campaign aiming to focus attention on Cuban plants has been launched by Planta! The Cuban Plant Conservation Initiative. Cuban plants take centre stage in a new song, Del Monte Soy, which is about the relationships between Cubans and their natural environment. The word 'monte' is used to describe any kind of forest. Planta! received a Conservation Leadership award in 2012 to help with awareness raising and to facilitate networking and resource sharing between Cuban

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conservationists. The music and lyrics were written and performed by renowned Cuban singer-songwriter Tony Avila, accompanied by popular Cuban artists Laritza Bacallao, Ivette Cepeda, Miriela Moreno and Grupo Frasis. The song has become a hit on the radio and the video is being shown on national and local television channels.
Source: Fauna & Flora International News (2013) http://www.fauna-flora.org/news/pop-song-campaign-highlights-importance-of-cuban-plants/

Environmental disaster caused by pesticide contamination in French West Indies

A carcinogenic pesticide that was used to combat banana weevil on the island of Martinique in the French West Indies between 1972 and 1993 has infected the entire food chain on the island. Chlordecone has been found in drinking water, beef and eggs as well as in the milk of nursing mothers. The contaminant gradually spread to the coast, destroying the fishing industry on which many families depended for their livelihoods. Freshwater prawn farms had to be shut down and the government implemented a ban on offshore fishing. The offshore limit will soon be increased from 500 to 900 m. A team of doctors at France's Institute of Health and Medical Research monitored the development of children whose mothers had been exposed to chlordecone during pregnancy and found evidence of psycho-motor impairment and problems with visual memory. In January the French government promised EUR 2 million in aid.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0529-gen-pesticide-pollution-caribbean.html

SOUTH AMERICA

Colombia protects indigenous sacred sites

The ceremonial site of Jaba Tañiwashkaka in north-eastern Colombia has been granted protected status by the government. The land was handed over to the Kogi tribe on 5 May 2013 in a traditional ceremony and is the first sacred site to be designated a protected area in the country. The 155-ha site was purchased jointly by the Kogi, the Colombian Ministry of Culture and the Amazon Conservation Team to protect it from the threat of commercial development. The Kogi are indigenous people of the Sierra Nevada de Santa Marta, and they have strong spiritual beliefs and maintain their traditional practices. Their spiritual leaders, called *mamos*, use the site of Jaba Tañiwashkaka for religious ceremonies. The handover of this site to the Kogi is significant because it may lead to the designation of other such sacred sites in Colombia as protected areas.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0528-colombia-sacred-sites.html

Rainforest critical for hydropower...

In Brazil c. 45 new hydro plants are planned. But deforestation in Amazonia could significantly reduce the amount of electricity they can produce. A new study has found that evapotranspiration from the rainforest is critical for generating rainfall, which feeds into the rivers that ultimately turn turbines. A study has found that because of current levels of deforestation, rainfall is 6–7% lower than it would be with full forest cover. The study looked closely at Brazil's controversial Belo Monte dam, said to be the world's third largest hydropower project. Predictions for 2050 suggest a 40% loss of forest, meaning significantly less rain, and under this scenario simulated power generation declined to only 25% of maximum plant output and 60% of the industry's own projections.
Source: PNAS (2013) http://dx.doi.org/**10.1073/pnas.1215331110**, and *BBC News* (2103) http://www.bbc.co.uk/news/science-environment-22513233

...changes in Amazonia's hydrological cycle attributed to rising ocean temperature...

Researchers at the University of Leeds have found that Amazonia's flood and drought cycle is becoming more extreme and less predictable. Rather than attributing the substantial wetting trend of the past two decades to the short-term influences of shifts in the Intertropical Convergence Zone and the effects of El Niño and La Niña events, they focus on the relationship between rising ocean temperatures in the Atlantic and rainfall in the Amazon basin. They propose that the intensification of Amazonia's hydrological cycle could be a result of increased atmospheric water vapour coming from the tropical Atlantic, which is resulting in increased precipitation during the rainy season. This intensification of the hydrological cycle combined with the existing pressures of deforestation, dam building and overfishing could have serious implications for ecosystem processes in Amazonia, including fish migration and seed dispersal, as well as for transportation, urban infrastructure and hydroelectricity generation.
Source: Geophysical Research Letters (2013) http://dx.doi.org/10.1002/grl.50377, and *Mongabay.com* (2013) http://news.mongabay.com/2013/0514-amazon-discharge.html

...and supermarkets to avoid meat from Amazonia

Deforestation in Amazonia has slowed over the past years but illegal logging and invasion of public land continues to be a problem, and huge swathes of forest have been turned into pasture-land and soy plantations. Now, the main group representing supermarkets in Brazil says it will no longer sell meat from cattle raised in the rainforest. The Brazilian Association of Supermarkets, which has 2,800 members, has signed an agreement with the Federal Public Prosecutor's office in the capital, Brasilia. Under the deal, supermarkets have promised to reject meat from areas of Amazonia where illegal activities take place. The agreement also includes a more transparent labelling system, to make it easier for consumers to avoid buying meat from Amazonia and make it harder for shops to sell items from producers who flout the law.
Source: BBC News (2013) http://www.bbc.co.uk/news/world-latin-america-21934025

Deforestation leads to seed shrinkage

Only 12% of Brazil's Atlantic rainforest remains, and deforestation has caused the trees to produce smaller, weaker seeds that are less likely to regenerate. This appears to have been triggered by the loss of large frugivorous birds. Examination of > 9,000 seeds from palm trees showed that those from areas that had suffered heavy destruction were smaller than seeds in undisturbed forest. Consideration of a wide array of factors indicated that the main factor causing the change was the disappearance of the large frugivorous species. Usually, species such as the toucan and cotinga use their large beaks to eat the fruit, thus spreading the seeds. But as the rainforest was lost these large birds disappeared. By evolving to produce smaller fruits, which birds with smaller beaks could handle, the palms were more likely to be dispersed. However these seeds were weaker. Smaller seed size means a lower probability for successful recruitment.
Source: Science (2013) 340(6136), 1086–1090 (http://dx.doi.org/10.1126/science.1233774), and *BBC News* (2013) http://www.bbc.co.uk/news/science-environment-22706402

PACIFIC

Is the Tasmanian tiger alive and well in New Guinea?

A relict population of Tasmanian tigers could still survive in New Guinea, according to cryptozoologist Dr Karl Shuker. Although the species once populated much of Tasmania and mainland Australia and was declared extinct over 80 years ago, its prehistoric presence on the island of New Guinea was only discovered from fossil remains in 1960. New Guinea is relatively unexplored territory, and therefore there is a possibility that a population of Tasmanian tigers still survives there. The idea is bolstered by reports from tribal groups of a canine-like animal that closely matches the description of the Tasmanian tiger; however, as yet there has been no proof and the reports have not been verified by scientists. With new conservation technologies such as camera trapping it should be possible to confirm whether the species is still present on the island.
Source: Mongabay.com (2013) http://news.mongabay.com/2013/0520-hance-thylacine-new-guinea.html

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Court face-off over whaling

The UN International Court of Justice has set dates for public hearings on Australia's challenge against Japan's whaling programme in Antarctica. The hearings will start in June in The Hague. Australia took legal action against Japan over whaling in 2010. Despite a ban on commercial whaling for 25 years, Japan catches c. 1,000 whales each year for what it calls research. Australia is requesting the UN court to halt the Japanese research programme, which includes hunting whales in Antarctica using a special permit, and hopes to establish that Japan's whaling is not for scientific purposes and is against international law. New Zealand, supporting Australia, is also expected to make submissions to the court. For its part, Japan says it will argue that its whaling activity is within the International Convention for the Regulation of Whaling rules.
Source: BBC News (2013) http://www.bbc.co.uk/news/world-asia-22119410

Australian tadpoles beat invasive toads

The cane toad *Rhinella marina* is one of the most successful invasive species worldwide and is considered a feral pest across north-eastern Australia. Experimental work has shown that tadpoles of native Australian frogs can affect survival, size at metamorphosis and duration of larval period of cane toad tadpoles. To test if these effects occur in nature, scientists conducted a field experiment using two temporary ponds with enclosures, with tadpoles of native green tree frogs *Litoria caerulea* and cane toads, in treatments with a range of densities and combinations. Observations revealed that toad tadpoles grew more slowly and spent longer as larvae when they faced competition. In one pond, frog tadpoles also significantly reduced the body length and mass of newly metamorphosed toads. The results indicate the possibility of using native frogs as a component of an integrated approach to the biological control of cane toads.
Source: Austral Ecology (2013) http://dx.doi.org/10.1111/aec.12029, and *BBC News* (2013) http://www.bbc.co.uk/nature/21629255

Regent Honeyeaters on the loose

The Critically Endangered regent honeyeater is endemic to Australia, where it feeds on nectar and insects within eucalyptus forests. The captive-breeding-and-release programme formulated to boost the population of the species has released 38 more birds into the wild in the Chiltern–Mt Pilot National Park in north-eastern Victoria. This is the third such release, and now brings the total number of Regent Honeyeaters released in Victoria since 2008 to just over 100. The birds were bred and nurtured at Taronga Zoo, and then flown south before being acclimatized to their new surroundings for 2 days. Of the 38 birds released, 25 were colour-banded and fitted with radio transmitters so that researchers can follow their movements. Within 3 weeks many of the birds had dispersed over an area of several kilometres.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/05/regent-honeyeaters-on-the-loose

Warmer frogs fight off infection

Researchers in Australia have discovered a link between the body temperature of frogs and their ability to fight infection by the amphibian chytrid fungus, a lethal skin disease that can cause mortality within weeks of infection. Hundreds of species of amphibians worldwide have been infected by the disease during the past 3 decades, and it has caused the decline and extinction of many species. The researchers from the Australian Museum and James Cook University tracked more than 100 frogs of three species for 16 days, monitoring the body temperature of each individual daily and nightly. They found that warmer frogs were less prone to infection by the amphibian chytrid. The reason for this is not yet known but it may be that the frogs' immune systems are more efficient when the animals are warmer or that the fungus starts to die at higher temperatures.
Source: Scientific Reports 3 (2013) http://dx.doi.org/10.1038/srep01515, and *Mongabay.com* (2013) http://news.mongabay.com/2013/0527-dulaney-temperature-frogs.html

Plan to save New Zealand seabirds heralds changes to fishing practices

It is estimated that over 15,000 seabirds die annually from coming into contact with commercial fishing operations inside New Zealand's Exclusive Economic Zone. The Ministry for Primary Industries has now released a National Plan of Action for Seabirds. The intent is to save native seabirds, including threatened albatrosses and petrels, from being killed by commercial and non-commercial fishing activity. Six species in the new risk assessment are considered to be at very high risk from fishing activity, including the flesh-footed shearwater. An initial priority is to create a species-specific action plan for the black petrel, which only breeds on Great Barrier and Little Barrier islands, and is at risk from commercial and recreational fishers, particularly in the Hauraki Gulf.
Source: BirdLife News (2013) http://www.birdlife.org/community/2013/04/plan-to-save-new-zealand-seabirds-heralds-changes-to-fishing-practises

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