Briefly

INTERNATIONAL

Frog harvest rings alarm bells

Amphibian decline is linked to a diverse number of factors ranging from climate change to disease. Now an investigation of global trade patterns in frogs' legs over a 20 year period, using a UN database, provides an insight into levels of amphibian-harvesting from the wild. Global trade in frogs' legs has increased over the past 20 years, with the major importing countries comprising France, the USA, Belgium and Luxembourg. The major exporters are Indonesia, China, Belgium and Luxembourg (the latter two being transshipment points). The market for frogs in Indonesia is scrutinized in particular; the domestic Indonesian market is thought to account for 2–7 times the volume exported internationally (5,600 t in 1992). The study's authors call for more and better data on harvested populations, and recommend the establishment of a mandatory certification process for the harvest of wild frogs' legs.
Source: Conservation Biology (2009), http://dx.doi.org/10.1111/j.1523-1739.2008.01165.x

Human hunting drives rapid change in exploited species …

Predators are known to affect observable traits in wild populations but a new study has found that such changes occur more rapidly in human-harvested systems than in natural systems. An examination of average phenotypic changes in 29 species exploited by humans, ranging from cod to caribou, showed that changes in human-harvested systems occurred 300% faster than in natural systems. Phenotypic changes observed included average declines of nearly 20% in size-related traits, and are among the most rapid changes ever witnessed in wild populations. The fact that these phenotypic changes are fastest in commercially exploited populations may have profound repercussions both for conservation and economics. In particular, the effects of harvesting on size traits could have serious negative impacts on populations and ecosystems, as well as industries that depend on these populations.
Source: Proceedings of the National Academy of Sciences (2009), 106, 952–954.

… but some change may be reversible (albeit slowly)

A study on silverside fish has provided the first empirical evidence that fishing-induced decreases in body size can be reversed following cessation of fishing pressure. Populations of fish that were subjected to size-specific fishing demonstrated a slow but significant increase in body size, based on which the researchers predict that full recovery of body size could occur within c. 12 generations. In contrast, populations that evolved larger body size over the same time period did not display much evidence of reversal to their original size. The researchers do add the caveat, however, that harvested species typically have generation times of 3–7 years, so recovery could take many years, and recovery rates in wild populations may be affected by other processes of selection related to life history and environment.
Source: Proceedings of the Royal Society B (2009), http://dx.doi.org/10.1098/rspb.2009.0003

Forests may cease to act as carbon sinks as global warming increases

A report produced by a group of forestry researchers warns that forests may cease to function as carbon sinks and start to release carbon instead should temperatures rise 2.5°C above pre-industrial levels. Deforestation currently accounts for c. 20% of greenhouse gas emissions from human activities but forests absorb a larger amount of carbon than is emitted from their deforestation. Higher temperatures, along with other stressors such as droughts and more pest invasions, would result in considerable destruction and degradation of forests. Products obtained from forests, such as charcoal and non-timber forest products, are also expected to be affected by climate change, thus having an impact on the communities who depend on these products for their livelihoods.
Source: Adaptation of Forests and People to Climate Change—A Global Assessment Report (2009), www.iufro.org/download/file/3580/3985/Full_Report.pdf

Eggs on the menu at vulture restaurants

A study on Fuerteventura, in the Canary Islands, has found that the nests of ground-nesting birds are at increased risk of predation when located near a carcass. Three hundred and twelve artificial nests resembling those of two steppe species, the lesser short-toed lark and the cream-coloured courser, were constructed along 12 lines in different zones around a vulture feeding station and two fresh carcasses. Lines of nests showed higher predation rates in areas where a carcass was present (8–92%) than their respective paired lines where carcasses were absent (0–12%), and the probability of nest predation increased with carcass availability and raven abundance. Vulture restaurants, set up to provide a supplementary food source to threatened scavengers, pose a particular danger to prey species as the restaurants' constant supply of carrion can attract permanent aggregations of facultative scavengers.
Source: Animal Conservation (2009), 12, 85–88.

Global warming warning for fisheries

An indicator-based approach has been used to assess the vulnerability of 132 national economies to potential impacts of climate change on their fisheries. Fourteen of the 20 most vulnerable countries were located in Africa, including Uganda, Senegal and Malawi, along with Peru, Colombia, Bangladesh, Cambodia, Pakistan and Yemen. The vulnerability of these countries is a result of a combination of predicted warming, the relative importance of fisheries to their economies and diets, and the limited societal capacity of these countries to adapt to potential impacts as well as to opportunities. A worrying finding of the study is that many of the most vulnerable countries are also among the world's least developed, whose inhabitants are twice as reliant on fish compared to people in less vulnerable countries.
Source: Fish and Fisheries (2009), 10, 173–196.

Albatross task force up to the job

A project that brings together conservationists, fishermen and the South African government is making a real difference to albatrosses in the southern hemisphere. The Albatross Task Force, started in 2006, has instructors working in seven countries with globally-important populations of seabirds. The instructors work alongside fishermen, showing them ways of preventing birds getting hooked on fishing lines. Initially the Task Force worked with the long-lining industry but it has recently commenced working with the trawling industry. The Task Force's remit was helped by a permit, introduced in South African waters in 2008, stipulating that a maximum of 25 seabirds could be caught per long-line vessel; this prompted fishermen to take responsibility for the safety of seabirds. As

a result of the Task Force's work there was a decrease of 85% in the number of seabirds caught in 2008 compared to 2007.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/02/atf_prince_charles_event.html

Male and female sharks maintain distance

A study of shortfin mako sharks in the South Pacific Ocean has revealed the existence of a 'sexual line in the sea', with male and female mako sharks appearing to occupy geographically separate areas. The study examined 396 mako sharks caught in the area by commercial fishing boats, and found that nearly all the sharks caught east of 120°W were female, whereas most sharks caught west of this longitude were male. This finding could have grave implications for the population of sharks in the area, as the western part of the area investigated has typically been fished more heavily than the eastern area, leading to the possibility that a disproportionate number of male shortfin mako sharks may have been caught.
Source: Biology Letters (2009), 5, 156–159.

If only Noah had known ...

Researchers pondering the hypothetical question of how to decide which animals to allow onto the Ark have used a model designed by an economist, Martin Weitzman, to investigate which type of Borana cattle should be prioritized for conservation. Weitzman's model, which is based on the cost-effectiveness of conserving species, was applied to Borana cattle, a culturally significant breed that occurs in East Africa. The model indicated that the best chances of preserving this cattle type lay in protecting the Ethiopian breed, rather than the Kenyan or Somalian breeds. This is because the Ethiopian breed is most at risk of extinction, coupled with the fact that herders were willing to work towards conservation.
Source: Ecological Economics (2009), 68, 2051–2057 and *New Scientist* (2009), http://www.newscientist.com/article/mg20126983.300-conservationists-deciding-which-species-to-survive.html

Some aerosols can be fatal to phytoplankton

Aerosol particles, consisting of both natural and artificial components including soot, mineral dust and bacteria, are an important source of nutrients and trace metals to the world's oceans. The release of nitrogen and phosphorous by aerosols enhances phytoplankton growth, which in turn can increase carbon sequestration rates in the oceans. However, it has recently been discovered that not all aerosols stimulate phytoplankton growth; some are in fact fatal for particular groups of phytoplankton. The researchers involved in this discovery believe that the toxicity may be related to high copper concentrations in these aerosols, as laboratory experiments have indicated that copper is toxic for *Synechococcus* cultures. Atmospheric copper deposition is increasing rapidly as a result of anthropogenic emissions, and this deposition may affect patterns of phytoplankton growth, particularly in areas downwind of Asian industrial regions.
Source: Proceedings of the National Academy of Sciences of the USA (2009), http://dx.doi.org/10.1073/pnas.0811486106

Islands worth investing in

An index that combines endemism and species richness ('endemism richness') has been used to investigate the contributions of particular biogeographical regions to global biodiversity. Endemism richness of vascular plants was calculated for the entire terrestrial area of the world, except for Antarctica, and these results were compared to the spatial pattern of endemism richness of terrestrial vertebrates. The results show that endemism richness values on islands exceed those of mainland areas by a factor of 9.5 for plants, and 9.1 for vertebrates, and endemism richness of plants and vertebrates is strongly correlated. Examining past and present human impact and land cover change on island and mainland regions, the authors found that the human impact index was significantly higher on islands, and land-use-driven change on islands is expected to increase in the future. These findings lead the authors to suggest that island conservation warrants a high priority on the conservation agenda.
Source: Proceedings of the National Academy of Sciences of the USA (2009), http://dx.doi.org/10.1073/pnas.0810306106

Mid-frequency sonar causes hearing loss in bottlenose dolphins

An experiment in which a captive bottlenose dolphin was exposed to mid-level sonar, used by naval vessels, has shown that such exposure can result in temporary hearing loss and slight behavioural changes. It is thought that there is a connection between the use of sonar and mass strandings by cetaceans, and this study represents an attempt to obtain empirical evidence of the physiological effects of sonar on cetaceans, evidence that has proved hard to accrue. This experiment shows that at least one species of odontocete is affected by mid-frequency sonar but only after prolonged, high-sound exposure.
Source: Biology Letters (2009), http://dx.doi.org/10.1098/rsbl.2009.0099

Oceans' plastic threat

Autopsy records of leatherback turtles from 1885–2007 reveal that 33.8% of turtles had plastic in their gastrointestinal tracts. Leatherback turtles are at risk of ingesting plastic whilst they hunt for the jellyfish and other gelatinous prey that constitute their diet. When analysed by decade, the data showed a rapid increase in turtles ingesting plastic from the late 1960s to the 1980s, with the incidence of plastic ingestion levelling off after this point. The most common plastic items found inside turtles were bags but fishing lines, balloons and cigarette and sweet wrappers were also found. Although only 8.7% of cases of plastic ingestion were mentioned as potentially having caused death by blocking the passage of food, plastic can still pose a serious threat to turtles even in cases where it does not cause death outright, as it can impair health and reproduction.
Source: Marine Pollution Bulletin (2009), 58, 287–289.

EUROPE

Migration in action in France

Surveys at French migration watch sites have resulted in the counting of 45 million birds passing through the country on migration. The data collected by the researchers, working as part of the Mission Migration (Migration Study Group), have been added to the new Migraction database (http://www.migraction.net) which provides online storage of the data in real time. French ornithologists and nature conservation groups have cooperated under the initiative of LPO (the BirdLife partner in France) and other funding associations since 2006 to improve the protection of migratory birds and their habitats. One benefit of this network of migration watchers that has already become apparent is the reduction of illegal hunting at major migration bottlenecks.
Source: BirdLife International News (2008), http://www.birdlife.org/news/news/2009/01/migraction.html

Animals raised on natural pastures produce healthier meat

Animals that graze on unimproved, more biodiverse pastures produce tastier and healthier meat than those raised on improved pastures. An analysis of the nutritional qualities of plants growing on natural grassland showed that these plants provide a richer and more varied diet for grazers than intensively managed pastures.

Furthermore, grazers on traditional pastures also produce healthier meat: lambs grazing on unimproved land, particularly heather, had higher levels of vitamin E than conventionally-reared lambs, and their meat also contained higher levels of healthy fatty acids. In some habitats, such as salt marshes, the presence of grazers can aid the maintenance of biodiversity by preventing the habitat's domination by any one species.
Source: PlanetEarth Online (2009), http://planetearth.nerc.ac.uk/news/story.aspx?id=291

Oil rigs used by porpoises

Data from acoustic-monitoring devices attached to an offshore exploration drilling rig and gas production platform complex in the North Sea indicate that harbour porpoises occur within < 200 m of the platform, with 2,479 porpoise encounters recorded during 525 days of monitoring. Porpoise activity was higher at night and the researchers suggest that this is related to the activity patterns of the porpoises' prey. Previous research has shown that offshore platforms can act as artificial reefs, and in the North Sea, where fishing is not allowed within a 500-m zone around each installation, these installations may act as refuges for marine life. The authors suggest that the apparent importance of these sites for sea life should be taken into account when decisions regarding the decommissioning of rigs are made.
Source: IECS Journal of Marine Science (2009), 66, 734–745.

Birds shot in Romanian protected area

Dalmatian pelicans and pygmy cormorants have been illegally targeted by hunters in the Danube Delta Biosphere Reserve, which, in addition to being a Biosphere Reserve is also a Ramsar site and a Natura 2000 site. Both species are protected from hunting under Romanian legislation, and their distinctive appearance precludes accidental shooting. The Danube Delta is a stronghold for the Vulnerable Dalmatian pelican, with 400 pairs breeding there, and is also home to half the world's population of pygmy cormorants. Romanian NGOs have expressed their concern at the lack of legislative enforcement at the Reserve.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/02/dalmatian_pelicans.html

European birds already feeling the heat

A study using long-term datasets for 108 bird species from 20 European countries to develop an indicator to summarize the impacts of climate change on large areas containing many species has found that such impacts are already being felt. The indicator, which draws together data from bioclimate envelope modelling with population trends in European birds from the Pan-European Common Bird Monitoring Scheme, works by measuring the divergence in population trends between those birds predicted to expand their range under climatic change and those species whose range is expected to decline in size. The results show that birds that are predicted to thrive under climatic change, which include Sardinian warblers, bee-eaters and hoopoes, have been increasing in number since the 1980s, while those predicted to suffer from climatic impacts, such as snipe, lapwings and lesser spotted woodpeckers, have been decreasing.
Source: PLoS One (2009), 4(3), e4678, http://dx.doi.org/10.1371/journal.pone.0004678

NORTH EURASIA

Fruit and nut forests in jeopardy

The *Red List of Trees in Central Asia*, published by the Global Trees Campaign, has revealed that many of the fruit and nut trees in Central Asia's forests are threatened with extinction. The forests in Kyrgyzstan, Kazakhstan, Uzbekistan, Turkmenistan and Tajikistan show particularly high levels of genetic diversity as a result of the mountainous and fragmented geography of the area. Over 300 species of fruit and nut trees occur in the area, including wild apple, plum, cherry and walnut. It is thought that many of the domesticated species of fruit and nut originate from these forests. Domestic apples, for example, are known to have descended from the wild species *Malus sieversii*, which is from the Central Asian region and identified as threatened in this report. Threats to the forests are numerous and include overexploitation, overgrazing, desertification and fires.
Source: FFI press release (2009), http://www.fauna-flora.org/docs/media_release_As_apples_blossom_in_the_UK_their_wild_ancestors_face_extinction.pdf

NORTH AFRICA AND MIDDLE EAST

Sooty falcon's migration tracked

Researchers in the United Arab Emirates (UAE) have been able to follow the migratory route of a sooty falcon from its breeding grounds in the Sila Peninsula, UAE, to its overwintering site in Madagascar by means of a satellite tracking device. The tracking revealed that the bird travelled 6,700 km, and passed through seven countries en route to Madagascar. Sooty falcons breed in localized colonies in the Middle East and their breeding is timed to coincide with the autumn migration of small birds. The species is in decline, however, with a recent breeding survey of the sooty falcon by the Environment Agency–Abu Dhabi finding that the species had declined by 64% since 1994. Implementation of the African-Eurasian Memorandum of Understanding on Birds of Prey will provide broad-scale actions to help the falcon but conservation of the bird's remaining nest sites in the UAE and throughout the Gulf is also required.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/01/sooty_falcon.html

Migratory birds still ending up in Cypriot restaurants

Research by BirdLife Cyprus shows that trapping of migratory birds continues unabated in Cyprus, despite the fact that c. 90% of birds passing over the island are legally protected. Statistics from 2008 indicate that illegal mist-netting of migratory birds increased during the winter of 2008, with trapping reaching its highest level for 5 years. It is estimated that >1.1 million birds were killed in Cyprus in 2008, the majority of which were served as a local delicacy in restaurants. Song thrushes and blackcaps are the most frequently targeted species but the trapping methods used are indiscriminate, with up to 100 different bird species known to have been caught. Trapping is lucrative, with birds selling in restaurants for up to EUR 5 each, and prosecution rates are low; in 2008 only nine restaurateurs were charged with selling these delicacies.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/03/cyprus.html

Iraq's wildlife revealed

The fifth annual survey of Iraq's Key Biodiversity Areas by Nature Iraq, covering 65 sites in total, has served to emphasize the richness of the country's wildlife. Iraq's Mesopotamian marshes were revealed to be of great importance to birds, with African sacred ibis and African darter, neither of which have been found anywhere else in the Middle East, both occurring in the marshes. The marshes also harbour thousands of Vulnerable marbled teal, seven Vulnerable greater spotted eagles and an

endemic subspecies of otter, the Vulnerable smooth-coated otter. However, drought and upstream damming and irrigation schemes mean that the marshes, newly restored following 90% of their area being drained during Saddam Hussein's reign, are shrinking once more. Nature Iraq is calling for a basin-wide coordinated management plan for the whole of the Tigris and Euphrates river systems.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/04/nature_iraq_surveys.html

Flying rodenticides

Farms in Israel, Jordan and the Palestinian authority are turning to natural methods to control agricultural pests instead of using chemicals that can have a detrimental effect on surrounding ecosystems and species. Modern developments in these countries have reduced the number of nesting sites available to barn owls and common kestrels and therefore nest boxes have been erected for these two species. The first site where the barn owl boxes were used, the Kibbutz Sde Eliyahu in the Bat-She'an Valley, estimate that barn owls are removing at least 80,000 rodents from the valley every year. Farmers in Jordan, at first reluctant to join the scheme because barn owls symbolize bad luck in the Muslim tradition, became enthusiastic proponents once the benefits of this natural pest control became obvious. A project is now underway to compare the experimental results of using barn owls and kestrels in Israel, Jordan and the Palestinian authority.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/04/barn_owls_israel.html

First National Park created in Afghanistan

A region of blue lakes separated by dams made of travertine, a mineral deposit, plays host to the first National Park to be declared in Afghanistan. Band-e-Amir is popular with pilgrims and Afghans, although foreign tourism declined since 1979 as the result of an increase in violence. It is hoped that the declaration of Band-e-Amir as a National Park will reinvigorate the area's tourism, and help the region to obtain World Heritage Status. Although surveys of the area by the Wildlife Conservation Society suggest that much of the area's wildlife has been lost, not helped by destructive fishing practices in the area's lakes, some species remain, including urial, a type of wild sheep, ibex, wolves and the Afghan snow finch, thought to be the country's only endemic bird species.
Source: BBC News (2009), http://news.bbc.co.uk/1/hi/world/south_asia/8013017.stm

SUB-SAHARAN AFRICA

A new name for the Nigeria-Cameroon chimpanzee

The chimpanzee that occurs in Nigeria and western Cameroon (possibly the Niger River to the Sanaga River) used to be called *Pan troglodytes vellerosus*. The name was given by John E. Gray in 1862 on the basis of a specimen he received from the explorer Richard F. Burton. Gray believed that Burton had collected the animal from Mt Cameroon but research by John Oates, Colin Groves and Paulina Jenkins has indicated that, in fact, the type specimen came from Mbátá, Gabon, to the south. The name *vellerosus* is, as such, a junior synonym of *Pan troglodytes troglodytes*. The next available name chosen by John Oates and his colleagues was *Pan troglodytes ellioti*, a specimen from Basho, Cameroon, described by Paul Matschie in 1914, who gave it the name in honour of Daniel G. Elliot's support in the study of ape natural history.
Source: Primates (2009), 50, 78–80, http://dx.doi.org/10.1007/s10329-008-0116-z

African forests harbouring more and more carbon

Long-term data from a 10-country monitoring network in Africa has found that carbon storage has been increasing by 0.34 Pg C yr^{-1} in African forests since the monitoring began in 1968. The reported changes in carbon storage are similar to those observed in Amazonian forests, suggesting that increasing carbon storage in old-growth forests is pan-continental. One possibility for increased storage by old-growth forests is an increase in resource availability, for example through increasing atmospheric CO_2 concentration levels. Whatever the reason for increasing carbon storage by old-growth forests in Africa, this study highlights the importance of these forests as a carbon sink, and urges their protection through payments for ecosystem services to those living near forested areas, and formalizing and enforcing land rights for forest dwellers.
Source: Nature (2009), 457(7232), 1003–1006.

Coelacanths under pressure from harbour plans

A proposal to build a deep-water harbour in the shallow waters of Mwambani Bay south of the Tanzanian town of Tanga is bad news for the population of coelacanths that live along the coast. The plan for the new harbour, proposed as a means to stimulate economic development in the region, has been met with scepticism, with some questioning the need for a new harbour in the area. Some environmentalists believe that the new harbour may be linked to plans for the creation of a soda-ash extraction plant on the shores of Lake Natron. Regardless of the reasons behind the harbour's conception, it is likely that the creation of the harbour in Mwambani Bay will prove detrimental to the coelacanths, which are already suffering from the effects of dynamite-fishing and the use of deep-set shark nets.
Source: Nature (2009), 457(7233), 1063.

Elephants act as seed dispersers in the Congo basin

Examination of 855 dung piles in the Ndoki Forest in northern Congo revealed that forest elephants disperse at least 96 plant species from 36 different families. Forest elephants, which are smaller than their savannah-dwelling relatives, are therefore responsible for dispersing more intact seeds than any other species or genus of large vertebrate in African forests. Additionally elephants carry the seeds further than other dispersers, with GPS telemetry showing that they travelled up to 24 km in 24 hours. These findings underline the importance of large vertebrates for tropical forest structure and functioning. The loss of elephants and other large-bodied herbivores from these forests could lead to recruitment failure among animal-dispersed tree species, and shift the composition of these forests towards tree species that are spread abiotically.
Source: Biotropica (2009), http://dx.doi.org/10.1111/j.1744-7429.2009.00512.x

Madagascar's amphibian numbers underestimated

It is commonly acknowledged that amphibians are declining across the globe. Less well understood are patterns of amphibian diversity, particularly in the tropics. Now researchers have shed light on amphibian diversity in the biodiversity hotspot of Madagascar by examining morphological, bioacoustic and genetic variation of the island's amphibians. The results, obtained from DNA sequences of 2,850 specimens from over 170 locations, indicate that the current number of 244 described amphibians in Madagascar may increase 2-fold, to a minimum of 373 and up to 465. This means that continued habitat destruction in Madagascar may be affecting more amphibian species than previously thought,

and it is also likely that amphibian diversity has been underestimated elsewhere in the tropics.
Source: Proceedings of the National Academy of Sciences of the USA (2009), 106, 8267–8272.

Armyworms spread through Liberia

Given Liberia's troubled and violent past, it seems a particularly cruel twist of fate that the country is now in the grip of the most serious plague of insects in 30 years, as millions of the bellicose-sounding armyworms march across the country. Some farmers have reportedly been unable to reach their farms as they are surrounded by the caterpillars, while wells and waterways in affected areas have been rendered unfit to drink from because of contamination by caterpillar faeces. At least 500,000 villagers have been affected by the caterpillar invasion, and the Liberian president has declared a state of emergency. It is feared that the plague of caterpillars will increase the threat to food security in the country, which is already precarious.
Source: United Nations press release (2009), http://www.un.org/apps/news/story.asp?NewsID=29710&Cr=fao&Cr1=africa

Gorillas on the rise …

A team of rangers from ICCN (the Congolese Institute for Nature Conservation) has carried out a survey of the habituated gorillas of the Democratic Republic of Congo's Virunga National Park, finding that gorilla numbers in the Park have increased by 12.5%. The habituated gorilla population now numbers 81 individuals, with 10 babies having been born since the last survey in 2007. Despite this good news, there is still concern for the long-term safety of the gorilla population, with fighting in the region starting again recently following the arrest of the rebel leader who had controlled the sector of the Park where the gorillas are found. An agreement in 2008 had allowed the return of the rangers to the Park's headquarters, from which they had previously been evacuated, and thus the recommencement of gorilla monitoring.
Source: International Gorilla Conservation Programme press release (2009), http://www.igcp.org/news/news_increase.html

… but genetic analysis reveals discrepancies in gorilla population size estimates

A study of the mountain gorilla population in Uganda's Bwindi Impenetrable National Park has shown that estimating population size using nest-counts alone can lead to overestimation. In some instances gorillas were found to build more than one nest, with genetic analysis of dung showing that the overall rate of individual double-nesting was 7.8%. DNA analysis showed that the population estimate calculated from the nest-counting technique (336 individuals) was 10% higher than that estimated from DNA analysis (304 individuals). Bwindi's gorilla population was thought to be increasing by c. 1% per year (see *Oryx*, 40, 419–427) but as previous surveys have been based on indirect counts this figure may not be accurate. The study's authors suggest that future surveys of gorilla populations employ genetic techniques alongside traditional counting methods to obtain the most accurate estimate of population size (see also pp. 416–418).
Source: Biological Conservation (2009), 142, 290–300.

Potential threat to addax

There are concerns that the recent commencement of drilling for oil in Niger's Tin Toumma desert may have detrimental effects on the area's wildlife, in particular the world's last viable population of the Critically Endangered addax antelope. Game guards working for the Sahara Conservation Fund have already reported that gazelles in the area have been poached, and the remains of three freshly-killed addax were discovered during a recent field trip, although it was not clear who was responsible for their deaths. The Sahara Conservation Fund is employing a strategy that involves, among other things, bringing together stakeholders to look for mutually beneficial outcomes, raising the nation's awareness as to the uniqueness of Niger's deserts, and engaging with military forces and the local government in an attempt to mitigate their presence in the desert.
Source: Sandscript (2009), 5, 1–2.

Gabon's forest hero honoured

A man who has taken on the Gabonese government and a Chinese mining and engineering company in his attempt to protect Gabon's Ivindo National Park is one of the winners of the 2009 Goldman Environmental Prize. Marc Ona Essangui has campaigned for 3 years against the Belinga mine project on the grounds that the project's construction has so far been carried out illegally. Work is already underway in the Park to build a hydroelectric dam on the Ivindo River near Gabon's highest waterfall, the Kongou Falls. Marc Ona Essangui claims that the government failed to consult the population and that there had been no environmental impact assessment before development started. Mr Ona's protests culminated in his being jailed for 'incitement to rebellion' but an internationally coordinated campaign resulted in his release a few days later. Seven people, from six continental regions, shared the USD 900,000 Goldman Environmental Prize this year.
Source: BBC News (2009), http://news.bbc.co.uk/1/hi/sci/tech/8000936.stm

FSC certification for community-managed forest

Two communities in Tanzania, working with the Mpingo Conservation Project, have obtained the first Forest Stewardship Council certification for African forests. African blackwood (also known as *mpingo*), used in the manufacture of clarinets, oboes and bagpipes, will be harvested by the communities and sold internationally, where it will fetch a price of > GBP 13 per log. This represents a considerable increase from the GBP 0.05 previously received by communities before they started working with the Mpingo Conservation Project. Under the system of Participatory Forest Management Tanzanian communities are able to take ownership of their forests, and thus profit from timber sales, provided the forests are managed sustainably. However, with illegal logging widespread, the FSC certification allows the differentiation of timber coming from community forests from timber obtained from other sources. It is anticipated that the first FSC-certified African blackwood instruments will be available in 2011.
Source: FFI press release (2009), http://www.fauna-flora.org/docs/Sound_&_Fair_Press_Release_on_FSC_certificate_April_2009.pdf

SOUTH AND SOUTH-EAST ASIA

USD 9.5 million fund launched for Indochina

The Critical Ecosystem Partnership Fund (CEPF), a joint initiative of l'Agence Française de Développement, Conservation International, the Global Environment Facility, the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank, has launched a 5-year investment programme for the Indochina region. The USD 9.5 million investment aims to protect biodiversity by building the capacity of civil society organizations such as NGOs and community groups. Work in the region, for which BirdLife International in Indochina will act as the Regional Implementation Team, will focus on two areas, the Northern Highlands Limestone

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Corridor and the Mekong River and Major Tributaries Corridor. In these landscapes 28 key biodiversity areas are particular priorities for CEPF funding, while across the Indochina region as a whole 67 animal species and all of the region's 248 globally threatened plant species will also be priorities for investment.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/01/indochina_cepf.html

Parrots benefit from law enforcement

Six wild-caught eclectus parrots have been confiscated from smugglers by officials in Halmahera Island, North Maluku. This is the second time in recent months that the Natural Resources Conservation Center of Indonesia's Forestry Department has foiled the smuggling of wild animals. A raid in December 2008 resulted in the confiscation of 243 wild animals, including 89 endemic parrots, which were on their way to the Philippines from Tobelo on Halmahera Island. The actions of the government in this respect are being applauded by the Indonesian NGO ProFauna Indonesia, which published a report in 2008 suggesting that c. 10,000 parrots are caught from the wild in North Halmahera, with many destined to be sold abroad. ProFauna believes that law enforcement by the government is an effective way of combating this trade, alongside public and educational campaigns to raise people's awareness of the issue.
Source: ProFauna press release (2009), http://www.profauna.org/content/en/news/2009/law_enforcement_to_tackle_illegal_parrot_trade.html

Sundarbans at risk from petrochemical development ...

The Indian government has approved plans for the development of a petrochemical hub on the island of Nayachar. The hub, which will refine crude oil and produce petroleum by-products, will be just over 10 km from the wildlife hotspot of the Sundarbans. This has prompted concerns that noxious effluents from the plant will flow into nearby coastal waters and from here into the myriad creeks and rivers that make up the world's largest surviving mangrove system. The Sundarbans, a part of which is a UNESCO World Heritage Site, act as a nursery to a number of marine, coastal and estuarine species, as well as harbouring the Endangered royal Bengal tiger.
Source: New Scientist (2009), 201(2695), 7.

... and dolphin boost in the Sundarbans

Researchers from the Wildlife Conservation Society have discovered a stronghold for the Vulnerable Irrawaddy dolphin, counting nearly 6,000 of these freshwater cetaceans in Bangladesh's Sundarbans mangrove forest and the neighbouring Bay of Bengal. Previous estimates had suggested that the largest populations may number only in the low hundreds or fewer. However, the future of these dolphins is not assured. While surveying the Sundarbans researchers found two dolphins that had drowned after becoming entangled in fishing nets, which local fishermen acknowledged is a common occurrence. In addition, freshwater supplies are declining as rivers and streams are diverted further upstream, and seawater levels are rising in the area as a result of global climate change. Conservationists and the Ministry of Environment and Forests are currently working together to establish a network of protected areas in the Sundarbans for the dolphins.
Source: WCS press release (2009), http://www.wcs.org/353624/wcs_dolphin_discovery

Borneo burning

The burning of biomass is a contributing factor to global carbon emissions and, during years of drought, biomass-burning in Indonesia contributes a disproportionate amount to these emissions. Given the paucity of data on the frequency and causes of severe fires in Indonesia, researchers turned to visibility reports from the region's airports to create a continuous record of severe burning events during 1960–2006. These data reveal that severe fires occurred during drought years, usually linked to El Niño seasons in the Pacific, but that until 1980 these large fires only occurred in forests in Sumatra. The first large fires in Kalimantan (Indonesian Borneo) were only recorded in the 1980s. The researchers suggest that the severe fires in Borneo only started occurring after large-scale encroachment by people in the 1980s, with the clearing of vegetation to create farmland removing moisture from ecosystems, leaving forests vulnerable to wildfires.
Source: Nature Geoscience (2009), 2, 185–188.

Crocodiles' DNA to be examined

Fauna & Flora International and the Cambodian Forestry Administration and Wildlife Alliance are starting a DNA analysis project in Cambodia to determine whether any of the Siamese crocodiles in the Phnom Tamao Wildlife Rescue Centre are pure-bred, rather than hybrids. Should a sufficient number of pure-bred Siamese crocodiles be identified at the Centre then these individuals will be used as the basis for a captive breeding project, with a view to releasing offspring from the project into five selected sites in south-west Cambodia. The Critically Endangered Siamese crocodile was once common throughout South-east Asia but has been driven to extinction in 99% of its original range. Crocodiles are still being removed from the wild to be sold to crocodile farms, with 34 individuals at the government-run Phnom Tamao Wildlife Rescue Centre having been confiscated from wildlife traders.
Source: FFI press release (2009), http://www.fauna-flora.org/docs/Media_Release-DNA_testing_offers_new_hope_for_one_of_world%E2%80%99s_rarest_crocodiles.pdf

Huge turtle haul

In what is believed to have been the largest ever recorded seizure of freshwater turtles, 5 tonnes of live turtles were confiscated in Allahabad in January. The c. 3,000 individual turtles were being transported in a lorry, apparently to Kolkata, when the Special Task Force of the Uttar Pradesh Police made their seizure. Three people who were transporting the animals were arrested. The haul included three turtle species that are listed in Schedule 1 of The Wild Life (Protection) Act: the Indian flapshell turtle, the Ganges or Indian softshell turtle and the spotted black terrapin, or spotted pond turtle. All the turtles seized in the raid have subsequently been released into the Yamuna River. Information on the trade in live turtles and tortoises in India is scant but it would appear from this and other seizures that it is thriving.
Source: Wildlife Protection Society of India press release (2009), http://www.wpsi-india.org/news/25012009.php

Illegal distilleries destroyed in Cambodia

An investigation by Fauna & Flora International and the Cambodian Ministry of Environment resulted in the discovery, in Phnom Samkos Wildlife Sanctuary, of several new factories distilling the oil sassafras, which is made by boiling the roots and trunk of the threatened *mreah prew phnom* tree (see also *Oryx*, 42, 481). Sassafras is used in the production of cosmetics but can also be used to make the drug ecstasy. Not only does the distillation process threaten the existence of the *mreah prew phnom* tree but it also takes a heavy toll on the surrounding environment, with factory waste polluting the nearby streams, and trees being felled for firewood. Two of the recently discovered factories, which are run

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by Vietnamese syndicates, have now been closed as the result of a joint operation between FFI and the Royal Cambodian Armed Forces, and two people arrested.
Source: FFI press release (2009), http://www.fauna-flora.org/docs/Media_Release-%E2%80%98Ecstasy_oil%E2%80%99_distilleries_raided_in_Cambodia%E2%80%99s_Cardamom_Mountains.pdf

Gibbons counted in National Park

A survey, led by Fauna & Flora International, in Phong Nha-Ke Bang National Park has recorded c. 41 Endangered southern white-cheeked crested gibbon families, comprising at least 113 individuals. The vast majority of the individuals (101) were seen in the National Park itself, with the remaining gibbons observed in the buffer zone surrounding the Park. The surveyors also made incidental records of other species encountered during the gibbon surveys, observing a total of 129 vertebrates, 12 of which are categorized on the IUCN Red List, and six of which had not previously been seen in the Park. The 85,754 ha Phong Nha-Ke Bang National Park is a World Heritage Site, and is the richest site for primates in Indo-China, with nine primate species recorded as occurring in the Park.
Source: FFI press release (2009), http://www.fauna-flora.org/docs/PN-KBGibbonCensusFeb2009.pdf

Illegal trade imperils conservation of orang-utans and gibbons

The wildlife trade monitoring network TRAFFIC has published a report assessing the trade in gibbons and orang-utans on the Indonesian island of Sumatra. Sumatra, and its offshore islands, are home to the Endangered Kloss, lar, and agile gibbons and the Critically Endangered Sumatran orang-utan. TRAFFIC concludes that despite considerable efforts and substantial financial investment there are few indications that the past 15 years have seen a decrease in trade in gibbons and orang-utans. Although trade is less open than before, numbers observed in zoos and rescue centres in Sumatra and elsewhere suggest trade is still threatening the survival of these apes. To curb this trade the report presents practical recommendations focussing on increasing the efficiency and transparency of the implementation of wildlife protection laws, greater inter-agency co-operation and alternative routes to law enforcement, and increased integration of land-use planning with wildlife protection.
Source: TRAFFIC press release (2009), http://www.traffic.org/home/2009/4/16/illegal-trade-devastates-sumatran-orang-utan-population.html

EAST ASIA

New babbler described

A new species of babbler has been described, with its name deriving from the reserve in which it was discovered, close to the Chinese border with Vietnam. The Nonggang babbler was first discovered by Chinese researchers from Guangxi University in 2005 and indentified as a new species the following year. The Nonggang babbler seems to spend most of its time foraging for insects on the ground between rocks and leaves, apparently preferring running to flying. Although c. 100 pairs of the species have been observed in Nonggang reserve, no nest of the species has yet been found. The habitat in which the Nonggang babbler occurs is karst seasonal rainforest, and although this habitat type is protected in Nonggang reserve itself, karst rainforest outside the reserve is at risk from logging and charcoal-making.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/01/nonggang_babbler.html

Wetland map indicates 30% decline in China's wetlands

The first comprehensive map of Chinese wetlands has revealed that one third of them disappeared between 1990 and 2000. The map, compiled using Landsat satellite imagery of China from 1990 and 2000, was originally intended to aid research into the spread of avian flu by tracking migrating birds. However, much of the information it contains is of great value to conservationists, such as the revelation of an enormous decrease in the area of the Sanjiang Plain wetland, the summer home of Endangered red-crowned cranes, which has decreased from 22,932 to 10,114 km^2. The map's creator, Peng Gong, intends to publish the map in full detail but needs to obtain permission from the State Bureau of Surveying and Mapping. Meanwhile, the Chinese State Forestry Administration started its own wetland mapping project in October 2008, which will include remote-sensing data and much denser ground data.
Source: Nature (2009), 458(7235), 134.

China's carbon balance investigated

A research team that calculated China's carbon balance has found that China's terrestrial ecosystems absorbed 28–37% of the country's fossil carbon emissions during the 1980s and 1990s. Using biomass and soil inventories, ecosystem models and atmospheric inversions the researchers determined that China's north-east is a net source of CO_2, because of overharvesting and degradation of the area's forests, and that southern China's ecosystems account for $>65\%$ of the country's carbon sink. There are a number of reasons for the presence of this carbon sink in southern China: increased precipitation may have increased vegetation growth, large-scale reforestation projects have been active in the region since the 1980s, and fuelwood collection has decreased, aiding the recovery of shrublands. China's net carbon sink of 0.19–0.26 Pg carbon $year^{-1}$ was found to be smaller than the sink of the USA but similar to that of Europe.
Source: Nature (2009), 458(7241), 1009–1013.

Spoonbill numbers down

A survey of the Endangered black-faced spoonbill has found that the number of wintering birds has decreased, down from the 2,085 individuals counted in 2008 to 2,041 at the most recent count. The species was previously categorized as Critically Endangered but an International Action Plan coordinated by the Chinese Wild Bird Federation resulted in the discovery of new breeding sites in China and Russia, as well as the rediscovery of the species in the Philippines. Concern surrounds the species' most important overwintering sites, as these are facing severe development pressures. The habitat of one of Japan's largest overwintering populations, an artificial wetland in Fukuoka Bay, is due for development over the next few years, and a coastal wetland in Macau, which supports c. 2% of the global population during the winter, is threatened with the development of a casino.
Source: BirdLife International News (2009), http://www.birdlife.org/print.html?url=%2Fnews%2Fnews%2F2009%2F04%2Fblack-faced_spoonbill.html

NORTH AMERICA

Wildlife has a whale of a time around the Jonah gas field

The Nature Conservancy have used a computer model to determine key animals, plants and habitats most at risk from impacts from Wyoming's Jonah gas field in an attempt to provide a scientific basis for mitigation. Working with BP America researchers compared maps illustrating key habitat areas with those showing priority oil and gas drilling areas. The modelling revealed an area near the gas field, Cottonwood ranch, which was not suitable for future drilling but which contained healthy wildlife habitat. As a result the Jonah

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Interagency Mitigation and Reclamation Office, which is financed by operators in the gas field, funded a 420-ha easement. The easement will limit future residential development on the site, thus protecting the species that occur there. This technique is now being trialled at other sites in the USA.
Source: The Nature Conservancy press release (2009), http://www.nature.org/pressroom/press/press3853.html

New deep-sea corals discovered

An investigation carried out in the deep waters of the Papahānaumokuākea Marine National Monument has identified seven new species of bamboo coral, six of which are thought to belong to new genera. The *Pisces V* submersible was used for this mission, descending 350–1,770 m below the surface to the areas where the discoveries were made. Not only are the discoveries important in adding to knowledge on coral classification, they will also prove useful in determining both past and future changes in climate. Some of the corals are 4,000 years old, meaning that researchers will be able to examine their growth rings to obtain long-term historical data on climate changes, while ongoing observations of these corals will be valuable in analysis of future climate change as these deep sea species may be among the first marine organisms to be affected by ocean acidification.
Source: National Oceanic and Atmospheric Administration press release (2009), http://www.noaanews.noaa.gov/stories2009/20090305_coral.html

Blue whales make a reappearance in the North Pacific

Hunting of blue whales in the North Pacific between 1924 and 1965 caused such a decrease in their population that subsequent surveys found none in areas where they had previously been caught in large numbers. Now an analysis of recent sightings off the coast of British Columbia and in the Gulf of Alaska since 1997 has revealed that blue whales in these areas are part of the Californian population, prompting speculation of the resumption of a traditional migration pattern for an eastern North Pacific population, possibly orchestrated by shifts in prey availability driven by changes in oceanographic conditions. This discovery suggests that the population that historically inhabited the area around the Gulf of Alaska and the extant Californian population may be one and the same, instead of discrete populations as previously suggested.
Source: Marine Mammal Science (2009), http://dx.doi.org/10.1111/j.1748-7692.2009.00298.x

Flashing lights better for birds

Avian mortality resulting from collisions with communication towers could be cut by as much as 50–71% by changing the lighting system used on the towers. Avian fatality data were collected at 24 Federal Aviation Administration communication towers during a period of peak songbird migration. Towers with non-flashing lights combined with flashing lights were responsible for 13 fatalities per season, whereas towers with flashing lights only had a fatality rate of 3.7 birds per season. Based on these findings the authors suggest the removal of non-flashing lights from communication towers, which can be achieved with the minimum of cost and that will also reduce the future running costs of the towers.
Source: Ecological Applications (2009), 19, 505–514.

More diverse avian assemblages reduce West Nile virus infection rates

The so-called 'dilution effect' is a mechanism whereby areas with higher disease-host diversity display lower rates of disease transmission. A study of West Nile virus infection and bird diversity in the eastern USA is an example of the dilution effect. US counties with greater avian diversity had lower rates of human infection with West Nile virus. Overall, the avian community structure explained c. 50% of the variation in human West Nile virus incidence. This study's findings do not provide unequivocal support for any one particular mechanism of the relationship between diversity and disease transmission but they do underline the vital importance of intact and diverse ecosystems to human health.
Source: PLoS ONE (2009), 3(6), e2488, http://dx.doi.org/10.1371/journal.pone.0002488

Aquatic Arctic species can rest easy

Industrial fishing will not be allowed to occur north of the Bering Strait for the foreseeable future, according to a decision by the North Pacific Fishery Management Council. A consortium of NGOs, fishermen and local communities had lobbied for this decision, on the grounds that commercial fishing would have a detrimental effect on many seabirds. Bottom-trawling and related activities were of particular concern with fears that bottom-feeding birds such as the spectacled eider would suffer if their prey were disturbed. Ledyard Bay, one of 29 Important Bird Areas north of the Bering Strait, is home to c. 33,000 spectacled and 500,000 king eiders, which feed on molluscs and other bottom-living species. Studies indicate that a few fish species, such as the Arctic cod, sustain much of the Arctic food web, and commercial fishing could thus have a grave effect on the entire ecosystem.
Source: BirdLife International News (2009), http://www.birdlife.org/news/news/2009/03/alaskan_fisheries_protected.html

CENTRAL AMERICA AND CARIBBEAN

Precipitous decline in Central American neotropical salamander numbers

To date not much of the information about the global amphibian decline has focused on salamanders, possibly because they are a more secretive group than frogs. Now a study of salamanders at several sites in Mexico and Central America has revealed drastic declines in the numbers of these amphibians. The most serious declines were seen in terrestrial microhabitat specialists in the upper cloud forest and other high elevations, with three salamander species previously encountered with relative frequency apparently now extinct. These declines probably occurred in the late 1970s to early 1980s, before or at the same time as many reported frog declines. The reasons behind the salamander declines are not clear but it is possible that deforestation may have affected moisture levels in the areas where the greatest declines have occurred.
Source: Proceedings of the National Academy of Sciences of the USA (2009), 106, 3231–3236.

Corals show resilience in the face of adversity

A study of the coral reefs that fringe Jamaica's Discovery Bay has shown that the corals are resilient to the multiple stresses they have undergone during 2000–2008, including several hurricanes and a mass bleaching event that affected the Caribbean in 2005. The mass bleaching effect was the most serious disturbance to the reefs, although reactions to this event differed according to species and location within the bay. In the year following the 2005 bleaching event mean size classes of most coral species were reduced but many coral species had recovered significantly by

2008. The researchers conclude that despite the acute stresses placed on the corals growing in Discovery Bay, combined with chronic stressors such as overfishing and coastal development, the demographic studies indicate good levels of resistance on these fringing reefs.
Source: Marine Environmental Research (2009), 67, 189–198.

Blue iguanas get their own reserve

The Cayman Islands Government has set aside c. 80 ha of government-owned dry shrubland on Grand Cayman for the island's endemic giant lizard, the Critically Endangered Grand Cayman blue iguana. At one stage the iguanas, which can grow to 1.5 m in length, were the island's largest land animals but predation by introduced dogs and cats has had a serious impact on their population, and in 2002 only 25 individuals remained in the wild. A captive breeding programme, initiated in 2002, saved the species from extinction, and there are now c. 250 individuals in the wild. Using the land contributed by the government, conservationists hope to increase the area of land under protection for the iguanas with the ultimate aim of creating a self-sustaining wild population.
Source: Blue Iguana Recovery Programme press release (2009), http://www.blueiguana.ky/pr31032009/

SOUTH AMERICA

Cattle-ranching continues to drive Amazonian deforestation

A new report by Greenpeace has used satellite mapping to make clear the links between cattle-ranching and deforestation in the Amazon. Brazil is the world's largest beef exporter, and c. 40% of Brazil's cattle are located within the Amazon rainforest. One of the issues identified in the report is the proliferation of deforestation around slaughterhouses, with one of the maps showing how the area around slaughterhouses is often turned into pasture. The existence of roads in the Amazon means that now cattle can be grazed in remote areas and then transported to slaughterhouses hundreds of kilometres away. In addition, the presence of roads makes the Amazon more vulnerable to further deforestation. In the report Greenpeace urges the Brazilian government to adopt a 5-year moratorium on deforestation to achieve zero-deforestation in the Brazilian Amazon by 2015.
Source: Amazon Cattle Footprint (2009), http://www.greenpeace.org/raw/content/international/press/reports/amazon-cattle-footprint-mato.pdf

Tree frogs point the way to hotspots in Brazil's Atlantic Forest …

Genetic analysis of common tree frogs in two regions of Brazil's Atlantic Forest supports the view that biodiversity is greater in areas with a more stable climate. Researchers examined the Atlantic Forest's climate over the past 21,000 years, and found that an area in the centre of the Atlantic forest, in Bahia state, was the most stable, and areas in the south of the Forest had had a more variable climate. Analysis of three species of tree frogs from both areas revealed that the frogs from the central region had greater genetic diversity than the same species from the south, with data from birds and lizards also showing greater diversity in the central region. Examining climate data may prove a useful technique for conservationists when it comes to determining how to distribute funds, particularly in less well studied areas such as Brazil's Atlantic Forest.
Source: New Scientist (2009), 201(2695), 11.

… but the Forest is in trouble

A detailed map of Brazil's other great rainforest, the Atlantic Forest, is ringing alarm bells with conservationists following a study that revealed a massive decrease in the area of the forest. The study aimed to quantify how much of the Atlantic Forest remains and to analyse the spatial distribution of the fragments. The results were sobering, with $>80\%$ of fragments found to be <50 ha in size but with large average distances between fragments of 1,440 m. Furthermore, nature reserves only protect 9% of the remaining fragmented forest, and only 1% of the original forest. The authors of the study make some recommendations for the Atlantic Forest's conservation, including prioritizing the conservation of the remaining large fragments and managing the matrix around fragments to improve their connectivity.
Source: Biological Conservation (2009), 142, 1141–1153.

Hirsute butterfly discovered

An expedition to Colombia's remote Magdalena Valley has resulted in the discovery of a new species of butterfly, the Magdalena Valley ringlet. The researchers were unaware at first that the butterfly they had collected was new to science but when the specimen was compared to others in the 3 million strong butterfly collection of London's Natural History Museum it was found to match an unnamed specimen that had been in the Museum's collection for over 90 years. The name of the former Collection Manager of the Museum's butterfly collection, Phil Ackery, has been included in the species' Latin name, *Splendeuptychia ackeryi*. One of the species' most striking characteristics is its hairy mouthparts, and it was this, in addition to other characteristics that enabled the researchers to confirm the species as new.
Source: Conservation Leadership Programme press release (2009), http://www.conservationleadershipprogramme.org/PressReleases.asp

Oil spill contaminates Ñambí river

The Ñambí river, which flows through the Pangán Bird Reserve in western Colombia, has recently become contaminated by a crude oil spill. The cause of the spill is reported to be the result of thieves drilling into an oil pipeline belonging to EcoPetrol that runs from Putumayo in the Amazon to the coastal port of Tumaco. The illegally extracted oil is used to make gasoline, which is in turn used in the processing of coca leaves into cocaine. Waste products from the distillation of the crude oil, plus excess crude oil, all flow into local streams, and then on into the Ñambí river. ProAves, a Colombian NGO, is seeking support to train local people to become forest guardians to work in Pangán Bird Reserve, with a particular emphasis on monitoring the pipeline.
Source: ProAves press release (2009), http://www.proaves.org/article.php?id_article=616&lang=en

International agreement to protect the Andean cat as a flagship of the High Andes

On 11 December 2008 in Tilcara, a small town in north-western Argentina, institutions from Argentina, Bolivia and Chile agreed on a framework for international collaboration to protect the biodiversity of the High Andes around their triple frontier. This agreement promises new opportunities for conservation without frontiers along the Andes, inspired by the belief that the Endangered Andean cat *Oreailurus jacobita* is a good flagship for the protection of this vast and remote ecoregion, rich in endemism but highly vulnerable to increasing human pressures such as opencast mining and off-road tourism. This represents the culmination of a Darwin Initiative–University of Oxford project in partnership with Andean Cat Alliance members in these three countries.
Source: Alainza Gato Andino press release (2009), http://www.gatoandino.org/sp/capacidades.asp

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PACIFIC

Papua New Guinea gets its first national conservation area

Efforts by conservationists over many years have resulted in the Papua New Guinea government, together with local communities, creating the country's first national conservation area. The YUS Conservation Area, named after the Yopno, Uruwa and Som rivers, is a 760 km^2 area of tropical forest on the Huon Peninsula. One of the species that will benefit from the declaration is the Endangered Matschie's tree kangaroo, a marsupial that occurs in the newly protected forests. Local people will also benefit from the protection of the resources and services provided by the forest, and the area is estimated to contain 13 million t of carbon that will now remain locked up in the forests. The land in the YUS Conservation Area remains under local ownership but villagers have committed to prohibit all hunting and development within the area.

Source: Woodland Park Zoo press release (2009), http://www.zoo.org/pressroom/pr/2009/pr03_02_2009.htm

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Rockhopper numbers undergo rapid decline

Following the recent split of rockhopper penguins into two distinct species researchers have investigated the conservation status of the newly recognized northern rockhopper penguin, which breeds at the UK Overseas Territory of Tristan da Cunha. The researchers compared historical records of the penguin's population with more recent records, and found evidence of 90% declines in the penguin's population on both the island of Tristan (over a 130-year period) and on Gough Island (over 45 years), although the Tristan Island population now appears to be stable. Possible reasons for the decline on Tristan Island include past human exploitation and introduced predators but reasons behind the declines on Gough Island are as yet unknown and require further investigation.

Source: Bird Conservation International (2009), 19, 109–120.

Road kill numbers prove useful

Corpse counts along roads in New Zealand over the last 60 years have provided researchers with evidence for population fluctuations in the species killed on roads. Eleven mammals and 14 bird species were recorded, with the most commonly recorded mammal species, Australian possums, hedgehogs and rabbits, all originating from beyond New Zealand's shores. The effects of control methods on one of these species, the possum, are thought to account for the 60% decrease in possum corpses between 1994 and 2005 but the reason for the observed 82% decrease in hedgehog corpses between 1994 and 2005 is not clear. The researchers also investigated the relationship between traffic volume and road-kills, finding that roads traversed by $>3{,}000$ cars per day are essentially impassable to larger mammals.

Source: New Zealand Journal of Zoology (2009), 36, 123–134.

Rabbits wreck havoc on Macquarie Island

When conservationists carried out a cat-eradication programme on Macquarie Island, off the Australian coast, the intention was to protect the island's birds. However, a study has now revealed that removal of the island's 160 feral cats in 2000 resulted in a massive increase in the number of rabbits on the island, with the rabbit population now numbering 130,000, up from just 4,000 in 2000. This exponential increase is despite the presence of myxomatosis on Macquarie, which, it had been thought, would limit the rabbit population. The rabbits have had a negative effect on 40% of the island's vegetation, and researchers estimate that cost of further conservation action will be $>$AUD 24 million. This study highlights the vital importance of conservation agencies taking into account and planning for indirect effects of management interventions.

Source: Journal of Applied Ecology (2009), 46, 73–81.

Desiccation risk influences juvenile cane toad dispersal

Experiments in Australia's Northern Territory have revealed that the dispersal of young cane toads from their natal ponds is influenced by desiccation risk. Young cane toads were attracted to artificially moist habitats in an otherwise arid environment, and their daily dispersal from ponds showed a tidal pattern in the dry season that coincided with periods of relative moisture. The immediacy with which toads responded to artificial watering shows that even a brief rain shower could prompt dispersal from the edges of natal ponds, thus bringing the toads into contact with native predators. However, so immediate is their dispersal that a brief shower may cause the toads to disperse and then become trapped in a rapidly desiccating landscape. This study also identified the time of greatest aggregation of juveniles, midday during dry periods, which may prove useful for future control efforts.

Source: Journal of Tropical Ecology (2009), 25, 193–200.

Penguins' empire shrinks

The reliance of emperor penguins on sea ice for breeding, foraging and moulting leaves them vulnerable to changes in the extent of this ice. Researchers have now modelled emperor penguin responses to future sea ice change using a stochastic population model that combines a long-term demographic dataset of emperor penguins in Terre Adélie with projections of sea ice extent from General Circulation Models of the Earth's climate. The model shows that decreases in sea ice extent will have a serious negative effect on emperor penguin populations, with a 36% chance that the population will decline by 95% by 2100. Survival is possible for the penguins under these scenarios provided they adapt, migrate or change the timing of their growth stages but researchers are pessimistic about these things occurring in time, given the projected increases of greenhouse gases and their effects on Antarctica's climate.

Source: Proceedings of the National Academy of Sciences of the USA (2009), http://dx.doi.org/10.1073/pnas.0806638106

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