

INTERNATIONAL

Protected tropical forest biodiversity declining

Despite having protected status biodiversity in many tropical forests is still declining. A data set of changes over the past 20–30 years in 31 functional groups of species and 21 potential drivers of environmental change for 60 protected areas across the major tropical regions was used to assess the state of protected areas. The analysis reveals great variation in reserve health, with c. 50% having been effective or performed passably but the rest experiencing erosion of biodiversity that is widespread taxonomically and functionally. Habitat disruption, hunting and forest-product exploitation were the strongest predictors of declining reserve health. Environmental changes immediately outside reserves seemed nearly as important as those inside in determining their ecological fate. The findings suggest that tropical protected areas are often intimately linked ecologically to their surrounding habitats and that a failure to stem broad-scale loss and degradation of such habitats could increase the likelihood of biodiversity declines.

Source: *Nature* (2012), <http://dx.doi.org/10.1038/nature11318>, and *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-18970076>

Gibson settles discord on timber

The US government has settled its legal case against the Gibson Guitar company over use of illegal timber from Madagascar in its instruments. Gibson will pay a USD 300,000 fine, and a USD 50,000 community payment to be used to promote the conservation of protected tree species used in the musical instrument industry. Gibson admitted violating the Lacey Act, which requires firms to know that timber they use is obtained legally. Gibson's premises were raided by the US Fish and Wildlife Service in 2010 and 2011, with agents impounding ebony and rosewood imported from Madagascar and India. In addition to the payments Gibson is withdrawing its claim to the wood seized, and is to implement a compliance programme to avoid importing illegally logged timber in the future.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-19153588>, and *Mongabay.com* (2012), <http://news.mongabay.com/2012/0806-gibson-doj-lacey.html>

Mangrove conservation is economic CO₂ fix

Protecting mangroves to lock carbon away in trees may be an economic way to curb climate change. Carbon credit schemes already exist for rainforests; the new work suggests mangroves could be included too, although the economics depend on the global carbon price. Mangrove habitats comprise <1% of forest areas but protecting them has important benefits for wildlife and for human communities in the form of fishing habitats and storm protection barriers. Similar to rainforests, mangroves store carbon within their biomass, which is released when the habitat is destroyed, but mangroves are being lost at a greater rate than tropical rainforests. Their ability to capture carbon may be on average five times that of tropical rainforests, so they have become of interest to carbon-focused conservation strategists.

Source: *Proceedings of the National Academy of Sciences of the USA* (2012), 10.1073/pnas.1200519109, and *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-19050796>

New Red List revealed as world leaders gather in Rio

The new Red List of Threatened Species (v. 2012.1) was unveiled at the Rio +20 meeting in June 2012. Two thousand new species have been assessed for this edition of the Red List, bringing the total to 63,837. East Asia's status as the world's main 'extinction hotspot' has been confirmed but overall the statistics are little changed. Forty-one percent of amphibians, 33% of reef-building corals, 25% of mammals and 13% of birds languish on the risk list. Among the listings of new Asian primates is the Myanmar snub-nosed monkey, first photographed by camera trap in 2011, which has been categorized as Critically Endangered. For newly assessed East Asian snakes the main threats have emerged as hunting for meat, skin, medicine and the pet trade. The new list also includes a number of plants that have been over-harvested for fruit for use in food and medicine, including two species of turmeric and one of ginger.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-17261638>

Hungry turtles?

A study that tracked the movement of leatherback turtles has revealed new information on the foraging habits of this

Critically Endangered species. The study's findings come as a result of a relationship between the swimming speed of turtles and their success at foraging for their jellyfish prey. Leatherback turtles in the Atlantic Ocean had two swimming speeds: slow, during which they forage for jellyfish, and fast, during which they travel between sites. Turtles in the Pacific Ocean, however, did not appear to swim at slow speeds. The differences in foraging speeds recorded in this study are the first indications that leatherback turtles in the Pacific and Atlantic have different foraging behaviours, and suggest that leatherback population recovery in the Pacific Ocean is hindered by properties of the foraging habitat. Limited resources in the Pacific Ocean may also be contributing to the increasing intervals between nesting events recorded within this population, one of the factors involved in its decline.

Source: *PLoS One* (2012), <http://dx.doi.org/10.1371/journal.pone.0036401>

Alarm grows over palm oil surge

Despite increasing concerns about the environmental impacts of oil palm plantations the industry is currently booming, with a Malaysian palm-oil company earning the second-largest initial public offering in 2012 (USD 3.2 billion) after Facebook when it became listed at the end of June. Initial hopes that palm oil could be a means of cutting greenhouse gas emissions, while also acting as a sustainable food crop and an alternative livelihood for small-scale farmers, have dwindled in the light of subsequent evidence. One of the main concerns around palm oil is that forest is frequently felled to make way for plantations, often in areas of carbon-rich peatland. Estimates suggest that, by 2020, c. 40% of Indonesia's peatlands will be used as plantations. Much rests on the Roundtable on Sustainable Palm Oil, a non-profit organization that brings together conservation groups and palm-oil companies, with some voicing concern that the palm-oil industry is becoming too powerful for sanctions to be a sufficient means of ensuring sustainability.

Source: *Nature* (2012), 487(7405), 14

Fishing effort increases but catches decline

An investigation of spatial and temporal patterns of global fishing effort and this effort's relationship to fisheries catch has

been used to examine the state of the world's fisheries, and has found all of the world's oceans are now fished. Furthermore, fishing fleets have increased in power by an average of 10-fold since the 1950s, although in Asia the increase is 25-fold over the same time period. However, the amount of fish landed per standardized unit of fishing power expended has decreased by half since the 1950s. The figures illustrate the significant changes that marine environments have undergone during this time.

Source: *Fish and Fisheries* (2012), <http://dx.doi.org/10.1111/j.1467-2979.2012.00483.x>, and *Nature* (2012), 486(7404), 445

Life flourishes online

An online database that aims to build a web page for each of the 1.9 million species currently recognized has celebrated passing the one million mark with the addition of thousands of new images and data from the Smithsonian Institution's National Museum of Natural History. More than 200 collaborators now contribute to the Encyclopedia of Life, which was started 5 years ago with only 30,000 pages. Just after the Encyclopedia celebrated its milestone, another database was launched, which is billed as an interactive tool for global biodiversity analysis. The Map of Life includes a web-mapping tool that integrates different data types, focusing on terrestrial vertebrate and fish species, and allows users to search for a species name to see a map of all distribution records for that species. Users are also able to add or update data to the Map of Life.

Source: *Encyclopedia of Life Press Release* (2012), http://eol.org/info/press_releases/info/May_9, and *Nature News* (2012), <http://www.nature.com/news/map-of-life-goes-live-1.10621>

Consensus statement on climate change and coral reefs

The 12th International Coral Reef Symposium, held in Cairns, Australia, in July 2012, issued a consensus statement calling on all governments to ensure the future of coral reefs, through global action to reduce the emissions of carbon dioxide and other greenhouse gases, and via improved local protection of coral reefs (see also pp. 467–468). The statement notes that reefs are important ecosystems of ecological, economic and cultural value yet are in decline because of the effects of pollution, sedimentation, overfishing and climate change, all of which are expected to increase in severity.

Source: *International Coral Reef Symposium 2012* (2012), http://www.icrs2012.com/Consensus_Statement.htm

EUROPE

Street lights alter invertebrate communities

Researchers investigating invertebrate communities that occur under street lamps in a town in south-west England have found that the lamps may affect the composition of these communities, and this may also have the potential to affect the structure and function of ecosystems. Fourteen traps set below and between street lamps were emptied before sunrise and sunset for 3 days, and the types of insects in the traps categorized according to five feeding strategies: predators, scavengers, grazers, parasites and detritivores. More invertebrates were found beneath the lights than between them, and predatory and scavenging insects were particularly abundant under the lamps. Certain insect groups, such as harvestmen, ants and ground beetles, preferred grass around the street lights both day and night, suggesting that it is not just the street lights' illumination that attracts species.

Source: *Biology Letters* (2012), <http://dx.doi.org/10.1098/rsbl.2012.0216>, and *Nature* (2012), 487(7405), 9

Scottish city's first peregrine chick raised in tower block...

A pair of peregrine falcons who set up home in Glasgow's Red Road flats have raised what is believed to be the city's first ever peregrine falcon chick. The birds nested on the 24th floor of a 27-storey building in Petershill Court, which is due to be demolished. With the help of RSPB Scotland measures were put in place to protect the birds, who produced two eggs, only one of which hatched. The peregrine falcon chick left the nest on 12 July 2012. After fledging, the young bird will continue to be fed by its parents for another 4–8 weeks, after which they will normally leave the area.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/uk-scotland-glasgow-west-18988842>

...and missing red kite at 'love nest'

A red kite that disappeared from the Scottish Highlands has been traced to a 'love nest' in Aberdeenshire. The bird—named Professor Feathers—had a satellite tag attached as a fledgling in 2009 but little was known about his movements since. However, RSPB Scotland has found that Professor Feathers, from the Black Isle, has set up home with a kite, Red Blaze, from an Aberdeen reintroduction programme

and they have reared three chicks together. Professor Feathers and Red Blaze are breeding in a completely new area away from other established pairs. This news may indicate that the species is spreading more widely across its historic range. Red kites were once common all over the British Isles, before widespread killings in Victorian times led to just a few pairs surviving.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-19148359>

Excessive summer rain almost apocalyptic for wildlife...

The UK's rainy summer, with the wettest April–June on record and heavy rain in July, has had severe effects on some wildlife. Cold, wet conditions have left many bees, bats, birds, butterflies and wild flowers struggling, although slugs, snails, mosses and some plants have thrived. The wet weather could lead to local extinctions of rare or isolated species. The breeding season has been particularly catastrophic, with seabirds blown off cliffs by gales and garden birds unable to find food for their young. Bats have been hit by the cold, particularly lesser and greater horseshoe bats, leading to a slow-down in pregnancies. After a dry start to the year helped amphibians to breed, the April downpours filled dry ponds with water that was too cold for frogs, newts and toads.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/uk-18849327>

... and wet weather sparks concern for swifts...

This summer's cold and wet weather has had a disastrous effect on the breeding season for swifts in the UK. The population of the birds, which come to the UK every summer to breed, is nearly a third lower than it was in the mid 1990s. The weather has resulted in fewer flying insects for swifts to eat. Many swifts are returning to Africa early, putting populations further at risk. Swifts are also facing a lack of nesting sites in the roofs of UK buildings as old properties are renovated and new homes built with no access or space for nests.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-18993582>

...but super slugs flourish

Numbers of a new super slug have been growing fast in the UK because of the wet summer. The wet weather is causing the slug, which originated from Spain, to

flourish. *Arion flagellu*, otherwise known as the Spanish stealth slug, is causing problems because it brings new diseases and parasites with it that can kill native British slugs. It also can produce c. 400 eggs per year compared to 100 laid by British slugs so the numbers can multiply rapidly. These large numbers can cause problems to plants because they attack farms and gardens, ruining crops. They also pose a threat to drivers as slugs are also cannibals; they can smell when another slug has been squashed and will eat it, leaving slicks on the roads causing cars to slide.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/magazine-18672728>

Spoonbill sandpiper chicks hatch in UK

The breeding programme for one of the most threatened waders, the spoon-billed sandpiper, is continuing apace, with 14 chicks of this Critically Endangered species hatching in the UK in July 2012. The eggs underwent a week-long journey from their laying place in the sub-Arctic tundra in the Russian Far East to the Wildfowl and Wetlands Trust at Slimbridge. The chicks, which are the size of bumblebees on hatching, will join a group of sandpipers that made the same journey in 2011, in the hope that these individuals will form the nucleus of a breeding programme once they reach maturity at 2 years old. Fewer than 100 spoon-billed sandpiper pairs are thought to remain, with their decline suspected to have been caused by the loss of intertidal habitat in their East Asian overwintering sites, and exacerbated by tramping at these sites.

Source: *Wildfowl & Wetlands Trust News* (2012), <http://www.wwt.org.uk/news/all-news/2012/07/www-news/first-ever-spoon-billed-sandpiper-chicks-hatch-in-the-uk/>

Captive-bred lynx breeds in the wild

A Critically Endangered Iberian lynx born in a lynx breeding centre in Spain has successfully bred following her release into the wild. Two female lynxes were released in February 2011, following months of preparation, during which the animals were prepared for life in the wild, including feeding them wild rabbits, subjecting them to fasting periods to encourage exploratory behaviour, and avoiding human-lynx contact. Both lynxes adapted well to wild conditions, with post-release monitoring showing that the individuals both settled in high-quality areas following their release. One of the lynxes was subsequently found dead in an illegal box trap, used to trap predators, having succumbed to heat shock, but the other female

was observed to have cubs by May 2012. An additional 15 captive-bred lynx were released in early 2012, as efforts continue to bolster the global population of Iberian lynx, which currently numbers c. 350 individuals.

Source: *Cat News* (2012), 56, 36–39

Oxygen levels fall in the North Sea

A comparison between oxygen levels in the North Sea in 2010 with historical data from the International Council for the Exploration of the Sea database shows an increase in seasonal oxygen depletion and warming over the last 20 years. Summer oxygen depletion in the North Sea is likely to be a consequence of warmer temperatures and increased photosynthetic blooms, themselves a result of nutrient influx. Oxygen depletion is most significant in areas of strong thermal stratification, where layers of water at different temperatures do not mix. In well-mixed regions of the southern North Sea near-bed dissolved oxygen saturations reached 90% but in two other areas with strong thermal stratification, levels were as low as 65–70% in 2010. One of these areas, the Oyster Grounds, has dissolved oxygen levels that are close to ecologically critical levels that, if reached, will require management action under the EU's Water Framework Directive.

Source: *Biogeochemistry* (2012), <http://dx.doi.org/10.1007/s10533-012-9729-9>

Small wind turbines have negative effects on bat activity

A boom in the use of small wind turbines, installed mainly for domestic and farmland use, could be influencing bat numbers. Research on birds and common and soprano pipistrelle bats at 20 sites across the UK recorded a fall in bat activity of up to 54% near such turbines. Results from a field experiment indicate that micro turbines should not be sited within 20 m of potentially valuable bat habitat.

Source: *PLoS ONE* (2012), 7(7), e41177, and *BBC News* (2012), <http://www.bbc.co.uk/news/uk-scotland-19048787>

Satellite-tracked cuckoo takes surprise route to Africa

A male cuckoo satellite-tracked since May 2011 has taken a surprising route on his way back to Africa. Instead of flying west around the Sahara, as last year, he was tracked 1,000 km further east on the Algerian coast. In 2011 this cuckoo was tracked from the Norfolk Broads to north-east Morocco, via the Straits of Gibraltar,

before skirting around the Sahara to the Congo Basin. A potential reason for the change is that he found suitable habitat after having travelled through the same region of Algeria earlier in 2012 whilst flying to the UK. Another explanation is that he drifted off course. This British Trust for Ornithology study has already shown how little time these birds spend in Britain and where in Africa they spend the winter. The research may also provide insights into why there has been a 50% decline in British cuckoos in the last 25 years.

Source: *BBC News* (2012), <http://www.bbc.co.uk/nature/19112879>

Two new areas of marine protection along Northern Ireland coastline

Two new areas of marine protection off the coast of Northern Ireland have been announced. The Special Areas of Conservation include the sea and seabed surrounding the Maidens Islands off Larne and those adjacent to the Portrush Skerries and Giant's Causeway. The move also provides protection for the harbour porpoise. The sites are important for their marine habitats and biodiversity. The Special Areas of Conservation at the Maidens include sandbanks, reefs and grey seals, and the areas protected at the Skerries and Causeway includes sea caves, sandbanks and reefs.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/uk-northern-ireland-19005743>

SUB-SAHARAN AFRICA

A new tool for tackling elephant poaching

One of the difficulties plaguing law enforcement and authorities in tackling elephant poaching is determining where the ivory originates. Looking at mitochondrial DNA (mtDNA) scientists have now been able to divide Africa's wide-ranging elephant population into eight distinct groups. This has allowed them to determine the country of origin for ivory 62% of the time, and in some cases up to 84%. MtDNA is transmitted only by females, which generally don't move far from their birthplace. Once governments have a better idea of where elephants are being poached then steps can be taken by that particular country to prevent the poaching.

Source: *Evolutionary Applications* (2012), <http://dx.doi.org/10.1111/j.1752-4571.2012.00286.x>, and *Mongabay.com* (2012), <http://news.mongabay.com/2012/0808-hance-ivory-forensics.html>

Mixed success in conserving East Africa's evergreen forests

A new study has quantified spatial variation in trends of evergreen forest coverage in East Africa between 2001 and 2009 and tested for correlations with forest accessibility and environmental drivers. Background forest loss was estimated to be -9.3% ($17,167 \text{ km}^2$) but variable between countries (-0.9% to -85.7%). The most successful protected areas were National Parks, although only 26 out of 48 parks increased or maintained their forest area. Forest Reserves, Nature Reserves and Game Parks were more likely to lose forest cover. Forest loss in buffer zones around effective protected areas exceeded background forest loss, in some areas indicating leakage driven by National Parks. Human pressure, forest accessibility, protection status, distance to fires and long-term annual rainfall were significant drivers of forest loss.

Source: *PLoS ONE* (2012), 7, e39337

Tata denies links with new Lake Natron soda ash plant plans

The Tata Group has denied any involvement in plans to mine soda ash in the Engaruka area, part of the Lake Natron basin. In March 2012 Cyril Chami, who was then Tanzania's Minister of Trade and Industry, said that the government was talking to Tata Chemicals to set up a USD 450 million soda ash factory at Engaruka. The factory would exploit newly discovered soda ash at Engaruka. In a letter dated 27 June 2012 Tata's Managing Director R. Mukundan said Tata was no longer involved in any developments at Lake Natron. Since 2006 the Government of Tanzania has been interested in building a soda ash facility at Lake Natron, which is the most important breeding site for lesser flamingos. There are 1.5–2.5 million lesser flamingos in East Africa (three-quarters of the global population) and all of them breed at Lake Natron.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07/tata-denies-links-with-new-lake-natron-soda-ash-plant-plans/>

Tusks go up in flames

The Gabonese President, Ali Bongo, has burnt c. five tonnes of illegal ivory worth USD 9.3 million in the country's capital, Libreville, in an attempt to send a strong message to those involved in illegal ivory poaching. The burnt ivory was Gabon's entire government stockpile of confiscated ivory, estimated to have come from c. 850 elephants. The president emphasized the

importance of ensuring that future generations do not inherit an 'empty forest'. Gabon has a zero tolerance policy for wildlife crime and is working on ways to ensure this policy is enforced. Since the discovery of 20 elephant carcasses in two national parks in April 2011 security has increased, from 70 park guards to 400, and a 250-strong brigade of paramilitary police for the national parks has been formed.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/world-africa-18614260?>

Nursery success accelerates reforestation efforts

Following the success of an 18 month pilot scheme, a native tree nursery established at Kanjonde village on the slopes of Mount Moco has increased its capacity as part of a recent expansion programme. The project is run in collaboration with the local community, with the long-term aim of reforesting Angola's largest mountain, a critical site for the conservation of montane forest-dependent species. Supported by The Rufford Small Grants Foundation and the A.P. Leventis Ornithological Research Institute, the project has recently received funding from the Gulf Agency Company. Construction of the new facility was completed in May 2012 and the old nursery, which holds about 120 trees, will continue to be used. Increased capacity at the new facility, which will hold 400–500 trees at any one time, will greatly accelerate the number of trees successfully planted back onto the mountain. The nursery already employs three part-time workers from Kanjonde village and it is hoped the new facility will provide employment for at least one more person.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07>, and *MountMoco.org* (2012), <http://www.mountmoco.org/>

Albatrosses' wandering genes

A study has found that wandering albatrosses are not the monogamous species they appear to be. On examining the albatross population on Marion Island, in the Indian Ocean, over three seasons, between 14 and 24% of the chicks were found to be the result of extra-pair copulations. The authors of the study suggest that extra-pair copulations are a means of maintaining genetic diversity in albatross populations, as the birds return to the nesting areas from which they themselves hatched and thus often find a mate with a genetic make-up similar to their own. Given the effort involved for albatrosses to find and secure a mate, a process that can take

years, it appears that extra-pair copulations are an alternative to mate-swapping, particularly as the costs involved in this behaviour are small.

Source: *Behavioral Ecology and Sociobiology* (2012), <http://dx.doi.org/10.1007/s00265-012-1374-8>

President of Chad sends troops after elephant poachers

Following the massacre on 24 July 2012 of dozens of elephants in south-western Chad, President Idriss Deby Itno sent troops to the Mayo Lemie–Chari Baguiri area to catch the poachers. President Deby also gave orders to check the country's exit points for the poachers and smuggled ivory, and sent investigators to search for information around Zakouma National Park, apparently to ascertain if there is a connection between the poachers operating there, who are said to be from the Janjaweed militia, and those operating into the Mayo Lemie–Chari Baguiri area. SOS Elephants is calling for the establishment of a permanent mobile brigade for the protection of wildlife and a security cordon around the area where the massacre occurred, or establishment of a formal protected area in the region.

Source: *Mongabay.com* (2012), <http://news.mongabay.com/2012/0803-neme-elephant-slaughter.html>

Controversial mining of Mana Pools

Mana Pools National Park and Sapi and Chewore Safari Areas form a UNESCO World Heritage Site in the Zambezi Valley of northern Zimbabwe. This area is now threatened by both tourism and mining. A local NGO, the Zambezi Society, reports that construction has started on a controversial new 24-bed lodge alongside the Zambezi River, despite recommendations against such development in the recent park management plan. A lease for the lodge was granted to ECIS Investments by the Zimbabwean Parks and Wildlife Management Authority and an environment impact assessment (EIA) was approved by the Environmental Management Agency soon afterwards. But the Zambezi Society found the EIA to be inadequate, inaccurate and ill-informed. A second threat now comes from mining after the government granted prospecting/exploration licences to GeoAssociates, a Zimbabwean company, to explore for heavy mineral sand deposits along the Ruckomechi and Chewore Rivers.

Source: *Zambezi Society News Release* (2012), <http://www.zamsoc.org/?p=1612>

91% of Madagascar's lemurs threatened with extinction

Ninety-four of the world's 103 lemur species are at risk of extinction according to a new assessment by the IUCN Species Survival Commission. Lemurs, endemic to Madagascar, are threatened by habitat destruction and poaching for the bushmeat trade. The update to the IUCN Red List shows that 23 lemurs are now categorized as Critically Endangered, 52 as Endangered, 19 as Vulnerable, three as Near Threatened, and only three as Least Concern. The new numbers are alarming relative to the last assessment in 2005, which identified 10 species as Critically Endangered, 21 as Endangered, and 17 as Vulnerable. The plight of lemurs has significantly worsened since a 2009 military coup plunged the country into a political crisis that undermined its institutions, led to abandonment of conservation initiatives, undercut Madagascar's emerging ecotourism industry, and contributed to a sharp rise in illegal logging and commercial lemur hunting.

Source: *Mongabay.com* (2012), <http://news.mongabay.com/2012/0713-lemurs-madagascar.html>

SOUTH AND SOUTH-EAST ASIA

Baby born at the Sumatran Rhino Sanctuary

A baby Sumatran rhino has been born in the Sumatran rhino sanctuary in Indonesia. Baby Andatu was born on 23 June 2012 and is the first Sumatran rhino to be born in Indonesia. He is also only the fifth Sumatran rhino to be born in captivity. Sumatran rhinos are categorized as Critically Endangered on the IUCN Red List. Andatu brings hope that more Sumatran rhinos will be born and thus contribute to an increase in the species' numbers.

Source: *IUCN Red List of Threatened Species* (2012), <http://www.iucnredlist.org/news/baby-born-at-the-sumatran-rhino-sanctuary>

Hundreds of fires burn Tesso Nilo National Park

From June to July 2012 hundreds of fires spread in the 83,000 ha Tesso Nilo National Park in Indonesia, one of Sumatra's last remaining lowland forests. The Park is home to 120–150 Critically Endangered Sumatran elephants as well as Sumatran tigers. Based on data from WWF Program–Riau, fire hotspots reached their peak in the

third week of June. As of early July the fires had not been totally extinguished. The Park is prone to fire because much land has been illegally encroached, with c. 35,000 ha taken by residents and corporate developers, much of it converted into oil palm plantations or settlements. A road owned by PT. Riau Andalas Pulp and Paper splits the National Park but, reportedly, the provincial government plans to sever the road to reduce illegal logging.

Source: *Mongabay.com* (2012), <http://news.mongabay.com/2012/0808-wihardanditesso-nilo.html>

Rara looks forward to a sustainable future

Field surveys have been conducted recently at Rara National Park in western Nepal to assess and value the ecosystem service benefits that the Park and surrounding Buffer Zone provide to local stakeholders. As part of a Darwin Initiative project 'understanding, assessing and monitoring ecosystem services for better biodiversity conservation', fieldwork involved estimating the amount of carbon 'locked up' in the Park and Buffer Zone. Community meetings and household interviews were also conducted to quantify and value the harvested wild goods, crops and water services provided to local people. An in-depth understanding of how the Park is being used by local stakeholders is essential if communities are to continue to benefit from the area's natural resources in the future. While a great potential for sustainable tourism has been identified, conservation of the 10,600 ha Park will not be possible without improvements in the management of the forests in the surrounding Buffer Zone or future investment in securing people's livelihoods.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/05/>

Alarm sounds for reefs in the Coral Triangle

A report that revisited a global study of threats to coral reefs published in 2011, supplementing this work with more recent and detailed data for the Coral Triangle region, has found that 85% of reefs in this area are threatened by local stressors, compared to a global average of 60%. *Reefs at Risk Revisited in the Coral Triangle* found that the most widespread local threat to reefs in the Coral Triangle is overfishing, including destructive fishing, which poses a threat to nearly 85% of reefs. When the risks from local stressors are combined with wider threats, such as

thermal stress and coral bleaching, more than 90% of reefs in the Coral Triangle are considered threatened, compared to 70% of reefs globally. The Coral Triangle, located in South-East Asia and the western Pacific, is the world's centre of marine biodiversity and is home to > 3,000 fish species.

Source: *Reefs at Risk Revisited in the Coral Triangle* (2012), http://pdf.wri.org/reefs_at_risk_revisited_coral_triangle.pdf

Thailand customs seizes USD 700,000 in ivory

In July 2012 nearly half a tonne of ivory worth more than USD 700,000 was seized at the airport in Thailand's capital Bangkok. The elephant tusks were hidden in wooden boxes on a flight from Kenya. Ivory shipped to Thailand is often made into carvings or jewellery, or sold on to other countries, such as China, for what is said to be medicinal use. The trade in ivory is banned under CITES, to prevent the poaching of elephants. The items had been labelled Goods to Declare, as handicrafts, and were probably destined to be converted into accessories. The penalty in Thailand for trafficking threatened species or their parts is up to 10 years imprisonment and a fine four times the value of the items seized.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/world-asia-18869424>

Tigers spotted in remote Indian reserve

Camera traps located in India's Namdapha Tiger Reserve have secured the first ever photos of a tiger in the Reserve, as well as 30 other mammal species. Eighty camera traps were placed in the 300 km² Reserve by researchers from the Assam-based conservation organization Aaranyak. The remote location of Namdapha Tiger Reserve, on the border between India and Myanmar, has made it vulnerable to poaching to meet the demands of the illegal wildlife trade, and the Reserve had even been dubbed a so-called empty forest. In addition to the tigers, the camera traps also recorded leopards, clouded leopards, golden, marbled and leopard cats, and two potentially new frog species, as well as wild elephants, previously thought to have been extirpated from the Reserve 15 years ago. Calls are now being made for the establishment of a permanent tiger protection force in the Namdapha Tiger Reserve.

Source: *Panthera Press Release* (2012), http://www.panthera.org/sites/default/files/Panthera%20Press%20Release_Namdapha_FINAL.pdf

South-East Asia's largest lowland rainforest spared from new land concessions

Four economic land concessions have been cancelled in Cambodia's Prey Lang forest, the largest intact lowland forest in South-East Asia, reports the *Phnom Penh Post*. The land concessions, totalling > 40,000 ha, would have been used for rubber plantations. Prey Lang forest is home to c. 350,000 people, many from the Kuy ethnic group, who depend on its resources for their livelihoods. Most local people have vocally opposed economic land concessions in the region. The government is currently considering a proposal to designate > 600,000 ha of Prey Lang and adjacent ecosystems as a protected area.

Source: *Phnom Penh Post* (2012), <http://www.phnompenhpost.com/index.php/2012-080657838/National-news/economic-land-concessions-in-prey-lang-rejected.html>, and *Mongabay.com* (2012), <http://news.mongabay.com/2012/0806-hance-prey-lang-land-concessions.html>

EAST ASIA

South Korea reveals plans for 'scientific' whale hunts

South Korea looks set to join Japan as the second country to commence a programme of so-called scientific whaling, following an announcement at the 64th conference of the International Whaling Commission by the head of the South Korean delegation at the conference. The country intends to investigate the minke whales that migrate off the Korean peninsula, some of which may be minke whales from the depleted J-stock that occurs in the region. The move is being justified on the grounds that South Korea needs accurate counts of the whale populations in their waters, to assess the status of the whale stock in Korean waters. There are signs, however, that the South Korean government is under pressure from coastal fishermen who are keen for the resumption of coastal whaling because they believe the whales are consuming their fish stocks.

Source: *Nature Newsblog* (2012), <http://blogs.nature.com/news/2012/07/south-korea-aims-to-be-second-nation-to-engage-in-scientific-whaling.html>

Snub-nosed monkey not restricted to Myanmar

Researchers have published the first photographic evidence that a population of the recently discovered snub-nosed monkey *Rhinopithecus strykeri* lives in China. This

new discovery reveals the international range of this Critically Endangered species and efforts to conserve the monkey will no longer be focused solely on north-east Myanmar's Kachin State. The snub-nosed monkeys were first photographed in China by a forest guard in a forest near Pianma, in Yunnan's Lushui County. Subsequently, researchers conducted interview surveys with hunters along the Chinese-Myanmar border that suggest at least one group of monkeys in contiguous forest across the border in Yunnan. Although the home range of the species is now known to be greater than previously thought, the extent of the range and population numbers of the snub-nosed monkey remain difficult to estimate.

Source: *American Journal of Primatology* (2012), <http://dx.doi.org/10.1002/ajp.22041>, and *Wiley Press Release* (2012), <http://eu.wiley.com/WileyCDA/PressRelease/PressReleaseId-104277.html>

NORTH AMERICA

Marine protected areas cover 8% of US waters

An inventory of marine protected areas in the USA has shown that these areas cover 8% of US waters and contain a representative network of sites of marine importance. The total area of waters that are under some kind of marine protection is > 8%, however, as this does not include marine protected areas specifically established to sustain fisheries production, which often have specific restrictions on fishing gear over large ocean areas. The data on US marine protected areas are available to the public, and users are able to search for all the protected areas in a certain region, and also to search by attribute, such as conservation purpose. As well as revealing the extent of cover of marine protected areas, analysis of the data also illustrates that over two-thirds of US marine protected areas were established, at least in part, to protect natural heritage values such as biodiversity, protected species or ecosystems.

Source: *National Oceanic and Atmospheric Administration News* (2012), http://www.noaanews.noaa.gov/stories2012/20120516_mpa.html

New flu virus found in seals

Last year 162 harbour seals around the coast of New England died from pneumonia. Autopsies on five of the seals indicate that they died from a type of H₃N₈ influenza A virus closely related to a strain that has been circulating in North American birds since

2002. This new strain of influenza virus could potentially affect human and animal health. The discovery highlights the potential for pandemic flu to emerge from unexpected sources. One of the big concerns is that seals are acting as a mixing vessel for viruses in a way that has previously happened in pigs.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-19055961>, and *mBio* (2012), 3(4), e00166-12

Seabirds prosper behind predator-proof fence

A fine-mesh fence, erected around an area of Hawaii's Oahu Island in 2011, has already had a significant impact on the island's seabirds. Once the fence, which is impenetrable even to creatures as small as baby mice, had been constructed at Kaena Point, predators in the 20-ha area were removed, thereby creating an area that resembles the conditions present on the island 800 years ago, prior to the settlement of humans on Oahu. Since the fence's construction the population of Near Threatened Laysan albatrosses at Kaena Point increased by 15%, and the number of wedge-tailed shearwater chicks that survived to fledging tripled in 2 years to 1,775.

Source: *Science* (2012), <http://dx.doi.org/10.1126/science.336.6089.1628>

Midway's first short-tailed albatross chick survives tsunami to fledge

A short-tailed albatross chick has fledged on Midway Atoll in the Hawaiian Archipelago, the first time this Vulnerable species has been known to breed outside Japanese territory. Although swept out of its nest by the tsunami that followed the Japanese earthquake of March 2011 the chick survived and has now flown from the Atoll, not to return for another 4-6 years. The chick is the offspring of a pair of albatrosses ringed as fledglings at the species' main breeding stronghold on Japan's Torishima Island. In 1954 25 birds were present on Torishima. With conservation efforts the species has undergone a substantial increase, with 426 breeding pairs on Torishima in 2008. Conservation measures away from the breeding grounds have included working with both the Alaska demersal long-line fishery and the Hawaii-based pelagic long-line fishery to prevent albatrosses from dying on long-line hooks as they are set.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2011/07/midway%E2%80%99s-first-short-tailed-albatross-chick-survives-tsunami-to-fledge/>

Deep-sea stowaways

Marine scientists studying life around deep-sea vents have discovered that some species can survive the extreme change in pressure that occurs when a research submersible rises to the surface. The study revealed how the deep sea limpet *Lepetodrilus gordensis* can be inadvertently carried by research submersibles to new areas, with potentially damaging effects on marine ecosystems. An increase in deep-sea drilling and submersible activity means a higher chance of species being accidentally introduced in this way. In coastal environments one of the biggest threats posed by invasive species to native species is disease, as newly introduced pathogens and parasites can cause mass mortality. Diseases that may exist in the extreme environments created by hydrothermal vents have not been well studied. This research has implications for the exploration of hydrothermal vents as it reveals the potential risk of human-driven change to the ecosystem.

Source: *Conservation Biology* (2012), <http://dx.doi.org/10.1111/j.1523-1739.2012.01864.x>, and *Wiley-Blackwell Press Release* (2012), <http://eu.wiley.com/WileyCDA/PressRelease/pressReleaseId-103588.html>

Snack box reptiles

A Japanese citizen, Atsushi Yamagami, has been sentenced to 21 months in prison and ordered to pay USD 18,000 in fines after smuggling turtles and tortoises in snack food boxes from Japan to the USA. Most of the reptile species involved can only be imported into the USA with a special permit. Prosecutors alleged that not only were the animals treated cruelly, they also posed a risk of salmonella transmission. Atsushi Yamagami also paid couriers to hide animals in luggage and it is thought they made over 40 trips between Japan and the USA between 2004 and 2011. Species smuggled by Atsushi Yamagami and his couriers were sold to pet shows, with Atsushi Yamagami using the money from the proceeds to buy snakes, turtles and tortoises native to North America that were then smuggled back to Japan for resale.

Source: *The Telegraph* (2012), <http://www.telegraph.co.uk/earth/wildlife/9237715/Man-jailed-for-smuggling-live-dozens-of-turtles-and-tortoises-into-US.html#>

Environmental groups voice concern over US navy exercises

The use of old warships for target practice in US waters has attracted criticism from environmental organizations, on the grounds that these boats contain toxic

chemicals including asbestos and polychlorinated biphenyl compounds (PCBs) that could have a negative impact on the surrounding environment. Little is known about the contaminating impacts of exploding old ships in this way but elsewhere in the US terrestrial military bases make up 10% of the US Environmental Protection Agency's list of most contaminated sites, and a study in 2010 around the wreck of an aircraft carrier sunk during a training exercise in 2006 found that fish and sea mammals living nearby had elevated levels of PCBs. The US navy has sunk 109 ships in training exercises over the last 12 years, despite the existence of viable alternatives such as inflatable targets or simulations.

Source: *New Scientist* (2012), 215(2872), 14

Results of peer-review sometimes ignored

An examination of decisions made by the US Fish and Wildlife Service regarding the designation of critical habitat for threatened species has found that the advice of reviewers is often not considered. Scientists working for the Wildlife Service develop critical habitat designations, which are then peer reviewed before being finalized by the Secretary of the Interior. An examination of 169 peer reviews of 42 proposed designations made between 2002 and 2007 found that 81% of the designations were reduced by an average of 43%, despite half the reviews recommending adding areas to existing designations. The authors urge the creation of a post within the US Department of the Interior, whose incumbent could review decisions, or to separate agency scientists and policy makers. Either way, these recommendations would alleviate the current system in which the US Fish and Wildlife Service is both submitter and adjudicator.

Source: *BioScience* (2012), <http://dx.doi.org/10.1525/bio.2012.62.7.11>

Aquarius's future not too bright

Since 1992 ocean researchers have been able to make use of the submerged Aquarius Reef Base to study the coral reefs that surround the base in the waters off the coast of Key Largo. At 13 m long and 5 m wide, Aquarius can house up to six researchers at a time, and a 2-week stay on board gives them the opportunity to spend as much time investigating the reef as they would in a year of sequential dives. Now Aquarius is threatened with closure, as pressure on its budget has led to Aquarius's owner, the US National Oceanic and Atmospheric Administration, to recommend that the US Congress cease funding the base and

terminate the programme under which it operates, the National Undersea Research Programme. Attempts are being made to find a solution to the base's closure, but barring a last-minute rescue, the age of Aquarius may well be coming to an end.

Source: *Nature* (2012), 487(7408), 416–217

CENTRAL AMERICA AND CARIBBEAN

Ring species found in the Virgin Islands

The concept of a 'ring species', a species that arises when a parental population divides around a patch of unsuitable habitat and then act as two species when the parental population rejoins, has been difficult to demonstrate in practice, and those species in which it has been demonstrated have all been animals. Now for the first time researchers have identified a ring species in a plant, the Caribbean slipper spurge. Two nuclear gene regions of this species were sequenced from the species throughout its range, and revealed that the species complex originated in Mexico, and then spread in two directions around the Caribbean basin, one to the east through the Yucatan Peninsula into the Greater Antilles, and the other through northern South America and then into the Lesser Antilles and eastern Greater Antilles. The two forms co-occur in the Virgin Islands, where they appear to be morphologically and ecologically distinct.

Source: *Proceedings of the Royal Society B* (2012), <http://dx.doi.org/10.1098/rspb.2012.0498>

Thieving agoutis are good news for trees

An experiment in which researchers attached motion-sensitive tags to large seeds has revealed that rodents play a crucial role in the dispersal of the seeds. Theories that rodents became seed dispersers for so-called megafaunal seeds when their original Pleistocene seed dispersers went extinct > 10,000 years ago have met with scepticism, because rodents do not travel great distances and are thought to eat most of the seeds they cache. The results of this study in Panama showed that initial seed caches were made by agoutis close to the tree, and dug up again soon after their initial burial. However, instead of eating the seeds, the agoutis then reburied them, repeating this process up to 36 times per seed. Circa 35% of the seeds were dispersed for > 100 m. Videoing the agoutis' behaviour it transpired that the rodents steal and

re-cache each other's seeds, thus turning the rodents into excellent substitute dispersers.

Source: *Proceedings of the National Academy of Sciences of the USA* (2012), <http://dx.doi.org/10.1073/pnas.1205184109>

Harnessing wind and solar resources

A recent assessment of the Dominican Republic's wind and solar energy resources suggests the country will benefit economically, socially and environmentally if it can cost-effectively harness its renewable energy sources and reduce its dependence on energy imports. According to the report the Dominican Republic has extensive solar and wind resources that are largely untapped and the assessment provides policy and energy planning recommendations for the creation of a renewables-friendly investment climate. In recent years the government of the Dominican Republic has committed to reducing the country's carbon footprint while providing secure and sustainable energy access to its citizens. Like many developing nations, it has contributed relatively little to the world's climate crisis but is extremely vulnerable to the impacts of climate change, including water shortages, reduced food production, increased storm intensity and rising sea levels.

Source: *Worldwatch Institute* (2012), <http://www.worldwatch.org/new-report-lays-out-roadmap-sustainable-energy-system-dominican-republic>

SOUTH AMERICA

Lonesome George dies

Lonesome George, a tortoise dubbed the rarest species in the world, has been found dead in his corral on the Galapagos island of Santa Cruz by his keeper of 40 years. George was thought to be the last remaining individual of the Santa Cruz subspecies of giant tortoise, *Chelonoidis nigra abingdoni*. Despite being part of the Galapagos National Park breeding programme and thus being introduced to a number of female tortoises from related subspecies, George did not produce any offspring. Until the late 19th century giant tortoises were common on the Galapagos islands but the populations became rapidly depleted, both by sailors hunting the species for their meat and following the establishment of feral goats on the islands. A post-mortem will take place on George, who, at 100 years old, was deemed to be in the prime of life, as giant tortoises can live to 200 years.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/world-18574279>

Census of black-browed albatross indicates breeding success

A new report indicates a healthy increase in the numbers of Endangered black-browed albatrosses breeding in the Falkland Islands. Over two-thirds of the global population of black-browed albatrosses breed in the Falkland Islands, and so the status of this population has significant bearing on the global conservation status of the species. Aerial and ground based surveys conducted in 2010 revealed an increase in the population between 2005 and 2010 of at least 4% each year. The positive trends from both surveys are further supported by favourable survival and breeding data from an ongoing study carried out by researchers at New Island, one of the twelve breeding sites in the Falkland Islands.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07/falkland-albatross-shows-increase>

Amazonian deforestation has a long tail

A group of researchers have created a model that suggests the Amazon will carry on losing species as a consequence of deforestation that has already occurred. The model is based on the fact that the effects of habitat loss do not manifest themselves immediately, and also that deforestation does not generally occur all at once in an area. The model relates species extinction to the timing and amount of habitat loss. On populating the model with data for forest-dependent vertebrates and deforestation patterns from 1970 to 2008, the predictions were grim, suggesting that 80–90% of species extinctions resulting from previous forest loss have yet to occur. Although these results are not encouraging, the model may have an application in targeting conservation action at areas with the highest extinction debt.

Source: *Nature* (2012), <http://dx.doi.org/10.1038/nature.2012.11007>, and *Science* (2012), <http://dx.doi.org/10.1126/science.1219013>

New swimming cave cricket species filmed

A swimming cricket was one of three new species discovered by a BBC TV crew filming in Venezuela. The insect, believed to be a new species, was captured on camera along with a no-eyed harvestman and a cave catfish in a remote Venezuelan tepui, a type of table-top mountain. The cricket swims underwater and uses its front legs to do breaststroke and its hind legs for kicking.

Source: *BBC News* (2012), <http://www.bbc.co.uk/nature/19102700>

Guyana rainforests secure trust fund

The government of Guyana has launched a USD 8.5 million trust fund, the first of its kind for the country. The fund will provide long-term financing for the management of Guyana's protected areas system. Financing for the trust comes from the German government through their development bank, KfW, which provided USD 5 million, with another USD 3.5 million coming from Conservation International's Global Conservation Fund, made possible by a grant from the Gordon and Betty Moore Foundation. The trust fund will greatly enhance Guyana's conservation efforts by supporting on-the-ground efforts for the country's protected areas, including the implementation of management and monitoring plans and funding for park rangers and scientific research.

Source: *Conservation International Press Release* (2012), <http://www.conservation.org/newsroom/pressreleases/Pages/Trust-Fund-Protect-Guyana-Forests.aspx>

Brazilian pig iron industry agrees measures to protect Amazon

All seven pig iron companies in the Brazilian state of Maranhão have signed an agreement not to source wood charcoal that comes from forest destruction, slave labour or encroaches into indigenous lands. The findings of a 2-year investigation by Greenpeace documented the devastation to the region from the pig iron industry. Pig iron is the primary ingredient for steel used by the world's leading car makers, and pig iron from this region is often processed using wood charcoal made from illegally logged rainforest wood.

Source: *Greenpeace News Release* (2012), <http://www.greenpeace.org.uk/blog/forests/brazilian-pig-iron-industry-agrees-measures-protect-amazon-20120803>

PACIFIC

Detector dogs make remarkable discovery

Detector dogs Bob and Tar in Fiji have been working methodically to check the forest on Gau for nesting petrels. Their hard work paid off when they led their handlers to the first ever well-documented colony of the collared petrel. This major discovery was made on a forested hillside above the village of Navukailagi in the north of the island. Twenty-five nesting burrows were found scattered on the steep slope, with some burrows measuring > 2 m in length. Each burrow was inspected with a burrow-scope

but not all revealed owners. Some burrows were too long whereas others had right angle bends that the burrow-scope could not get around. It is thought that one of the nesting burrows could belong to the elusive Fiji petrel.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07/fiji-petrel-detector-dogs-make-a-major-discovery/>

Mind the gap

The brown tree snake has been posing a threat to the ecosystem and infrastructure of Guam for c. 70 years, annihilating 10 of the island's 12 native bird species and causing costly damage to electrical power systems. The invasive reptile's destructive habits come from its incredible ability to cross gaps between trees. But new findings on the biomechanics behind the snake's bridging ability may help halt their destructive activities. The research provides insight into what allows the snakes to cross horizontal and vertical gaps and what causes them to fail. To test the animals' bridging skills, the research team placed the snakes on perches in front of various obstacles ranging from vertical ascents and short drops to horizontal gaps and sharp turns. The team's findings could prove critical for helping to improve gap-based barriers that the island uses to keep the snakes off power lines and away from cargo ships and planes.

Source: *The Journal of Experimental Biology* (2012), <http://dx.doi.org/10.1242/jeb.076646>, and *Science Now* (2012), <http://news.sciencemag.org/sciencenow/2012/07>

Solomon Islands launder exotic birds

The Solomon Islands has become a hub for laundering wild birds into the global captive-bred bird trade. Parrots, cockatoos and other exotic birds have been exported over the last 10 years but there are no major captive breeding units in the islands. The Solomons recently joined CITES, which sets conditions for trading captive-bred and wild animals. Some of the 35 bird species exported from the Solomons are on the IUCN Red List, including the Critically Endangered yellow-crested cockatoo. Records from importing countries show that c. 54,000 birds were exported from the Solomons during 2000–2010, with 40,000 of these declared as captive-bred. Most belong to species native to the Solomons but > 13,000 came from non-native species originating in Indonesia and Papua New Guinea. There are no records of these species being imported into the Solomons,

either for re-export or to begin a captive breeding programme.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-18858872>, and *TRAFFIC* (2012), <http://www.traffic.org/home/2012/7/17/solomon-islands-at-centre-of-captive-breeding-shenanigans.html>

Bright lights on Tahiti prompt action to save grounded birds

The Société d'Ornithologie de Polynésie has launched a rescue programme for grounded petrels and shearwaters attracted by lights on Tahiti. At least 60 grounded shearwaters and Near Threatened Tahiti petrels have been successfully released this year and a network of volunteers has been established. As part of the programme, awareness-raising activities have been organized and volunteers trained to release the birds safely. Before being released the grounded birds are measured and ringed and some blood or feathers are taken for genetic analyses. All the data collected from the programme will be used to improve knowledge of the impact of lights on the seabirds.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07>

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Island robins forget to be afraid

Researchers from Otago University have discovered that birds that grow up in island sanctuaries can lose their ability to recognize introduced predators. Ian Jamieson and Karin Ludwig studied native New Zealand robins raised on a pest-free island and found the birds forgot to be scared of rats. Rats have been present on Stewart Island since the 1600s. The clued-up robins that live there know rats are dangerous and respond appropriately. However, nearby Ulva Island is rat-free, and the robins born there don't know danger when they see it. The research has implications for sourcing animals from island sanctuaries for reintroductions back to the mainland.

Source: *Animal Behaviour* (2012), <http://dx.doi.org/10.1016/j.anbehav.2012.04.037>, and *3 News* (2012), <http://www.3news.co.nz/Birds-in-safe-environments-cant-recognise-predators/tabid/1216/articleID/258034/Default.aspx>

Plans for dam abandoned

Following Meridian Energy's announcement in May 2012 that it was abandoning its plans to build an 85-m high dam on the

Mokihinui River, calls for the river and its catchment to be given permanent protection by adding it to the adjacent Kahurangi National Park may have been answered. The Mokihinui River is one of New Zealand's largest wild rivers, supporting threatened wildlife such as the blue duck as well as the South Island long-tailed bat and two unique species of giant land snails. The river is also home to endangered native species including the longfin eel and the giant and short-jawed kokopu. The West Coast Tai Poutini Conservation Board has recently given its full support for the proposal, providing hope that the Mokihinui and its surrounding forests will be given permanent protection by National Park status.

Source: *Forest & Bird* (2012), <http://www.forestandbird.org.nz/what-we-do/campaigns/save-the-mokihinui-too-precious-dam>

Shark attacks prompt calls for a cull

The fifth fatal attack by a great white shark off the coast of western Australia in less than 12 months has prompted calls for the protection afforded to the species in Australian waters to be lifted. Following the most recent fatality Australia's fisheries minister suggested an investigation into whether there has been a significant increase in the number of great whites since they became protected and, if so, whether they still warrant protection. On average, one fatal shark attack occurred once per year in Australian waters over the last 2 decades. However, researchers caution against the assumption that an increase in shark attacks is indicative of an increase in sharks, pointing out that such an increase can occur because more people are visiting beaches. Furthermore, the incidences may be an example of statistical clustering, rather than an increasing trend in shark attacks.

Source: *BBC News* (2012), <http://www.bbc.co.uk/news/science-environment-18858292>

Divided dolphin societies unite

A unique social division among a population of bottlenose dolphins in Australia's Moreton Bay has ended. The dolphins lived as two distinct groups that rarely interacted, one of which foraged on trawler bycatch. But a ban on fishing boats from key areas appears to have brought the two groups together to hunt for new food sources. The Moreton Bay dolphins were thought to be the only recorded example of a single population that consisted of groups not associating with each other. The 'trawler' dolphins from Moreton Bay had previously fed on the bycatch from boats while the

'non-trawlers' found other sources of food. Scientists identified individual dolphins by the marks on their dorsal fin and recorded which animals were associating with which. The results suggest that a flexible social structure may be an important factor in how dolphins exploit a wide range of resources in the marine environment.

Source: *Animal Behaviour* (2012), <http://dx.doi.org/10.1016/j.anbehav.2012.06.009>, and *BBC News* (2012), <http://www.bbc.co.uk/nature/18985101>

Mistletoe manipulation

Mistletoe species have been designated as keystone species, for reasons including their provision of fruit and nectar, their roosting and nesting site potential, and their beneficial influences on the forest canopy and floor. Now in what are thought to be the first experimental manipulations of purported keystone resources, researchers have performed experiments in which they quantified the effects of mistletoe on diversity at a woodland scale through the removal of all mistletoe plants from 17 treatment sites in New South Wales. Three years after the mistletoe removal, these 17 woodlands lost, on average, 20.9% of their total species richness, 26.5% of their woodland-dependent bird species and 34.8% of their woodland-dependent residents compared to 11 control woodlands in which mistletoe was not removed and 12 sites where mistletoe was naturally absent. The researchers speculate that this decrease in species richness concomitant with the removal of mistletoe is because mistletoe plays a key role in nutrient enrichment through litter-fall.

Source: *Proceedings of the Royal Society B* (2012), <http://dx.doi.org/10.1098/rspb.2012.0856>

Size matters if you're a turtle

Marine debris is a significant problem that has been documented to affect more than 267 species worldwide. In a recent study investigating the prevalence of marine debris ingestion in 115 sea turtles stranded in Queensland, Australia, between 2006 and 2011, researchers assessed how ingestion rates differed between hawksbill and green

turtles. The findings showed no significant difference in the overall probability of ingesting debris between the two species studied, which have similar life histories. Curved carapace length, however, was inversely correlated with the probability of ingesting debris. When the researchers compared turtle class size they also found that larger benthic turtles had a strong selectivity for soft, clear plastic. Smaller pelagic turtles were much less selective in their feeding habits and showed a trend towards ingesting rubber items such as balloons.

Source: *PLoS ONE* (2012), <http://dx.doi.org/10.1371/journal.pone.0040884>

Olympic Park host to EagleCam

Sydney's Olympic Park is home to EagleCam, a remote camera system that has allowed researchers to observe and record the lives of a pair of white-bellied sea eagles. In the months leading up to the 2012 breeding season new camera equipment has been installed to stream the eagles' activities live on the internet. A pan-tilt-zoom camera is currently positioned on the forest floor about 45 m from the eagles' nest. Technicians are waiting to see if the eagles will renovate the nest they built last year as a replacement for their historic 20-year-old home, which had collapsed dramatically. However, it seems the pair are building another nest perched 25 m up in a scribbly gum tree. Once the team can confirm that the eagles will not revert to using last year's nest, cabling will be extended to their new nest site and the camera carefully positioned in a tree nearer the nest.

Source: *BirdLife International* (2012), <http://www.birdlife.org/community/2012/07/ozzy-eaglecam-approaching-take-off/>

Toads' toxins are used against them

Newly hatched cane toad tadpoles are known to seek out and eat newly-laid cane toad eggs in an attempt to reduce intraspecific competition within ponds. Now researchers looking for ways to stem the tide of cane toad invasions across Australia have isolated the various chemicals produced by cane toad eggs, and quantified the reactions of cane toad

tadpoles to these various potential attractants. Their results indicated that the toads' chemical defences, a family of toxins known as bufadienolides, caused a strong response in toad tadpoles, while repelling native Australian species. In field experiments in ponds, traps baited with bufadienolides caught tens of thousands of cane toad tadpoles but few other species, despite the ponds harbouring many native fishes and invertebrates.

Source: *Proceedings of the Royal Society B* (2012), <http://dx.doi.org/10.1098/rspb.2012.0821>

Humpback whales delaying migration due to Antarctic changes

Humpback whales in the Antarctic are delaying their migration to feed on krill that are staying later because of reduced extent of sea ice, a possible consequence of climate change. These whales occur in high densities in bays along the Western Antarctic Peninsula late into the austral autumn, much later than previously thought. A survey detected 371 groups of humpback whales over a 654-km survey area, with density estimates of up to 1.75 whales per km². The highest densities were found in the enclosed regions of Wilhelmina Bay, the Errera Channel and Andvord. The results could help establish a baseline for measuring future change in the ecosystem.

Source: *Endangered Species Research* (2012), 18, 63–71, and *Mongabay.com* (2012), <http://news.mongabay.com/2012/0730-climate-change-humpbacks.html>

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