

Conservation news

Venezuelan Red Listed animals are now in everyone's hands

Massive inflation has been one of the dominant characteristics of Latin American economies over the last few decades. As local currencies have lost value, governments have re-launched them with new names, higher values, and new designs. In 1987, for example, the Bolivian *boliviano* lost six zeroes to become the *boliviano nuevo*. Between 1986 and 1993, Brazilian currencies dropped nine zeroes, and in 1993, 1,000 Mexican *pesos* were replaced by one *peso nuevo*. Argentina may be the most dramatic example in the hemisphere: in 1970, the *peso ley* replaced the *peso moneda nacional*, at a rate of 100 to 1. In 1983, the *peso argentino*, worth 10,000 *pesos ley*, was introduced. Two years later, 1,000 *pesos argentinos* were replaced by one *austral*, and in 1992, the *peso convertible* replaced the *austral* at a rate of 10,000 to 1. During this span, the decrease by 13 orders of magnitude in currency values has had many implications in Argentina, with the conservation opportunities presented by so many new designs almost surely the least among them: the same familiar national symbols, events, heroes and monuments often reappeared.

However, this year Venezuela joined the regional trend of dropping zeroes without missing out on the unique public education opportunity it presented. On 1 January 2008 it substituted its *bolívar* for the *bolívar fuerte* at a rate of 1,000 to one. For anyone interested in biodiversity conservation the difficulties implied by the inflation that motivated the change had a silver lining: The Central Bank used illustrations taken directly from the *Red Book of Venezuelan Fauna* for the back of its new bills. This represents a considerable break with past symbols-and-events designs, although the front of each bill still maintains tradition with portraits of heroes from the Independence war against Spain in the 1800s.

The new family of Venezuelan currency has notes for 2, 5, 10, 20, 50 and 100 *bolívares fuertes*, each with its own threatened species. Respectively, these are the pink river dolphin *Inia geoffrensis* (Near Threatened in Venezuela, Vulnerable globally), the giant armadillo *Priodontes maximus* (Endangered in Venezuela, Vulnerable globally), the harpy eagle *Harpia harpyja* (Vulnerable in Venezuela, Near Threatened globally), the hawksbill turtle *Eretmochelys imbricata* (Critically Endangered in Venezuela and globally), the spectacled bear *Tremarctos ornatus* (Endangered in Venezuela, Vulnerable globally), and the red siskin *Carduelis cucullata* (Critically Endangered in Venezuela, Endangered globally).

Of course, it is too early to say if placing threatened species in all Venezuelans' hands, as it were, will have a positive impact on their conservation. Although hopes are

high in Provita, the Venezuelan NGO that published the *Red Book*, there is caution as well. According to the current Director for Institutional Development, Franklin Rojas-Suárez, 'a much higher profile will be of great benefit for most of the species used. Twenty years ago, probably a few thousand people in Venezuela knew that spectacled bears existed, and public support for conservation activities grew greatly after we and many others began awareness campaigns. Putting a bear on the currency reaches many more people than NGOs alone can, and makes Venezuelans realize that we have outstanding fauna of which they should be proud, and which they should value. However, for the red siskin, greater prominence might fuel current illegal trade and collector demand. So we'll have to see.'

What is clear is that this is a unique opportunity for governmental institutions, conservation organizations, local citizens and other stakeholders to join efforts in assuring that the increased visibility of Venezuela's threatened species helps decrease their extinction risk. It is heartening that the scientific endeavour of classifying risk has had the non-scientific result of familiarizing a nation with its animal species.

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Evidence of another living 'giant' lizard from the Canary Islands

The lizard genus *Gallotia* are endemic to the volcanic Canary Islands, and are divided into four main evolutionary lineages. One of these includes the locally-named 'giant lizards', adults of which can reach body lengths of over 240 mm (not including the tail) and 1 kg in weight. Subfossil evidence of these lizards indicated their existence on the Canary Islands until relatively recently but it was generally thought that the last remaining species, *Gallotia simonyi* from El Hierro, had become extinct by the 1940s. Then, in 1975 the rediscovery of this species on a rather inaccessible adjacent cliff was announced by German biologists. Subsequent fieldwork by local researchers led to *Gallotia intermedia* being discovered on the island of Tenerife in 1995 (not giant in size but still from the same evolutionary lineage), followed by *Gallotia bravoana* in La Gomera, in 1999. All of these Critically Endangered species appear to exist in small, isolated, relictual populations. The local Canary Islands Government has set up recovery centres and put in place strict protection measures for these lizards.

In December 2007 the Spanish national newspaper *El País* published a picture of what is expected to prove the existence of the fourth and final member of the giant lizard lineage, from the island of La Palma. No specimens have yet been captured but the photographs, taken by a biologist, are convincing: it is a *Gallotia* but appears morphologically different and larger than the native species. This again demonstrates that relatively large vertebrates can escape notice despite their proximity to well-populated areas. Human population densities in La Palma (120 persons km⁻²) are close to the EU average (114 persons km⁻²). The situation with *Gallotia intermedia* on Tenerife is more surprising still: the population density on this island is more than 3 times the EU average, with one of the recently discovered populations even being found close to a major tourist area.

The presence of a large lizard on La Palma is known from subfossil evidence. It also fits the biogeographical pattern in the Canaries. La Palma is a recent island whose subaerial emergence has been dated at just over 1.7 million years ago. Since its appearance it has been colonized by other lizards found on the much older neighbouring island of Tenerife, i.e. the smaller congeneric *Gallotia galloti* and the gecko *Tarentola delalandii*. If the pattern is repeated for the new lizard it would be expected to be most closely related to *G. intermedia* from north-west Tenerife, rather than the larger *G. bravoana* (La Gomera) or *G. simonyi* (El Hierro). Tissue samples and mtDNA sequencing are needed before this can be examined.

What has led to the recent near-extinction of these lizards? Is it due to the arrival of humans (and associated introductions) that have had a negative impact on the giant lizards but not the smaller congeners, or do human impacts influence the outcome of competition between the two *Gallotia* species on each of the western Canary Islands, with the smaller species driving the larger one to extinction? Unfortunately there are no control islands with just one giant species to examine this. A congeneric lizard as large as those from the giant clade, *G. stehlini*, is the only native *Gallotia* on Gran Canaria and relatively abundant, particularly close to human habitation, suggesting that large *Gallotia* can live with humans as long as a smaller competitor is absent. Even so, this is not conclusive proof of a competition effect: *G. stehlini* belongs to a different evolutionary lineage, which means that it may be able to cohabit with humans as a result of possessing particular characteristics absent in the other giant lizards. More research on the actual causes of the giant lizards' decline is required because the long-term natural survival of this group depends on identification of the exact causes, followed by appropriate remediation.

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9th Conservation Workshop for the Fauna of Arabia: Protected Area Systems in the Arabian Peninsula

The 9th Annual Conservation Workshop for the Fauna of Arabia was held at the Breeding Centre for Endangered Arabian Wildlife in Sharjah, UAE, over 3-5 February 2008. This important regional forum is hosted by the Environment and Protected Areas Authority of the Government of Sharjah, under the patronage of His Highness Sheikh Dr Sultan bin Mohammed al Qassimi. The workshop series has grown in both scope and size since its inception in 2000, with a total of 84 delegates attending from seven countries in 2008.

Earlier workshops assessed the conservation status of a range of regional taxonomic groups, from large mammalian carnivores through to freshwater fishes. Last year the 8th Workshop focused for the first time on protected areas (*Oryx*, 41, 132-133), following earlier workshop recommendations that the identification and protection of suitable habitats was of over-arching concern throughout the Arabian Peninsula. The interest generated by discussions in 2007 made it clear that protected area planning and management was an important unifying theme for species conservation in the region. The 2008 Workshop continued the focus on protected areas, and a series of parallel workshop sessions evaluated for the first time the status of the region's snakes.

The sessions on the evaluation and development of protected area networks had four core objectives, each one forming a sub-theme for the Workshop: (1) to review the current status of protected areas and protected area systems in the Arabian Peninsula; (2) to undertake a formal evaluation of protected area management effectiveness; (3) to identify priority sites for the development of Transfrontier Conservation Areas; and (4) to raise awareness of the implications of global climate change on species conservation and protected area creation and management in the region.

Protected areas networks are well advanced in some countries in the Peninsula, and others are in the process of planning for protected areas. A series of country reports were presented for Jordan, Saudi Arabia, Yemen, Oman, Kuwait, and for sites in UAE. Some common issues emerged, including the need for high-level political support and inter-agency involvements at all stages of protected area creation and management, the value of making explicit linkages with appropriate and sustainable commercial activities, the importance of law enforcement, and the critical need to engage meaningfully with local communities.

The evaluation of protected area management effectiveness sought to identify common limiting factors, obstacles and needs relating to protected areas in the region through the application of a formal tool to evaluate protected area

management effectiveness. Following a general introduction to the IUCN World Commission on Protected Areas Evaluation Framework, working groups applied the WWF Rapid Assessment and Prioritization of Protected Area Management questionnaire to a total of 10 protected areas in Jordan, Saudi Arabia, Yemen, Oman and UAE. Some key points emerged: the region's protected areas face a number of environmental pressures, including overgrazing, wood-cutting, poaching, and other forms of unsustainable resource use, but future threats will come primarily from development incompatible with protected area conservation objectives. Such pressures include mining, unregulated nature-based tourism, urban sprawl, and infrastructure expansion, particularly of road networks. In addition, while there is a strong focus on the biological components of areas, there has been much less attention paid to the socio-economic aspects of protected area management. As a consequence many reserves find themselves in unresolved conflict with local communities and lacking the necessary information, understanding or mechanisms to engage local people in protected area management. Other problems include lack of clear land tenure, lack of clear authority to prevent incompatible development in and around reserves being sanctioned by other land management agencies, and the small size and lack of connectivity between sites.

Cross-border cooperation emerged as an important theme in the 2007 Workshop and the intention in 2008 was to identify and prioritize some key sites in which real progress could be made. Delegates proposed three sites in which the ecological needs of high profile charismatic species encompass key habitats and ecological processes and provide natural and ecologically meaningful cross-boundary linkages. Potential partner nation representatives were urged to use the Workshop as an incentive to develop cross-border cooperation. With even only one high profile Transfrontier Conservation Area as a successful model of regionally relevant cross-boundary arrangements, wider interest and support for the concept will be generated.

In an overview of the implications of climate change predictions it was noted that under most scenarios there are significant climatic changes forecast for the Peninsula. Over the entire region temperatures will increase, extreme weather events will become more frequent and, for all but the south-east, rainfall will decrease. This will have major ramifications for already arid and hyper-arid regions, and major consequences for protected areas and their species. Protected area networks in the Peninsula will enhance the natural resilience of species to climate change in four ways: through the protection of climate refugia; by conserving large-scale migration corridors; by the maintenance of viable populations to enable adaptation, with reserve networks that cover a diversity of habitats and gradients of climate; and in reducing threatening processes at the landscape level by preventing land-clearing and intensifi-

cation of use next to reserve boundaries. To achieve this regionally there is an agreed need for national policies on climate change to include protected area management, and the national and regional coordination of threat management across land management agencies.

The Workshop also examined the conservation status of Arabian snakes. With more than 50 species being dealt with, endemics were prioritized, followed by species extant in Arabia and with a wider global distribution. Taxon data sheets and distribution maps were compiled for all but the sea snakes, with four species categorized as Vulnerable, three as Near Threatened, and two as Data Deficient. Western Yemen, Hadramaut (Yemen), Dhofar (Oman), Qatar and north-east Saudi Arabia were identified as priority geographical areas requiring further field research.

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Tiger numbers in India

The National Tiger Conservation Authority has released the Status Report of Tigers, Co-predators and Prey in India. The report was long awaited, with the country's tiger crisis and the conservation of tiger as a flagship species having assumed global significance (see *Oryx*, 40, 135-136, and 41, 13-14).

This country-wide report generated considerable media interest as it announced that India has *c.* 1,400 tigers, *i.e.* a reduction of tiger numbers by *c.* 50% compared to the last report in 2001-2002, which proclaimed the existence of 3,600 tigers. However, these current and past numbers cannot be readily compared because the surveys used completely different methodologies. The Government has discarded the old pugmark census methodology because the Tiger Task Force, appointed by the Prime Minister following the disappearance of tigers from Sariska Tiger Reserve, found the technique to be highly flawed. Perhaps the tiger numbers in the country were always this low and were overestimated by inappropriate methodologies and inflated figures.

The Government has recognized that auditing is an important tool in conservation management and the National Tiger Conservation Authority showed transparency by placing the report in the public domain (see http://projecttiger.nic.in/whatsnew/status_of_tigers_in_india_2008.pdf).

The study was carried out at a cost of >USD 3.4 million, nearly 48% of the cost spent on monitoring by all projects in tiger range countries during 1998-2005, and involved 500,000 man days of effort. The study used spatial mapping

of tigers, prey and habitat, estimation of tiger and prey densities using occupancy surveys, and capture-recapture and line transect methods. The reported tiger numbers do not include the famed Sunderbans Tiger Reserve and some other forests of central and south-east India where surveys were not carried out because of logistical problems or security concerns, and does not consider cubs and juveniles. Hence tiger numbers could be higher than the number reported.

The report identified tiger occupancy area in India as 96,697 km² and shows that the dry forests of central India, the deciduous forests of the Western Ghats, and the alluvial grassland-forest mosaic of the terai region hold 80% of the country's wild tiger populations. The forests around Kanha (Madhya Pradesh state), and Nagarhole-Bandipur (Karnataka), Corbett (Uttaranchal), Dudwa (Uttar Pradesh) and Kaziranga (Assam) tiger reserves have the highest tiger densities.

The report also negated claims by some conservationists that 60% of India's wild tigers persist in forests outside protected areas, reaffirming the fact that protected areas are the last stronghold of tiger populations. This assumes greater importance with the country currently passing through a phase of unregulated, largely private-led, development, and with the newly passed Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 potentially threatening ecologically sensitive species such as the tiger (see also *Oryx*, 41, 16).

The report's results provides an opportunity for conservation biologists to reiterate that halting fragmentation of tiger habitats, reducing proximate threats such as prey hunting, direct killing of tigers, forest fires, exploitation of forest products, and reduction of human-tiger conflicts are of immediate concern. India has c. 300,000 km² of potential tiger habitat, and policies and management need to be framed and implemented to harness this potential. Currently less than 2% of the tiger habitat is effectively protected but the country could hold over 10,000 tigers. Assuming a mid-range tiger density of 8-10 tigers per 100 km², the current 29 tiger reserves, with a total area of 37,000 km², could themselves support 3,000-3,700 tigers.

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Cambridge Conservation Forum Annual Symposium 2008

The Cambridge Conservation Forum's annual symposium, held on 11 January 2008 at Girton College, Cambridge, UK,

commenced with Fauna & Flora International's Mark Rose, who detailed the changing face of conservation. He provided an overview of how the conservation movement has developed since the 19th century, and how it may proceed in the current climate of changing political and economic arenas. Central to his discussion of how conservation will progress was the point that conservationists now have the opportunity to ensure that biodiversity conservation is central to future activities relating to climate change, and he cited the high profile discussions concerning avoided deforestation at the recent UN Climate Change Conference in Bali as an example of this. As well as providing an overview of how far conservation has come, and of how far there is still to travel, the mutable face of conservation revealed by Mark's presentation was much in evidence during the subsequent presentations. In some cases the discussions were of a practical nature, dealing with the physical movement of species and habitats, for example, through ecological networks, and restoration of habitats and assessment of the success of this technique. Other presentations dealt with means of measuring and planning for future change; for example, Rhys Green used models to illustrate the pros and cons of two alternative measures, wildlife-friendly farming and land-sparing, for protecting biodiversity in the face of an expected 2-3 fold increase in global demand for food over the next 40 years.

In addition to presentations concerning biodiversity conservation, one of the morning's presentations dealt with future developments of the conservation bodies in Cambridge or, if you will, movements of conservationists themselves. Andy Clements, Director of the British Trust for Ornithology, gave an overview of the plans for the 'conservation hub' in Cambridge. While this plan is in the early stages of development, indications suggest that it will be a great asset to both the city and the conservation world. Andy Clements' presentation was the first in the speed dating sessions, an increasingly popular occurrence at conferences. Delegates were encouraged to move between discussion groups half-way through each session, enabling them to sample more of the mosaic of subjects being debated, although this did mean that the same ground was covered to a certain extent during the discussions.

The last presentation of the day had a bitter-sweet taste, as it was given by Tim Sparks, who is based at the Monks Wood Centre for Ecology and Hydrology, one of the four centres due to be shut down following a restructuring programme. Tim's talk, on hedgerows and wildlife, was interesting for a number of reasons, but there was one particular comment he made that resonated with the theme of movement and change that permeated the symposium. Considering the iconic and well-loved landscape of northern England, with its parcels of fields divided by hedgerows, Tim remarked that it was the 1808 Enclosure Act that

created this habitat that we seem to cherish. How different from the poet John Clare's plaintive cry shortly after the Enclosure Act came into force: 'Enclosure, thou'rt curse upon the land, And tasteless was the wretch who thy existence planned.' It is remarkable that in 200 years something as loathed as the Enclosures Act has given rise to something as treasured as this iconic landscape: a suitable

tribute to the shape-shifting nature of conservation and our perception of it.

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