

**First biological assessment of Cardamom Mountains, south-western Cambodia, reveals a wealth of wildlife**

The first major biological survey of the Cardamom Mountains, conducted between January and April 2000, has confirmed that this area contains exceptionally high biodiversity and an outstanding number of globally threatened species. Spanning more than 1 million ha in south-western Cambodia, the mountain range forms arguably the last great wilderness in mainland South Asia. The mountains are still thickly forested and largely devoid of human impact: access is normally possible only during the brief dry season via ill-maintained, unpaved roads. Until 1998, the Cardamoms provided a secure refuge for Khmer Rouge guerrillas.

Because of this area's remoteness and security risks, little biological or conservation work has been carried out to date. A limited ornithological survey took place in 1944, while a Fauna & Flora International (FFI)/Wildlife Protection Office team conducted a preliminary large mammal survey in April 1999. Most parts of the range and most taxa remain unknown, hampering efforts to develop effective strategies for conservation. Nevertheless, two areas within the range have had protection on paper since 1993: the Mount Samkos Wildlife Sanctuary (3338 sq km) to the east and the Mount Aural Wildlife Sanctuary (2536 sq km) to the west. These were selected on the basis of satellite images and aerial photographs. Neither sanctuary is marked on the ground nor has any real management. Between these sanctuaries, the mountain range has been divided into logging concessions.

The present survey was organized by FFI to identify priority species and habitats for protection and to train a new generation of Cambodian conservationists. Ten nationals from the Wildlife Protection Office and the Ministry of Environment participated in the survey, led the botanical work and received one-to-one coaching from international biologists in field techniques. A variety of taxa were surveyed, including vascular plants, mammals, birds, reptiles, amphibians and insects.

The biologists quickly found many species that had not previously been documented in Cambodia, for example 15 per cent of the forest birds, 36 per cent of reptiles and amphibians, and 57 per cent of bats. A remarkable number of species, most notably from the high montane forests, are probably new to science (voucher specimens are currently being examined by specialists). The high peaks were also found to support the globally threatened serow *Naemorhedus sumatraensis*,

and known endemics such as the chestnut-headed partridge *Arborophila cambodiana* and the Cardamom banded gecko *Cyrtodactylus intermedius*. These montane forests also contribute to the Cardamom Mountains' crucial role as a watershed for the Mekong/Tonle Sap and thus for much of Cambodia's most productive arable land.

The team found fewer endemic animals at lower elevations, but relatively high densities of endangered large mammals such as gaur *Bos gaurus*, Asiatic wild dog *Cuon alpinus*, pileated gibbon *Hylobates pileatus* and tiger *Panthera tigris*. Local people reported little or no decrease in mammal populations during their lifetimes, and Asian elephants *Elephas maximus* were even said to be increasing in some places. The foothills also support extensive tracts of lowland evergreen forests, one of the most threatened and species-rich forest types in South-east Asia.

In addition to c. 35 large mammal species verified by the project biologists, local people also reported Javan rhino *Rhinoceros sondaicus* and spiral-horned ox *Pseudonovibos spiralis* in remote parts of the mountain range. Following similar local reports, we were able to confirm the presence of Siamese crocodiles *Crocodylus siamensis* in rivers and marshes on the southern slopes. This magnificent reptile was considered to be virtually extinct in the wild, and the Cardamom Mountains may represent its last hope of survival. (See also *Status of the Siamese crocodile in Vietnam*, by Steven Platt & Ngo van Tri, *Oryx*, 34(3), pp. 217–221.)

Threats to biodiversity are mounting rapidly, however. New roads are under construction, traversing the mountain range for the first time: the logging companies Yourysaco and GAT International are building all-weather roads between Koh Kong and Pursat, the first of which could be completed by 2001. Unless effective safeguards are put in place, this 'opening up' of the Cardamom Mountains will attract greater numbers of illegal loggers, poachers and settlers. The survey team found evidence of illegal hunting for personal consumption and, to a growing extent, for commercial trade using selective and non-selective snares, guns and even anti-personnel mines. Illegal logging practices were also observed. These growing problems are compounded by encroachment by ex-Khmer Rouge and returning refugees, in desperate need of new homes and food. It was noted that the United Nations Development Programme was facilitating the development of settlements at the very heart of the Mount Samkos Wildlife Sanctuary as part of the post-war reconciliation process.

While the full implications of the biological survey have yet to be evaluated and discussed in detail with the appropriate government authorities, it is now clear that the Cardamom Mountains are of outstanding national and regional importance for wildlife. Ironically, this owes more to the bitter civil war and the associated suppression of trade and development, rather than to intentioned conservation management. As Cambodia begins the difficult road to recovery, this beleaguered nation will need both technical and financial support to integrate the urgent human development and welfare programmes with biodiversity conservation from the earliest stages.

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### **CITES Conference of Parties 11: an FFI perspective**

'Save the Elephant!', 'The Ivory Trade Kills Elephants!' and much more screamed the banners strung across the road as we wended our way from downtown Nairobi to the United Nations Environmental Programme's (UNEP's) Gigiri headquarters in the diplomatic uplands of Kenya's capital city, the location for the 11th meeting of the CITES Conference of the Parties (CoP). The groups of photogenic Kenyan youth gathered at the gates waving posters of dead elephants with their tusks hacked out only increased the foreboding that, once again, the giant African pachyderm was going to loom large over the proceedings.

In fact, the meeting itself turned out to be less of a circus than some might have hoped or (in the case of the FFI team) feared. Attended by around 130 delegations from government Parties (i.e. voting members) and a similar number of observers, including non-governmental organizations (NGOs), some 2100 people were registered as participants for the event, which ran from 10 to 20 April 2000. It would be safe to guess that even the most hardened of CITES delegates had not managed to read all of the papers, which weighed in at around 7 kg. In fairness, however, the CITES Secretariat should be congratulated for putting a lot of material on their Web site well beforehand and for generally making a good job of the preparations.

Under the arcane procedures of CITES, whose job, since FFI helped to get it going in 1974, it has been to

regulate international trade in endangered species of wild fauna and flora, the Conference divides, for most of the time, into two huge committees. Committee 1 debates and decides proposals to amend the Appendices to the Convention. If a species is listed in Appendix I, it cannot be traded commercially between the Parties, while if listed in Appendix II, it can be traded subject to monitoring and, in certain instances, quotas specified on a country basis. Moving a species from one Appendix to another or removing it altogether is commonly known as 'uplisting' or 'downlisting', as the case may be. Committee 2, generally thought less interesting, debates resolutions, which may cover the domestic operations of CITES or a call for action from others. The results of the two Committees eventually come back to the Plenary, allowing impassioned Parties to have a second bite at the cherry if they feel they have a chance to overturn an unfavourable decision in Committee.

Despite appearances, Kenya was not the host country for the meeting, the venue being offered by the United Nations Environment Programme (UNEP), the parent convention for CITES, because political turmoil in Indonesia obliged that country to withdraw its offer in 1997 to host the event. This did not stop President Daniel arap Moi in his welcome address offering strong support for Kenya's proposals to restore southern African elephant populations to Appendix I.

In preparing for the meeting, FFI had analysed all 62 species proposals carefully, with input from the Conservation Committee and the Council, and had been involved in a briefing session with the UK Department of the Environment, Transport and the Regions (DETR) Minister for the Environment, Michael Meacher. We had identified whales, dolphins, sharks, elephants and hawksbill turtles as the most difficult and controversial topics, but were keen to follow the plant and tree proposals as well. A UK paper calling for action on the unsustainable bushmeat trade in some tropical forests, along with an understanding for its sustainable use by local people, was also of considerable interest.

Due to last minute switches in the agenda, the bushmeat issue was debated and decided before we could get into the relevant Committee to say our piece, but all was far from lost. The meeting agreed to establish a working group to meet inter-sessionally, to be led by key Central African range states but involving donors and NGOs, as well as other international bodies with biodiversity and forest responsibilities, such as the Convention on Biological Diversity (CBD) and the International Timber Trade Organization (ITTO). In the light of FFI's recent work in producing a report on bushmeat for the Ape Alliance and the plan for a staff post to follow it up, we were given to understand that our participation in the working group might be welcome.

It was understood that international trade is but one part of the problem, which gives CITES a locus, but it was good that at least one inter-governmental body has recognized the issue and that a range state-led initiative has been proposed.

The first elements of excitement came when the Japanese and Norwegian proposals to downlist various gray and minke whale populations to Appendix II were debated in Committee. Japan could argue that the eastern North Pacific stock of gray whales was plentiful, but those opposed to any trade in whalemeat countered that DNA work did not yet permit a satisfactory separation of this population from others. Even if it did, the contention was that whales should be left to the International Whaling Commission (IWC) and that CITES should follow rather than lead that body, as agreed some years ago. The problem there was that the IWC has been advised by its Scientific Committee that minke whale populations have recovered, but has declined to adopt the necessary management system to regulate any agreed trade. The International Union for Conservation of Nature (IUCN) called for the IWC to take proper account of its science, because if the IWC is seen to be purely political the pressure for CITES to lead rather than follow may become irresistible. CITES was clearly divided and when secret ballots were held the Japanese proposals were rejected by roughly 60 per cent of the voters. The Norwegians, with a better case more winningly argued, finally achieved a bare majority back in Plenary for their minke whale proposal, but not the two-thirds needed for downlisting.

Also in the marine area, Cuba had tabled two proposals to downlist the hawksbill turtles in their waters, one allowing an annual quota of 500 turtles to be harvested and the other restricted to a one-off sale of their stockpile of shell accumulated since the international trade was banned. Most, including FFI, recognized that the Cubans had worked hard to produce a sustainable management and monitoring programme and to reduce their annual offtake from 5000 to 500, but the concern was for the very low apparent populations elsewhere in the world, accompanied by considerable scientific disarray as to the likely overall numbers of hawksbills and their pattern of activity. Interestingly, there seemed to be considerable support from neighbouring countries and when Cuba decided to ask only for the one-off sale, they only just failed to obtain a two-thirds majority both in Committee and Plenary. There was a strong indication of donor support for a regional initiative, which could be helpful if it recognizes the need for local benefit. To an FFI observer it seems that there is a paramount need for the scientific data to be drawn together and for the IUCN categorization of 'critically endangered' to be reviewed.

Somewhat surprisingly, the proposals to list the basking and whale sharks in Appendix II and the great white shark in Appendix I were all defeated. Those opposed, principally Japan and Norway, argued that sharks should be left to the Food and Agriculture Organization (FAO), who had produced an action plan (in fact in response to an earlier CITES concern), and that data on threat was still insufficient. The UK proposal to list the basking shark, generally considered to be timely and well argued, only just failed to obtain the two-thirds majority and was helped by effective interventions in Committee and Plenary from Elliot Morley, the UK Fisheries Minister, who was able to draw on a draft FAO document suggesting that CITES should in fact manage high value, vulnerable species such as sharks.

Nevertheless, the biggest surprise of all was that the key proponents in the African elephant debate reached a compromise behind the scenes and came to Committee with their package. Kenya and India withdrew their proposal to restore the Botswanan, Nambian and Zimbabwean populations to Appendix I, while these three countries and South Africa withdrew their requests for raw ivory quotas before the next Conference. The net result is that the South African population also now moves to Appendix II and all four southern African countries can trade in those elephant products, apart from raw ivory, for which they sought permission, as well as live elephants. Some adjustments to the monitoring system for illegal killing of elephants (MIKE) were negotiated and African support for it was confirmed in the communiqué from the range state meeting held just before the CoP. Most delegations seemed very satisfied by this result. The disappointment was the paucity of reporting to the Secretariat and to TRAFFIC, who are running the Elephant Trade Information System (ETIS), on incidents of poaching or ivory seizures, when unsubstantiated allegations about these phenomena are deployed by those who demand that the countries who are successfully conserving elephants should hold back from reaping the full benefits.

So much for the headline proposals and their out-come. Details of the other results can be found on the CITES Web site at [www.cites.org](http://www.cites.org). Mention should, however, be made of the adoption of the 5-year strategic plan, an effort by the key Parties and the Secretariat, to make sure that CITES is an effective operating system, not just a forum for passing resolutions. To coin a phrase, the priority is capacity building, capacity building, capacity building. It is also encouraging that, after its recent turbulence, the Secretariat is now firing on all cylinders under the genial oversight of new Secretary-General, Willem Wijnstekers.

FFI had a presence throughout the CoP and was represented by three staff members—Simon Mickle-

burgh (to whom I am indebted for notes on the parts I was unable to reach), Sara Oldfield and Mark Rose—as well as a trustee (the author). We followed Committee 1 and Plenary pretty faithfully and as much as was feasible of Committee 2. Behind the scenes, we had several discussions on the bushmeat and hawk-bill issues and were able to encourage a compromise on the elephant proposals through talks with the South African, Botswanan, Zimbabwean and Kenyan heads of delegation, without claiming any credit for the final result. It was gratifying to be fully consulted by the UK delegation and to be invited, along with WWF-UK, to a lunch briefing for Elliot Morley on his arrival. Perhaps most satisfying of all was the number of people from biodiversity-rich partner countries who sought out FFI to renew contact, to seek co-operation on interesting projects, to praise *Oryx* or, like Nehemiah Rotich, now Director of the Kenyan Wildlife Society, to thank us for our assistance to the East African Wildlife Society.

If we were to rate this CoP against the criteria in FFI's mission statement, namely to conserve threatened species and to seek sustainable solutions, based on sound science and taking account of human needs, we might award it 6 out of 10. It was business-like and not one-sided, but some of the compromises were stand-offs rather than sustainable solutions and too many people who ought to know better ignored the science. Apart from capacity building, the most urgent follow-up task for the CITES inner circle is to forge effective collaboration with FAO, IWC and CBD, so that these stately ships move on from saluting each other with polite resolutions as they pass in the night and begin to operate joint working in pursuit of common objectives.

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### Note from the editor

Further issues relating to and arising from the CITES CoP will be published in the October issue of *Oryx*. At the time of going to press, final resolutions from the Conference were not available.

### The BP Conservation Programme winners for 2000

Twenty-two student teams around the world won awards in this year's BP Conservation Programme, which supports conservation research in priority lo-

calities leading to conservation action of global importance. Her Majesty Queen Noor of Jordan presented the awards on 27 April 2000 at the Natural History Museum, London. Celebrating its 15th year, the Programme is organized by BirdLife International and Fauna & Flora International, and for the 10th successive year, the award is supported by BP Amoco.

Of the 22 winning teams, four are based at UK universities (Aberdeen, Oxford and East Anglia, with expeditions to Madagascar, Ecuador and Mexico), one is based in the UK (with an expedition to Ecuador) and 16 are from overseas. Overseas field projects are being carried out in 15 different countries, including Argentina, Brazil, China (two teams), Fiji, French Polynesia, Hungary, Kenya, Madagascar, Malaysia, Mongolia, Philippines, Romania, Russia, Tanzania, Ukraine and Vietnam. The awards comprise not only funding but also practical training and ongoing advice to help the students undertake the best research possible to support global conservation initiatives.

Four Follow-up Awards were presented for the best 'follow-up' proposals submitted from previous years' winning projects. A team from French Polynesia, led by Dr Caroline Blanvillain of the Université de Polynésie Française, was awarded £20,000 for a project following up several conservation actions for two endangered bird species in the Tuamotu Archipelago. The team will work in collaboration with the Acteon Society Group, which exploits copra. An award of £13,000 was made to a team from the Universities of Aberdeen and Antananarivo, led by Daniel Bennett and Felix Amyot Kofu, respectively. Their project will conduct the first ultrasonic surveys of bat communities on the east coast of Madagascar. The results will have direct implications for bat conservation in the forest remnants of Madagascar. A team led by Reuben Sharma of the Universiti Putra, Malaysia, was awarded £12,000 for their work to ensure that tortoise populations in protected areas are afforded proper legal protection and that they are not exploited for commercial purposes. The team plan to achieve this by implementing monitoring programmes in collaboration with communities exploiting turtles and government agencies responsible for wildlife and forest management. An award of £10,000 was made to a team from China, led by Sun Yue-Hua from the Institute of Zoology, Chinese Academy of Sciences, for a biological study of the Chinese grouse and other endemic birds in southern Gansu, China. They will combine a landscape survey with radio-tracking studies to help the local government to manage their forestry practice. In addition, the team intends to provide recommendations for the conservation and management of wildlife within fragmented habitats.

Eighteen First Year Awards were presented, including one gold award of £7000, five silver awards of £5000 and 12 bronze awards of £3000. The gold award was presented to a team from Fiji, led jointly by Peter Harlow, a PhD student based at Macquarie University, Sydney, and Marika Tuiwawa, an MSc student and curator of the South Pacific Regional Herbarium. The aim of their project is to survey 17 Fijian islands for the crested iguana *brachylophus vitiensis*, first discovered on the island of Yaduataba in 1979. The impact of goat grazing, vegetation burning and introduced predators on iguana populations will be assessed and the team

will create an action plan for the long-term conservation of the iguana for use by the National Trust of Fiji.

The BP Conservation Programme is open to students (undergraduate or postgraduate) in full- or part-time education anywhere in the world. The selection procedure is stringent, demanding high standards of scientific research and full collaboration with the host country in all of the conservation initiatives it supports. For further information, contact Marianne Dunn, Programme Manager, BirdLife International, Wellbrook Court, Girton Road, Cambridge CB3 0NA, UK. Tel.: +44 1223 277318; e-mail: [DunnM22@bp.com](mailto:DunnM22@bp.com)