

## Tigers in peril in Cambodia

In the desperately poor country of Cambodia, where civil war has continued for over 20 years, the demand for tiger products has recently been increasing. Tigers are being intensely hunted in many parts of the country, especially in the north-east. Their parts are offered for sale openly in the capital, Phnom Penh, and in the market town of Poipet on the Thai border.

In February 1994 I carried out a 15-day survey of the main markets selling wildlife products in Cambodia. The principal wildlife traders said that tigers were becoming more difficult to find because the prices for tiger products have been rising, thus encouraging local hunters and also government personnel to poach them for this illegal trade.

In the late 1980s Vietnamese soldiers based in Cambodia killed many tigers and brought their carcasses to Phnom Penh to sell, usually in the O Russei market. The buyers were mostly Thais. With the departure of the Vietnamese army in 1989, Cambodian soldiers started to shoot tigers. In 1991 traders in Phnom Penh sold tiger bones for \$55/kg, but by early 1993 the price had increased, depending on size, to \$80–100/kg. In December 1993 a Cambodian soldier brought an entire tiger carcass to the capital and sold it for \$1500; the buyer sold the nails and skin (which he had tanned) for \$900, and the large bones for \$100/kg. The buyer told me that he had bought the skin and bones of 34 other tigers in 1993. Another large dealer in tiger products said that he occasionally buys live tiger cubs for \$200–250 each and sells them to traders for \$400–500. He said that he had bought six live and dead tigers in 1993.

People of several nationalities buy tigers and their products in Cambodia. Thais are probably in the majority, usually purchasing tiger products from Poipet next to their border. This market town was established a few years ago to sell live birds, monkeys, wildlife products and other Cambodian goods to the Thais in exchange for Thai consumer products. Of the 10 large shops in Poipet specializ-

ing in Cambodian animal products, two were selling tiger parts during my visit, including skins (\$400 and upwards), bones (\$80/kg), teeth (\$80 each), skulls (\$20 each) and nails (\$10 each).

Singaporeans were once major buyers of tiger bones in Cambodia. The bones are used in traditional medicine in Singapore to cure, for example, rheumatism, typhoid fever and malaria, and some people from Singapore continue in the trade. In 1992 they usually bought bones from middlemen in Koh Kong Province in western Cambodia, but now deal mainly with traders in the O Russei market.

Vietnamese traders are the main buyers of live tiger cubs, and they also purchase tiger bones from the O Russei market. They transport the cubs and the bones by road to Ho Chi Minh city for sale to Vietnamese middlemen who sell them to local people and foreigners.

In 1993 there were over 20,000 United Nations' personnel in Cambodia as well as thousands of foreign tourists. In order to cater for their shopping needs, scores of souvenir shops in Phnom Penh offer many wildlife products for sale, such as elephant ivory and bone carvings, elephant teeth, wild pig tusks, deer and gaur horns, stuffed palm civets, stuffed tortoises, python skins, bear nails, as well as tiger nails and teeth, which are sold as ornaments. Some Cambodians also buy tiger nails, teeth and bones. There is no local demand for tiger penis, which is consumed in some South East Asian countries as an aphrodisiac, nor for the blood, which is used as a tonic in parts of Asia. A few Cambodians eat the skin (with the hairs removed) to lower fever.

The future of the tiger in Cambodia appears precarious, at least in the short term. The civil war has worsened recently, especially in the west, and law and order is very poorly enforced in most parts of the country. The economy is one of the poorest in the world, and with prices increasing for tiger products, hunters continue to seek out these animals. Nobody knows how many tigers there were and how many are left in Cambodia because no census has been carried out, but wildlife traders in Phnom Penh say that tigers are



Soldiers kill tigers in Cambodia for their valuable products, such as the skin shown here in a street in Phnom Penh (E. Martin).

becoming noticeably scarcer. Until law enforcement is improved and until the government cracks down on illegal hunters, middlemen and retail sellers of tigers and their products, the tiger will continue to be persecuted in Cambodia for the unscrupulous economic gain of a few.

Esmond Martin  
PO Box 15510, Mbagathi,  
Nairobi, Kenya

## News from Laos

Scientists supported by The Wildlife Conservation Society (formerly the New York Zoological Society) completed a 5-month bird and mammal survey of Nakai-Nam Theun National Biodiversity Conservation Area in central Laos in June 1994. At 3500 sq km, this is the largest of the 17 newly designated reserves in the country, which between them cover over 10 per cent of the land area, giving Laos one of the most impressive reserve systems in tropical Asia.

The reserve is dominated by relatively dry

evergreen slope forests, mostly between 600 and 1900 m with some peaks exceeding 2200 m, where the forest becomes upper montane in character. These slope forests are mostly in excellent condition. About 350 sq km of the 1200-sq-km Nakai plateau to the west is also included. This area is a gently rolling pine (*Pinus* spp.)/broadleaved forest mosaic at 500–600 m and includes over 200 km of major sluggish river with forested banks, which is an acutely threatened habitat. In the mountains to the north lies a much wetter forest type, which may be similar to the everwet forests of the now-famous Vu Quang reserve, which directly adjoins Nakai-Nam Theun. This wet forest has now been recommended for addition to the reserve.

About 400 species of birds were recorded, with at least eight being Red Data Book species. Good numbers of beautiful nuthatch *Sitta formosa* and rufous-necked hornbills *Aceros nipalensis* occur above 1000 m; Blyth's kingfisher *Alcedo hercules* and white-winged wood ducks *Cairina scutulata* were found along the forested lowland rivers and streams; in the wetter forests crested argus *Rheinartia ocellata* were numerous and the first short-tailed scimitar-babblers *Jabouillea danjoui* outside Vietnam were seen.

Despite the impressive avifauna, the birds were eclipsed by the mammals of the reserve. Vu Quang was the site where the saola *Pseudoryx nghetinhensis* was first found in 1992. The species proved to be quite widespread in Nakai-Nam Theun, mainly in the wetter forests of the proposed northern extension. Many hunters knew of it and we were shown 20 sets of horns. We met one group of hunters who had shot a saola the previous day and were still carrying the horns, although they had cooked and eaten the rest of the carcass, including the skin.

We also found an undescribed species of muntjac, which was markedly larger than the sympatric common muntjac *Muntiacus muntjak* with disproportionately large antlers and different coloration. We found numerous sets of its antlers in villages – outnumbering more than twice those of the common muntjac – suggesting that the new species is locally quite

common. In March we found a live adult male captive in a town near the reserve, allowing us to gather tissue samples and the first ever photographs of a live specimen. In April we examined many more antlers and saw two live females in the wild. On our return from the field we learnt that a Vietnamese team had discovered the same species in Vu Quang in March–April and had already released the news. They rapidly published, in Vietnamese, a brief type description, of the male alone, without the benefit of having an intact specimen and named it *Megamuntiacus vuquangensis*.

Many other rare mammals were found, although populations of tiger *Panthera tigris*, gaur *Bos gaurus* and Asiatic elephant *Elephas maximus* were rather low, due to heavy poaching. Evidence was also found of the presence of leopard *Panthera pardus*, golden cat *Felis temmincki*, black bear *Ursus thibetanus*, sun bear *Helarctos malayanus*, back-striped weasel *Mustela strigidorsa* (a species seldom recorded), spotted linsang *Prionodon pardicolor* (one of fewer than 10 sightings reported by scientists in the last 30 years), pygmy loris *Nycticebus pygmaeus* and douc langur *Pygathris nemaus*.

Although legally a reserve since December 1993 and now in the first stages of management implementation, Nakai-Nam Theun is far from secure. The most pressing threat is from logging of the massive cypress-like conifers (possibly *Fokienia* sp.), which occur on the higher slopes. In early 1994 a helicopter was being used by a Japanese contractor, in co-operation with the Lao military, to extract the valuable timber and a 30-km road is being built into the very heart of the reserve to allow subsequent logging by truck. This will encourage increased access by settlers and hunters to the core of the reserve, quite apart from the direct damage to the habitat.

The other major threat is from the Nam Theun II dam project, which is technically outside the reserve. The dam will flood about 500 sq km of forest, scrub and cultivation on the Nakai plateau. It will inundate more than 95 per cent of the forested sluggish rivers, backing them up far outside the plateau, destroying wetland and gallery forest, preventing the

movement of migratory fish, speeding access to remote valleys, attracting settlers and displacing 4000 or more people, many of whom will move deeper into the reserve to seek land. On the positive side, the project will at least provide an incentive to protect the forests of the reserve, which cover 95 per cent of the reservoir catchment. Two other major dams are planned for lower down the Nam Theun catchment, until now one of the best forested river systems left in South East Asia. It is hoped that the Lao authorities, who are just embarking on a massive programme of dam-building with no serious attempt at Environmental Impact Assessment, can be persuaded to reduce or shelve those other schemes.

Hunting by both Lao and Vietnamese men, particularly for ivory, gaur horns and tiger bones, is a very serious problem. It is probable that the demand for saola trophies will escalate rapidly and snaring of crested argus is a major concern. Harvesting of other wildlife, driven in part by Vietnamese traders entering the country illegally, is having a massive impact on rattans, sandalwood, turtles and presumably many other species. Other pressures on the reserve include a major immigration of traditional shifting-cultivators from largely deforested northern Laos, gradual population growth and expansion of farmland by the several thousand inhabitants of the reserve, improving road-links to markets, a newly established regional town on the edge of the reserve and other smaller dam projects.

The reserve, linked as it is with other high-quality sites both in Laos and Vietnam, has the capacity to become one of the best in the region, but if the rapidly accelerating human pressures are not soon stemmed it may be irreparably damaged.

Tom Evans and Rob Timmins  
c/o 25 Cradley Road, Cradley Heath, Warley,  
West Midlands, UK



A hunter in Basse Casamance National Park with skins of bushbuck, Maxwell's duiker and a porcupine (O. Burnham).

## Senegalese national park devastated by rebels

As global conflicts intensify wildlife is increasingly the tragic, and often unreported, victim of war. Even small 'unimportant' wars can have devastating consequences for wildlife. Just one such war has recently been fought in Senegal.

Senegal is heavily reliant on tourism for foreign revenue and there are some outstanding national parks, which attract visitors as well as providing increasingly important refuges for many rare species.

Unique among Senegal's protected areas was Basse Casamance National Park in the south-west corner of the country. This area of towering closed-canopy forest was given national park status in 1970 in order to protect a vegetation type fast disappearing in Senegal and to conserve locally threatened species, such as Casamance flying squirrel *Anomalurus beecrofti hervoi*, which occurs nowhere else, and forest buffalo *Synceros caffer nanus*, as well as numerous other mammal species and over 200 recorded species of birds, including the

crowned eagle *Stephanoaetus coronatus*. A simple but good hotel was situated near one of the park entrances and from there it was easy to wander through the forest, where bushbuck *Tragelaphus scriptus*, buffalo and various species of duiker were frequently seen. The forest guards maintained the roads and provided information to tourists and there were frequent ministerial visits. Animals such as the bay colobus *Colobus badius temmincki* and Maxwell's duiker *Philantomba maxwellii* became tame and approachable and poaching within the park was practically non-existent.

In the 1980s an uprising was started by Diola rebels fighting for the liberation of the Casamance region from Senegal. The fighting was sporadic and generally well contained by the Senegalese army, but feelings ran deep and fighting broke out repeatedly throughout the decade. In 1989 government soldiers pursued heavily armed rebels into the south-west Casamance region, where they fought fierce battles both in and around the national park where the rebels took refuge. Eventually a cease-fire was arranged but a survey at the end of 1989 found that the wildlife had been severely depleted. There was no trace of



A burnt-out landrover next to the ruins of a park building destroyed by rebels in Basse Casamance National Park (O. Burnham).

buffalo, sitatunga *Tragelaphus spekii* or manatee *Trichechus senegalensis* and greatly reduced numbers of bay colobus and Campbell's monkey *Cercopithecus campbelli*.

Basse Casamance National Park remained open throughout the uprisings, although few, if any, tourists visited. Tragically, in 1992 the fighting started again and this time on a scale unknown in Senegal before. Thousands of people fled into neighbouring countries, abandoning everything they owned. The national park remained open thanks to the bravery of the forest guards, who for a time were virtual prisoners within the forest, dependent on military supplies getting through. Early one night in 1993 rebels attacked the park headquarters, took several guards hostage and then burnt the buildings, vehicles and all equipment before ordering the remaining guards to leave. The guards sent a radio message requesting a military escort from the nearby town of Oussouye. As they were leaving, the escort itself was ambushed. In the confusion and darkness, with every one fighting for his life, several guards and soldiers were killed. Some escaped to safety but none has returned to the park since.

The most recent information from Basse Casamance is very disturbing. A survey has shown that the buffalo have definitely gone;

no trace could be found of the sitatunga or the yellow-backed duiker *Cephalophus sylvicultor*, and even bushbuck have become scarce. During the survey a hunter was encountered and said quite openly that any one who tried to stop him hunting would be in danger. He also related the story of the buffalo hunt that took place shortly after the park was over-run, in which only three buffalo survived by fleeing into some patches of forest. The survey also revealed that colobus monkeys are greatly reduced in number and have become very shy, as have the Campbell's monkeys that associate with them.

Bush meat is freely available in nearby towns and a tourist in Oussouye was recently offered antelope meat in a restaurant, unheard of when Basse Casamance National Park was patrolled.

The destruction of this beautiful national park is tragic, especially because it was one that seemed secure and accepted by local people as well as being well supported by the government. The destruction of a park in such circumstances does not bode well for the future of others in the region that are less secure.

Owen Burnham  
85 Ryeland Close, Yiewsley,  
West Drayton UB7 8AX, UK