

**New species of monkey discovered in Tanzania: the Critically Endangered highland mangabey *Lophocebus kipunji***

A new species of monkey, the first to be discovered in Africa since 1984, has been unexpectedly found in two separate montane forest areas in Tanzania: Ndundulu Forest of the Udzungwa Mountains and Rungwe-Livingstone in the Southern Highlands, 350 km from Ndundulu. The monkey is a mangabey and has been named the Highland mangabey *Lophocebus kipunji*. The common name reflects the fact that it is found in forests at elevations above 1,300 m and as high as 2,450 m, where temperatures can drop to  $-3^{\circ}\text{C}$ . The species name, *kipunji* (pronounced kip-oon-jee), is the name that local people in the Southern Highlands have for the 'shy monkey' they reported seeing from time to time in the forest. The species is a medium-sized brown monkey with a very long and broad erect crest of hair on its head; its ventrum and distal third to half of its tail are off-white. The facial skin is uniformly black, with no contrasting eyelid coloration (differential eyelid color is characteristic of the other genus of mangabeys, *Cercocebus*). It is arboreal and lacks the characteristic 'whoop-gobble' loud-call vocalization of all other known mangabey species in both genera.

The discoveries were made independently by researchers engaged in separate conservation projects. The project in the Udzungwa Mountains was focused on another mangabey, the Critically Endangered Sanje mangabey *Cercocebus sanjei*, one of the world's most threatened primates. Whilst attempting to verify reports by Danish ornithologists that the Sanje mangabey was present in Ndundulu Forest, the Highland mangabey was sighted and identified as a new species by C. Ehardt and T. Butynski. Subsequently, Ehardt learnt that T. Davenport and his team, working on a broad-scale conservation project in the Southern Highlands, had discovered the same species of mangabey several months earlier in the course of their work in the Rungwe/Livingstone forests. It was thus out of concern for other threatened species and their forest habitat that the independent discoveries were made. A jointly authored description of the new species was prepared by the two teams (*Science*, 308, 1161–1164).

Data from the two projects suggests that the new mangabey should be categorized as Critically Endangered using the IUCN Red List criteria ([\[www.redlist.org/info/categories\\\_criteria2001.html\]\(http://www.redlist.org/info/categories\_criteria2001.html\)\), the major criteria being its extremely limited distribution, fragmentation into two populations, and the likelihood that its abundance is low. In Ndundulu Forest in the Udzungwas the major concern is that there are likely to be very few Highland mangabeys remaining, perhaps fewer than 500 animals. Our preliminary surveys found only three groups, all within a 3 km<sup>2</sup> area; previous surveys in this forest and discussions with local villagers indicated that the mangabey is absent from much of Ndundulu Forest. The forest is in good condition, although its status of Forest Reserve, as it is now classified, does not provide the degree of monitoring and protection that will fully assure survival of this small population of the mangabey. We are continuing efforts to encourage the Tanzanian government to incorporate Ndundulu Forest Reserve into adjacent Udzungwa Mountains National Park, thereby increasing the level of protection.](http://</a></p></div><div data-bbox=)

The most significant risk to this new species is the continuing severe degradation of the Rungwe-Livingstone forests. Unabated logging, poaching, and unmanaged resource extraction are of great concern, and unless there is immediate conservation intervention the narrow forest corridors linking the forests of this area will be destroyed and the Highland mangabey population in the Southern Highlands will become fragmented. This will add further pressure to a population estimated to only number 250–500 animals. The new Kitulo National Park should, however, provide increased protection for the portion of the population in Livingstone Forest. The mangabeys in Mount Rungwe Forest Reserve, in contrast, are severely threatened and immediate conservation intervention is imperative.

It is astonishing that, in 2004, a completely new species of African monkey can be discovered. Additional new primate taxa may yet be found, especially in biodiversity hotspots, which are receiving increased research and conservation attention. It is also likely, however, that such finds will be of highly threatened taxa, as is the case for the Highland mangabey. This should encourage everyone engaged in biodiversity conservation to redouble their efforts; without continued research taxa may be lost before they are even discovered.

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## Soaring sales of ivory items in Sudan

The Khartoum/Omdurman area of northern Sudan has become one of the largest ivory markets in the world. A survey in January–February 2005 sponsored by Care for the Wild International counted over 11,300 ivory items, almost all carved from new elephants tusks, in 50 shops. While Sudan has lost the majority of its elephants to poachers (numbers fell from c. 133,000 in the early 1970s to c. 40,000 in the early 1990s, with even fewer today), it is likely that most tusks in trade in northern Sudan are now coming from the Democratic Republic of Congo (DRC). Baggara horsemen from Darfur and southern Sudanese rebel soldiers using modern firearms have been crossing the border to poach elephants in, for example, the DRC's Garamba National Park, and taking the tusks into Sudan. Soldiers from the Sudan army, police and civilians are killing elephants in southern Sudan. The soldiers, with access to army vehicles, transport the tusks from southern Sudan to sell to traders and craftsmen in Khartoum/Omdurman. An average size tusk (only 2–3 kg nowadays) sells for USD 105 kg<sup>-1</sup>, as opposed to USD 20 kg<sup>-1</sup> to traders in the DRC.

Sudan bans the sale of tusks that have come from elephants killed after 1990, but almost all the ivory items seen for sale in Khartoum/Omdurman are made and sold illegally from new ivory from poached elephants. The Sudan government rarely seizes new tusks or worked ivory at the border, in workshops or in souvenir outlets. While much of the world has succeeded in reducing worked ivory sales, the Sudan government generally ignores shopkeepers who sell ivory items.

Chinese residents and visitors to Sudan buy over 75% of the ivory items on display in the shops, mostly jewellery and small figurines as souvenirs, and smuggle them to China in their luggage. There are also South Korean and Saudi Arabian buyers. However, the expanding numbers of Chinese working in Sudan, in the oil industry, mining and construction, mean that the 150 ivory craftsmen in Khartoum/Omdurman are busy catering to the growing Chinese demand for ivory items – including chopsticks (c. USD 13 per pair) and name seals.

Since the late 1990s more illegal tusks have been imported into China than into any other country; most originate from central Africa. The estimated number of African elephants being poached in central Africa for the illegal ivory markets in Asia and Africa, including Sudan, is 5,000–12,000 per year, which is above sustainable levels.

In October 2004 the CITES Conference of the Parties in Bangkok urged member states to comply with CITES, not only to fight ivory smuggling but also to clamp down on unregulated domestic ivory markets by mid March 2005. There is still no sign of this happening in Sudan. International pressure must be mounted on the Sudan government to enforce its own wildlife laws, and on the Chinese government to urge its citizens to stop buying ivory trinkets in Sudan.

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## Fiji's *Xixuthrus* longhorn beetles Vulnerable, not extinct

Fiji's giant longhorn beetles, *Xixuthrus heros* and *X. ganglebaueri* of Viti Levu, and *X. terribilis* of Vanua Levu and Taveuni (Yanega *et al.*, 2004, *Zootaxa*, 777, 1–10) are among the largest (14.5 cm body length) and rarest beetles in the world. So rare, in fact, that they have been declared extinct several times in popular books and on the internet. Recent research by Fiji's Department of Forestry and the Wildlife Conservation Society suggests these beetles should actually be categorized as Vulnerable ([http://www.redlist.org/info/categories\\_criteria2001.html](http://www.redlist.org/info/categories_criteria2001.html)) on the IUCN Red List. This proposed status is based on the natural history and rarity of these enormous beetles, making them sensitive to loss of natural forests, logging of the large host trees they require for reproduction, and intensive commercial exploitation.

Very large Cerambycid beetles are often naturally rare, possibly because of strong competition for suitable host trees. Fijian *Xixuthrus* larvae could live >10 years and we suspect a single tree may host only one or two larvae, at the most, based on observations of larval tunnels (5 cm diameter) in dead wood of a live *buabua* (*Fagrea gracilipes*, Loganiaceae). This tree, the only documented host tree species, had a diameter at breast height (dbh) of 80 cm. Standing trees of this size are uncommon in Fijian forests (we estimate <4 km<sup>-2</sup>) and they are targeted in logging operations. Fijian rainforests and larger trees continue to be lost through logging and agricultural expansion, and thus populations of beetles are probably declining. The abundance of large trees of suitable host species and moisture content may be key limiting factors for *Xixuthrus* reproduction.

Based on our recent collections adults probably live from May to September. They are strong flyers, which allows them to cover large distances in search of mates and host trees. During these flights both sexes are attracted, over long distances, to lights. The formidable appearance and hissing of adult beetles causes most to be killed when they arrive at lights and this may be an significant source of adult mortality for populations at the edge of natural forest.

Fijian *Xixuthrus* may also be declining throughout their range through predation on adults and larvae by alien mammals, specifically black, Pacific, and Norway rats, mongoose, cats, dogs and pigs. Our research suggests that pressure from rats and mongoose is lower >5 km from any forest edge. Thus, forest-edge beetle populations may be most heavily affected by alien mammal predation. Presently, logging of natural forests is intensive and logging roads, acting as highways for rats and mongoose, are now penetrating many remote areas. Thus, rats, lights, and logging may increasingly restrict populations of *Xixuthrus* to larger blocks of unlogged natural forest.

Fijians occasionally eat *Xixuthrus* larvae and adults, but this probably has minimal impact on beetle populations. Another potential threat is the introduction of beetle parasites to Fiji. Currently, adult Fijian *Xixuthrus* show no evidence of phoretic mites or pseudoscorpions (10 live specimens observed), a feature that is unusual, as large Cerambycids elsewhere typically host large numbers. Having evolved without phoretic symbionts may render Fijian beetles particularly sensitive to introduced parasites.

Finally, although there is little domestic market for these beetles as curios, good specimens of adult *X. heros* and *X. terribilis* have been offered for sale on the internet and at insect fairs for prices of USD 4,000–12,000. We have also encountered Japanese and Italian collectors and entomologists in Fiji seeking specimens of these beetles. Given their rarity, the market price and demand, and the potential for commercial collectors to employ banks of attracting lights, we are concerned about the potential for damage to populations of Fijian longhorn beetles. We feel it would be precautionary to apply CITES Appendix 1 status, Annex D of the European Wildlife Trade Regulation, and Fiji's Appendix III status to all Fijian *Xixuthrus*, given their natural rarity, vulnerability to commercial exploitation (the long larval stage of these beetles probably precludes commercial farming), and the need for more information about their distribution and ecology. Nominations are in preparation for each status. The recent case of an endemic Lucanidae (stag beetle) on Lord Howe Island being nearly wiped out by one collector is a cautionary tale. While the IUCN Red List, CITES status, EU Annex D, and Fiji's Appendix

III are important conservation tools, the most cost-effective and precautionary approach to ensure a future for these beetles is for Fiji to establish a network of larger forest reserves and to leave some larger trees standing after logging operations.

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### **Two international meetings on the conservation of the Mongolian gazelle and saiga antelope, Ulaanbaatar, October 2004**

Two international meetings on the conservation of steppe ungulates were held over 25–30 October 2004 in Ulaanbaatar, Mongolia. The first was devoted to the conservation and management of the Mongolian gazelle *Procapra gutturosa*, and was organized by the World Conservation Society (WCS), in collaboration with the US Agency for International Development, the UNDP/GEF Project on Biodiversity Conservation and Sustainable Livelihood Options in the Grasslands of Eastern Mongolia, the WWF Mongolian Program Office and the Mongolian Academy of Sciences. This conference had strong participation from Mongolian national and local government and protected areas managers, and brought together more than 100 local and international specialists studying the Mongolian gazelle.

The first day was a scientific workshop at which the key scientific issues that need to be tackled were identified and debated. One of the most contentious issues is the estimation of population size (see also *Oryx*, 39, 164–169). There is still no resolution either on the current population size or on the most appropriate methodologies for obtaining an estimate. Estimates range from c. 400,000 to >1 million. Currently various ground-based methods are used, and although there have been consistent long-term studies in particular areas, surveys of other areas have been more patchy. This is problematic for such a nomadic species and makes the interpretation of local trends difficult. A comprehensive aerial survey in 1994 by a Mongolian-German team estimated gazelle numbers at >4 million, but this has been controversial. Long-term (1994–2004) surveys in Eastern Mongolia conducted by a Mongolian-Russian team suggest that up to 1998 Mongolian gazelle numbers increased, but declined rapidly thereafter. At the workshop it was agreed that regular aerial surveys were necessary but

that funding is the limiting factor. It was also agreed that ground-based methods should be used to supplement and validate aerial surveys. Although the meeting did not resolve all issues, they were at least aired and there was general agreement that teams must work together. One of the outputs of the workshop was a GIS-based database prepared by WCS, containing information from a questionnaire survey of specialists. This provides a compilation of all the information on Mongolian gazelles, which is a step towards reaching consensus.

It was clear from the meeting that there is significant ongoing poaching, which is probably the cause of population declines. A joint Mongolian-Japanese team showed, using satellite-tagged individuals, that the Ulaanbaatar-Beijing railway disrupts movement patterns. The border fence between China and Mongolia is also a significant barrier to movement, and there are plans to build a road and oil pipeline in Eastern Mongolia, which is likely to disrupt movement further.

The second part of the meeting brought scientists and policy-makers together to move forward on an action plan for the conservation of the Mongolian gazelle. One strand of this was the consideration of a draft agreement for the management of transboundary populations of the Mongolian gazelle. The representative from the Convention on Migratory Species (CMS) helped to facilitate these discussions, and we hope that there will be a Memorandum of Understanding signed between China, Mongolia and Russia under the CMS. There has already been cooperation for a decade between the three range states within the framework of the Dauria International Russian-Mongolian-Chinese Protected Area. This could form a good basis for a broader agreement covering the whole range of the species.

The second meeting, on the Mongolian saiga *Saiga tatarica mongolica*, was organized by the WWF Mongolian Program Office and the Mongolian Academy of Sciences. This was a timely meeting at which the dire status of the Mongolian saiga was outlined (see also *Oryx*, 38, 250–251). In recent years conservation intervention by WWF-Mongolia and colleagues has had substantial success; in 2002 the population reached a peak of c. 5,000 animals and local people were engaged in a benefit-sharing project funded by WWF's Large Herbivore Initiative. However, funding ceased and a series of bad winters combined with poaching reduced numbers to c. 750 in spring 2004. The meeting was very concerned about the effect that another bad winter in 2004/5 might have on the population, and policy recommendations were dominated by suggestions for actions to mitigate the effects of bad weather, as well as continuing to enlist the support of local people for saiga conservation.

Presentations were given by members of the UK Darwin Initiative supported project *Using Saiga Antelope*

*Conservation to Improve Rural Livelihoods* on their work in Kalmykia and Kazakhstan, strengthening conservation capacity and raising public awareness. Information was also given about the successful captive breeding facility in Kalmykia, and it was suggested that there might be a strong case for collaborating to set up a similar facility in Mongolia.

The Mongolian saiga has been neglected by international conservation bodies and this needs to change if this subspecies is not to be lost. It was agreed that awareness could be raised by ensuring that Mongolia was included in the *Memorandum of Mutual Understanding Concerning Conservation, Restoration and Sustainable Use of the Saiga Antelope* (*Saiga tatarica tatarica*) to be signed under the CMS, and in the action plan for saiga conservation drawn up in Elista in 2002.

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### The first botanical expedition to the Putu Hills, south-east Liberia

In May-June 2005 a joint expedition of the Universities of Wageningen (Netherlands) and Liberia (Monrovia) visited the Putu Hills in south-east Liberia for 3 weeks. The Putu Hills consist of two narrow, iron-rich ridges running north-south and rising abruptly to over 800 m. This small, isolated mountain group lies deep within the Upper Guinean rainforest belt of West Africa. No botanical expedition had previously visited the Putu Hills. The team explored the eastern Putu range and the southern extensions of both ridges, collecting 467 plant species, 93 of which are endemic to the Upper Guinean Forest. At least six apparently new species were discovered, and several other rare species were found including six not previously recorded from Liberia. For unknown reasons species from the *Areaceae* family were unusually abundant.

The team found most of the Putu Hills covered in intact forest. Higher-elevation areas of the eastern ridge have distinct characteristics: dense moss cover on stems and branches, and montane species of epiphytic ferns. It is likely that the slopes the valleys between ranges remained under forest cover during drier ice-ages when much of the surrounding lowland was savannah. Because the expedition took place at a sub-optimal time for flowering and fruiting the species collected represent only a modest portion of the diversity of the Hills. Orchids in particular appear to be diverse but could not be collected because few were flowering. Future

expeditions should explore the flora of the Hills at more optimal times, and examine the western ridge as well as the forest in the valley between the ridges.

Logging, farming and iron mining are all possible threats to the Putu Hills, whose rich floral diversity could be rapidly lost because of their small area. The area should be considered urgently for official conservation protection based on botanical diversity.

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### New and improved internet resources

In July 2005 information on the Eastern Arc Mountains global centre of endemism in Tanzania was made available at <http://www.easternarc.or.tz>. This is the web site of the *Eastern Arc Mountains Conservation Endowment Fund*, the only sustainable financing mechanism dedicated to the conservation of the forests of the Eastern Arc. If you have published papers or written unpublished reports on any aspect of conservation in the Eastern Arc, or know of financial opportunities to support conservation in the Eastern Arc, the Fund would be pleased to hear from you (contact [eamcef@easternarc.or.tz](mailto:eamcef@easternarc.or.tz))

*NatureServe Explorer* (<http://www.natureserve.org/explorer/>) is an authoritative source for information on more than 65,000 plants, animals, and ecosystems of the United States and Canada. *Explorer* includes in depth coverage for rare and endangered species.

*InfoNatura* (<http://www.natureserve.org/infonatura/>) is a conservation and educational resource on the birds, mammals and amphibians of Latin America and the Caribbean, covering more than 8,500 common, rare and endangered species.

*Bushmeat IMAP* (<http://www.bushmeat.org/IMAP/index.html>) is an initiative developed by the Bushmeat Crisis Task Force (BCTF) to create a central repository of information on bushmeat hunting, consumption and trade worldwide, with a particular focus on sub-Saharan Africa and especially Central Africa. *Bushmeat IMAP* involves both the process of gathering information and mechanisms for cataloguing and sharing it, including a searchable library of key legislation, published research, internal reports & media, a customizable map maker for finding and mapping information on protected areas, roads, concessions, human settlements and wildlife distributions in Central Africa, and a geo-referenced database of conservation projects worldwide, and hunting and market sites of concern in sub-Saharan Africa.

WWF US recently launched *WildFinder* (<http://www.worldwildlife.org/wildfinder>) a map-driven, searchable database of more than 30,000 birds, mammals, reptiles and amphibians worldwide with a powerful search tool that allows users to discover where species live or to explore wild places to find out what species live there.

A new e-bulletin, *Saiga News*, is now available at <http://www.iccs.org.uk/saiganews.htm> and <http://saigak.biodiversity.ru/publications.html>. The first issue includes articles about the status of saiga in Turkmenistan, the role of saiga horn in traditional Chinese medicine, and genetic differentiation between saiga populations, as well as updates on regional and international saiga conservation and highlights of press coverage of saigas in the range states and elsewhere. *Saiga News* will be published twice a year, and it is hoped that it will be used as a forum for the dissemination of saiga information to all interested parties. It is currently available as a PDF file, and in hard copy upon request, in English and Russian. Chinese and Mongolian versions will be available in the near future.