

HUNTED IN ANGOLA

SURVEYING THE BUSHMEAT TRADE

ELENA BERSACOLA¹



has a background in art and an MSc in Primate Conservation. She is currently carrying out research on primates and ungulates in Africa and Southeast Asia.

MAGDALENA S. SVENSSON¹



has an MSc in Primate Conservation and has for the last seven years studied nocturnal mammals in Africa and the Neotropics.

SIMON K. BEARDER¹



is Emeritus Professor of Anthropology and has 45 years of experience conducting field studies of nocturnal mammals in Africa.

MICHAEL MILLS²



has an MSc in Conservation Biology. Michael Mills is a specialist bird guide and has conducted bird research throughout Africa for the past fourteen years.

VINCENT NIJMAN¹

trained as a biologist. He is currently Professor of Anthropology and has studied the international wildlife trade for the last two decades.

¹Oxford Brookes University, Oxford, UK.

²A. P. Leventis Ornithological Research Institute, University of Jos, Nigeria. Corresponding Email: hellenbers@gmail.com



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Bushmeat on the side of the road. This adult male Blue monkey was displayed for sale about 80 km from the capital Luanda.

Angola is flourishing. So is its bushmeat trade. A cursory drive down major roads or visits to rural markets show the extent to which wildlife is being sold for food. But how to quantify this major threat to conservation in a country known as a hotspot for birds, mammals and plants¹? In September 2013 we visited Angola to conduct a wildlife survey in the Angolan Escarpment.

At least 18 species of primates are believed to range in Angola. One subspecies of Blue monkey (*Cercopithecus mitis mitis*) is endemic to the Angolan Escarpment, and this area represents approximately one-third of the estimated range of Southern talapoin monkeys (*Miopithecus talapoin*)². Conservation studies in

Angola are rare as over 40 years of conflict made it essentially impossible to conduct fieldwork in the country.

Angola is now experiencing one of the fastest post-war economic booms, driven by a massive export in petroleum products (over 90% of the total exports). Angola is Africa's second largest oil producer, and during the past few years the country has become China's major oil supplier. Chinese banks have already provided over \$14 billion of financial loans for reconstructing roads, railways and social infrastructures^{3,4}. Although roads provide a number of benefits to local people, they are mainly built by Chinese nationals and often have a negative impact on the environment. The improved access of newly constructed roads tends to promote

¹ Ryan PG, Sinclair I, Cohen C, Mills MSL, Spottiswoode CN & Cassidy R. 2004. The conservation status and vocalizations of threatened birds from the scarp forests of the Western Angola Endemic Bird Area. *Bird Conservation International* 14: 247-260.

² IUCN. 2013. *IUCN Red List of Threatened Species*. Version 2013.2. Available at: www.iucnredlist.org

³ Naidu S & Mbazima D. 2008. China-African relations: a new impulse in a changing continental landscape. *Futures* 40: 748-761.

⁴ Kabemba C. 2012. Chinese involvement in Angola. Open Society Initiative for Southern Africa. Available at: www.osisa.org/books/regional/chinese-involvement-angola

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Top: Female Blue monkey and Blue duiker presented for sale.

Below: Adult male Southern talapoin monkey for sale. Bushmeat carcasses on the side of the road were often displayed hanging from a wooden structure; easy to spot them whilst driving.

and increase logging and poaching in previously isolated localities⁵.

Across Central and West Africa, bushmeat can be seen marketed on the side of the road, sold locally and/or transported to city markets where it fetches higher prices. To quantify the impacts of the bushmeat trade on wild populations, studies have focused on monitoring the market off-take and supplies, trends in bushmeat demand and estimates of the remaining animal population numbers in the wild⁶. For

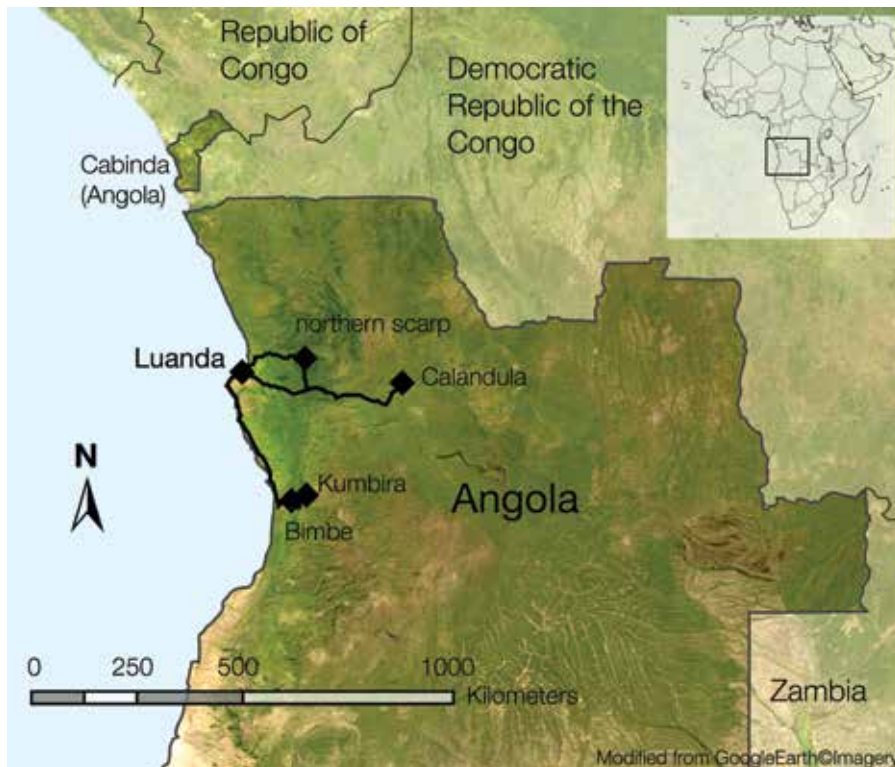


Fig 1 Map and location of survey route (black thick line) and camping sites (black diamond).

example, over half of the taxa hunted for bushmeat in the Congo basin are exploited at unsustainable levels⁷.

According to the current legislation in Angola, it is the responsibility of the government to promote the conservation of natural resources by regulating their exploitation. The state's task is to maintain ecological balance by taking necessary measures to protect the environment and wildlife throughout Angola. Thus, actions that damage or threaten environmental conservation are punishable by law⁸. In 1999 the Ministry of Agriculture and Rural Development published the Combined Executive Decree No. 37/99 of 27 January 1999. Annex 1 of this document comprises a list of animals that are prohibited from being hunted; these including giraffes and rhinos as well as all marine turtle and crocodile species. Under Annex 2 animals are

listed for which controlled hunting is allowed, including lions, leopards, impalas and porcupines⁸. Whether these laws are enforced by the Angolan authorities is still unclear.

We traveled to Kumbira Forest and the Bimbe area (Gabela region), approximately 350 km south of Luanda, and subsequently to the northern scarp and Calandula forest areas, about 170 and 380 km northeast of Luanda respectively (Fig 1). These two regions are mainly inhabited by different Bantu ethnic groups: the Ovimbundu people live south of Luanda and the Ambundu to the northeast of the capital. At each of the four sites we camped for three to four nights in order to conduct nocturnal surveys. As we were aware of the paucity of conservation data from this region, during our fieldwork we also collected data on hunting and the wildlife trade: 1) we surveyed along the

⁵ Chomitz KM & Gray DA. 1996. Roads, landuse, and deforestation: a spatial model applied to Belize. *The World Bank Economic Review* 10(3): 487-512.
⁶ Fa JE, Yuste JEG & Castelo R. 2000. Bushmeat markets on Bioko Island as a measure of hunting pressure. *Conservation Biology* 14(6): 1602-1613.
⁷ Fa JE, Peres CA & Meeuwig J. 2002. Bushmeat exploitation in tropical forests: an intercontinental comparison. *Conservation Biology* 16(1): 232-237.
⁸ Jones BTB. 2008. *Legislation and policies relating to protected areas, wildlife conservation, and community rights to natural resources in countries being part in the Kavango Zambezi Transfrontier Conservation Area*. Conservation International/African Wildlife Foundation/Swiss Agency for Development and Cooperation. Windhoek



PHOTO BY: SIMON K. BEARDER

Bushbuck and Blue duikers for sale.



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One of the 11 Leopard skins openly displayed for sale at the Benfica craft market, Luanda.

Large items are also displayed on the ground and hanging from beams. We systematically counted the animal products on sale, and recorded species and type of item. As many of the tables displayed hundreds of small items we took photographs to aid with the counting.

We surveyed about 1400 km of small and main roads south and northeast of Luanda. We encountered bushmeat for sale at 13 locations, of which one was in the Gabela region and 12 to the northeast of Luanda. We observed hunters harvesting one Blue duiker and one Yellow backed duiker. The most numerous species found in the bushmeat trade were Blue duikers (45.1%), Blue monkeys (11.3%), Bush hyraxes (9.9%) and Yellow backed duikers (8.5%) from a total of 71 individuals recorded (Table 1). For 25 fresh carcasses, the hunting technique was evident. Eighty four percent of these fresh carcasses were hunted with shotguns, 16% were trapped using metal or string snares. All fresh carcasses were killed the same day they were presented for sale; at none of the sites was there an opportunity to store perishable goods, but whatever was not sold would be dried or smoked and presented for sale again. Some vendors said they hunted the animals themselves.



PHOTO BY: SIMON K. BEARDER

Genet carcasses for sale.

roads between field sites and in Luanda; 2) we collected data opportunistically about wildlife hunting at each field site; and 3) we visited the Benfica craft market in Luanda to collect data on animal products on sale there.

When sighting any wild animals on sale by the side of the road, we took a GPS position, collected data on species, type of carcass, sex and approximate age of the individuals, and we queried vendors about prices and the way the animal was hunted. In general, vendors were willing to discuss hunting and the bushmeat trade, and they usually allowed us to take photographs.

On 19 September 2013 we visited Benfica Mercado do Artesano, an approximately 800 m² open market situated in Luanda. The market is arranged in two sections: one that includes mainly fabric, grass and wooden products and the front section which houses mainly animal and wooden items displayed on tables.

Table 1: Wildlife seen harvested or on sale on the side of the road in Angola

Species	Status ^a	Harv Fresh	On sale Fresh	Other	Hunting technique	Price (AOA)	Total	%
Blue duiker	LC	1	31		Sg (7), T	3000-3850	32	45.1
Yellow backed duiker	LC	1	1	4 sm	(1)	25,000 ^c	6	8.5
Angolan blue monkey	DD ^b		8		Sg	1500-3000	8	11.3
Southern talapoin monkey	LC		1		Sg (2)	1500	1	1.4
Bushbuck	LC		2	2 sm	Sg	9000 ^c	4	5.6
Bush hyrax	LC		7 ^d		Sg (1)	1000-2500	7	9.9
African giant squirrel	LC		1		T (2)	500	1	1.4
Cane rat	LC		3	1	Sg	8000	3	4.2
African civet	LC		1		Sg (3)	6000	1	1.4
Large spotted genet	LC		1		Sg	1500	1	1.4
Small spotted genet	LC		2		Sg	1500	2	2.8
Tree pangolin	NT			2 live	Sg	2000	2	2.8
Nile crocodile	LR/LC			1 skin		8000	1	1.4
Monitor lizard	NA		1		Sg	5000	1	1.4
Tufted guineafowl	LC			Remains	T		1	1.4

^aData from IUCN (2013): LC = Least Concern, DD = Data Deficient, NT = Near Threatened, LR = Lower Risk, NA = Not assessed; ^bat subspecies level; ^cprice is for fresh carcass; ^dtwo animals on sale in Gabela area, Harv = harvested by hunters; AOA = Angolan Kwanza (approx. 100 AOA = 1 USD); sm = smoked; Sg = shotgun; T = trapped, Hunting technique: values in brackets represent number of carcasses of which hunting technique was known by the researchers.

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Immature Tree pangolin advertised for sale. The hunter informed us that the Tree pangolins were seen travelling together and were caught by hand. They were to be sold for bushmeat and to ensure that the meat would remain completely fresh the vendors kept them alive.

Prices of bushmeat varied among species, ranging between 500 AOA (approximately \$5) for a 0.7 kg African giant squirrel to 25,000 AOA (approximately \$250) for a 65 kg Yellow backed duiker. Prices appeared to be correlated with size of the animal.

We observed indications of hunting at all camping locations. Whilst staying in Kumbira we heard gunshots at night and observed a hunter harvesting a Blue duiker which was trapped using a metal snare. We also observed a number of spent cartridges along roads and trails. In Bimbe we did not hear gunshots or see any carcasses. We however asked the village chief if anyone there would hunt and he told us that Blue monkeys were an easy animal to hunt close to the village. In the northern scarp forest we heard gunshots at night and observed two hunters harvesting a

Yellow backed duiker. In Calandula we heard gunshots at night and observed hunters with rifles heading into the forest at dusk and returning to the village at dawn.

We visited Benfica market in Luanda and observed several animal products for sale (Table 2). Most common was Elephant ivory, comprising raw tusks and some two thousands of other carved ivory items. Details on the ivory at this market can be found in Svensson *et al*⁹. Of the remaining 48 animal products, large marine turtle shells represented 56.5% and Leopard skins 23.9%. Turtle and tortoise shells comprised 25 large (60-100 cm) and one small (approximately 20 cm) respectively. Half of the turtle shells were painted or displayed carved designs on the surface of the shell. All Leopard skins were from large individuals and price appeared to be correlated with size. We observed four live birds in one cage and an infant Blue

⁹ Svensson MS, Bersacola E, Bearder SK, Nijman V & Mills M. In press. Open sale of elephant ivory in Luanda, Angola. *Oryx*.

Table 2: Wildlife products and live animals seen on sale in Luanda

Species	Item	Number	Price (AOA)
African elephant	Ivory	2064	
Marine turtles	Shells	25	
Tortoise	Shell	1	
Leopard	Skins	11	60,000-150,000
Nile crocodile	Handbags (2), skull	3	
Monitor lizard	Handbag	1	
Greater kudu	Horns	2	
African grey parrot	Live	2	35,000
Red fronted parrot	Live	2	35,000
Angolan Blue monkey	Live infant	1	50,000

We also had the opportunity to interview a person about trade of great apes in Angola. The interviewee has lived in Luanda since 2007 and was involved in the rescue of Chimpanzees occurring in the pet trade in Angola. During 6.5 years of living in Luanda, our interviewee was aware of 20-25 Chimpanzees having been kept as pets in Angola. The interviewee had been involved in rescuing seven of these Chimpanzees, transferring them to a rescue center in South Africa.

All Chimpanzees occurring in the pet trade are believed to originate from the Cabinda enclave adjacent to the Democratic Republic of Congo. Chimpanzee pet owners were identified by our interviewee as mainly expatriates from Portugal and Brazil. One of the main purposes of keeping Chimpanzees as pets appeared to be to promote entertainment, such as attracting clientele to restaurants and clubs. According to our interviewee, Chimpanzees were often provided with drugs and alcohol for the sole purpose of entertainment. Our interviewee noted a decline in prices for infant Chimpanzees, as in 2007 they were sold for around \$3000, and in 2013 she learned of someone paying only \$1000.

monkey inside a second bird cage. The infant Blue monkey appeared stressed and malnourished.

In rural areas across West and Central Africa bushmeat can be relatively cheap and in some cases it constitutes the main source of animal protein for local people. In contrast, in urban areas it is often expensive and viewed as luxurious food¹⁰. Our findings indicate that in Angola bushmeat hunting is practiced for local consumption as well as a source of income. In West and Central

Africa, the taxa most commonly hunted for bushmeat appear to be duikers, as well as primates¹⁰. Our results are consistent with this trend, as 53.6% of the animals found in the bushmeat trade were duikers, whilst 12.7% were primates.

Across sites in Africa, shotguns appear to be commonly used to hunt large species, such as monkeys and duikers, whereas snares are more effective for hunting smaller animals, such as Blue duikers⁶. The use of



PHOTO BY: ELENA BERSACOLA

African giant squirrel hunted with shotgun and displayed for sale.

shotguns is associated with intensive hunting pressures for primates. On Bioko Island, hunting with shotguns almost caused the local extirpation of Black colobus monkeys (*Colobus satanas*)¹¹. In Angola, Blue monkeys were the second most commonly hunted species. Angolan Blue monkeys are restricted to the Angolan Escarpment; overhunting of this primate, possibly leading to localized extinctions, is likely to have disastrous impacts on their population.

The proliferation of new roads into previously remote areas has often been associated with increased hunting. New roads built by European companies in the 1980s in Cameroon have led to a significant increase in the bushmeat trade¹². Bushmeat hunters were able to access remote areas more easily while the costs of transporting the carcasses diminished considerably¹². In Angola we saw several main roads under construction around Luanda, as well

¹⁰ Bowen-Jones E, Brown D & Robinson EJZ. 2003. Economic commodity or environmental crisis? And interdisciplinary approach to analysing the bushmeat trade in central and west Africa. *Area* 35(4): 390-402.
¹¹ Kümpel NF, Milner-Gulland EJ, Rowcliffe JM & Cowlishaw G. 2008. Impact of gun-hunting on diurnal primates in continental Equatorial Guinea. *International Journal of Primatology* 29: 1065-1082.
¹² Wilcox AS & Nambu DM. 2007. Wildlife hunting practices and bushmeat dynamics of the Banyangi and Mbo people of southwestern Cameroon. *Biological Conservation* 134(2): 251-261.



PHOTO BY: MAGDALENA S. SVENSSON

majority of these people are Portuguese and Chinese expatriates. The University of Stellenbosch (South Africa) estimated that over 40,000 Chinese immigrants were in Angola in 2007. Most Chinese workers in Angola are employed by Chinese construction companies¹³. Eating wildlife is part of Chinese culture and a symbol of status¹⁴. The large presence of Chinese workers in Angola might therefore be contributing to fueling the demand for bushmeat, increasing the bushmeat and wildlife trade, as well as the trade in animal products.

The Angolan population of Chimpanzees is only found in Cabinda, but to date there is no exact estimates on their population size. In 2003 Kormos *et al*¹⁵ gave a rough estimate of 200-500 Chimpanzees in Cabinda. This extremely small number makes the population vulnerable to threats such as overhunting. In 2006 the Angolan government published a National Action Plan for Biodiversity to implement a permanent ban on hunting of endangered species, including Chimpanzees, by 2012¹⁶. As apparent by the ongoing pet trade in Chimpanzees, this ban is currently not enforced properly by the authorities. The number of Chimpanzees found in the Angolan pet trade is alarming and it remains to be seen whether any are left in the wild or the animals seen were in fact exported from the Democratic Republic of Congo.



PHOTO BY: ELENA BERSACOLA

Top: Female Chimpanzee kept in the outdoor area of a restaurant in Luanda. Below: Monitor lizard and Bushbuck on sale north of Luanda.

as logging roads in the rural areas. We predict that wildlife hunting and trade is likely to increase in these areas due to this development.

Despite hunting off all marine turtle species being illegal in Angola they were well represented in the Benfica craft market, as were ivory and crocodile items. A large proportion of

the items for sale seemed to be aimed at Asian clientele, as we observed many objects with Asian references⁹. We also observed Chinese clientele by the bushmeat stalls along the main roads. According to the United Nations' Department of Economic and Social Affairs, about 87,000 immigrants are currently present in Angola. The

In Angola there is a relatively high demand for bushmeat and animal products, which are openly available on the side of the road and in the main craft market in Luanda. The impacts of this trade on wild populations need to be examined. Conservation efforts are urgently required to monitor the trade and prevent the overexploitation of wildlife to the detriment of intact ecosystems in Angola. ●

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 14. McKenna P. 2009. Eating wildlife is part of Chinese culture. *New Scientist*, 2717.
 15. Kormos R, Boesch C, Bakarr MI & Butynski TM. 2003. *Status survey and conservation action plan: West African chimpanzees*. IUCN/SSC Primate Specialist Group, Gland, Switzerland.
 16. Kuedikuenda S & Russo V. 2006. *Strategy and National Action Plan for Biodiversity (2007-2012) - Resolution No. 42/06 of July 26, 2006*. Ministry of Urbanism and Environment, Luanda.