

# The African Bushmeat Trade: Triggering Disease Threats and Destroying Biodiversity

## Claire Daniels

The trade of wild primates, or bushmeat, for the purpose of consumption has increased exponentially over the last decade, most notably in Central and Western Africa. Close contact with these animals poses a threat to both human and primate health. This phenomenon has originated from deforestation by timber industries, easing access to natural habitats, as well as the growth of a large human population deficient in dietary protein [1]. Hunting as a traditional practice of subsistence has been replaced by a lucrative industry that is fueled by increasing demand from both domestic and international markets. From spotlight hunting for nocturnal creatures, to guns for long range attack, techniques have been developed to give the hunter an unprecedented advantage and to greatly improve yields and devastate the forests [1].

“ The hunter [has] an unprecedented advantage. ”

With recent changes in environment and limited access to provisions, many new communities are turning to bushmeat as a last resort. For example, inhabitants in the vicinity of the coast have depended on successful fish harvests for employment and income, but facing low harvests has caused them to seek alternatives. The fish market in Western Africa is characterized by unpredictability, as the annual harvests have fluctuated from 230,000 to 480,000 tons in the past thirty years with as large as a 24% deviation between successive seasons [2]. Justin Brashares from The Berkeley Institute of the Environment examined thirty years of local fish market sales and pricing data from Ghana, finding a strong correlation between the fish supply and the consumption of bushmeat. The amount of fish per capita has decreased since 1970 despite the expanding harvests, due to a threefold increase in size. The annual bushmeat trade

within the region of Ghana alone is estimated at 400,000 tons [2]. Still, the figures below illustrate the native preference for fish, as the hunting of bushmeat decreases when the fish supply is sufficient. Overall, there has been a 50% decline in fish biomass in the offshore waters surrounding the coast of Africa, and this decrease is proportionally met by an increase in mammal biomass consumed [2].

The most damaging consequences of these unsustainable activities include the loss of biodiversity in tropical hotspots, as well as the risk for viral transmission from wild primates to humans. Many tropical zones that are home to rich levels of biodiversity are the same regions with the highest human population growth rates, averaging 3.1% each year [3]. In the past, habitat destruction has been considered the leading cause of species extinction across all of the continents, as fragmented habitats failed to provide the resources necessary to support the contained species. Amidst the conflict in Africa, in particular, European powers and multinational companies have found it easy to take advantage of the cheap land, and continue to divide forests with their access roads and factories. While deforestation is still a serious problem, it was not until 2001 that the International Union for Conservation of Nature (IUCN) disclosed the severity of the impact of the bushmeat trade on extinction rates.

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The IUCN Red List of Threatened Animals has shown an increased danger for mammal populations, most significantly in the primate order. Their research has shown that in Asia, 71% of species are hunted unsustainably, 68% in Africa and 40% in Latin America [3]. And since 1970, the loss of biodiversity in tropical African regions has been quantified

Declining fish stocks lead to increased bushmeat trade. Reproduced from [9]



Hunting quota imposed to sustain population. Reproduced from [10]



by the 76% decline in biomass of 41 mammal species [4]. Scientists argue that the world is currently experiencing the sixth mass extinction event in history, and these statistics support the hypothesis that wildlife populations are being decimated even faster than their habitat can be torn down.

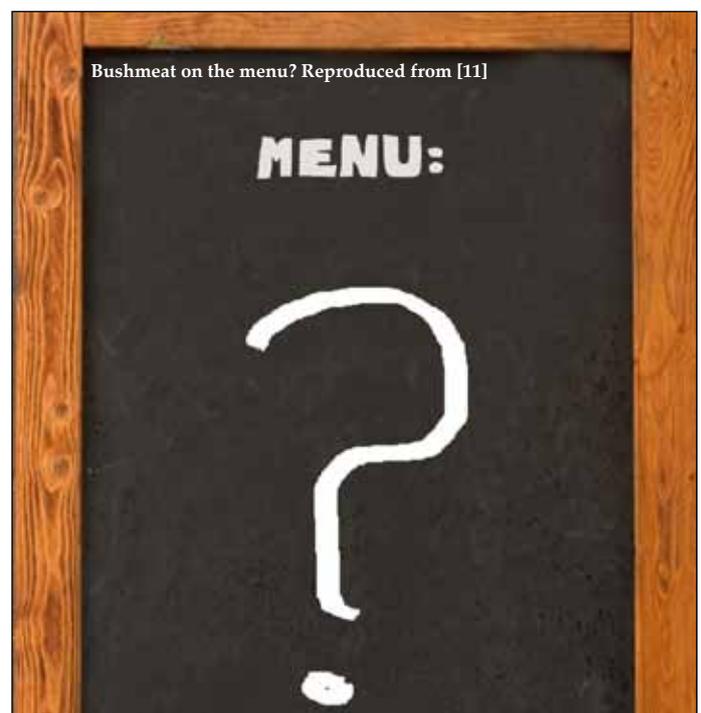
Another problem that compromises the health of the African community is the increased human contact with primates, putting both groups at risk for the communication of new diseases. Empirical evidence has demonstrated a growing threat for new viruses to make the jump from simian to human, just as HIV resulted from the zoonosis of Simian Immunodeficiency Virus (SIV) from chimpanzees and sooty mangabeys to humans. In 2002, a random sample of 1,100 villagers in Cameroon were examined and ten of the subjects (1%) were found to have antibodies to Simian Foamy Virus (SFV), which was previously thought to only infect primates [5]. All of the infected subjects had either worked in the bushmeat market or had kept primates as pets. While SFV does not cause disease, these antibodies serve as a marker that transmission is possible, and even likely. Through habitat encroachment, humans are challenging the natural gap between man and primate, jeopardizing biodiversity and putting both groups at risk.

African communities are hesitant to accept these findings, as they claim that bushmeat has been a part of their diet for thousands of years, while the AIDS pandemic has only recently developed. In response to this defense, it has been determined that “contained exposure to small indigenous pockets of SIV” have occurred throughout this history, but spread has been prevented due to the historic isolation of villages [1]. Today the interactions between wilderness, rural, and urban locations facilitate the proliferation of an emerging infectious disease. Eighty percent of these EIDs can be attributed to human-primate contact, including the Ebola virus that began in Sub-Saharan Africa and spread to Indonesia and the Philippines [6].

While the bushmeat trade has been made illegal in most parts of Africa, the economic incentives of the multi-million dollar industry have taken priority over the observance of

conservation and health policies. The international market plays a significant role in the demand for bushmeat, especially in ethnic open air markets and the exotic restaurant industry in big cities where customers are willing to pay elevated prices. Thousands of pounds of bushmeat are smuggled into the US each month, with an average of a five hundred pounds being confiscated through K9 teams and X-ray machines in customs each day [7]. In 2002, congress called for programs promoting internal awareness of this crisis as well as the instatement of strict trade barriers with Africa, with adverse publicity exposing the source of this exotic meat. However, the inhibition of the international market will not alone resolve the issues facing Africa, and solutions must be offered from within. Strategies to manage the domestic problems must offer alternative sources for income and meat consumption by exploiting indigenous resources, such as

Bushmeat on the menu? Reproduced from [11]



Trade in primates is of most concern for both wild populations and human health. Reproduced from [12]



ecotourism. Communities must also be educated about the damage they are inflicting on their forests, as well as on their health, so they may elect to change their eating habits and participate in recovery efforts.

Doctor Anthony Rose, founder of the Bushmeat Crisis Task Force in Washington D.C., has participated in on-site research at logging camps in Africa and has presented the steps that he took to help an ex-hunter in Cameroon, Joseph

“ **Successful policies must unite traditional values and modern needs.** ”

Melloh, transform a town's business of bushmeat and logging into one of conservation and tourism. Two communities in the surrounding area worked together to care for the forest and invest in gorilla research, using this resource to generate a more consistent source of income without a loss to biodiversity [7]. Similarly, the Communal Areas Management Program for Indigenous Resources (CAMPFIRE) encourages the population of Zimbabwe to exploit its unproductive land by using their natural reservoir of elephants, buffalo,

and lions to attract international trophy hunters. To ensure the safety of the animal populations, The Department of National Parks and Wildlife Management have set quotas on the sustainable harvest of elephants, a population that has recently doubled in size. In its 18 years of operation, the families participating in CAMPFIRE have increased their household income by 15-25% [8]. Still, this program is met with criticism by some Western NGOs, but it is a safe and dependable alternative to aggressive hunting and unhealthy consumption of wild animals.

Curtailing the increased volume of bushmeat trade is vital to both wildlife and human populations around the world. Efforts to halt the damage being performed depend on the support from developed countries, first in the rejection of bushmeat within their borders and then in the search for sustainable alternatives for protein and income. Successful policies must unite the traditional values of the villages and the modern needs of the community. If this market can be controlled and appropriate dietary substitutes can be found, these tropical hotspots may avoid further extinctions and villages may still escape the transmission of deadly viruses, such as HIV. ■

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[10] African Bush Elephants by Scott Beddard. Wikimedia Commons under CC-BY. Available from: [http://commons.wikimedia.org/wiki/File:Loxodonta\\_africana\\_-\\_Africa\\_-\\_drinking-8.jpg](http://commons.wikimedia.org/wiki/File:Loxodonta_africana_-_Africa_-_drinking-8.jpg)

[11] Board 4 by Kriss Szkurlatowski © sxc.hu. Available from: <http://www.sxc.hu/photo/1027544>

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