

Food for thought

Guy Cowlshaw investigates the bushmeat trade in Ghana.

Bushmeat, the meat of wild animals, is widely eaten in West and Central Africa. Many different animals are hunted for income or subsistence, mostly mammals – especially larger antelope, primates and rodents. Over recent years, concern has grown that bushmeat hunting is unsustainable. This doesn't only threaten the hunted species with extinction – an unsustainable trade will eventually lead to the loss of a food source and cash income to those who eat and sell bushmeat, many of whom already live in poverty. There is therefore an urgent need to find ways of making the bushmeat trade sustainable. But how might such a sustainable trade be achieved?

We investigated this question by studying the urban bushmeat trade in the city of Takoradi, Ghana. We chose a city market because the urban trade has traditionally been most strongly associated with unsustainable levels of bushmeat extraction (primarily due to its large consumer populations). We reasoned that if urban markets can still exist, despite apparent overexploitation, then they might have interesting and important

lessons to teach us about sustainability. We also studied the bushmeat commodity chain that supplies the market, on the basis that any future management of the trade will require knowledge of its structure.

Along the commodity chain, we found a variety of different actors, comprising hunters, wholesalers, market traders, and café owners. Individually, the largest share of the trade was handled by wholesalers, but, as a group, café owners sold most bushmeat to the public. Hunters appeared to make the most profit per sale, but there was no evidence that they (or any other group) controlled the trade. Rather, all actors appeared to trade freely among one another. These findings indicate that the participation of all groups in the commodity chain is likely to be necessary for the effective management of the Takoradi bushmeat trade.

Surprisingly, however, we found that the Takoradi bushmeat trade is sustainable. All of the species sold in the market, which comprised mostly small antelope and rodents, were being sold at



levels which we predicted to be sustainable. And, unlike most unsustainable hunting systems, there was no evidence of local depletion around the city. Larger species were just as likely to come from the outskirts of Takoradi as they were from the edge of the city's hunting catchment about 170km away. Finally, over the last 30 years, the price of bushmeat had declined, both in real terms and relative to domestic meat, thus providing no evidence of a growing scarcity of bushmeat.

How could a large urban centre like Takoradi (Ghana's third biggest city) manage to achieve a sustainable bushmeat trade, when in so many other places in tropical Africa bushmeat is overexploited? The answer lies in the dynamic nature of bushmeat harvesting systems. We looked at the species inventory for mammals appearing in the market, and compared it to the mammals that we would have expected to see given local species distributions, habitat preferences, and legal status (species that could be legally hunted). We found that all species with low reproductive rates, including





Anti-bushmeat poster in Ghana, West Africa. Old markets are likely to have already lost their vulnerable species. Conservationists should focus on new markets.

buffaloes, forest hogs, large antelopes and primates, were missing. At the same time, we interviewed bushmeat hunters. The hunters reported that there had been a historical decline in bushmeat species, but that there had been no further change over the past eight years.

These findings suggested to us that the unsustainable hunting of vulnerable (slow-reproducing) bushmeat species in previous decades had already driven these animals to extinction around Takoradi, and that the only species left were those that were robust to hunting – species with high reproductive rates, such as cane rat and Maxwell’s duiker. Thus Takoradi may not be so different to other localities in tropical Africa after all. The local bushmeat trade has been characterised by overexploitation in the past, and is now sustainable only because the remaining species can cope with high rates of hunting.

What lessons does this assessment of sustainability teach us about managing the bushmeat trade elsewhere in tropical Africa? The first lesson is that mature

markets are likely to have already lost their vulnerable species, so conservation attention should focus primarily on young markets where vulnerable species might still be protected. The second, and most important, lesson is that if a large urban

centre like Takoradi can be sustainably supplied solely with fast-reproducing species, then in

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principle it should be possible to protect vulnerable species from hunting while permitting a sustainable trade in robust species. While implementing such an approach is likely to be very challenging in practice, it suggests that there is a solution to the widespread overexploitation of bushmeat that we can work towards. This solution has the potential both to prevent species extinctions and to allow local people to continue to benefit from bushmeat.

Want to know more?

The Bushmeat Research Programme tackles the biological, economic and social aspects of the trade, using a variety of approaches including field research and mathematical modelling. There are presently ten projects in the programme, based in six countries across West and Central Africa.

See www.zoo.cam.ac.uk/ioz/projects/bushmeat.htm