

Quantifying giraffe poaching as population threat

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The trade in wild meat, or bushmeat, is recognised as one of the most important challenges for wildlife conservation in Africa (Milner-Gulland *et al.* 2003). This trade has severe implications for wildlife populations and is considered to be a driving force behind the decline of many wild animal populations.

Hunting and gathering of wild animals has always been an important aspect of life in rural African societies but as the human population grows such utilisation of wildlife becomes increasingly unsustainable. Colonisation and the introduction of modern wildlife conservation measures has led many African governments to introduce restrictions on hunting, such as banning hunting in National Parks and conservation areas, closed seasons in which hunting is prohibited, introduction of a license system and restrictions on species/age categories which can be taken.

Despite these new measures people continue to hunt illegally, and poaching – the illegal killing of wild animals – remains widespread. Wildlife is hunted primarily for its meat (bushmeat) but also for skins and other products such as tusks, horns, beaks, tails and ears. In rural African communities bushmeat not only forms a large part of the diet (particularly in the dry season) but also provides an important source of income. For example, as much as 90% of bushmeat gathered is taken to be sold at market and provides a valuable income source for impoverished families (de Merode *et al.* 2004).



Even though the bushmeat trade and the sale of wildlife products is rife, its secretive and covert nature makes quantifying its true effects extremely difficult. The majority of research is concerned with surveying products available at market, but it is more difficult to ascertain exactly where these products are coming from, how they are obtained, by who and what effect the trade has on local wildlife populations. But such surveys do highlight that bushmeat and associated poached animal products are widely available and easy to obtain.

For example, a survey of Nairobi's meat markets (Born Free, 2004) concluded that bushmeat made up 25% of all meat available for sale. Mostly sold as 'goat' or 'beef', bushmeat was purchased by members of all levels of society and consumers could probably not differentiate between it and domestic meat products. Furthermore, all butcheries sampled did not have refrigeration facilities indicating that there is a continual supply of freshly poached meat entering Nairobi on a regular basis.

Are giraffe under threat from poaching?

There is little doubt that giraffe populations are under threat across Africa, with reasons for this often cited as increasing human-wildlife conflict, loss of habitat and poaching. We know that poaching is widespread throughout Africa and a recent report by WWF/IUCN (2009) highlighted that poaching has reached a fifteen-year high. However, despite numerous anecdotal reports of poaching in giraffe there is very limited data or research on this issue and we cannot be sure of the real extent to which poaching is a threat for giraffe populations.

A review of the literature highlights that giraffe are poached for three main reasons, for their meat, skin and other products;

Meat

Killing a giraffe involves relatively little effort for the amount of meat yielded as a large quarry can be secured with a single gun-shot. Hunting giraffe is attractive for the poacher because it provides a maximum return (large amount of meat) for a minimal investment (one gunshot as opposed to several minimises the chances of the poacher being caught).

Giraffe are laid back, sedentary creatures and will often stand still to stare at a potential threat before running away, making them an easy target for poachers since they are easily shot or speared. Snares are also effective in giraffe since their legs will tangle easily, and their long necks can be caught in wire snares.





Giraffe meat is said to have a sweet taste and is highly coveted in some parts of Africa. With adult giraffe weighing up to 2,000 Kg one individual can provide a substantial amount of sweet-tasting meat to feed a family, as well as providing plenty of surplus to be sold at market, providing financial income.

Skin

Giraffe are also widely poached for their skin as it is thick, durable and suitable for a range of purposes such as making clothing, shoes, bags, belts, hats and covers for drums.

Other products

There is a long history of the use of giraffe-related products throughout Africa and giraffe are targeted especially for the other products that can be obtained from a successful hunt. Such products are used to manufacture artefacts and convey symbolic meaning, and are now increasingly produced for the tourist trade (Espinoza *et al.*, 2008).

The main use of other giraffe parts is that of the hair. Giraffe hair has been used to make bracelets, necklaces and other jewellery for hundreds of years and has been reported in several African tribes; the Samburu (Straight 2002), the Mursi (Turton 2005) and the Nuer (Evans-Pritchard 1940). Today, giraffe tail hairs are mainly used for weaving into bracelets and stringing beads together for the tourist market. A spot-check of curio markets in Maputo, Mozambique, revealed that giraffe hair featured heavily in the crafts and jewellery available for purchase to tourists (TRAFFIC, 2002).



There is a long standing history of the use of giraffe tails in Africa culture, and they are highly prized as symbols of authority. Often used as fly swatters, their cultural usage dates back as far as ancient Egypt (Kirwan 1963, Phillips 1997, Lucas, 1999) and are also worn as armbands by the Turkana tribe (Barton 1921).

Leg tendons are used for thread and guitar strings, bones can be made into buttons and tools, while the bladder can be used as a water bag.

Medicinal purposes

The use of traditional medicine in Africa is widespread, affordable, accessible and culturally acceptable. However, many of the species used for the preparation of medicines are harvested unsustainably from the wild and high demand for particular species encourages an increasingly commercialised trade, driving higher levels of poaching (TRAFFIC, 2002).

Unfortunately, in some areas of Africa giraffe feature heavily in local beliefs and traditional medicines. In Tanzania, it is believed that giraffe brains and bone marrow afford protection from AIDS and can even cure HIV-AIDS victims, that products are “capable of reviving bed-ridden HIV-AIDS victims” (Arusha Times, 2004).

It is this medicinal belief that drives poaching of giraffe in Tanzania and the continued demand means that prices for poached giraffe remain high. Freshly severed heads and giraffe bones can fetch prices of up to \$140 USD per piece, making giraffe poaching a highly lucrative and profitable business activity.



In 2004, twelve giraffe were killed in two months in Naiti village (a region high in HIV sufferers) for medicinal purposes, while in the western Kilimanjaro region, 210 giraffe were killed in a period of 10 months (February-December 2007). Local reports say that around 20 giraffe are regularly poached each month in this area, mainly for traditional medicine but also for meat and skin (Nkwame, 2007).

As well as a high demand for giraffe products for medicinal purposes, giraffe meat is highly sought after in Tanzania and can be found easily in the Arusha markets (Arusha Times, 2004).



Research and Figures

A review of the poaching/bushmeat literature reveals a lack of giraffe-specific information, but given the volume of anecdotal reports available it is clear that poaching of giraffe is definitely occurring and could be a threat to populations. The lack of specific data on giraffe poaching makes quantifying its effects difficult, but a review of population trends and historic reports can provide some insight.



In 1982, Dagg & Foster wrote, “giraffe became an easy target that few hunters could resist...” (p.19) and Dugmore (1925) noted, “Along the Uaso Nyiro River where reticulated giraffe had once been abundant, so few survived by 1908 that a herd of 20 was a most uncommon sight” due to high levels of poaching in the area.

In Somalia, giraffe populations were reported to have dramatically decreased between 1950 and 1980, “largely because of poachers who can sell the meat, skin, and tails of any giraffe kill” (p.21, Dagg & Foster, 1982).

A review of giraffe history in East Africa by Sidney (1965), contains a lot of information about the impact of poaching on giraffe, as highlighted by these excerpts;

“The Reticulated giraffe is very badly poached by the tribesman of Northern Province, who use giraffe hide for making water buckets and sandals.” (p.149)

“In Turkana [the Rothschild’s giraffe] has been poached nearly to extinction” (p.149)

“An effect of the first year of the Great War, was that a number of giraffe were killed for food.” (p.150)

“...the range of the Baringo giraffes was becoming more restricted every year, since the Dutch colonists would not refrain from killing them for their hide” (p.150)



“The main stronghold of the giraffe in Uganda is undoubtedly in northern Karamoja, where a number are poached annually” (p.151)

“..the giraffe is the main victim of wheel trapping and armed ex S.D.F. poachers...” (p.151)

“poaching...has increased on the Sudan side due to shortage of food. The poaching is encouraged by the fact that the tail hairs have a value of a shilling for three.” (p.151)

“There are no giraffes in Uganda to the west of the Nile...it is suspected that [they have been] poached by the Madi tribesmen” (p.151)

“1947 - The giraffe is still persecuted for its tail” (p.152)

“1950 – despite poaching, they seem to be holding their own in the Northern province” (p.152)

“...it is possible that [giraffe] numbers may have been considerably reduced during the last fifty or one hundred years owing to the demand for their tail hairs in Buboka and Uganda” (p.153)

Even though the bushmeat trade in Africa has been heavily reviewed and documented (Asibey, 1977; Jeffery, 1977; Martin, 1983; Ntiama-Baidu, 1987), there still remains patchy information on levels of giraffe poaching. The reason for this is unclear, but one possibility is the sampling method most commonly used. The majority of studies focus on sampling the end product (i.e. the meat) at markets and there is often difficulty in diagnosing exactly which species the meat has come from. Some of these studies simply differentiate between ‘bushmeat’ and ‘domestic meat’, whilst others classify bushmeat using broad categories such as ‘primate’ or ‘ungulate’. As a result, giraffe meat may not be identified correctly and so we are not seeing the true extent of giraffe poaching.

These sampling methods are due to the inherently secretive nature of illegal poaching. It is the poachers themselves who could provide the most valuable information regarding what species are preferred, which are the most taken and how, but these people survive by going undetected and so they are extremely difficult to identify, find, and are particularly unwilling to talk.



In 2008 however, Caro was able to overcome some of these limitations and conducted an in-depth study of poaching which involved interviewing some of the key poachers in the Katavi-Rukwa ecosystem of western Tanzania. By speaking to the poachers directly, Caro was able to more accurately assess the levels of poaching and the impact on different species.

The result is an informative and in-depth report that highlights giraffe as being particularly vulnerable to poaching in the area. It was estimated that between 2246 and 2264 giraffe were illegally poached each year, representing a 40% yearly loss of the total giraffe population. Of the total wild species poached in the area, giraffe accounted for 25% of the off-take and were a clearly preferred quarry.

There were five species that were preferentially poached in the Katavi-Rukwa ecosystem, of which giraffe was one. Of these five species, Stoner *et al.* (2007) reported significant and consistent declines in population sizes based on population trends for the area from 1992 – 2001, which may have been partly due to the high poaching levels.

Other sources

Although limited data is available in the scientific literature, there is a wide catalogue of anecdotal evidence of giraffe poaching throughout Africa;

Kenya

Poaching is widespread during the dry season and there are several reports of giraffe being found injured or dead as a result of poaching-related injuries. In 2007, the Garissa Giraffe Sanctuary reported finding a dead giraffe that had been speared in the stomach by poachers. It had not died instantly, but ran away and was found dead at a later date from its injuries (Garissa Giraffe Sanctuary, 2007).

Ogutu *et al.* (2008) carried out a study on the Maasai Mara ecosystem and reported that numbers of giraffe, warthog, impala, topi and hartebeest fell by 50% or more between 1979 and 2002. These declines were attributed to rapid growth of Maasai settlements around the reserve and possible illegal poaching of wildlife that damaged or affected crops and livestock.

Botswana

There are reports of giraffe poaching in Botswana for meat and medicinal purposes. In 2010 a giraffe carcass was found in the Okavango Delta region that had obviously not died of natural causes. The most obvious feature was that its ears had been bluntly cut off and some of the skin removed (Evans, 2010). The removal of selected body parts indicates likely use for traditional medicinal purposes.



South Africa

Barnett & Patterson (2005) report that despite a regulated hunting trade, giraffe are still taken illegally by poachers in South Africa.

Niger

In the 1960s, giraffe were wide spread throughout western Africa but large-scale poaching, deforestation and habitat loss caused a population crash. By the mid 1990s giraffe had been eliminated from the whole of West Africa, with only one population remaining in Niger. In 1996, there were 50 individuals left, but this figure has since increased to around 200 following focused conservation efforts and an outlawing of poaching that used to contribute to the loss of around ten giraffe each year (McDonnell, 2007).

Conclusions

While it is difficult to quantify the real effects of poaching on giraffe populations, what is clear is that the bushmeat trade is thriving globally and it is highly likely that giraffe are affected by this trade.

Rowcliffe *et al.* (2010) estimate that 273 tonnes of bushmeat is imported into Europe alone from Africa each year (Kinver, 2010) and many other reports highlight the current thriving levels of trade in wildlife meat and skins (Born Free, 2004; Yee, 2007; Bobek, 2009; Mwenja & Kariuki, 2009).

Caro (2008) reported that giraffe represent 25% of all species poached in western Tanzania. While it is unlikely that this figure is representative for the rest of Africa, it does highlight (along with the numerous anecdotal reports) that giraffe poaching is occurring. Reviews of the literature fail to uncover specific reports of giraffe meat presence in African markets, but this is probably due to the limitations of the survey techniques employed rather than an absence of giraffe meat itself.

So in conclusion, giraffe poaching is occurring and is wide-spread across Africa but quantifying levels of this activity and the resulting affects on population trends remains a huge challenge. Until we have a better way of measuring the extent of giraffe poaching we cannot assess the trade's impact on the continuing decline of many giraffe populations across Africa.



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