ARTICLES ON AFRICAN LION (*PANTHERA LEO*)
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AFRICAN INDABA – an electronic bi-monthly newsletter for hunter-conservationists and all people who are interested in the conservation, management and sustainable use of Africa’s wild natural resources. African Indaba, founded by Gerhard R Damm in 2003, is now the official CIC Newsletter on African affairs, with editorial independence. For more information about the International Council for Game and Wildlife Conservation CIC go to www.cic-wildlife.org or access the African Indaba webpage at www.africanindaba.com to download the entire archive.
Lion hunting has come under increasing pressure from animal rights activists, conservationists and even hunters. The real or perceived decline in lion populations in sub-Saharan Africa (former rather inaccurate figures spoke of between 30,000 and 100,000 lions and more recent research puts the population at a probable figure of about 40,000 with a minimum of 29,000 and a maximum of 47,000) is in our opinion not the issue in this instance. Of concern are, however, the obvious deterioration in trophy quality and a noticeable trend to over-hunting male lions in individual populations within the range states.

The future of the enigmatic African lion safaris lies not only in the hands of the professional hunters and outfitters, but also in the responsibility of the visiting tourist hunter and the organizations that represent them. Only closest cooperation with recognized researchers, unbiased evaluation of the facts, and the development of universally binding conservation and utilization strategies will bring about a tolerance of future lion hunting. The economic future of many a safari operator and professional hunter, and indeed the future of complete conservation schemes in Africa will depend on a sensible no-nonsense approach to evaluating existing lion populations for sustainable take-off of trophy specimens as well as on the strict adherence to set quotas.

A number of researchers have dealt with the “lion question”. African Indaba has selected Karyl Whitman and Petri Viljoen’s studies, presented to the African Lion Working Group (ALWG) in 2002, (see reference at the end of this article), because we believe that both researchers have shown a deep understanding of the issues involved and have started to show the way forward.

African Indaba would like to challenge all safari outfitters and professional hunters, who regularly deal with lion hunting, to evaluate their own situation and to use SCI African Chapter as a conduit to eventually create together with the research community feasible and ecologically sound lion management schemes for the hunting grounds of Africa. Karyl and Petri will field-test their theories in 2003 and African Indaba will keep you informed (Editor).

Safari hunting often occurs in areas considered of marginal value since they are not suitable for other livelihoods, such as farming or photographic tourism (Whitman, 2002). The African lion is highly sought-after by the tourist hunting industry, with trophy sales and daily rates generating significant revenue for the hunting safari industry in several African countries. Lions are therefore usually considered to be a key trophy species in selling hunting safari. Exclusion of lion hunting, like the recent ban in Botswana, usually leads to an un-proportionally greater loss of income for conservation authorities as well as hunting operators.

Although environmental conditions typically establish the safari hunting seasons, lions are non-seasonal breeders and highly infanticidal, thereby complicating management strategies (Whitman & Packer, 1997). The effect of selective removal of specific individuals therefore presents a challenge to the management of lion populations. The annual removal of adult male lions may in some situations be advantageous, but in others detrimental to a given population (Whitman & Packer, 1997). For example, the removal of non-resident adult males may reduce male-male competition and therefore result in increased territorial male tenure and cub survival. However, removal of resident (territorial) males may potentially disrupt the social system, leading to increased rates of infanticide, and occupation of territories by immature males with resultant reduced reproduction (Schaller, 1972; Caro & Durant, 1995; Whitman & Packer, 1997).

A further risk factor is introduced by a combination of high demand for trophy lion, unsustainable quotas, and an industry plagued by mismanagement (Whitman, 2002), making local lion populations particularly vulnerable to over exploitation.

Given that lion hunting generates considerable revenue for the safari hunting industry, it is important to ensure that quotas are sustainable and that unethical behavior (at all levels) is curbed.
Thus it is important that safari outfitters and professional hunters, as well as client hunters re-evaluate their ecological footprint with respect to lion hunting and improve their ability to monitor and evaluate the status of hunted lion populations (Whitman, 2002). Karyl Whitman proposes the following policies to be adopted:

- Lion populations should be surveyed to estimate abundance and demographic composition wherever possible.
- Long-term records of quotas, number of licenses issued, and off take should be maintained by each country and reported to an international registrar.
- Measurements of lion skull size as well as body size should be recorded for all lion shot.
- A qualitative assessment of mane quality should be applied to trophies shot.
- Trophy age should be assessed by a combination of tooth development and wear, nose pigmentation, mane development, etc.
- Hunters should record locations as accurately as possible of all lion shot using a GPS—with records going to a central database to monitor intensity of use of certain areas.
- Splitting hunting blocks and then arbitrarily doubling or tripling the quota should cease immediately.
- Professional hunters should adhere to higher ethical standards in terms of what is fair chase and in trophy selection.
- Safaris should not be marketed to clients as “sure things,” to relieve professional guides somewhat from pressure at having to deliver a lion, regardless of quality.
- Above all, hunting companies and governments should pursue policies that favour long-term use over short-term gains.

Petri Viljoen (in cooperation with Anthony M Starfield and Karyl Whitman) presented a simulation model for managing free ranging lion populations to the African Lion Working Group in 2002. SimSimba has been designed to explore the effect of various harvesting scenarios on lion populations and their complex structure.

The social structure and behavior of lions is a crucial part of their population dynamics. The survival rates of an individual depend on the individual’s age, sex and possibly even on its location; in the case of lions, social status, particularly that of males, means everything to their survival and opportunity to reproduce. Therefore, when trying to model the effects of safari hunting, one also needs to know the social status of the individual being removed from the population. It makes a difference whether a hunter shoots a nomadic lion or a partner in a pride coalition. If it is a nomadic lion, the strength of the nomadic coalition will be weakened, the coalition might be less successful in an attempt to dislodge a pride coalition, and so cubs in the pride might have a better chance of survival. If it is a pride lion, the partnership will be weakened, his colleague or colleagues will be more easily displaced, resulting in infanticide.

SimSimba has been designed so that the user can customize the model to any lion population, real or virtual. In three user-friendly pages, users have the capability of adjusting all the input parameters. So for example, users can profile a lion population by adjusting cub mortality directly or indirectly (by altering probabilities of infanticide or cub abandonment). Users can also determine how many prides a population will have, and what the maximum size for each pride may be. Users may also influence male competition in several ways, for example, by adjusting the probability that a pride coalition will occupy two territories, how often nomads can move in a time step, or the probability of a nomadic or pride lion dying in a territorial fight. Overall, SimSimba should accommodate an array of variations in lion behavior and population dynamics as the user sees fit.

However, this flexibility comes at a price. The model needs to be tested (“tuned-in”, as it were) thoroughly with each set of parameters to ensure that they are plausible. It follows that SimSimba is not a model merely to be picked up and used. Training is required for it to be used sensibly and effectively. Because SimSimba’s design allows for flexibility and incorporates essential aspects of lion social behavior, it is ideally suited to address a range of questions posed by the user.
For example, the potential impact of various scenarios such as the following can be tested on a simulated population:

- Removal of one male every year vs. two males every two years;
- Removal of as many adult males as possible in a given year and then only again after a couple of years;
- Removal of a certain percentage of males across a population every year. This can be varied by including only residents, or only nomads, or at random;
- Removal of all adult males in one territory every year while ignoring other territories;
- A catastrophic event (i.e. 30% mortality), given a certain probability;
- Disease with different effects by using, for example, 10%, 20% and 30% mortality across all age classes, or only cubs.

The text of this article has been taken largely verbatim from research papers of Karyl Whitman and Petri Viljoen. We express our gratitude to both for having reviewed the article and given permission to publish it in African Indaba.


For details on SimSimba and on lion conservation/ hunting, contact Petri Viljoen, petriv@mweb.co.za, phone +27 (0)82 3380896 and/or Karyl Whitman, phone 1-907-646-7874, whit0371@tc.umn.edu

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MEASURING LARGE AFRICAN PREDATORS
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Conversations among wildlife enthusiasts, especially hunters, usually include references to the size of animals. Although specific dimensions may be referred to, interpretation by the audience is open to differing perceptions. Accepting variation as a basic principle of biology means that body dimensions of animals must vary. Although some body measurements can be taken with great accuracy, differences in measuring techniques contribute to variation. Applying standard procedures when collecting data for morphometric analysis can reduce this variation.

Dr. G.L. Smuts took body measurements from 158 male and 186 female African lions in the Central District of the Kruger National Park between 1974 and 1978. Smuts et al.(1980) stated: “Despite many wild lions (Panthera leo) having been handled both dead and immobilized in the past, surprisingly little has been published on aspects of their growth or even the average weights or body dimensions of adult specimens.” In this regard, Dr. B. Bertram described already in 1975 how he weighed large male lions single-handedly. “Weighing large animals does not necessarily require huge tripods, trees, spring balances and teams of assistants. I am grateful to Dr J.M. King for suggesting the use of bathroom scales for weighing immobilized lions. I carried six lengths of angle iron and four wooden planks 30 cm wide; all were 120 cm long, and so fitted conveniently into a small vehicle. These components could be bolted together in 4 min to produce a platform roughly 120 cm by 200 cm. This was placed close to the back of the immobilized lion, which was then rolled over onto it and
pushed to the center of the platform. A set of low flat bathroom scales was placed underneath each end. With the platform with the lion then balanced on the two sets of scales, the reading of each scale was taken; their sum, minus the weight of the platform, gave the weight of the lion. With this system, it was possible to weigh a lion of 200 kg alone and without assistance, and with a minimum of disturbance. A slightly larger platform with four sets of scales would enable one to weigh considerably heavier animals."

Why then are animals and specifically the larger African predators not measured when the opportunity arises? Measuring the bodies of immobilized large animals is time consuming and has to compete with activities such as collecting bio-logical samples (e.g. blood), fitting radio collars or just the inevitable time constraints of a tourist hunter on a two or three week safari. Furthermore, animals are often subjected by operators to a range of different measuring techniques.

The African trophy hunter may register trophy size of animals in three major record books (SCI, Rowland Ward, CIC). RW and SCI measure the greatest length and width of the skull and add the two figures (RW method 17, SCI method 15), CIC uses the Boone & Crockett method which also scores the total of greatest length and width, however measurements are taken on the cranium without the lower jaw attached. The scores are measured to the nearest 1/16 of an inch. Only SCI lists the body measurements of darted carnivores. The score is the sum of the length of body including tail between pegs; circumference of chest and circumference of head, measured to the nearest 1/8 of an inch (SCI Method 16-D). It is optional to provide the weight of the animal in this category.

However, the procedure of registering trophies in record books is not satisfactory because of an important bias. Only data of the some animals are registered since many hunters do not register their trophies at all and the SCI record book is restricted to SCI members only. Rowland Ward’s 26thedition lists only about 500 lion skulls over a period of about 100 years. Important data is therefore lost to science and conservation efforts.

In February 2002, ALPRU (African Large Predator Research Unit, University of the Free State) started a database on the body mass and dimensions of large African predators. We developed standardized procedures to measure specimens and record data collected from dead or immobilized large African predators. For example, for an adult male African lion, with its mane extending down to the abdomen, 45 variables are taken. The objective is to develop non-invasive techniques to determine whether wild animals might have been subjected to subnormal growth and development; primarily as result of their habitat and food variation. Are the animals large enough and well developed for their age?

There is a concern that trophy quality of African lions is declining. Recently Karyl Whitman [African Indaba (2), 14-15] suggested that measurements of lion skull size and body size should be recorded for all legally hunted African lion and a qualitative mane assessment should be introduced.

The procedures proposed by ALPRU can assist here. We suggest that professional hunters should measure all variables on all hunted large predators. Measuring instructions are available on request. African Indaba and the African Chapter strongly recommend that members should cooperate with ALPRU in data collection. Please contact them at African Large Predator Research Unit (ALPRU), Dept Animal, Wildlife and Grassland Sciences (70), Faculty of Natural and Agricultural Sciences, University of the Free State, PO Box 339, Bloemfontein 9300, RSA. Email: ALPRU@sci.uovs.ac.za

In Vol 1/2 the article “Safari Hunting of Lion” contained a summary of papers which Karyl Whitman and Petri Viljoen presented to the African Lion Working Group (ALWG) in 2002. I started my introduction that “the real or perceived decline in lion populations in sub-Saharan Africa is not the issue”. Recent media reports, like those published on the web by the BBC News World Edition on October 7th and in New Scientist Magazine on September 20th have proved me wrong.

BBC quotes Professor David Macdonald, director of WildCRU, Oxford University’s Wildlife Conservation Research Unit, announcing the results of his team’s 5-year study of lion conservation, which has concentrated on fieldwork in Zimbabwe and Botswana. The article continues with a statement that the estimate of 20 000 lions or fewer compares with a population of about 200 000 in the early 1980s. As the same figures are mentioned on Professor Macdonald’s WildCRU website http://www.wildcru.org/ I assume that BBC quoted him correctly. At the end of the article Macdonald says “The lions’ decline is shocking, because it suggests they’re a great deal more frail than we might have thought. If they were all in your sitting room, 20 000 lions might sound a lot, but we’re talking about an entire continent.”

I also had the impression that Macdonald may dislike hunting. This impression is reinforced by WildCRU’s connections to Born Free Foundation. Dr Claudio Sillero, a co-worker of Professor Macdonald at Oxford University and deputy chair of the IUCN Canid Specialist Group (Macdonald holds the chair), is also Head of Conservation of Born Free. (quote from the Born Free website: “Born Free’s Head of Conservation, Dr Claudio Sillero, has been participating actively in a series of lion conservation workshops in various southern African countries by our partner WildCRU at Oxford University”).

In New Scientist staff writer Stephanie Paine reports an interview with Dr. Laurence Frank, wildlife biologist from the University of California. Dr. Frank stated the African lion population with 23 000 and Paine goes on to say that “20 years ago the lion population seemed in good shape. There were no hard figures but conservationists guessed there were around 200 000.” It seems that Paine got that latter figure from WildCRU. Other media rearranged Dr Frank’s statement into this headline: “Lion populations have fallen by almost 90% in the past 20 years, leaving the animal close to extinction in Africa, a wildlife expert has warned.” The Chicago Sun-times Newspaper even discovered on October 26th that “Aids may be driving the African lion into extinction” and continued to state “scientists reporting a devastating collapse of the African lion population from 230 000[sic] in 1980 to fewer than 20 000 now, the decline has traditionally been blamed on loss of natural habitat and hunting. But advances in virology and ground breaking field research suggest large numbers of lions could be dying from AIDS because their immune system has been destroyed by lion lentivirus, the lion version of HIV.” In the same article, Briton Kate Nicholls and her Dutch partner Pieter Kat even argued that the African lion figure to be close to 15 000. And the UK’s Independent Digital News headlined on October 8th “Rich Tourist trophy hunters are wiping out African lion population, conservationists warn” (guess who was the quoted “leading British scientist”).

Fortunately, Dr Frank is also quoted by New Scientist’s Paine to have said that “people like to see wild animals against a spectacular scenic backdrop, but much bush country is dull and scruffy, and the wildlife hard to spot. The industry is fragile, too. The recent terrorist alerts have hit Kenya very hard. And tourism is never likely to be lucrative enough to protect the huge areas of habitat that species such as lions and wild dogs need.

The alternative is trophy hunting. Many people don’t like the idea, and it has been banned in Kenya for the past 25 years. Frank is a reluctant supporter - as long as hunting is properly regulated and doesn’t put predator populations at risk. ‘Paid hunting has brought about a huge resurgence of wildlife in South Africa and Namibia, and it is a mainstay of the economy in Tanzania, Botswana and Zimbabwe,’ says Frank.
Sport hunting requires the preservation of large tracts of land because it takes a large, healthy population of animals to produce a few old trophy males. It is also more robust than tourism: Zimbabwe no longer has an ecotourism industry but sport hunting is still going strong.

If conservation is to succeed, there must be a balance between the needs of the carnivores and the needs of the people. If persistent livestock killers aren’t dealt with, people will revert to shooting and poisoning predators. Trophy hunting may be unpalatable, but it is practical. A trophy hunter will spend $30,000 to shoot a big male lion. Apparently some will pay $15,000 for a female. In Laikipia you could make half a million dollars a year by shooting the problem animals that are going to be killed anyhow. That would be enough to offset the cost of the entire local lion population for the next decade.”

Professor Macdonald has access to the IUCN-ALWG African Lion Working Group Study (by Hans Bauer and Sarel van der Merwe4), which says “the number of free ranging African lions (Panthera leo) has never been assessed ... an inventory of available information, covering most protected areas and ranging in quality from educated guesses to individually known populations ... gives a conservative estimate of between 16 500 and 30 000 free ranging lions in Africa.” The breakdown of numbers in this report shows an estimate of 23 000 lion with a minimum of 16 500 and a maximum of 30 000! [Editor’s comment: van der Merwe said in a personal communication: “Nobody can make a sound calculation of the decline in lion numbers since Nowell and Jackson’s 1996 publication. I took the accuracy of the figures which Jackson and Nowell provided for the African Lion (30 000 to 100 0000) as absolute guesstimates, and it was confirmed by Peter Jackson. No-one in his right mind can make any trustworthy calculations with regard to decline in numbers. Except that it is reasonable to accept that decline will be a reality, due to human population growth).

Bauer and van der Merwe make a point to state in their study “the classification [of lion as vulnerable] was partly based on an educated guess of between 30 000 and 100 000 free ranging lions (Nowell & Jackson, 1996). The large margin was justified by lack of information and the notorious difficulty of lion censuses.” In Bauer and van der Merwe’s document the reader comes across another important passage: “many rural non-protected areas in East and Southern Africa contain lions (G. Mills, pers. comm.), in contrast to West and Central Africa (Bauer et al., 2003). Some of these areas were included, but others have never been surveyed although they may contain substantial numbers of lions (order of magnitude: thousands). We speculate that surveys of unknown lion populations will increase the current estimate and min-max to an unknown extent, but surely by less than 100%” (Editor’s emphasis).

Is the increase over the estimated figure 23 000 around 50%? Then we come to a revised estimate of 34 500 (with a maximum of 45 000); if we take 80% then the figures are 41 400 as an estimate and 54 000 as a maximum. I suggest that Bauer, as a cautious scientist, did not use the upper limit of 100% without some plausibility checks on his side.

I further suggest that therefore a far more plausible figure for lion population in sub-Saharan Africa (North Africa has a zero population) could be put around 40 000 to 50 000 – a figure which is astonishingly close to the 39 000 to 47 000 lion as established by Philippe Chardonnet in his 2002 study “Conservation of the African Lion”. It would be a sensible course of action if the African Lion Working Group and the IUCN Cat Specialist Group encourage Chardonnet and Bauer to discuss their respective results in a joint paper – and to also include papers (like those of Viljoen and Whitman5) dealing with the aspect of sustainable lion utilization.

Incidentally, Bauer and van der Merwe mention that many large lion populations in East and Southern Africa have been stable over the last three decades and that [lion] conservation is bolstered by safari hunting and tourism revenues, allowing for conservation in natural lands outside National Parks.

I know for a fact that some academic lion experts show unhappiness with the insinuation of a catastrophic decline in lion numbers in Africa. Dr Frank – according to our information – made this clear in communications with his colleagues that he never mentioned the number of 230 000 or 200 000 lion. Professor Macdonald who certainly knows the study of Bauer and van der Merwe as
well as the figures published by Nowell and Jackson earlier has not made any statement except that
the website of WildCRU still advertises the figure of 200 000 African lion. That may have a reason in
the connection to Born Free Foundation, since the emotional response which the recent media
reporting has created, might well end up in generating funds for new research projects.

The entire debate at this stage looks rather similar to the emerging elephant debate some
decades ago. Against better knowledge, scientists remained silent, when the international media,
abetted by an assortment of so called animal rights organizations, went on a frenzy proclaiming the
perceived immediate extinction of the African elephant. Setting matters right was either
unfashionable or uncomfortable – or it jeopardized project funding. Scientific truth was sacrificed for
short term goals. Adams and McShane have exposed this issue in their book “The Myth of Wild
Africa” (1992). Today the unenviable situation of African elephant range states with elephant
overpopulation problems is a result of the international media having created a doomsday scenario.

The African Lion Working Group’s responsibility towards society and African conservation
requires that ALWG set matters right in their African Lion Database. Alarmist and doomsday reports
do neither serve the African lion, nor the rural people who live with the lion and in the long run do
not serve science!

I am only too aware that especially the West and Central African lion populations may
indeed be in need of special conservation measures. The AWLG application to IUCN to upgrade the
red list status of the West and Central African populations is a prudent step in the right direction.

In Eastern and Southern Africa, it is upon the hunting community needs to develop
sustainable hunting models for lion in cooperation with field scientists, game departments and rural
people. Whitman and Viljoen’s work could form a departure point for a close cooperation between
science and hunters, and Dr. Frank’s above mentioned assessment regarding lion hunting
underscores a possibility to dialogue.

To develop sustainable hunting models and to collect reliable field data (in particular from
the non-protected areas where lion hunting takes place) scientists from ALWG, nature conservation
agencies and professional hunters, outfitters and tourist hunters as well as rural people must find a
common platform, cooperate, share information and most of all arrive at sensible solutions which
take the conservation needs and management realities of the African lion and the aspirations of the
rural communities into account. The ALPRU proposals in the article “African Lion – What the hunter
can do” (see page 17 for details) could be the catalyst for that partnership!

It makes no sense that alarmist news and bitter commentaries put the parties into feuding
camps. Prohibition of lion hunting – although certainly of short term benefit to some, and fund-
generating for others – will not help to increase lion populations – Botswana’s history during the lion
hunting moratorium proves that. More lion have been poisoned, shot and trapped in Botswana in
the last years than at any time when lion hunting was legal. Kenya has a similar record.

Reports like those of BBC and the subsequent spreading of negative comments will be water
on the mills of the international conflict industry represented by vociferous animal rights groups and
divert funds from essential conservation projects to the conflict industry’s public media campaigns.

The African lion will certainly benefit the least!

In my comment which I referred to in the first paragraph I also wrote “The economic future
of many a safari operator and professional hunter, and indeed the future of complete conservation
schemes in Africa will depend on a sensible no-nonsense approach to evaluating existing lion
populations for sustainable take-off of trophy specimens as well as on the strict adherence to set
quotas…. to eventually create together with the research community feasible and ecologically sound
lion management schemes for the game fields of Africa.” The survival of viable lion populations in
Africa too, one might add today!

The challenge to act responsibly applies not only to the hunting community, but also to the
research community, to the conservationist from IUCN affiliated NGOs and to the operators of
photographic safaris and camps. It is about time that all these parties work together! African Indaba
will be more than happy to provide an adequate forum for dialogue!
The annual hunters’ conventions were held, as usual, in the United States of America in January/February 2001. Amongst those who attended were professional hunters and hunting outfitters from Botswana who participated in order to sell their government-approved lion-hunting quotas for the year. After the conventions the Botswana hunters returned home to find that their government had, precipitously, placed an indefinite moratorium on lion hunting in the country and all the booked lion hunts had to be cancelled.

The reason the government gave for the moratorium was that many people in the game-viewing tourist industry had voiced concern that Botswana’s lion population was in serious decline - and they blamed this state of affairs on various overhunting practices. The moratorium was a coup de main achieved by Botswana’s anti-hunters. The scales were tipped by an overseas animal rights NGO - who claimed to be specialists in lion “conservation” – lobbied for the cessation of lion hunting amongst the country’s political elite.

A major thrust of the anti-lion-hunters’ argument was that many Botswana citizens, who lived and farmed outside the boundaries of the protected wildlife areas, were poisoning and shooting large numbers of lions in protection of their domestic stock. Another was the alleged over-killing of pride males by the safari industry. The purpose of the moratorium, the government said, was to assess the validity of all the claims that had been made and, if the lion population was indeed declining, to determine the reasons why. Today, two and a half years later, the moratorium remains in place and nothing seems to have been accomplished with regards to even initiating an investigation.

This action caused a huge rift between the hunters and the non-hunting game-viewing tourism. What few people realized was that, behind the scenes, many anti-hunting animal rightist
NGOs were pulling the strings. Emotions, for many months, ran high. Nobody sat down to calmly and coldly evaluate the ecological facts of the matter and/or to think through what this whole debate was about. The Botswana government had fallen into the trap set for it by the growing army of foreign-based animal rights activists whose NGOs now proliferate in Africa’s post-colonial capitals and who are trying to control the direction of official wildlife management programs everywhere.

It is important, therefore, that we examine the facts pertaining to lion ecology and to reveal the truth about what is going on in Botswana – and what is happening in many similar wildlife situations across the length and breadth of the continent.

African lions are prolific breeders. Females breed at age 30 months. They have 2 to 5 cubs at a time. If food is plentiful, and if the prides are of the right size for the prey they normally kill, at least 50% of the cubs survive. The cubs are independent at age 20 – 22 months, at which time the young males, and often the young females, too, are evicted from their parental prides. They then become nomads - or vagrants - and they wander the countryside looking for a home range of their own.

In established game reserves that support a lion population, available lion home ranges and lion territories are always dynamically full to capacity. This means that as the young nomads move about the sanctuary they cannot find a place to settle down. They are being forced to scavenge for their meals, or to kill and eat where and when they can, before being forced to move on. Theirs is a wanderer’s life, therefore, that exists only on the outskirts of, or in between, where the established prides are living. It is a hard life that is full of conflicts and many nomads are killed and eaten by other lions or by hyenas.

If a vacant home range is found – such as might occur, for example, when a new bore-holed game water supply is commissioned – the young nomads will settle down. A new territorial pride will then become established. Few nomads, however, ever become fixed into any kind of permanent home range. Home ranges are places where animals satisfy their “living needs” – or “survival needs.” They provide the animals with air, water, food and shelter (security). Home ranges become fixtures in an adult animal’s life out of which the occupier rarely ventures. To do so is to invite a stranger to occupy the vacancy – and to invite conflict with the lions living in the strange places into which the wanderer ventures.

Home ranges are not easy to secure in a saturated habitat so they are important finds for nomadic lions.

Territories, on the other hand, are concerned with breeding. Territories are “owned” by fully mature males – which gather around themselves units of breeding females. Territories are defended by the big males - which chase off other male lions that might want to intrude. A young male lion’s home range will become his territory if he survives into full adulthood. Sometimes two males or more will hold down a territory. When this happens it is most likely they are brothers that grew up as nomads together. In all such cases one male is always dominant.

Much has been surmised about what happens when the dominant male of a pride is killed. It is said that this event is followed by a period of turmoil in the pride and that, when a new male takes over, he kills all the cubs that were sired by his predecessor. That this happens there is no doubt. That it is a regular and normal behaviour pattern, however, nobody knows. A cold-blooded review of this cub-killing behaviour suggests that even if the phenomenon is the order of the day it probably has little impact on the fortunes of the population as a whole. This is because cubs sired by the newcomer will replace those he has killed within a few months. (Author’s Note: All the individuals of a lion population need to do, to render their population “stable”, is that they replace themselves once within their own life-time. And lionesses remain fecund for a dozen year and more after they reach maturity!)

A great deal of natural mortality, therefore, occurs within normal lion populations. The killing of cubs by large male nomads also takes place - which probably happens more frequently than most people realize. I watched just such an event unfold in Hwange some years ago. Three male nomads one day entered the territory of two large males near the game reserve’s Main Camp
headquarters. The big males were absent - hunting nearby - at the time, so the nomads challenged the two lionesses of the pride one of which had four not-so-small cubs. A battle royal ensued, the end result of which was that all four cubs were killed, which the nomads then ate. Sometimes, however, the nomads are cornered by the big territorial males – and killed – whereupon they are often eaten by their killers. This, too, might happen more frequently than most people think. Nomads are lions-in-waiting that are always hanging around the fringes of permanent lion society ready to take advantage of any vacancy situations that might occur. They are always being hounded by the resident territorial animals and are really surplus to the permanent population. These nomads are the lions that oft times venture over the game reserve boundaries and predate on domestic animals. The lions that the cattlemen of Botswana destroyed in protection of their stock, therefore, were “surplus” animals and their destruction did not really affect the resident lion population in the nearby game reserve at all. (Author’s Note: It has recently become fashionable for people who are concerned about lion “conservation” to fund the capture of nomadic stock-killing lions and return them to the nearby game reserves from whence they came. This practice does nothing for lion “conservation”. It just adds extra stress to the more important resident lions that live permanently within the game reserve boundaries.)

Male lions reach their prime between the ages of 5 and 7 years. They can hold a dominant position in lion society only until they are about 12. Females conceive for the first time before they are 3 and, thereafter, will continue to produce cubs every two years until they are about 15. Immediately following the loss of their cubs – for whatever reason – lionesses come into heat again, and four months later produce their next litter. Lions, therefore, are fecund and quickmaturing animals that have a huge propensity for increasing their numbers rapidly when conditions are right. This being the case it is not difficult to understand why most game reserve lion populations are “at capacity” most of the time.

Furthermore, when a pride-male is killed - for whatever reason - there are normally many surplus nomad males to take its place.

When lion society is thus understood, we can reason that if Botswana’s lions were really in decline, the killing of nomadic stock-killing lions by farmers cannot be the cause. The possibility that hunters on safari may be killing too many mature males in the resident prides then becomes a much more obvious “other” reason for the population decline. And that is what the anti-hunters are promoting.

When we examine the current ecological circumstances of Botswana’s game reserves in their very broad dimensions, however, a much more probable cause becomes manifest.

In any game reserve the overall sustainable animal biomass (the combined weight of all the animals) is determined by the soil-type and its fertility, the species composition of the vegetation, and the average annual rainfall. The nature of the vegetation, taken together with its physical environment, determines the diversity of habitat-mix that occurs - and that determines the number of different animal species the game reserve can support. A game reserve can only produce a certain mass of grass and a certain mass of browse every year.

And this finite food supply can sustainably support only a certain number (or biomass) of those different species of animals that eat grass and those that eat browse. Furthermore, the different animal species that eat either grass or browse compete with each other for these limited food resources all the time.

The respective numbers of each animal species, however, are restricted not just by the availability of food. Their numbers are determined also by the size of the particular habitats to which each species is especially adapted and by certain species-specific intra-population behavioural traits. So the equation is fairly complicated. Nevertheless, anyone who makes even the most superficial assessment of the current ecological circumstances of Botswana’s game reserves will very quickly find out that the ecosystems are dominated, throughout, by a hugely excessive elephant population. I believe that Botswana’s elephants exceeded the carrying capacity of their habitats in or about 1960 – when there were only about 7 500 elephants in the country. The current number is in excess of
140,000. This means the habitats are 1,750 percent overstocked with elephants — and the elephant population is still growing. It is, in fact, doubling its numbers every ten years.

Elephants are preferential grazers. That means they prefer to eat grass when it is green and palatable and nutritious. During the summer rains elephants eat grass in preference to woody vegetation. This means that during the wet season elephants are very serious food competitors for grazing animals such as buffalo, zebra, waterbuck, wildebeest, hartebeest and tsessebe, and by the end of the rains, given the huge numbers of elephants present in Botswana, there is then not much grazing left. During the dry season elephants readily and completely shift their attentions to woody plants — ignoring whatever dry grass then exists. This means that, during the cold winter and hot early summer period, elephants become serious food competitors of the browsing animals. The elephants’ ability to completely switch their diet - from grass to woody plants – combined with their huge size, makes them uniquely adapted to totally out-compete any and all other herbivores.

The fact that the elephant population in Botswana has exceeded the carrying capacity of its habitat now for more than 40 years means that drastic changes have occurred to the original habitats. Species of plants have been eliminated in the principal habitat types and they have totally changed in character. So great has much of this change been that many sensitive animal species that have very special habitat requirements have also disappeared. This process of local extinction of both plant and animal species is still in progress.

A few species - like impala (which are also grazers/browsers) - have benefited from the changed habitats and numbers have increased. These animals have now joined the elephants as serious competitors for all available food. And as the habitats have changed, and as the numbers and biomasses of plant species in the habitats have been reduced or eliminated by the elephants (and impala), so the volume of plant food produced by the habitats each year has consistently declined.

What has happened in Botswana over the past years? The numbers of elephants have increased and - because the elephants eat most of the limited and constantly declining grass and browse produced each year – the numbers of the other herbivore species (grazers and browsers) have declined correspondingly.

And these “other” herbivores represent the food base for the country’s lion population! A reduction in grass and browse must reduce the numbers of the animals that depend upon these herbivorous foods to survive, so must the numbers of lions decline, too, when their prey-food base is similarly reduced.

Within this ecological circle ups and downs will occur. The constantly changing circumstances wrought by too many elephants may for a time, or from time to time, enhance the survival chances of animals like lions. Lions will benefit, for example, when, at the height of each dry season, young herbivores die of starvation. Food for the lions is then plentiful.

But as their living food base becomes generally more diminished each year so the ability of the prey animals to maintain a sustainable large lion population declines correspondingly.

My own evaluation of the purported decline in the Botswana lion population – if it is true - therefore, is that the hugely expanded elephant population has much more to do with that decline than potential over-hunting by the safari industry. And if a decline in the lion population is not currently happening, it will happen sooner or later as the ecological syndrome I have outlined above. I have a gut feeling that Botswana’s lion population has indeed declined in recent years. I say this because all the ecological indications have been manifest for decades. I sincerely believe that the ecological factors created by the fact of there being too many elephants in the country, is the principal and real reason why this has happened.

The best way to help the lions of Botswana recover their former numbers, therefore, is to drastically reduce the country’s grossly excessive elephant population. Achieving and maintaining, by a system of pro-active management, a state of ecological stability between what is left of the elephant population after it has been seriously reduced by management, and the habitats that support it, will also save the country’s overall bio-diversity which, currently, is taking a pounding.
What I am absolutely sure about is that prohibiting the “sustainable” trophy hunting of lions – no matter how low may be their numbers - will not help the lions to recover their former population numbers under the circumstances I have here described.

Paradoxically, the very people who called for the lion hunting moratorium to be put in place in Botswana are exactly the same people who oppose the culling of elephants!

VOL 1/6 (2003)
AFRICAN LION – WHAT THE HUNTER CAN DO!
Gerhard Damm

African Indaba Vol. 1 # 3 carried an article by HO de Waal, African Large Predator Research Unit (ALPRU), University of the Free State, South Africa with the title “Measuring large African predators”. ALPRU’s objective is the establishment of a continent wide database for the African Lion and professional hunters and outfitters (as well as visiting hunters) were asked to contribute a little time and effort towards the establishment of this database. In Vol. 1 # 2 we also published information about the field work and models of Karyl Whitman and Petri Viljoen with regard to sustainable safari hunting of the African lion.

This issue of African Indaba is taking up the topic once again – and the reasons are obvious. You just have to read the article “Another debate – this time the African lion” on page two. Notwithstanding the fact that Professor David Macdonald may have quoted some wrong figures on BBC and on the WildCRU website, the hunting community must show goodwill and cooperative spirit in lion conservation. Last not least, we still want our sons and daughters to experience the thrill of a genuine African lion safari during the next decades. In times where public opinion is easily swayed, and where emotions of a generally under-informed or miss-informed public may turn against any form of hunting, hunters must proactively show their commitment to conservation and sustainable use!

With a view to CITES CoP 13 (Conference of Parties) in 2004, hunters must be aware of the distinct possibility that the African range nations may face immense pressure for uplisting the African lion to Appendix 1. What that means for hunting trophy lion can easily be imagined; but what it means for the rural communities who live with and next to the free-ranging lion is somewhat more difficult to fathom out. It will essentially mean that the lion will lose most of its economic value to these rural people and the cost of having lion in the vicinity will increase manifold. Their economic equation will balance even less than before.

The result? Lion will be prosecuted and killed; relentlessly and mercilessly – by any means available. What does that mean to the African lion? Outside of formally protected areas, the lion will be seen as vermin without economic value, even with a very negative economic value! It will meet its destiny and disappear from these areas!

Neither we as hunters nor any scientists conducting research on lion want that outcome. And I believe firmly, neither do the rural communities in Africa. So what can we do? The scientists must make sure that the public is receiving factual and unbiased information – and in cases where the media do not fulfil their role as unbiased communicators, the African Lion Working Group is commended for its recent publication, “African Lion Database” and supported in its efforts as a watchdog and as a source of factual information.

The hunters in turn also have to shoulder their responsibility. It makes no sense for hunters to bury their heads in the sand and pretend to wait for the storm to pass. For this storm – if not fought with facts and scientific principles in time - will not pass. If we do not secure the continued existence of a viable African lion population, the economic future of many a safari operator will also hang in balance and hunters around the world will lose the possibility of hunting lion in Africa.
All hunters must join forces – visiting sport hunters, professional hunters and outfitters – in order to show a serious commitment towards the conservation and sustainable use of lion. I therefore commend the International Foundation for the Conservation of Wildlife (IGF) and its director, Dr Philippe Chardonnet, who together with his colleagues and John Jackson’s Conservation Force brought out the book “Conservation of the African Lion – Contribution to a Status Survey” (details see page 5, this issue). But we certainly need more work and commitment at grassroots level – all visiting hunters and most of all, all professional hunters and hunting outfitters have to join in.

In some quarters, there is a growing concern that trophy quality of African lions is declining. It is therefore the obligation of the hunter to co-operate in collecting reliable data of trophy quality, area, habitat and prey availability which can be evaluated and integrated into game management plans. Hunting can only be sustainable if it involves an ongoing process of adaptive management of the natural resource. The hunter is a key element in this process and must not shy away from this responsibility.

This is where ALPRU fits in. In February 2002 ALPRU started a database on the body mass and dimensions of large African predators. Standardized procedures to measure specimens and record data collected from dead or immobilized large African predators were developed. The procedures proposed by ALPRU will assist professional hunters to measure all variables on all hunted large predators. Similarly scientists will collect data on immobilised animals across the continent.

Samples of mane and body measuring instructions are shown in sketches on page 17 of this African Indaba. There is a simple rationale for the professional hunter and outfitter to join in such a continent wide effort to establish a meaningful database (other than the mere “record book entry” – see Dieter Schramm’s remarks about “world records” on page 4, this issue) and sustainable hunting quotas: It will give an economic incentive to rural communities to tolerate lion on their land, it will ensure the presence of viable lion populations on non-formally protected land, it will provide mature trophy lion for the visiting hunter and it will guarantee the economic future of safari companies!

During discussions amongst experts it became evident that techniques to capture and record morphometric data from hunted animals in Africa are either non-specific, inadequate or non-existent. As a result valuable data as substantiation of sustainable use of wildlife, especially large African predators, and as contribution to conservation efforts are lost to science.

At the first glance it may seem that the measuring of large animals is difficult. For that reason, or because it is simply not regarded as necessary or a priority by professional hunters or visiting hunters, very few authenticated measurements are available to science.

In my article “Another debate – this time the African Lion” I have criticized recent alarmist media reports, but I also called for cooperation between science and the hunting community. I challenge ALL HUNTERS – PROFESSIONALS, LOCAL AND VISITING – to recognize not only their obligations towards the age-old traditions of hunting but also for the needs of scientific conservation activities. Join the ALPRU effort and contribute the data of the game you hunt to the benefit of science, conservation and sustainable use.

In case of the African lion the procedure is less than difficult – it just needs a bit of time. To sacrifice that time must be in the interest of all genuine hunters! With this issue of African Indaba you receive the ALPRU Field Data Sheet as separate mail to record variables of the hunted lion as well as other relevant information The ALPRU Field Data Sheet has been developed to universally suit all large African predators and has been tested successfully with several species by ALPRU – so you may also want to use it for leopard, etc.

In addition, ALPRU has designed graphic presentations to assist the operator in the field with the task of measuring the animal. A complete set of these instructions is available from African Indaba or directly from ALPRU.

I see that you are of goodwill and ready to cooperate with ALPRU – but how do you weigh a big lion in the field? It is actually quite simple – Dr Brian Bertram already used this method in 1975:
I carried six lengths of angle iron and four wooden planks 30 cm wide; all were 120 cm long, and so fitted conveniently into a small vehicle. These components could be bolted together in 4 min to produce a platform roughly 120 cm by 200 cm. This was placed close to the back of lion, which was then rolled over onto it and pushed to the centre of the platform. A set of low flat bathroom
scales was placed underneath each end. With the platform with the lion then balanced on the two sets of scales, the reading of each scale was taken; their sum, minus the weight of the platform, gave the weight of the lion. With this system, it was possible to weigh a lion of 200 kg alone and without assistance, and with a minimum of disturbance. A slightly larger platform with four sets of scales would enable one to weigh considerably heavier animals."

It should not be too difficult for a safari operator to perform these chores – last not least the hunted lion is normally brought back to camp, were all the utensils for weighing and measuring (and the time to do a proper job) are available.

Biological samples can be collected with a simple procedure, since ALPRU only require hair samples for DNA analysis to accompany the physical data set. The hair is plucked between thumb and forefinger from the skin at the base of the tail. The hair must still contain its follicles (roots attached). The hair sample is placed in a paper envelope; the envelope is inserted in a small plastic bag or a pill box to keep it dry and stored in a cool place or refrigerator. Clearly mark the container with the corresponding identifying information from the ALPRU Field Data Sheet. Once ALPRU has been informed about the number of hair samples, the necessary arrangements and quarantine procedures for export/import of pathology specimens will be issued. Better still, be prepared and contact ALPRU timely in advance for more details before the 2004 hunting season starts.

Any conscientious safari outfitters and professional hunters gain another two advantages by participating in the scheme – the bath room scales can be used in the hunters’ tents to show how much weight is lost on a strenuous African safari, and the visiting hunter is being supplied with hitherto unknown detailed statistics of the trophy and an ALPRU certificate recognizing the hunter and the outfitter will be issued.

Please cooperate in this important issue – it is your action now which will determine the success of scientific conservation efforts. Your action will contribute towards maintaining viable African lion populations and continued lion hunting. For more information or discussion on how you may cooperate contact either Gerhard Damm gerhard@muskwa.co.za or ALPRU (Prof HO de Waal) at fax +27-51-401-2608; email ALPRU@sci.uovs.ac.za or ALWG (Sarel van der Merwe) mwnatura@mweb.co.za.

IMPORTANT NOTE: PDF files of the ALPRU Field Data Sheet and A4 size instructive photos/sketches for measuring will be provided by email on request. All data submitted to ALPRU will be treated with the utmost discretion.

VOL 2/1 (2004)
EXTRACT FROM EDITORIAL BY G DAMM

The last issue of African Indaba – in particular the various articles about the African lion and its status - brought a variety of responses. I was particularly glad that Prof. David Macdonald and one of his co-workers, Dr. Graham Hemson, as well as Dr Laurence Frank and Dr. Craig Packer found time to respond as well as a number of their colleagues from the African Lion Working Group. Let us hope that this signals the start of a broad based and open minded exchange of information and constructive dialogue. African Indaba will do its best to foster such interaction. We will report about the issue again in the near future.
The lion articles in the November/December issue of African Indaba have created considerable reader interest. Therefore we will periodically bring information about ongoing lion research projects. For space reasons we have to distribute this information over the next three issues.

If you are interested in knowing more about these and other research projects please contact the African Lion Working Group (Mr. Sarel van der Merwe, Chairperson, email mwnatura@mweb.co.za or sarel@civic.mangaung.co.za)

The effects of sport hunting on an African lion population
- Principal researcher: Karyl Whitman.
- Supervisor: Prof Craig Packer
- Study area: Maswa Game Reserve, Tanzania.
- Date started: 1996
- Duration: 4 years
- Academic institution: University of Minnesota.
- Affiliated institutions: Wildlife Conservation Society, Big Game Special Projects Foundation (Minnesota), Bell Museum of Natural History, Dayton-Wilkie Fund, Graduate School of Minnesota, Global Wildlife Trust, Friedkin Conservation Fund, Serengeti Lion Project.
- Summary: Lions are economically important to the hunting industry. A high risk of infanticide associated with the removal of resident males, combined with a high demand, make lions particularly vulnerable to over-exploitation. Currently only a few scientific studies have examined the extent to which sport hunting affects lion populations. This study will model the effects of different harvesting strategies on a simulated population, monitor a hunted population over time, and provide a quantitative analysis of the impact of regulated harvesting on the reproductive potential and social behavior of the lion.

An investigation into the effects of trophy hunting on the social behavior, population structure, and distribution of lion (Panthera leo) in the mid-Zambezi Valley, Zimbabwe
- Principal researcher: Norman Monks.
- Supervisor: Dr Tim Lynam, Dr Moyo.
- Study area: Mid-Zambezi Valley, Zimbabwe.
- Date started: 2000
- Duration: 3 years
- Academic institution: Tropical Resources Ecology, Program, University of Zimbabwe.
- Summary: The mid-Zambezi Valley in the north of Zimbabwe of some 10,500 sq. km is used primarily as safari hunting area. Only in Mana Pools National Park (2,196 sq. km) is hunting not undertaken. The project will look at the effects that sport hunting of lion is having on the lion population. Social behavior, population structure, and distribution, will be some aspects looked at in the light of hunting pressure.
Karyl Whitman and Professor Craig Packer of the University of Minnesota, together with colleagues Anthony M. Starfield and Henley S. Quadling published a remarkable article in Nature “Sustainable trophy hunting of African lions” in February. The research combines on site observations of Serengeti/Ngorongoro lion and observations from hunting concessions with sophisticated computer software to model lion population data.

In their article, the scientists write that “male lions reach sexual maturity at about 2.5 yr of age and live to a maximum of about 15 yr in nature. The lion’s mane reaches full size at about 4 yr, and peak reproductive success is attained by about 8 yr. African lions live in stable social groups (‘prides’) containing an average of 6 breeding females and a coalition of 2–3 adult males. The resident coalition sires all cubs born during their tenure, but most coalitions only remain resident for about 2 yr on average — long enough to rear a single cohort of young to independence. Rather than wait for mothers with dependent offspring to rear their current brood, incoming males typically kill all cubs less than 9 months of age and evict older sub-adults when they first take over a pride.”

When a hunter kills a dominant male lion, takeover battles for pride control may result in further casualties amongst the combatants in addition to the cubs killed by victorious newcomers. If male takeovers become too common, cubs are prevented from reaching adulthood resulting in an accelerated population decline.

But there is a most significant outcome in the study of Whitman and Packer. When the minimum age of hunted trophy males was raised, the chances of population persistence increased markedly — to the point where removing males older than 6 years of age had no substantial effect regardless of quota size. On the opposite end however, the excessive removal of younger males of 3 years or less invariably lead to population crashes at one point in time.

It seems that a responsible hunting strategy which concentrates on hunting only males of 6 years and older would in fact prevent lion prides from changing hands too frequently. As a consequence at least one group of cubs will have the chance to reach independence during the tenure of a coalition. A stable lion population in the region concerned is the result. The number of the mature male hunter-killed lion is actually not having any detrimental effect on this lion population and would in effect “produce” more mature trophy animals in the long run. Consequently the hotly discussed lion quotas, difficult to establish objectively and difficult to control, could be a thing of the past.

To improve population stability, Packer and Whitman challenge the hunters to apply hunting strategies which target nomadic males or resident pride males whose cubs have recently reached independence. This could significantly reduce infanticide and assist further in managing the lion population to optimal densities.

Another consideration deserves to be looked at: Whitman and Packer suggest that instead of selling a “guaranteed lion hunt” hunters should find back to their roots and buy hunting “opportunities” (which may be successful or not) and/or auction selected hunting opportunities in defined prime areas to maximize economic return. I suggest that this could be a source of funds for lion research and conservation.

The important and relevant conclusion is however that a lion population offers sustainable trophy harvests by following the simple harvest rule of not hunting males under 6 years of age and preferably concentrate efforts and hunting skill on even older males past the prime reproductive age. This should find the approval of all hunters, since the trophy “quality” will definitely be raised.

Whitman and Packer also delivered a most valuable tool with a simple technique for age-assessment of free ranging lion. Mane size and coloration are in their opinion no reliable indicators of age, but the extent of black pigmentation in the nose gives a fairly close indication. Lions are born with pink noses which become increasingly freckled and black the older the animals get. Noses of 5-
year old males from the Serengeti are about 50% black; the scientists found out that Ngorongoro lion are about 8 years when they reach this stage.

This simple way of determining trophy eligibility — honestly applied in the field and rigorously enforced by authorities and associations alike — will radically improve the scenario for lion hunting all over Africa. Every African professional hunter worth his salt should be able to judge the age of a lion — if the nose is more than 50% black it’s a shootable trophy. If not, continue hunting! Combined with the other mentioned strategies, hunters can turn out to be some very important role players in African lion conservation.

It would also fit hand in glove with the “Principles and Guidelines for the Sustainable Use of Biodiversity” which were recently adopted at CoP 7 of the Convention of Biodiversity in Kuala Lumpur (see separate article in this issue). Applied to the numerous areas in Africa, where lion range and human range overlap and conflict situations (loss of live and livestock) arise, the methods suggested by Packer and Whitman will assist in resolving pastoralist-lion conflict without compromising lion conservation (Dr. Laurence Frank has — with the Laikipia Lion Project — actually a perfect scenario to field test this approach, if the Kenyan government would only allow trophy hunting).

The authors of the Nature article are not shy to state that the practice of harvesting only males above a certain age range — thus ensuring that the “best” males breed successfully in a stable population - could possibly be extended to other trophy animals too. “With basic information on breeding biology and social behaviour an age-threshold criterion could be calculated that would minimize the adverse effects from [hunting] killing all of the eligible males each year” they say. Packer and Whitman hit a point which has been brought forward by professional hunting associations in Africa (i.e. PHASA and NAPHA) and by the Council for International Game and Wildlife Conservation (CIC) on a number of occasions and which certainly deserves intensive scrutiny and cooperation with researchers and scientists.

The international media — like “Der Spiegel” from Germany and BBC News World Edition — were quick to report on the article in Nature. I was personally very pleased to read that Dr. David Macdonald, Director of Oxford’s University’s Wildlife Conservation Research Unit, whom I criticized harshly in African Indaba Vol 1/#6 for some remarks on the BBC News Forum, told BBC this time, referring to the work of Prof. Packer and Karyl Whitman: "I think it’s an excellent and much needed development. You might think that [trophy hunting] is ethically attractive or ethically unattractive. What matters is that [it] is sustainable."

Hopefully the hunters in Botswana can cooperate with Dr. Macdonald and his colleague Dr. Graham Hemson on some aspects of the viability and compensatory mortality of Botswana’s lion population. We might just be able to find a broadly acceptable solution there too!

More information about lions can be found by clicking the following websites: Lion research Center, African Lion Working Group, IUCN Cat Specialist Group, IUCN Conservation Breeding Specialist Group, Laikipia Predator Project, Hwange Lion Research (Wild-Cru).

Addendum:

It comes as no surprise that the Minnesota University study has also drawn criticism. The corner from which such criticism comes is obvious and IFAW Kenya (exactly there, where IFAW’s “preservation record” is demonstrably poor) was in the forefront. Kate Nicholls, who heads together with Peter Kat the so-called Okavango Lion Conservation Project, said "It is irresponsible, poor science and has got nothing to do with conservation".

Well, Mrs. Nicholls, for the record I would like to draw the attention of the readers to your alarmist call – repeated by The Nation in Nairobi and The Reporter in Gabarone – that the “AIDS virus is killing Africa’s lions”. Now, this is irresponsible science, or should we rather call it a callous bit of self-promotion and/or fishing for funds?

Well respected lion researchers around the world know about FIV in the Serengeti for two decades and their molecular data suggest that FIV has been present in lion for thousands of years,
Kat and Nicholls saw a few sick lion cubs which eventually died - their presumption that they died from AIDS is preposterous at least, since the probability that the cubs died of CDV, TB or simply of starvation is infinitely larger (in a year when prey is scarce, cub mortality can reach 80%).

Even if FIV were as harmful as Kat and Nicholls propagate, it would take years to kill its victims - thus it would only cause illness in adults, not cubs.

Nicholls and Kat amazingly got research clearance from the Botswana Government, but solid lion science has never been an outcome of their work; they were successful, however, in the setting up of a number of internet sites where one can join a prayer circle to help all the lions that are dying from AIDS!

Luckily, some people in Botswana seem to start looking behind the Kat/Nicholls smoke screen: The Director of Botswana Wildlife and National Parks, Joseph Matlhare, said in a recent interview with BOPA that some researchers believe that FIV comprises the immuno response of affected individuals. “Some scientists believe the virus has been present in natural populations of cats, including lions for some time. They believe this has enabled cats to evolve immuno responses and strategies to withstand the impact of the virus.” Matlhare told BOPA that the virus has infected lions in almost all parts of Africa adding that prevalence rate in some countries is much higher compared to that of Botswana’s lions. "If the virus were that virulent, one would expect high levels of mortality in these places, but research has not indicated any significant rise in mortality amongst lions nor outbreaks of highly contagious lethal diseases amongst their populations”, he said.”

Matlhare called for more research work to be done for everyone to understand and appreciate the impact of FIV on lions and the entire cat family.

I suggest that Mrs Nicholls and Mr Kat are certainly not amongst the scientists and conservation biologists who are eligible for this work!

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VOL 2/3 (2004)
THE LARGE AFRICAN PREDATOR PROJECT – PROGRESS & GUIDANCE TO PARTICIPANTS
H O de Waal, University of the Free State

African Indaba carried several references to the African Large Predator Research Unit (ALPRU) at the University of the Free State in Bloemfontein, South Africa. In an article (AI #1,3 - “Measuring large African predators”) ALPRU stated its objective to establish a database for among others the African lion (Panthera leo). Professional and visiting hunters, outfitters and scientists were invited to participate in this project.

This issue of African Indaba is pursuing the topic further with a view to provide some guidance on the measuring procedures as well as feedback on the progress thus far.

Background on the Project: a growing concern was expressed in some quarters that trophy quality of African lions is declining. Therefore, ALPRU initiated this project through which hunters and scientists could co-operate in collecting reliable data of trophy quality, area, habitat and prey availability. This data can then be evaluated and among others be integrated into game management plans.

The standardized procedures of ALPRU to measure the body mass and dimensions of large African predators have been designed to measure specimens and record data collected from dead or immobilized animals and will assist in measuring all variables on hunted large African predators. Scientists will use the same procedures to collect data on immobilized animals across the continent. These procedures are now available in *.pdf format on ALPRU’s Web site:
http://www.uovs.ac.za/alpru. Each procedure contains very specific instructions that are easy to follow. If you are still unsure of how to do it, contact HO de Waal & Sarel van der Merwe [ALPRU.SCI@MAIL.uovs.ac.za] for more information and guidance. Be it as it may, you are welcome to pop us a note/message/letter or e-mail to show your interest. It should not be too difficult to perform these chores, namely to weigh and measure the animals. We can assure you that the anatomy of these animals will fascinate and impress you if nothing else while you measure them! Collecting biological samples are just as simple! ALPRU only require a sample of hair for DNA analysis to accompany the physical data set. The hair is plucked between thumb and forefinger from the skin at the base of the tail.

The hair must still contain its follicles - that is the roots in layman's terms. The hair sample is then placed in a paper envelope; the envelope is inserted in a small plastic bag or a pillbox to keep it dry and stored in a cool place or refrigerator. Clearly mark the container with the corresponding identifying info reported on the ALPRU Field Data Sheet. Once ALPRU has been informed about the number and detail of hair samples the necessary arrangements and quarantine procedures for export/import of pathology specimens will be issued. Contact ALPRU timely in advance for more detail.

You may still ask why this new initiative? During discussions it became evident that techniques to capture and record morphometric data from hunted animals in Africa are either non-specific, inadequate or non-existent. Hence, valuable data that could serve as justification for sustainable use and management of wildlife are lost to science and conservation efforts, especially for large African predators. It seems that the measuring of large animals is perceived to be difficult and for that reason, or simply because it is not regarded as necessary or a priority by professional and visiting hunters, very few authenticated measurements are available to science. The need for greater co-operation between science and the hunting fraternity, specifically to "...recognize their obligations towards age-old traditions of hunting and more recent needs for scientific based conservation activities” has previously been stated eloquently by the Editor of African Indaba.

The specific procedures and the ALPRU Field Data Sheet have been developed to suit all large African predators. Although a male lion has been used as example, the ALPRU procedures have been tested successfully with several species such as immobilized leopard (*Panthera pardus*) and cheetah (*Acinonyx jubatus*), as well as dead black-backed jackal (*Canis mesomelas*), caracal (*Caracal caracal*) and Cape fox (*Vulpes chama*). Thus far ALPRU have received requests for info and procedures on detail from within South Africa, but also from Namibia, Botswana, Zambia, Zimbabwe and Tanzania to measure legally hunted lion and leopard.

In exchange for the effort in co-operating with ALPRU, safari outfitters and professional hunters will be provided with previously unknown detailed statistics of their trophies and a Certificate of Appreciation for Participating in a Scientific Endeavour issued by ALPRU. Check also African Lion Working Group (ALWG) for further information on the African Lion.

**VOL 2/3 (2004)**

**AFRICAN LION RESEARCH PROJECTS**

Gerhard R Damm

We will periodically bring information about ongoing lion research projects. If you are interested in knowing more about these and other research projects please contact the African Lion Working Group (Mr. Sarel van der Merwe, Chairperson, Email: mwnatura@mweb.co.za or sarel@civic.mangaung.co.za)

**Laikipia Predator Project**

- Principal researchers: Dr Laurence Frank, Dr Rosie Woodroffe.
• Co-workers: Harry Wright, Aaron Wagner, Meredith Evans, Morecai Ogada.
• Study area: Laikipia District, Kenya.
• Date started: 1998
• Academic institutions: University of California, Berkeley, University of Warwick, Montana State University.
• Summary: The project aims to conserve and manage lions and other large carnivores such as hyenas and leopards in a livestock-producing area. Basic ecological information on the existing predator populations is collected. Carnivores are radio-collared to study movements, home range, group composition, birth- and mortality rates. Important diseases, such as distemper, rabies, and Feline Immunodeficiency Virus are also studied. Patterns of depredation and livestock husbandry methods that reduce the impact of predators on livestock are also investigated. Results and recommendations will be applicable throughout Africa where predators still coexist with people and livestock.

Kilimanjaro Lion Conservation Project
• Principal researcher: Dr Laurence Frank
• Co-worker: Seamus MacLennan
• Study Area: Kajiado District, Kenya
• Date Started: 2004
• Academic institutions: University of California, Berkeley.
• Affiliated institutions: National Geographic Society, Wildlife Conservation Society
• Summary: In the past few years, this area has seen a dramatic increase in lion killing by local pastoralists and a precipitous drop in lion numbers. Recent loss of traditional tolerance toward lions is a pattern that seems to be spreading in Masailand, one of the last great remaining lion populations. We will be collecting basic ecological information on lion populations and movements. This area is between Amboseli National Park and Tsavo West National Park, it is potentially an important dispersal area for both. Based on what we have learned in Laikipia, we will also be working intensively with the local Masai to try and improve livestock husbandry to better protect their herds from predators. This will be combined with an innovative compensation scheme that uses payment for lost stock as an incentive for improving husbandry practices and cessation of poisoning and spearing predators.

AFRICAN LION - ROLF BALDUS INTERVIEWS PROF. CRAIG PACKER
Rolf Baldus

Editor’s comments: Kenya’s proposal to transfer the African lion from CITES Appendix II to Appendix I has again highlighted the IFAW-abetted protectionist wildlife policy of this country. Since sport hunting was prohibited in Kenya almost three decades ago, the country has lost a considerable – and in our opinion unacceptable – percentage of its precious wildlife. The propaganda campaigns of the international animal rights movements cannot change this sad fact. Fortunately more and more conservation scientists worldwide now go public in exposing the failure of the Kenyan approach.
Rolf Baldus (RB): Dramatic lion figures are being published by the world media: According to some scientists there are only 15,000 lions left in the whole of Africa as compared to 100,000 in the past. Is the lion an endangered species?

Craig Packer (CP): The earlier figure was never meant to be taken seriously as a population estimate; it was just a rough guess of the order of magnitude of the overall population size. Instead of a million lions or ten-thousand, the authors said there were probably on the order of a hundred thousand. The recent numbers stem from the first systematic attempts to tally all the lions on the continent. This time each guess was scaled down to the size of a single reserve or park, and then the guesses were summed up to give a crude total. The two most widely cited total guesses used different techniques, and the more inclusive estimate came up with a larger number. So it is simply wrong to claim that these surveys show a “dramatic decline” in lion numbers – we’ll never know what happened to lion numbers over the past 20 years. On the other hand, I do think that there probably are fewer than 100,000 lions left in the wild – which is less than the number of chimpanzees or elephants – so it is important to take active steps to conserve the species while we still can.

RB: What are the main causes for declines of lions where they occur?

CP: Lions are dangerous animals that kill people and livestock. Rural Africans face real threats from lions, and they retaliate to livestock losses or personal injury by trying to remove the “problem animal.” The number of lions killed by vengeful humans each year is far greater than from any other cause.

RB: If international trade or trophy hunting are not threatening the lion, then the Kenyan uplisting proposal at CITES would have no basis?

CP: The Kenyan listing is irresponsible. It recognizes the inadequacies of the recent censuses, yet it immediately turns around and cites them as if they were perfectly accurate. Even worse, the Kenyans claim that lions are being decimated by FIV (feline immunodeficiency virus) and distemper. Our Serengeti studies are far the most exhaustive investigations on lion health, and we cannot find any evidence that FIV causes significant health effects. While Canine Distemper Virus did cause a 35% decline in the Serengeti lions in 1994, the population recovered completely within 5 years – and is currently at its all time high. By far the most important threat to lions comes from problem animal control, and by putting lions on Appendix 1, the Kenyans would do much more harm than good. Tanzania has more lions than any other country in the world, and the majority of these animals live outside the national parks. If lion trophy hunting were stopped, they would have no economic value, and there would no longer be any incentive to conserve the lions. Opponents of trophy hunting have provided no alternative mechanism for funding the large-scale conservation efforts required to protect the species.

RB: Kenya has had no hunting of lions since 27 years and the lion population has been greatly reduced. Tanzania has lion hunting and at the same time the biggest population on the continent. What is the role of well managed lion hunting for conservation?

CP: I think that the situation in Kenya illustrates that lions would be viewed only as threats to people and livestock in the absence of trophy hunting. Lions in Amboseli National Park were exterminated by angry Maasai in the early 1990s, and three-fourths of the lions in Nairobi Park were speared in the past year. Lions inflict serious damage to these people’s livelihoods, so why should they be tolerated outside the parks? The Tanzanian hunting industry certainly has the potential to play an important role in lion conservation, but there is significant room for improvement. Hunting companies need to engage local communities directly and help them to co-exist with lions.

RB: It is argued that the phenomenon of maneless lions is a result of trophy hunting. Why are there lions with and others without manes?
**CP:** Mane size is largely a response to average temperature in the environment. Serengeti and Ngorongoro lions live at fairly high altitudes where temperatures are quite mild, and they have luxurious manes; lions in the hotter climates of Tsavo, Selous and India have quite short manes. Even in the 1890’s these hot climate lions were known for being maneless – long before there was any significant trophy hunting.

**RB:** How can lion hunting be improved?

**CP:** Lion trophy hunting must be recognized as the primary mechanism for protecting viable lion populations outside the national parks. First and foremost, hunters must work to discover the circumstances where people and livestock are attacked by lions. Conservation of such a dangerous animal rests with the tolerance of local people, and practical projects improving animal husbandry and personal safety should be implemented in cooperation with the local and regional governments. Lions kill dozens of people each year and hundreds of livestock. Rural Africans are becoming less and less tolerant to these losses, and I wouldn’t be surprised if they eventually started to view problem animals with the same intense hostility as rural Swedes or Americans! Second, it is essential to restrict lion hunting to males that are at least 6 yrs of age – old enough to have raised their first set of offspring. By enforcing an age minimum, the wildlife authorities will make giant strides in forcing hunting companies to prevent over-exploitation. Finally, the business of trophy hunting needs to be based on providing its clients with an unforgettable adventure – rather than selling them dead animals. African hunting companies must become associated with wildlife conservation in the same way that Ducks Unlimited is associated with wetlands conservation – rather than being associated with dead ducks.

Lion conservation is going to be very expensive, and hunting companies will have to raise more and more income from diversified activities – there is no way to stake their fortune on shooting more and more animals. In addition, the industry needs to attract more long-term investors. By increasing the stability of the hunting blocks (through extended contracts and restrictions on who can actually hunt in those blocks), hunters will increasingly regard the young lions on their properties as their crop of the future rather than something that should be hastily plucked before it is ripe.

Dr. Craig Packer is a Distinguished McKnight Professor from the University of Minnesota. He has done 26 years of research on the lions of the Serengeti and is regarded as one of the world authorities on lions.

The interview was conducted by Dr. Rolf D. Baldus in Tanzania and first published in German in “Jagen Weltweit”, Paul Parey Verlag, Hamburg, [http://www.jww.de](http://www.jww.de)

For more information about Dr. Packer’s work please go to the following website: [http://www.lionresearch.org/](http://www.lionresearch.org/)

**VOL 2/4 (2004)**

**TANZANIA: LION CONSERVATION AND HUMAN-LION CONFLICTS**

Rolf D. Baldus

Tanzania has the largest lion populations on the continent, and they are not threatened with extinction. The population is stable in nearly all protected areas. Outside these protected areas it is of significant size and mostly stable. Exact data are lacking, but lions most probably have become less during the last decades in areas with high population growth, expansion of agriculture and
livestock husbandry and in some areas in Northwestern Tanzania where an influx of refugees occurred.

Although the lion range has been reduced in Tanzania in the last 50 years due to population growth and agricultural expansion, lions benefit from a widespread network of protected areas (30% of the country) and from vast tracts of unpopulated and populated lands with relatively undisturbed habitats suitable for lions. Lions are protected throughout the country, and it is the policy of the Government to conserve them both inside and outside of the protected areas as part of biodiversity. Some problem-animal control in extreme cases of human-lion conflict occurs. Approx. 250 lions are shot per year by tourist hunters, which is overall a sustainable yield. Empirical evidence from the Selous Game Reserve shows that offtake levels are sustainable. Lions play a major role in the hunting industry, which is economically significant and greatly contributes to paying the conservation bill. As a consequence of the Wildlife Policy of Tanzania (1998) Wildlife Management Areas are being created where villages manage the wildlife on their land and are increasingly earning revenues, including those from lions.

This raises tolerance levels towards wildlife including dangerous game and improves the potential for wildlife as a land use option. Areas which otherwise would be lost for wildlife are thereby safeguarded.

As a consequence of this relatively good conservation record, in particular when compared to many other countries, lions are a major source of conflicts with the human population. We estimate that around 200 people are killed in Tanzania every year by dangerous animals, of which around one third on an average could be by lions. Lion inflicted injuries and loss-of-life are more acute in Southern Tanzania. Not less than 35 people were killed by one or several man-eating lions in an area of 350 km² just 150 km southwest of Dar es Salaam between the Rufiji River and the Selous Game Reserve within the past 20 months. This is one of the most extreme incidents ever recorded of man-eating by one or two lions and at the same time one of the best documented cases, at least from Tanzania. Further analysis might help to understand the underlying causes better and thereby devise strategies to protect humans without eradicating the lions.

The reasons which have led to such a tremendous loss of lions in Kenya or in West-Africa are not connected to international trade. To upgrade the lion to CITES App I as proposed by Kenya would not address any of the issues that adversely affect lion populations, i.e. loss of habitat to agriculture, problem animal control, poaching and killing of lions by pastoralists. It would however, make the hunting of lions more difficult or even impossible.

This hunting is sustainable giving value to lions and is one major element in the range of conservation tools which Tanzania has successfully applied to protect the future of the lion.

Download the study at www.wildlife-programme.gtz.de/wildlife

EXTRACTS FROM AN ARTICLE ABOUT THE INTERNATIONAL FOUNDATION FOR THE CONSERVATION OF WILDLIFE IGF

In this issue we want to explicitly highlight the very substantial document about the African Lion compiled and edited by Dr. Phillippe Chardonnet. For the first time this study can be opened and/or downloaded from IGF’s website (see links provided below). We recommend that all those concerned with the conservation and sustainable use of the African lion take a look at the wealth of information provided there.
IGF has coordinated a comprehensive survey of the conservation status of the African Lion, *Panthera leo* throughout the whole distribution range of the taxon. The purpose of the survey is to provide interested parties with additional data on the conservation status of the lion in Sub-Saharan Africa (SSA). This survey is considered as a contribution to the issue, which is already addressed by a number of scientists, managers and authorities, etc. The intention of the survey is to be much more a "food for thought" than a conclusive statement.

Download the full text of the publication:
Chapter I - Introduction Open | Download
Chapter II - Population survey Open | Download
Chapter III - Driving forces Open | Download

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**AFRICAN LION RESEARCH PROJECTS**

We continue to bring information about ongoing lion research projects. If you are interested in knowing more about these and other research projects please contact the African Lion Working Group (Mr. Sarel van der Merwe, email mwnatura@mweb.co.za or sarel@civic.mangaung.co.za

**The people and predators project Tanzania**

- Principal Researcher: Laly Lichtenfeld
- Assistant: Charles Trout
- Study Area: Tarangire National Park and Monduli/Simanjiro Districts, Tanzania
- Date Started: 2002
- Academic Institutions: Yale University
- Affiliated Institutions: Tanzania Wildlife Research Institute, the Wildlife Division, and Tanzania National Parks Authority
- Summary: The People and Predators Project is committed to developing realistic strategies for conserving large carnivores in areas where these animals interact with a variety of people including local community members and professional sport hunters. This project is one of the first in Tanzania to focus on the status of the African lion outside of national parks. Ecological data is collected on the abundance of large carnivores in different land use areas including professional sport hunting blocks and village lands. This information is compared to data collected in the nearby Tarangire National Park. Recognizing the wary nature of carnivores outside of protected areas, the project is working to develop cost effective methodologies for estimating lion abundance when the likelihood of actually seeing these animals is low.

Following work pioneered in southern Africa, the project currently uses traditional Hadzabe hunter-gatherers to track the animals and estimate their abundance via spoor counts. The knowledge of the Hadzabe is impressive, and they have reliably and consistently estimated the age, sex, and group composition of lions from their tracks. In addition, the project has developed several programs focusing on the attitudes of local community members, professional sport hunters, and photographic tourism operators toward lions and lion conservation and the nature of human-lion interactions. This includes research on the impacts of livestock depredation and local retaliation by spearing and poisoning. The results and recommendations of this project will make an important contribution to the current debate regarding the status of lion populations and the effects of sport hunting. In addition,
lessons learned will be widely applicable throughout Africa in areas where lions come into contact with local communities and professional sport hunters.

For further information, please visit the project website at www.predators-tz.org

Serengeti Lion Project
• Principal researcher: Prof Craig Packer. Co-workers: Grant Hopcraft, Bernard Kissui, Dennis Ikanda, Dominic Smith, Peyton West.
• Study area: Ngorongoro Carter, Lake Manyara National Park, Serengeti National Park, Tanzania.
• Date started: 1963 (Ngorongoro), 1966 (Serengeti)
• Duration: ongoing
• Academic institution: University of Minnesota. Affiliated institutions: National Science Foundation (US), Frankfurt Zoological Society, Tanzanian Wildlife Research Institute, Ngorongoro Conservation Area Authority, Tanzanian National Parks.
• Summary: Long-term studies of African lions focusing on a broad array of topics. These include aspects of individual survival and reproduction, population trends, genetic health and variability, epidemiology, and conservation.

Makgadikgadi Lion Project
• Principal researcher: Graham Hemson Supervisor: Prof David Macdonald, Prof Gus Mills.
• Study area: Makgadikgadi Pans National Park and surrounds, Botswana.
• Date started: 1998
• Duration: 5 years
• Summary: Two main questions are addressed. Firstly, how do lions impact upon the local community through livestock predation and how does the local community impact upon the lion population through retaliatory killing. Secondly, how do lions deal with the large fluctuations in local prey distribution and density in terms of dietary preference and home range utilization and what influence does relative prey availability have on the killing of livestock.

Cameroon Lion Project
• Principal researchers: Dr. Hans Bauer, Dr. Hans de Longh, Mr. Stephen Van Der Mark
• Associates: Dr. Pim Van Hooft, Prof. Helias Udo De Haes, Dr. Jean Pierre Mvondo, Mr. Saleh Adam
• Study area: Northern Cameroon (Waza NP and Benoue NP)
• Date started: 1995
• Affiliated institutions: Institute of Environmental Sciences Leiden University, Centre for Environment and Development studies in Cameroon, Garoua Wildlife School, Waza NP Conservation Service, WWF-Netherlands, Dutch Federation of Zoos
• Summary: This research project focuses on human-lion conflict. An extensive study was undertaken in Waza NP, including use of radio-telemetry, calling stations. Participatory Rural Appraisal and policy analysis for a study of livestock depredation and the impact on lion population viability. This work now continues, but has broadened to an assessment of the impact of all human activities. Activities in the Benoue area have so far been limited to surveys only, but may be extended in future. Research results were also used for a Lion Conservation Training Course for students of the Garoua Wildlife Schools and wildlife professionals (including park wardens).
EXTRACTS FROM PROPOSALS FOR CONSIDERATION AT CITES 2004

Kenya requests the transfer of populations of *Panthera leo* currently listed in Appendix II to Appendix I due to the [perceived] ongoing decline in the number of individuals in the wild; and for the populations of West and Central Africa which, in addition to experiencing a [perceived] ongoing decline in the number of individuals in the wild, also are small and fragmented. Kenya refers to a number of sources in its proposal (Bauer and Van Der Merwe, Nowell and Jackson, Creel and Creel, Macdonald, Loveridge, Loveridge, Whitman, Packer), but significantly omits referring to Chardonnet.

Namibia’s official (negative) response to the Kenya proposal says “whereas we recognize that export of trophies is, in theory,- permissible under an App I listing, experience has shown that an App I listing affects non-commercial exports, especially through stricter domestic measures. The listing of lions on App I would have economic consequences for local communities outside, and along the borders of protected areas where lions occur, which in turn will have a detrimental impact on our ability to manage and conserve this species outside of protected areas, thus effectively reducing the range over which lions can exist. We believe that this would be true in many other range States. The lion population decline, suggested in the proposal, from the 1996 estimate (Nowell & Jackson 1996) to the 2004 estimate (Bauer & van der Merwe 2004) is unconvincing and perhaps inappropriate. The proposal makes no attempt to verify the quality, accuracy, or compatibility of the two datasets. The results from these 2 estimates are, in all likelihood, not directly comparable. We believe that the suggestion of a population decline, using those references, is invalid. The proposal omitted reference to a third survey (Chardonnet 2002), where the population was estimated at 28,854 - 47,132 lions.”

South Africa’s official response is also negative saying “of overriding importance may be that the figures quoted in [the Kenya proposal] must be explained further. The estimate of Nowell & Jackson 1996 that has been widely quoted as a benchmark of the population of lions in Africa is nothing more than a speculative guess and not the result of a systematic survey. Thus it is not really a suitable benchmark. Two recent systematic lion surveys (Bauer & Van der Merwe 2004, Chardonnet 2002), suggest that the lion population in Africa is currently about 16 500 – 47 000, with 30 000 being the likely actual number. The review of Bauer & Van der Merwe is widely recognized as being an underestimate, as many large hunting concession areas in East and Southern Africa were not reported on. Chardonnet is probably more comprehensive and thus more reliable. According to Kenya, recent research indicates that current trophy hunting levels and practices are unsustainable in some areas. These threats are however not linked to the CITES App listing of the lion population, but to regulation and protection on a national level. Although it is recognized that the hunting of older males may increase infanticide rates this has not been shown in field studies, with lion populations breeding at similar rates in harvested and non-harvested populations. Several research programs are tackling this issue in various African countries, and guidelines on sustainable use of lions (Whitman et al. 2004) are available to decision makers.

For additional information about the African Lion please read also the interview with the recognized lion expert, Professor Dr Craig Packer on page 2 of this issue of African Indaba as well as our articles in previous issues.
African Indaba had some foresight in this matter [of the African Lion] and we raised the issue of lion conservation and sustainable use of this charismatic member of the Big Five already in 2003 in our very first issue and continued bringing in-depth articles. Together with John Jackson III of Conservation Force and Dr. Philippe Chardonnet of IGF, we started to seed the idea of a comprehensive AFRICA-WIDE LION SYMPOSIUM already in the last quarter of 2003. This initiative has now become more concrete and we are in the final planning stages of this LION SYMPOSIUM, which will be held in Johannesburg in March 2005. Prominent lion researchers from Europe and USA and of course from Africa have already signaled their willingness to participate, as well as representatives of the various national African Professional Hunting organizations.

The symposium will also have resource economists, government representatives, delegates from national wildlife authorities and most importantly of rural communities of the lion range nations participating in the deliberations. Representatives of international and national conservation organizations will also sit at the tables.

Although we are still in the preparatory stage one can already say that the main topics will be the identification of the geographical areas where lion conservation is most urgent, and where actions can be taken (and should offer a good chance of succeeding, i.e. be acceptable to local government, communities, administrations, and people, in the short and long term. The issue of “Problem Animal Control (PAC)” must be tackled as well as “best practices in lion hunting”. Finally the participants should come to “agree on a set of conservation activities that would have the biggest impact on lion conservation”.

Some articles in this issue deal with those topics. Do yourself a favor and read them – and bring them to the attention of environmental editors of the media. Too many false and totally irresponsible statements regarding the African Lion, i.e. the Nicholl/Kat myth of lions dying of feline AIDS, the myth of having a realistic benchmark concerning lion numbers (depending on the source, 100 000 or 200 000 lion were stated as having lived in Africa less than two human generations ago), the myth that only 12 000 to 15 000 lion are living today in Africa – rumors which have been launched by armchair protectionists and have been greedily swallowed by the media!

The most vocal supporters of Kenya’s proposal are people who exclude the human element from their equation. Mostly they are animal rights advocacy groups conducting campaigns (and spending their funds) in the media; groups who seem to forget that most of Africa’s poverty-stricken communities can ill afford the time and money to count lions, attend meetings, or discuss whether or not to allow hungry lions to devour their cattle.

There is no doubt that we have considerably fewer lion today than 50 years ago – but there is even less doubt that we have several more hundred millions of Africans living on the continent and that suitable lion habitat is disappearing fast. Those lion living in Africa today need a pragmatic approach to save and conserve them and their habitat. Therefore, tangible economic values must be attached to the lion and the African people must receive a direct benefit. The African land- and humanscape of the 21st century is different from the situation found in the earlier part of the 20th century – there is no way to turn back the clock.

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LION SPECIALISTS REJECT KENYA PROPOSAL

In July the 6th International Wildlife Ranching Symposium brought together more than 200 wildlife conservation and management specialists in Paris to discuss and explore the topic “Wild
Taking Note that the first two continent-wide lion surveys were made in 2002, from which, since no previous such surveys had ever been made, no trend in the continental population can be deduced at this time,

Aware however that lion populations are bound to be in conflict with human occupation of lion habitat by settlements or pastoralists, Encouraging wildlife managers in the African lion’s Range States to monitor lion populations in the coming years, developing in the process adapted methodologies for sampling and estimating numbers in representative lion populations, as well as getting a better understanding of their population dynamics under various regional conditions in order to ensure their sustainable utilization,

Aware furthermore that trophy hunting of adult lion males has been, for many years, and continues to be sustainable in most instances, based upon annual quotas which are decided and can be adapted by each Range State as it sees fit and provides economic benefits for to local people who live near lion populations and to wildlife conservation authorities, benefits which would be jeopardized to a great extent were the lion to be listed on Appendix I, due to excessive import restrictions applied in such cases by States such as the USA,

Informed that Kenya is proposing to the forthcoming CITES COP 12 that the African lion (Panthera leo) be listed in Appendix I of the Convention,

Considering that the entire international trade in African lions is already fully controlled, as its monitoring in Appendix II of CITES over the last 25 years has amply demonstrated, its inclusion in Appendix I of the treaty cannot be justified,

Concur with the comments published by the Governments of Namibia and South Africa which conclude that the argument and supporting data of the Kenya proposal are inadequate and that the African lion does not meet the biological criteria for Appendix I listing, and therefore,

Recommend unanimously that Kenya’s proposal to list the African lion (Panthera leo) in Appendix I of CITES be rejected.

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DR CRAIG PACKER’S RESPONSE TO KENYA’S LION PROPOSAL
Professor Craig Packer, Dept. Ecology Evolution & Behavior, University of Minnesota

Editor’s Note: The renowned lion specialist and member of the African Lion Working Group, Dr Craig Packer sent this article to the CITES authorities in response to Kenya’s proposal to uplist the African lion to Appendix I at the 13th Conference of Parties in Bangkok.

The Kenyan recommendation is fundamentally flawed since it is impossible to measure long-term changes in lion numbers. The earlier figures were never meant to be taken seriously as population estimates; they were just rough guesses of the order of magnitude of the overall population. Instead of a million lions or ten-thousand, the authors suggested that there were probably on the order of a hundred thousand across Africa as a whole. In contrast, the recent estimates stem from the first systematic attempts to tally all the lions on the continent. Crude guesses were made for each reserve or park, and these guesses were summed up to give a crude
The two most widely cited totals used different techniques – Chardonnet included hunting reserves; Bauer and van der Merwe did not – and Chardonnet’s more inclusive estimate provided a larger number.

I was asked to contribute to the Bauer survey, and I made it clear to the authors that my estimates for Tanzania and Kenya were far too crude to be used for policy decisions. Tanzania has four of the largest lion populations left in Africa (Serengeti, Selous, Moyowosi-Kigosi, and Rungwa-Kisigo-Ruaha), and I only provided rough numbers for Serengeti and Selous. Further, I made no attempt to estimate the number of lions outside the reserves even though there are numerous reliable reports of man-eating lions in many parts of Tanzania each year. Thus, figures from Tanzania are incomplete, and it is simply wrong to claim that recent surveys show a “dramatic decline” in lion numbers – numbers may well have dropped, but we have a poor idea how many lions live in Africa today, and we’ll never know what happened over the past 20-50 yrs.

The Kenyan report also makes two erroneous claims about the impact of disease on Africa’s lions. Canine distemper virus (CDV) did indeed cause a dramatic short-term decline in our Serengeti study population, but the population completely recovered within 4 years and is currently at its all-time high.

There are no data whatsoever showing a measurable impact of FIV infection on lion survival or reproduction. We were the first research group to identify FIV in African lions, and Packer et al. (1999) summarized 15 years of data on FIV in the Serengeti lions, finding no difference in survival between animals that were infected at an early age versus those infected at a later age. This situation is essentially the same as for SIV in numerous primates and FIV in pumas. The consensus among lentivirus experts is that endogenous hosts are unharmed by these viruses: severe immunodeficiency is only a serious health risk to novel hosts such as humans and domestic cats that have only recently been exposed. The only other pathogen besides CDV that appears to be persistently harmful to lions is bovine tuberculosis (bTB). However, bTB has infected the Serengeti lions for at least 20 yrs, prevalence has never been higher than 5%, and only four animals (out of hundreds) have become seriously ill with the disease.

In contrast to the large outbred Serengeti population, the lions of Hluhluwe-Umfolozi Park (HUP) and Ngorongoro Crater are both highly inbred, and both populations are highly susceptible to infection: bTB poses a more serious health risk to the HUP lions than in the Serengeti, and the Crater lions have suffered three major disease outbreaks in the past 10 yrs (1-2 of which were CDV).

“Fresh blood” was introduced into HUP in 1999 and a similar translocation will be undertaken in the Crater in early 2005. If disease resistance is improved by the restoration of genetic diversity, it will be important to find the revenue to finance similar activities in other small lion populations. Reclassifying lions to Appendix 1 would be irrelevant to restoring genetic diversity to small populations in National Parks (e.g. Amboseli, Nairobi, Manyara) and harmful to lions in smaller hunting reserves in southern Africa since there would be little economic incentive for the hunters to manage their inbred lion populations.

The Kenyan recommendation states that quotas set for lion trophy hunters in Tanzania are unsustainable. However, there is no evidence for this assertion. Lion offtake in Tanzania has been nearly constant for the past 10-15 yrs, indicating relatively stable lion population sizes for the country as a whole.

Although we do not know how many lions exist throughout the country, the number is very likely to exceed 10,000-15,000 animals, so a total offtake of around 200 lions is less than 2% of the total.

The most important flaw in the Kenyan recommendation is that it plays down the fact that lions are dangerous animals that kill people and livestock. Rural Africans face real threats from lions, and they retaliate to livestock losses or personal injury by trying to remove the “problem animal.” The number of lions killed by vengeful humans each year is far greater than from any other cause. In the first six months of 2004, one of my students, Bernard Kissui, documented the deaths of 21 lions around Tarangire National Park that were speared after killing livestock.
The Tarangire lions follow the migration during the wet season, and most if not all of the victims originated from within the National Park. Another student, Dennis Ikanda, has found that 6-7 lions are killed by Masai each year in the Ngorongoro Conservation Area; most of the victims had followed the wildebeest migration and originated from Serengeti National Park. The true extent of lion killings from problem animal control (PAC) is unknown since most cases are never reported to wildlife authorities. But extrapolating from Tarangire and the NCA, the number must be far greater than from trophy hunting, and PAC also results in the deaths of adult females as well as males.

The overall reduction in the lion’s geographical range over the past century has resulted almost entirely from PAC. I know of no cases where lions have been extirpated from a hunting reserve, but lions are now missing from large parts of Africa where human populations have increased in rural areas. Reclassifying lions to Appendix 1 will not directly protect lions from PAC. The most likely outcome would be to reduce the tolerance of local communities: any serious reduction in lion trophy hunting would diminish the economic incentives to coexist with lions.

Finally, a loss in revenue to trophy hunters would decrease their abilities to invest in any form of protection for the lion populations on their concessions. Lions are indeed likely to decrease in numbers across Africa over the next few decades, but reclassifying them to Appendix 1 would be a serious mistake. The primary threat to the lion is from PAC rather than from international trade. The most important step that CITES could take would be to guide park managers, wildlife authorities, and hunting concessionaires with practical techniques for reducing the impact of PAC.

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CITES PROVISIONAL ASSESSMENT FOR THE KENYA LION PROPOSAL AT COP 13

The proposal aims to transfer the African populations of the lion Panthera leo from App II to App I. The supporting statement quotes population estimates of 16,500 to 30,000 lions on the continent, of which the large majority occur in East and Southern Africa. In its comments as a range state, Namibia notes however that the supporting statement does not present information from a recent continent-wide survey of lions in Africa, which would suggest that higher numbers remain. Trade in specimens is mostly limited to trophies and skins exported mainly from Tanzania, South Africa and Zimbabwe. (Editor’s note: There seems to be some obvious – and possibly significant – double counting with respect to South Africa, since a good number of sport hunted lion trophies are exported from Tanzania and Zimbabwe to South Africa and then re-exported again. Additionally, most lion exported as “hunting trophies” from and originating in South Africa are in fact “canned lion”. These lion come from captive breeding and their “hunting” (as objectionable as the practice is) has no influence whatsoever on wild lion conservation. The few (in our opinion less than 10 per year) wild lion trophy hunted in South Africa come from carefully managed wild populations and their harvesting does not compromise lion conservation in this country).

Illegal international trade seems very limited. The information does not indicate that the wild population of the species is small, or that each of the subpopulations is very small. The species’ range is reportedly over 7 millionkm². It is unclear what levels of declines in numbers of individuals in the wild can be projected, but the proposal indicates that the species is increasingly rare outside protected areas as a consequence of direct persecution of problem animals, reduction of prey basis, livestock grazing, disease and political instability in some range States. Overall, it seems that the species does not meet the biological criteria for inclusion in App I. The supporting statement suggests that certain hunting quotas, particularly in Tanzania, are set at unsustainable levels and are considered unenforceable. It argues that an App I listing would mean that Parties should have to
submit export quotas in compliance with Resolution Conf. 9.21 to allow the CoP to review and eventually adopt these quotas. In fact, exporting States would be able to continue to export hunting trophies of this species without recourse to the Conference of the Parties even if the species were included in App I \textit{(Editor's note: It would however complicate and for some countries even completely obstruct lion trophy imports, due to national legislation)}. If current levels of international trade were a concern, it might have been expected that this fact would have been picked up in the Review of Significant Trade, conducted by the Animals Committee in collaboration with the CITES Secretariat. To date this has not been the case. 3 of 4 range States that responded to Kenya’s invitation to comment on its proposal oppose the inclusion of African lion populations in App I \textit{(Editor's note: Namibia, Botswana and South Africa)}. As indicated in the proposal, it appears that the long-term conservation of this species mostly depends on better protection of its habitat and prey base, particularly outside protected areas, and reduction of human-wildlife conflicts, including giving value to lions through tourism and well regulated trophy hunting.

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\textbf{FACTS ABOUT FELINE IMMUNODEFICIENCY VIRUS (FIV)}

From a FACT-Sheet published by IUCN Cat Specialist Group, African Lion Working Group, SSC Veterinary Specialist Group

\textit{Editor's Note: This finally puts the mark of irresponsibility and un-scientific work on Kate Nicholls and Peter Kat. The media reported extensively about their alarmist, albeit unfounded statements concerning FIV mortality of Botswana's lions and Nicholls and Kat cleverly used the easily influenced emotions of unsuspecting citizens to further their ends – especially collect funds! African Indaba congratulates the scientists for their candor in exposing the Nicholl/Kat scheme for what it is!}

Feline immunodeficiency virus (FIV) is a lentivirus that infects both wild and domestic feline species and is closely related to human immunodeficiency virus (HIV). Species-specific strains of FIV have been isolated from the domestic cat, puma, lion, leopard and Pallas’ cat. In the domestic cat, the virus is present in blood and saliva, and biting is believed to be the most common way the virus is transmitted among the cats.

Domestic cats infected with FIV develop changes in the numbers of T lymphocyte cells over a period of months to years analogous to those seen with HIV/AIDS in people. While FIV infection is usually associated with abnormal T lymphocyte counts, this does not necessarily result in a compromised immune system.

Some infected domestic cats develop clinical problems resulting in increased mortality, while others show no signs of illness and have a normal life expectancy. FIV infection in wild African lions has not been associated with overt clinical signs and there is no evidence that FIV infection results in increased mortality.

Some FIV-infected captive lions have displayed the same changes in T lymphocyte counts as exhibited by infected domestic cats but there is little evidence that infection results in clinical signs or increased mortality. African lions in eastern and southern Africa have the highest prevalence of FIV infection of any wild feline with nearly 100% of adults infected in several areas. Although recognized only in the last few decades, FIV has been present in wild lion populations for prolonged periods, possibly many thousands of years.

The most detailed studies of FIV have been conducted on the lions of the Serengeti National Park in Tanzania, where the lion strain was first recognized in the mid-1980s. Long-term studies of individuals sampled in the 1980s and 1990s showed no difference in survival between animals that
were infected at an early age vs. those infected at a later age. During a severe outbreak of canine distemper virus (CDV) in the Serengeti in 1994, FIV-infected animals were no more likely to die from CDV than animals that were not infected with FIV. In addition, the Serengeti lion population has doubled over the past 10 years, so these lions are clearly vigorous despite the ubiquity of the virus.

The lions of KNP South Africa are infected with FIV at a similar rate (and for at least as long) as the Serengeti lions. Accordingly, it is unlikely that FIV alone represents a health threat to Kruger lions.

The prime health threat to the Kruger lions is considered to be the recent spread into the population of bovine tuberculosis (bTB) caused by the bacterium *Mycobacterium bovis*. *Mycobacterium bovis* causes disease in felids regardless of their FIV status. Whether the course of *M. bovis* infection in FIV-infected lions is different has not been determined. Although bTB and CDV can cause serious health problems in lions, it is unlikely that FIV poses a serious threat to lions where FIV has been present for extended periods of time. Of the lion populations tested to date, only those in Etosha National Park, Namibia and Hluhluwe-Umfolozi Reserve, South Africa (and satellite populations of these established by translocations) have tested negative. However, recent testing suggests that these populations may be infected with a different strain not detected using earlier methodologies. If any of these populations are truly FIV-negative, these lions may not be resistant to FIV induced disease as they have not had a chance to adapt to the virus during evolution. Therefore, when translocating lions between populations, prudence suggests not to introduce FIV-infected lions into FIV-negative lion populations.

VOL 2/5 (2004)
A HUNTING WEBSITE WE LIKE
Information in this article is reproduced with permission from the TGTS/WWS website and the TGTS/WWS Lion Page

*Editor’s note:* Although it is not customary for African Indaba to write about specific safari operators, we feel that the contents of the articles on the TGTS/WWS websites are noteworthy because of their explicit insistence on Fair Chase and sound management practices. In particular Petri Viljoen’s explanations about sustainable lion hunting are worth to be read. If the practice on the hunting fields is consistent with the statements made on the website, then we really a good example of “best practice”.

General Information about Hunting in Tanzania

Your professional hunter will expose you to the widest variety of game species, landscapes and habitat in all of Africa: the ingredients to make your safari the experience of a lifetime. Legendary Adventures is committed to maintaining a long tradition of ethical hunting. Our professional hunters are fully aware of Tanzania Wildlife Hunting Regulations, which are strictly observed.

Hunting plays a crucial role in conserving vast areas of Tanzania’ wilderness. However, it will only be able to continue to do so if hunting is conducted in a responsible and ethical manner. Hunting is only done on foot, for male and mature specimen only and your Professional Hunter will decide whether the animal is of good trophy quality. We believe it is important that both our clients and our outfitter’s Professional Hunters be proud of the way in which hunts are conducted.

Although Tanzania is renowned for its excellent trophy quality, it is primarily the thrill of the chase that should motivate you to come on safari with us. Apart from collecting aged trophies during your safari, we want you to remember your safari for the unique atmosphere of the African bush, the people, animals, skills, sights, smells and sounds that you encounter while in Tanzania.
You will need to be reasonably fit, capable of carrying your own firearm for extended periods and willing to walk to seek your intended trophy. You will be hunting aged male specimens only, and we ask that you accept the judgment of your Professional Hunter when it comes to trophy quality. Our guarantee is to endeavor to provide you opportunities to shoot top quality trophies in a fair and sportsman-like manner. We have made a strong commitment as a company to work only with outfitters in Tanzania who operate with a high level of respect for the natural resources entrusted to them. Professional hunters exercising judgment in the field, and clients interested in meaningful field experiences must collectively share the responsibility of being custodians of nature’s gift to mankind. Everyone must also share the responsibility of upholding and promoting the ethics of sport hunting and the laws of Tanzania. To accomplish this, the local outfitters will focus on utilizing precious resources in a manner that does not negatively impact the sustainability and natural replenishment of animals and habitat. An animal should be harvested only when it is determined by the PH that it can be collected humanely and without detrimental impact to the sustainability of the wildlife population. The PH will make judgments in the field that take into consideration many factors that contribute to the overall success of the safaris they conduct, as well as the long term viability of TGTS & WWS.

The company has a primary interest in ensuring the safety of its clients, working with the local outfitters to uphold the laws of Tanzania, and providing clients with an excellent safari experience. Clients are therefore advised of these additional regulations to the Tanzania Wildlife Conservation Act, 1974 No. 12 1974 which clients will be asked to follow while on safari:

1. Clients’ firearms must be unloaded on-board any vehicle.
2. No hunting of any description or sighting of rifles within 1 kilometer of any camp.
3. There should be minimum waste of the meat of trophy animals and where possible, meat should be distributed to the local people.
4. Proper effort must be made to track and follow all wounded animals.
5. The PH is responsible for interpreting, implementing and observing all Tanzanian laws and company policies. At no time should the PH be pressured to deviate from the laws of Tanzania or company policies.
6. Only aged animals can be collected, irrespective of whether they are to be used as bait or retained as a trophy. Professional Hunters are responsible for making this determination.
7. Only male animals may be hunted. In the event that a female or immature leopard or lion is shot, be this deliberate or accidental, you will be required to pay double the published game fee. Under no circumstances will any such trophy be exported from Tanzania (see also following article “Choosing the Right Lion”).
8. Any observer wishing to hunt an animal or bird must upgrade to hunting client status or purchase a Companion Hunt. Non-hunting observers may not shoot animals on a hunting client’s license.

**CHOOSING THE RIGHT LION**

Petri Viljoen

The lion is one of the principal trophy species sought by safari hunters and therefore the continued presence of lions in hunting areas is critically important to the safari industry. Lions have a complex social behavior that places them at relatively high risk for being over-exploited in the absence of sound population management strategies.

Lions have a unique social organization and behavior is unique, particularly co-operative behavior. It differs from that of other members of the cat family, which are not distinctly social. A
lion pride is the basic unit consisting of resident females accompanied by their off-spring, and adult males, the pride males, which share an area, the territory and interact with minimum aggression.

Females may be recruited into the pride. A lion pride is not a cohesive social unit as not all members are together all the time. Lion groups could therefore either be a sub-group of a pride or all the members of a pride together. Sub-adult females may remain in the pride for their entire existence but some leave the pride. However young male lions leave the pride at about three years of age and on reaching maturity may become pride males of another pride by expelling the pride males.

Following a pride takeover, pairs of males will remain with the pride for an average period of 18 months while male coalitions will maintain pride tenure for periods of over 40 months. Cubs may be killed by the new pride males, thereby reducing the time before the offspring of the new males are born, thus increasing the reproductive success of the new males. During this period the pride males have exclusive mating opportunities with the pride females. Males defend their ranges from male intruders and females from females. Females in a pride tend to come into estrus simultaneously and give birth synchronously. Litters are therefore borne at approximately the same time and are thereafter raised communally. Infanticide could therefore potentially affect a range of cubs of various ages from several females. A male lion is sexually mature from about two years of age, but not fully adult until about four.

Males may continue to grow until about seven or eight years and their manes are usually not fully developed until about five or six years. Because lions are non-seasonal breeders and also highly infanticidal they complicate management strategies. The effect of selective removal of specific individuals presents a real challenge to the effective management of lion populations. The annual removal of some adult male lion may in some situations be advantageous, but in others detrimental to specific lion populations. For example, the removal of non-resident aged males may reduce male-male competition and therefore result in increased territorial male tenure and cub survival. However, removal of resident (or territorial) male lions may potentially disrupt the social system, leading to increased rates of infanticide, and occupation of territories by immature males with resultant reduced reproduction.

To minimize the potential effect of selective removal of males during safari hunts, TGTS/WWS have for several years implemented a strategy as far as the hunting of lion is concerned. The positive results of this strategy are now seen.

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**EUROPEAN COMMISSION HEARING: LION TROPHY HUNTING**

Manolo Esparrago, FACE

On 29th July, following a hearing on 9th June, the European Commission and the Dutch Presidency gave several conservation and animal welfare NGOs the opportunity to make an input to the preparation of CITES CoP 13. The Commission was represented by Mr Garcia (Head: Environmental Agreements and Trade Unit).

Several anti-use movements took part in the hearing, including the International Fund for Animal Welfare (IFAW), Greenpeace, the Species Survival Network and the Eurogroup for Animal Welfare. The conservation movement was represented by TRAFFIC. In favor of “conservation through sustainable use” were the World Conservation Trust (IWMC) and FACE.

Mr Garcia presented the Commission’s proposal for a Decision approved by the College of Commissars which will express the EU position with regard to CoP13. The Dutch representatives stated that the Council would examine the Proposal with a view to reach an agreement on the 24th of September. The Dutch Presidency will formally represent the EU during CoP13.
During the hearing the FACE representative focused on the Kenyan proposal to uplist African Lion from App II to App I. This proposal, in practical terms, would amount to a ban on trophy hunting and would seriously compromise lion conservation.

- FACE criticized the Kenyan claim that there has been a decline in the number of lions, based on an inappropriate comparison between a mere educated guess in 1996 (Nowell and Jackson) and a conservative estimate in 2004 (Bauer & van der Merwe). Furthermore, the Kenyan proposal omitted reference to Chardonnet’s comprehensive survey (2002).
- Kenya’s claim that hunting quotas are unsustainable is based on the erroneous assumption of a decline in lion population. In their response to the Kenyan proposal, several range states, such as Botswana, Namibia and South Africa, assert the sustainability of their hunting quotas. If, as claimed by Kenya, lion quotas set by Tanzania are unrealistic, then the most sensible strategy would be through the significant trade review process for App II listed species and for appropriate consultation with Tanzanian authorities (the significant trade review process seeks, in cooperation with the Managing Authorities of exporting countries, to identify and solve problems related to App II species avoiding the drastic consequences of a transfer to App I).
- The main threat to the conservation of lion populations is human population growth and expansion, and, as a consequence of this, agriculture, livestock leading to vengeful killing by local communities when humans or cattle have been attacked. These threats must be dealt with at national level and have little to do with the purpose of CITES, which is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. As Namibia has pointed out, neither of these threats will be addressed through an App I listing.
- Trophy hunting, on the other hand, offers great economic incentives for the local communities and does not represent a threat to lion conservation. If lion trophy hunting were stopped, lions would have no economic value outside national parks and they would be regarded only as a threat to humans and livestock.
- The Kenyan proposal does not explicitly call on a total ban on hunting trophy, but the App I listing would have the same consequences. Experience shows that App I listing greatly affects non-commercial trade.
- To give a European perspective, FACE commented on how easy it is to favor, from distant countries, the protection of dangerous and damaging animals if one does not have to coexist with them. The problems faced in Europe with species far less dangerous and damaging, like the wolf, show that local communities are reluctant to tolerate and conserve a species when the cost of it outweighs the benefits.

Mr J. Bernay, representing the World Conservation Trust, supported the FACE position. The anti-use NGOs supported an uplisting of species in to CITES’ App I as the best means to attain conservation. According to them (especially IFAW), an inclusion in App I would send the right message to the range states. Mr. Garcia was clear in indicating that CITES implementation is particularly difficult for developing countries. Therefore, if we are not selective in the use of CITES, we will be putting too much pressure on the system. He reminded that the purpose of CITES is to regulate significant international trade. If a species is endemic but there is no such significant international trade, then the Convention will not apply; it will be up to the range states to adopt the necessary measures for conservation. The Commission also acknowledged the important role of trophy hunting for species conservation.

On the specific issue of the Kenyan proposal for Lion, the Commission’s Proposal for a Decision (subject to approval in the Council) states that “the Community is not fully convinced that App I listing of this species is the best means to address the problems concerning its conservation. The Community will work to achieve an outcome on this issue that will have the support of all range States.” The Commission adopts an open position with regard to Kenya Proposal. In any case,
the Commission considers that “given the types of specimens in international trade, the proposal does not demonstrate that this trade is the main cause of decline.”

Although FACE has focused on the Kenyan proposal for Lion, these are the positions of the European Commission in relation to Elephants and White Rhino:

- “Concerning elephants, the Community is unwilling to agree to resumption in commercial ivory trade until it is satisfied that there are adequate mechanisms in place to ensure that there will not be no resulting increase in illegal killing of elephants”. Mr Garcia confirmed this view expressing his concern about the Namibian proposal for an annual quota of ivory. With regard to this Namibian proposal, the Commission’s considers that “a decision on annual quota is premature but trade in leather goods could be considered”.
- Swaziland proposes a transfer of its population of White Rhino from App I to App II for the exclusive purpose of allowing international trade in live animals to appropriate and acceptable destinations and hunting trophies. The Commission considers that this proposal is “subject to establishment of an export quota for hunting trophies”. Mr Garcia declared that that it has to be confirmed that a sustainable quota is possible.

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**WEST AND CENTRAL AFRICAN LION NETWORK**

The lion-network, ROCAL (Reseau Ouest et Centre Africain pour la conservation du Lion, translated West and Central African Lion Network) was formed by a number of lion researchers during a lion conservation training course for francophone Africa in Garoua/Cameroon two years ago. After a slow start it finally came to live and action.

ROCAL is intended to complement the African Lion Working Group (ALWG) and provide an additional forum for communication about lion conservation, in French and focuses on west and central Africa. The founder members of ROCAL envision immediate action over the next five years in order to promote the long term conservation of lion populations across West and Central Africa and to promote management aimed at maintaining long term viability while reducing human-lion conflict and in a way contributing to the sustainable development of the region.

In their mission statement ROCAL sets the following objectives:

- The conservation of lions within the context of the various countries and in the sense of Agenda 21 and the Convention on Biological Diversity: conservation, sustainable use and equitable sharing of benefits
- Harmonization of research and action protocols to allow for comparison between areas
- Exchange of information and experiences
- Preventing further fragmentation of lion populations in contiguous ecosystems, among others by contributing to the establishment of transfrontier protected areas

For more information about ROCAL please contact: Hans Bauer, email h.bauer@freeler.nl

**VOL 2/6 (2004)**

**EXTRACTS FORM G DAMM’S EDITORIAL COMMENTS**

In the immediate aftermath of CoP 13, a hunting organization, SCI (“First for Hunters” as the club has labeled itself) took ALL the credit for the CoP-13 rejection of Kenya’s Lion Proposal in a boisterous media release. Not one word was lost about the personal, intellectual and financial contributions of other key role–players.
SCI’s delegation certainly contributed to Kenya withdrawing its proposal, but the emphasis must be on CONTRIBUTION and certainly not on exclusivity!

The exemplary and comprehensive lion study, commissioned and financed with foresight 3 years ago by the International Foundation for the Conservation of Wildlife (IGF) and Conservation Force and undertaken by IGF’s director, Philippe Chardonnet was the clear focal point of the early resistance against Kenya’s uplisting proposal by the African range states. Chardonnet’s statistics and citations from his study formed the interlinking thread in virtually all assessments by organizations and individuals who really care about the fate of the African lion. To make it absolutely clear:

**ALL opponents to Kenya’s proposal** used the Chardonnet study as THE convincing argument. Conservation Force and Dr. Craig Packer of the University of Minnesota – the readers of African Indaba know about Packer’s work from numerous articles in this e-Newsletter – engaged at a very early time in the discussions where to spend scarce time and funds with the best possible prospects of success in lion conservation and lion hunting. Conservation Force’s John Jackson had a lion video produced by Osprey Filming at shortest notice and distributed it with comprehensive literature to wildlife departments in Africa. Jackson, Packer and Chardonnet engaged key decision makers in discussions early in the process and in the process irrefutable evidence against Kenya’s initiative eventually emerged.

Jackson, Chardonnet and Packer, IIFC-World Conservation Trust, and behind the scenes people like Bertrand des Clers, Rolf Baldus, members of the African Lion Working Group, FACE’s Manolo Esparrago and particularly the outspoken delegates from virtually all the African range states were the real fathers of the delegates’ rejection of Kenya’s ill-conceived proposal, which lead finally to Kenya withdrawing its proposal, but the emphasis on exclusivity!

I can say with some pride that African Indaba was involved in the process since it started. We corresponded with the African Lion Working Group (ALWG), with the African Large Predator Research Project (ALPRU) and assisted in creating contacts between those who should be partners.

African Indaba brought some controversial articles and opinions to stimulate the discussions. This reasoned discussion was about to be channelled into a comprehensive 2005 symposium “Towards a Sustainable Future: Lions and Humans in Africa” (see editor’s comments African Indaba Vol. 2 No. 5), but the outcomes of CoP 13 overtook these plans and we now have to see how our plans could fit into the workshops projected in the sessions of Committee 1 at CoP 13.

CITES CoP 13 had pragmatic outcomes which set good signals for incentive-based conservation in Africa. These outcomes are not the victory of [some] hunters over the rest of the world (we are far too minute a group of people to ever indulge into such sort of self-aggrandizement). These outcomes are proof of reason being stronger than emotions! They are proof that hunter-conservationists, wildlife managers and conservationists can and will work together. Far more important than the rejection of Kenya’s lion proposal, than the approval to harvest 5 black rhinos each in South Africa and Namibia, than the increase of leopard quotas in both countries and a number of other sustainable use linked issues is something else, however:

The plenary of delegates adopted a decision on achieving greater CITES-CBD synergy and a decision on incorporating the Addis Ababa Principles and Guidelines on Sustainable Use into CITES. This most important development will lead to far reaching consequences (for details on the Addis Principles and CBD see also African Indaba, Vol 2 No 2 – March 2004).

During the forthcoming IUCN World Conservation Congress in Bangkok the IUCN Sustainable Use Specialist Group will elaborate on exactly this topic in two related workshops about the Addis Ababa Principles and in a separate knowledge interchange called “Recreational Hunting and Rural Livelihoods”. In another planned workshop in 2005 experts will tackle the growing need to develop a firm intellectual underpinning for the concept that hunting can provide a sustainable tool for conservation and rural development (Jon Hutton, 2004 – see also page 5).

How can the international hunting community have a substantive voice in these processes which undoubtedly influence already now CoP 14 and other international and national conferences and conventions?
First of all, hunters must recognize that besides of having a common life style and the cherished privilege to know wild creatures and lands of the world through first-hand participatory hunting experience, they also have as important common goals the effective wildlife management and just benefit distribution of their conservation dollar. Last not least hunters [still] have the good will of many scientists, researchers, wildlife managers and conservation organizations! This considerable capital can only be used effectively by pooling our economic, intellectual and political resources and creating vigorous and constant dialogue amongst equal partners. Cooperation and information exchange on basis of equality is essential to achieve common goals and objectives.

National recreational and professional hunting organizations in Africa as well as international hunters’ organizations like FACE, IGF, Conservation Force, CIC, SCI and its individual chapters, DSC, HSC, Danish Hunters’ Assoc. etc. need to work together as equals. We need to show a combined strong presence and speak with one voice at all international meetings and reinvent how to cooperate efficiently (i.e. cost-effective and outcomes orientated), in a variety of fields amongst them
- public relations and media work
- hunter & conservation education
- best practices
- field conservation and scientific projects
- hunting regulations at national and supra-national levels
- international conventions CITES, TRAFFIC, CBD, etc
- removal of disincentives for wildlife conservation.

This HUNTERS’ ALLIANCE must seek responsible outcomes for the wildlife and people of Africa. The real issues must be tackled on global, continental and local levels with strong commitment, sincerity and loyalty. The public – hunting or non-hunting – does not need to be bombarded with statements of individual achievements; these are irrelevant on a global [public] level anyhow.

What the public must be made aware of is the simple fact that hunters, irrespective of club affiliation, contribute their share towards the conservation of the Africa’s wildlife and its pragmatic “Conservation through Use”! Hunters in Africa and those around the world interested in Africa must be made to see that the future of African hunting depends on JOINT ACTION. We stand or fall together! Let us create something like “African Wildlife Conservation Partners” which could blueprint an “African Plan for Hunting and Conservation” and arrange innovative schemes for outcomes-focused project funding. No individual organization has the intellectual, personal and financial resources to do all that – but as a HUNTERS’ ALLIANCE we can make a difference! Conservation Force could lead us into this direction! This is – in my opinion – the real lesson all hunters (and their respective organizations) have to internalize from CITES CoP 13!

VOL 2/6 (2004)
OPEN LETTER OF CRAIG PACKER TO CITES DELEGATES

The SSN (Editor’s note: SSN = Species Survival Network – an international alliance of animal rights organizations) document seriously misquotes our paper (Whitman, et al., 2004). SSN implies that our analysis demonstrated that lion hunting would invariably be detrimental to the population as a whole. But we explicitly modelled the effects due to infanticide following the replacement of the breeding males, and we concluded that trophy hunting would have no effect whatsoever on the overall population as long as hunting was restricted to males older than 6 yrs of age. SSN is simply wrong in stating that we considered current quotas in Tanzania to be unsustainable. Instead, we showed that recent quotas were quite similar to the expected offtake from actual lion populations if
our 6 year minimum were adopted. We did say that quotas had recently been raised above these levels, but we did not make any evaluation of their sustainability since we do not know the population sizes in the respective reserves. Indeed, our paper emphasized that quotas would be irrelevant if our age-minimum were adopted.

These distortions are part of a much larger pattern in the SSN document. They imply that the Chardonnat survey is invalid because it has not been peer-reviewed. In fact, the Bauer and van der Merwe paper is in no way a valid scientific survey – it is the result of an informal questionnaire where various researchers simply provided rough guesses of local population sizes. There was no standardized methodology for these guesses, and they vary widely from precise counts of known individuals (our study in Ngorongoro Crater) to sheer speculation. I reluctantly supplied many of the data on Kenya and Tanzania to the Bauer paper myself, and I specifically told the authors that I did not consider my estimates to be more than rough-and-ready approximations – but I felt it was better to provide some sort of rough guess rather than imply (by an absence of any sort of estimate) that there were zero lions in these reserves (which is how the survey would have handled missing data). In fact, the Bauer paper is missing an enormous amount of coverage, so it is obviously a gross underestimate of the continent-wide total.

Thus to state, as the SSN document does, that the Bauer/van der Merwe paper provides some sort of gold standard on lion numbers is ludicrous. Even more absurd is to compare these numbers with even wilder speculations published in the past by Nowell and Jackson or anyone else. These were obviously just order-of-magnitude guesses which were never meant to establish a scientific baseline.

Third, SSN incorrectly states that there are no populations with at least 1000 breeding adults. However, there are at least five populations in Africa that meet this criterion: the Serengeti/Maasai Mara population is estimated to contain around 3,500 lions. We maintain individual records on all the lions living in the south-eastern corner of the Serengeti National Park. Currently, our study population contains 291 individuals and 156 of these (53.6%) are breeding age. Thus the Serengeti likely contains over 1875 breeding adults.

The Kruger Park in South Africa is believed to hold comparable numbers of lions, as does the Rungwa/Ruaha/Moyowosi/Kogosi ecosystem in Tanzania and possibly the Okavango ecosystem in Botswana. The Selous ecosystem is believed to contain over 5,000 lions, so there are at least 4 intact lion populations that safely exceed the 1,000 adult lion threshold.

There can be no doubt that the number of lions has declined in Africa since the 1890s. However, the primary cause of declining lion population sizes is problem animal control and habitat loss. Our latest research clearly indicates that the rate of lion killing by local people has increased dramatically in East Africa over the past 5 years. Lions kill on the order of a thousand cattle a year, and we have also discovered that the prior estimate of 50-60 people killed by man-eaters each year is seriously underestimated. We now believe that about 100 rural Tanzanians are killed by lions every year.

Consequently, the local people express a tremendous amount of hostility towards lions. Whenever a lion is killed in retaliation for taking livestock, the villagers celebrate with a feast – and the lion killers are hailed as heroes. A ban on international trade will not make any positive impact on the attitudes of local people toward dangerous animals. Nor have any of the proponents of a hunting ban offered any alternative mechanism for either enforcing anti-poaching activities or protecting rural populations from further lion attacks. Any further loss of incentive for tolerating lions would be catastrophic.

It is very important to remember history. When the parks systems were established in Africa during the colonial era, only a small proportion of wildlife areas were given full protection as National Parks. In countries like Tanzania, a much larger amount of land was set aside as buffer zones around the parks. These buffer zones were intended to create a gradient around the parks to protect people from the animals in the national parks, and to protect the animals in the national parks from people in the agricultural areas.
Lions were always considered to be a highly dangerous resident in the parks, and the buffer zones were meant to establish the safe gradient by allowing trophy hunting and other forms of utilization.

If lion hunting is banned, this system will be lost. Local people are already killing far more lions than trophy hunters. Remove the enforcement agencies that protect lions in the reserves and lions will be gone in another 10-20 yrs.

I find it incredibly ironic that this initiative has come from Kenya, where all forms of trophy hunting was banned in the 1970s. Kenya has suffered a devastating loss of lions over the past 30 years, including the lions in Amboseli and Nairobi Parks owing to hostility of local people to dangerous predators.

The experiment has already been performed, and the answer is clear. Lions must be managed in cooperation with trophy hunters, wildlife biologists and conservationists. The task ahead is formidable; we need all the help we can get.

VOL 3/1 (2005)
DALLAS & RENO LION DISCUSSIONS

The International Professional Hunters Association (IPHA) and Conservation Force host a roundtable discussion on the African lion immediately following the IPHA AGM in Reno on 25 January 2005. The formal speakers include John J. Jackson III Chairman of Conservation Force; Dr. Craig Packer, Department of Ecology, Evolution, and Behavior at the University of Minnesota; Dr. Laurence Frank, Laikipia Predator Project, Kenya & University of Berkeley; David Erickson, Cullman & Hurt Community Wildlife Project. The first three are members of the African Lion Working Group.

The topics will include reports on the status of the African lion, CITES issues and options for the future. After the formal presentations a round table discussion will facilitate the input of IPHA members. The organizers welcome suggestions on population monitoring techniques, aging of lion trophies, local conservation incentives, reduction in PAC losses, best safari hunting practices and alternatives, and maintaining a stewardship role to ensure robust lion populations for safari hunting. The program is scheduled for up to two hours, but the discussions can continue between the participants for the duration of the Reno convention. For those IPHA members not able to participate at the Reno Lion Meeting, another similar meeting is scheduled at the Dallas Safari Club Convention on 7 January 2005 from 8:30 to 9:30 am.

VOL 3/2 (2005)
LION WORKSHOPS AND SYMPOSIUMS

Guest Editorial by John J Jackson III, Conservation Force

Though the African Lion has been suffering from persecution and habitat disruption, it has not been without supporters. There have been a large number of lion workshops and symposiums in the last few years and more are in the planning stage. The African Lion Working Group (ALWG - www.african-lion.org) led off with a series of ongoing meetings since its formation. There have also been numerous local meetings such as the National Technical Predator Management Conservation Workshop in Maun, Botswana, in 2001, sponsored by the Government of Botswana, Botswana Wildlife Management Association, and Conservation Force (www.conservationforce.org), and the periodic meetings of the Large Carnivore Management Association of Namibia (LCMAN).
The most important Chapter of *Conservation of the African Lion: Contributions to a Status Survey*, by Philippe Chardonnet, 2002, is *Driving Forces*, Chapter III (Ed note: for a download of this study go to [www.wildlife-conservation.org/index.php](http://www.wildlife-conservation.org/index.php)). It addresses the growing “challenges” of lion conservation in addition to demography. Immediately upon the completion of the study, now commonly called the *Chardonnet Study*, the leadership of the *International Foundation for Wildlife Conservation* ([www.wildlife-conservation.org](http://www.wildlife-conservation.org)) and Conservation Force that had sponsored it, concluded that a continent-wide workshop was needed to bring all of the stakeholders together to adopt and implement action plans based upon state-of-the-art science to ensure the survival of the African Lion. That all of African workshop was planned for March, 2005, but was way-laid by developments arising from the Kenya lion proposal at CITES COP13 in October, 2004. During that COP in Bangkok the SADC countries tentatively decided to hold four regional workshops and perhaps a fifth final all of Africa workshop. Out of prudence Conservation Force and the International Game Foundation cancelled their long-planned March 2005, workshop.

After the fact, many felt that the costs of four or five work-shops, estimated at half a million U.S. Dollars, was extravagant use of funds that would better be spent on the ground. African Resources Trust has had the responsibility of organizing the workshops. Now the workshops have been reduced to two, one for West and Central Africa and a second for East and Southern Africa, and perhaps a third concluding meeting. The proposed dates of the Central-West Africa workshop is 19 to 21 July, 2005, in Douala, Cameroon, and the SADC Region’s workshop is tenta-tively to be 5 to 9 September, 2005, in Victoria Falls, Zimbabwe. Those are tentatively to be followed by an overall African work-shop from 7 to 11 November, 2005, in Mauritius.

*Safari Club International* ([http://www.scifirstforhunters.org](http://www.scifirstforhunters.org)) is to be congratulated for unconditionally funding the largest share of the costs of all three and leaving the agenda to others. That stupendous contribution once more demonstrates the commitment of the safari hunting industry to the conservation of Africa’s wildlife.

Nevertheless the context of the meetings and who is able to attend them is crucial to their ultimate contribution to lion conservation. That difficult task has been assumed by the *Cat Specialist Group of IUCN* ([http://lynx.uio.no/catfolk/sp-accts.htm](http://lynx.uio.no/catfolk/sp-accts.htm)) who in turn has solicited the help of the African Lion Working Group. Hopefully the focus will be on the principle threats to the lion, particularly human and livestock conflict and loss of habitat.

It is really not a CITES issue as trade is negligible and there certainly is no mandate from CITES. The objective, one would hope, is to address more crucial issues rather than be distracted. The focus needs to be taken off of the trade and put where it be-long. We must get focused if this icon of Africa is to range widely.

Though the International Foundation for the Conservation of Wildlife and Conservation Force have abandoned their March 2005 workshop plans, they and their many partners held at least eight workshops and meetings within the safari hunting industry over the past few months.

The first meeting was hosted by *Cullman & Hurt Community Wildlife Project* ([http://www.cullmanandhurt.org](http://www.cullmanandhurt.org)) in Arusha, Tanzania, in December 2004. This was followed with a breakfast presentation at *Dallas Safari Club’s Convention* (DSC [www.biggame.org](http://www.biggame.org)); the *International Professional Hunters Association* (IPHA [www.internationalprohunters.com](http://www.internationalprohunters.com)) hosted another workshop at its AGM; two were hosted by *Tanzania Game Trackers* in Las Vegas; and yet another before the AGM of the *African Professional Hunters Association* (APHA apha@habari.co.tz tzhaoa tt@yahoo.com). Finally the last one in this series of work-shops took place before the AGM of the *Tanzania Professional Hunters Association* (TAHOA).

The objective of those meetings has been to solicit the help of safari hunting operators because of the unique opportunity they have to save the lion where they ply their trade. Conservation Force and its partners engaged them in the conservation effort in search of the best safari hunting practices and policies, challenged them to help address the real underlying threats to African Lion such as loss of habitat and lion conflict with humans and livestock.
2005, workshop plans, they and their many partners have held at least eight workshops and meetings within the safari hunting industry over the past few months. The safari hunting industry is in a unique position to help itself by saving the African Lion, and we are busy educating and arming them to help do just that.

**VOL 3/2 (2005)**

**SOUTH AFRICAN DRAFT LEGISLATION: LARGE PREDATORS**

The Department of Environment and Tourism (DEAT) has called for public comment on the proposed legislation relating to the management of large predators to be submitted by March 15th. Since the closing date of the submissions is after publication of this newsletter edition we refrain from publishing comments in order not to influence the process. We will bring you a summary in our next issue.

One comment, however, seems to be in order now: Carte Blanche showed another piece on Sunday February 25th with some movie footage of a horrible killing of a “canned” lion. It is astonishing that the killer had the guts to show his face! Some sordid boasting of a lion breeder about having sold all his lion for 2005 to overseas “hunters” completed the picture of the “ugly hunter”. The entire footage obviously aimed at influencing the public comment process.

The canned lion shooting industry has done serious harm to the good reputation the South African professional safari hunting has earned over decades. It created the perception that South African Nature Conservation and South African Hunting Operators/PHs compromise ethical standards provided sufficient money changes hands. Therefore it has to be put on record that even several years ago all South African hunting organizations strongly opposed and continue to oppose the canned shooting of large carnivores and repeatedly urged DEAT and the provincial authorities to bring it to a halt as rapidly as possible.

**VOL 3/3 (2005)**

**BOTSWANA HOLDS FIRST NATIONAL LION WORKSHOP**

Paul Funston

In concordance with the outcomes of the CITES 2004 process, various regional and country specific lion workshops were requested. As the Botswana government has recently wisely decided to lift the moratorium on the trophy hunting of lions for 2005, a national workshop to evaluate the population status and threats to its lion population was required. This was achieved during a two day workshop hosted by Chobe Marina Lodge, Kasane, from March 18th to 19th. The workshop was well attended by members of the Department of Wildlife and National Parks, other government bodies, community leaders, independent researchers, and experienced lion biologists from other countries. Representation from the photo-tourism and safari hunting sectors, however, was relatively lacking, although the voices of senior members were certainly heard.

Estimating abundance of any large carnivore is never easy, but there was general consensus that the lion population in Botswana comprises approximately 2500 to 3500 individuals in three fairly distinct populations: southern Kalahari (Kgalagadi Transfrontier Park and adjoining WMAs), central Kalahari (Central Kalahari Game Reserve and some adjoining WMAs and wildlife ranching areas), and the greater Chobe-Okavango-Makgadikgadi area.
While population size is relatively well known, little information on the population trend is available, but some tentative indications of its relative stability exist. Perhaps more important was to evaluate the perceived threats to Botswana’s lion population. These were broadly listed as:

- Disease
- Trophy hunting
- Human-lion conflict

Although a few delegates were left wondering, the scientific evidence presented by Prof Craig Packer (Serengeti Lion Project), convinced the majority that feline immunodeficiency virus (FIV) poses no threat to Botswana’s lion population. Supportive evidence of this is many and varied, and includes data on survivorship of infected lions, and phylogenetic evidence indicating that lions have been exposed to this virus for millions of years with no deleterious affect. Although not present to defend his supposedly conflicting evidence, Dr Peter Kat who runs a lion project in the delta, was regarded as having been responsible in raising false alarms about the supposed severity of this disease in lion populations without any published research and through using the international media.

Dr Kathy Alexander, a veterinarian with substantial experience in lions and other large carnivores, also presented similar findings, indicating that FIV is a non-issue in lions in Botswana. Other diseases were also discussed, one of which that is known to affect lions at times, is canine distemper virus (CDV). While present in Botswana, being carried by domestic dogs, CDV only seems to pose limited local threat to lions. Preliminary indications are that this could be during periods of high prevalence of brown ear ticks.

As this disease can also affect other large carnivore populations, particularly the threatened African Wild Dog, vaccination programs for domestic dogs were proposed. Generally, however, it was concluded that there are no major current disease threats to be concerned about, but that vigilance and well structure disease ecology studies were to be supported.

Since it is widely stated as being negative for lion populations, trophy hunting was discussed in some detail. Once the dust had settled it was clear that the low quotas issued in Botswana over the last two decades (15-37 lions/year) constitute a relatively minor offtake. The annual quotas only amount to 1-2 % of the population being removed annually. Thus, although locally disruptive to specific prides, these low off takes could only have minimal impact on the population. Botswana does not allow the hunting of female lions, and in line with findings from Tanzania, a minimum age threshold of six years will be stipulated for male lions that are to be hunted. Combined, these two measures result in trophy hunting having the least possible impact on lion populations. Furthermore the consensus of opinion was that the breeding of lions for canned shooting should remain outlawed in Botswana, as it was clear how harmful this could be to the image of trophy hunting as a sport with substantial conservation benefits.

A strong point of encouraging community participation in profit sharing and ownership (partnership) in trophy hunting was made. However, what became very clear during the workshop is that substantial tension exists between some segments of the photo tourism and trophy hunting sectors. The main source of this tension is that the photo-tourism operators object to lions, which they spend time habituating to tourism vehicles, getting shot in adjoining hunting blocks when they move into those areas. Sometimes this also then leads to disruption of the pride that those males were with. This is a real problem at times, and is exacerbated by the scenic beauty and wildlife splendor of even the peripheral areas of the delta being as highly suitable to photo-tourism, as they are for hunting. Essentially the problem thus lies in the spatial and/or temporal zonation of the land-use pattern. Unless this can be addressed, both parties need to try and develop ways of minimizing this conflict, primarily through better communication and understanding.

Lastly, it was clear that human-lion conflict is a large problem in Botswana, and undoubtedly leads to the highest number of dead lions. While this is a problem throughout, certain ‘hot spots’ have been identified where intense conflict occurs. For example, along the Boteti River in the area of the Makgadikgadi Pans National Parks the conflict is so intense that the government has erected a
fence to help minimize the problems. Similar fences erected for the same reason in other parts of Botswana, e.g. the southern boundary of the Kgalagadi Transfrontier Park, have resulted in reduced levels of conflict. They, however, require the necessary maintenance in order to be effective. In areas of less severe conflict, or where fences are clearly not an ecologically wise option, other strategies must be pursued to minimize conflict. The main thrust needs to be in developing and encouraging livestock husbandry and wildlife management practices that facilitate co-existence as much as possible. Alternative creative and practical solutions need to be tested, and if found to be useful, encouraged.

Furthermore, the current financial compensation system should be reviewed, as in many respects it has created a society dependent on government handouts. One set of suggestions to replace direct compensation, revolved around the development of insurance programs whereby the state, other financial sources, and the livestock owners themselves all invest (financially and through improved husbandry) and thus have a stake in the program.

The value of wildlife to communities was also clearly expressed, and it was felt that facilitating the destruction of some problem animals through financially more rewarding trophy hunts, would substantially increase the tolerance towards large predators in some areas.

In closing the workshop the three perceived threats were revisited and the above summation given. A list of more detailed and specific outcomes of the workshop was then compiled, which is to be disseminated to the government departments concerned and to the relevant stakeholders. A general feeling by most stakeholders was that a better understanding of the issues had been achieved, and that communication had improved, and was paramount to resolving outstanding or lingering concerns.

Importantly the communities who live on the ground, and have to deal with these issues on a daily basis, want to be consulted and more involved in all these processes. They felt that they had much to offer, and that the survival of lions in Botswana was as much in their interest as that of anybody else.

VOL 3/3 (2005)
SAVANNAS FOREVER: A CERTIFICATION PROGRAM FOR LION TROPHY HUNTING
Dr Craig Packer

There is immediate need for a certification program for lion trophy hunting. The lion is under severe threat from habitat loss and "problem animal conflict." Scientific studies of human-lion conflict around Tarangire National Park, the Ngorongoro Conservation Area, Makgadikgadi Pans National Park and Laikipia, and information provided by hunting companies around Africa, make it clear that the lion is experiencing unprecedented hostility from local people in retaliation for attacks on humans and livestock.

A comprehensive survey of man-eating throughout Tanzania has found that well over 100 people are attacked by lions each year, as well as thousands of cattle. Thus it is no surprise that the lion is in serious trouble. Over 75% of the protected areas in Tanzania were originally set aside for trophy hunting, and the African lion is the most important single species to the Tanzanian hunting industry. Concerns have been raised over the possible sustainability of lion trophy hunting, owing to the complex social system of this species. However, highly-detailed population simulation models show that trophy hunting causes virtually no harm to the population as a whole provided that clients only shoot males that are at least six years of age. Hunting areas can yield a sustainable harvest of trophy males, provided that they utilize their resources wisely, and trophy hunting is the only
mechanism for financing conservation activities over most of the wild areas in Africa. The most urgent problem for lion conservation, therefore, is not trophy hunting, but large-scale retaliation by local people against problem lions.

I therefore propose a coordinated program to recruit individual hunting companies to become genuine partners in the conservation of savanna ecosystems. The program is called "Savannas Forever" and it requires each participating company to meet standards for the following three activities:

1. Restrict all lion hunting to males that are at least 6 years of age. The lion's age can be estimated prior to being shot on the basis of nose coloration. Once killed, the lion's age can be accurately estimated from its teeth. We will establish a lab at the Tanzanian Wildlife Research Institute in Arusha where our technician will extract and X-ray the relevant teeth. All underage trophies will be destroyed before export or kept in Arusha for scientific study.

2. The company must engage in effective anti-poaching that links to the enforcement activities of the Wildlife Division. We will conduct on-site inspections and advise the company on specific tactics to improve the effectiveness of their anti-poaching efforts. All data collected by the inspection team will be made available to each participating company to guide future activities; thus strategies that have been successful in one area will be made available to other concessions.

3. The company must develop meaningful community conservation projects that focus on risk-reduction of local people from lion attacks on their families and their livestock. This also requires on-site inspections and interviews with neighboring people. Once again, we will advise the companies on specific strategies for reducing risks of lion attacks.

In areas where lions do not inflict harm on local communities, the companies must provide sensible economic returns to local people (which would generally be linked to the villages' agreement to refrain from bush meat hunting). If the company meets our criteria for all three activities, they will receive a "Gold Star" certification. "Gold-Star" rating will have real value only if international hunting organizations reward Gold-Star companies with preferential treatment at annual conventions and by allowing only those animals shot on Gold-Star safaris to be entered into their record books. The resultant value of Gold-Star status would therefore provide a strong incentive for other companies to improve their conservation activities -- and strengthen the industry as a whole.

A significant percentage of Tanzanian hunting companies are already highly ethical and would be likely to receive Gold-Stars. However, a proportion of operators are believed to engage in poor conservation activities and thereby tarnish the reputation of the industry as a whole. A vast amount of land has been set aside for hunting in Tanzania, and thus a well-regulated trophy hunting industry is essential not only to the conservation of Tanzania's natural resources but also to the economic development of the country. Because of recent concerns over the potential uplisting of the lion to Appendix 1 of CITES, the industry must be seen as responsive to lion conservation. Prior attempts to establish a certification system for trophy hunting have failed, but now we have a real window of opportunity to get a foot in the door. The Tanzanian government is under significant pressure to provide certification of hunting companies, and the Director of Wildlife has given me his enthusiastic support. After my recent visit to Botswana, I would like to start Savannas Forever simultaneously in Tanzania and Botswana. The Botswana government and hunting industry were as enthusiastic about Savannas Forever as their Tanzanian counterparts, and Botswana and Tanzania are the two premier lion-hunting destinations in all of Africa.

Savannas Forever cannot be seen as an arm of the hunting industry; we must be completely independent to be able to have international credibility and to set strict standards. Thus my initial goal is to find 3 years funding from an international donor such as the World Bank or USAID. But if the Gold-Star system has sufficient value to the hunting companies after three years, we could look to the industry to support the program via some sort of general fee structure.
SADC invited IUCN to organize the African Lion Conservation workshops as follow-up from CITES CoP 13. Cecil Machena of Zimbabwe heads the central coordinating committee with formal organizational responsibility. Other members are Kristin Nowell (IUCN Cat Specialists), Luke Hunter (WCS) and Holly Dublin (IUCN SSC Chair).

Prior to the actual workshops, technical sessions with participation limited to lion specialists, will be held. The objective of the technical sessions is to produce a scientific overview of the threats to, and status & distribution of the African lion. The Wildlife Conservation Society (WCS) in cooperation with the Cat Specialist Group will jointly host the technical sessions. ALWG and ROCAL members will participate and contribute information previously gathered by the ALWG and Chardonnet surveys, with updates and review conducted by some 50 invited technical specialists.

The outcomes are expected to be an authoritative and comprehensive assessment of African lion status and a rigorous assessment of threats. The result will form the basis for lion conservation strategies.

The actual workshops are planned with [invited] participation from government officials, local NGOs, safari operators, key community leaders, and international donors and organizations.

The goal of the conservation sessions is to produce 4 regional conservation strategies (to provide broad guidance to governments and stakeholders and encourage inter-regional cooperation) and the foundation for a continental African lion conservation action plan. The process is not finalized yet, and is subject to ongoing discussions within an advisory committee formed by the Cat Specialist Group, African Lion Working Group (AWLG), Reseau Ouest et Centre Africain pour la Conservation du Lion (ROCAL) and the Wildlife Conservation Society (WCS). It is expected that by end of May themes and contents of the workshops and the list of invited participants will be finalized.

The technical workshops for East & Southern Africa are tentatively set for Victoria Falls/Zimbabwe on August 22 and 23 and feed directly into the main workshop on August 24 to 26. The technical workshop on West and Central Africa will be in Douala/Cameroon and the dates are under discussion for September/ October 2005. The Africa-wide strategic & technical workshops are planned for February 2006 with dates and venue to be determined. It is expected that the East & Southern African events will lead towards lion conservation and management strategies for East and Southern Africa respectively, similar as the West & Central African workshops to two strategies for the respective regions.

Another set of objectives is that the regional conservation and management strategies thus developed will positively influence the national lion conservation and management plans or stimulate formulation of new plans where none existed before.

Further information and confirmation of dates and venues can be obtained by contacting the Central Coordinating Committee member Cecil Machena Machena@art.org.zw
VOL 3/5 (2005)
PROJECT: LION DEMOGRAPHY AND ABUNDANCE IN KNP

Project name: Assessment of lion population demography and abundance in the Kruger National Park.
Principal researchers: Dr Paul Funston and Dr Sam Ferreira
Co-workers: Dr Gus Mills, Dr Markus Hofmeyr, and Prof Craig Packer
Study area: Kruger National Park
Date started: June 2005

Academic institutions: Department of Nature Conservation, Tshwane University of Technology, Pretoria, South Africa, funstonpj@tut.ac.za Conservation Ecology Research Unit (CERU), Department of Zoology and Entomology, University of Pretoria, Pretoria, South Africa, smferreira@zoology.up.ac.za South African National Parks
Affiliated institutions: Conservation Force, Metairie/LA, USA, cf@conservationforce.org

Project summary: How many lions are there? Are their numbers changing and if so, how? These are the questions that managers of lions usually ask. The management of lions has many constraints, whether the lions are free-ranging or not, and it is often hard to get information about a specific group of them. As a rule, researchers spend large amounts of time trying to estimate how many lions live in an area with some form of precision. They then can calculate a population growth rate from repeated estimates of the number of lions in the same area. However, the variation in the estimates of lion numbers results in large uncertainty of growth rate. It is both time-consuming and expensive to derive variables for a lion population. As a result managers of most reserves know far less than Kruger about their respective lions, which has a reasonably well studied population. However, in Kruger, the managers have no recent estimates of the population size, fecundity or survival of their lions. A possible compounding problem is that the incidences of disease, particularly bovine tuberculosis, is causing substantial concerns for management. As the disease seems to be higher in the south than in the north of Kruger, management may therefore ask what the consequences of this is for lion populations, and which component of lion demography is most affected?

Many methods can estimate the numbers of a carnivore, and baited capture sites with individual recognition through brand marking stations is possibly the best way to do it. Given the time and cost constraints of this method, however, there has been a trend towards adapting the calling station method developed for spotted hyaenás, which has been fairly successfully used for lions. However, such stations are constrained firstly, by how long and often the lions take to respond and turn up at a station, and secondly by either missing individuals or repeatedly sampling the same ones.

We propose to develop a combination of methods for an approach that evaluates and corrects for these constraints. Estimation of population demographic variables is usually obtained through intensive long-term behavioral studies that are substantially more time-consuming and expensive. We, however, have developed a conceptual modeling approach that uses observations of age distributions and female-cub associations to derive age-specific survival and fecundity. From these we can derive population growth rates. Our conceptual approach is thus potentially rapid and relatively inexpensive.

We wish to obtain information on lion populations including abundance and age-specific survival and fecundity in three regions of Kruger National Park (South, Central and Northern). These generally correlate with varying prevalence’s of bovine tuberculosis (BTB) in the host (African buffalo) and associated species (e.g. lion) populations. From these we can model intrinsic population growth rates and evaluate the differences between regions from which we may infer the influence of BTB on lion populations.

Project Objectives:
1. To obtain reliable lion population estimates for three regions in Kruger National Park through refinement of the calling station technique.

2. To obtain age-specific survival and fecundity parameters from which to derive population statistics for three regions in Kruger National Park.

3. To obtain population growth rates and compare three regions of Kruger National Park characterized by different levels of disease incidences.

Conservation Force (www.conservationforce.org) is funding this project with R78,000 (=approx US$12,000). Conservation Force is based in Metairie, Louisiana, U.S.A. and registered as a non-profit 501 (c) 3 charitable foundation. The name Conservation Force stands for three forces. First, that hunters and anglers are an indispensable force for wildlife conservation, second, that Conservation Force is a collaborative effort combining forces of a consortium of organizations and, third, that Conservation Force itself is a proactive force to be reckoned with because of its record of successes. The mission of Conservation Force is the conservation of wildlife and the natural world. The purpose is to establish and further conservation of wildlife, wild places and our outdoor way of life. For more information about Conservation Force please visit www.conservationforce.org or email cf@conservationforce.org

VOL 3/6 (2005)
BOTSWANA: TROPHY QUALITY MONITORING FOR LION
Gerhard R Damm

One of the major concerns facing sustainable hunting of lion is the age of the hunted lion. Scientists, conservationists and hunters agree that there is an urgent need for reliable methods to determine trophy animal age. A reliable age-assessment technique is to x-ray the lion’s second premolar P2 to determine the extent of pulp-cavity growth. This method can be used for also for leopard and any other large predator to obtain a close age approximation. In the process P2 will be removed from each skull and radiographed with a dental X-Ray machine. The radiograph will be scanned and inserted into an architectural computer program to determine various dimensions of pulp and non-pulp according to a process developed by Ann Cheater at Tshwane University of Technology in South Africa and validated by Prof. Craig Packer’s research unit.

Through a network of hunters and the assistance of African Indaba, a portable dental X-Ray machine was located and purchased in South Africa and subsequently shipped to Maun. Debbie Peake will provide facilities at Mochaba to house the x-ray machine and undertake photography work. Thanks to generous funding from Conservation Force, the scientific groundwork of Craig Packer and Ann Cheater and the enthusiasm of Debbie Peake, the Botswana Wildlife Management Association (BWMA) will be now able to reliably age all trophy hunted large carnivores and share/discuss the data obtained with staff from the Botswana Department of Wildlife and National Parks and wildlife researchers.

This is extremely important for the future of safari hunting of lion and leopard in Botswana. The safari operators and hunting clients are aware that the P2 will be removed from each skull. Outfitter and professional hunter members of the BWMA are also committed to providing series of photographs of all hunted lion trophies, as well as completing a number of in-depth questionnaires for submission to DWNP Research and the African Large Predator Research Unit (ALPRU). In addition, all operators will provide written additional information on lion sightings, natural mortalities, predator/prey relationship, problem animals, etc. in their respective wildlife management areas.
Peake will coordinate the inspection of each trophy by DWNP staff prior to export and submit an annual report to the DWNP Licensing and Research Unit on lion hunts and individual trophies. This report will include copies of all reports, ALPRU forms, age analysis, photographs of the trophy and especially the facial area with nose coloration. Results of this analysis will be shared with all stakeholders at the end of the hunting season (September) for discussion with the DWNP Research Division to evaluate ages, growth, nose colorations, etc. The data will provide invaluable base material for future allocations of quota. The facility will also be made available to private researchers in Botswana, i.e.: Wild Dog Research (Tico McNutt), Lion Research Center (Winterbach et al) and DWNP Problem Animal Control Division.

Results of age validation for lion and leopard would significantly contribute to an ongoing Trophy Quality Monitoring Project, carried out by Debbie Peake since 1997, in which measurements of key species are maintained in a database and are reviewed by DWNP annually.

**VOL 3/6 (2005)**

**FIRST AFRICAN LION WORKSHOPS ARE SUCCESSFUL**

John J Jackson III, Conservation Force

The lion workshops for West and Central Africa held in Douala, Cameroon in October were a great success. The meetings advanced lion conservation in both regions and recognized hunting as an important tool for the long-term survival of lion. The Participants formulated the Vision “A West and Central Africa which sustainably manage their biodiversity” and the Goal: “To ensure the conservation and sustainable management of the lion in West and Central Africa.”

Both 3-day workshops were organized by the World Conservation Union (IUCN), the Species Survival Commission and its Cat Specialist Group, as well as the Wildlife Conservation Society and Africa Resources Trust. The first was a technical workshop financed by WCS to create an agreed upon database of the number and range of lion in West and Central Africa. A second objective was to identify and prioritize lion conservation units in the two regions. The workshop developed an updated distribution map for lions in the region, modeled on similar exercises for the tiger, jaguar, and other species. The objectives were achieved with the caveat that new field data that had recently been collected by Philippe Chardonnet through a “bush book” reporting system will be added. Philippe has created a field network that is recording and reporting lion observations in “Carnet De Brousse” note books. Its focus is outside of parks as no systematic attempt has been made by other researchers beyond the borders of protected areas. Chardonnet’s contribution supplies important, complementary data. The technical workshop was funded by the Wildlife Conservation Society (WCS), represented by Luke Hunter and a team of WCS technical specialists. It was attended by a total of 27 individuals.

The second workshop focused on identifying conservation problems and to develop conservation strategies to deal with the threats to West and Central Africa lion. It was attended by directors of wildlife departments, stakeholders and decision makers. 41 individuals from 21 countries participated.

The single largest financial contribution to this workshop came from the Safari Club International Foundation, SCIF. This fact and the positive demeanor of SCIF’s two representatives, Bob Byrne and George Pangeti, reflected very well on the hunting community and its conservation concerns (read the Final Statement drafted by the workshop participants).

The three primary causes of the decline in lion were thought to be (1) habitat reduction/degradation, (2) reduction in prey populations, and (3) the human-lion conflict. Hunting can be a conservation tool to help solve all three. The action plans to contend with these threats are
still being formulated over the internet and should be finalized before the East & South Africa workshops scheduled for early January 2006 in Johannesburg.

By general agreement the regional workshops should be followed by national workshops in each lion range state to develop individual national action plans. A similar protocol was first established for the African elephant. It is very ambitious and will be expensive. If the hunting community is to maintain its role and leadership, it will have to continue funding the processes. The fate of the lion rests on it. On the positive side, this is an uncommon opportunity to join hands and save what is so very important to us.

One could only wish that we had taken this kind of proactive approach before the listing of markhor, argali, elephant and rhino. Philippe Chardonnet who did the all important African lion study for Conservation Force and the International Game Foundation IGF, was an important expert in both workshops and provided invaluable contributions. He co-authored the two substantive background papers that were used to kick-off both workshops.

He was clearly the most knowledgeable about lion population and range in the technical expert workshop and the most informed about the problems and solutions in the conservation strategy workshop that followed. Conservation Force’s lion study proved to be the most comprehensive and authoritative referenced resource.

At times it seemed that we had already done all the work and the workshop was used by everyone else to catch up. Our years of work have paid off big time. Our lead was quite obvious. Those that have supported our efforts need to know and share this uncommon, total success.

The workshops were organized in response to the growing concern that number and range of African lion are declining. The African Lion Working Group, ALWG, which is an affiliate of the IUCN Cat Specialist Group, Conservation Force and IGF were the first to raise concern for the African lion in 2 studies completed in 2002. It grew more serious when the media exaggerated the ALWG “partial” population estimate amidst claims that the lion was endangered. ALWG was already planning a technical meeting to develop a more comprehensive database and Conservation Force also planned an Africa Lion workshop with over 100 participants to develop a conservation strategy to deal with the “driving forces” described in the Chardonnet Lion Study.(you can download the entire study by going to the IGF Website and clicking on the Chardonnet Study)

The Kenya proposal of CITI ES COP13 caused a reaction that has temporarily shuffled the roles of some interests but the outcome should still be the same. The workshops are covering the same ground the original workshops were designed to cover.

Potentially, the lion may become one of the best-managed species in the world.

VOL 4/2 (2006)
AFRICAN LION WORKSHOPS
John J Jackson III, Chairman, Conservation Force and CIC Sustainable Use Commission

A monumental effort to conserve the African lion in Eastern and Southern Africa was launched at two back-on-back work-shops held in Randburg, RSA in early January 2006. The first one was a “technical” workshop aimed at assessing and mapping the range of lion in Eastern and Southern Africa and analyzing potential lion conservation units. The second was a planning meeting to develop a conservation strategy to secure and re-store sustainable lion populations over the next 25 years.

The technical workshop session was organized by the Wildlife Conservation Society (WCS) and the IUCN Species Survival Commission’s Cat Specialist Group including its affiliates, the African Lion Working Group (ALWG) and the West and Central African Lion Conservation Network (ROCAL).
32 experts and observers attended the session which was funded by WCS and facilitated by WCS’s Dr Luke Hunter.

Though primarily conceptualized as a range mapping exercise, the workshop also attempted to separate lion populations into different categories of risk called Lion Conservation Units (LCU). The threats in each LCU were separately assessed as well as the potential viability of the respective lion populations. That process remains open as more information will be added in future by various experts. The results are not expected to be published for several months. One tentative conclusion was that approximately thirty-four (34) percent of the lion populations are believed to be potentially self-sustaining for the next 100 years. The largest and most secure lion population units are found to be in Tanzania, followed by Botswana. Approximately fifty-five (55) percent of the African lion’s range is situated in hunting blocks of one form or another. The participants considered that the risks or threats affecting lion are lower in safari hunting areas and are lowered by regulated safari hunting. In other words, safari hunting and in particular safari hunting of wild lion was found not to be a threat. There was general agreement that safari hunting should be viewed as a useful means of alleviating threats and that it generally provides a net benefit to species’ conservation in general and lion conservation in particular. The Wildlife Conservation Society (WCS) intends to use the results of its technical workshop to launch its own comprehensive lion conservation program and to use the information gathered for its own lion database.

The information proved also useful for the second workshop aimed at developing a lion conservation strategy. This symposium was attended by a broader spectrum of 67 participants which included lion experts, range nation authorities and stake-holders. Its purpose was the development of the political and biological aspects of a viable lion conservation strategy.

The session was organized by Kristin Nowell of IUCN’s Cat Specialist Group and its affiliates, WCS and African Resources Trust at the request of the Southern African Development Community (SADC). It was primarily funded by Safari Club International Foundation of Safari Club International (SCI), but was also funded by WCS and the UK Department of the Environment, Food Resources and Agriculture.

This workshop was larger and far more comprehensive than the preceding symposium. Dr Holly Dublin, Chair of the IUCN SSC and Dr Russell Taylor facilitated this extremely important second workshop. Its importance was demonstrated by the attendance of the management authorities from nearly every range state, the co-chair and vice-chair of the IUCN Cat Specialist Group, Chair of the African Lion Working Group (ALWG), Chair of ROCAL, the director of the International Foundation for the Conservation of Wildlife, the Chair of Conservation Force and President of the Commission on Sustainable Use of the International Council for Game & Wildlife Conservation (CIC), the coordinator of the Global Carnivore Program of WCS, the Director of Conservation for Safari Club International Foundation, both the Director and Program Officer of TRAFFIC ESA, and the world’s leading lion scientists such as Craig Packer, Paul Funston, Laurence Frank, Hans Bauer, Norman Monks, Philippe Chardonnet, Christian Winterbach and others. That is just a sampling of the approximately 80 participants but demonstrates the seriousness of this unprecedented undertaking and the high caliber of the participants.

The workshop to develop a lion conservation strategy began with the presentation of key papers providing the most cutting-edge information and developments in lion conservation. Three background papers were sent to participants before the work-shop began and the principal authors delivered these papers on the opening morning. These papers are all available on the internet at the African Indaba Website (please go to the lion conservation link).

The **Lion Status and Distribution in Eastern and Southern Africa** was prepared by Hans Bauer, Philippe Chardonnet and Kristin Nowell. In this document two key lion surveys are compared: **Bauer and van der Merwe** (published in 2004 but actually completed in 2002), and the **Chardonnet Study** by the International Foundation for the Conservation of Wildlife (IGF) and Conservation Force, also completed in 2002. The different methodologies in the two surveys were not really comparable as the Bauer survey was only “partial” and focused more on protected areas,
while the Chardonnet study was “more complete” and included more protected and far more unprotected areas than the Bauer survey. For example, the Bauer Survey had no estimate whatsoever for several range countries and included only a fraction of Tanzania that has the largest lion population in Africa thought to be equal to all the rest of Africa.

There is a common sense assumption among many lion re-searchers that there has been a considerable decline in overall numbers of lion over the past several decades, but the trend cannot be quantified because no precise baseline data exists. Tanzania, with the largest population prey base and suitable habitat has a growing lion population as well as the largest lion population.

The second paper was *Lions, Conflict and Conservation in Eastern and Southern Africa*. It was prepared by Laurence Frank, Graham Henson, Hadas Kushnir and Craig Packer and reviews lion-human conflict in all its ramifications. Laurence Frank emphasized the need for preventative actions to protect livestock and importance of using mechanisms to provide the local people benefits from lion and wildlife, especially outside of protected areas. Interestingly he mentioned that the lion population was increasing in his Kenya study area even though twenty (20) percent of the lion population was being killed each year. He estimated the potential revenue from those lion that were being killed to be more than one-million U.S. dollars per year if Kenya permitted tourist safari hunting.

The third background paper is entitled *Impacts of Trophy Hunting of Lions in Eastern and Southern Africa: Recent Offtake and Future Recommendations* by Craig Packer, Karyl Whitman, Andrew Loveridge, John Jackson (yours truly), and Paul Funston. It reviews lion trophy hunting and the biological “best practices” being developed to raise the conservation value of lion, while also reducing the impact of the regulated hunting. Craig Packer recommended that tourist hunting be restricted to older males and that females normally not be on quota. He emphasized the importance of tourist safari hunting to lion conservation including the fact that most lion range is in hunting areas. Tanzania has the most lion safari hunting and partly in consequence has the most robust lion populations.

Holly Dublin made it clear that the workshop was not about the narrow issue of safari hunting. Nevertheless, the issue could not be avoided because of the positive contributions to lion conservation being derived from that form of hunting. The participants concluded that lion safari hunting was not the threat, but was an important means of alleviating the threats to Africa’s lion (see also IUCN Cat Specialist Group “Events & Activities”). It is an important means of maintaining lion, lion habitat and abundant lion prey. Safari hunting adds substantial value to the lion for local people – a necessity if lion are to be tolerated on their lands. Tourist hunting is the principal conservation tool in more than half of African lion habitat.

David Erickson presented the Cullman & Hurt Community Wildlife Conservation Project. This is one program the safari hunting community can be particularly proud of. Through it a single hunting operator provides direct benefits to 100,000 people in 33 villages in Tanzania. In 15 years the project has provided more than US$ 2 million to local communities including the construction of 34 schools, 12 medical dispensaries and mobile medical units, operated 3 full-time anti-poaching patrols, conducted leopard and lion studies, and much more.

Though the background papers and initial presentations were interesting and useful, most of the workshop was devoted to development of an actual strategy. Participants were divided into working groups to address six issues that were identified:

- Mitigation
- Trade,
- Management
- Policy and Land Use
- Politics
- Socio-economics.

Targets and activities were developed under each of those six (6) issues. The final strategy for Eastern and Southern Africa is expected to be published in June or July 2006. A continental lion
strategy including the results of the October 2005 Workshop in Douala for Western and Central Africa is expected to be published by January or February 2007.

Sarel van der Merwe, chair of the ALWG, summed it up when he wrote that “no one doubts that we are at the foot of the Lion Conservation Mountain of Africa.” Indeed, the second workshop is an unprecedented and important effort.

Saving the lion entails saving its habitat and prey base, effective management and reducing human and livestock-lion conflict. It is synonymous with saving wild Africa, or as Craig Packer and others put it, saving “Savannas Forever.”

VOL 4/2 (2006)
SAVANNAS FOREVER: CERTIFICATION FOR HUNTING IN AFRICA
Dr Craig Packer

Editor’s Comment: Just in time before closing this issue we received this article from Craig Packer about the launch of Savannas Forever. I had the opportunity to discuss the issues together with Craig Packer, Kai Wollscheid Director General of CIC, and John Jackson III Chairman of Conservation Force in a personal meeting just after the Lion Symposium in Johannesburg. The underlying concept is one of self-regulation. With the formidable team of experts assembled, the support of Conservation Force and the International Council of Game and Wildlife Conservation (CIC) and the adaptive development of methods the future looks promising. There are a number of developments in the pipeline which African Indaba will report about in the next issues – so look out for more information. In the meantime you can get information from the Savannas Forever Webpage at www.SavannasForever.org

In the last week of February we will officially launch Savannas Forever with generous gifts from Dan and Tom Friedkin. Savannas Forever’s mission is to provide practical solutions for conserving African wildlife while protecting local people and promoting their livelihoods. Our strategy is to use sustainable hunting certification to motivate and educate stakeholders to manage wildlife as a valuable economic, socio-cultural and environmental asset, thereby developing a vested interest in its protection.

On-going international pressure to protect wildlife populations has created an urgent need to verify sustainable hunting practices and to measure outcomes for key species such as lions, leopard and Cape buffalo. Without verifiable outcomes, the trophy hunting industry risks hunting bans imposed by national governments or by international wildlife treaties. But without economic incentives for local people to sustain wildlife, animal populations could decline rapidly as has occurred in countries that have banned hunting altogether.

Savannas Forever’s goal is to develop the most trusted conservation hunting certification system for African trophy hunting. Savannas Forever will work with the hunting industry, conservation organizations and rural communities to create a voluntary, third-party certification system that includes principles, criteria and indicators to measure how well a hunting company follows sustainable harvest practices, protects its wildlife populations from illegal offtake, and develops meaningful engagement with local communities.

The certification process will be managed adaptively and will not be a pass/fail system. The first step for participating companies will be a self-evaluation to identify areas of improvement and will subsequently progress to a full third-party certification. Our discussions with hunting companies, conservation organizations and wildlife authorities have generated a groundswell of support and excitement. In the past two months, 16 leading hunting companies in Tanzania, Mozambique and Botswana have joined the Savannas Forever research consortium. Our research activities will start in
In 2005, I completed a six year doctoral study of human-lion relationships in the Tarangire ecosystem of Northern Tanzania and received my Ph.D. from Yale University. The goal of my research was to determine the primary social and ecological factors influencing interactions between people and lions. In terms of human communities, I considered three major stake-holders encountering lions in the Tarangire ecosystem: the professional sport hunting industry, the photographic safari industry and local African communities. In an effort to introduce an applied component to my research, I also co-founded the People & Predators Fund, a 501(c)3 non-profit organization originally based at Yale and now located in New Jersey. In recognition that the future of many wild animals lies primarily in the hands of the people living among them, the People & Predators Fund is promoting a new approach to conservation that links the long-term survival of species like lions with the healthy and responsible development of human communities. Our mission is supported by the six years of research summarized below.

The rationale behind my research and the People & Predators Fund is deeply grounded in the belief that environmental and social health is inherently intertwined. Today, a thorough integration of ecological and social knowledge is required to meet the increasing challenges of wildlife management and conservation outside of protected areas. Indeed, interdisciplinary studies are becoming increasingly popular and commonly involve the collaboration of scientists from a variety of disciplines.

The Tarangire ecosystem (12,000 km\(^2\)) is an ideal area to investigate human-lion relationships. Including two national parks as well as hunting and Maasai village lands, it represents a complex arena of multiple land uses, diverse human interests and lions. At the time of my study, conflicts between people and lions outside the boundary of Tarangire National Park were prevalent and widely acknowledged, but little scientific data about either the social or ecological factors creating the problems were available.

I developed my social research to compare people’s attitudes toward lions, the nature of their encounters with them and the types of human-lion conflict that occur. Despite vastly different backgrounds, livelihoods and types of interactions with lions, all of the stakeholders expressed a deep and passionate value for lions. Among the sport hunting and photographic respondents, this value is related to the beauty, power and potential danger lions pose as well as to the economic benefits associated with lions. However, it was interesting to find that the financial benefits derived from lions were not necessarily enough to motivate local conservation action. Many individuals from both the photographic and sport hunting industries indicated that due to an abundance of lions in Tanzania, the possible loss of the lion from the Tarangire ecosystem would be disappointing but not particularly significant from a business point of view. In fact, most respondents remarked that the market-based economy of sport hunting often made it difficult for companies, particularly small to medium sized ones, to forego the profits of hunting a lion if it was of an inappropriate age, or in extreme cases, sex. Addition-ally, many operators felt that personal investments in conservation were somewhat insecure given ongoing debates over conflicting rights to land and wildlife use.
From a Maasai point of view, an important value and respect for lions as a significant and worthy foe has grown from a history of traditional lion hunts. This value influenced Maasai tolerance for lions, motivating a desire to see that some lions are always present. In this regard, it is important to recognize that positive values for lions do exist among local community members and that these may be integral to developing local lion conservation programs. Of course, on the other hand, a noteworthy contempt for livestock killers was also evident. I estimate that nearly 40 lions are killed annually by the Maasai on the eastern boundary of Tarangire National Park in retaliation for livestock predation. However, my research showed that Maasai motivations for killing lions went well beyond conflicts with livestock to include the sheer risk of living alongside a large and dangerous predator (particularly for women and despite their low likelihood of encountering lions). Cultural traditions and perceptions of the lack of rights over wildlife and the inequitable distribution of wildlife tourism revenue were also motivations for killing lions.

With an in-depth understanding of the unique assemblages of psychological, political, socio-cultural and economic factors influencing human attitudes toward lions in hand (much of which is oversimplified or omitted here for lack of space), the next stage of my research was to relate the effects of these attitudes toward the big cats’ distribution and abundance throughout the Tarangire ecosystem. Collecting ecological data on lions outside of protected areas is a difficult job. I found Tarangire lions changed their behaviors, becoming more wary and secretive once they moved across the national park boundary. As conventional methods of photographic identification appeared less useful, I instead turned to traditional hunting knowledge and the ancient art of wildlife tracking. Enlisting the help of Hadzabe Bushmen – renowned to be some of the best trackers in all of Africa – I conducted spoor counts from road transects, a non-invasive technique used successfully in southern Africa to provide estimates of lion and leopard density.

The results of my ecological research demonstrated that lions moved throughout the Tarangire ecosystem in response to the seasonal movements of wild prey populations. While lion prides were found to be resident both inside and outside of the national park, lion abundance was highest in the national park during the dry season when prey populations congregate in the park around the Tarangire River. Despite concern over the effects of sport hunting on lion populations, I found the hunting concession I surveyed to have a relatively healthy lion population with a comparable distribution of juveniles, sub-adults and adults to that of the park. This suggests that the sport hunting of lions can be an important conservation tool in situations where hunting ethics are strongly upheld, quotas are scientifically determined and monitored and where important regulations disallowing the hunting of immature and/or female cats are respected. On the other hand, in the village area, where livestock herders, farmers and sport hunters were present, the lion population was comparatively lower in abundance and comprised of a large proportion of sub-adult animals – an age group particularly notorious for its risky behavior as livestock raiders.

Overall, I estimate that approximately 600 lions reside within the 12,000 km² of the Tarangire ecosystem. Of the human communities most capable of impacting the lion’s long-term future, the Maasai most certainly stand out. An increasing resentment of lions fueled by local perceptions of the inequitable distribution of wildlife benefits suggests that these communities may become less tolerant of lions as time passes. As such, the future of the “Tarangire lion” seems questionable. More and more land is being cultivated, or at the very least, plowed to demonstrate ownership of land. While the Maasai have proven themselves capable of living with lions, intensive agriculture and large carnivores do not mix well.

However, a more positive future can be envisioned if all of the stakeholders work collaboratively toward improved lion conservation and management. Fortunately, while a variety of different attitudes toward lions were prevalent in the Tarangire ecosystem, all of the stakeholders indicated an interest in future collaboration and the potential development of a forum to communicate and coordinate their diverse interests. Having established a positive working relationship with all of the various stakeholders, the People & Predators Fund is well poised to act as a facilitator if such a forum were to develop. In addition, as part of its mission, the People &
Predators Fund is emphasizing the essential need to work with local communities to develop participatory programs for the improved livelihoods of humans and lions alike. Our long-term vision is of a landscape where lions continue to live among people and can be appreciated for not only their intrinsic value but also for their various cultural and societal uses including traditional hunting, sport hunting and photographic tours.

Dr Laly Lichtenfeld is a Research Affiliate of Yale University and Executive Director, People & Predators Fund. Download her complete dissertation HERE. For more information about the People & Predator Fund, please contact Laly Lichtenfeld at Lichtenfeld@people-predators.org or visit the website at www.people-predators.org.

VOL 5/2 (2007)

ZAMBIA’S LIONS IN THE SPOTLIGHT
Dr. Paula A. White

Zambia’s centralized geographic location, vast tracts of high quality habitat, and low human population density render it a potential stronghold for the African lion (*Panthera leo*) in southern Africa. Yet as in many other countries, the status of lions in Zambia is poorly known. The most
current estimates range from 1,000 to 3,575 lions and were derived by combining areas of very
different habitat types, or based on lion densities recorded nearly 40 years ago. Current and reliable
data on lion distribution and abundance in Zambia are urgently needed. Adding to the sense of
urgency is the fact that trophy hunting of lions represents a very important source of revenue for
Zambia, which is one of the top four lion-trophy producing countries in the world. Studies in
Tanzania have found that selective harvesting of older (>5-6 year old) male lions produced maximum
off-take of trophy animals while minimizing the negative effects on the overall population. At
present however, Zambia has no program in place to promote selective harvesting of lions. Moreover,
off-take quotas are set in the absence of adequate data on lion population size. Thus, the
sustainability of Zambia’s current lion hunting practices is unknown. Questions and concerns
regarding the status of Zambia’s lion population came to the forefront in 2004, when Zambia
opposed uplisting of the African lion to CITES Appendix I. In response, the Zambia Wildlife Authority
(ZAWA) was charged with providing evidence that Zambia’s lions are being managed in sound
fashion. This necessarily includes empirical data that can support ZAWA’s claim that quotas are
based on long-term sustainable use practices rather than short-term monetary gains.

In 2003, the Zambia Lion Project (ZLP) was formed by Dr. Paula White as part of an
investigation of carnivores in the North Luangwa Valley area. The ZLP has now partnered with ZAWA
for the purpose of gathering empirical data on lion populations throughout Zambia. The ZLP
operates towards a series of specific goals that are outlined below.

**Focal Study – North Luangwa:**

Field efforts were initially focused in the North Luangwa Valley and included North Luangwa
National Park (NLNP) and the adjacent game management areas (GMAs) in which trophy hunting
occurs. This area was selected because Luangwa Valley is one of two premier lion hunting regions in
Zambia (the other being the Kafue area), with most GMAs in the Luangwa Valley having lions on
quota. The goals of the Luangwa Lion Project (as it was previously known) are to estimate the
population size of lions in the North Luangwa Valley area, examine movements of lions between the
park and GMAs, and determine the source (birth) pride from which male lions taken as trophies
originated.

To accomplish this, the project has conducted intensive fieldwork and interviews with local
tour operators within NLNP, and in conjunction with the professional hunters (PHs) collected
information and genetic material from lions in the GMAs. This portion of the study is nearing
completion with final results available later this year.

**Genetics:**

An investigation into the genetics of Zambia’s lions is ongoing. Genetic profiles of lions from
three areas (Luangwa Valley, Lower Zambezi, Kafue) are being compared to determine gene flow, or
conversely, the genetic isolation of lion sub-populations. Preliminary analyses indicated genetic
differentiation between Luangwa Valley and Kafue lion stocks. The larger number of samples now
being analyzed will provide greater resolution in assessing these differences. Knowledge regarding
the genetic characteristics of Zambia’s lions is especially timely in light of the proposed program to
“augment” wild populations in the Kafue area through release of captive-bred animals (aka ‘Walking
with Lions’). The potential genetic uniqueness of Zambia’s lions is one of many reasons that the ZLP
is strongly opposed to this ill-conceived plan. (For more information, go to
http://www.lionscam.blogspot.com/).

**Aging Program:**

A program to selectively target older male lions in trophy hunting has recently been
developed in Tanzania (i.e., “Savanna’s Forever”). The goal of selective hunting is to maintain viable
lion populations that can support both hunting and photo tourism as well as function as an integral
part of a healthy ecosystem. The concept is based on data derived from long-term research of lion
populations in two ecosystems within Tanzania. Rapid turnover of male coalitions can result in high
rates of infanticide because the incoming males kill young cubs that are not their own. However, the
loss of males (through trophy hunting) older than 5-6 years has only minimal impact on the
remaining lion population. Visual characteristics (e.g., nose coloration, mane size, body color, etc.) of known-age study animals in Tanzania were calibrated with x-ray analyses of a premolar tooth.

The selection process involves PHs judging a lion’s age in the field using visual characteristics prior to lethal take. In April 2006, ZLP met with ZAWA, the Professional Hunters Association of Zambia (PHAZ), and the Safari Hunters Outfitters Association of Zambia (SHOAZ) to introduce the concept of developing age-based selective hunting in Zambia. While all parties recognize the conservation value of a selective hunting program, there was general concern that the specific physical characteristics used to determine age of lions in Tanzania do not accurately correspond with lion age in Zambia. Mane size and development are known to vary by region. Therefore, local studies are required to quantify visual characteristics of Zambian lions for calibration with definitive age.

PHs across Zambia were requested to contribute a premolar along with photographs from each trophy lion. Compliance was excellent, and tooth samples from the 2006 season are now undergoing x-ray and cementum annuli analyses with results expected by April 2007. This effort is being closely integrated with Dr. Craig Packer’s ‘Savanna’s Forever’ program in Tanzania to maintain consistency of data collection protocols and allow for robust comparison of results. Projected to run for the next two years, this pilot study will be used to develop an age-based selection program of lion hunting in Zambia.

Surveys:

Countrywide surveys will determine lion distribution and relative abundance in areas for which the current status of lion is not known. Field efforts will consist of rigorous and systematic coverage involving track counts, walking surveys, and “call in” experiments. Information relevant to lion habitat suitability (prey base, human density and land use) will be collected concurrently. Surveys are designed to identify those areas within Zambia where lions persist, or could potentially recover through natural dispersal processes. Countrywide surveys are scheduled to begin in August 2007, with intensive coverage of different areas over the next 2-3 years.

By providing empirical data, the ZLP seeks to provide ZAWA scientists and managers with the strong scientific basis necessary to develop sound lion management policies. In working directly with PHs, the ZLP provides the link through which management strategies (i.e. selective hunting) can be implemented. In addition to filling a data gap on the status of lions within Zambia, countrywide surveys will help identify potential corridors between lion populations in Zambia and those in neighboring countries. Both geographic and genetic data will assist in identifying viable Lion Conservation Units, thereby contributing to a range wide African lion conservation plan.

The ZLP is grateful for the support it has received from: the Frankfurt Zoological Society’s North Luangwa Conservation Project, Conservation Foundation Zambia Ltd, Wildlife Conservation Society, Safari Club International, Total Zambia Ltd, Associated Printers Ltd.

VOL 5/5 (2007)
HUMAN-CARNIVORE CONFLICT IN NIASSA NATIONAL RESERVE (EXTRACTS)
Sociedade para a Gestão e Desenvolvimento da Reserva do Niassa, Moçambique
Colleen Begg, Keith Begg, & Oscar Muemedi (abbreviated for space reasons)

Summary

Wildlife can cause significant loss of human lives and livelihoods and if not responded to human-wildlife conflict can lead to a critical erosion of support for conservation initiatives. Niassa
National Reserve, in northern Mozambique supports viable populations of lion, leopard, spotted hyaena and crocodile as well as approximately 25,000 people. This report provides a preliminary assessment of the scale and distribution of large carnivore attacks on Niassa residents, with particular emphasis on lions and crocodiles and to provide a baseline against which the level of future conflict can be compared. Data were collated from monthly reports of MOMS community scouts, NNR records, opportunistic conversations with local residents, concession operators and Reserve staff as well as from targeted questionnaire surveys for crocodiles and lions.

Since 1974, there have been at least 73 lion attacks in NNR. A minimum of 34 people has been killed and 37 injured with recent attacks concentrated in the north eastern region of NNR. Leopard attacks are rare however at least 9 people have been injured and 4 people killed by spotted hyaenas in NNR in the last 14 years. In these attacks sleeping in the open is the risk factor. At least 57 people have been killed by crocodiles in NNR in the past 30 years. A large portion of the Ruvuma River within NNR has not yet been surveyed so this is likely to be an underestimate. High-risk activities are repetitive behavior such as bathing at communal sites and wading at regular crossing points as well as Chingundjenje net fishing. We strongly believe that providing locally derived, practical solutions to this conflict before it escalates any further provides the best opportunity for successful long-term conservation of the large carnivores in NNR.

While livestock depredation is probably the most common cause of human-carnivore conflict in Africa, one of the most serious causes is the fear of being killed or injured by a large carnivore. The death or injury of a person due to a large carnivore causes considerable trauma to the family and community, and may impact severely on the welfare of the surviving family. Retributive killing of the species of animal responsible (not necessarily the problem individual) can also cause serious population declines. In NNR livestock depredation by large carnivores is not a major problem as there are relatively few domestic livestock (mainly goats and chickens) and cattle are absent. However, loss of human life and injury do occur particularly due to lions and crocodiles, but up until now the extent of the conflict has been unknown. We strongly believe that providing solutions before this conflict escalates any further provides the best opportunity for successful long-term conservation of the large carnivores in NNR.

**Lion**

In certain areas, particularly southern and eastern Tanzania, lion attacks have become increasingly common with more than 500 attacks since 1990. There are indications that a similar escalation in lion attacks has been experienced in northeastern Mozambique in Cabo Del Gado particularly on the Mueda plateau. Recent reports suggests that 46 people were killed between 2002-2003 in Muidimbe district on the Makonde plateau with 70 people killed between 2000 and 2001 by lions in Cabo Delgado e. Since 1974, there have been at least 73 lion attacks in NNR. A minimum of 34 people has been killed and 37 injured with 11 people killed and 17 injured in the last 6 years alone. A total of 49 lion attacks representing 28 individual victims were reported during the questionnaire survey. Additional reports of 19 deaths and 22 injuries were provided from other sources, with 13 people injured and 9 killed in the northeastern section of NNR (Block A, Gomba). This is believed to be in the right order of magnitude since details of lion attacks (victim names, circumstances and year of attack) are remembered long after the event. However, this area has not been comprehensively surveyed and several more attacks may remain unreported. In addition conversations with Niassa residents do suggest that lion attacks in the 1980s may have been underestimated as some were believed to be the work of witchcraft and “spirit” lions not bush lions. The work of “spirit lions” appears to have declined in the 1990s due to the death of the powerful traditional healer who lived in Mecula. Further investigation into the cultural significance of lions and lion attacks in Niassa is warranted as this may have an effect on future mitigation strategies and conservation initiatives.

Little information is currently available on the exact circumstances of lion attacks. Where some details are provided 50% of the attacks have occurred in the village with the lions entering the
living areas and on 4 occasions pulling people out of huts, 34% have occurred in the mashambas and only 18% have occurred in the woodlands. While it is likely that the spate of attacks in the Negomano area are exacerbated by low prey densities and heavy poaching pressure, spates of lion attacks on the Mueda plateau are not a new phenomenon but have been occurring in this region since the 1950s. Interestingly, no reports of lion attacks in Mbamba and /Mecula have been recorded in the last 10 years, despite previous attacks and regular sightings of lions in the mashambas of Mbamba and Ncuti.

VOL 5/6 (2007)
BOTSWANA: LION HUNTING SUSPENDED AGAIN
Gerhard R Damm

With the following short notice lion hunting in Botswana for the 2008 season was closed again: The Department of Wildlife and National Parks would like to inform the public that it is concerned by the number of lions killed in defense of livestock in certain areas of the country. As a precautionary measure, the Department has taken a decision not to issue any lion hunting quota until further notice. The Department further wishes to assure the public that appropriate measures are being put in place to reverse the current trends.”

This removal of the lion quota (in 2007 the quota was ONE mature male lion per concession) fails to consider the results of the IUCN Eastern/Southern African Lion Workshop in Randburg/South Africa in early 2006. Restrictions, if at all, should have been applied area-specific as an incentive/retribution tool to foster sound lion management and to decrease hostility of local herdsmen against predators. As instituted now, it will certainly lead to a revenue loss for communities and to substantial financial implications for the safari hunting industry, lion being one of their draw cards besides elephant. It also shows a lack of confidence in the safari operators of Botswana.

It will result in increased human/lion conflict adjacent to WMAs, possibly with the opposite result as envisaged by DWNP, since livestock owners may be resorting to indiscriminately killing lion and, if poison is used, subsequently other non-target predators. It may possibly also have disastrous consequences on lion demography, since key pride females will be indiscriminately eliminated.

I suggest that there is only route out of this obvious dilemma: The Botswana Wildlife Management Association (BWMA), as representative of the hunting safari operators in Botswana, must enter into a reasoned dialogue with government and DWNP to build a basis of mutual trust. One building stone in this dialogue would be the establishment of a clear and committed Code of Ethics for trophy hunting lion and in fact of all other huntable species. Once established and subscribed by professional hunters and safari operators, the essence of the Code must be practiced and perpetrators must be brought to book – swiftly and without favor – by joint actions of BWMA and DWNP.

Additionally, BWMA should refine and expand its existing database on hunting trophies based on state-of-the-art technologies. This will assist in establishing a climate of trust and good will. International and national hunting associations, the Southern African sustainable Use Specialist Group, and government officials from the majority of SADC states recently met in Windhoek on invitation of the Namibian Ministry of Environment and Tourism to discuss the development of best practices for the hunting industry in Southern Africa. In his opening speech at this Workshop the Namibian Deputy Minister for the Ministry of Environment and Tourism made it clear that “the over-commercialization of hunting could potentially breed greed and lead to over-exploitation of the resource.” He further said, “it is crucial that we prevent unwelcome practices such as canned hunting and short-term management techniques where operators offer the entire portfolio of species (often of marginal quality) during a single hunt instead of luring the same client back for follow-up hunts to
find high-quality trophies. [Trophy hunting] is not about making money on the short term at the expense of conservation. It is about a superior product offered in a sustainable manner at a quality-related price to a deserving client.”

Officials from Botswana and BWMA participated in this workshop and clearly showed commitment towards achieving solutions.

VOL 6/2 (2008)
HYENAS AND LION INTERACTION

High hyena densities do not have a negative impact on lion densities. The idea has been around for a while, first suggested in a paper by Susan Cooper and then immortalized in Derek Joubert’s films about the “eternal enemies”! Honer et al followed with a speculative paper.

Craig Packer of the University of Minnesota and Bernard Kissui looked for evidence whether hyena densities have any measurable impact on lion population densities in the Ngorongoro Crater. Their findings were published by the Royal Society in 2004 in a paper titled “Top-down population regulation of a top predator: lions in the Ngorongoro Crater” (click the link for the complete pdf file). This paper summarizes what is actually known about lions vs. hyenas in the Crater, and there was no effect of hyena densities on lion food intake or lion recruitment rate.

Packer stated recently that since publishing the paper in 2004 his team has able to examine Honer et al.’s population data for the Crater hyenas, and there is no effect of hyena abundance on lion abundance. Coexistence between lions and hyenas derives partly from the fact that lions primarily catch adult prey while hyenas are more likely to catch calves—a classic form of niche partitioning.

ZAMBIA LION PROJECT: WISH LIST FOR 2008
Dr. Paula White

The results from the lion trophies (left and right teeth to test the aging methods) sampled by the Zambia Lion Project for the 2007 season are interesting:

Tooth X-Rays

For each individual tooth an x-ray was made and assigned to an age category of either subadult, full adult, or old adult. Left and right teeth from the same lions were compared. In every comparison, the lefts were aged the same as the rights. That means that it does not matter whether the left or right tooth is provided for x-ray aging—The results will be the same. That is good news, and means that from now on only one tooth need be provided.

Subsequently the age category was compared to the lion’s photograph. The process of working on quantifying visual characteristics as seen in the photos with the x-rays is ongoing, but in general, x-ray age was consistent with the photos—i.e., lions with smooth, clean faces tended to be younger (tooth pulp cavity larger), and lions with dull, broad, scarred faces were older (tooth pulp cavity very small).

Tooth Cementum Ring Counts

The teeth were then sent to the lab to count the rings. The goal here was to age each lion in years, similar to counting the rings of a tree. However, the results were very different from the x-ray comparison. In fact, in almost every case, left and right teeth from the same lions gave different
ages. For example, a left tooth might give an age of 4 years, while a right tooth from the same lion might give an age of 5 or 6 years. Unfortunately, this means that tooth ring counts are not going to provide the exact ages of lions as was hoped for. There is still good news from these results, however, because these differences have now been documented scientifically – thanks to the efforts of the hunting community in Zambia and their help in obtaining samples.

Unfortunately, there is no way to know which (if either) of the teeth is giving a correct age. That is disappointing, but the fact that the method does not work is important and highly valuable information.

Wish List 2008

There remains some skepticism that Zambian lions – in particular the ‘mohawk’ maned ones – are indeed old males. Because we cannot count on tooth rings to verify lion age, it is imperative that we get MORE PHOTOS of each lion taken as trophies during the 2008 season. So, in addition to the profile trophy shot and mane view that has been provided, pictures of the lion’s teeth to show wear & color, and their faces/heads/ears to show scars, nicks, and other ‘wear & tear’ typically associated with age are essential. Some of the outfitters in Zambia have provided excellent photos of the bony backbones, baggy bodies, etc. In general, any feature that is used to determine that a given trophy was ‘old’ should be photographed!

It is appreciated that things get very hectic once a lion is shot, and the field staff may have many other things to take care of quickly. Therefore, it will probably be easiest to photograph the teeth after the lion is skinned out. That way the tongue can be removed, the teeth rinsed of blood and dirt, and the jaw held open to show the front and back teeth color and wear. Don’t worry how grisly the pictures appear – a freshly skinned skull is fine. It is tooth detail that is important. Please be aware that the cleaning process for export removes a lot of the teeth’s natural color. Therefore it is best to photograph teeth BEFORE soaking or boiling the skull. Otherwise, the teeth will look whiter – and younger – than they really are.

Although these results mentioned above were unexpected, the goal for Zambian lion hunting has not changed: it is to establish some standards by which potential trophies can be visually assessed prior to being harvested, in order that older lions are selected.

By photographing tooth wear and color and other indicators of age like facial scars, and comparing them to tooth x-rays, we can provide evidence that Zambia’s trophy lions are of harvestable age regardless of (in some instances) their mane development.

Finally, a note on the genetic work. A new laboratory will soon be completing the analysis of the dried hide samples that have been providing and results will be available early in 2009.

In summary: For each lion trophy taken in Zambia during the 2008 season, Outfitters should provide the following:

- 1st small tooth in upper jaw behind the canine from either the left or right side
- Small piece of dried hide
- Photographs of the trophy lion showing profile, mane, nose
- Photographs of trophy lion teeth/skull showing tooth color & wear
- Any other trophy photos that indicate advanced age (face scars, etc.)
- Confidential Information about hunt: Date, GMA, location, PH, client name

My sincerest thanks to those safari companies, outfitters and hunters who lend their continued cooperation and support.

Dr. Paula A. White, Director, Zambia Lion Project Center for Tropical Research, University of California Los Angeles USA E-mail: paw@carnivoreconservation.com
Experts are meeting in Windhoek to map out a strategy that will guide Lion Conservation in Namibia. The lion in Namibia is not only the country’s most threatened and endangered species, but also one of the most vulnerable large mammals. Namibia is required to develop a strategy like other lion range states. The strategies follow a debate to restrict trade in trophies at the CITES Conference of Parties 13 held in Bangkok four years ago, which highlighted the need for a pan-African consensus on the way forward for lion conservation. Rangeland states agreed to hold workshops, which would develop lion conservation strategies.

Strategies are currently being developed in Mozambique, Zambia and Namibia, while Zimbabwe already has a strategy in place. The workshop is the first step towards developing management strategies that ensure long-term lion populations and improve sharing of benefits derived from lions.

Director of Scientific Services in the Ministry of Environment and Tourism, Fanuel Demas, said the workshop was long overdue because Namibia is one of the African Lion range states with significant lion populations. It is estimated that Namibia had between 560 and 890 lions between 1999 and 2004. Demas, who was speaking on behalf of the permanent secretary, Dr Kalumbi Shangula, said lions are indispensable assets, which contribute to the country’s economy. “The strategic goal is further to recognize lion potential for providing substantial social, cultural, ecological and economic benefits,” said Demas.

Apart from attracting tourists, lions prey on domestic livestock and cause economic and human life losses. The need for strategies resulted from a proposal from Kenya and Mali, who wanted the lion to be transferred from CITES Appendix 2 to Appendix 1 because of the decrease in the lion population over the years but Namibia and South Africa were opposed to the proposal because of the long-term negative effects it would have on local communities such as increased human-lion conflict. According to Demas, lion mortalities in Namibia are as a result of social conflicts, shooting especially on sub-adults, natural mortalities such as drought and killings by other prides.

A study carried out in the Kunene Region noted that survival rate was high for the 1 to 4-year age group. The 3 to 4-year age group had a higher risk of dying because they were involved in the human-lion conflict, while those between four and 16 years were wiser and avoided conflict. Although statistics are that 25 lions per year are killed along the southern boundary of the Etosha National Park, a farmer farming in the area said many farmers do not report lion kills. The farmer said most lions being killed were sub-adults because they were pushed away due to their being problematic.

The two-day workshop has brought together representatives of the farmers’ unions, wildlife foundations, lion researchers, conservancies, game farms, non-governmental organizations dealing with conservation and professional hunters.

There can be no pretense to save African lion without adoption of national action plans. Hunters should rightfully have a seat in the workshops to develop those plans and be partners in
their implementation. The campaign to complete those action plans in all four regions of Africa announced in the November *World Conservation Bulletin* has not fared well. Although action plans are finally being adopted over much of Southern and Eastern Africa (at least in draft form), not one has been even drafted in Central or Western Africa. That is a big enough hole to sink the whole ship at the next CITES Conference of the Parties, CoP 15, next January, 2010. Worse, the non-consumptive action plan adopted by Kenya (apparently the very first plan drafted) is being touted as the model to follow in critical countries.

The necessary field studies in Central and Western Africa had to commence in the January-February dry season else they could not be completed this year. Had we not commenced those field studies and instigated others, the hunting community would be going into the next CITES CoP with too little product after the time span of two CoPs.

A month late, in the last drop-dead point in time in the last week of January, Conservation Force resorted to pleading and begging. Five lion conservation heroes from the safari hunting industry reached into their pockets and wired sixty-thousand ($60,000.00) dollars to Conservation Force. Imagine this in light of the state of the economy! The heroes in the order they donated are Eric Pasanisi for Tanganyika Safaris in the amount of $20,000.00, Michel Mantheakis for Miombo Safaris in the amount of $10,000.00, Danny McCallum for Danny McCallum Safaris Tanzania in the amount of $10,000.00, and Raoul Ramoni in the amount of $15,000.00.

We were still $5,000.00 short to commence the fieldwork in at least three of the four chosen countries. The International Professional Hunters Association, IPHA, came through with that $5,000.00 after only days before providing Conservation Force with its annual $5,000.00 supporting contribution for necessary operating/survival costs. That extra $5,000.00 left IPHA practically no balance in their own operating account! These leaders and stewards of the hunting world reacted!

Within 24 hours the directors of wildlife of the respective countries and lion authorities were informed and the work was initiated. The groundwork had months before been approved by the respective wildlife authorities, but everyone including them had nearly given up as Kenya and protectionists started filling the vacuum.

Now we are getting worried as we have launched the whole project, have hired the experts and vehicles in three countries and will need at least $200,000.00 more by April. Approximately $40,000.00 more has come in or is promised in sums of $50.00 to $5,000.00. Conservation Force has taken nothing for itself, no out-of-pocket costs, no fees, nothing. This is a true crisis that must be addressed. In these lean times it must be done purposefully and smartly.

The lion authorities and conservation community have taken note of the extreme effort and importance of the initiative. The recognition of the safari hunting industry is having a positive effect that may save more than the African lion. If this was not such a serious crisis, it could be seen as an opportunity to demonstrate the caring role of the hunter. We thank you all so very much. You are indeed the heroes of African lion conservation!

**G DAMM’S EDITOR’S NOTES (EXTRACTS)**

Proper and sustainable "real hunting" is an essential part of the future of wildlife conservation in Africa. Especially of lion conservation, since the King of Beasts often lives outside formally protected areas. Hunting and hunting dollars can and will save the wild lion of Africa – most lion scientists of renown have stated this repeatedly. It is, therefore, quite unbelievable that Prof. Craig Packer seems now hell-bent on pushing the global community towards putting lion on CITES Appendix 1. It will kill the goose which laid the golden eggs. Where would funding come from for lion research and its conservation in those areas, which are not formally protected, if the USF&WS list
the African lion on ESA? Will Professor Packer rather see his precious lion speared, poisoned or snared by self-defending locals, who risk life, limb and cattle living with lions and are disenfranchised from any economic benefits, if the protectionists have their way? Wild animals, especially those who occasionally eat people and often eat cattle, will not survive without benefit given to and value believed in by the people who live around them (see also News from Africa – Mozambique on page 15 and Niassa Carnivore Project on Page 8).

Of course the legal and moral obligations of the safari outfitters and hunting tourist who search for Africa’s wild lion need to come into play here. Many of them have heeded the proposed restrictions on minimum age and avoidance of hunting prime males in pride situations. Others – usually fly-by-nights – have not. The latter ones are those in Professor Packer’s sights, but the professor would achieve his objectives easier, if he would cooperate with the professional hunting associations in Botswana, Mozambique, Tanzania, Zambia, Zimbabwe, with people like John Jackson III of Conservation Force, with the CIC (see Long Term Conservation of the African Lion – page 14), instead of pushing them into a corner.

Hunters raised hundreds of thousands of dollars in a few months this year for the lion range states to conduct their CITES recommended national lion studies and develop national lion management plans. Not one of these projects would have been possible without the hunter-dollar and John Jackson’s ingenious capability to make international hunters accept their conservation responsibility. Human population growth is accelerating the pressures on Africa’s wildlife including the lion. It is time that protectionists re-evaluate their standpoint and accept controlled trophy hunting as essential to wildlife conservation in general and the continued well-being of wild African lion populations in particular. If not for the sake of the hunters, then for the sake of wildlife and habitat conservation. We can live with that!

VOL 7/4 (2009)
LONG-TERM CONSERVATION OF THE AFRICAN LION
CIC Recommendation from the General Assembly in Paris

RECOMMENDATION CICGA56.REC03

KNOWING and CARING FOR the magnificent African lion;
CONCERNED, as the principle stakeholders, about the challenges of conserving the African Lion in the developing world;
MINDFUL OF the recommendations of the regional strategies arising from CITES that there will be national Action Plans for the conservation of the African lion;
AWARE OF the increasing difficulties for conserving lions due to human-lion conflicts;
CARING for the lions and all that they add to the nature experience and biodiversity;
RECOGNIZING the role and responsibility of sustainable hunting in maintaining large tracts of natural habitats outside National Parks and conserving biodiversity as a whole in these areas, including large predators and their prey basis:

The 56th CIC General Assembly in Paris from 30 April to 2 May

ENCOURAGES every Lion Range State to adopt its own national action plan for the conservation of the lion as suggested in the regional strategies with the cooperative help of international hunting community;

URGES the hunting community to support the Lion Range States in their efforts to adopt and implement their national actions plans for the conservation of the lion;

REQUESTS the hunting professionals to recognize and apply the best practices in sustainable hunting of the lion;
RECOGNIZES sustainable hunting programs for lions, such as the Niassa National Reserve, Mozambique (recipient of the 2008 CIC Markhor Award), for their accomplishments; and

CALLS ON others to follow these examples.

VOL 8/2 (2010)
MANAGING THE CONFLICTS BETWEEN PEOPLE AND LION


Introduction by Philippe Chardonnet

Not long ago, when large mammals harmed people we talked of accidents; when they damaged people’s assets we referred to incidents. Nowadays, human/wildlife conflicts are regarded as common occurrences. It seems that what were once considered exceptional or abnormal events have become normal or usual. Whether this is a result of higher frequency and amplitude is not clear, because we do not have reliable statistics to make accurate comparisons.

Similarly, human-eating and livestock-raiding lions might be seen as normal lions expressing their carnivorous nature in particular circumstances. Contemporary lions are not wilder or crueler or more dangerous than before: it is just that these particular circumstances seem to be recorded more frequently.

Also, communication is now instant and universal: news of a casualty in a remote wilderness can be reported at once on the internet, spreading the information worldwide. Furthermore, a problem lion seems to have a greater psychological impact than a problem crocodile: a crocodile victim disappears, but a lion victim is more likely to be noticed; also, according to B. Soto, a lion incident might be perceived as an intrusion into the human environment, whereas a crocodile incident might be viewed as a human intrusion into the crocodile environment. The result is that the lion might be regarded as more at fault than the crocodile, even though the consequences are the same.

In any case, the interface between humans and wildlife is increasing: growing human population and encroachment into lion habitat have simply augmented the incidence of contact between people and lions. Similarly, the harvesting of wildlife has increased, leaving less natural prey for lions.

Obviously, the probability of clashes between people and lions now tends to be higher. Long established traditional ways of deterring fierce, fully-grown lions might become partly ineffective, and lethal methods are not always acceptable by modern standards. Triggers for human eaters and cattle raiders are being investigated, and knowledge of behavioral factors is improving.

New methods to protect people and livestock from lions are being tested in a number of risk situations; these methods are also designed to conserve the lion itself from eradication over its natural range.

Conservation of the lion is now a topical concern because our ancestors, the hunted humans (Ehrenreich, 1999) of the past who were chased by predators have become hunting humans and predators themselves. Interestingly, this study was undertaken during a period of rising general interest in conservation of the lion. Two regional strategies for the conservation of the African lion
have been developed under the auspices of the Cat Specialist Group of the World Conservation Union/Species Survival Commission, one for West and Central Africa, the other for Eastern and Southern Africa.

And more and more lion-range states are developing national action plans. This provides evidence of the effort invested in tackling the diverse issues related to lion conservation. By focusing on the human/lion interactions, the present study is complementary to the work of the World Conservation Union.

This study also echoes the dynamic forum facilitated by the African Lion Working Group.2 We hope that this review will contribute to the challenge of long-term conservation of the African lion. Success will be attained when the lion changes from being perceived as vermin or a pest to being regarded as a wealth or an asset.

You can downloaded this 66-page paper at http://www.africanindaba.co.za/news.htm

VOL 8/4+5 (2010)
CONSERVATION STATUS OF THE LION IN MOZAMBIQUE
Philippe Chardonnet, Pascal Méochina, Pierre-Cyril Renaud, Carlos Bento, Domingo Conjo, Allessandro Fusari, Colleen Begg, Marcelino Foloma and Francisco Pariela

Supported by: DNAC/MITUR & DNTF/MINAG
Funded by: SCI Foundation, Campfire Association, DNAC/MITUR and IGF Foundation

Abstract
The IUCN-SSC organized two regional workshops, one for West and Central Africa (2005) and one for Eastern and Southern Africa (2006), with the intention to gather major stakeholders and to produce regional conservation strategies for the lion. Mozambican authorities, together with local stakeholders, took part in the regional exercise for establishing the Regional Conservation Strategy for the Lion in Eastern and Southern Africa. They recognized the importance of establishing a National Action Plan for the Lion in Mozambique and realized the lack of comprehensive information for reviewing the lion profile in the country.

A survey has been launched to update the conservation status of the lion in Mozambique. The final report of this survey is expected to become a comprehensive material for submission as a contribution to the forthcoming National Action Plan workshop.

The current report is the final product of the whole survey made in three phases. The methods used are explained and results are provided. A database has been set up to collect and analyze the information available as well as the information generated by specific inquiries. Nine thematic maps have been drawn. The lion range in Mozambique is still quite extensive with a surface ranging between 515,000 and 610,000 km², i. e. 66 to 78 % of the terrestrial surface of the country. An assessment of the lion population size has been attempted with a tentative number of 2,700 individuals in Mozambique at this stage.

The lion appears unevenly distributed although more lion range (71 %) lies in non-gazetted areas outside Protected Areas (named Conservation Areas in this country), a majority of the lion observations come from Protected Areas including National Parks, National reserves, Hunting Blocks, Coutadas (Game Reserves), Community Programs and Fazendas do Bravo (Game Ranches). In line with the regional Lion Conservation Units (LCU), 3 national LCUs are suggested for Mozambique. Human/ lion conflicts are of great concern in this country, especially in northern (Niassa and Cabo Delgado Provinces) and western (Tete Province) Mozambique.
Informal harvesting of lion is not allowed in Mozambique. If practiced it is treated as poaching and subject to fines and penalties as any illegal activity.

Formal harvesting of lion is strictly controlled in Mozambique. Lion hunting is governed by law, mainly the Forestry and Wildlife Law (Law 10/99) and its regulations (Decree 12/2003). According to the forestry and wildlife regulations, the lion is considered a game species, not a protected species.

Lions are hunted in Mozambique through (i) tourism or sport hunting by foreign tourist hunters and (ii) recreational hunting by national citizens. However, lion harvesting is also carried out through Problem Animal Control (PAC) involving problem lions. Lion hunting is only permitted

- In some defined areas: Coutadas (Game Reserves), Hunting Blocks of Niassa NR, Community Based Natural Resources Management Areas (CBNRM programs), fazendas do bravo (Game Ranches) and Multiple Use Areas (under special conditions only).
- During a defined hunting season which is the same as for other game species (from April to September in Multiple Use Areas and from June to November in the other areas).

The annual lion quota is set per hunting season based on rules which determine the quota for each specific areas where hunting is permitted. It is revised annually by the relevant wildlife authority (DNAC/MITUR & DNTF/MINAG) and applies to adult male lions only.

The annual quota is set for two categories of areas

(1) areas mostly used by international tourist hunters
   (i) Coutadas,
   (ii) Hunting Blocks of Niassa NR,
   (iii) areas under CBNRM and
   (iv) fazendas do bravo and

(2) areas only used by Mozambican citizens, i.e. multiple use areas or non-gazetted areas.

Only Mozambicans can hunt lion in these areas (under special conditions only). The lion quota is much lower in open areas compared to the first category of areas, although these areas are larger.

The annual quota is set in a global figure. According to the DNAC, the evolution of the national quota for lion was 52 in 2007, 111 in 2008 and 60 in 2009. However some discrepancies appear between various sources of information. In 2007, the quota was 55 according to safari operators interviewed and 68 according to the DPT in Tete province (as compared to 52 as provided by DNAC).

In 2008, the figure was 106 according to the safari operators interviewed (compared to 111 by DNAC). In 2007 the national quota was divided into 58% (Hunting Areas, n = 30); 13% (Game Ranches, n = 7) and 29% (Non-Gazetted Areas, n = 15). In 2007, the Niassa Province was the province with the highest lion quota representing 39% (n = 20) of the national quota. In all other provinces, the respective lion quotas per province represented less than 15% of the national quota.

The annual lion offtake evolved as follows: In 2007 nine lions, for an overall offtake percentage of 175, according to DNAC; in 2008 fourteen lions, for an overall off-take of 12.6% according to DNAC, SGDRN and safari operators interviewed. Again some discrepancies appear between various sources of information. In 2007 the offtake was 19 lions according to safari operators interviewed (compared to 9 as per DNAC) and in 2008 it stood at 22 lions according to DNTF (as compared to 14 as per DNAC).

The following offtake of lion was observed in 2007: Lion were mainly hunted in Niassa National Reserve Hunting Blocks, where 8 out of the 18 lions on quota were taken (local offtake 44%) against 9 out of 16 in 2006 (56%) (Begg and Begg, 2007). In all the Coutadas only one out of the seven lions on quota was harvested (14%). No lion was reported as harvested in the Tete Community Program area.
**Extract on Discussion of Lion Hunting (pages 49 to 51 of the report)**

The monitoring system to evaluate the offtake of lion (quota utilization) as well as for other species is not well developed and needs to be improved. With a few local exceptions, it remains quite difficult to determine precisely the level of lion offtake in the country. The reporting systems as well as the data collection need also to be improved. Currently there is no standard format for the safari operators’ annual report. And only a percentage of safari operators are used to submit their annual reports to the wildlife authorities.

Quota setting for lion as well as for other game species is done through a procedure of data analysis and consultation that is essentially based on information received from safari operators, provincial directorates for tourism, forestry and wildlife services, previous years quota offtake as well as the safari operators requirement.

With the exception of the study conducted in Niassa NR by SGDRN, very few surveys of the lion populations are carried out in the other regions. In absence of specific lion surveys, a set of indirect criteria can be efficiently used for monitoring the lion conservation status and trend in hunting areas, and for setting quotas, e.g. lion trophy size and trend, lion hunting effort parameters, direct and indirect lion signs and their indices. Participatory methods for setting quotas have been designed and are well known in Southern Africa (WWF 1997, WWF, 2000).

Recent advances suggest that hunting quotas might be replaced by targeted harvests selected upon biological criteria as it is sometimes done for elephants with minimum tusk length and weights or with leopards with minimum length. Whitman et al (2004) developed a model showing that trophy hunting is likely to have minimal impact on the whole lion populations if the offtake is restricted to males older than 6 years, regardless of the level of offtake. The rationale is to let enough time for pride males to produce cubs old enough to become independent (i.e. to escape infanticide) when incoming males coalitions take over the prides. The Niassa NR is already combining the usual quota system with the new method of the minimum age threshold (Begg & Begg, 2009). It may be hypothesized that Mozambican lions have their own ecological and biological features, according to their respective ecosystems and regions, as suggested by the difference between the evaluation of maximal pride sizes conducted during this survey (mean 5 to 8; min 2 to 5, max. 3 to 19) and the value observed in Northern Tanzania (nearly 30) where the Whitman model was developed.

Accurate ageing of live lions is critical for properly applying the minimum age threshold method. Five lion ageing criteria are used by Whitman et al (2004): facial markings, mane development, nose pad pigmentation, leg markings and teeth. Whether the visual standards used in Northern Tanzania to assess the age of live lions at a distance are accurate when applied to other lion populations elsewhere remains questionable.

Preliminary results from the Zambia Lion Project provide growing evidence that neither mane development nor nose pigmentation in Zambia provide reliable ageing criteria in the same way as in Tanzania (White, pers. comm. to the authors). According to Begg (pers. comm. to the authors), the Tanzanian lion ageing criteria seem to apply to the Niassa situation.

Research studies are needed in Mozambique to improve the knowledge of lion ecology and lion ageing, assuming possible regional differences given the size and shape of the country.

The national lion offtake, i.e. the percentage of the national lion quota which is utilized, is surprisingly low (17% in 2007 and 12.6% in 2008). There is one exception in the country with the Niassa NR producing reliable data and decent figures. Some questions may be raised to look for explanations:

Trophy fees for fixed quotas are paid regardless of whether the animal has been hunted or not. This system of fixed fees does not provide any incentive for hunting operators to avoid male lions that are less than 5 years old or that are in breeding prides (with lion cubs less than one year old). This untargeted hunting could result in unsustainable harvest with potential detrimental effect on population genetic and dynamic (Loveridge et al, 2006). Placing lions on optional quota, with fees only paid if animals are shot would help ensuring sustainable offtake.
Official lion hunting by Mozambican citizens remains marginal and insignificant. From 2007 to 2008 no lion hunting license was issued for national hunters to hunt the Multiple Use Areas, which are reserved for Mozambican only. Most national hunters hunt for meat, some as a recreational activity, very few for trophy. The national hunter is looking more at plains game. Also a number of them are scared to hunt dangerous game such as lion. Finally, the cost of hunting big game is much higher than medium or small size game.

Overall, killing of lion by people in Mozambique is by far mostly due to poaching, either unintentional in the quest for bushmeat or intentional for retaliation. The second cause responsible for lion killing by humans is lion PAC operations. Lastly tourism hunting is harvesting a few adult male lion every year. The question remains whether diseases are responsible for lion mortality in the country to what extent and if human activities play a role.

VOL 8/4+5 (2010)
THE ZAMBA LION PROJECT
Dr. Paula A. White

The future of African lion populations – and the desire for continued access to hunt trophy lions for sport – are inexplicably linked in that they share a common goal of long-term conservation of the species in the wild. While controversy persists over the value of sport hunting to conservation, the stark contrast of lion population status in countries such as Zambia (where hunting still exists) versus Kenya (where hunting was banned many years ago) illustrates the benefits of consumptive tourism.

In Zambia’s Game Management Areas, hunting safari operators engage in land stewardship that includes anti-poaching patrols and enforcement against illegal human and livestock encroachment, thereby protecting vast tracts of prime wildlife habitat adjacent to National Parks. In addition, hunting activities distribute crucial income and provide development aid such as bore holes, schools, and clinics to remote villages through local employment and community pledges, respectively.

Economic incentives derived from safari hunting of lions also promote tolerance for villagers to co-exist with large predators that they otherwise seek to destroy as dangerous pests.

In turn, it is the responsibility of the hunting community as well as the wildlife managing authority to ensure that hunting of lions is done in a sustainable fashion. This includes sustainable quotas and age-based selection of older male lions as trophies.

Sound management practices must be built upon a strong, scientific basis and must also constitute practical measures that can realistically be applied in a hunting situation.

Since 2004, the Zambia Lion Project has collected empirical data on African lion populations within Zambia. The goal of the project is to assist Zambia Wildlife Authority in developing and implementing a rigorous, scientifically based management plan of African lion populations in Zambia that includes sustainable trophy hunting. Working in partnership with Zambia Wildlife Authority, and with the kind cooperation of the Professional Hunters Association of Zambia and the Safari Hunters and Operators of Zambia, the Zambia Lion Project collects samples (photographs, tooth, and DNA) on the trophy lions taken each year. In exchange, safari operators are provided with individualized results of their trophies, while an overall summary is presented to the greater hunting community.

In May 2010, the Zambia Lion Project produced a booklet on age-based trophy selection that was distributed to each safari operator in Zambia. Funded by Conservation Force and Safari Club International Foundation, “A Regional Guide to Aging Lions in Zambia” compares physical characteristics (trophy photos) with age criteria (tooth x-rays and tooth wear) for each of 47 trophy lions taken in Zambia between 2006 and 2009. The purpose of the booklet is to inform and elicit
dialogue between clients and professional hunters alike on the topic of lion trophy selection. Presented as a ‘work in progress’, the booklet is intended to generate feedback that, along with trophy data from the 2010 season, will be incorporated into a final version for 2011. Ultimately, the final guide is intended to serve as a practical and informative tool that will assist in age-based trophy selection of Zambia’s lions in the bush. Zambia Lion Project’s research has contributed to Zambia Wildlife Authority’s completion of “Zambia’s Conservation Strategy and Action Plan for the African Lion” which marked an important step forward and helped demonstrate to the international community that Zambia is genuinely committed to lion conservation.

Further aspects of the Zambia Lion Project’s research include field surveys and interviews to determine lion distribution and abundance countrywide, in-depth genetic analysis of Zambia’s lions, and quantification of the socio-economic benefits derived from trophy hunting in Zambia.

For more information on this project, please contact: Dr. Paula A. White, Director, Zambia Lion Project Center for Tropical Research, University of California, USA e-mail: paw@carnivoreconservation.com

VOL 8/6 (2010)
A TOOL FOR LION HUNTERS: THE CONSERVATION FORCE POCKET GUIDE TO AGING LIONS
John J Jackson III

In November, Conservation Force began widely distributing a condensed version of its Guide to Aging Lion in East and Southern Africa. It has been circulated to professional hunters associations, is available on Conservation Force’s website, and freely handed out at meetings and conventions around the world. The free guide is also attached to this African Indaba and can be downloaded free of charge form the African Indaba website at www.africanindaba.co.za. Of course, it is not a substitute for the more complete guide of 46 pages published by Safari Press and also sold by The Hunting Report at a nominal price.

The guide was the work of 12 of the leading lion specialists in the world, while this free guide has been wholly prepared by the leading author of the original, Karyl Whitman, Ph.D., and has been reviewed by Craig Packer, Ph.D.

Hunters are the primary stakeholders in the survival of the African lion, which is seen as intolerable by pastoralists. We are also its stewards. It is necessary and important that we search for and apply suitable practices for this dwindling species.

The limiting of harvest to lion five years of age or older is the new ethic, new definition of a trophy lion, and has the very least biological impact on the respective population. If we are to be good stewards, we must adopt reasonable practices ourselves.

The age ethic is fortified by contemporary lion science. Conservation Force is deeply engaged with the scientific community in the advancement of that science in addition to our leadership in evolving national lion action plans across Africa. I am getting a little leery of “best practices” as being unnecessarily limiting. Nevertheless, this is a better practice, particularly while we endeavor to secure robust lion populations, of which there are too few, and rebuild and restore others. It is probably a necessary, good faith practice if we are to keep lion from being uplisted and continue to play our important role in its conservation. It is still a difficult judgment call in the field, but that is what makes it a true trophy. Keep this guide or print a free color version from Conservation Force’s website. Conservation Force Directors serve on the African Lion Working Group (ALWG) and the Cat Specialist Group of IUCN. Conservation Force has lion research, management
and recovery projects from Danakil, Ethiopia, west to Burkina Faso and throughout all of Africa. Unfortunately, it is not yet enough, but we are in for the long haul to ensure that lions forever roar.

VOL 9/1 (2011)
THE CONSERVATION STATUS OF THE LION IN TANZANIA
Pascal Mésochina, Obed Mbangwa, Philippe Chardon-net, Rose Mosha, Beatrice Mtui, Nowlenn Drouet, William Crosmary and Bernard Kissui

This report was published in June 2010 by the International Foundation for the Management of Wildlife, Paris (IGF) and gives ample information and background about the status of Panthera leo in Tanzania.

From the Abstract:

The IUCN SSC organized two regional workshops, one for West and Central Africa (2005) and one for Eastern and South-ern Africa (2006), to produce regional conservation strategies for the lion. Tanzanian authorities, together with local stakeholders took part in the regional exercise for establishing the Regional Conservation Strategy for the Lion in Eastern and Southern Africa and soon after organized the first national workshop to prepare a National Action Plan for lion and leopard. In 2009 the Tanzanian authorities expressed the will to update the lion pro-file in the country and to hold the second national workshop for finalizing a Lion National Action Plan. The present survey has attempted to update the conservation status of the lion in Tanzania. The final report of this survey is expected to bring comprehensive material for the submission to the forthcoming National Action Plan Workshop. The methods used are explained and results are provided and discussed. A geo-referenced database has been set up to collect and analyze the information available (250 bibliographic references) as well as the information generated by specific inquiries (among 321 informants). Nine thematic maps have been drawn.

The lion range in Tanzania is still extensive with a surface of 750,000 km2, i. e. 92% of the terrestrial surface of the country, of which 335,000 km2 (i. e. 42%) are located inside Protected Areas (National Parks and Hunting Areas). An assessment of the lion population size has been attempted with a tentative figure of 16,800 individuals in Tanzania at this stage, a large majority of them living in Protected Areas (i. e. 80%). Tanzania hosts the largest lion population in Africa and is the first country in terms of lion trophy hunting with around 200 free ranging lions legally harvested per year. This figure remains far smaller than the number of lions illegally killed for various reasons such as ritual killing, snaring for bush-meat, retaliation in reaction to human casualties and livestock losses, etc. Because lions largely range outside protected areas, hu-man lion conflicts are of great concern in this country, especially in central and southern Tanzania. Indeed, illegal killing of lions and habitat loss appear to most informants as the main threats to lion conservation.
Many conservationists, animal-lovers and commentators have applauded the efforts of a consortium of wildlife and animal welfare organizations fighting to add the African lion as an endangered species under U.S. law. If successful, the listing would effectively prohibit American hunters from bringing the skins and skulls of lions back to the United States. It would not prevent hunters going on safari to kill a lion but very few will bother if they cannot bring home some reminder to hang on the wall.

Normally, I would be among those applauding. Shooting a big cat in the name of "sport" nauseates me, and I've spent a career working to conserve the world's great cats. I have logged thousands of hours in their magnificent presence. When I watch a male lion grooming his cubs or see a female leopard haul a car-cass her own weight up a thorn-tree, I am mystified that some people take pleasure in killing their kind with a high-powered rifle. I'm not especially averse to culling -- like all wildlife biologists, my work occasionally necessitates killing animals, such as euthanizing injured wildlife -- but it certainly isn't fun. I simply do not understand what drives a hunter to shoot a creature as magnificent as a lion for a trophy and bragging rights.

Yet I question the effort to list the African lion under the Endangered Species Act (ESA). There is absolutely no doubt that far too many lions are being shot for sport. The process of approving the numbers for hunting (technically, the legal quota that can be exported by hunters) has long been flawed by shoddy science, population estimates little better than guesswork, and relentless lobbying by the hunting industry which is powerful, rich and persuasive. Hunting not only risks taking too many lions but it also disrupts the species' complicated social structure. Prime male lions -- the most sought after trophies -- guard their females from pride take-overs by strange males. Take-overs are catastrophic to lionesses because victorious incoming males kill any cubs belonging to the previous pride males; infanticide hastens the females' return to estrus, giving the new males their own opportunity to sire cubs. It is a natural part of lion society but excessive hunting removes too many males and the essential mantle of protection that allows females to raise a generation of cubs. Between shooting adults and the related loss of cubs, poorly regulated hunting drives lion declines; it is unequivocal.

But that does not mean that all hunting is necessarily bad for lions. Just as strong, empirical science has shown that over-hunting is bad for lions, it also demonstrates that hunting can be sustainable. By setting very conservative quotas and raising age limits to ensure that older male lions are targeted, the worst effects of lion hunting can be mitigated (Packer et.al). There is scant evidence of the hunting industry embracing such measures on its own but the few exceptions -- and they do exist -- show that hunting does not inevitably come with costs to lion numbers.

Indeed, it even has the potential to benefit lions. In Africa, sport hunting is the main revenue earner for huge tracts of wilderness outside national parks and reserves. Many such areas are too remote, undeveloped or disease-ridden for the average tourist, precluding their use for photographic safaris. Hunting survives because hunters are usually more tolerant of hardship, and they pay extraordinary sums - up to US$125,000 - to shoot a male lion. The business requires only a handful of rifle-toting visitors to prosper which, in principle, helps protect those areas. The presence of hunting provides African governments with the economic argument to leave safari blocks as wilderness. Without it, cattle and crops- and the almost complete loss of wildlife they bring- start looking pretty attractive.

Which is why I'm not happy about the ESA petition. If American hunters, by far the largest market for big game safaris in Africa, can no longer hunt, lions and other wildlife will probably lose out. As unpalatable as it may be, until we find alternative mechanisms to generate the hard cash...
required to protect wilderness in Africa, hunting remains the most convincing model for many wild areas.

Let me state it again; I think sport hunting big cats is repellent and I would welcome its demise. But my personal distaste for hunting won’t help lions if shutting it down removes protection from African wilderness. Whatever one’s personal feeling, hunting should be regarded as yet another tool in the arsenal of options we must consider if we are to conserve the lion. Without doubt, the entire process that allows hunting big cats in Africa needs a complete overhaul to purge its widespread excesses and enforce far stricter limits on which lions can be hunted and how many. That would force hunters to produce the conservation benefits of which they constantly boast but only rarely produce. That -- rather than the nuclear option of eliminating hunting -- should be our goal. **Read the Guardian's "African lions under threat from a growing predator: the American hunter" with quotes from Dr. Luke Hunter.**

**Learn what Panthera is doing to conserve Africa's lions through "Project Leonardo"**

**Dr. Luke Hunter** is the Executive Vice President at Panthera, where he oversees the direction and strategy of all of Panthera’s wild cat conservation programs. Hunter has conducted fieldwork on large cats in Africa since 1992. His current projects include assessing the effects of sport hunting and illegal persecution on leopards outside protected areas, developing a conservation strategy for lions across their African range, and the first intensive study of Persian leopards and the last surviving Asiatic cheetahs in Iran. Dr. Hunter has contributed to over 100 scientific papers and popular articles, and has just completed his 6th book -- A Field Guide to Carnivores of the World, to be released September 2011.

Panthera, founded in 2006, is the world’s leading organization devoted exclusively to the conservation of wild cats and their ecosystems. Utilizing the expertise of the world’s premier cat biologists, Panthera develops and implements global conservation strategies for the largest, most imperiled cats - tigers, lions, jaguars and snow leopards. Representing the most comprehensive effort of its kind, Panthera works in partnership with local and international NGOs, scientific institutions, local communicates and governments. Visit us at [www.panthera.org](http://www.panthera.org)

**VOL 9/5 (2011)**

**TROPHY LION GUIDELINES & AGE MINIMUMS – ZAMBIA PROJECT**

Dr. Paula White, Director, Zambia Lion Project, Center for Tropical Research, University of California e-mail: paw@carnivoreconservation.com

As many of you know, Tanzania has recently announced a new regulation that all trophy lions hunted in that country must be a mini-mum of 6 years old. The details of how age will be determined and consequences of shooting underage lions are still being worked out by the Tanzanian authorities, scientists, and safari operators, but there is general agreement that the industry must be pro-active and become more self-policing in the future in order to defend the claim that lion hunting is being conducted on both an ethical and sustainable basis.

Operators in the Niassa area of Northern Mozambique have been participating in an age-based trophy selection program for the past few years. While scientists and hunters alike agree that determining the exact age of a wild lion is not possible, assigning individuals to broader age categories is more straightforward and in Niassa consist of the following:

- 4 years old or less
- between 4 and 6 years old
- 6 years or older
The Niassa system assigns “points” to each trophy based upon the age category into which it falls. Age is determined by combined examination of tooth wear, tooth x-ray, and trophy photographs. The total number of points determines whether or not the quota in a given block will increase, decrease, or stay the same in the next year. Trophy lions deemed to be 4 years of age or less may be confiscated and/or fines imposed. Within the 4-6 years age category, the first lion taken receives a ‘warning’, but if a second lion falls into this category, it results in loss of quota. If all trophies fall into the 6 years or older category, the quota is increased for the next year. While the specifics may vary slightly, it is likely that Tanzania will adopt a program similar to Niassa’s.

Support for age minimums of trophy lions is widespread; Zambia Lion Project has been proposing for several years that a mandatory sampling program be established with minimum target age of 5 years or older. However, given the ever-increasing international pressure to close lion hunting entirely, it would be in Zambia’s best interest to standardize its performance and to strive for a 6 years or older minimum in the near future.

A Regional Guide to Aging Lions in Zambia

Zambia Lion Project appreciates the constructive comments that were received following distribution last year of the first draft of this guide. The goal was to produce an expanded guide (more trophies, with greater detail of the methods used to age trophies) for 2011. Unfortunately, not enough quality photographs were received from the 2010 season to accomplish a revision. With your help, I would like to revise the guide for next year. Therefore, I am kindly requesting your help in obtaining standardized photographs of each trophy lion taken in 2011. Please see the samples of the eight-photo series I require.

The goal of the regional aging guide is to compare a lions’ physical characteristics with the best available age estimates as obtained from tooth x-rays and tooth wear. Standardized photographs are an integral part of improving and updating Zambia’s regional aging guide which in turns allows us to better monitor the progress of the age-based trophy selection program. The continued cooperation of the Zambian hunting fraternity helps to demonstrate the industry’s commitment to ethical and sustainable hunting practices, and on a broader scale, helps to ensure the future of lion hunting in Zambia and beyond.

Zambia Lion Project extends its deepest thanks to the Professional Hunters Association of Zambia for their generous donation from last year’s end of season dinner dance. This level of support means more than words can say. Thanks to all contributors for your kind assistance, cooperation, and support.

Photo 1: Trophy – whole body from the side
Photo 2: Head up – mane on throat and chest

Photo 3: Head down – mane on head and shoulders
Photo 4: Face/Head from above to show shape & scars

Photo 5: Nose – keep in focus!!
Photo 6: Teeth front – at time of hunt to show natural COLOR

Photo 7: Teeth row – skull at eye level
The present efforts by a number of European and US based animal rights’ groups to stop selective and sustainable lion hunting is counterproductive for the survival of these magnificent large cats in the wild.

On a global scale, the lion population has decreased in recent years even though some populations remain in good shape at local level. This decline also affects many national parks. The main reasons are habitat loss, competition with livestock husbandry, revenge killings by livestock herders, and a lack of proper wildlife management by the authorities including anti-poaching. It should be noted that lions have fared much better in a number of gazetted hunting areas where more care is taken in their management and where the proceeds from lion hunting have been effectively used for conservation.

The countries and areas with the lowest conservation status of lions appear to be those without hunting! Two examples:

- Kenya lost most of its lion population since 1977 when hunting was banned. Less than 2,000 are remaining today. Tanzania in contrast has always had lion hunting and today still holds the largest population, with more than 15,000 lions in the wild. Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) should acknowledge and promote the Tanzanian model of lion conservation with sustainable hunting as one of the pillars of lion management.

- In the far-Northern Province of Cameroon, the lion population of Waza National Park is on the verge of extinction where no hunting has taken place for decades in the whole buffer zone and surrounding areas. In the northern Province, far south of Waza National Park, the lion population has been maintained in the whole region, in particular in three National Parks which are surrounded entirely and protected by operational hunting areas that act as
(i) buffer zones against agricultural and pastoral encroachment and
(ii) ecological corridors linking National Parks.

Nowhere has legal lion hunting been the reason for lion populations going extinct. There are
many practical conservation and Governance problems in all lion range states that need to be
resolved. All parties interested in lion survival should cooperate and seek for best lion management
practices instead of fighting ideological battles against the sustainable use of natural resources,
which is one of the pillars of the Convention on Biological Diversity (CBD).

It is symptomatic of animal rights’ organizations to ally themselves with certain wildlife
administrations of a few African states that have no lion hunting and at the same time have a
particularly poor track record in the conservation of lions. The same has happened with the
elephant. The attempt to have lions listed in Annex I at the next CITES Conference of the Parties is
not in line with CITES scientific criteria for up-listing. The objective, rather, is simply to stop lion
hunting. However, this would severely damage lion conservation in those states that retain
significant lion populations.

An Appendix I listing would not, in principle, prohibit hunting. The risk however is that an
import ban on lion trophies would be imposed, resulting in a loss of hunting revenues. Lions breed
fast and hunting them

1) provides a valuable means of using their natural habitats in a sustainable manner and
2) avoids that these wilderness areas be converted to intensive agriculture and mining,
land deprived of biodiversity and other ecosystem services. Well-controlled and
managed hunting generates social, cultural and economic benefits for lion protection.
This creates incentives for communities to protect them and adequate justification for
politicians to resist land encroachment and to maintain or to set aside large tracts of
wild land for biodiversity and ecosystem services.

The tolerance of local communities for these large carnivores, which are often responsible
for the loss of human life and predation of livestock, is indispensable for the survival of lions in the
wild. The use of chemicals to poison lions is on the increase and reprisal killings are much higher
than reported. If rural communities do not see any benefit from this resource, they will destroy it.
Nobody is able to stop them; certainly not cash strapped governmental wildlife administrations.

Living with lions is a cost to rural people – so why should they not benefit? The CIC therefore
encourages not only national governments to maintain or improve local livelihoods through the
sustainable use of species, but also CITES to take into consideration, in the future, rural livelihoods
and poverty reduction through the sustainable use of natural resources. A strategic cooperation
between CITES and the CBD would be beneficial to address this biodiversity-poverty conflict.

It is shameful that animal rightists from developed and relatively wealthy countries
endeavor to deprive poor local communities in African countries to benefit from lions and other
wildlife on their land.

It is regrettable but typical that in their battle against sustainable hunting some animal
rights’ activists resort to a dubious use of literature and misinterpretation of scientific publications. A
particular UK based organization with a strong protectionist agenda has addressed British and EU
parliamentarians in an attempt to convince them that they should advocate banning the import into
the EU of legal lion trophies.

In their blog the organization claims that several publications, which have been co-authored
by a CIC-member and which present a critical analysis of cases of corruption and of hunting
management in need of improvement, allow the conclusion to be made that hunting per se is
detrimental to the well-being of wildlife populations. Quite to the contrary, the authors conclude
that in the case of practical deficits, the solution is reform of the hunting industry. Hunting bans only
deteriorate the situation further. In one of the publications mentioned, the authors explicitly say
that: “without the income generated from tourist hunting, many important wildlife areas would
cease to be viable.” This is quite contrary to what the blog claims.

The CIC is dedicated to sustainable hunting in line with the CBD. Such hunting
is a strong instrument to ensure that large tracts of land are kept under conservation regimes, despite the competition with land uses that have negative environmental impacts;

has conserved wildlife, even if hunting management regimes sometimes needed reform and hunting practices needed improvement.

The CIC promotes a critical analysis and debate on sustainable hunting in order to achieve and safeguard best practices. The CIC would like to see the animal rights’ organizations show the same willingness to critically analyze the results of their protectionist campaigns, which are, more often than not, negative for conservation and wildlife.

At the 59th General Assembly in Cape Town (May 2012) the CIC continued its debate on best practices of hunting and how sustainable hunting in line with the CBD principles can contribute to the survival of Africa’s unique wildlife.

VOL 10/2 (2012)
DNA CONFIRMS GENETICALLY DISTINCT LION POPULATION FOR ETHIOPIA

While it has long been noted that some lions in Ethiopia have a large, dark mane, extending from the head, neck and chest to the belly, as well as being smaller and more compact than other lions, it was not known until now if these lions represent a genetically distinct population. The team of researchers, led by the University of York, UK, and the Max Planck Institute for Evolutionary Anthropology, Germany, has shown that captive lions at the Addis Ababa Zoo in Ethiopia are, in fact, genetically distinct from all lion populations for which comparative data exists, both in Africa and Asia.

The researchers compared DNA samples from 15 Addis Ababa Zoo lions (eight males and seven females) to lion breeds in the wild. The results of the study, which also involved researchers from Leipzig Zoo and the Universities of Durham and Oxford, UK, are published in the European Journal of Wildlife Research. Principal Investigator Professor Michi Hofreiter, of the Department of Biology at the University of York, said: “To our knowledge, the males at Addis Ababa Zoo are the last existing lions to possess this distinctive mane. Both microsatellite and mitochondrial DNA data suggest the zoo lions are genetically distinct from all existing lion populations for which comparative data exist. We therefore believe the Addis Ababa lions should be treated as a distinct conservation management unit and are urging immediate conservation actions, including a captive breeding program, to preserve this unique lion population.”

The lion (Panthera leo) is the principal terrestrial predator in Africa and therefore a key species of the savannah ecosystem. Lion numbers are in serious decline and two significant populations of lion – the North African Barbary lions and the South African Cape lions have already become extinct in the wild.

One of the regions with a declining lion population is Ethiopia. In addition to a few hundred wild lions scattered throughout the country, 20 lions are kept in the Addis Ababa Zoo. These lions belonged to the collection of the late emperor of Ethiopia, Haile Selassie. He established the zoo in 1948 and the seven founder lions (five males and two females) are claimed to have been captured in south-western Ethiopia, although their geographical origin is controversial.

In their study, the team of researchers recommend establishing a captive breeding program as a first step towards conserving this unique lion population. Lead author Susann Bruche, now with Imperial College London, but who conducted the research with the Max Planck Institute for Evolutionary Anthropology, said: “A great amount of genetic diversity in lions has most likely already been lost, largely due to human influences. Every effort should be made to preserve as much of the
lion’s genetic heritage as possible. We hope field surveys will identify wild relatives of the unique Addis Ababa Zoo lions in the future, but conserving the captive population is a crucial first step. Our results show that these zoo lions harbor sufficient genetic diversity to warrant a captive breeding program.

It has previously been suggested that no lions comparable to those at Addis Ababa Zoo still exist in the wild, mainly due to hunting for their mane. However, the researchers say that according to the Ethiopian authorities, lions with a similar appearance to those at Addis Ababa Zoo still exist in the east and north-east of the country, notably in the Babille Elephant Sanctuary near Harar and southwards to Hararghe. These regions, the researchers say, should be prioritized for field surveys. Professor Hofreiter said: “A key question is which wild population did the zoo lions originate from and whether this wild population still exists; this would obviously make it a priority for conservation. What is clear is that these lions did not originate in the zoo, but come from somewhere in the wild - but not from any of the populations for which comparative data is available.”

A genetically distinct lion (*Panthera leo*) population from Ethiopia” *European Journal of Wildlife Research*. www.springerlink.com/content/1612-4642

**VOL 11/1 (2013)**

**THE LION DEBATE – HOW TO PLACE LIONS ON THE ENDANGERED SPECIES LIST**

Lions (and other predators) form a vital component to many of Africa’s natural ecosystems. Their function in structuring ecological systems is through their affect on prey numbers and behavior, both wild and domesticated. As such their presence in an area is deemed to be an indicator of its wild and natural integrity. Lions also play a critical role in the tourism industry, especially in protected areas that depend largely on mass tourism to survive. Protected areas (or national parks) are therefore at the core of conservation efforts to maintain these ecologically functioning populations. But the existing protected areas across Africa are not sufficient to conserve numerically viable populations of lions: it is vital that some conservation activities occur outside of the protected areas.

Some of these areas may border a protected area, or they may be some distance away. Circumstances often dictate that these areas are unsuitable for traditional tourism (access, lack of infrastructure, human populations, livestock, or physical features) and therefore cannot rely on traditional tourism as a primary source of income. To effectively conserve carnivores in this type of environment, especially lions, requires that the local communities residing in these areas perceive that there are tangible incentives and benefits. A variety of approaches are adopted to achieve this: specialist ecotourism, mitigating human – lion conflicts (e.g. building “lion proof bomas for livestock”, “living fences” constructed from thorny vegetation), various compensation schemes to offset livestock deaths from carnivores, law enforcement and the most controversial or all, sport hunting.

Sport hunting has come under attack by activists who claim that hunting adult lions leads to high levels of infanticide that will ultimately cause lions to disappear. Much of this research is based on observations from Serengeti in Tanzania (where there is no sport hunting) and other large protected areas, such as Hwange National Park in Zimbabwe (where lion populations rapidly recovered after a 4-year moratorium was enforced). The demise on the lion populations in these areas is attributed to “sport hunting” and the answer to resolving this issue is to ban sport hunting altogether or at least prevent lion trophies from being imported into the USA.
On the surface, the arguments advanced by the pro-ban fraternity appear to be powerful and convincing. But these arguments tend to gloss over the real issues of carnivore conservation outside of protected areas. They shy away from the facts that the real threat to lion populations is from loss of habitat, disease, conflict with communities that result in poisoning or other forms of retaliatory killings and snaring. They also tend to shy away from explaining the realities of lion biology and the fact that adult male lions will kill, injure and maim both adult males and females irrespective of whether there is sport hunting or not. And they shy away from exposing the fact that uncontrolled and indiscriminate “hunting”, especially of adult females, will result in population crashes.

Sport hunting targets mature adult males, preferably over the age of 5 years. Wild populations of lions residing in areas co-habited by people and livestock have not declined as a result of sport hunting this segment of the population, especially where the hunting industry is well managed and administered, and where communities benefit from this industry. Removing this incentive by enforcing a ban on hunting lions will surely place this important carnivore on the endangered species list.

**VOL 11/1 (2013)**

**DALLAS SAFARI CLUB – DEFINITION OF A HUNTABLE LION.**

More than 70 major safari operators, hunting industry leaders and top conservationists have pledged to support Dallas Safari Club’s (DSC) newly adopted definition of the ideal huntable African lion. The definition reads: “The ideal huntable male lion is at least six years of age and is not known to head a pride or be part of a coalition heading a pride with dependent cubs.” DSC adopted the position as a way to urge hunters to self-impose harvest restrictions. Overharvest of young male lions could reduce lion populations overall, posing a real concern to the conservation and scientific management of this iconic species. Furthermore, such reductions in numbers would lead wildlife authorities to reduce quotas. However, research shows that hunting older male lions has no negative effect on populations. Encouraging lion hunters to be more selective is a DSC conservation move being applauded by biologists and professional hunters across Africa ([http://www.biggame.org/](http://www.biggame.org/)).

**Editors’ Note:** As laudable as this seems, there is an inherent risk with this approach that could result in shutting down lion hunting. Monitoring of age-based wild lion trophy hunting is implemented in the Niassa National Reserve in Mozambique, Tanzania (in the whole country) and Zambia. In all these areas, the so-called “6 year rule” is not applied using only two categories i.e. older than 6 years = accepted, less than 6 years = rejected). The “rule” in fact uses three categories: greater than 6 years = accepted with awards, less than 4 years = rejected with strong penalties and between 4 and 6 years= tolerated with penalties. The word ‘6 year rule’ is therefore misleading since the two category binary mechanism is not applied in reality.

**VOL 11/2 (2013)**

**TANZANIAN DIRECTOR OF WILDLIFE ON LION HUNTING**

"Odd as it may sound American trophy hunters play a critical role in protecting wildlife in Tanzania. The millions of dollars that hunters spend to go on safari here each year help finance the
game reserves, wildlife management areas and conservation efforts in our rapidly growing country," writes the new Tanzanian Director of Wildlife, Prof. Dr. Alexander Songorwa, in "The New York Times". See: http://www.nytimes.com/2013/03/18/opinion/saving-lions-by-killing-them.html?smid=fb-share&_r=1&

**Saving Lions by Killing Them**

**Alexander N. Songorwa**

Odd as it may sound, American trophy hunters play a critical role in protecting wildlife in Tanzania. The millions of dollars that hunters spend to go on safari here each year help finance the game reserves, wildlife management areas and conservation efforts in our rapidly growing country.

This is why we are alarmed that the United States Fish and Wildlife Service is considering listing the African lion as endangered. Doing so would make it illegal for American hunters to bring their trophies home. Those hunters constitute 60 percent of our trophy-hunting market, and losing them would be disastrous to our conservation efforts.

In 2011, five animal-rights and conservation groups petitioned the Fish and Wildlife Service to list the African lion as endangered, arguing that the population had fallen dangerously low because of habitat loss, poaching, commercial hunting and new diseases associated with human encroachment. “The U.S.,” their petition said, “is by far the largest importer of hunting trophies from Tanzania.”

While that is true, the lion population in Tanzania is not endangered. We have an estimated 16,800 lions, perhaps 40 percent of all lions on the continent, the biggest population in the world. Their numbers are stable here, and while our hunting system is not perfect, we have taken aggressive efforts to protect our lions.

Tanzania has regulated hunting for decades; female and younger lions are completely protected, and the hunting of males is limited by quotas set for each hunting area in the country. We recently made it illegal to hunt male lions younger than 6 years old to ensure that reproductively active animals remained with their prides. And proposed amendments to our wildlife law would further crack down on the export of lions taken illegally, penalize hunting companies that violated our rules and reward those that complied.

Africa, of course, is endowed with a tremendous wealth of wildlife, and Tanzania has been particularly blessed. We have roughly 130,000 elephants, two of Africa’s three largest populations of wild dogs, and spectacular landscapes like the Serengeti, Ngorongoro Crater and Mount Kilimanjaro. We have placed nearly a third of our land in national parks, game reserves and wildlife management areas.

Of all the species found here, lions are particularly important because they draw visitors from throughout the world — visitors who support our tourism industry and economy. Many of these visitors only take pictures. But others pay thousands of dollars to pursue lions with rifles and take home trophies from what is often a once-in-a-lifetime hunt. Those hunters spend 10 to 25 times more than regular tourists and travel to (and spend money in) remote areas rarely visited by photographic tourists.

In Tanzania, lions are hunted under a 21-day safari package. Hunters pay $9,800 in government fees for the opportunity. An average of about 200 lions are shot a year, generating about $1,960,000 in revenue. Money is also spent on camp fees, wages, local goods and transportation. And hunters almost always come to hunt more than one species, though the lion is often the most coveted trophy sought. All told, trophy hunting generated roughly $75 million for Tanzania’s economy from 2008 to 2011.

The money helps support 26 game reserves and a growing number of wildlife management areas owned and operated by local communities as well as the building of roads, schools, hospitals and other infrastructure — all of which are important as Tanzania continues to develop as a peaceful and thriving democracy.
If lions are listed by the United States as an endangered species, American hunters may choose to hunt other prized species outside of Africa or simply not hunt at all. This would add further strain to our already limited budgets, undo the progress we’ve made, and undermine our ability to conserve not only our lions but all of our wildlife.

As Tanzania’s highest-ranking wildlife official, I ask on behalf of my country and all of our wildlife: do not list the African lion as endangered. Instead, help us make the most from the revenues we generate. Help us make trophy hunting more sustainable and more valuable. In short, please work with us to conserve wildlife, rather than against us, which only diminishes our capacity to protect Tanzania’s global treasures.

Alexander N. Songorwa is director of wildlife for the Tanzanian Ministry of Natural Resources and Tourism.

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**VOL 12/1 (2014)**

**LIONS APPROACH EXTINCTION IN WEST AFRICA**
Brian Clark Howard, National Geographic, Published January 8, 2014

Lions may soon disappear entirely from West Africa unless conservation efforts improve, a new study predicts. The study, published January 8 in the peer-reviewed scientific journal *PLOS ONE*, presents "sobering results" of a survey that took six years and covered 11 countries.

Lions once ranged from Senegal to Nigeria, a distance of more than 1,500 miles. The new survey found an estimated total of only 250 adult lions occupying less than one percent of that historic range. The lions form four isolated populations: one in Senegal; two in Nigeria; and a fourth on the borders of Benin, Niger, and Burkina Faso. Only that last population has more than 50 lions. Study co-author Philipp Henschel, the Gabon-based survey coordinator for the big cat conservation group Panthera, told National Geographic. "In many countries it was not known that there were no more lions in those areas because there had been no funding to conduct surveys."

The survey covered 21 protected areas in 11 countries in West Africa. All the areas contained suitable intact lion habitat but only four isolated populations were recorded. The study identified the reduction in the lion's historic range as a result of large-scale land use changes as being the major cause that threatens the West African Lion. In addition lions that occur in protected areas have been killed by local people in retaliation to livestock killings, and the poaching of lions' prey to supply local and regional bushmeat markets. Henschel highlights in the report that park authorities in West Africa don’t have the resources to prevent retaliatory killings or poaching. "When we looked at the 21 management areas, we realized that six of them had no operating budget at all, and compared to the big game parks in South and East Africa, they are all understaffed. These 'paper parks' are systematically being stripped by poachers." said Henschel.
Background

The largest terrestrial species in the order Carnivora are wide-ranging and rare because of their positions at the top of food webs. They are some of the world's most admired mammals and, ironically, some of the most imperiled. Most have experienced substantial population declines and range contractions throughout the world during the past two centuries. Because of the high metabolic demands that come with endothermy and large body size, these carnivores often require large prey and expansive habitats. These food requirements and wide-ranging behaviour often bring them into conflict with humans and livestock. This, in addition to human intolerance, renders them vulnerable to extinction. Large carnivores face enormous threats that have caused massive declines in their populations and geographic ranges, including habitat loss and degradation, persecution, utilization, and depletion of prey. We highlight how these threats can affect the conservation status and ecological roles of this planet’s 31 largest carnivores.

Ecologically important carnivores. Seven species of large carnivores with documented ecological effects involving (A) “tri-trophic cascades” from large carnivores to prey to plants, (B) “mesopredator cascades” from large carnivores to meso predators to prey of mesopredators, and (C) both tri-trophic and mesopredator cascades. [Photo credits: sea otter (N. Smith), puma (W. Ripple), lion (K. Abley), leopard (A. Dey), Eurasian lynx (B. Elmhagen), dingo (A. McNab), gray wolf (D. Mclaughlin)]
With ONE MILLION hunter-raised dollars in the bank, one strategic plan to ensure the conservation of the African lion, and just one year; Safari Club International Foundation awaits the first indications of success with its Fighting for Lions Campaign. [The] United States Fish and Wildlife Service (FWS) will announce what protection status, if any, should be assigned to the African lion under the Endangered Species Act (ESA). Anti-hunting organizations have petitioned the FWS to list African lions as endangered, and through a set procedure, the government must consider the ESA petition within a limited time frame. If [listed] as endangered, the U.S. market is closed to lion hunting causing a cascade of problems.

An endangered listing would essentially mean a total loss of U.S. citizen participation in lion hunting. International hunters would fill the void, but they would pay less to hunt. This means African lions would lose economic value. There would be an immediate reduction in revenue for private and government run anti-poaching efforts that protect lions, depredation compensation, and contributions to community development. As a result, farmers and ranchers will no longer have any incentive to protect lions: they would kill lions instead to protect their animals and families. Jobs and incomes of local people associated with the hunting industry would be at risk, and at the bottom of the cascade would be the lion. Ironically, lions will suffer most from the very Act that was designed to help conserve them.

For the same reasons, stopping all lion hunting (not just from U.S. hunters), would be devastating for lion conservation. This is the goal of anti-hunting organizations: to end all hunting, everywhere without regard to its positive benefits. They will likely try to reach this goal by proposing to up-list lions to the maximum protection status at the next Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). African lions are presently protected under CITES, but their populations are healthy enough to sustain international trade. If the maximum CITES protection status is decided for lions, many countries would block their citizens from participating in international hunting and trade. The Fighting for Lions Campaign represents the hunting community and gives a voice to those who understand the importance of hunting to lion conservation. The campaign’s three approaches to conserve lions across the entire African continent are:

- Population Research where needed;
- Conservation, which includes human-wildlife conflict and anti-poaching; and
- Outreach and Education.

The campaign brings science to the forefront and communicates that lions are absolutely not on the brink of extinction. In the past year, SCI Foundation has initiated or accomplished the following:

**Population Research:** Census surveys and organized research are of utmost importance to ensure the FWS and CITES have the correct information to make decisions. SCI Foundation has three major lion research projects underway, all of which are designed to improve lion conservation and management.

- **Project 1: Lion aging experiment:** If we can visually age lions in the field to a specific year class, then we can have more control over the harvest. Harvest of old lions is generally accepted as a best practice. SCI Foundation has partnered on a long term aging study that will determine whether it is possible to age lions in field situations, as well as post-harvest, with precision. This is currently a management need, as African countries trial age-based harvest regulations. The research includes lions from Zambia, Tanzania, and South Africa.

- **Project 2: Zambia-wide lion population census:** SCI Foundation is working to build a four-way partnership with Zambia's Wildlife Management Authority, University of Zambia, and Mississippi State University. This multiple-year population census will derive the most
scientifically robust estimate of lions, and include statistical precision. This is a fundamental step to quota setting in Zambia with an anticipated reopening of hunting.

- **Project 3: Study of harvest statistics in lion range states:** SCIF has discovered a discrepancy between African government lion harvest statistics and trade statistics reported in a CITES database. The CITES database is the best information available regarding trade in protected wildlife, including lions. Thus, it is imperative that the database is accurate. Otherwise, analyses using the database to understand lion harvest and trade are inherently flawed.

- **Conservation (Human-Wildlife Conflict and Anti-Poaching):** With population growth, humans and lions increasingly share the same lands resulting in conflicts. Increased agriculture and livestock production replaces the habitat of lions and their prey, exacerbating the problem. The more lions interact with humans, the more common poaching for bush meat and retaliatory killings becomes. By preventing these conflicts, we can help protect African lions from illegal killings. SCI Foundation is in communication with African governments to learn how we can alleviate human-wildlife conflict.

- **On July 1, 2013, President Obama signed an executive order establishing a Presidential Taskforce on Combating Wildlife Trafficking (Taskforce). SCI Foundation is pleased that the administration has taken such a strong step to combat the growing problem of poaching and illegal wildlife trade. The Taskforce will coordinate efforts among federal agencies and work with foreign nations and international bodies to aid in enforcement against crime related to wildlife trafficking. To the best of our ability, SCI Foundation will be involved with the development of recommendations that are implemented by the task force.**

- **During the African Wildlife Consultative Forum (AWCF), hosted by Zambia and SCI Foundation in Livingstone, Zambia, November of 2013, three letters were drafted:**
  - The first letter was to Director Ashe of the FWS asking for his consideration of the African nations represented at AWCF before making any decisions regarding the listing of the African Lion under the Endangered Species Act. All nations represented signed on.
  - The second letter detailed the importance of the African government’s intelligence to the development of strategy with wildlife trafficking and anti-poaching. All nations represented signed on and the letter has since been submitted to the record.
  - The third letter was drafted by the PH Association representatives and expressed their interest to be involved, however possible, with anti-poaching efforts initiated by the Taskforce. Every single PH Association signed onto the letter giving a strong "boots-on-the-ground" voice that hunting in Africa is essential to combating wildlife trafficking. SCI Foundation acted on the 13 PH associations’ behalf and submitted the letter for record.

- **Outreach and Education:** Public opinion impacts regulatory decisions. SCI Foundation has completed public opinion surveys to help explain the impacts of an ESA listing and CITES up-listing to decision makers. Both regulatory mechanisms can have a great influence on hunters investing in the conservation of the African lion. Just like in the U.S., hunting generates conservation revenue in Africa. An Endangered status or up-listing for the African lion will result in major revenue losses for conservation and less protection for African lions in Zambia, Tanzania, and South Africa, among others.

  - In early 2013, SCIF conducted extensive public research on the listing and the proper way to frame the argument to prevent the extinction of the African lion through its listing of endangered under the ESA. Further, SCI Foundation partnered with some of the foremost experts in Washington when it comes to the intricacies of the Endangered Species Act. These experts advised SCIF for the best course of action moving forward through 2014 and beyond.
  - In June of 2013, SCIF participated in an exclusive workshop hosted by the FWS. SCIF Conservation Chair Dr. Al Maki outlined current conservation efforts across the lion’s range and focused on Tanzania’s successful management of the species. All participating biologists were in agreement that the African Lion was NOT "on the brink of extinction."
  - Also in June of 2013, SCIF released "Keeping the Lion’s Share" which counters a "study" issued by the petitioning groups questioning the role of hunters in helping African
communities, and calling for African lions to be listed by the U.S. government as an endangered species. The report points to figures that show the millions of dollars contributed by hunters to African communities dwarf the paltry expenditures by the animal rights groups in sub-Saharan Africa. The report was published by many main stream media outlets such as The Wall Street Journal, Yahoo News, and CNBC.

The first real-world measure for the effectiveness of the Fighting for Lions Campaign starts with the Endangered Species Act. SCI Foundation's efforts with outreach and communication of lion science will be successful if the African lion is not listed as an endangered species. Future measures include CITES recommendations on how lions should be listed by CITES, ground breaking research being used in lion management, and public awareness of the benefits hunting has to lion conservation.

To make a donation to support the Fighting for Lions Campaign, contact Kimberly Byers at KByers@safariclub.org or call (520) 620-1220 Ext. 322. You may also contact your state representative to show your support to the campaign and SCI Foundation's wildlife conservation efforts. For a list of your elected US officials, click here.

VOL 12/2 (2014)
LION NUMBERS COULD IMPROVE WITH NEW SUSTAINABLE HUNTING QUOTAS

"Data-poor management of African lion hunting using a relative index of abundance". Proceedings of the National Academy of Sciences, 16 December 2013. Corresponding author E. J. Milner-Gulland, Imperial College London

Researchers have devised a simple and reliable way to set sustainable quotas for hunting lions, to help lion populations to grow, in a new study. Trophy hunting occurs in 9 of the 28 African countries that have wild populations of lions. Hunting is legal in these countries but quotas are set to restrict the numbers of lions that can be killed.

Whilst such hunting is controversial, evidence suggests that it can help conservation efforts because it generates substantial revenue. Hunters can pay up to US$125,000 to shoot a male lion. This enables governments to leave wilderness areas as habitats for wildlife, rather than turning the land over for other uses such as farming. However, there is much uncertainty over the sustainability of quotas, as conservation authorities lack reliable information on the total number of lions inhabiting their countries. This has contributed to a decline in the number of lions across Africa, from an estimated 100,000 fifty years ago to roughly 30,000 today.

In a new study in the journal Proceedings of the National Academy of Sciences, conservation scientists from Imperial College London and the Universities of Stirling and Cape Town devised a method that should ensure more sustainable hunting quotas. They created an algorithm that uses data about how long it takes to find and shoot a lion in a given area to estimate how many adult males can be hunted, whilst allowing the lion population to grow.

The researchers modelled the effects of introducing their new method for setting hunting quotas in a heavily depleted lion population and found that the number of adult males would grow from around 38 to 100 individuals in 30 years. During the same time, the sustainable quota could increase from 15 to 22 lions, thus benefiting hunters.

Professor E.J. Milner-Gulland, one of the authors of the research from the Department of Life Sciences at Imperial College London, said: "Many people don't feel happy about the idea of hunting animals for sport, especially animals that are as beautiful and impressive as lions. However, in some areas, the money that comes in from hunting is what enables the land to be set aside for wildlife and this provides the lions with a home."
As conservation scientists, we want to ensure that populations of lions can thrive. Our model shows that it is possible for lion numbers to grow even where there is hunting, but this only works if you set quotas for hunting at the right level, and in many places this is not happening at the moment. Our new method for setting quotas relies on information that is easy for governments to get hold of and it should be simple for them to use. It could also be used to set reliable quotas for other animals which are hunted by searching for individuals, such as wild sheep or deer. The next step is for us to test the method in the field and if it proves successful, we hope it can be widely adopted."


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WILL HUNTING SAVE LIONS FROM EXTINCTION?
Andrew Wyatt

African lions are one of the most charismatic species on the planet. Images of the King of the Jungle are etched deeply into our collective conscience. The debate on how best to conserve lions has been stirred anew with a recent Twitter post by Melissa Bachman who killed a “trophy” lion while on safari in Africa. The image of a rifle-toting Bachman posing over the carcass of a dead lion offended activists and animal lovers alike. However, Twitter hype aside, the hunting/conservation of African lions is a controversial topic that begs a thorough understanding of the facts.

In 2011 US Fish & Wildlife Service was petitioned by animal rights activists to add African lions to the Endangered Species list, sharpening the divide of an already philosophically polarized conservation community. Contradicting the underlying premise of the petition, at a recent lion workshop hosted by FWS, three experts on African lions agreed that the lion, in their opinion, is not currently in danger of extinction. The International Union for Conservation of Nature (IUCN), the central body in conservation for the African lion, currently lists lions as “vulnerable” on their Red List of Threatened Species.

All agree that populations of lions have declined significantly. According to a study authored by Professor Stuart Pimm of Duke University in 2012, about 75 percent of Africa’s savannahs and more than two-thirds of the lion population once estimated to live there have disappeared in the last 50 years. There are likely between 32,000 and 35,000 free ranging lions on the African continent today. According to Pimm, “massive land-use change and deforestation, driven by rapid human population growth” is the primary reason for the decline of the lion.

Sixty percent of all lions harvested in Africa are destined for trophy rooms in the United States. Proponents of an Endangered Species listing claim the issue is a “no brainer.” Allowing hunters to harvest lions and export trophies back to the US sends the wrong conservation message. They say lions would be best conserved by blocking access to American hunters, thereby reducing pressure on lion populations. Jeff Flocken of the International Fund for Animal Welfare (IFAW), the group spearheading the petition to list lions on the Endangered Species Act (ESA), wrote, “Why should anyone spend money to protect an animal that a wealthy American can then pay to go kill?” Flocken characterizes his argument as common sense, but acknowledges that, habitat loss and human-lion conflict, not hunting, are the primary causes of the lions’ disappearance from Africa.

It is absolutely essential that local communities identify the presence of lions as a direct benefit to them. Reducing human-lion conflict is critical to conservation success. According to Dennis Ikanda, of the Tanzania Wildlife Research Institute’s Kingupira Research Centre, his country
generated $75 million in lion hunting from 2008 to 2011. Opponents of an Endangered Species listing assert that trophy hunting is the only thing standing between the lions and extinction. Although those claims may seem counter intuitive, the money generated by hunting is being plowed back into the local economy, into conservation measures and into protecting lions from poaching. Hunting advocates say the only chance for survival of the lions is management as a valuable and sustainable natural resource.

Melissa Simpson of SCIF wrote in an opinion piece for National Geographic Society, “If the (FWS) were to take regulatory action and put the African lion on the Endangered Species list, it would be in spite of the overwhelming scientific evidence to the contrary. Such an overreaching decision would deprive the countries that grapple with lion management the resources they need the most. And the most essential resource is money.” Hunting advocates believe that more closely monitored hunting and the millions of dollars injected into management, conservation and the local economy is the best way to conserve lions.

Additionally, proponents of listing insist that adult male lions being harvested are in fact dominant pride males in their breeding prime. They assert that harvesting pride males destroys pride stability by instigating less dominant males to cull the former pride male’s cubs in order to establish themselves, thereby disrupting the natural pride dynamic and throwing breeding cycles into chaos. If this were true, and management practices didn’t focus on males who have passed their prime, then damage to pride stability would be a serious problem.

Hunting advocates have argued that it is irresponsible and unsustainable to harvest pride males in their prime. Responsible game management practices dictate only aging males that have passed their prime and are often alienated from the pride should be harvested. These are males that were possibly once dominant, but have become too old (6+ years) to maintain status within the pride structure. Although the idea of trophy hunting does not enjoy wide popularity, its value as a pragmatic conservation tool has proven to have merit. The questions are, will an Endangered Species listing relieve pressure on lion populations? Or will blocking American hunters from harvesting lions remove economic incentives necessary to protect a valuable resource?

Animal rights advocates dismiss the conservation benefits of hunting. However, a study of trophy hunting by the University of Zimbabwe supports claims of conservation success tied to responsible hunting practices. Peter Lindsey, the lead author of the study, wrote, “trophy hunting is sustainable and low risk if well managed.” Lindsey continued, “Trophy hunting was banned in Kenya in 1977, in Tanzania during 1973–1978, and in Zambia from 2000 through 2003. Each of these bans resulted in an accelerated loss of wildlife due to the removal of incentives for conservation. Avoiding future bans is thus vital for conservation.” When local communities are not incentivized to protect lions they are subsequently killed. To date there appears to be no clear evidence that would support the premise that listing lions as endangered in the USA would inure conservation benefit to lions in Africa; to the contrary, listing could undermine real conservation efforts by diminishing the value of lions to local African communities.

Admittedly, oversight of hunting practices in Africa is not likely to be commensurate to standards in the west anytime soon. Trophy hunting is by no means a perfect solution, but the IUCN Cat Specialists Group says, “Properly managed trophy hunting was viewed as an important solution to long-term lion conservation.” There will always be some abuse from unscrupulous individuals. But the monetary incentive to manage sustainable lion populations for hunting is the only protection lions currently have. Removing economic incentive for Africans to conserve lions has been demonstrated to be counterproductive. Working to improve oversight and lion management should be a priority. Until a better conservation model proves its mettle, responsibly managed hunts are the best chance for lions to survive in Africa.
Trophy hunting and lions inspire extreme opposite reactions. Hunters feel that trophy hunting is essential to conservation or stewardship of wilderness areas; while animal rights people feel that trophy hunting in the name of conservation is a madness that should have been banned long ago. Similarly, lions are either magnificent beasts, the ‘king of the jungle,’ which people are willing to pay substantial amounts to see or shoot; or they are a bane to society killing livestock and people. Occupying the middle ground on trophy hunting and lions can be a lonely place to be.

In 2006, the opportunity to indulge two of my chief interests, namely, lions and sustainable resource use as a tool in conservation, presented itself, and I began a study on lions in Selous Game Reserve, Tanzania (access the completed PhD thesis, submitted in 2010, here). Since 2011, I have been working in Selous GR in various capacities. Over the next few pages, I will summarize some of my PhD study’s key findings and at the end, bring discussions up-to-date.

Lion trophy hunting is very topical at the moment, with diverse interested parties awaiting the decision of the US Fish and Wildlife Service (USFWS) on the listing of lions for import of trophies into the USA. These interested parties range from the government of Tanzania, American hunters, the Tanzanian hunting industry, conservation groups, and animal welfare groups. It is my opinion that well-regulated, managed and transparent trophy hunting has an important role to play in the conservation of wildlife populations and areas in Tanzania. The key question is whether trophy hunting is well regulated, managed and transparent in Tanzania? And if not, what can be done to make it so?

Background to Lions, Conservation, and Hunting in Tanzania

Tanzania has more lions than any other country, supporting between half and a third of the remaining free-ranging wild lion population. Tanzania has achieved this through a sensible approach of pursuing both photographic tourism and hunting tourism, and has to be commended for setting aside so much of its land for wildlife (some 30% of the country). Only some 15% of this wildlife area is reliant on photographic tourism to fund its conservation and protection, the other 85% is reliant on trophy hunting. While photographic tourism can make much more money than hunting tourism per unit area (in some cases up to 40 times as much), you need many more visitors and the infrastructure to support these numbers of visitors. You also need the attractions to bring in the visitors, and much of the more scenic wilderness areas of Tanzania are already set aside for photographic tourism (e.g. Serengeti, Ngorongoro, etc.) – they make more money. Hunting seems a sensible option in areas that are very woody (hard to see animals), have fewer animals, or are too inaccessible.

Hunting in Tanzania is permitted through the issuance of a license by the Director of Wildlife, and a total of 74 species of big game can be hunted by tourists. Hunting areas are divided up into hunting blocks or concessions which are leased to hunting companies who are responsible for organising the hunting safaris and attracting tourists. Each hunting block has a quota of animals that may be hunted. This quota is, in general, set through educated guesswork, but hunting companies still have to achieve 40% of their quotas or face fines and penalties. Much has been written about the negative consequences of infanticide on lion populations if the breeding pride males are constantly removed through trophy hunting, and suggestions have been made to only hunt older males. Such suggestions of only hunting males above six years old would do away with the need for a quota system, but would require the ability to accurately age lions in the field (for more info, see Whitman et al., 2004).
The Selous (SGR) is Africa’s largest and oldest protected area. It is internationally designated as a World Heritage Site and has developed a considerable reputation as a tourist hunting destination. However, two of the SGR’s 47 hunting blocks were set aside for non-consumptive or photographic tourism in the 1960s, and in 2003 two more blocks were added to the photographic area. Currently, the four photographic blocks of SGR comprise 2966 km² or six percent of SGR. Further blocks may be added to the photographic area in the future. The Selous makes a good case study for the future of lion trophy hunting in Tanzania.

Lion Population and Ecology in Selous Game Reserve

Due to difficulties in initially getting permission to work in the hunting areas of Selous, my field research was predominately focused on the photographic area of northern Selous; where intensive searches for lions were conducted between 2006 and 2009 (except during the rainy season of March to May). Over 160 lions were individually recognized, and in August 2012, there were 112 lions in an 800 km² study area, giving a density of 0.14 lions per km², or 1 lion per 7 km². The population in this area had remained relatively constant, as my density estimates were similar to results using the same method from 1997–1999, but the adult sex ratio had decreased from 1 male: 1.3 female in 1997 to 1 male: 3 females in 2009. Such changes in the sex ratio are often indicative of unsustainable male lion trophy hunting, which tie in with recent studies of lion trophy hunting in Tanzania (discussed later).

In 2009, I was given permission to work in the hunting blocks of SGR and using buffalo calf distress calls conducted call-up surveys to census lions in three hunting sectors in the west, east and south of Selous, and in the northern photographic area. Estimated adult lion densities varied from 0.02-0.10 per km², allowing an overall population estimate of 4300 (range: 1700 – 6900). This represents Africa’s biggest lion population (for more info, see Brink et al., 2013).

Lion distribution in the 800 km² study site in northern Selous was best explained by lean or dry season prey biomass. The mean dry season prey biomass for the study site was 1436 kg per km², suggesting a lion carrying capacity for the study site of 164 lions (0.21 lions per km²). However, by another method a carrying capacity of only 104 lions (0.13 lions per km²) was suggested for the same area based on the average number of preferred prey species recorded on prey transects. In August 2009, as mentioned earlier, at least 112 lions were observed in this 800 km² study area, so the observed number of lions was between the two possible carrying capacities. Based on prey transects and field observations of lions on kills, lions in northern Selous showed a preference for buffalo, zebra, giraffe and wildebeest and an avoidance of warthog and impala. However, no relationship was noted between lion distribution and buffalo sightings. Environmental and anthropogenic factors that best explained lion distribution in northern SGR were distance to the reserve boundary and villages and soil type of an area. Understanding lion ecology and the factors that impact lion distribution and population can be useful in setting the lion trophy hunting quota in Selous.

Setting the Lion Trophy Hunting Quota in Selous

The sustainable management of hunting in Selous Game Reserve (SGR) is driven by a quota system, whereby the reserve is divided into 43 hunting blocks and each is allocated a quota of animals to hunt. The lion hunting quota in Tanzania, as mentioned previously, is currently set through educated guesswork. A transparent means of setting quotas for lions in SGR was devised. In particular, three different approaches were used to investigate the sustainability of the lion hunting quota (for a detailed discussion of these three approaches, please see my thesis: pg. 55–78). The most accessible and simplest to implement was an approach based on hunting off-take and quota data. Based on lion off-take data from 1995 to 2008 a reduction to the quota is suggested to one lion per 1000 km². Therefore a block of 2000 km² would get a quota of two lions per year, and a 500 km² block would get a quota of one lion every other year. This approach suggests a lion quota of 46 lions for Selous. The other approaches would suggest a quota of 70 or 88 respectively. All three
approaches showed the need for the lion quota to be reduced from the actual figure of 140 lions in SGR.

The reaction from the various hunting companies to suggestions of a reduced quota has by and large been negative; their objections have focused on three points: i) the quota should not be reduced, as it is rarely met; ii) certain areas have higher densities of lions, and therefore these areas should be allowed to continue to harvest at higher levels; iii) the reduction in off-take has been a result of self-regulation.

The hunting companies argue that they need the high quotas to sell the opportunity to hunt to tourists, and that they do not expect to fill the quota. This is true of many companies, but there are companies that have a quota of four lions, a block of 379 km², and shoot all four lions on their quota. The challenge has always been how to regulate the companies that over harvest their blocks. A reduction of the lion quota to one per 1000 km² would reduce the quota from 499 for the whole of Tanzania (as it was in 2008) to 230, but this would still be higher than the 162 lions hunted in 2008 in Tanzania. What it would mean is that the spread of hunting would be more even (i.e. you would not have areas of over harvesting).

Certain areas have higher densities of lions, and therefore these areas should be allowed to continue to harvest at higher levels; there are blocks harvesting at two or three lions per 1000km² that have not shown a reduction in off-take over time. While this may certainly be true, there have been almost no independent field studies from hunting areas in Tanzania. Conversely, it could be argued that these high levels of off-take have been maintained by increased hunting effort or illegal practices (e.g. hunting at night with spotlight) masking a reduction in the overall population and a sudden decrease in off-take is imminent.

These reductions in off-take have been a result of self-regulation; that is, hunters are showing restraint and only hunting older animals or good trophy animals. While this may be true of several companies, it does not explain why the greatest decrease in lion hunting is seen in areas with the highest hunting pressures (i.e. most lions shot per unit area per year). Nor does it explain the general perception among government officials and professional hunters in SGR that there are fewer lions in 2008 than in the 1990s, nor the fact that under-aged lions are still being shot in Tanzania in 2008. In the next section, I look at one of the major causes of unsustainably high hunting off-take, namely, short-term block leasing or sub-leasing.

The Impact of Short-Term Leasing on Lion Trophy Hunting

Over the last two decades the lion quota in Selous has remained relatively constant and the numbers of tourists visiting Selous for hunting safaris have increased. However, actual lion trophy hunting off-take in Selous peaked in 1998 (115 lions shot) and over the last decade lion trophy hunting has decreased by some 50% to 53 lions hunted in 2008. However, this decrease has not been uniform across the Selous. The blocks in Selous with the highest lion hunting pressure (i.e. the most lions shot per 1000 km² per year) were the blocks that experienced the steepest declines in trophy off-take from 1996 to 2008 and tended to be leased by the same company for less than five years (or sub-leased). This short-termism is driving the over-hunting of lions, leading to declines in the lion population in these hunting blocks. Furthermore, because of Tanzania’s over-reliance on trophy fees (i.e. fees paid for the dead animal) these high pressure hunting blocks brought in the greatest amount of revenue for the government per km² of area. There is a need to move away from the over reliance on trophy fees for government income generation.

There is very little information available on many aspects of the Tanzanian hunting industry. In particular, many of the concessions are leased to local companies that do not have the capacity to market their hunting opportunities, thus leading to a system of subleasing mostly to foreign professional hunters without any residence status in Tanzania. This has implications for revenue collection and long-term utilization of the blocks whereby all parties involved benefit most by maximizing returns over the short term, which is achieved through shooting the most lions over a limited period. In Selous, most of these blocks are on the western side of the reserve.
Hunting companies that retain the same hunting blocks over 20 years take a long-term view over husbanding hunting opportunities in their blocks. This relationship is clearly highlighted by the lion trophy hunting data in my study. It is therefore strongly recommended that blocks should be leased for a minimum of ten years and not the five years as is current practice.

The Future: Lion Trophy Hunting in Tanzania

Till this point, I have largely been focused on sharing the results of my work in Selous from 2006 to 2009, now I would like to discuss what has happened since and look at future opportunities and challenges. On returning to Tanzania in 2011, my focus was very much on continuing to monitor lions in Selous. In particular, to expand monitoring to the hunting areas of Selous using a new cost effective and reliable method based on spoor transects (for more info on the method see, Funston et al., 2010). However, it has proved impossible to get research clearance for the work in the hunting blocks. This work could have been used to allow for a more informed decision in the USFWS listing of the lion. The former Director of Wildlife wrote in the New York Times (March 17, 2013): “I ask on behalf of my country and all of our wildlife: do not list the African lion as endangered. Instead, help us make the most from the revenues we generate. Help us make trophy hunting more sustainable and more valuable. In short, please work with us to conserve wildlife, rather than against us, which only diminishes our capacity to protect Tanzania’s global treasures.” If these sentiments are genuinely held, partnership with international conservation organizations could greatly help Tanzania’s credibility that lion trophy hunting was currently sustainable by allowing these international organizations to assist in field surveys and monitoring of trophy quality prior to export. Many of these necessary changes to lion trophy hunting are not rocket science and are far from new, and recent efforts on trophy assessment and lion aging with IGF Foundation (Fondation Internationale pour la Gestion de la Faune) represent a step in the right direction, but to my mind do not go far enough: lion trophy data should have been made more widely available and organizations with differing viewpoints should be involved.

The adoption of the 1995 Policy and Management Plan for Tourist Hunting (MNRT, 1995), which was accepted by the then Director of Wildlife, but has yet to be implemented, would go some way to making trophy hunting sustainable as it would allocate hunting blocks through market-based competition with a long-term lease, thereby reducing the importance of trophy fees. The 1995 Management Plan focuses on a more equitable distribution of revenue and had six main recommendations:

- The allocation of hunting blocks through a tender system that allows equitable distribution of blocks, without compromising the existing high standards of many outfitters or prejudicing the long-term economic returns from tourist hunting to Tanzania (open allocation);
- The adoption of a fee structure that combines a right to use concession fee paid by the outfitter in return for a long-term lease of that block, and a trophy fee per animal shot (improved fee structure);
- The setting of sustainable hunting quota that promote trophy quality on a scientific basis (sustainable quotas);
- The adoption of codes of conduct by outfitters and the overseeing of examinations for professional hunters that ensure their competence in the practice of hunting and in providing the necessary services to their hunting clients (codes of conduct and professional examinations);
- The sharing of revenues and benefits with rural communities from hunting carried out on their land (community benefit); and
- The reinvestment of part of the funds derived from tourist hunting in the management of game reserves (Game Reserve retention)

It is my opinion that transparent, well-regulated and managed trophy hunting has an important role to play in lion conservation in Tanzania. For lion trophy hunting to be of benefit to
conservation in Tanzania, it has to be sustainable, but more importantly beyond any suspicion of wrong-doing. Regardless of how the USFWS list the lion, those that support lion trophy hunting have to clearly explain how they intend to deal with allegations of unsustainable hunting, corruption, and poor wildlife management practices. Similarly, those that support a ban on lion trophy hunting have to clearly articulate how they intend to fund the conservation of areas currently reliant on trophy hunting, a very substantial area in the Tanzanian context.

Further Information:

*Henry Brink was formerly Principal Investigator on Selous Lion Project and a Project Officer on Frankfurt Zoological Society’s Selous Conservation Project. The views expressed here are the author’s own and do not reflect the opinions of the above organizations.*

**VOL 12/06 (2014)**

**US FISH & WILDLIFE SERVICE: LION NOT AN ENDANGERED SPECIES**
Rolf D Baldus

The U.S. Fish and Wildlife Service (FWS) rejected the claim that the African lion merits listing as an endangered species under the Endangered Species Act. After a long and comprehensive review of the species status, which included information from the foremost lion researchers in the world, the FWS concluded that the African lion simply is not on the brink of extinction and did not merit listing as an endangered species. Nevertheless the lion will be listed as “threatened” due to a rapidly increasing human population in Africa, which leads to habitat loss, loss of prey-base, and increased lion-human conflict, usually in the form of killings in retaliation for lion attacks on livestock. The FWS decided that lion hunting is “not ... a threat to the species at this time,” and that well-managed hunting can provide important conservation benefits for the lion.

This decision is a blow to US anti-hunting organizations which are fighting for an import ban of lion hunting trophies. However, according to Safari Club International eighty percent of US voters agree that while they care about the future of the African lion, there are higher priorities that need to be addressed in the United States. The FWS should focus on those species found here, that the government actually has the ability to manage.

Links for more information:
Service Proposes Endangered Species Act Protection for the African Lion
USFWS Proposed Lion Rule— How Does This Affect Me as a Hunter?
SCI Foundation: In Major Setback for Anti-Hunting Efforts; FWS Rejects Attempts to Stop Lion Hunting
LION HUNT QUOTAS COULD BE GOOD FOR ANIMALS BUT BAD FOR HUMANS

Rosaleen Duffy, Professor of Political Ecology of Development at SOAS, University of London

Criticism of sport hunting nearly always focuses on whether hunting is cruel or not. A good example was provided by the recent controversy surrounding Melissa Bachmann, a keen hunter and television personality who posted a photo of herself with a lion trophy on Facebook. She has been heavily criticized, even threatened for her actions. But there are more interesting and important questions – what does sport hunting lead to? And could limited hunting actually help populations increase? The study Data-poor management of African lion hunting using a relative index of abundance published from researchers at Imperial College London, Stirling and Cape Town Universities uses population models to map the effects of a hunting quota on lion numbers. In its model, the paper found a lion population would rise from 30 to 100 individuals in 30 years. This in turn would allow the quota of lions allowed for hunting to go up from 15 to 22. With hunters prepared to pay US$125,000 to take home a lion trophy, this means the land could be profitable as wild habitat, and hence conserved, rather than turned over to farming.

The idea of setting quotas for sport hunting to increase numbers of lions is anchored to a particular, economic valuation of nature that has become popular. This approach holds that the application of market principles can solve everything from loss of charismatic species such as pandas, rhinos or elephants, to mitigating the effects of climate change. Examples include payments for ecosystem services (PES), or the “natural capital” model, carbon trading, adopt-an-animal schemes, green certification labels, ecotourism and sport hunting.

The potential of a green economy

These are central pillars of the “green economy”, backed by a UNEP report that was discussed center stage at Rio+20 in 2012. The green economy assumes jobs, income and benefits will be developed by encouraging environmentally sustainable behavior. Sport hunting of lions fits right in to this. But for many, placing our trust in the green economy is a worry – it could lead to concentrations of money and power, it might deepen existing inequalities, and there is no guarantee that it will lead to a greener economy in the future.

NGOs such as Born Free Foundation, Humane Society International and International Fund for Animal Welfare have all argued against sport hunting, citing its cruelty and pointing to scandals such as canned hunting. Other conservation NGOs, such as WWF take a less critical view, and do not oppose sport hunting per se, reflecting the long historical relationships between hunting and conservation. This is an important and worthwhile debate, it is one that needs to be had, but it misses a critical point: if we rely on economic incentives to conserve rhino, for example, what happens when those incentives are reduced?

Hunting to save them

South Africa has permitted sport hunting of white rhino since 1968, and it provides some lessons that we need to take seriously. IUCN African Rhino Specialist Group data indicate that that since hunting began the numbers of Southern white rhino have increased from 1,800 to over 20,000. There is no doubt that sport hunting and expansion of rhino numbers occurred simultaneously. But these days most rhino are in private hands because owners have an economic incentive to increase rhino range and numbers: the more rhino they have, the more they can sell to sport hunters. This apparent success story is more complex than it first appears.
The trade in rhino parts (notably rhino horn) is banned under the Convention on the Trade in Endangered Species (CITES), so rhinos can only be “sold” as sport hunting trophies or as a star attraction in safari tourism. As demand for rhino horn grows, the only way of obtaining it is via increasing levels of illegal hunting. As a result, the cost of protecting rhinos has risen, while the revenue from hunting rhinos has stagnated or even fallen. A key threat that rhinos face today is disinvestment by private owners who cannot afford to keep them. This has led to vocal calls to legalize a rhino horn trade to boost incentives for private owners – at the moment in “rational” or market terms, it does not make sense for private owners to continue to pay the considerable costs of their upkeep.

Trophy cash, but for who?

A second critical, but often invisible, concern is that the revenues from sport hunting merely concentrate power and wealth in existing hands. It is common to hear the argument that hunting provides an important source of income and employment for rural communities in poorer parts of the world. It is the case that sport hunting brings jobs for some, and income for some. But the economic benefits are not spread widely, and the profits overwhelmingly go to those able to set up “luxury safari experiences” on private land in the first place – the rich.

Poorer rural communities are relegated to more menial and lower paid tasks – they are the cleaners, cooks, waiters, guides and rangers, and not (with some exceptions) the owners. The narrow focus on jobs and income, the rush to launch new tourism and sport hunting ventures means that often we do not consider other approaches to developing the local economy.

If the objective is solely to increase lion numbers, then yes, sustainable hunting quotas are likely to work, just as they worked for white rhinos. But, with serious concern over social inequality, we should ask whether increasing animal numbers is the only measure we wish to apply.

This article first appeared in “The Conversation – Academic Rigor, Journalistic Flair”

VOL 13/04 (2015)
THE AFTERMATH OF THE NOTORIOUS ZIMBABWEAN LION HUNT
Gerhard R Damm

Journalists from around the globe qualified in environmental matters or not, with or without sound knowledge on wildlife conservation, felt the necessity to chip in with an opinion or an opinionated story on the most notorious lion hunt ever. And so did millions of people on social media, most with scant or no background information on the realities of African wildlife conservation and the daily life of rural people living close to wildlife in Africa.

The story of a lion from Hwange National Park, which was called Cecil by some, galvanized self-proclaimed experts to condemn hunting as cruel and anachronistic.

A few weeks into the furor about this particular lion more reasonable voices surfaced; people with knowledge on African wildlife conservation put forward rational arguments and questioned the knee-jerk reactions and vitriolic comments.

Africans seemed to be quite surprised about the uproar. Zimbabwean citizen Goodwell Nzou wondered in an opinion piece in The New York Times of 5th August “Cecil who? When I turned on the news and discovered that the messages were about a lion killed by an American dentist, the village boy inside me instinctively cheered: One lion fewer to menace families like mine.”

Why is it, that despite of the millions of visitors to national parks, the protected areas are usually running at a loss and have to be subsidized by the taxpayer? And why is it that many remote hunting concessions have well-functioning anti-poaching and community conservation programs in place? Why are places, less scenic and attractive than those of the up-market game lodges in
national parks, still harboring wildlife and have not been converted to agricultural land or livestock grazing grounds? Could it be that hunting, albeit removing a few individuals from locally thriving wildlife populations, provides more attractive returns for the landowners?

Dr. Rosie Cooney answered these questions with an abundant YES. “There is clear and demonstrable evidence that vast areas of private/communally owned land in southern Africa have been restored to wildlife, driven by the income earned from wildlife-based land uses”, Dr. Cooney said, and “on most of that land, tourism is not viable and the biggest earner is hunting.

Dr. Paul Tudor Jones II stated that “hunting generates a significant amount of revenue” and he challenged “those who are bitterly opposed to all forms of hunting, to hark back to E.O. Wilson’s line about a greater independence of thought”. Dr. Jones added “Photographic tourism is great in places where large animals roam and the scenery is spellbinding, but that’s not always the case in Africa”. In places where landscape and wildlife are mundane, trophy hunting is the better land-use option.”

Theodore Roosevelt IV wrote in an article of The Washington Times “For my urban friends in New York, Washington, D.C., and Los Angeles, trophy hunting is inconceivable and signing petitions to ban it seems like the very least they can do. It is the very least, and the very worst”.

And I am quoting in this context Nzou again: “For Zimbabweans, wild animals have near-mystical significance. We belong to clans, and each clan claims an animal totem as its mythological ancestor. Mine is ‘Nzou’, elephant, and by tradition, I can’t eat elephant meat; it would be akin to eating a relative’s flesh. But our respect for these animals has never kept us from hunting them or allowing them to be hunted.”

Human hunters were probably the first to express this deeply rooted empathy and respect for the animals they hunted. Hunting constitutes arguably the oldest human activity and influenced human development, culture, religion and social interactions from the beginnings of human history. The ancient human hunters’ relationship with animals made them create amazingly beautiful paintings and rock carvings of hunting scenes; they also conserved parts like antlers, tusks and horns of the hunted game – apparently without any utilitarian purpose – to memorize the hunt and celebrate the hunted. The earliest surviving hunting trophies, one might say! In these days hunting was essential for survival, but it had already recreational and cultural associations. The hunter-animal relationship was more to than simply killing and eating the prey. And all decent hunters still show a strong and determined empathy and respect toward the animals they hunt – the ancient root of the modern hunters’ concern for conservation.

Nzou’s empathy for lions is apparently limited. He asked “did all those Americans signing petitions understand that lions actually kill people? That all the talk about Cecil being “beloved” or a “local favorite” was media hype? Did Jimmy Kimmel choke up because Cecil was murdered or because he confused him with Simba from The Lion King?” In Nzou’s village in Zimbabwe, surrounded by wildlife conservation areas, “no lion has ever been beloved, or granted an affectionate nickname. They are objects of terror!”

In relation to wildlife viewing tourism Dr. Cooney appropriately asks who earns the returns – and states that such tourism exists only in relatively few areas of some southern and eastern African countries and that the returns primarily flow offshore or to already wealthy elites.

“If sustainable hunting is taken out of the equation on pressure by a well-meaning, but under-informed and emotionally charged public, the sad fact is that most wildlife will be persecuted, shot and driven off these lands, just like they were in all these countries before last century’s wildlife reforms”, Dr. Cooney concluded. Dr. Jones concurred saying that “if the long-term survival of an animal population means the long-term financial sustenance of a community, then that population will likely survive.”

Dr. Jones reasoned that “governments have to justify all land use in economic terms. If hunting is not available to some communities, then their alternative is raising livestock, which takes a heavy toll on land and water resources. So it really does make more sense to lose an individual animal of an individual species now and then rather than risk losing an entire ecosystem.”
Dr. Jones also mentioned that Wilderness Safaris, a leading photo-tourism operator, has a position paper on trophy hunting, stating, in effect, that ecotourism, on its own, cannot ensure the conservation of Africa as a whole and that hunting has been vital in mainstream destinations like Southern Africa and less mainstream destinations like Central African Republic or Burkina Faso.

In South Africa, game ranches literally changed the country’s landscape. In the 1960s there were a mere handful, in 2002 the number had risen to about 5,000. Today, the count is over 12,000 and rising. They generate revenue in various ways, ranging from ecotourism to the sale of live animals, but hunting makes the most money by far.

There are negative developments too, like the highly questionable practice of breeding mutant animals or the enhancement of horn length in ungulates by using specialized feed formula. Notorious is the totally unacceptable breeding of lions for killing by executioners who are unfortunately confounded by the public with hunters. But in general, the development has been good for the ecosystem. Despite the poaching onslaught, South Africa still has an astounding number of black and white rhinos, and the ungulate populations have gone from around half a million animals in 1966 to close to 20 million today. The main driver of this development was hunting, and the huge cash injection through local and visiting hunters.

Stewart Dorrington, a former president of the Professional Hunters’ Association of South Africa and a life-long game rancher, puts it simple: “My hunting price is $2,500 for a kudu, more than 10 times what the meat of one of these antelopes would bring. If you stop hunting, the market is going to change completely; it’ll go to meat value, really; less than 60 cents a pound”. Many scientists agree.

Vernon Booth, a Zimbabwe-based ecologist who has worked in African wildlife management for 30 years, said that “lions were now protected because of the high value attached to them [by hunters]. Locals tolerate them because of the income that trickles down. Without the hunt money, locals would increasingly poison lions, which are considered dangerous to people and livestock. If there is a complete ban on lion hunting, the tolerance levels for lions would just plummet and lions would be exterminated very quickly outside protected areas”. Mr. Booth added that “even though hunting may seem unpalatable to a lot of people around the world, it is actually very, very necessary”.

Mikkel Legarth of the Modisa Wildlife Project in Botswana was very explicit in his talk on “How the ban on lion hunting killed the lions [in Botswana]”. Listen for yourself to Legarth’s presentation when he says that the Botswana lion hunting ban lead to significantly increased numbers of lion killing by cattle ranchers. And Mr. Legarth can certainly not be counted as an avid supporter of hunting – but he is a realist!

Glen Martin, author of Game Changer: Animal Rights and the Fate of Africa’s Wildlife (University of California Press, 2012) quotes from Dr. Richard Leakey’s address to the Strathmore Business School, Nairobi in the California Magazine. The renowned paleoanthropologist said “my friends say we are very concerned that hunting will be reintroduced in Kenya, let me put it to you: hunting has never been stopped in Kenya, and there is more hunting in Kenya today than at any time since independence. (Thousands) of animals are being killed annually with no control. Snaring, poisoning, and shooting are common things. So when you have a fear of debate about hunting, please don’t think there is no hunting. Think of a policy to regulate it, so that we can make it sustainable.”

Most mainstream conservation groups, wildlife management experts and African governments support hunting as one way to conserve wildlife. It is not a contradiction in terms, they contend; hunting is one indispensable sector of a complex economy that has so far proven to be the most effective method of conservation, not only in Africa but around the world.

“There are only two places on the earth where wildlife at a large scale has actually increased in the 20th century, and those are North America and southern Africa where conservation was built around hunting,” said Dr. Cooney. One might add that Europe has its own successful model which has always included hunting – in fact red deer, boar and chamois populations expand so rapidly in
landscapes steeped in deeply rooted hunting traditions that paradoxically the Green parties across Europe today call for ever higher hunting quotas. This does not lack a certain irony! The Spanish ibex populations have risen to record numbers on the Iberian Peninsula because of the cooperation of hunters and landowners with government authorities. And in Asia the once highly endangered markhor has made spectacular comebacks in Pakistan and Tajikistan because of integrating trophy hunting and community interests – as a side effect snow leopard populations also increased.

We all know that there are some major problems with current governance of hunting in Africa. The present systems have its flaws and failures. Better control, more science, more dedicated benefits to local communities and more hunter education are needed. It is upon us that the death of the particular lion in Hwange is converted into a catalyst of such improvement.

But most importantly we should listed to Goodwill Nzou when he says “we Zimbabweans are left shaking our heads, wondering why Americans care more about African animals than about African people … and please, don’t offer me condolences about Cecil unless you’re also willing to offer me condolences for villagers killed or left hungry by his brethren, by political violence, or by hunger.”

VOL 13/04 (2015)
A SELECTION OF READING MATERIAL ON LIONS AND TROPHY HUNTING

Lion hunt quotas could be good for animals but bad for humans The Conversation, South Africa
Another View: Responsible hunting helps save lions Sacramento Bee, USA
In Zimbabwe, We Don’t Cry for Lions The New York Times, USA
Cecil the Lion: Lessons in misplaced outrage The Daily Maverick, South Africa
Dishonest environmental campaigns will harm lions The Daily Maverick, South Africa
Lionizing Cecil Makes Us Feel Good, But a Trophy Hunting Ban Will Accelerate Slaughter California Magazine, USA
Trophy hunting tough to define GreenBayPressGazette, USA
RIP Cecil the lion – what will be his legacy? And who should decide? IIED, United Kingdom
The necessity of hunting The Washington Post, USA
On the Conservation of Trolls Conservation for the 21st Century, United Kingdom
Hunter Defends Big Game Hunting Boston NPR News Station, USA

... AND ONE VERY INTERESTING VIDEO

How the ban on lion hunting killed the lions featuring Mikkel Legarth of Modisa Wildlife Project Botswana

VOL 13/04 (2015)
SHANE MAHONEY ON CECIL THE LION AND TROPHY HUNTING

There’s been a great deal of discussion regarding the Cecil the Lion. What has often been lacking is a balanced approach and more complete treatment of the related issue of trophy hunting. In response, Conservation Visions Inc. has produced a 16 minute film that features wildlife biologist,
conservationist, and CEO of Conservation Visions Inc., Shane Mahoney. Shane reviews the issue, presents the facts as they are known, and provides excellent commentary on the realities of ecosystem and wildlife management, and evidence in support of legal and regulated hunting as a tool for conservation. We believe this is a valuable contribution to the larger, ongoing debate that has stemmed from what has become an international incident and social media tsunami. It was designed to hopefully engender further meaningful discussion amongst the hunting community and the general public.

Here’s a YouTube link to the video: https://www.youtube.com/watch?v=6_WWEo7ofD4

An MP4 download is available at:
https://www.dropbox.com/sh/zaayss0hu3kl45v/AABExloPqtPi7kCVt0ABII6a?dl=0

We encourage you to circulate this short film to your own contacts and throughout your own circles. Rather than being divisive and alarmist, the film identifies the Cecil phenomenon as an opportunity for all people to realize the challenges facing wildlife conservation and the role that hunting can and does play in supporting those. We also ask that you share this video through your social media, and we would encourage you to post it to your website, if you deem that appropriate. Feedback is welcome. Please don’t hesitate to get in touch with Conservation Visions should you have questions, comments, or suggestions. Email: amanda@conservationvisions.com; Web: http://conservationvisions.com/

VOL 13/04 (2015)
LION TROUBLE IN NORTH-WEST NAMIBIA
Helge Denker THE NAMIBIAN

We were lucky. The giraffe was lying right on the track. A large mound of meat silhouetted against yellow grass backlit by the early sun - with the outline of a lion crouched alongside. A male with an impressive mane, appearing almost as large as the body of the giraffe. A once-in-a-lifetime experience for me, after so many years of travels, to see a fresh lion kill at such close range, here, on the fringes of the Namib Desert, in Torra conservancy in the Erongo-Kunene community conservation area. A once-in-a-lifetime experience even for community conservation veteran Garth Owen-Smith, who was accompanying us, who has lived and worked in this area for half a century and knows more about these lions than most; who woke with a start one night while sleeping out in the veld in Kaoko many years ago, to find a lion yanking at his foot. With a shotgun blast over the cat's head, he managed to dissuade it of its intentions. A reminder, as we listened to Owen-Smith's story, that lions do consider humans fair game.

Right now, there are 30 known lions in Torra alone, and over 150 estimated for the northwest. The pride this male belongs to is believed to consist of 14 individuals. The male had obviously brought the young but already huge giraffe down alone, most likely having ambushed it from the cover of a sprawling *boscia* nearby. Now he was protecting his kill until his pride would join him - which by the next morning some of them had: three females with small cubs, which mostly remained hidden somewhere in dense vegetation near their mother.

For a day-and-a-half, we spent many hours with the lions at their kill. They are relatively unbothered by vehicles and gave us a wonderful, intimate encounter.

It is not even one of the tourism concessions that are considered the wildlife strongholds for the area. It is communal farmland. Land where people generate their livelihood from a mixture of livestock herding, the odd patchy garden and wildlife-based ventures.
The fact that the lions are becoming increasingly accustomed to vehicles and people actually poses an additional threat to the local community, who have to live with the predators on a daily basis.

The conservation of these lions is hugely important in the face of rapidly diminishing global lion ranges and numbers. In Namibia, both lion ranges and numbers are expanding, at least for the time being. Current population estimates for the country indicate somewhere between 600 and 800 animals. Yet Owen-Smith is predicting real lion trouble for the north-west, and says actions must be taken now.

He saw lions starving at the end of the drought of the early 1980s, when lion numbers - and drought conditions - were similar to what they are now. Droughts can be a time of plenty for predators, and the poor and patchy rainy seasons of the last years have given many of the lions in the north-west favorable conditions by concentrating game in the few areas were rain has fallen, or by forcing game to use isolated waterholes.

This has led to highly successful lion breeding and unusually large prides. But game dispersal in search of grazing can also work against the lions, as it did in the early ’80s, and will then bring them into increasing conflict with livestock. Today there are significantly more people and their livestock in the north-west than 30 years ago.

As the drought becomes more severe, farmers trying to access the last available grazing are forced to move livestock into areas frequented by lions. “People do not want to hear about lions,” says Vitalis Florry. “The lions have made farmers poor.” Talking with the Torra conservancy field officer (and livestock farmer), it is clear that the trouble is already here, and brewing.

In the last two months, one horse, two cattle, three donkeys and 25 goats have been lost to lions in the conservancy. One of the three lion-proof stock enclosures built with donor funding to solve the problem, was demolished by elephants last year. The other two are working well, but such enclosures are costly to erect and currently provide only localized relief for farmers.

The lions now range across at least 25 conservancies, and the sentiments of local communities in most of these are similar: the costs and dangers of living with lions far outweigh the benefits. “Lion rangers” are being employed in several conservancies to help monitor lion movements, and alert farmers to herd their livestock to safety to avoid conflicts. Ranger salaries are being paid partly by conservancies, partly by tourism operators and partly by NGOs. But the concept is not as simple as it sounds.

Without remote tracking technology, monitoring lion movements in rugged terrain can be near impossible. While about a third of the adult lions have been fitted with transmitters, mostly by Philip ‘Flip’ Stander as part of the Desert Lion Conservation Project, the ‘early warning system’ that the remote tracking could enable is currently not active.

One of the issues is funding. Another is manpower. Stander and his project cannot do that job alone. Conservation NGO Africat has taken this on in some conservancies, but has thus augmented monitoring in only a small portion of lion range. Flip Stander’s focus is research. He has achieved a gargantuan task for lion conservation and is continuing to gather and share an incredible wealth of data. Yet, as Stander’s work has brought international attention to the lions, that attention has also taken him away from his research to create more awareness, most recently by helping to produce another documentary ‘Vanishing Kings’ about his subjects.

But all the desert lion fame alone will not save them. Most of the people living in rural areas, and especially livestock farmers, want to see fewer lions.

Actively zoning core wildlife areas in conservancies helps. But wildlife moves, especially during times of drought. This is marginal wildlife habitat. All game needs to wander and use available resources to stay alive - for lions that includes the odd livestock meal. More must be done to reduce conflicts. But some conflicts will always occur, and these need to be offset by clear and direct returns from lions.

Tourism is part of that long-term solution. Yet current tourism contributions are limited. It is mostly the joint-venture lodges that generate meaningful returns in their areas of operation. Some
operators are still refusing to pay anything. Input from the mobile tourism sector [Editor’s note: mostly 4x4 enthusiast from South Africa, but also from Europe and US] is generally meagre. The TOSCO Trust (Tourism Supporting Conservation) is working hard to change that, and a system of conservation contributions in a few core areas is being tried out. Currently, the claim that tourism returns could fund all conservation initiatives in the north-west is not apparent on the ground.

Trophy hunting is making an important contribution to conservancy income, especially in terms of funding game guard salaries and other running costs. Yet the trophy hunting of lions is extremely controversial. Hunters are accused of always singling out prime males, skewing population demographics and upsetting pride structures.

Desert Lion Conservation Project data shows that significantly more lions are killed by locals than by trophy hunters. Targeted trophy hunting of individual, suitable lions could reduce lion troubles and generate significant conservation revenue. But poor practices by some hunting operators have reinforced the stigma, and around the globe pressure is mounting to ban trophy hunting of lions altogether [Editor’s note: Denker’s article was written before the lions got names].

There is a whole new guard of concerned conservationists fighting the cause of the lions and collecting funds for desert lion conservation. These efforts are making an important difference, especially to lion research, but as long as they remain ad hoc, will only offer short-term relief. If lions are to survive outside national parks for generations to come, more permanent funding streams need to flow directly into conflict mitigation.

Under the Ministry of Environment and Tourism’s Human-Wildlife Self Reliance Scheme, compensation payments for losses are made according to strict conditions. After initial start-up funding from the MET’s Game Products Trust Fund, conservancies now need to pay compensation from own income, reinforcing the importance of generating direct returns from wildlife.

The concept of wildlife incentives is being coordinated by the Natural Resources Working Group of NACSO. The idea includes securing funds from external conservation partners to match tourism operator contributions.

“Funding needs to be used effectively where it is most needed,” says Russell Vinjevold, who coordinates human-wildlife conflict mitigation for Integrated Rural Development and Nature Conservation. “The problem is finding a lasting balance between the aspirations of people and the needs of wildlife.”

Does it all boil down to money? Actually, it all comes down to people and land use. Lions are large and dangerous predators that are difficult to live with. If we want communal farmers to put up with this threat to their livestock and their lives, we need all the innovation we are capable of. We need to stop talking about saving ‘the last of the desert lions’, because we can hardly expect more than 150 lions to coexist with people in the arid north-west.

We need to listen to the people out there and find solutions that will help them live with the lions that are there now.

First published in The Namibian on 2015-06-24

VOL 13/04 (2015)
Cecil-Mania: Setting the Record Straight
Special Report – Conservation Bulletin September 2015 by Conservation Force Staff Attorney Regina Lennox

The death of Cecil the lion has been international news for weeks. Most of the ‘facts’ have been misrepresentations and hyperbole. This is not good for the image of hunting. The media’s naive and uncommon fascination with the story has not helped, and constant re-reporting has allowed the
misinformation to spread unchecked. The habitat, revenue, anti-poaching, and community incentives tourist hunting provides should not be ignored. To that end, in this bulletin we debunk some myths and misinformation about hunting which have been consistently repeated during the “Cecil mania.” The good news is that we have the facts on our side. As a community, we need to correct false impressions and widely share these critical facts. Read more [HERE](#).

**VOL 13/05 (2015)**

**SOME DEVELOPMENTS IN THE ZIMBABWEAN LION CASE**

Compiled by Gerhard R Damm

The case against professional hunter Theo Bronkhorst, who is out on $1,000 bail, should be thrown out of court, his lawyers have argued. Bronkhorst denies any wrongdoing, insisting that he had obtained all the permits required to kill an ageing lion that was outside national park boundaries. His lawyer, Perpetua Dube, told a court in the north-western town of Hwange: “The charge is not clear and the circumstances do not constitute a chargeable offence.” Prosecutor Namatirai Ngwasha said: “We need time to research and make an informed response to the defense’s application,” AFP reported. Regional magistrate Dambudzo Malunga accepted the defense’s court application and remanded the case until 15 October, when she would decide whether Bronkhorst’s trial should go ahead. The owner of the land on which Cecil was killed was listed among five state witnesses in the trial after initially being charged with allowing an illegal hunt.

Bronkhorst was again arrested in September on separate charges of planning to smuggle 29 sable antelopes into South Africa. He was also bailed in that case too, which will be heard separately.

Craig Packer, known worldwide as lion expert, said in an interview with John Vidal of the [Guardian (UK)](https://www.theguardian.com/environment/2015/oct/04/trophy-hunting-lion-conservation-walter-palmer) published on October 4 “Trophy hunting is not inherently damaging to lion populations, provided the hunters take care to let the males mature and wait to harvest them after their cubs are safely reared. The [American] dentist [Walter Palmer] was unlucky and not altogether to blame.”

Packer continued saying “‘Trophy hunters are no angels but they actually control four times as much lion habitat in Africa than is protected in national parks; and 80% of the world’s lions left in the world are in the hunters’ hands. Clients like the dentist are just tourists. They believe whatever they are told. It’s extremely unlikely that [the dentist] knew anything about that particular lion or even how close he was to the national park when he shot it. It’s common practice in Zimbabwe for hunting operators to draw lions out of the parks so their clients can shoot them.”

Wilbur Smith the South African author, who has sold more than 130 million books worldwide, spoke out in support of hunting talking to [Daily Mail, UK](https://www.dailymail.co.uk/news/article-3259735/Wilton-Smith-supports-hunting-dentist-killed-southern-lion.html). He said he believes hunting is the ‘right thing to do’ to aid conservation. Mr. Smith told The Observer: ‘Poor Cecil the lion was 18 years old, losing his teeth and going downhill fast. The American dentist probably did his offspring and his pride a favor.’ The author has often featured big game hunts in his novels, of which he has written more than 36, and once said that the ‘the most effective way to kill any animal is for it to die before it even knows you are there.’ He made his comments regarding Cecil the lion during a promotional tour of his latest book, “Golden Lion”.

David J. Hayes, a distinguished visiting lecturer in law at Stanford Law School, has urged the U.S. government to take action. He said in the [Stanford Daily of September 29](https://teachlaw.stanford.edu/2015/09/29/proper-wildlife-hunting-can-support-conservation-and-african-economies-but-stricter-regulation-is-needed/) that “proper wildlife hunting can support conservation and African economies, but stricter regulation is needed. That regulation could come in the form of a more rigorous review of hunting practices, especially for animal populations that are under stress from poaching, loss of habitat and other challenges.”

And finally, Christopher Clark, a British freelance writer based in Cape Town wrote on September 29th in a [Huffington Pot Blog](https://www.huffingtonpost.com/2015/09/29/cecil-lion-lion-conservation-trophy-hunting-safari_n_8295553.html):

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“Now that the deafening noise around the tragic death of Cecil the Lion has finally subsided, it’s time for some more reasoned debate. Please try to leave your emotions at the door. They are not helping anyone, least of all the wildlife that many of you claim to care so much about. What an insane racket you all made. Let’s reflect a little:

Many of you around the world who apparently abhor the killing of any animal called for the violent death of all trophy hunters. TV presenters broke down in tears, while normally every night they read out the deaths of thousands of people without flinching. Strangely, many of you didn’t seem to have any issue with this. Then some model with big eyebrows who generally doesn’t seem to care much about anything except cocaine and clubbing held a benefit event for lion conservation. Ed Sheeran got a big lion tattoo. And suddenly, all of you were lion experts.

... You need to see that mass bans and boycotts might actually, in some instances at least, cause more damage than good. Let’s take Namibia for example, where local Minister of Environment and Tourism, Pohamba Shifeta, went so far as to say that airlines banning the transport of wildlife trophies would be ‘the end of conservation’ for the country.

... There are certainly some convincing arguments for the positive conservation impact that trophy hunting can have, in theory at least. ... Whatever we might think about the hunters, hunting can be a force for good - both for wildlife and for African people - when and where it is properly, ethically and transparently managed and administered, but that too often the opposite occurs and the industry becomes hampered by bad administration, bad ethics and corruption.”

Vol 14/01 (2016)
Hunters Care For Wildlife
Bernard Lozé, President, International Council for Game and Wildlife Conservation CIC

Editor’s Note: The Dallas Safari Club held its annual Convention and Sporting Expo, “Conservation” in Dallas in January. The DSC Convention unites annually policy makers, international organizations, sporting enthusiasts, entrepreneurs, and industry representatives. Dubbed the “Greatest Hunting Show on the Planet”, the four day event included a packed exhibition hall and exhilarating auctions. Conservationists and hunters from all over the world met for broad-based dialogues on hunting advocacy initiatives and diverse workshops on wildlife conservation and sustainable hunting.

During the exclusive Saturday night Dallas Safari Club Gala Dinner, the International Council for Game and Wildlife Conservation was awarded the prestigious 2015 Peter Hathaway Capstick Hunting Heritage Award. The award recognizes individuals and organizations whose achievements demonstrate a sustained and active contribution to the conservation of wildlife and its habitat. Mrs. Fiona Claire Capstick

Fiona Capstick, Richard Cheatham, Tommy Carruthers and Bernard Lozé
narrated the key objectives and accomplishments of the CIC in a video show. To the rising sounds of trompes de chasse playing the CIC hymn, DSC legend Tommy Caruthers, Capstick Award Committee Chairman Richard Cheatham and Fiona Capstick called CIC President Bernard Lozé to receive the Capstick bronze statue amidst the thundering applause of the audience. Bernard Lozé delivered a notable acceptance speech to a banquet hall packed with guests from around the globe. Here is Bernard’s speech:

This is the first time that the CIC has been publicly recognized on North American soil for our global work to promote wildlife conservation and sustain the diverse hunting heritage. I am proud to note that four of the nine individuals previously recognized with this award are CIC members! The CIC must be doing something right in its mission to promote sustainable hunting to conserve wildlife and wild lands, support communities and preserve our hunting heritage across the globe. In order to achieve these fundamental goals, we need to work together! We also need to include the non-hunting conservationists to conquer the impossible.

Why is the very act of hunting in the crosshairs on the international media stage today? Why does hunting come under fire over moral objections? Why are the contributions of hunting to landscape and wildlife conservation not recognized? This may be our own fault, at least in parts. If we don’t face the present attacks on sustainable hunting together and as a unified group, if we don’t win our case in the court of public opinion, wildlife and habitats will disappear much quicker than anyone has yet predicted. Nobody wants this.

If we are honest with ourselves, we must admit that we struggle to find truly persuasive messages. Our messages focus on species conservation, hunter motivations, hunting systems and methods. We highlight the conservation contributions of hunting on a narrower or wider scale. We dish out a cocktail of ecological, social, and economic facts and beliefs.

These messages are imperative! But the presentation of these messages lacks emotion and fascination, and sometimes clear and hard data. And on occasion, the visual impressions we present are counterproductive! Rarely does our true, but complex message reach the public and policy makers in a concise and understandable form! Especially the urban youth of the 21st century! These young urban people have a resounding voice. Their social media accounts wield tremendous power. Every second, Facebook, twitter hashtags, and Instagram are at their fingertips. They use them to great effect!

What about us? Around the globe are millions of young hunters and millions who are young at heart. We can also create influential information and networking platforms to spread the word about the amazing connection between hunting and landscape conservation. Amongst us and our allies are also skilled and professional communicators who can simplify conservation complexities into a tweet!

The connection between hunting and conservation must come vibrantly alive. Short and concise messages that explain conservation and sustainable use through hunting must flood the net. Our quest is to develop innovative approaches that encourage non-hunters to see us in a positive light! Bottom line: we need to mobilize our ranks, change our approach and meet people on the digital turf.

Let’s follow President Teddy Roosevelt’s advice: “There can be no life without change, and to be afraid of what is different or unfamiliar is to be afraid of life”.

With the prospect of change comes the opportunity to ‘brand’ hunting ... we must disassociate hunting from negativity and social disapproval! Our logos, mission and vision statements show the direction, but we need to step it up. We must promote coherent sets of values and promises which the non-hunter understands and accepts.

There was a time, when hunters were the leaders of broad-based conservation coalitions! Teddy Roosevelt is a proud and shining example of such leadership! Today, like in the times of Roosevelt, we need to cross the aisle and enter into constructive dialogues with non-hunters and develop together win-win outcomes for landscapes, biodiversity and people!
In doing so we don’t sacrifice hunting, we don’t compromise on our values! Using 21st Century communication tools and branding hunting help us to explain, engage and inspire! It’s time that we take up Roosevelt’s challenge! It’s time that we once again lead a broad-based conservation coalition!

- Lead with integrity and empathy ...
- Lead with transparency in our actions ...
- Welcome all those who care for wildlife and help them understand hunting ...
- Help them accept its contribution to conservation, even while they may remain less than totally comfortable about it!

The results will be provocative and intriguing. It will be a powerful new hunting message. After all, what will be more inspiring than the hunting brand that embodies conservation of biodiversity on incredibly vast tracts of land outside protected areas?

I repeat - we need professional help and guidance. We must recruit first class PR advisors and seasoned campaign managers. Let’s fire up the enthusiasm of millions of young hunters and use social media to our advantage. Let’s brand hunting, and let’s engage with the non-hunter.

It always seems impossible until it’s done, said Nelson Mandela, and he achieved the impossible. We hunters also never back down from a challenge. We thrive when things get tough. We are a resilient bunch. We selflessly charge to the forefront to preserve the wild landscapes we love.

Let’s rise to the present challenge in the best traditions of President Teddy Roosevelt, who once said … “People don’t care how much you know until they know how much you care”. Hunters do care for wild landscapes and biodiversity. Let’s prove this to the world!

Editor’s Postscript: The DSC Conservation Convention was an ideal setting for a cocktail reception of the International Council for Game and Wildlife Conservation at the Omni Hotel. The CIC was represented by President Bernard Lozé, President of Honor Dieter Schramm, Vice-President Dr. Kaush Arha, the President of the CIC Applied Science Division Gerhard Damm, and his wife Conny. In front of an illustrious audience of leaders from major US hunting associations the CIC speakers highlighted the four global initiatives of the CIC and showcased CIC achievements. The well attended event offered opportunities to explore cooperation between sustainable use advocacy organizations from both sides of the Atlantic and to introduce the work of the CIC to our North American friends.

Intensive individual discussions concentrated on landscape preservation and wildlife conservation. Gerhard Damm highlighted the need for new alliances and a persuasive new hunting message. A measure of the success of this CIC event is the request of many participants that the CIC presence at the DSC Convention and the North American Conference on Wildlife & Natural Resources is made into regular annual event! This enthusiastic reception of CIC in the United States calls for sustained engagement and follow up.
The thoughts and prayers of the members of the International Council for Game and Wildlife Conservation were with the families who lost loved ones and with the many who suffered wounds during the terrorist bombings in Brussels on March 22nd, 2016. These tragic events and other recent terrorist attacks in France, Syria, Iraq, Pakistan and Turkey unite all people of good will to support the authorities of the civilized nations around the world in their relentless fight against the terrorist scourge.

Our 63rd CIC General Assembly in the heart of Europe honors the victims of the tragic events and serves as a show of strong support for our Belgian hosts.

I extend my warm and heartfelt welcome to our members, distinguished guests and hunters from around the world.

Hunters have historically been the vanguards of wildlife protection and conservation in Europe, Africa, North America, and indeed around the world. Hunters were at the forefront in the creation of most wildlife protection areas and the developing of wildlife laws.

Yet hunting is currently the subject of intense but often ill-informed debate. Those opposing hunting often intentionally conflate legal hunting, poaching and wildlife crime likely to obfuscate people than enlighten them. Anti-use activists used this obfuscation to induce airlines to ban or severely restrict the carriage of legal hunting trophies. Anti-use activists infuse misinformation in their moves at various levels to end or limit hunting, and use it in public smear campaigns of prominent hunters. A group of Members of the European Parliament recently called for the signing of a declaration to ban import of trophies into the European Union.

The honorable MEPs who campaign for signing this declaration apparently did not have access to or chose to ignore significant information and facts about hunting. Did these anti-hunting parliamentarians ever ask themselves as to what inspires people to support conservation?

A 2015 study by researchers at Cornell University published in the Journal of Wildlife Management provides an answer: bird watching and hunting. The contributions of individuals who identified as both bird watchers and hunters were on average about eight times more likely than non-recreationists to engage in conservation. Those who practiced only bird watching were on average five times, and those who practiced solely hunting, four times more likely to engage in conservation. Both bird watchers and hunters were more likely than non-recreationists to enhance land for wildlife, donate to conservation organizations, and advocate for wildlife – all actions that significantly impact conservation success desired by a vast global majority.

In the CIC we have a strong component of members who engage in the conservation of migratory birds – and this engagement is certainly not limited to birds which can be hunted. Our work encompasses all migratory bird species along the aeon-old flyways in the Americas, Eurasia and Africa – and beyond. The CIC has a permanent representative in the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). We work closely with the World Organization on Animal Health (OIE), for example in combatting Avian influenza. Just recently the CIC co-sponsored a

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2 See “Working together for migratory birds and people across Africa and Eurasia” in this issue
motion to prevent electrocution and collision impacts of power infrastructure on birds – with 14 other conservation organizations – to be presented at the World Conservation Congress in Hawai’i.

Show me the hunter who doesn’t marvel at the majestic flight of a Lammergeyer over the highlands of Central Asia whilst hunting the wild sheep and goats. Show me the hunter who does not enjoy the sparkling dive of a kingfisher into the Zambezi River whilst taking a rest under the shadows of mighty Camelthorn trees after an exhausting morning on the track of a bull elephant. Show me the hunter who is not looking towards the skies in awe whenever the trumpeting calls and distinctive flight patterns of migrating cranes catch the ear and eye!

The respected magazine Science Daily said on its website that the findings of the Cornell University study could assuage concerns about diminishing support for conservation in the United States and its historic ties (both socially and economically) to hunting. One take-home message is apparent from the study: The more time we spend in nature, the more likely we are to protect it.

Hunters spend a lot of time in nature – the connectivity with nature, with the regional fauna and flora, but also with fauna and flora of distant lands, is the basis of their passion.

Throughout Europe landowners – communal, state or private – work hand in hand with hunters to preserve or restore habitats; to protect or create living space for wild creatures. Hunters and anglers led the revolution to save wildlife on the North American continent and remain today its most stalwart legion of support; they cooperate with wildlife managers and biologists from federal and state agencies. Hunters and anglers provide most of the wildlife management funding through an intricate excise tax system, hunting licenses and huge private donations channeled through hunting clubs. In southern Africa tourism and trophy hunting are reliable conservation funding sources.

In contrast, the no-hunting model – as practiced for example in Kenya and India, exhibits low performance, since in both countries large wildlife species are in decline. Statistical evidence proves that the no-hunting model is not self-sustaining. Tourism revenues cover only half of the wildlife management cost in these two countries and the balance has to be shouldered by the governments respectively the tax-payer or international donors.

In most of Africa, and Asia the worst threats to habitat and wildlife conservation are rural poverty and lack of knowledge. People, who live in poverty, as many rural Asians and Africans do, care little for wildlife aesthetics. This applies especially to those making a living from their livestock. They cannot afford to lose stock to predators; neither can they afford the competition for grazing associated with large numbers of wild ungulates. They have little in common, if anything at all, with the romantic views of nature of northern hemisphere city dwellers turned anti-use activists.

Rural peoples throughout the two continents have often been relocated, dispossessed of land, or restricted in its use or in the use of wildlife on the land. This limits or eradicates traditional income sources. The real solution to address multi-dimensional poverty is village-based tenure and/or private rights to forests, fish, wildlife coupled with a requirement for democratic process.

The high value of many wild resources gives us a broad range of tools for successful incentive-driven conservation. Science-based programs will make conservation in Africa and Asia – and over large parts of South and Central America – finally independent of the emotional approach and neo-colonial pressure tactics from northern hemisphere protectionists and their conditional funding.

I am the first to admit that weak governance, corruption, lack of transparency, excessive quotas, illegal activities, poor monitoring and other problems plague hunting in a number of regions. The CIC and its partners are active on this front too. We are in constant dialogue with our partner hunting clubs, professional hunting associations, wildlife researchers and managers, and importantly, with the governments of range states, to eradicate unacceptable practices. The European Sustainable Hunting Initiative for Birds was the result of an agreement between BirdLife International and our partner FACE (Federation of Associations for Hunting and Conservation of the

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EU). The European Charter on Hunting and Biodiversity was achieved with important inputs of the CIC. At present we are cooperating with a number of governments on the development of similar frameworks for Africa and Asia. In its work the CIC relies not only on inputs from hunters – our organization counts amongst its leaders as well as amongst its rank and file a good number of non-hunting wildlife experts, scientists and university professors who help the CIC with constructive advice and expertise to take the right decisions.

When hunting – especially trophy hunting - produces a good financial return from a few hunted animals, it allows wildlife populations to be manipulated according to ecological rather than financial needs. This distinction is extremely important.

Prince William made a highly publicized reference to this recently (see the article of Drs. Knight and Emslie, both from the IUCN African Rhino Specialist Group, in this issue of African Indaba).

Good conservation does not stagnate; it produces surpluses – and on finite lands surplus should be used for the good of the people who live with wildlife. Hunting programs are therefore a means to an end. Within these programs animals are harvested at a reasonable rate, not only maintaining trophy quality within healthy populations, but maintaining the populations to which these animals belong and most importantly ensuring that the land will be kept for wildlife. When conservation of animals becomes valuable to people living nearby, those animals are assured respect and their habitat will be protected.

You may have heard it often – but let me point out a salient fact once again: Habitat loss and degradation are the primary drivers of declines in wildlife populations. The disappearance of natural habitat is the principal cause of biological diversity loss at every level — ecosystem, species and genes, all of them. Yet, demographic change of the human population is accelerating and corresponding demands for land for development are increasing fast. They are exacerbating tremendous pressure on wildlife. This is most noticeably in biodiversity-rich parts of the globe.

The need for viable conservation incentives becomes more urgent than ever. Well-regulated sustainable hunting has played, and is playing now and in future, an important role in this conservation game – at local level in front of your house door, or in foreign lands which you visit as a hunting tourist.

Well managed trophy hunting takes place in many parts of the world can and does generate critically needed incentives and revenue for governments, private and community landowners to maintain and restore wild lands and wildlife and to carry out multi-layered conservation actions and anti-poaching interventions. It can return much needed income, jobs, and other important economic and social benefits to indigenous and local communities in places where these benefits are often scarce.

In many parts of the world indigenous and local communities have freely chosen to use trophy hunting as a strategy for conservation of their wildlife and to improve sustainable livelihoods. Look to the Inuit in the Arctic, the community conservancy movement in Namibia, the village conservancies in Tajikistan and Pakistan, and many other shining examples around the world.

Hunting is Conservation – this is what inspires and drives us as members of the CIC and unites us with all hunters and conservationists around the world. Our debates in Brussels will demonstrate our commitment in the pursuit of excellence in hunting!
Well done, Prince William. He is talking sense. As hard as it is to comprehend that killing animals can be integral to their survival, the fact remains: without trophy hunting, many of Africa’s iconic species would be worse off.

In South Africa and Namibia hunting has played a role in the significant expansion of wildlife outside Parks. Limited hunting has been credited with helping to encourage the increase in southern white rhino range and numbers. When hunting started in 1968 there were only 1,800, but today there are over 19,230 white rhino in South Africa and Namibia which annually hunt small numbers of white and black rhino, and which currently conserve 94.4% of the species. A third of white rhinos in South Africa are now conserved on private and community land outside state parks. Numbers of black rhino have also increased by 52% in these two countries (up to 3,840) since the approval of small annual hunting quotas.

The reasons for this are manifold. Healthy game populations, tourism spectacles and lodges don’t just fall out of the sky at no cost. Hunting can help generate the cash flow to help pay for protection, growing game numbers and building tourism infrastructure. Hunters also venture to the remotest areas or ones without spectacular scenery. Here closely regulated, ethical hunting can provide livelihoods and a good revenue stream – and importantly an incentive to maintain wildlife – for people living outside the tourism trail. In other words, hunting gives wildlife value for those who live in it. By contrast wildlife numbers outside parks have declined in Kenya since it banned hunting.

A South African private reserve, which can’t be named for security reasons, provides an illustrative case study. Like many reserves, it receives no government grant and its conservation efforts have to be self-funded. This reserve has been a conservation success story with strong growth in numbers of many species over the years including white rhino and elephant. Hunting of small numbers of big game has been absolutely integral to its success by contributing the most towards funding its conservation efforts. From 2000-2010, limited big game hunting contributed over three times more income than tourism to fund protection and conservation efforts.

The reserve has a policy that all proceeds from rhino hunting must be spent on rhino conservation. For example, the killing of two old white rhino in 2012 paid for 49% of a $377,000 high tech security fence upgrade along a vulnerable border. Now, when there is a breach, anti-poaching units are alerted and rapidly deployed greatly enhancing the security of rhinos in the reserve.

As the numbers who practice trophy hunting are so small, its environmental impact is actually very low compared to ecotourism, which attracts a much greater volume of people. With

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Richard Emslie serves as Scientific Officer of the IUCN SSC African Rhino Specialist Group. At the IUCN meeting in February 2012 in Abu Dhabi, Richard received the Harry Messel Award for Conservation Leadership.

Mike Knight is Head of Planning & Development of South African National Parks. He has extensive experience in large mammal ecology and ecophysiology, park development and animal re-introductions. He has also worked in a number of African countries and serves as Chairman of the IUCN SSC African Rhino Specialist Group.
minimum impact and maximum revenues, it must be welcomed by those who are serious about conserving Africa’s wildlife.

Provided it is correctly regulated and conservationists are strategic about animals selected for hunts, hunting itself can directly stimulate population growth. If, for example, a dominant male is infertile, his death can allow more bulls to move in and impregnate females in the area.

Hunting isn't, however, without its problems. Often the hunting industry could do better at policing what is going on and there are unethical practices that need to be stopped such as canned hunting. In 2010 and 2011 there was also an increase in numbers of “pseudo-hunters” from Vietnam who sought white rhino hunting permits in South Africa with the intention of obtaining and exporting rhino horn to illegal markets in South East Asia. Hunting applications peaked in 2011(231), but following law changes in 2012 the problem has mostly been dealt with, and applications have returned to normal levels. In 2015, 62 white rhino and only 1 black rhino were hunted in the whole of South Africa representing less than a third of a percent of total rhino numbers in the country.

A few individuals legally hunted each year is a small price to pay for the transformative benefits that trophy hunting brings. The public may recoil at pictures of rich white men beaming beside the corpses of felled rhinos and lions. These reactions are understandable. But the welfare of entire communities and ecosystems surely trumps any queasiness grounded in sentimentality.

Vol 14/02 (2016)
Culling To Conserve: A Hard Truth For Lion Conservation
Michael Schwartz

People that don’t live in Africa tend to learn about wildlife conservation in easy-to-understand terminology. But safeguarding animal species like lions is often more complex than mainstream media sound bites would have their audiences believe.

The National Post recently reported that management from Zimbabwe’s Bubye Valley Conservancy was considering a controversial move to cull upwards of 200 lions out of a rough population of 500 in order to ensure the reserve’s wildlife biodiversity.

It was also reported that since the growing calls to end trophy hunting, due in large part to the killing of Cecil the lion in Zimbabwe’s Hwange National Park last year, conservancies like Bubye are no longer seeing the funding necessary to adequately cover conservation costs, which includes fence maintenance, financing local schools and health clinics, and providing meat to local people.

Given the many challenges conservationists face in Africa, coupled with culling and trophy hunting being such contentious issues, I decided to reach out to Dr. Byron du Preez, a Bubye Valley Conservancy project leader and member of the Wildlife Conservation Research Unit (WildCRU), in the Department of Zoology at Oxford University.

Specifically, I was hoping for clearer answers regarding the potential paradox that increasing calls for hunting bans in Africa have on existing lion populations, and how that may be playing out within the recent culling conundrum. Fortunately, Du Preez went one step further by clearing up what was initially reported, clarifying the proposed cull, explaining how culling works, and elaborating on the dangers of promoting single species management. The following is his official statement:

Clarification on the Proposed Lion Cull: I am an independent scientist working on the Bubye Valley Conservancy, focused on lion ecology, which actually means just about every aspect of the ecosystem, such is the influence that lions have. I am neither pro- nor anti-hunting. I simply focus on practical conservation solutions that actually work in the real world.

We are hopeful that we will be able to translocate some lions, although all previous attempts to translocate lions out of the Bubye Valley Conservancy have been derailed by factors entirely out of our control. However, if the species was in as much trouble as the sensationalist
reports like to focus on, one would think that it would be a lot easier to find new homes for these magnificent animals than it actually is. ‘There is basically no more space left in Africa for a new viable population of lions.’ The fact remains that habitat destruction is their biggest enemy, and there is basically no more space left in Africa for a new viable population of lions.

The Science of Culling: A cull is not a once-off fix (neither is translocation, nor contraception), but would be more of an ongoing management operation conducted on an annual basis. When given adequate space, resources, and protection, lion populations can explode, such as they have done on the Bubye Valley Conservancy.

Reducing numbers to alleviate overpopulation pressure does nothing to permanently solve the problem, nor halts the species’ breeding potential; [it] only slows it down for a relatively short time until their population growth returns to the exponential phase once again.

Culling is a management tool that may be used for many species. That includes: elephants, lions, kangaroos, and deer, basically animals that have very little natural control mechanisms other than disease and starvation, and that are now bounded by human settlements and live in smaller areas than they did historically.

As responsible wildlife managers who have a whole ecosystem full of animals to conserve (not just lions), we have therefore discussed culling as an option for controlling the lion population, but have agreed that, for now, this is not necessary just yet and we will continue to try and translocate these animals until our hand is forced.

As already mentioned, there is very little space left in Africa that can have lions but doesn’t already. Also, where lions do occur, especially in parks and private wildlife areas, they often exist at higher densities than they ever did historically.

This is mainly due to augmented surface water supply resulting in greater numbers of non-migratory prey that now no longer limit lion nutrition and energy availability, allowing the lion population to rapidly expand.

For example, successful hunting to feed cubs all the way through to adulthood and independence is one of the greatest stresses for a lion, and often results in dead cubs and reduced population growth. In turn, a high density of lions can severely reduce the density of their prey, ultimately leading to the death of the lions via disease and starvation—far more horrific than humane culling operations conducted by professionals.

The Dangers of Single Species Management: Lions are the apex predator wherever they occur, and as such exert a level of top-down control on the rest of the ecosystem. Lions prey on a wide variety of species, and we are starting to see declines in even the more common and robust prey such as zebra and wildebeest—not to mention the more sensitive species such as sable, kudu, nyala, warthog, and even buffalo and giraffe.

Apart from their prey, lions are aggressively competitive and will go out of their way to kill any leopard, cheetah, wild dog, or hyena that they encounter, and have caused major declines in these species, not just on the Bubye Valley Conservancy, but elsewhere in Africa where lion densities are high. According to the International Union for the Conservation of Nature (IUCN), cheetah are listed as vulnerable, and wild dogs are endangered.

It is easy to simply focus on the number of lions remaining in Africa that has fallen steeply over the last century from ~100,000 to ~20,000 today, but which is directly linked to the reduction in available habitat.

Simply focusing on increasing the abundance of one species at the cost of another cannot be considered a conservation success—assuming that holistic conservation for the benefit of the entire ecosystem is the end goal—no matter how iconic that species is.

Luckily, lions kill lions, resulting in more lion mortality than any other species—including man on the Bubye Valley Conservancy—and in an ideal world the lion population would level off at a putative carrying capacity where lions control their own numbers (deaths from conflict equal or exceed new births). However, it is possible and probable (man-made water points increase the
carrying capacity of — and therefore also the competition and conflict between — all wildlife species) that this would still be at the cost of certain other sensitive species.

Ecosystem stability is related to size (and conversely ecosystem sensitivity is inversely related to size) and smaller areas need to control their lion numbers a lot more carefully than large areas such as the Bubye Valley Conservancy, which is over 3,000 square kilometres [1,160 square miles]. In fact, small reserves in South Africa alone culled over 200 lions in total between 2010 and 2012, according to the 2013 report from the Lion Management Forum workshop.

**Understanding Carrying Capacity:** The Bubye Valley Conservancy does not rely on trophy hunting to manage the lion population. I will discuss the economics of hunting in brief. The most recent and robust lion population survey data calculate a current lion population on the Bubye Valley Conservancy of between 503 and 552 lions (it is impossible to get a 100 percent accurate count on the exact lion number — which also changes daily with births and deaths).

Carrying capacity is an extremely fluid concept, and changes monthly, seasonally, and annually depending on all sorts of factors including rainfall, disease (of both predator and prey), and economics.

It is estimated that 500 lions eat more than U.S. $2.4 million each year (the meat value used is a very conservative $3 per kg – compare that to the price of steak in a supermarket, and then remember that the Bubye Valley Conservancy used to be a cattle-ranching area, and if wildlife becomes unviable, then there is no reason not to convert it back to a cattle ranching area once again).

To give the question of carrying capacity a fair, if necessarily vague, answer, I would personally estimate that the upper carrying capacity of lions on the Bubye Valley Conservancy would be around 500 animals — assuming that they are allowed to be hunted and therefore generate the revenue to offset the cost of their predation.

Remember, lion numbers can get out of hand. And if there was no predation, then thousands upon thousands of zebra and wildebeest and impala would need to be culled to prevent them from over grazing the habitat, leading to soil erosion, starvation, and disease.

The ecosystem is a very complex machine and whether anyone likes it or not, humans have intervened with cities, roads, dams, pumped water, fences, and livestock. The only way to mitigate that intervention is by further, more focused, and carefully considered intervention, for the sake of the entire ecosystem.

It is important to bear in mind that the wildlife here, and in the majority of other wildlife areas in Africa (hunting areas exceed the total area conserved by Africa’s national parks by more than 20 percent), does not exist as our, or anyone else’s, luxury.

The Bubye Valley Conservancy is a privately owned wildlife area, or to put it another way, it is a business. The fact that it is a well-run business is the reason why it is one of the greatest conservation successes in Africa, converting from cattle to wildlife in 1994 (only 22 years ago) and now hosting Zimbabwe’s largest contiguous lion population at one of the highest densities in Africa, as well as the third largest black rhino population in the world (after Kruger and Etosha).

This is only possible because it is a business, and is self-sufficient in generating the funds to maintain fences, roads, pay staff, manage the wildlife, pump water, and support the surrounding communities — all extremely necessary factors involved in keeping wildlife alive in Africa.

*Michael Schwartz, a freelance journalist and African wildlife conservation researcher, is also an honorary member of the Jane Goodall Institute and International Institute for Environment and Development’s Uganda Poverty Conservation Learning Group. Article is reprinted with permission.*
The Biggest Obstacles For Africa’s Big Cats

Almost every obstacle surrounding big cat conservation in Africa is symptomatic of human population growth and the conversion of rangeland to reduce poverty. On a slightly contrarian note, Africa’s surge of human inhabitants is actually good news—at least insofar as the state of the human condition is concerned.

At long last, significant portions of a continent long beleaguered by death, disease, and destitution are showing promising signs of improvement, thanks largely to 21st century advancements. And what’s more, Western civilization has played a fairly substantial role in the continental baby boom by providing the means to engage in large-scale food production.

All in all, such progress is a tad ironic when considering how often animal activists unfairly rake Africans over the coals for their role in the defoliation of wilderness and the disappearance of wildlife. But that argument is neither here nor there.

The fact remains that Africa’s green revolution and expanding human population are the biggest juggernauts for feline conservation. And like it or not, bans on the sustainable use of wildlife have all but removed the incentive for landowners with properties that don’t attract tourists to invest in maintaining wildlife habitats.

More to the point—a growing demand for vegetable cultivation to bolster economic development means less room for lions, leopards, and cheetahs.

**A Changing Landscape**

According to the Institute for Security Studies (ISS), “the demographic size of Africa in the world [grew] from nine percent of the total in 1960 to 15 percent in 2010. By 2050, its share of global population will reach 23 percent and it will be considerably larger than either China or India.” Furthermore, ISS observes that while population growth rates across the continent aren’t uniform, East and West Africa are seeing the most significant upticks in annual fertility rates. Ultimately, the entire “African population may not approach stability until, near, or even shortly after the end of the century, by which time it could be about 3 billion people, or 32 percent of the global total.”

While such high growth rates could spell an increase in urban poverty, the most noticeable change will occur on available lands that are homes for Africa’s big cats. Mike Norton-Griffiths, a wildlife ecologist in Kenya, points out three factors that underlie these dramatic changes in land management. “First, the growth in the human population creates an ‘internal’ market for higher production—more mouths to feed off the same area require higher productivity and, therefore, investment in land management. “Second are the burgeoning ‘external’ markets—local markets in neighboring towns and, more recently, the vast urban markets of Nairobi and other large towns. “Finally, and most important, is the evolution of property rights from the customary tenure regimes of the 1930s to private, freehold tenure, with secure property rights enshrined in and enforced by secular law (specifically the amendments to the Registration of Titles Act of 1959).”

**Culture of Population Growth**

On the cultural end of the spectrum, it’s important to note that while polygamy is no longer as widely practiced, the measure of married—and unmarried—couples throughout Africa is still weighed in the number of children they have. Bottom line: more offspring means greater social status for men and women.

The problem, however, is that excess children being born into impoverished communities exacerbates poverty—ergo, unsustainable harvesting of natural resources to feed a surplus population and escalating instances of human-wildlife conflict resulting from habitat encroachment shouldn’t come as a surprise.
This is an especially sensitive issue that must involve conservationists, social workers, healthcare practitioners, and other experts who aren’t ethnocentric when working with those who hold to different cultural values.

Land Rights

Human population growth and alternative land-use are the biggest variables associated with wildlife population declines. But to argue that they are mutually exclusive from the removal of wildlife’s economic viability is to deny reality. Prior to being outlawed, sustainable use in Kenya occurred on 60 percent of the total wildlife range, whilst tourism covered only five percent. Today, significantly less rangeland remains.

Norton-Griffiths states, “As Kenya demonstrates so clearly, people do what they do in response to economic incentives, but their ability to respond efficiently depends on the security of their property rights.” That wildlife belongs solely to the Kenya government is a picture-perfect illustration of disastrous land use policies, evidenced by some of the worst annual decline rates in wildlife populations on the continent. (It’s worth noting that while Kenya’s elephants may be faring a bit better, lion populations have dropped significantly.)

Kenya’s burgeoning tourism industry is one key example. With 95 percent of all wildlife tourism taking place in the national parks and reserves (known as service revenues), less than 1 percent of gross revenues goes to landowners (producer revenues) living with wildlife.

But while sustainable use may work in countries like Namibia, calls to reintroduce the practice in Kenya are out of the question since the damage was already done by banning it in the first place. It’s also fair to point out that not all methods of sustainable use fall under a true definition of conservation since they do not promote biodiversity (canned hunting – sic – editor’s note canned shooting would be a better name).

Payment for Ecosystem Services:

One novel approach that can offset encroachment is payment for ecosystem services (PES), which means leasing land from the rural poor to keep it in its natural state. By receiving regular payments from lessees, rural landowners receive fiscal benefits not normally seen from the influx of tourists that pay the state directly.

Calvin Cottar, a Kenyan conservationist, wrote that, “Lease payments on a regular ‘per hectare/year’ basis can be at values equal or higher than that possible from alternative land uses such as agriculture and monoculture domestic stock. “In return, the landowners give the PES lessee the rights to the land use, and allow the keeping of wildlife and natural habitat intact.” As it stands, there are roughly eight conservancies with a combined total of 227,949 acres near the Maasai Mara National Reserve that utilize the PES system.

According to the Association for Strengthening Agricultural Research in Eastern and Central Africa, “More than 800 families benefiting earn more than U.S. $ 3.6 million annually, now paid directly to households on a flat rate based on land holdings.” But in spite of what is perceived as a win-win scenario, PES remains tenuous.

Not all rural communities are landowners living adjacent to protected areas, and as such, cannot reap the same rewards that those whose lands hold more wildlife do. This invariably leads to future wilderness encroachment. Additionally, the PES model requires more investment from the international private sector in order to secure wilderness that would otherwise be converted to cash crops or cattle pastures.

With progress comes the inevitable demise of the natural world. But that doesn’t mean that the West should cease helping the less fortunate, nor should those whose major motif is protecting African wildlife ignore the fact that poor people living alongside them are only trying to survive.

Since many African people still live in poverty, they sometimes resort to less preferable methods of dealing with dangerous animals like lions and leopards—methods that aren’t popular in the court of public opinion.

Unfortunately, some activists seem content stereotyping impoverished Africans as one monolithic group of poachers without addressing the root of the conservation problem. Likewise,
they fail to acknowledge that economic survival is the driving force for rural African communities, much in the same way it dictates the lives of American suburbanites.

The difference is that those fortunate enough to live in the comforts of the developed world don’t have to worry about competing as heavily with dangerous wildlife on a daily basis. Many Africans, meanwhile, do not have that luxury.

All told, the loss of remaining wilderness remains a problem, as does falling wildlife populations. But again, these are symptoms, not sources. With that in mind, finding balance between these two diametrically opposing forces is the greatest challenge that conservationists face in 21st century Africa. Continued poverty reduction strategies, addressing the population growth dilemma, mitigating competition for space, and redressing policies that take away incentives for safeguarding wildlife need to be dealt with, and dealt with soon.

At the end of the day, bellicose rhetoric about saving Africa’s predators and other wildlife from the big bad humans greatly oversimplifies all that is truly involved in realistically preserving nature. Put simply, conservation requires just as much compassion for people as it does for animals. One cannot exist without the other, and sometimes sacrifices must be made to achieve the greater goal. It’s high time to stand up for what is right in lieu of what feels good.

When that perspective becomes the cornerstone of conservation efforts, it will break the ongoing destruction of the natural world. When we choose compassion for people, the survival of wildlife will greatly improve.

Vol 14/02 (2016)
Two “Famous” Lions Killed In Non-Hunting Kenya
Gerhard R Damm

Two more lions – both of them “named and famed” – have been killed in Kenya in the waning days of March, although hunting is prohibited since 1977. “Mohawk the most famous lion of Kenya”, the other one called “Lemek”, which Maasai leaders said that residents speared the two-and-a-half-year-old near Old Kitengela township road, 12 miles south of Nairobi, and roughly two miles south of the Nairobi National Park southern tip. “Lemek” was apparently seen roaming about in the plains outside the Park, not having raided any cattle yet. Consequently these two killings cannot be blamed on hunters, nor can the human-lion conflict be laid at the hunters’ doorstep. The killings simply confirm the fact that humans do not tolerate large predators in their neighborhood – and that proper wildlife management and adequate responses to a real or perceived threat are not in the repertoire of the Kenya Wildlife Service. “This was the third time in two months that lions had escaped from Nairobi National Park. One found its way to a military barracks, another to a strip of land near the international airport” said The Washington Post and added “Where the lions once would have wandered peacefully, they now encounter suburbs, farms and commercial buildings”.

Kenya Wildlife Service spokesman Paul Udoto said “the lion escaped from Nairobi National Park and ended up in Isinya town, 12 miles away [sic]. Veterinary teams headed to Isinya after they got word on Mohawk’s whereabouts. But noise and commotion from bystanders agitated the animal, prompting it to attack the man [sic]. In order to save lives, rangers shot it to death before veterinarians arrived with tranquilizers.”

Congratulations to the Kenya Wildlife Service for a “decisive and consequent action” one might try to say. This is competence squared!

“Mohawk”, reportedly 13 years of age (Editor’s note: it usually takes qualified scientists and a laboratory to determine a lion’s true age by analyzing some teeth), came to an admittedly gruesome end. If you have the stomach, watch the video clip of the killing on CNN at this link http://edition.cnn.com/2016/03/31/africa/kenya-mohawk-lion-killed/.
The story of the lion from the fairly small town of Isinya reverberated all around the world. It was broadcast originally by KTN Kenya but quickly found its way on to the net and across the front pages of national and international newspapers. “In a country that has invested millions in protecting its wildlife, Kenyans are trying to figure out what went wrong asked The Washington Post. “The uproar over the death of Mohawk mirrored a similar outcry in South Africa, where South African National Parks officials said that they had decided to kill a lion known as Sylvester who had escaped from Karoo National Park” chimed the New York Times. The Dodo Website titled “Beloved Lion Killed Because People Wouldn’t Leave Him Alone” adding “the news of Mohawk’s death prompted swift internet outrage, echoing concerns about another beloved lion you may remember named Cecil”. We shouldn’t forget the anti-use activists who came board in their thousands with comments and online petitions like “Fire the rangers who killed Mohawk the lion!” – conveniently forgetting that the rangers are not to blame, but the wildlife management system of Kenya and the Kenya Wildlife Service.

Kenya has a poaching problem for many years; ever since regulated sustainable use was banned in 1977 most of the wildlife species there have declined in unimaginable percentages. The decline was demonstrably not caused by hunting, since there was no legal hunting!

A golden opportunity was available in the 1970s for Kenya Wildlife Service to establish community conservancies in the same area where the deadly conflicts between man and wildlife are occurring. The area’s open plains were only utilized by the Maasai for grazing their livestock. Had KWS had the foresight and courage to make its own decisions without animal rights NGO pressure and made beneficial arrangements with the landowners and those who utilized their land for their stock, the area would be teeming with wildlife and there would have been real benefits to the local people. The lack of firm vision resulted in what is now a concrete jungle right at the doorstep of Nairobi National Park to the south and the sad loss of wildlife thru conflict and a clear lack of any appreciation of the wildlife from the Park.

Already in 2003, the late Imre Loefler former Chairman of the East African Wildlife Society said in an article “... over the years, public attitudes towards the parks have become increasingly hostile, particularly because of the consequences of the growth in human population: as the numbers of people have trebled, land, water and wood have become scarcer and human-animal conflicts have increased manifold... With Nairobi being the seat of numerous conservation NGOs confessing various shades of imported animal welfare philosophies, the government and the agency responsible for wildlife were always under pressure to eschew any form of wildlife management and utilization other than tourism. Tourism, even under the best of circumstances, is not capable of generating enough revenue to vouchsafe the survival of wildlife. Moreover, tourism is concentrated in a few areas and, particularly in its mass variety, is detrimental to the environment. All in all, Kenya’s conservation efforts have failed and wildlife numbers have plummeted.”

And in another article published in 2004, Loefler said with some foresight “without providing economic benefits, conservation cannot succeed. For now, Kenya is the last remaining bastion on the entire eastern half of the African continent for conservation concepts of the old fashioned kind. And it is the NGOs concerned mainly with animal welfare and animal rights – and not with people – that are mobilizing their resources to stop Kenya from embracing husbandry as the way forward for wildlife and forest management.”

Imre Loefler was right!
African Lion Working Group: Statement On Captive-Bred Lion Hunting And Associated Activities
Sarel van der Merwe, Chairman, (Dated 17/02/2016)

It is the opinion of the African Lion Working Group (ALWG) that captive-bred lion hunting, which is defined by ALWG as the sport hunting of lions that are captive bred and reared expressly for sport hunting and/or sport hunting of lions that occur in fenced enclosures and are not self-sustaining does not provide any demonstrated positive benefit to wild lion conservation efforts and therefore cannot be claimed to be conservation.

In addition while more data are still needed, the international lion bone trade that is currently being supplied by the South African captive-bred lion industry may fuel an increased demand for wild lion bones elsewhere. This could negatively impact wild lion populations and hinder conservation efforts. The recent dramatic increase in lion bone trade should be reason for concern.

The estimated 8,000 lions in South Africa currently being maintained and bred on game farms as part of this industry should not be included in any assessments of the current status of wild lions. Captive breeding of lions for sport hunting, hunting of captive-bred lion and the associated cub petting industry are not conservation tools. In our opinion they are businesses and outside the remit of the African Lion Working Group and should be dealt with accordingly.

Vol 14/03 (2016)
Can There Be Sustainable Lion Hunting In Africa?
Jason G. Goldman June 22, 2016 Conservation This Week

By now the arguments for both sides are well known. Trophy hunting provides important revenue for African landowners, and without that income, they might be persuaded to convert land currently managed for wildlife into farms and mines. Sacrificing a few older, non-reproductive lions—it is argued—allows the entire ecosystem to be preserved. On the other hand, pervasive corruption and unscrupulous practices that contravene the established scientific guidelines for sustainable hunting have led to overharvesting, especially for the charismatic king of the jungle. Can anything be done to make hunting practices more sustainable?

That’s what Montana State University’s Zambia Carnivore Program’s Scott Creel wanted to know. The common wisdom for sustainable hunting is known as “age-restricted harvesting,” and it holds that only male lions above a certain age ought to be removed from the population. The problem, the researchers realized, is that those guidelines were developed based on a well protected, growing lion population. They set out to determine whether there could be sustainable lion hunting for the more typical challenged populations.

Using mathematical models informed by real-world population estimates, Creel and his team projected population dynamics for African lions 25 years into the future—both without hunting and under a range of hunting scenarios. Those scenarios included quotas for hunting blocks, age restriction, and hunting periods punctuated by recovery periods with no hunting. They assumed that the hunting blocks were located adjacent to protected areas like national parks, as is so often the case in the real world, with lions moving frequently between protected and unprotected landscapes.

They discovered that most hunting scenarios resulted in a long-term decline in trophy-sized males, which is both detrimental to lion populations and undesirable for hunters. The best strategy, therefore, was a mosaic one. “This decrease in the availability of prime-aged males is minimized,”
the researchers conclude, “by the combination of a block quota of one, a 3 on/3 off cycle of hunting and recovery, and a minimum hunted age of 7 or 8 years.” In other words, hunting blocks can sustainably be allocated one trophy hunt per year of a lion at least 7 years old, for three consecutive years, followed by three years for recovery. They also recommend that trophy fees be increased to account for the reduced quota. Still, such a scenario would still include a long-term decline in lion populations, especially if poaching or habitat degradation worsen.

Trophy hunting by itself might be sustainable, but not given a background of poaching, habitat loss, and retaliatory killings. “If other negative effects on lions are not controlled, it is unlikely that trophy hunting at any level will be sustainable,” they conclude. It’s a dire warning, and one that they say likely applies to other African megafauna as well, especially leopards.


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Vol 14/03 (2016)
African Lion Range State Meeting
Gerhard R Damm

Delegates of 28 African lion Range States⁶, met in Entebbe, Uganda from 30 to 31 May 2016 to discuss the conservation, management and restoration of the lion (*Panthera leo*) and its habitat in Africa. The press release and communiqué from the meeting highlights the importance of CBNRM, incentives, benefit-sharing, HWC mitigation measures and well managed hunting programs for the conservation of African lion, and the potential negative impacts of import bans on hunting trophies.

The range states also recognized that the main threats (listed in no particular order) for lions in Africa are: (1) unfavorable policies, practices and political factors (in some countries); (2) Ineffective lion population management; (3) habitat degradation and reduction of prey base; (4) human-lion conflict, (5) adverse socio-economic factors; (6) institutional weakness; and (7) increasing trade in lion bones.

The Official Communiqué highlights inter alia

- the need for the development of national action plans and adaptive management practices to conserve lions at the national level;
- that community-based natural resource management, the creation of incentives for local communities to engage in lion conservation, the sharing of conservation benefits and the establishment of mitigation measures can increase the lion range and are essential to the conservation success of lions;
- a call for the establishment of viable ecosystem and wildlife-based land-use practices, ensuring that agricultural activities and mining operations do not impede lion conservation, including restoration programs;
- and points out the benefits that trophy hunting, where it is based on scientifically established quotas, taking into account the social position, age and sex of an animal, have, in some countries, contributed to the conservation of lion populations and highlight the potentially hampering effects that import bans on trophies could have for currently stable lion populations.

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So do hunters really conserve wildlife? For decades that question has been at the core of the clash between anti-hunting groups and conservation organizations that promote hunting, and was put forth in a debate on Wed., May 4, 2016. Field & Stream Editor Anthony Licata and Catherine Semcer of H.O.P.E. (Humanitarian Operations Protecting Elephants) argued for the motion; Wayne Pacelle, president of the Humane Society of the United States, and Adam Roberts, head of Born Free USA, argued against it. The debate was hosted by Intelligence Squared (IQ2) at Manhattan’s Kaufmann Center and moderated by John Donovan of ABC News. You can read the debate transcript in its entirety here.

So when the dust settled, which side won? The answer is … drum roll, please … It still depends on which side you ask. But results of pre- and post-debate polls of the live audience show that Pacelle and Roberts were able to use their well-rehearsed and expertly delivered emotional arguments to “convince” an already biased audience to vote that hunting is not really conservation.

Although a bit discouraging, the outcome is not surprising considering that the debate took place in New York City—a locale not exactly famous for its contingency of hunters. It is important to note that a pre-event online "Hunters Conserve Wildlife" poll showed a 69-percent approval of hunting as a means of conservation, a poll that drew such vicious verbal threats from the anti-hunting contingency that the Kaufmann Center was compelled to increase its security force prior to the event. Conveniently, these online poll results were omitted from any final reporting as Donovan later cited the m as being "unscientific."

Audience members in attendance were provided with electronic voting systems at their seats as a way of voting for or against the motion.

While Licata and Semcer artfully presented indisputable facts and statistics supporting that hunting is the most powerful means of conserving animal species, particularly those that are endangered, Pacelle relied on examples of animal rights extremism as a basis for his arguments as he lashed out at conservation groups including the NRA and SCI. Perhaps his biggest jab at hunters was when he actually said conservation has nothing to do with why hunters go into the woods. "Hunting is going to be around for a while," he says. "There's a deeply committed, small segment of the American population that favors it, but let's not make the argument, because it's untrue, that somehow this [hunting] is a big protector of wildlife in general." As for Africa, he says, "The trophy hunting concessions are miniscule compared to wildlife watching, which is why Botswana and Kenya and Rwanda have banned all trophy hunting." Even Roberts had to give the facts a slight nod when he said, "Well, I think it's very effective if you look at it in a very small microcosm." But then was back at it and said hunters only work to rebuild species' populations just to hunt them back to the verge of extinction.

Pacelle and Roberts regularly relied on highly charged and widely publicized controversies such as 2015’s “Cecil the Lion” to get the audience to focus on one animal rather than on the general...
health of a species' population. Licata and Semcer repeatedly called them out for being disingenuous and for purposely obfuscating the facts to tap into audience emotions and compel them into believing poaching is hunting and that market hunters are sportsmen. At one point when a man in the front row said he knew Cecil and that "there were 13 other lions killed illegally that were wearing collars in Hwange National Park," even Donovan stepped in, responding, "But this team is not arguing for the illegal killing of animals." Thank you, Mr. Donovan. That that would be poaching.

Countering Roberts' false statements on the decline in lion populations, Semcer, whose organization H.O.P.E. works with governments and organizations to fight poaching in Africa, said, "We are the people who hunt legally. We pay into the system. We purchase licenses. We do boots-on-the-ground conservation projects. The cause of lion decline is not sportsmen, and you know this. The cause is herdsmen killing lions because they are competing with their livestock. That is in every single document, from the U.S. Fish and Wildlife Service to the IUCN," referring to the April 2016 IUCN (International Union for Conservation of Nature) Briefing Paper prepared for the European Union advising it to ensure decisions restricting or ending trophy hunting are based on an analysis of trophy hunting's role in affected communities and are made only if other alternatives can deliver equal or greater conservation incentives.

Licata and Semcer touted proven facts and research provided from agencies such as the U.S Fish and Wildlife Service and from African agencies that acknowledge the billions of dollars hunters raise for conservation. Some of them include:

- American hunters provide 80 percent of the funding for state wildlife agencies.
- Sportsmen contribute a billion dollars annually to wildlife conservation.
- Since 1965, hunting license fees have generated $22 billion for conservation in their respective states. In 2015 alone, they generated $821 million.
- The Pittman-Robertson Act's excise tax on sales of ammunition set aside over $12 billion for state wildlife conservation, allowing species from deer to wolves to recover.
- The duck stamp has preserved six and a half million acres of wetlands.
- Considerable hunter-generated income comes from nonprofit hunting groups. In 2014 and 2015, Ducks Unlimited alone raised $238 million for conservation and has conserved 13.5 million acres of wetlands across North America.
- Hunters have conserved an area of wildlife habitat in Africa more than 1.7 times the size of the U.S. National Park System.
- One outfitter in Mozambique's Coutada 11 reinvests $100,000 in anti-poaching efforts annually. And thanks to anti-poaching efforts that H.O.P.E. supported through training, advisory assistance and procurement services, this is the only area in Mozambique that did not see a decline in elephant numbers in the last national elephant census.
- The Tanzanian Wildlife Division receives 6.8 times more funding from hunting than from photo tourism.
- Conservation does not come for free. We need tourism, too, but the reality in Africa is that it's not possible everywhere.

Despite all this, Pacelle said to instead examine our national parks. "Every U.S. national park with the exception of one forbids trophy hunting and forbids sport hunting entirely. So we're managing those populations through Mother Nature, who does it quite well and has done so for eons." Not true. Here are just two recent stories talking about how and why hunting is being used on some national parks.

Licata countered, "We don't live in one giant national park. Not everything has that intact ecosystem. The fact is, there are a lot of people in this world. The habitat won't support predators. It cannot just be left to its own. Hunters are a natural part of that ecosystem and always have been. And when it's done in the right way, it's absolutely effective and valid."
The International Council for Game and Wildlife Conservation, CIC, sponsored two high-level panel discussions and press conferences on 24th and 28th September during the 17th Conference of the Parties of CITES. Initially CIC planned only one press conference, but due to demand by the Africa Ministers present in the first meeting and the interest generated, a second event was scheduled.

Three African environment portfolio ministers, The Honorable Edith Edna Molewa, Minister of Water and Environmental Affairs (South Africa), The Honorable Pohamba Shifeta, Minister of Environment and Tourism (Namibia), and The Honorable Oppah Chamu Zvipane Muchinguri, Stephen Mwansa, Permanent Secretary Ministry of Tourism & Arts (Zambia), Prince Mupazvirihlo Chiwewete, Permanent Secretary Ministry of Environment Water and Climate (Zimbabwe), Shonisani Munzhedzi, Deputy Director-General: Biodiversity and Conservation of the Department of Environmental Affairs (South Africa), Willem Wijnstekers, former Secretary General of CITES and Deputy President Division Policy & Law of the CIC International Council for Game and Wildlife Conservation (The Netherlands) and Wilfried Pabst, owner of Sango Conservancy & Lodge within Savé Valley Conservancy (Zimbabwe) formed an impressive panel. With ingrained authority the panelists addressed the topic “Keep Calm and Let Africa Speak” and took questions and comments from around 100 guests and journalists from around the world in the two meetings.

The discussions and interactions with the plenum was moderated with distinction by Dr. Ali A. Kaka, Africa Regional Councilor for the International Union for Conservation of Nature (IUCN).

The participating journalists packed the press room to hear firsthand the views of the African representatives on the proposals being submitted to and discussed at COP 17. It soon became clear that the panelists considered many of the proposals to be primarily driven either by African States with very poor conservation results or by non-African states which have little or no wildlife of relevance to the proposals up for decision by the voting delegates at CITES. Clearly aggrieved at many suggestions on which they were not consulted as range nations, and/or on which their views based on successful conservation models were not taken with the seriousness they deserved the panelists did not mince words and spoke candidly.

The audience was accorded ample time to ask questions and make observations. Keen observers noted that there was widespread support for the sentiments of the panelists. Questions at some of the panelists on the status of their wildlife and on some incidents that intended to cast a shadow on the national wildlife management strategies of the participating countries were answered with resounding arguments.

In his opening remarks Dr. Ali Kaka got right to the point saying “We are talking about the sustainable use of wildlife”.

Namibia’s Minister Pohamba Shifeta, for example, pointed out that friendly coexistence is a myth and that there is a price communities living in close proximity with dangerous wildlife pay. Namibia boasts of community conservancies established under enlightened legislation that allows people to benefit economically from the sustainable use and conservation of wild animals. Conservation hunting in Namibia is based on sustainability, and the proceeds go to the community conservancies. Therefore the communities understand the value of wildlife. Shifeta appealed to the listeners (and implicitly also to the greater community of CITES delegates) when he concluded: “Don’t be
influenced by emotions! First and foremost you need to comprehend the point of view of our rural communities, who live from and with wildlife!”

Namibia’s Minister also mentioned that those living on other continents should stop prescribing Africans what to do with African wildlife. “They are infringing on the sovereignty of African states”, Shifeta said. Participants could sense similar indignation from the representatives of South Africa, Zimbabwe and Zambia, as well as from private conservancy owner Wilfried Pabst. Stephen Mwansa of Zambia stressed that “wild animals are there because of our conservation efforts and that includes their consumptive use!”

“We’re being told by people outside, by people my color of skin, how to run things in Africa,” Wilfried Pabst, owner of the Sango Conservancy in Zimbabwe, said. He highlighted that the call for a ban earlier this year by some European Union parliamentarians on the importation of trophies was equivalent to banning hunting. “They have neither regard nor understanding of what they are effectively destroying. In southern Africa alone, if we ban sustainable use, we would eliminate some 55 million hectares of land under conservation and lose in the region of 20 million animals, hundreds of thousands of jobs, each man or woman supporting a family of 10, thus putting millions of local people into destitution,” Pabst passionately explained. “Sustainable use is a “very successful conservation model”, he said.

“Listen to me very carefully, I mean every word I’m saying,” Pabst continued emphatically, “untold NGO’s do good work, but there are those who are against the sustainable use of wildlife resources, those who are disguising the intention of banning sustainable hunting behind the mask of wanting to forbid the importation of trophies into Euro and the USA. “

"I declare with conviction that the NGO’s directly or indirectly propagating to end sustainable hunting, that these NGO’s are criminal organizations. Did you hear this? Criminal. Because they are soliciting money under false pretenses - this is fraud and thus criminal. None of the donors are told, as they should be, that sustainable hunting is one of the two largest contributors in funding conservation globally. Taking the income from sustainable hunting away will destroy some 75% of all wildlife areas in southern Africa alone. If the well meaning donors would understand that these NGO’s business plans they are funding would cause the destruction, they would not donate. They
are kept in the dark that their funds are actually funding the exact opposite of what they believe their contribution would achieve."

"None of these NGO’s would like to see an intact and growing Wildlife scene. Why? If Wildlife is well conserved as in southern Africa at large, these NGO’s could not raise any funds, their business model would die, their offices, vehicles overseas trips would disappear. Conclusion? These NGO’s can only survive or thrive by leaving donors in the dark as to the real effect of their donations and they need chaos and destitution in wildlife conservation to solicit these funds. That is indeed a criminal business model,” Pabst concluded.

Prince Mupazvirhi Chiwewete supported Pabst, saying Zimbabwe had not received a single cent of the millions of dollars collected for Cecil the Lion. "When decisions are made without consulting us, without taking into consideration our interest, those decisions are not made in the interest of conservation" he concluded. Shonisani Munzhezdi (South Africa) added that “…local communities are the ones who have to be involved in decision making that effects them. They should be assisted and supported, and we need to ascertain that they benefit!"

“Sustainable use, conservation and fair equitable benefit sharing are the pillars of the natural resources! There is no way that we would have sustainable conservation without looking at the issues affecting people,” Munzhedzi concluded.

The Honorable Minister Oppah Chamu Zvipane Muchinguri (Zimbabwe) reinforced these statements by saying “it is easy for those not living with the elephants and other dangerous wildlife to preach and act noble. Yet it is our people who have to bear the cost of this existence. Removing incentives for these communities is to condemn them to perpetual poverty none can understand unless you have experienced it…. “ She also noted that “it was sad some governments and NGOs are failing to appreciate that sustainable use of wildlife is a key pillar to successful conservation. Communities as major custodians of wildlife resources need to continue accruing economic benefits from wildlife, since otherwise they would have little incentive to conserve it.”

The Honorable Edith Edna Molewa, Minister of Water and Environmental Affairs (South Africa) mentioned already in her opening address to the CITES delegates that "our commitment to the sustainable utilization of natural resources contributes significantly to socio-economic development of poor and rural communities as part of our country’s economic and social development."

Steven Mwansa passionately summarized the position of the panelists, “Please leave us alone!”

The CIC International Council for Game and Wildlife Conservation is a politically independent and globally active advocacy working in the public interest with a diverse membership that includes states, corporates, universities and associations. The core strength of the CIC rests in dedicated hunter-conservationist members from all continents. CIC advocates wildlife conservation across diverse landscapes through shared incentive-driven use. Our adaptive management approach is grounded in cutting-edge science. CIC values traditional knowledge reflected in millennia of diverse hunting heritage. The members uphold and evolve the fundamentals of ethical hunting. CIC aims that each generation bequeaths to its successor intact landscapes richer in wildlife.

The CIC CITES Team consisted of Heli Siitari, President of CIC Division Policy and Law, Willem Wijnstekers, former CITES Secretary General & Deputy President of CIC Division Policy and Law, Willy Pabst, CIC member and conservancy owner in Zimbabwe, Tamás Marghescu, CIC Director General.
Yes, a lion got killed. Yes, he had a name and was a favorite at a well-known photographic installation in Hwange National Park. He was killed in a place with no lion permit and the world went nuts: Millions of words of rhetoric were generated, some true, some false, most opinions and feelings. The result of all of this is that today we look at a very different hunting landscape to what we were looking at just 12 months ago.

This event and the subsequent events have been the “Twin Towers” of the hunting world – our 9/11 - the anti-hunters have suddenly gained enormous momentum and have shown the hunting world just how powerful they are. If you do not believe this then you just need to look around you ...

Several airlines now do not carry trophies in their cargo. At the time of writing this article, lion trophies are no longer allowed to be imported into the USA, Australia and France. Several hunting conventions were literally shut down as a result of letters being written. As I type this, the European Union (EU) – yes, the whole EU – is discussing the possibility of closing imports of any kind of African trophy into Europe.

The anti-hunters truly used their extreme show of force to illustrate just how influential they have become and, sadly, the thing that truly suffers is our wildlife. This will be the very end of huge parts of Africa and its wildlife ...

When I look at a map of Africa in my mind, I basically see two things – areas with wildlife and areas without wildlife – and I ask myself what the difference is: The areas with wildlife have people who are protecting it and creating value in those areas; some from photographic tourism and some from hunting tourism.

People who are against trophy hunting will often return from a trip to Kenya where they visit the Maasai Mara and a few other places and say, “The wildlife is thriving. We saw millions of animals.” Indeed that is true, very true – but we are not comparing apples to apples. Let’s look at the northern frontier district of Kenya, which in former times was a hunting area thriving with an abundance of species, both in variety and in numbers. A visit there today will show you a broken ecosystem with large numbers of people, livestock and dust ...

As a matter of fact, we do need to acknowledge that there are areas of the planet, huge areas and species where non-consumptive (photographic and viewing) tourism is absolutely the best solution – Maasai Mara, Serengeti, Ngorongoro Crater, Kruger National Park, Okavango Delta, Bwindi Impenetrable Forest – the list goes on and on ... These are areas that for one reason or another have a very viable business model that does not require hunting to sustain it. However, that is not true everywhere. Let’s look at a vast amount of western Tanzania where enormous hunting blocks, collectively covering millions of acres, are supported 100% by hunters’ dollars. Yes indeed, without hunters to pay for the protection of those areas and the anti-poaching and infrastructural maintenance, these areas and their wildlife will cease to exist.

An old man walked up to me at a trade show recently and asked, “Who closed lion imports to the USA?” I looked at him and said, “You did, Sir.” He was shocked, stuttered, coughed and said, “WHAT?” I repeated myself, “You did, Sir. I did. We all did.” “We did so by not educating people on the importance of hunters as a financial tool for Africa, an integral part of the conservation model. I am not talking here about the actual trigger puller; that’s a whole different conversation. I am talking about the good that the business of hunting does when managed properly and correctly within viable quotas and with a good percentage of the income generated going into communities, anti-poaching, etc. Sir, we have kept that a secret, preferring instead to show kill shots and dead game and reporting only inches and sizes.” After a few moments, he looked me up and down and said, “You know, you are right. I have not thought of it that way.” He then walked off into the crowd.
Let’s imagine for a moment you are a non-hunter – not an anti-hunter, just a non-hunter, someone who does not hunt but is not against hunting. You are living in Sydney, Australia, you and your wife work and you have a moderate income. You are Mr Average, a First World citizen and all you know is that wild African lions number in the region of 32 000 continent-wide. You also know that vast areas of Africa are seeing declining numbers of wildlife. Then you see a picture of a guy sitting with a dead lion, the caption of which reads: “A great success in western Tanzania yesterday. Congratulations to Joe Schmoe for his magnificent lion taken with a .375 H&H after a hard hunt.” Nothing more, nothing less – no education, no other facts. (At this point facts would be ignored anyway because of the overwhelming emotional response associated with the dead lion.) The conclusion as a non-hunter you immediately jump to is that this guy is part of the problem, not part of the solution. The picture angers you so you jump on-line and you google lion trophy hunting, only to find hundreds of similar images. You read all the articles on the first Google page and your mind goes into overdrive. You have seen the solution, you understand why lions are in trouble and you are now well on your way from being a non-hunter to an active anti-hunter.

So hunters, where have we been? We are hiding behind T-shirts that say: “I hunt, it’s legal, get over it”. We say things like: “I don’t care. The more hate I get, the more pics I am going to post” and “Here’s one for the anti-hunters” as we pose with a leopard over our shoulders and blood running out of its mouth. Can we honestly say that this is going to win the battle for us?
I am not in any way saying hide it. I am not in any way saying stop it. What I am saying, is let’s get serious about what it’s going to take to ensure that the good we do as a group and as a body is truly understood. We are not asking non-hunters to run to the gun shop, buy a gun and start killing animals. What we are asking is for people to truly listen, to understand the good that we do and how we do it.

**Hunters who say they do not care about antis are, simply put, very naive.** I have a message for hunters: IT’S TIME TO CARE! It’s time to take a long, hard look at how we educate, at what we have been doing and how we have been doing it, and start to change the model.

Einstein said that doing the same thing over and over again and expecting a different result is the definition of insanity. Likewise there have been folks who have said to me that I am a hypocrite, as I have as much or more content on-line of kill shots than anyone – and yes, they are right. But I am also knowledgeable enough about current affairs to know that that needs to change. We cannot change the past – we own it. What we can change is the future because we own that too. We are not allowing them to win by changing our strategy. We are not allowing them to shape our future. On the contrary, if we do not change our strategy they will and already are shaping our future – and with it the future of the millions of acres and thousands of wildlife species that thrive on hunters’ dollars.

The other argument I often hear is that it is just 5% of the radicals who are going to write letters and make a fuss and “we don’t need to worry about that”. Well, here are the facts: If we look at a universe of hundreds of millions of non-hunters, even just 100 million non-hunters, then 5% or 5 million people motivated to shut it Down. Any organization that is service-oriented and relies on the general public for their income (a hotel chain, an airline or even a whole community) who receives 5 million letters will look hard and is very likely to make some policy change!

This brings me to a very real question we all often ask ourselves: Why do you hunt?

- You do not, I can assure you, embark on an African hunt to feed a local village.
- You do not go on a hunt to finance a local anti-poaching group.
- You do not hunt to drill water for a man-made watering hole or village water supply.
- You do not hunt to build a school or a clinic.
- You do not hunt to finance researchers.

This list can indeed go on and on but it is not a list of reasons why you hunt – it is a list of the benefits of hunting and the effect of hunters’ dollars flowing into an outfitter, a community, a region and a government.

**So I say again: Why do we hunt?**

- Is it because we love an excuse to be outdoors on the trail of something?
- Is it because we are driven by some primal need to chase?
- Is it for the relationships developed around a campfire and the pursuit?
- Is it for the adrenaline and excitement of the final moments of a stalk?
- Is it for the excuse to spend time with loved ones in a carefree, natural environment?
- Is it a way for you to feed your family in an exceptionally healthy way?
- Is it for the adventure of it all?

I would guess it is probably one or two or even all of the above reasons. And yet what we post on social media does not usually reflect any of that – all it reflects is the dead game, which actually is when it is all over.

In the very wise words of Shane Mahoney: “There has never been a time in history when the societies around the world have had more empathy for wildlife.” I truly believe he is absolutely correct – we are bombarded through social media, print, television and billboards about wildlife needing help. I agree – a lot of this is marketing campaigns by wildlife welfare organizations who have thriving business models based on emotional response; it is all over Discovery Channel and Nat Geo, who by the way reach an estimated 400+ million households in more than 10 languages! This is all leading to a great awareness by Mr Average, who also has a Facebook account and an opinion.

So let’s get back to the 9/11 analogy, namely that Cecil the lion was our “Twin Towers”.

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What do we do? Do we all sit and say that sucks, but I’m just going to keep on doing what I do. Or do we mount an army, a powerful, effective and highly intelligent army – let’s call it the conservation resistance army!

I say YES – we mount an army. We equip and teach that army and we send them out to battle, and here is how I see it:

**The front-line infantrymen:** In any fighting force the foot soldiers are the most numerous. Everyone who hunts is a foot soldier – their keyboard is their weapon, their ammunition is the constant stream of good information they can spray into the enemy like bullets. It is thought at a wild guess that there are possibly as many as 250 million people around the world who actively hunt. Can you imagine if each one of those people once a week posted something valuable – a great wildlife image, a great fact about the benefit of hunting, a project supported by hunters, etc. That is 13 billion great facts a year shot into cyberspace!

**The generals:** These are the large hunting organizations like DSC and SCI, the professional hunting groups like PHASA, ZPHGA, TPHA, APHA and NAPHA. These are the folks who need to have very well-planned social media content, with facts and figures and great information. They need to constantly maintain the supply of weapons and bullets, every new fact and piece of information that comes up gets funneled to the front line by these folks to make sure that their infantrymen have the right, accurate and true ammunition.

**The machine gunners:** These are the people in the public eye, the folks who film, host, edit, write and distribute any hunting media – a machine gun that can spew thousands of bullets into the opposition’s fighting force. The television shows across the globe need to be these gunners; they need to have exceptional, palatable, factual and elegant hunting facts and information, so that when a non-hunter stumbles across a channel or a show or a YouTube clip they are fascinated and educated rather than horrified and turned off.

A big part of the battle is the damage that has already been done and what YouTube continues to do. There are some pathetic YouTube clips that to this day get thousands of views and are widely distributed as “this is what hunters represent”. These will always be out there; we understand it is the Internet and once content gets out there it is there to stay. That said, each and every single one of us can do a good job of looking back and cleaning up our past; cleaning up some of the less elegant stuff that is out there by simply taking it Down. If we all step up and do that the effect will be profound – no less entertaining will be to aggressively work as a community to replace this with great moments that we pursue every day in the field ...

**The military police:** Not all hunters are good for an area. As a matter of fact, not all hunting is good for wildlife and wild areas in many areas across Africa. Because of greed and other variables, hunting has been part of the demise, not part of the solution. The military police need to be the governing bodies and associations within these countries who can police and protect the integrity of those who are doing it right – a little goes a long way when you are dealing with emotion and a little bad goes a long way in destroying the benefit of a lot of good.

**So, in closing, I would ask this to each and every one of you:**

- Do you love to hunt?
- Do you want your kids to enjoy the freedom to hunt as we enjoy today?
- Do you love wildlife?
- Do you want to see it thriving into the next generation?

If your answer to any of these questions is yes, then surely you are prepared to do what it takes to ensure that it will be there forever? In today’s world where everyone has a voice we need to exercise ours – in a way the world has never seen before. Can you imagine the impact, even just within our own communities, if every single one of us a few times a week shared something meaningful, generated some exceptional photography or footage and started spreading the facts!

In conclusion, let me say this: Before you upload a video or a photo, before you comment on a post, ask yourself, “Is the post I am about to make going to be educational and informative or is it going to raise emotion and hatred?”
As many of you know, in the last 18 months I have taken on a project that is focused on telling the world about human/wildlife conflict. To that end I have stopped making television shows and DVDs about hunting and have been focused on capturing the essence of these issues, most of which revolve around unsustainable human population growth. I have travelled to many places in a lot of different countries and what I have found in many cases is truly a tragedy. But I have to say I shudder in fear for our wildlife as I imagine the millions of acres across Africa that today are protected in some way, shape or form by money derived from hunting – if that wheel stops turning, the wildlife is doomed ...

I hope you will read this and realize what a serious situation we find ourselves in; how urgently we need to change what we do and how we do it when in the public eye.

I live in the Bahamas – my children have indeed left their little footprints in the African dust. They are fortunate to get a balanced view of how the world works. They have been part of the process and know where their meat comes from. They thrive on being outdoors. When they grow up, they may never choose to hunt – but I owe it to them to make sure that they have that choice.

Ivan Carter, born and raised in Zimbabwe, began a professional hunting career in 1988. With his passion for elephants and other big game spends over 180 days in the field each year in pursuit of dangerous game. He is currently filming for the second season of his new series, “Carter’s WAR, Wild Animal Response”, presented by NOSLER on the Outdoor Channel, a series based around human/wildlife conflict in Africa. Ivan is a great advocate for sustainable conservation practices, and truly believes in hunting as a conservation tool. Like Ivan on Facebook at www.facebook.com/ivancartersafrica and ivan.carter on Instagram and follow him on his adventures in the field

Vol 14/04 & 05 (2016)
News From And About Africa
Compiled by Gerhard R Damm

South Africa
Director of US Fish & Wildlife Service Dan Ashe has announced that lion trophies from captive bred populations in South Africa will not be accepted for importation to the United States. However, wild and wild-managed lions from South Africa will receive import permits. The captive bred lion breeders do not meet the requirements for true enhancement sought by USFWS, which include transparency, scientific management and effectiveness in protecting and enhancing wild lion populations. The World Conservation Congress in Hawai’i had earlier this year passed Motion 009 - Terminating the hunting of captive-bred lions (Panthera leo) and other predators and captive breeding for commercial, non-conservation purposes. The CIC International Council has now adopted this motion as its official position on captive lion breeding and shooting

Tanzania
Conservation Force made an extensive submission to the US Fish and Wildlife Service in support of applications for permits to import lion trophies from Tanzania. This submission documents the clear enhancement/benefits generated by safari lion hunting in Tanzania. The submission explains Tanzania’s lion management plan, regulations, and policies to show that lion hunting is well-managed and how the hunting addresses the three primary threats to lion. Most importantly, the submission includes the reports of 27 Tanzanian safari operators. These Operator Enhancement Reports detail and document the operators’ contributions to habitat and prey protection, anti-poaching, and community tolerance. They also explain the operators’ responsible stewardship of prey base species and lion, and the critical role U.S. hunters play in sustaining these efforts. This is a
short video about the recently documented sample of the unmeasured benefits (social and eco-system services) of safari hunting is available at https://vimeo.com/190055022. More details at Conservation Force.org

Vol 15/01 (2017)
The Lion’s Share? On The Economic Benefits Of Trophy Hunting
Gerhard R Damm

Dr Cameron K. Murray of Economists at Large Pty Ltd from Melbourne, Australia is the lead author of the report "The lion’s share? On the economic benefits of trophy hunting". This report was commissioned by Humane Society International (HSI). HSI hails the report with the article "New report reveals big game hunting makes minimal contribution to African economies and jobs - Trophy hunters’ inflated claims debunked; trophy hunting ‘insignificant’ to economy". The report concludes that hunting brings in just 0.78 percent or less of the overall tourism spending and has only a marginal impact on employment in Botswana, Ethiopia, Mozambique, Namibia, South Africa, Tanzania, Zambia and Zimbabwe, providing approximately 0.76 percent or less of overall tourism jobs. The total economic contribution of is at most an estimated 0.03 percent of gross domestic product (GDP), the HSI report said.

Let us for a start compare two similar sized areas - one in South Africa (Sabi Sands Game Reserve SSGR of 68,000 ha with an 50km unfenced boundary to Kruger National Park) and one in Zimbabwe (Savé Valley Conservancy’s 65,000 ha Sango Ranch).

About 42 commercial lodges operate in SSGR (a quick search on the internet confirms this). The daily capacity in visitor beds is about 780 guests. Several private lodges are also located in the reserve. Boreholes provide an abundance of water throughout the year and hold wildlife in the area. The entire Sabi Sands is used exclusively for photographic safaris - consumptive use, for example to provide meat rations from the abundant impala herds, or hunting is not permitted.

In addition to the tourists, there are constantly about 1,400 to 1,500 lodge employees present in the reserve, plus the SSGR workers maintaining the SSGR infrastructure. There is also considerable daily traffic from outside to deliver supplies to the lodges. The high end lodges offer amenities like air conditioning, wine cellars, luxury spas, gyms, individual splash pools and so on. During full occupancy (Christmas, Easter and other school holidays) round about 120 vehicles may be busy on morning and evening game drives. Light pollution at night (spot-lighting), time limits of 10 to 15 minutes per vehicle at ‘special’ sightings (leopards, wild dogs, lions, etc), constant radio traffic to exchange sighting locations, speeding with game drive vehicles to reach sightings, and off-road driving are common occurrences.

The privately owned Sango Ranch in Savé Valley Conservancy (SVC) operates on a combination of hunting, falconry and photographic safari basis. Sango accommodates 8 visitors in the main lodge and 8 in the tented camp. Through the initiative of the SVC landowners, wildlife numbers have grown exponentially. The SVC now holds more than 4,000 buffalo, 1,600 elephants, over 160 black and white rhinos, abundant lion and leopard populations plus a wide variety of autochthonous antelope species in healthy numbers. Artificial water points are kept to a minimum. Annual quotas for hunting as well as for meat provisions for staff and surrounding communities are significantly below the annual population growth rates. Quotas are established with the aid of aerial surveys and scientific ground surveys. Hunting - both daily rates and fees for hunted animals - provides an important contribution to the Sango Ranch budget. Game capture of overabundant

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7 This editorial draws heavily on comments and suggestions supplied by a number of wildlife conservation experts from African countries and around the world.
species and relocation to depleted areas outside the conservancy are usually done on a pro-bono basis and add cost instead of providing income.

It is obvious that the annual revenue from wildlife tourism of the lodges in the Sabi Sands is vastly greater than the combined tourist and hunting revenue of Sango Ranch. The ecological footprint of several scores of visitors and hunters on Sango is minimal. In contrast, the abundance of lodges in Sabi Sands, the dense network of roads and tracks, the high annual number of visitors (ca.100,000 per year, based on 40% occupancy) and the presence of probably around 60 game viewing vehicles (based on average occupancy) leave a broad and lasting ecological foot print.

Despite the vastly diverging revenue, the use model applied on Sango is highly important for conservation of this out-of-the-way land and its entire flora and fauna. It is also of paramount significance for the communities living on the borders of Sango Ranch - for employment and family income, meat supplies, empowerment through conservation education, and so on.

Whilst Sango Ranch is in a remote part of Zimbabwe, the highly accessible Victoria Falls area receives 150,000+ tourists a year. Not 10 km away is Zambezi National Park visited by only a tiny fraction of these tourists; the park barely generates sufficient income to cover operating expenses. The distance of Kazuma National Park to Victoria Falls is ca. 100 km; hardly any tourists visit this park. Similarly, very few photo-tourists come to the Hwange CAMPFIRE communal area; income from tourists is minuscule compared to the income from selling hunting rights. Regulated hunting takes place in the Matetsi Safari Area on the doorstep of the Victoria Falls Tourist Mecca. Matetsi generates sufficient income from hunting to cover its operating expenses. One of the hunting blocks was converted to a photographic only block some years ago; despite significant investments it is still struggling to find its feet.

In Namibia many conservancies engage in hunting AND photographic tourism. Peer reviewed research shows that if trophy hunting were to cease, photo tourism operations would no longer be economically viable. Naidoo et. al. (2016) analyzed 77 CBNRM registered conservancies in Namibia; without hunting revenue only 16% of the conservancies would survive economically. The impact would be increased vulnerability of some 50,000 km² of wildlife habitat. Without photo tourism revenue, 59% of conservancies remain viable.

A win-win solution - not only in Namibia - would be the combination of consumptive (extractive) and non-consumptive (non-extractive) tourism under strict interaction protocols. Adequate importance needs to be placed on an ecologically acceptable foot print of all safari operations, rather than the either/or proposition forwarded by animal rights extremists.

Hunting revenue remains a sustainable way to fund public agencies like Zimbabwe Parks and Wildlife and the Wildlife Department in Tanzania. This is also valid for Namibia, Mozambique and Zambia; the agencies cover the lion’s share of their operating budget from hunting fees. Consequently hunting helps conserving the wildlife enjoyed by photo tourists and hunters alike. Hunting also provides most and efficient community engagement in the greatest number of remote areas of Africa, where tourist do not venture!

Most hunting safari operators field anti-poaching units within their hunting concessions costing them millions of dollars annually. Zambezi Delta Safaris in Mozambique and the Dande Anti-Poaching Unit in Zimbabwe, as well as the safari operators in Tanzania are standout examples.

Another little-known Africa conservation success story is the relationship between safari hunting of mountain nyala, local communities and the conservation of Afro-montane forests in Ethiopia. The mountain nyala is one of the most highly prized big game species in Africa, and safari hunting plays a vital role in the conservation and management of the species and its habitat in rather

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remote areas not frequented by the average tourist. Even where the habitat had been altered by settlement and agriculture over the years hunting operators remained and assisted in regenerating the endemic heather and mountain forests which are essential for mountain nyala. Murulle Foundation\textsuperscript{10} initiated potential mountain nyala habitat surveys and developed triple-bottom line conservation programs. Community benefits and ownership all but eliminated poaching. Large populations of mountain nyala are now found outside of national parks in the hunting concessions of the Bale, Arsi and Harrar mountains.

Hunting areas in east and southern Africa are usually situated in marginal areas with monotonous landscapes, drab vegetation, and low wildlife carrying capacity. They are viable for hunting, but simply not suitable for nature based tourism. Landscapes with diversified natural scenery and abundant game herds are not typically found in hunting areas - such draw-card reserves have long since been converted into exclusive photo safari concessions. This is rarely admitted by those who oppose hunting.

If nature based tourism were a viable business in hunting areas, it is likely someone would be engaged in it. The fact that there is no engagement of the "eco-tourism" sector says everything. Most of Botswana's former hunting concessions fall into this category. Photo safari operators failed appallingly taken over most hunting blocks after hunting was closed in 2014. The cost of this failure fell upon local communities, who were deprived of their livelihood.

Murray's report falls abysmally short looking at the entire picture when it comes to the wildlife-based economies of the countries he surveyed. He compares the economic contribution of hunting with the economic contribution of tourism\textsuperscript{11}. This approach is full of serious methodological flaws and Murray's macro-scale-based conclusions are grossly and probably intentionally misleading, since he omits important micro-scale dynamics and fails to look at the important local impact of hunting-generated revenue.

Murray interprets legitimate WTTC figures in a worryingly manipulative manner. As to be expected, his conclusions fully reflect the line of thought of his contractors from Humane Society International, an organization with a stated anti-hunting agenda. Murray's report has so many glaring shortcomings that it cannot be viewed as comprehensive, objective or credible, and its conclusions cannot be accepted as valid.

The relevant comparison basis should be the proportionate revenue from hunting and from other tourism flowing to local landowners and land custodians, wildlife managers and communities. It is this funding which conserves land and wildlife! Taking total tourism as the comparison is quite ridiculous\textsuperscript{12}. Moreover Murray fails to recognize that high-end eco-tourism is only feasible in a limited range of areas. It requires proximity to transport routes, scenic landscapes, iconic wildlife at sufficient densities, political stability, absence of disease risks, infrastructure, capital, training, etc. Murray is silent on the limitations of eco-tourism and does not offer any solutions as how to generate benefits and incentives for conservation in the vast African wildlife areas where tourism is not practicable.

\textsuperscript{10} Murulle Foundation was co-founded by Dr. Paul Evangelista of Natural Resource Ecology Laboratory (NREL) and Jason Roussos, professional hunter and operator of Ethiopian Rift Valley Safaris. The Foundation works to build an enduring coexistence of local people and threatened ecosystems. See also the documentary \textit{Custodians of Wilderness: Ethiopia (2017)} from The Conservation Imperative on Vimeo.

\textsuperscript{11} Murray probably used the UN World Travel and Tourism Council (WTTC) approach of drawing figures from country Tourism Satellite Accounts to come up with the tourism sector's economic contribution. If this is the case, then one should bear in mind that \textit{these figures lump all tourism and travel participants (including business travel and day visits of people coming from a neighboring country to another country to purchase goods) as “tourists”}. Consequently, nature based tourism is only a small portion of the overall tourism and travel industry. It is very difficult to disaggregate out from the much larger contributions of business and day travelers to a country.

\textsuperscript{12} Only about 10-15\% of tourists categorized via the WTTC approach are coming as nature based tourists to Namibia. Thus, the purported economic tourism contributions (while valid by the WTTC) would be heavily over-stated when compared to the contributions of visiting hunters.
It is problematic to get into a debate about the economics of hunting in the first place, as hunting will never make impressive economic contributions to a country at GDP level. As indicated, Murray should rather look into the changes to incomes of African communities as a welfare measure. Using the welfare economic metric will take into account the non-financial benefits accrued by many communities from hunting, including the community development work required from hunting operators under concession agreements in many countries.

Murray and HSI miss recognizing the real conservation challenge in Africa: wildlife and wild land needs to be made profitable for as many local people as possible! Rural communities cannot be expected to just be custodians; they have to be invested shareholders and beneficiaries.

Regulated and conservation-conscious hunting positively influences landowner attitudes and values towards wildlife by providing traditional community and private owners with incentives to live with wildlife and promote wildlife as a land-use. Such attitudinal changes are fundamental for keeping wildlife on the vast tracts of habitat outside Africa's national parks that will never be suitable for tourism. Murray’s report fails to provide alternative suggestions how these immense tracts of land currently managed for hunting can be financed or justified as wildlife habitat in economic terms, if hunting was not permitted.

Unfortunately, it does not matter how many times Murray’s flawed paper (not peer-reviewed, and unlikely to survive a standard academic peer review process) is refuted by experts. It will be quoted again and again by those on the mission supported by the paper’s contractors. HSI - totally opposed to any form of hunting - misses the real context of conservation in Africa and will be spreading Murray's report to a broad general audience.

I am afraid that it will be believed uncritically by most of readers.

Vol 15/01 (2017)
News from and about Africa
Compiled by Gerhard R Damm

Tanzania

27 Tanzanian safari operators maintain year-round anti-poaching operations and deploy anti-poaching units addressing the concession’s specific poaching threat. All anti-poaching units of six to eight members contain at least one government game scout because only the scouts have the mandate to arrest poachers. Operators fund their anti-poaching primarily from hunting revenue and secondarily from hunter contributions. From 2013 to 2015, the 27 operators spent $6.7 million on anti-poaching and road opening and paid over $28 million in government fees which fund the Tanzania Wildlife Division’s operating budget and ca. 80% of the ordinary government anti-poaching program. (Source Conservation Force Tanzania Hunting Operator Enhancement Report)

Zambia - USFWS

Zambia submitted lion data to USFWS together with an extensive non-detriment finding for lion including the conservative lion quota as well as the adoption of age restrictions to achieve a positive enhancement finding of the USFWS.

Zimbabwe

The High Court in Bulawayo has thrown out charges against Theodor Bronkhorst, who allegedly assisted American dentist Walter Palmer to kill Zimbabwe’s most famous lion. Bronkhorst’s lawyer said there was no full trial but the [High Court] judge had decided that the charges – as they were brought at the time – were not properly constituted.

Zimbabwe - USFWS
USFWS has not yet acted on lion or elephant permit applications from Zimbabwe. But Zimbabwe authorities and FWS met multiple times during the CITES Conference in early October 2016. Zimbabwe agreed providing details from the new Elephant Management Plan. Conservation Force has contracted with an elephant expert to prepare prioritized action items from the Action Plan.

Zimbabwe - USFWS

The CAMPFIRE Program review was mandated by the Zimbabwe government and is funded by the European Union. “We are [funding] an evaluation based on a broad consultation of a wide range of stakeholders, which, we hope, will lead to some recommendations to be validated CBNRM stakeholder conference in early 2017,” said EU Ambassador van Damme, adding that the “EU is prepared to help the Government to comply with the new regulations, thereby ensuring a constant flow of trophy hunting revenues which can be shared with the communities and reinvested in conservation and the fight against poaching and wildlife trafficking”.

Zimbabwe - USFWS

Zimbabwe will submit an updated non-detriment finding for lion to USFWS. USFWS implied that they may be making an enhancement finding for Zimbabwe similar to the one made for South Africa. Conservation Force has submitted hundreds of pages of information showing the benefits of well-managed lion hunting in Zimbabwe, including several reports from hunting operators detailing their anti-poaching and community support, with data supporting a positive enhancement finding, and Zimbabwe’s lion quota reduction, adoption of age restrictions and new lion hunting regulations.

Vol 15/02 (2017)

People Don’t Care How Much You Know Until They Know How Much You Care!

Gerhard R. Damm, Editor and Publisher of African Indaba

President Teddy Roosevelt said more than 100 years ago “People don’t care how much you know until they know how much you care”. This statement aptly describes the present status of the relationship between hunters and non-hunters.

Anti-hunting activism un-fettered by scientific facts and logic reasoning is at an all-time high. In the current emotionally charged social media free-for-alls constructive debates have been replaced by non-contextual 140 character tweets bedeviling hunting. Mouse-clicked likes and dislikes require minimal personal effort, but give instant gratification of individual "feel-good" moments. This seriously compromises wildlife conservation and habitat preservation!

Cohesive counter-measures of hunting associations and pro-use groups are scarce, often amateurish, and mostly read only by the own constituency. Individual hunters more often than not shrug their shoulders in a "we-cannot-change-them-anyhow" attitude!

The hunters' and the non-hunters' concerns for habitats and wildlife, although congruent in many if not most aspects, are not sufficiently cross-referenced and explained in context. More of the same will not lead to change. It will not make society aware of how much hunters care! It's time that we recognize that we need innovative change! Especially in our outreach to the Millennial13

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13 The Millennial Generation reached adulthood around the turn of the 21st century and make up nearly one-fourth of the total population in North America and Europe.
generation. Hunting is not part of their current conversation\textsuperscript{14}. Non-hunting Millennials are largely motivated by individual animal welfare - in the worst case by animal rights doctrines - rather than by holistic biodiversity conservation. Reaching out to Millennials means going into an open forum; it will not be a one-way conversation and we must be well prepared to keep up with their pace.

A recent example of well-reasoned outreach comes from a non-hunter, who has a deep understanding for nature and natural processes. This sterling explanation can be found under "Interesting Articles For African Indaba Readers" in this African Indaba issue. I don’t think I have ever encountered a better rationalization of the concept of conservation through sustainable use than Dr Chris Brown’s\textsuperscript{15} thoughts and excellent logic presented in "The important link between hunting & tourism in Namibia - both working for conservation". Please make sure that you read the entire article. It contains lots of ideas which should be used in the dialogue with non-hunters.

Dr. Brown elaborates the concept originally presented by Roosevelt, ardent hunter and passionate conservationist that Roosevelt was. Throughout his life he did the single most important thing to conserve wildlife: he enthusiastically fought to protect wild landscapes; like so many of us, on every continent.

Today our super-saturated societies are overloaded with fact-based and, with increasing tendency, spurious information. In this conundrum hunters and conservationists battle to make their fellow citizens understand and accept that hunting plays an important role in the lives of scores of million people around the globe.

Hunters, in their attempts at justification, are often hiding behind a smokescreen of concern for the well-being of rural communities, habitat preservation arguments, animal welfare and conservation and other rationalizations. These are valuable by-products of hunting, but most likely not our true motives when we venture outdoors to hunt. Our underlying motives are neither conservation, social outreach, or economics; nor are they philanthropic. Let’s do some soul searching. Why do we hunt in the 21st Century? What does hunting mean from an individual hunter’s perspective? Honest answers may be a game changer!

Our hunting heritage goes back to mankind’s origins in prehistory. Hunting has influenced our development, cultures, religions and social interactions. The deep relationship between hunting and human development is inescapable - from prehistory to the second decade of the 21\textsuperscript{st} century. Hunting was and remains one of the most intense form of integration or re-integration with nature. When a hunter stalks the prey, all senses sharpen and provide an interconnected range of exciting and intriguing experiences before, during and after the hunt!

I believe that we hunt because hunting gives us sensual archaic experiences. Hunters experience nature unfiltered - as active participants and not mere observers. This is good and right, and doesn’t need to be justified! But it needs to be explained!

\textsuperscript{14} See article 'Culling To Conserve: A Hard Truth For Lion Conservation' with Dr. Byron du Preez’ remarks on ecosystem conservation in this issue of African Indaba  
\textsuperscript{15} Dr. Brown is the CEO of the \textlink{Namibian Chamber of Environment}
The process of the hunt is undeniably compelling. To begin with, one of the most fascinating aspects of hunting is the convergence of hunter and prey towards an uncertain conclusion. In order to survive and prosper in the coming decades, hunting must be understood as an holistic experience. This experience includes learning about the intended prey and about the lands where wildlife dwells within a complex ecosystem. Of course this also includes learning from and respecting the people who live with wildlife in the hunting areas. It embraces the preparation for the hunt, the stalk, the approach, the matching of senses, and the final moment of truth when the animal is within reach of the deadly bullet or arrow. Just think of all the emotions before and after this moment, which may end with a kill or the escape of the quarry. Our expectations, elations, remorse or regret, and deep satisfaction or disappointment combine to a heady cocktail indeed!

Consider the emotional mélange when you relive a hunt, no matter how it ended. The memories in the stories, diaries and photos; and precious experiences recreated by looking at the horns and antlers of animals ethically hunted and tastefully displayed. Relive the working of honestly harvested venison and the preparation of delicious meals for friends and family! As modern urbanites are discovering the joy of cooking with wild ingredients and the wholesomeness of locally sourced wild venison, we kill individual ones! Non-hunters take ultimate responsibility and don’t use surrogates in the process of the hunt is undeniably compelling. In order to survive and prosper in the coming decades, hunting must be understood as an holistic experience. This experience includes learning about the intended prey and about the lands where wildlife dwells within a complex ecosystem. Of course this also includes learning from and respecting the people who live with wildlife in the hunting areas. It embraces the preparation for the hunt, the stalk, the approach, the matching of senses, and the final moment of truth when the animal is within reach of the deadly bullet or arrow. Just think of all the emotions before and after this moment, which may end with a kill or the escape of the quarry. Our expectations, elations, remorse or regret, and deep satisfaction or disappointment combine to a heady cocktail indeed!

During a hunt an animal walking around alive and well in one moment is reduced to a dead carcass after the shot. Have the courage elucidating the apparent paradox that we love animals yet we kill individual ones! Non-hunting nature lovers have understandable difficulties accepting this, since the act of killing animals has effectively been eliminated from the conscience of urban dwellers. Consequently large parts of today’s society see the hunter merely as killer. The truth is that hunters take ultimate responsibility and don’t use surrogates in our intense and participatory experience of nature’s life and death continuum.

We also have to adjust to the impact we have on biodiversity, other creatures and on our non-hunting fellow citizens. Our archaic hunting heritage is, therefore, tempered with limitations drawn by modern conservation biology, formal rules, conscious self-restraint and individual ethics.

In the prevailing urban nature remoteness it is rarely appreciated that the keys to sustainable wildlife management are habitat preservation and the conservation needs of interacting multi-species animal populations. Protecting individual animals is of little conservation relevance.

Building bridges to the silent majority of non-hunting fellow citizens requires individual involvement, preparation and the help professional communicators to formulate truly persuasive messages. These messages should contain factual and psychological evidence, an honest analysis of

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16 See the suite of articles "Encore: Canned Lion Breeding And Shooting"; "The Color Game Is Over"; "Defining Fair Chase Behind A High Fence"; and "Boone And Crockett Club On Trophies" in this Issue of African Indaba
our motives, and the reasons which motivate non-hunters to express understanding for or rejection of hunting.

Let us explain that hunting means for us not just a set of science-supported facts. Hunting encompasses much more: a participatory nature experience, individual sets of values and promises, stories of the outdoors filled with emotions of awe and wonder, live-long learning processes and the simple joys of escaping to the great outdoors. Combined with evidence from conservation biology as well as from economic and social sciences like the examples Dr. Brown presented, we have an excellent tool-box at our fingertips!

What if we started a concerted effort of 'branding' hunting? What if we conclusively explained our urge to be in nature as authentic participants in the eternal circle of life and death? What if we aligned our messages with the emotions of our non-hunting fellow citizens? What if we seek and actively nourish the conditional support of a wide range of scientists like our friends from the global sustainable use scientist network of IUCN18?

Providing education and proper perspective is conservation leadership. Therefore, hunters must create cross-cutting alliances with those who have common conservation objectives. Hunters and non-hunters have, as a rule, identical conservation goals. If we concentrate on what unites us, we can trigger worldwide conservation actions which cut through to the public, the corporate world and to policy makers.

Hunting isn't just picking up a gun and shooting an animal. Our actions in the field must bring honor to the wild places and the wild prey we pursue. Reflect on this and communicate your honest reasons and answers within the circles of your friends, at the workplace, and especially whenever you have a chance to talk to non-hunters. It will require dedication to overcome the obstacles. But we have no option other than this to live up to Roosevelt's challenge: Let people know how much a genuine hunting experience makes us care for wild landscapes and biodiversity.

The hunter who accepts the sporting code of ethics keeps his commandments in the greatest solitude, with no witness or audience other than the sharp peaks of the mountain, the roaming cloud, the stern oak, the trembling juniper, and the passing animal.

José Ortega y Gasset (1883 - 1955)

Vol 15/02 (2017)
The Baby And The Bathwater - Trophy Hunting, Conservation And Rural Livelihoods
R. Cooney, C. Freese, H. Dublin, D. Roe, D. Mallon, M. Knight, R. Emslie, M. Pani, V. Booth, S. Mahoney and C. Buyanaa*

A new paper by IUCN experts presents substantial evidence that the controversial practice of trophy hunting can produce positive outcomes for wildlife conservation and local people. Download the PDF at Unasylva 249, Vol. 68, 2017/1

18 See article 'The Baby And The Bathwater- Trophy Hunting, Conservation And Rural Livelihoods' in this issue of African Indaba
Trophy hunting is the subject of intense debate and polarized positions, with controversy and deep concern over some hunting practices and their ethical basis and impacts. The controversy has sparked moves at various levels to end or restrict trophy hunting, including through bans on the carriage or import of hunting trophies. In March 2016, for example, a group of members of the European Parliament called (unsuccessfully) for the signing of a Written Declaration calling for examination of the possibility of restricting all imports of hunting trophies into the European Union. Although there is a pressing need for the reform of hunting governance and practice in many countries, calls for blanket restrictions on trophy hunting assume that it is uniformly detrimental to conservation; such calls are frequently made based on poor information and inaccurate assumptions.

Here we explain how trophy hunting, if well managed, can play a positive role in supporting conservation as well as local community rights and livelihoods, and we provide examples from various parts of the world. We highlight the likely impact of blanket bans on trophy hunting and argue for a more nuanced approach to much needed reform.

*Rosie Cooney, Chair of the International Union for Conservation of Nature (IUCN) Commission on Environmental, Economic and Social Policy (CEESP)/Species Survival Commission (SSC) Sustainable Use and Livelihoods Specialist Group (SULI) and Visiting Fellow at the University of NSW, Australia. Curtis Freese, Marco Pani and Vernon Booth are independent consultants and members of the IUCN CEESP/SSC SULI. Holly Dublin, Chair of the IUCN SSC African Elephant Specialist Group, Senior Advisor IUCN East and Southern Africa Regional Office, and member IUCN CEESP/SSC-SULI. Diliys Roe, Principal Researcher and Team Leader (Biodiversity) at International Institute for Environment and Development and member IUCN CEESP/SSC-SULI. David Mallon, Co-chair IUCN SSC Antelope Specialist Group and member IUCN CEESP/SSC-SULI. Michael Knight, Co-chair IUCN SSC African Rhino Specialist Group and member IUCN CEESP/SSC-SULI. Richard Emslie, Scientific Officer with the IUCN SSC African Rhino Specialist Group. Shane Mahoney, CEO Conservation Visions and Deputy Chair for North America IUCN CEESP/SSC-SULI. Chimeddorj Buyanaa, Conservation Director, WWF Mongolia Program Office.

Vol 15/02 (2017)
Culling To Conserve: A Hard Truth For Lion Conservation
Michael Schwartz

People that don’t live in Africa tend to learn about wildlife conservation in easy-to-understand terminology. But safeguarding animal species like lions is often more complex than mainstream media sound bites would have their audiences believe.

The National Post recently reported that management from Zimbabwe’s Bubye Valley Conservancy was considering a controversial move to cull upwards of 200 lions out of a rough population of 500 in order to ensure the reserve’s wildlife biodiversity.

It was also reported that since the growing calls to end trophy hunting, due in large part to the killing of Cecil the lion in Zimbabwe’s Hwange National Park last year, conservancies like Bube are no longer seeing the funding necessary to adequately cover conservation costs, which includes fence maintenance, financing local schools and health clinics, and providing meat to local people.

Given the many challenges conservationists face in Africa, coupled with culling and trophy hunting being such contentious issues, I decided to reach out to Dr. Byron du Preez, a Bubye Valley Conservancy project leader and member of the Wildlife Conservation Research Unit (WildCRU), in the Department of Zoology at Oxford University.
Specifically, I was hoping for clearer answers regarding the potential paradox that increasing calls for hunting bans in Africa have on existing lion populations, and how that may be playing out within the recent culling conundrum.

Fortunately, Du Preez went one step further by clearing up what was initially reported, clarifying the proposed cull, explaining how culling works, and elaborating on the dangers of promoting single species management. The following is his official statement:

Clarification on the Proposed Lion Cull

I am an independent scientist working on the Bubye Valley Conservancy, focused on lion ecology, which actually means just about every aspect of the ecosystem, such is the influence that lions have. I am neither pro- nor anti-hunting. I simply focus on practical conservation solutions that actually work in the real world.

We are hopeful that we will be able to translocate some lions, although all previous attempts to translocate lions out of the Bubye Valley Conservancy have been derailed by factors entirely out of our control. However, if the species was in as much trouble as the sensationalist reports like to focus on, one would think that it would be a lot easier to find new homes for these magnificent animals than it actually is. ‘There is basically no more space left in Africa for a new viable population of lions.’ The fact remains that habitat destruction is their biggest enemy, and there is basically no more space left in Africa for a new viable population of lions.

The Science of Culling

A cull is not a once-off fix (neither is translocation, nor contraception), but would be more of an ongoing management operation conducted on an annual basis. When given adequate space, resources, and protection, lion populations can explode, such as they have done on the Bubye Valley Conservancy.

Reducing numbers to alleviate overpopulation pressure does nothing to permanently solve the problem, nor halts the species’ breeding potential; [it] only slows it down for a relatively short time until their population growth returns to the exponential phase once again.

Culling is a management tool that may be used for many species. That includes: elephants, lions, kangaroos, and deer, basically animals that have very little natural control mechanisms other than disease and starvation, and that are now bounded by human settlements and live in smaller areas than they did historically. As responsible wildlife managers who have a whole ecosystem full of animals to conserve (not just lions), we have therefore discussed culling as an option for controlling the lion population, but have agreed that, for now, this is not necessary just yet and we will continue to try and translocate these animals until our hand is forced.

As already mentioned, there is very little space left in Africa that can have lions but doesn’t already. Also, where lions do occur, especially in parks and private wildlife areas, they often exist at higher densities than they ever did historically. This is mainly due to augmented surface water supply resulting in greater numbers of non-migratory prey that now no longer limit lion nutrition and energy availability, allowing the lion population to rapidly expand. For example, successful hunting to feed cubs all the way through to adulthood and independence is one of the greatest stresses for a lion, and often results in dead cubs and reduced population growth. In turn, a high density of lions can severely reduce the density of their prey, ultimately leading to the death of the lions via disease and starvation—far more horrific than humane culling operations conducted by professionals.

The Dangers of Single Species Management

Lions are the apex predator wherever they occur, and as such exert a level of top-down control on the rest of the ecosystem. Lions prey on a wide variety of species, and we are starting to
see declines in even the more common and robust prey such as zebra and wildebeest—not to mention more sensitive species such as sable, kudu, nyala, warthog, and even buffalo and giraffe.

Apart from their prey, lions are aggressively competitive and will go out of their way to kill any leopard, cheetah, wild dog, or hyena that they encounter, and have caused major declines in these species, not just on the Bubye Valley Conservancy, but elsewhere in Africa where lion densities are high. According to the International Union for the Conservation of Nature (IUCN), cheetah are listed as vulnerable, and wild dogs are endangered.

It is easy to simply focus on the number of lions remaining in Africa that has fallen steeply over the last century from ~100,000 to ~20,000 today, but which is directly linked to the reduction in available habitat. Simply focusing on increasing the abundance of one species at the cost of another cannot be considered a conservation success—assuming that holistic conservation for the benefit of the entire ecosystem is the end goal—no matter how iconic that species is. Luckily, lions kill lions, resulting in more lion mortality than any other species—including man on the Bubye Valley Conservancy—and in an ideal world the lion population would level off at a putative carrying capacity where lions control their own numbers (deaths from conflict equal or exceed new births). However, it is possible and probable (man-made water points increase the carrying capacity of — and therefore also the competition and conflict between—all wildlife species) that this would still be at the cost of certain other sensitive species.

Ecosystem stability is related to size (and conversely ecosystem sensitivity is inversely related to size) and smaller areas need to control their lion numbers a lot more carefully than large areas such as the Bubye Valley Conservancy, which is over 3,000 square kilometers [1,160 square miles]. In fact, small reserves in South Africa alone culled over 200 lions in total between 2010 and 2012, according to the 2013 report from the Lion Management Forum workshop.

**Understanding Carrying Capacity**

The Bubye Valley Conservancy does not rely on trophy hunting to manage the lion population. I will discuss the economics of hunting in brief. The most recent and robust lion population survey data calculate a current lion population on the Bubye Valley Conservancy of between 503 and 552 lions (it is impossible to get a 100 percent accurate count on the exact lion number — which also changes daily with births and deaths).

Carrying capacity is an extremely fluid concept, and changes monthly, seasonally, and annually depending on all sorts of factors including rainfall, disease (both predator and prey), and economics. It is estimated that 500 lions eat more than US$2.4 m. each year (meat value calculated at very conservative $3/kg—compare that to the price of steak in a supermarket, and then remember that the Bubye Valley Conservancy used to be a cattle-ranching area, and if wildlife becomes unviable, then there is no reason not to convert it back to a cattle ranching area once again).

To give the question of carrying capacity a fair, if necessarily vague, answer, I would personally estimate that the upper carrying capacity of lions on the Bubye Valley Conservancy would be around 500 animals—assuming that they are allowed to be hunted and therefore generate the revenue to offset the cost of their predation.

Remember, lion numbers can get out of hand. And if there was no predation, then thousands upon thousands of zebra and wildebeest and impala would need to be culled to prevent them from over grazing the habitat, leading to soil erosion, starvation, and disease. The ecosystem is a very complex machine and whether anyone likes it or not, humans have intervened with cities, roads, dams, pumped water, fences, and livestock. The only way to mitigate that intervention is by further, more focused, and carefully considered intervention, for the sake of the entire ecosystem.

It is important to bear in mind that the wildlife here, and in the majority of other wildlife areas in Africa (hunting areas exceed the total area conserved by Africa’s national parks by more than 20 percent), does not exist as our, or anyone else’s, luxury.
The Bubye Valley Conservancy is a privately owned wildlife area, or to put it another way, it is a business. The fact that it is a well-run business is the reason why it is one of the greatest conservation successes in Africa, converting from cattle to wildlife in 1994 (only 22 years ago) and now hosting Zimbabwe’s largest contiguous lion population at one of the highest densities in Africa, as well as the third largest black rhino population in the world (after Kruger and Etosha).

This is only possible because it is a business, and is self-sufficient in generating the funds to maintain fences, roads, pay staff, manage the wildlife, pump water, and support the surrounding communities—all extremely necessary factors involved in keeping wildlife alive in Africa.

Michael Schwartz is a freelance journalist and African wildlife conservation researcher. Several of his articles have been published in African Indaba

Vol 15/02 (2017)

Prides, Protection And Parks: Africa's Protected Areas Can Support Four Times As Many Lions

Panthera

Africa's protected parks and reserves are capable of supporting 83,000 wild lions if well funded and managed, according to a new report led by Panthera. Published in Biological Conservation\(^{19}\), the study shows that populations of the African lion and its prey species are drastically below their natural potential inside most of Africa's protected areas (PA). In recent years, lion numbers have declined steeply. Some estimates suggest as few as 20,000 wild lions remain in all of Africa, compared to 30,000 that existed just two decades ago. Yet, the study indicates that with sufficient global support for African conservation efforts, the continent's protected areas could support as many as 83,000 free-ranging lions.

Panthera Research Associate and Wildlife Conservation Network Conservation Initiatives Director, Dr. Peter Lindsey, shared, "Africa's incredible protected areas hold the key to securing the future of lions and several other wildlife species, and can yield significant benefits for people. African governments have set aside enough space to conserve lions effectively—we just need to find ways to enable those areas to be funded sufficiently and managed effectively. While a diverse set of approaches are needed to achieve lion conservation, it is clear that investing in improved management of PAs has particular potential to boost the conservation prospects for lions."

Lindsey continued, "Encouragingly, there are more than just biological reasons for investing in PAs. Well-funded protected areas, and especially those with lions, can play a critical role in developing tourism industries whose revenues can help to grow and diversify economies and create jobs. In addition, protected areas also play essential roles in providing ecosystem services, such as watershed protection. By investing sufficiently in Africa's protected area network, the global community has the opportunity to halt and reverse the decline in lion numbers."

The study found that less than one third of the 175 parks and reserves examined are currently conserving lions at more than 50% of their 'carrying capacity'—an ecological term for the natural population levels animals reach if human threats are minimal. Parks were in slightly better shape for lion prey, with around 45% of surveyed protected areas conserving herbivores at over 50% of their carrying capacity.

The illegal bushmeat trade stands out as the most severe and prevalent threat facing lions and many other wildlife species in Africa's protected areas. Following closely behind are a multitude of threats, including human-lion conflict, encroachment of PAs by humans and livestock and in some cases, the emerging threat of direct poaching of lions for the illegal wildlife trade.

Panthera and partner scientists found that adequate management budgets and management capacity are essential pre-requisites for successfully conserving lions in PAs, as they permit effective law enforcement and other critical conservation initiatives. Those protected areas dedicating the use of their land primarily for photo-tourism operations are also associated with the greatest success in conserving lions and their prey.

Today, sub-Saharan Africa's tourism industry, supported by dozens of parks and reserves, is valued at $25 billion dollars, compared to the $20 billion a year illegal wildlife trade that is increasingly targeting Africa's big cats and wildlife for their precious parts. Panthera also recognizes the importance of making sure that local people have a stake in and stand to benefit from PAs and big cat conservation. Simply put, managing PAs and protecting wildlife will be cheaper and easier if local people are supportive, and have a stake in the process. Senior Lion Program Director, Dr. Paul Funston, stated "There is just no replacement for large protected areas that invest adequately in management and protection of their lions. Very few areas in Africa meet these needs, and those that do are pure gold for lions. They are places where tourists can see lions really being lions in all the amazing facets of their behavior, and where lions properly fulfill their ecological role." Funston continued, "Protected areas are at the heart of the formula to save Africa's lions, and to ensure the species lives on, lions and their wild landscapes require nothing short of a wealthy and immediate investment from the global community—everyone from donors in New York City and African nations to international governments, corporations, foundations and NGOs who want to be a part of the solution in saving one of our planet's most remarkable wild animals."

While in many ways bleak, the lion's future glimmers with hope. Panthera's President and publication co-author, Dr. Luke Hunter, noted, "Many African nations have allocated truly massive swaths of land as protected parks and reserves. However, for Africa's vast PA network to fulfill its potential for conserving lions and other species, there is an urgent need to greatly escalate funding and capacity to effectively manage those parks. That will require a renewed commitment, both from African governments and the international community."

Vol 15/02 (2017)
Encore: Canned Lion Breeding And Shooting
Gerhard R Damm

The advocates of captive lion breeding and canned lion shooting often claim that these practices have broader conservation outcomes, such as a demand reduction in the hunting of wild lion and positive conservation outcomes as the reintroduction of captive bred lion into the wild. Hunter et al. (2012 in Oryx, 47(1), 19–24) already stated that the captive breeding and shooting industry lacks any capacity to contribute to in situ lion conservation20, with the dubious exception that the industry has been trying to bribe its way towards recognition by offering rather substantial financial "conservation contributions" for each killed (or 'hunted' as they say) captive bred lion!

In this issue of African Indaba the article "Why Men Trophy Hunt" highlights at least one of the reasons why there is still a market for South African lion breeders and the associated hunting

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20 The availability of wild founder lions, the unsuitability of captive lions for release and the evidence-based success of wild–wild lion translocations shows that captive-origin lions have no role in lion restoration. Compare the M. Schwartz' article 'A Hard Truth For Lion Conservation' in this issue of African Indaba.
operators. Fortunately, the U. S. Fish & Wildlife Service closed this loophole last year. The lion breeders responded with lobbying the SA government to establish a quota for lion bones to be exported to Asia. If this is legal and sustainable, I have no reasonable argument against it, although a decidedly negative opinion. After all we also 'produce' beef, pork, lamb and chicken this way; but just as these latter activities—it has nothing to do with conservation, let alone hunting! It is worthwhile re-reading the IUCN resolution WCC-2016-Res-013-EN "Terminating the hunting of captive-bred lions (Panthera leo) and other predators and captive breeding for commercial, nonconservation purposes" (pages 40-41), overwhelmingly passed at the IUCN World Conservation Congress Hawai‘i in September 2016. This resolution was accepted as official position of the CIC International Council for Game and Wildlife Conservation by the CIC Executive Committee. In any case, all professional hunting associations in Africa and most national and international hunting associations have distanced themselves from shooting captive bred lions!

Vol 15/02 (2017)
News From And About Africa
Compiled by Gerhard R Damm

African Lion, Tanzania & the European Union

Hunters from the EU are now able to import lion trophies from Tanzania. In November 2016 the EU’s Scientific Review Group (SRG) issued a positive finding for African lion from Tanzania. A group of three SRG experts traveled to Tanzania in August 2016 to assess the sustainability and management of lion trophy hunting. The SRG experts concluded that despite challenges, hunting is well-regulated in Tanzania. The continued functioning and success of Tanzania Wildlife Authority (TAWA) relies heavily on income derived from the hunting sector and significant revenue goes to the Districts and procedures are in place for sharing benefits with the local communities. The team also evaluated whether the areas would be better served by devoting them to photo tourism and concluded that the concessions are more suitable for hunting. Human-wildlife conflict was identified as a major issue affecting lions – not hunting. Lions are a key species to attract hunters, and lion hunters spend an average $100,000 US. Lion hunting targets only male lions six years or older and is strictly monitored (TAWA observers accompany hunters, and hunt evaluation forms, photos, and samples be submitted to TAWA; including anonymous skull inspection and measurement, x-raying of tooth cavities, and ageing of all lions hunted by independent experts. The SRG field group concluded that not only is Tanzania’s lion population not threatened but current trophy hunting in Tanzania is no threat to the species either.

Vol 15/02 (2017)
The Important Link Between Hunting & Tourism In Namibia Both Working For Conservation21
Dr Chris Brown, Namibian Chamber of Environment ceo@n-c-e.org

I am not a hunter. Nor have I ever been. I am a vegetarian (since the age of about 11), I am part of the environmental NGO sector and I have interests in the tourism industry in Namibia.

21 Bibliography see original article on the NCE website
So, it might surprise you that I am a strong supporter of the hunting industry in Namibia, and indeed, throughout Africa. Having said that, I should qualify my support. I am a strong supporter of legal, ethical hunting of indigenous wildlife within sustainably managed populations, in large open landscapes. The reason is simple. Well-managed hunting is extremely good for conservation. In many areas, it is essential for conservation.

There is much confusion and misconception, particularly in the urban industrialised world and thus by most western tourists that visit Namibia, about the role of hunting in conservation. Urban industrialised societies, and I include many biologists and recognised conservation organisations in this grouping, see hunting as undermining conservation, or the anathema of conservation. And they see protecting wildlife and removing all incentives for its consumptive use as promoting and achieving good conservation. Nothing could be further from the truth.

Much of the hunting and sustainable utilization debate within conservation has been taken over by the animal rights movement. I have sympathy for people who stand up for animal rights – I think we all should. None of us want to see animals suffering or being treated badly by members of our species. But the problem arises when animal rights agendas are passed off as conservation agendas. Animal rights agendas are not conservation agendas. Conservation works at the population, species and ecosystem levels. Animal rights works at the individual level. And what might be good for an individual or a collection of individuals might not be good for the long-term survival of populations, species and biodiversity. Take a simple domestic example. When the farm carthorse was replaced by the tractor, carthorses no longer had to work long hours in the fields. But they also no longer had a value to farmers. Once common, they are now extremely rare. Indeed, carthorse associations have been established to keep these breeds from dying out. The truth is, if animals do not have a value, or if that value is not competitive with other options, then those animals will not have a place, except in a few small isolated islands of protection. And island protection in a sea of other land uses is a disaster for long-term conservation.

Animal rights are important. But for wildlife they must be placed within a sound conservation and animal welfare setting, where conservation decisions on behalf of populations, species and ecosystems take priority over the rights of individual animals, but with due consideration of their welfare. Ethical and humane practices are an integral part of good conservation management and science.

The wildlife situation in Namibia provides a very good example of this. When the first western explorers, hunters and traders entered what is now Namibia in the late 1700s, crossing the Orange/Gariep River from the Cape, the national wildlife population was probably in the order of 8-10 million animals. Over the following centuries wildlife was decimated and numbers collapsed, first by uncontrolled and wasteful hunting by traders and explorers, then by local people who had acquired guns and horses from the traders, then by early farmers, veterinary policies and fencing, and finally by modern-day farmers on both freehold and communal land who saw wildlife as having little value and competing with their domestic stock for scarce grazing. Traditional wildlife management under customary laws administered by chiefs had broken down under successive colonial regimes. By the 1960s wildlife numbers were at an all-time low in Namibia, with perhaps fewer than half a million animals surviving (Figure 1).
At that time wildlife was “owned” by the state. Land owners and custodians were expected to support the wildlife on their land, but they had no rights to use the wildlife and to derive any benefits from wildlife. In response to declining numbers and growing dissatisfaction from farmers, a new approach to wildlife management was introduced. In the 1960s and 1990s, conditional rights over the consumptive and non-consumptive use of wildlife were devolved to freehold and communal farmers respectively, the latter under Namibia’s well known conservancy programme. The laws give the same rights to farmers in both land tenure systems. This policy change led to a total change in attitude towards wildlife by land owners and custodians. Wildlife suddenly had value. It could be used to support a multi-faceted business model, including trophy hunting, meat production, live sale of surplus animals and tourism. It could be part of a conventional livestock farming operation, or be a dedicated business on its own. As the sector developed, so farmers discovered that they could do better from their wildlife than from domestic stock. Both small- and large-stock numbers declined on freehold farmland while wildlife numbers increased. Today there is more wildlife in Namibia than at any time in the past 150 years, with latest estimates putting the national wildlife herd at just over 3 million animals. And the reason is simple – wildlife is an economically more attractive, competitive form of land use than conventional farming in our arid, semi-arid and dry sub-humid landscapes. Markets are driving more and more farmers towards the management of wildlife. This is good for conservation, not just from the perspective of wildlife, but also from the broader perspective of collateral habitat protection and biodiversity conservation. The greater the benefits that land owners and custodians derive from wildlife, the more secure it is as a land-use form and the more land there is under conservation management. Therefore, all the component uses of wildlife, including and especially trophy hunting, must be available to wildlife businesses. These uses include the full range of tourism options, live sale of surplus wildlife, and the various forms of consumptive use – trophy and venison hunting and wildlife harvesting for meat sale, value addition and own use. It is this combination of uses that makes wildlife outcompete conventional farming. And it is the “service” component of tourism and hunting that elevate wildlife values above that of primary production and the simple financial value of protein. As the
impacts of climate change become ever more severe, so will primary production decline in value, but not so for the “service” values derived from arid-adapted wildlife. And why especially trophy hunting? Because there are large areas of Namibia comprising remote, flat terrain with monotonous vegetation that are unsuited to tourism, but very important for conservation.

If Namibia had adopted an animal-rights based, protectionist, anti-sustainable use approach to wildlife management, we would probably today have fewer than 250,000 head of wildlife (just 8% of our present wildlife herd) in a few isolated large parks and a few small private nature reserves. We would have lost the connectivity between land under wildlife, and we would have lost the collateral conservation benefits to broader biodiversity, natural habitats and ecosystem services. Today, Namibia has well over 50% of its land under some form of formally recognised wildlife management (but probably over 70% if informal wildlife management is considered), including one of the largest contiguous areas of land under conservation in the world – its entire coast, linking to Etosha National Park and to conservation areas in both South Africa (Richtersveld) and Angola (Iona National Park) – over 25 million ha (Figure 2).

Figure 2: Contiguous land under wildlife management, including state protected areas, private nature reserves, communal and freehold conservancies and communal forests (Source: State of Conservancy Report 2015, NACSO)

There are some people in the tourism sector in Namibia and in our neighbouring countries who oppose trophy hunting because it is perceived to conflict with tourism and is thus not good for conservation. Some suggest that the land and its wildlife should be used for eco-tourism and not hunting. In most areas, eco-tourism cannot substitute for hunting. The loss of hunting revenue cannot be made up by eco-tourism revenue. Indeed, we need to optimise all streams of wildlife-derived revenue to make land under wildlife as competitive as possible.

Some tourism operators and tour guides attack the hunting sector to their guests. These tourism operators and guides are undermining an important part of conservation, an important contributor to making land under wildlife competitive and, in the final analysis, they are undermining the viability of conservation as a land-use form. The greatest threat to wildlife conservation, in Namibia and globally, is land transformation. Once land is transformed, often for agricultural purposes, it has lost its natural habitats, it has lost most of its biodiversity and it
can no longer support wildlife. Hunters and tourism operators should and must be on the same side – to make land under wildlife more productive than under other forms of land use. They are natural allies. They need to work together to ensure that land under wildlife derives the greatest possible returns, through a multitude of income earning activities. And where it is necessary for both hunting and tourism to take place on the same piece of land, they need to plan, collaborate and communicate so that all aspects of wildlife management and utilization – both consumptive and non-consumptive – can take place without one impacting negatively on the other. Conflicts between hunting and tourism are simply failures of management and communication, nothing more profound than that. But the onus should be on the hunting outfitters to ensure that there are ongoing, good communications. The onus is also on hunting outfitters, professional hunters, and the hunting sector to always maintain the highest ethical and professional standards, and to be mindful of the sensitivities of many people to the issue of hunting.

It is also the vital task and duty of tourism operators and guides to educate visitors from the urban industrialised countries about conservation in this part of the world. Visitors need to understand what drives conservation, the role of incentives, markets and what is meant by sustainable wildlife management. The tourism sector should not skirt around an uncomfortable discussion on hunting, but face it head-on and explain its importance to conservation. This is what good education is all about. Tourists come to Namibia to be enlightened, to be exposed to new ideas and to better understand the issues in this part of the world. They come here to take back new and interesting stories. What better story than Namibia’s conservation successes. But visitors need to understand it properly – its incentives, its market alignment, its strong links to the local and national economy, and its role in addressing rural poverty. It is the task of the tourism industry to help visitors understand why Namibia has one of the most successful conservation track records of any country in the world.

If we look for a moment at the conservation trajectory of a country such as the United Kingdom (an urban industrialised example) through its agrarian and industrial development, the indigenous wildlife at that time had no value. Thus, it lost the elk, wild boar, bear, wolf, lynx, beaver and sea eagle – essentially its most charismatic and important species. While small-scale attempts to reintroduce a few of the less threatening species are underway, it is unlikely that it will ever reintroduce the bear and wolf into the wild as free-ranging populations. And yet that country and others like it, with poor historic conservation track records, are keen to influence how Namibia should manage its wildlife. Its own farmers are not prepared to live with wolves, but many of their politicians and conservation agencies, both public and non-governmental, expect Namibian farmers to live with elephant, hippo, buffalo, lion, leopard, hyaena, crocodile and many other wildlife species that are far more problematic from a human-wildlife conflict perspective than a wolf. And they try to remove the very tools available to conservation to keep these animals on the land – the tools of economics, markets and sustainable use, to create value for these animals within a well-regulated, sustainably management wildlife landscape.

I believe that the problem is essentially one of ignorance. People think that they are doing what is best for conservation, but they simply do not understand the economic drivers for wildlife and biodiversity conservation in biodiversity-rich and rainfall-poor developing countries. And many African countries are sadly falling into the same trap. Kenya, for example, with its Eurocentric protectionist conservation approaches, has less wildlife today than at any time in its history. We need to share the message. And the message is, I believe, most powerfully explained using the simple graphic in Figure 3 below.
Figure 3: Economic returns to conventional farming (yellow line) and to wildlife management (green line) in areas of different land productivity, with rainfall being a good proxy for productivity.

The yellow line represents the return to land use under conventional farming, e.g. domestic stock and crops, across a rainfall gradient – rainfall being a proxy for land productivity. The green line shows the returns to land under wildlife. On the left side of the graph, in areas of rainfall below about 800 mm per year, returns from “indigenous production systems” – i.e. wildlife, are greater than the returns from “exotic production systems” – i.e. farming. However, this only applies if the rights to use wildlife are devolved to land owners and custodians. Markets then create a win-win Income & other benefits situation for optimal returns from land and for wildlife conservation in these more arid areas. If utilisation rights are not devolved, then wildlife has little value to the land owner and custodian, and people will use the land for other activities. On the right side of the graph, above about 800 mm, the lines cross over and here conventional farming outperforms wildlife management. If land owners and custodians are given rights over the wildlife and other indigenous species on their land, they will get rid of these species and transform the land for farming in response to market forces. Most of the western, industrialised world falls into the right side of the graph. Conservation agencies and organisations from countries on the right side of the graph, and areas where rights over wildlife are not devolved to land owners, are so conditioned to resist and fight against market forces having negative conservation impacts in their countries, that they automatically carry the fight across to those countries falling into the left side of the graph and which have devolved wildlife rights, not realising that the lines have switched over and that markets here are working for conservation. This is the important message that we must get across to policy makers, conservation organisations and the broader public in the urbanised and industrialised countries. And in some other parts of Africa. People need to understand the conservation drivers, incentives and markets, as well as the role of sustainable use within good conservation policy and practice. Well-intentioned but poorly informed efforts to influence conservation in this region seriously undermine good conservation policies and practices.

A second insight from the graphic above is that the greater the value earned from wildlife, not only is the gap widened on the left side of the graph over conventional farming, but the crossover point is pushed further to the right. This means that higher rainfall areas become...
competitive under wildlife management, opening more of Africa to this form of land use. Namibia’s record of environmental accomplishment speaks for itself. Through the implementation of appropriate policies, it has created incentives for wildlife conservation, unmatched anywhere in the world. But wildlife must have value otherwise land owners and custodians will move to other forms of land use. And it must have the greatest possible value to be as secure a land use as possible, over the largest possible landscape. And that is why I strongly support well-managed and ethical hunting. It is good, and in some cases essential, for the conservation of wildlife, of habitats and of biological diversity. And that is why hunting and tourism must work together, in mutually supportive ways, to optimise returns from wildlife for the land. Well managed and ethical hunting should in fact be called “conservation hunting”. And conservation hunting is essentially an integral part of tourism.