PROPOSAL FOR "GREEN HUNTING" OF ELEPHANTS AS AN ALTERNATIVE TO LETHAL SPORT HUNTING

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It has been argued that sport hunting of elephants offers social and economic benefits for conservation and does not endanger the species (Bond, 1994). Sport hunting when properly controlled can be maintained at a sustainable level (Craig and Gibson, 1993), and the revenues used to reward communities for tolerating and conserving such potentially challenging neighbours. Although the African elephant is recognised as an endangered species, sport hunting is still permitted in a number of African countries where it is not commercial nor a threat to their survival. Under CITES regulations sport hunters are permitted to bring their trophies back to their home countries.

However, in most parts of Africa excessive offtake by poaching or sport hunting has diminished stocks of large tuskers until old male elephants have become extremely rare or absent from populations. Destroying large bulls in an elephant population significantly alters the elephants' way of life, as female elephants prefer to mate with the largest and hence oldest bulls if given the choice (Moss, 1988). Contrary to some hunters' beliefs, these are not old mates past the age of effective breeding, but some of the fittest males in the stock who, by their longevity, have demonstrated their adaptiveness. Shooting a big tusker is killing a mature and useful member of society in the prime of life.

Depletion of the gene pool is evident in Uganda where Eve Abe has commented that a gene for tusklessness is spreading through the elephant population in Queen Elizabeth National Park, which experienced heavy poaching for ivory in the 1970s and '80s. Even in Zimbabwe where sport hunting has been instituted on a sustainable basis of not more than 0.75% of a total population, the tusks of trophy animals are small. In contrast populations with no hunting and little poaching, like Amboseli National Park in Kenya or Kruger National Park in South Africa, there are many old bulls with large tusks. Moreover, there are ethical objections against killing elephants for pleasure on the grounds that they are higher order sensate beings like chimpanzees, gorillas or dolphins, which no one would consider hunting for sport these days.

If it is accepted that sport hunting has economic and conservation benefits despite the strength of ethical and ecological arguments against it, it is worth considering a form of "green hunting" which could offer an alternative to actually killing the elephant. A non-lethal "green hunt" could be done with immobilising darts rather than bullets and could provide most of the benefits of sport hunting without the ethical and ecological downside. However, it must be recognised that even darting an elephant is a risk to the elephants' life and health, but it is greatly preferable to killing the animal, and may prove to be an acceptable alternative to lethal hunting. The conservation ideal of green hunting requires that it be used only as an alternative to lethal hunting and not as an additional quota, as that would only cause extra harassment to the elephants.

The technology of immobilising animals is now well advanced and can be done quickly, efficiently and repeatedly with relatively low risk to the elephant. It is routinely employed in research and in veterinary treatment of elephants, and may involve many of the traditional elements of a hunt, including a detailed knowledge of the quarry's behaviour. **It** can be performed on foot with a dart gun and a small team of trackers. The target animal needs to be carefully selected, and may require a skillful stalk from downwind, angling to get past other elephants, and a good shot from close quarters. The elements of skill, danger and luck would all be present with additional challenges. An elephant never collapses from a dart as it would from a brain-shot, but usually rushes off as if it were wounded until the drug takes effect. The hunter would have to follow and track assiduously. To lose an elephant might endanger its life, if it were to fall onto its trunk or to collapse into a swamp. So for ten to twenty minutes the hunter must keep pace with the elephant. However, it would be neither unethical nor illegal to immobilise and follow-up from the safety of a car if the hunter so desired.

If the elephant is approached carefully on foot and from down-wind, the elephant need never be aware of human presence. The darting then causes the minimum disturbance and in such cases the elephant would most

likely run for only a few paces before resuming a slow walk or stopping.

Green hunting would require an experienced veterinarian to be present to calculate the dose rate and administer to the elephant should anything go wrong. The drug should be given at a sufficient dose to put the elephant down quickly, aiming at 1 0 to 15 minutes at the most. When an elephant goes down and rests on it's breastbone or sternum it should be pulled over on its side with a rope attached to one of the tusks running up over its back. With a large bull a vehicle may be required to pull the animal over. The trunk should be straightened out to ease breathing and the heart and breathing rate measured. If it is a hot day the elephant should be cooled by a jerrycan of water being poured over its body and behind its ears.

Once the animal is recumbent the hunter can have photographs taken with his quarry. The only difference at this stage from a conventional hunt is that the animal is still breathing, living and unharmed. Practically all the great hunters admit that it is not the killing of the animal that gives them pleasure, but the hunt itself, with all the assimilated skill, mystique and bush lore. None of that will be impaired. A cast could be made of the tusks with a quick-setting foam which will set a perfect mould from which the exact details of the ivory can be replicated in plastic or fibre-glass as a non-lethal trophy. Revival of the bull is done simply by an injection of antidote into one of the large veins in the ear. Within about one minute the elephant would stir, flap his ears, rock back and forth and stand up.

Linking green hunting to research could justify green hunting by restricting it to animals that would be immobilised anyway, and a radio-collar could be affixed in a matter of minutes. If it is an advanced GPS model, the movements of the elephant could be recorded at regular intervals with great precision. The hunter will not only have experienced his hunt, taken photographs of his fallen quarry, and acquired his non-lethal trophies, but can be introduced to the excitement of field research. Precise records of the daily movements across the home range by the individualised bull can be sent to the hunter at intervals as well as observations on his general behaviour and ecology. Hunters could learn about the natural habits of their chosen species, and develop a more objective interest in their ecology and behaviour. This in turn might help to bridge the conceptual gap between hunters and animal rights activists. But above all the justification would be to spare the lives of elephants.

Ale risks inherent in this whole procedure are those of a normal hunt. Safety precautions in the form of an experienced professional hunter on stand-by with a gun should be taken.

In summary, the advantages of green hunting are as follows. On ecological grounds the idea will avoid depleting the resource of big tuskers and disrupting preferred mate selection be females. Use of large trophy animals would become sustainable, and the most successful big bulls would be allowed to breed and increase large tusk size in the population's gene pool. Economically it would bring in revenue which could be used for conservation or community development, while at the same time avoid frightening animals and lowering the amenity for tourism of an area. From a sporting perspective the skill and the risk of a green hunt would be undiminished, while giving access to better quality trophies, Ethically, and most importantly, it would offer an alternative to disrupting elephant society by temporarily immobilising rather than killing useful individuals.

There are, however, a number of problems which need to be weighed before the adoption of green hunting. Legal objections might be raised in connection with the control of narcotics, and drug control authorities might be resistant to the use of a restricted drug for sport. There would need to improved training of veterinarians and careful criteria devised for suitable qualifications for a veterinarian to accompany a green hunt. Being a domestic animal veterinarian would not necessarily qualify someone to carry out elephant anaesthesia. There would also be a risk to clients as in a normal hunt, and an attempted green hunt might sometimes result in the death of an animal which charged rather than ran away.

There are also welfare questions. The technique of immobilisation, although widely deployed, still involves a risk to the elephant's life and health. Clinical trials of the drug have not been conducted on the scale which would be required to classify M99 etorphine hydrochloride, the narcotic used, as a safe anaesthetic. Problems to the elephant's future health cannot therefore be discounted. The risks of mortality, lung and heart pathology in elephants from the effects of the immobilisation may be significant, and this is particularly true for larger animals which would be preferred in green hunting. M99 is a potent respiratory depressant and cardiac stimulant. Repeated knock downs might impose a greater risk. A poorly placed dart might cause the animal to run for 30 minutes or so, and the

distances covered can be large. The animal could fall in an awkward place and die as a result. The questions of how many times an animal can be immobilised which is acceptable, what age the animal should be, and whether pregnant animals should be included would all need to be considered. A hunter might argue that when one shoots an animal none of these problems except wounding would arise.

Ideally from an elephant's point of view it would be better to be left alone and neither immobilised nor killed, but in an imperfect world, hunting elephants is going to happen while there is still profit to be made in countries where it is permitted. The bottom line is that the discomfort and danger suffered by relatively few elephants in green hunting must be contrasted to the certain death of elephants in lethal hunting, and the question of morality of killing higher order sensate beings for sport. Most of the objections would be overcome by linking initially green hunting to research.

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