Elephants - Some Possible Fallacies

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Introduction

These notes were prepared for discussion purposes at the Workshop on Cooperative Regional Wildlife Management in Southern Africa. They discuss possible fallacies in the way we think about elephants, which is important because it influences how we think about management of elephant populations.

The elephant overpopulation problem is a morass of moral issues. While these issues are being resolved the quality and productivity of elephant environments continues to decline, reducing the long term viability of elephants and their habitats throughout Africa.

In referencing this section I use citations. Note that references to specific authors do not attribute a statement or position to that author. It merely identifies the author as relevant to discussion of that position.
Myths

Many of the fallacious positions noted below can be heard in Maune, in the Botswana countryside at tourist camps, or are expressed by the NGO and government communities in southern Africa and in the northern hemisphere.

Myth 1. Elephants should be allowed to determine their own abundance? This is the current state of planning in Botswana (see Chafota, this conference).

Myth 2. Uncontrolled populations of elephants will reach an equilibrium that balances them to their environment, identifiable by a decline in the birth rate (Calef, pers. comm., 1987.) But there has been no decline in the birth rate, and an environmental and property destruction debacle is in progress.

No agencies other than management by humans, starvation and drought are available to regulate the elephant abundance. The latter are environmentally highly destructive processes.

Myth 3. Professional trophy hunting is a viable way to control the abundance of elephants. But trophy hunters are interested only in trophies. Less than 1% of the southern African elephants are trophies and none of the trophy individuals are females. There is no evidence from anywhere in Africa that trophy hunting has regulated the abundance of elephants. Problem individuals are not conveniently culled by imported hunters. This culling, in fact all culling, is best left to professionals.

The trophy business needs to be distinguished from the ivory trade, which has been the main modifier of elephant abundance in the last two centuries (Barnes 1996).
**Myth 4.** If elephant numbers are to be controlled is it necessary to recover costs. I.e., meat, ivory and trophy hunting must pay for the effort. If this were any other pest we would instead evaluate the cost benefit ratio for control measures and their outcome rather than insist that the application of a solution to a problem be profitable (see Chafota, this conference).

**Myth 5.** There is no way to use the meat generated by culling. Therefore culling needs to await the development of meat processing capability.

See above. Apply cost-benefit, not moral persuasion.

**Myth 6.** It is the responsibility of southern African nations to compensate for the inability of East African and west African nations to control poaching. This is the de facto status at present because, contrary to the wishes of southern African nations, they reluctantly have agreed to limited support of the ivory trade ban (See Barnes 1996).

**Myth 7.** Large numbers of elephants are more important than old growth baobabs, morulas, baobabs and camelthorn trees (Hamilton, this conference). This is a value judgment. Note that we are not trading elephants for vegetation, we are trading elephant overabundance for trees, forests and forest products.

**Myth 8.** It is the responsibility of the rural people to tolerate destruction of fences, water storage facilities and gardens to accommodate elephants. Whose responsibility is it to pay for the damage so done? (Community Meetings, Namibia, 1992).
Myth 9. When land is converted from productive woodland and suitable elephant habitat to grassland unsuited to accommodating elephants these habitats will be reserved for elephants until they return to a state suitable for elephants. In fact, this change promotes land conversion, initially to cattle range land (See Barnes, 1996).

Myth 10. Biodiversity is a compelling priority in southern Africa. See Kuyver 1997: Unity in diversity: “From the elephant to butyric acid bacterium: It is all the same.”


But decisions can be based upon damage to agriculture and in reserves damage to old growth woody vegetation. These are measurable costs, not arbitrary numbers. Damage in peripheral areas where elephants are in the colonization stage are the result of elephant population pressures elsewhere, and additional damage can be prevented by local culling and management of overall numbers.

In many areas local managers would opt for no elephants. In 1992 the Regional Commissioner of Otjiwarongo asked:

"Who wants to stay in the communal area with the elephants, and Who wants to stay in the communal area, but without the elephants?"

Myth 12. The compression hypothesis suggests that elephant destructiveness is the consequence of loss of habitat and hunting pressure elsewhere, and that elephants have gathered temporarily in refugia where their overpopulation is destructive. Time has shown this to be a myth. The
'overpopulated' animals have increased in numbers in the last 40 years in northern Botswana, largely as a result of steady reproduction (Calef).

**Myth 13.** There are vast tracts of mopane that will sustain the large (about 80,000 in 1998?) northern Botswana population of elephants (see Ben-Shahar 1996). Outside the reserves and parks virtually all treelike mopane has been cut. Inside parks in northern Botswana mopane is not a favored elephant food. Other plant species, both trees (Acacia erioloba, Hyphaene ventricosa, Ficus burkei) and shrubs (Grewia spp.) may be nearly (>90%) eliminated while vast tracts of mopane remain virtually intact. Elephants have expanded past the mopane savanna and forests, barely lingering long enough to reproduce.

**Myth 14.** We need more time to generate data before we decide what to do (numerous authors).

In fact there are obvious things to do now. These include but are not limited to:

a) Make a long range plan to achieve goals for people and wildlife based upon currently available information and stick to it unless new information becomes available.

b) Clearly designate the boundaries of land use areas and maintain them so that settlement develops in an organized manner.

c) Avoid introducing water points (wells) for wildlife or people in wildlife designated and transhumans areas.

d) Cull whenever and wherever damage to protected old growth vegetation occurs.
Myth 15. The expansion of elephant populations in northern Botswana will lead to the eventual repopulation by elephants of areas in Zambia and Angola where elephants were eliminated in the past.

Elephants are now colonizing areas where the old growth vegetation shows that there have been no elephants in this century. Recolonization of Angola cannot occur under current conditions of unrest. When conditions there clear a plan for the management of wildlife in Angola can be undertaken by Angolans. However, satellite data show a rapid clearing of forests in Angola by fire and cultivation, suggesting that a Botswana based expatriate plan for reintroduction of elephants in Angola is premature or too late, depending upon your perspective.

Myth 16. Hunting will scare off all the local elephants.

There is no evidence to support this position. Hunting does make elephants wary and thus less useful to the tourist industry. The costs and benefits of hunting need to be evaluated.

Myth 17. Local people know elephants and how best to manage them. We should leave solution of the elephant problem to the locals.

Most people who have encountered elephants in southern Africa have done so for the first time since 1980, and when they met their first elephant they were not accompanied by any relatives or friends who had extensive experience with elephants. People need the wisdom of science and the historical evidence about the impact of elephants upon resources and finances.

Most people in northern Botswana have never fired a gun, and there are only a handful of people alive today who have participated in the killing of an elephant with a bow and arrow or with spears.
One of the greatest contributions scientists can make to local people is to provide an accurate account of the behavior, density and impact of elephants throughout Africa. This is not neocolonialism, it is information transfer.

**Myth 18.** Savanna cleared of trees by elephants will be restored to woodland (savanna) in time. Elephant damage is part of the great cycle of nature.

All areas cleared by elephants in recent decades in northern Botswana remain clear of woody vegetation. The loss of the treed park like savanna is often followed by a decline in the abundance of wildlife and a land use conversion to cattle grazing (Owen-Smith 1988).

**Myth 19.** If we save the elephants we will save the rest of the wildlife. elephants are an umbrella species.

This argument read well two decades ago. Now we are seeing the decline in the abundance of other large mammals in response to the huge increase in the numbers of elephants (Crowe, D., pers. comm). Habitat destruction results in the loss of species and associated tourism benefits.

**Myth 20.** If you don't cull all of the elephants they will still damage the vegetation.

This argument ignores the food preferences of elephants. Like many herbivores elephants have pronounced preferences for plant foods and will stick with high preference items. Many desirable species such as baobabs and mature morulas are attacked only after other species have been eliminated.
Myth 21. The damage to the riparian forests doesn't damage species diversity. So the destruction isn't an environmental problem.

This is a relevant argument only to diversity crazies. Most tourists and locals don't care a lot about all the species, but are concerned with the appearance of the environment. Tameness, visibility and abundance of wildlife are more important values to tourists than diversity. See Chafota: “The riverine woodlands ... have now been destroyed by elephants” (!) (this Conference). These are the most exciting birding spots in northern Botswana.

Myth 22. Rural development in developing countries is desirable and should be encouraged by the developed nations.

Rural development kills traditional equilibria and imports people and human reproductive effort into the hinterland. This results in demands for services from the government which are not compensated for by productivity. National development is the minimum unit development should be planned for.

If one accepts the development paradigm some sustainable way to accommodate it in the long run should be required.
References

Anon. 1992. Elephants and the community. Project 3884, Huab Catchment, Namibia. The effectiveness of elephant deterrents was determined experimentally. Whips are most effective, drums next, but twice as many used drums rather than whips. Shooting was seen as only half as effective, shouting useless. Most said all noises are ineffective.

