

Elephant culling: Why is it the best strategy to reduce overpopulation in South Africa?

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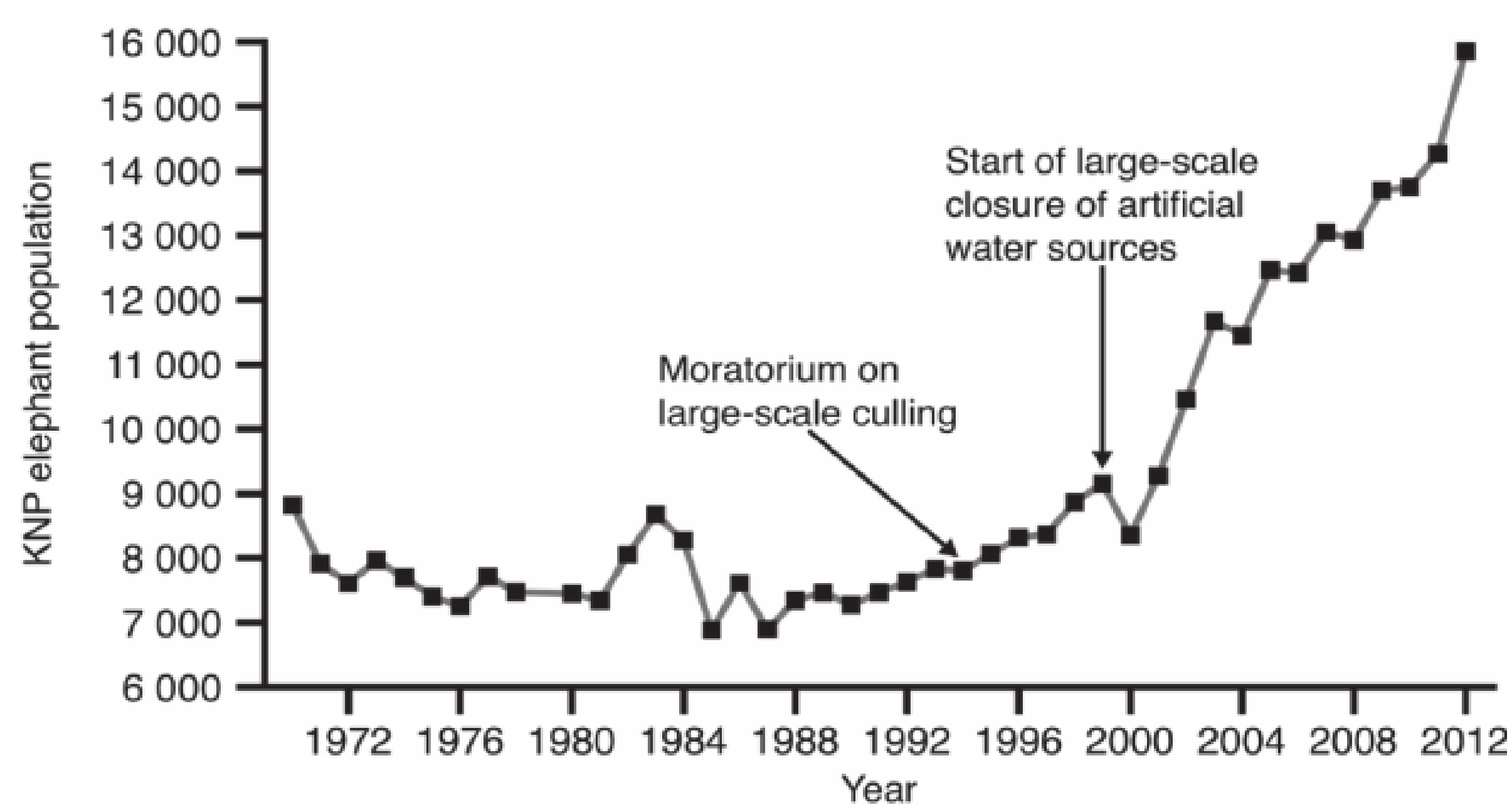
Abstract

This culling study was done on the South African elephant population encompassing research not only on the elephants themselves, but the surrounding species from flora to human life. Culling is a practice meant to reduce a population size through removing excess numbers of the species in as humane a fashion as possible and then distributing the wares throughout the community for a positive all around. Information was taken from a first person basis as well as journal and news articles to best determine the history of culling and its place in the 21st century. There are many alternatives to culling such as birth control, castration, or relocation, but are they viable methods to successfully control the current overpopulation of elephants in South Africa? Culling receives a bad rapport by people whom don't understand the necessity they have for it and the ramifications behind doing it incorrectly. I evaluated the benefits, the repercussions, and the alternatives of culling elephants to help establish the best practice to maintain the elephant population at a manageable number. The best long term alternative to culling found was birth control, but due to its ability to only work best on populations of less than 500 elephants it is still far off in the future before it can be viable in the field. Culling families of elephants is the best short term, effective option we currently have to manage the overpopulation in South Africa.



Intro

The African elephant population is currently around 415,000 with the majority being *Loxodonta africana* at a recorded number of 300,000. Kruger National Park is 7, 523mi². A big percentage of the *Loxodonta africana* in South Africa are located here and with those numbers it is easy to see what originally sounded like a large reserve is not as big as it needs to be to accommodate 300,000 elephants. "In South Africa, elephant populations are confined to reserves and parks, both small and large. It is important to manage such confined elephant populations to slow their growth rates so as to prevent loss of biodiversity, ecosystem function and resilience, harm to human lives or livelihoods, or compromising key management objectives." (imuno 1). Before 1995 elephants in Africa were culled meaning families of elephants were killed together to keep populations at carrying capacity. In 1995 a culling ban was placed because of public uproar about it being inhumane and unnecessary. The populations exploded which was good because the African elephant numbers has been declining due to poaching as well, but then the number became unmanageable. In 2008 the culling ban was lifted, but with the restriction of it being a last resort and a mile high of paperwork to get through with ecologists and authority before it is allowed.



Pros

1. Replenishing the natural biome

"The African elephant is capable of extensive habitat modification and it has been shown that even at low elephant densities there can be significant effects on trees in some habitats. This modification, commonly termed elephant impact, mostly takes place through elephants toppling (including pollarding) whole trees, by breaking and removing branches from their canopies (i.e. the elephants mechanically change the structure and composition of the canopy of trees, and by extension they change woodlands) and by preventing or reducing recruitment and regeneration. In such processes, browsing elephants commonly remove more material (biomass) than they finally consume. Moreover, elephants commonly strip bark off tree trunks, which is likely to result in the eventual death of the tree once fire or wood borers enter the exposed heartwood. These factors (i.e. browsing that affects the structure of a plant, 'wasteful' feeding and bark stripping) mean that an elephant population may have an effect on woody vegetation and biomass loss beyond what would be predicted by the physiological needs of the animals."

2. Humane form of death

Culling elephants is a humane process that includes removing the elephant's whole immediate family group at one time. When culling was first implemented, they went through a lot of methods to find the most effective. They found just killing the older females and the matriarchs left no one to raise the younger calves and no one to teach them right from wrong. When I say right from wrong I mean what to eat, migration patterns, how to stay safe, where they can and cannot wander, and how to protect themselves. This was especially bad for the male calves whom normally would grow up under the instruction of the matriarch until they were self-sufficient.

3. Income for South Africa

Legalizing culling would legalize the selling of elephant wares which would include the meat, skin, bones, and ivory. That would provide not only an income for the people outside of the money tourism and hunting brings, but good food, clothes, and remedies as well. This would help crack down on the sell of ivory on the black market allowing for South Africa to sell the millions of tusks they have in storage currently unable to touch.

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Cons

1. Negative perception

If we had begun to boycott traveling to South Africa due to us not wanting to support a country cruelly killing such majestic animals their whole economy would fall apart. The decision was simple because the alternative was trying to explain the process to an uneducated, upset mass of people. Anyone upset is already not listening to a reasonable or sound argument no matter how articulately the other person is explaining themselves. "In any exchange with an overly angry person, there may come a point when you need to disengage from the situation. There are lots of reasons why this might be the smart thing to do: To stay safe, for one, but also, and more commonly, because the situation is such that there is unlikely to be any positive resolution. The person may be so angry that a healthy, reasonable conversation simply can't be had at the time." (psych). The best thing at the time was to fall back and the elephants repopulated over the years until they became too much. Now is the time to reeducate the masses on the truth behind the gory pictures of deceased elephants and have an educated dialogue about its' necessity and its' lack of cruelty.

2. Killing healthy animals

An issue arose discussing culling about the deaths of healthy animals going to an early grave. Culling methods include killing whole families instead of trying to pick out the ones closest to the grave and culling them that way. The number of elephants that get kicked out of their family groups because of old age would not near the number of elephants that are culled in a year for management purposes. There is also the problem of how long it will take to ascertain that there is a new matriarch in place for the family if the old one is gone. If all the necessary information to live a healthy life in the savannas was not passed on and the matriarch goes down it could be inviting in the untimely death of that family anyway or causing aggression towards other animals and humans. At the same time healthy elephants are dying at the hands of poachers at a higher rate than those dying through the culling process.

3. Elephant's consciousness

It would be undeniably inhumane for us to kill animals who are self-aware and can mourn one another after death is the public opinion on the subject. "It is known that elephants can have social bonds with up to 25 other families representing as many as 175 other adult females" (20%). If this is true then is culling family groups the best option or should the process go back to removing only certain types of elephants like the matriarchs, bulls, or the calves? The scientific facts show that elephants are interested in the sick, dying, or dead irrespective of genetic relationship (matriarch). The same way that death interests all of us to some degree they pay attention too, but the only real mourning, if you could call it that, is from fresh calves. That has more to do with the loss of a food source because occasionally other female elephants will not take that calf on as their own and subsequently it will starve to death.

Alternatives

1. Contraceptives

Research has shown that it is a viable option, but that there isn't enough data and has not been around long enough to know the extent of possible adverse effects. The process of what the contraceptive inside the body is best summarized as "...when the porcine zona pellucida (PZP) vaccine (derived from pigs' eggs) is injected into the muscle of the target female animal, it stimulates her immune system to produce antibodies against the proteins in the vaccine. These antibodies attach to the sperm receptors on the ZP of her eggs and thereby block fertilization" (imuno 1). The scale that this would have to be done on is essentially 300,000+ South African elephants of all sizes, ages, and locations. A lot of time and effort goes into finding and tracking a whole family not to mention the time after to then separate each into their roles in the family and relationships with other groups.

2. Castration

An alternative close to the same line of thought as contraceptives is castration. This process effects the bulls instead of the females of the species. Bulls come into musth which is similar to puberty for humans. Their testosterone pumps out into their body as if the floodgates have opened and tell them to mate, procreate, and fight. "The periodic personality change associated with musth renders mature bull elephants unreliable, unmanageable, and dangerous. Because of this, many bull elephants have been euthanized when they come into musth." (surgical). Due to workers wanting to find a viable alternative to euthanizing young bulls we got physical and chemical castration, more recently. Elephants have strong, deadly chemical reactions to most drugs and anesthesia making the process of surgery create a high death rate in and of itself.

3. Translocation

Lots of western and eastern Africa have lost their huge populations of African elephants due to habitat changes as well as the ivory trade, poaching, and civil wars. Translocation essentially would be moving African elephants from a place of overpopulation to a sparsely populated country or zoos to help repopulate that area. Besides finding transportation for so many elephants, including flights, we have to discuss that just the calves cannot be sent because growing up without a matriarch causes loss of knowledge to care for themselves or show care towards others. The young bulls will destroy everything around the time of their musth. Elephants also have a natural homing mechanism like trained homing pigeons from their days of migrating all over the continent freely. Researchers found when they are moved to a new area they try and escape 90% of the time occasionally committing suicide from the high stress levels.

Discussion

Immunological contraception was the best long term method presently, but where the technology is a right now it is unsustainable with 300,000+ South African elephants. It would also be nice to see a longer trial run for the drugs involved in the contraceptives to be sure it doesn't reverse itself randomly or cause long term damage to the elephants. Elephant culling is not a random, cruel slaughter process that does not account for the loss of life. It benefits the elephants by providing funds and food for their rangers protecting them from the poachers as well as providing food, clothing, and funds for the people of the country. Give the people a reason to want to protect the African elephant. We don't senselessly kill our cash cows, but people are still eating steaks and burgers so somewhere cows are indeed dying. The African elephant is a beautiful, majestic creature I had the pleasure of seeing up close and personal and I want them to have the best life, but I also want that for all the other amazing animals most people have never seen or heard of that share the land with them. To get the population to below carrying capacity once again culling is the best choice we currently have to support all biodiversity in South Africa.

