

Reintroduction as a conservation strategy for the African wild dog

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With increasing human exploitation of the planet, more and more of today's species of animals are facing extinction. Fortunately, parallel to the escalating human intrusion, a greater awareness of the planet's fragility has also developed in the last years.

In the following, I will focus on conservation of carnivores in general and the re-introduction of the African wild dog specifically.

Large carnivores are susceptible to any disturbance in the ecosystem. As they represent the top of the food chain, they rely on a certain prey population, which again relies on a specific type of vegetation and so on.

However, conservation of large carnivores living in areas close to humans is often a battle between conflicting interests. For example, grey wolf attacking sheep in the eastern woods of Norway is the source of a continuous disagreement between wildlife environmentalists and farmers.

The African wild dog is a highly endangered animal with only 3 000-5 500 individuals left as of 2004. Their decline is linked to the ever-growing expansion of human territory. Expanding cities and highway constructions have led to considerable habitat loss. Attacks on livestock are a result of the dogs' territories eventually overlapping human whereabouts. Consequently, domestic stock killings evoke anger among locals and lead to wild dogs being persecuted and shot.

According to M.G.L. Mills, there are two main factors to consider regarding preservation of large carnivores; how they affect the existing prey population and their co-existence with other carnivores in the area. The prey-predator relationship is complex especially in Africa with several different predators preying on a number of different ungulates. Studies carried out in the Kalahari Gemsbok National Park concluded that the number of gemsbok were higher in an area outside the park without predators, than in an area of equal size and topography within park where predators resided. However, the overall observations from the Serengeti, the Ngorongoro Crater and Kruger National Park confirm that regulation of prey population is usually due to drought or heavy rainfall limiting the food supply. There

is no research implying that wild dogs may decrease the population of their prey. Neither will their existence be a threat to other carnivores of the release site; it is rather the other way around. Lions are known to occasionally steal the catch of wild dogs and there are reports of lions killing wild dogs as well.

Re-introduction of a threatened animal back to its original habitat is a well-known method used to ensure the future of endangered species. Nonetheless, there are several challenges associated with such operations. The released animals will have to compete for the same resources with the already present carnivores in the area, so-called exploitation competition. If original predators of the region were eradicated, there will be no competitors, but the new arrivals will still have to avoid conflicts with the human population. Based on this information one should carefully evaluate the size and prey availability of a potential release site. The ultimate goal of any re-introduction is to “establish a self-sustaining population that requires minimal long-term management.” (UCNI 1998).

There have been previous attempts of re-introduction of wild dogs. In 1988, 10 captive-born African wild dogs were released in Zimbabwe. Unfortunately, instead of hunting for food, the dogs were attracted to human activities and stayed around butchereries for days. A few of them were found in very poor condition and moved to another area. It was clear that the prolonged human influence pre-release had mitigated the dogs' natural instincts. Within two months of the release, all of the ten dogs were deceased. Five were shot, while the remaining dogs were likely to have died of natural causes.

Recent re-introductions have been far more successful. Markus Gusset and Sadie J. Ryan did a follow up study of African wild dogs re-released in South Africa in the period 1995-2005. 12 re-introduction sites were monitored, and the condition of the dogs registered 6, 12, 18 and 24 months after the initial release. These operations have proven to be a success, with litters produced on each release site and the target size of nine viable packs achieved in nearly half the time estimated. Furthermore, Gusset and Ryan did an evaluation of different factors influencing survival of the re-introduced dogs and their offspring.

A global model was used to illustrate the effect of both time and the different covariates. Data obtained from the model showed a negative correlation between

fence length and survival rates. The home range of an African wild dog pack varies, but they usually roam enormous territories. Thus, the poor condition of fences lacking regular maintenance causes repeated breakouts. As a result, the dogs may stray into human residential areas. Conservation areas in South Africa are generally fenced, but the fences are normally kept in good condition. Enclosures are expensive and not ideal considering that the animals are not being returned to total freedom. On the other hand, they are important in order to avoid deadly clashes between wild dogs and humans.

Neither human population density nor the effects of diseases had any significant influence on the survival rates. Nor did the prey density, at least individually. Although, a low prey density combined with a high number of competing predators would probably cause a decline in survivals. (Lions and wild dogs interaction is mentioned above)

The most prominent aspect however, was the importance of time spent in holding facilities, so-called bomas, before release. The African wild dog is a highly social animal. Pack members are usually closely related and share strong bonds. Social integration of the new pack while living together in boma for longer periods thus increased the chance of survival. Pups born in bomas, (representing successful integration), also had a positive effect on survival rates.

Conclusion

The case study in South Africa shows that follow-up observations after re-introduction are crucial for the future of the dogs. The populations need to be monitored and small packs should be mixed occasionally in order to maintain adequate gene diversity. By keeping individual records, in case of livestock killings, habitual problem animals can be identified and removed. Moreover, herdsmen using domesticated dogs and returning their animals to the manyattas (huts) during the night is reported to decrease attacks on domestic stock. Yet, as of now, it seems the key to a peaceful co-existence with neighboring humans is closed game reserves. In the future, the ideal situation would be as little human intervention as possible.

References:

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