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Distribution Update

Status of the African wild dog in the Bénoué Complex, North Cameroon

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Abstract

The status of the African wild dog *Lycaon pictus* in the West and Central African region is largely unknown. The vast areas of unspoiled Sudano-Guinean savanna and woodland habitat in the North Province of Cameroon provide a potential stronghold for this wide-ranging species. Nevertheless, the wild dog is facing numerous threats in this area, mainly caused by human encroachment and a lack of enforcement of laws and regulations in hunting concessions. Three years of surveys covering over 4,000km of spoor transects and more than 1,200 camera trap days, in addition to interviews with local stakeholders revealed that the African wild dog in North Cameroon can be considered functionally extirpated. Presence of most other large carnivores is decreasing towards the edges of protected areas, while presence of leopard and spotted hyaena is negatively associated with the presence of villages. Lion numbers tend to be lower inside hunting concessions as compared to the national parks. We advise local authorities to drastically improve management strategies and implement a system which follows up on new regulations in both national parks and hunting concessions. Only with such a system in place, the painted dog population may recover to a viable level in the future.

Introduction

Throughout the West and Central African region, the status and distribution of the African wild dog is largely unknown, although its habitat has become increasingly threatened (Fanshawe et al. 1997, Croes et al. 2008). Over the past few decades, protected areas have become fragmented, forcing wide-ranging species such as the African wild dog, to forage outside their natural habitat. The African wild dog is listed as globally Endangered by IUCN Red List (McNutt et al. 2008). According to this assessment, African wild dogs are 'probably extinct' from the majority of countries in West and Central Africa, while it is still classified as 'native' to Cameroon. Anecdotal reports suggest that few packs may still survive in the Pendjari Reserve in Benin (T. Djafarou pers. comm.) and in the 'W Transboundary Park' in Niger, Burkina Faso and Benin (G. Hamissou pers. comm.), although it is unlikely that a viable population still exists in these areas (Fanshawe et al. 1997). The last confirmed observation of a group of African wild dogs in the Bénoué Complex, North Cameroon, is from 1967 (Figure 1) while the last reported individual dates back to 2000 (H. Bauer pers. comm.). A study conducted by Breuer (2003) concluded that wild dog numbers in Faro National Park, in the extreme West of the complex, were critically low.

The North Province of Cameroon (Figure 2) is covered for 44% in natural Sudano-Guinean savanna and woodland, containing three national parks and 28 hunting zones. The entire complex covers an area of 40,000km^2, thus providing an important stronghold for a variety of wildlife species for the region. Human population growth is relatively high in the area at around 5% per year and mostly results from immigration of people from other provinces or neighbouring countries with a diverse ethnic background (A. Saleh pers. comm., Mayaka 2002). In addition to a degrading natural habitat, other human induced factors are threatening wildlife populations in the Bénoué Complex. Uncontrolled poaching is a threat to wildlife in general and affects both predator and prey numbers.

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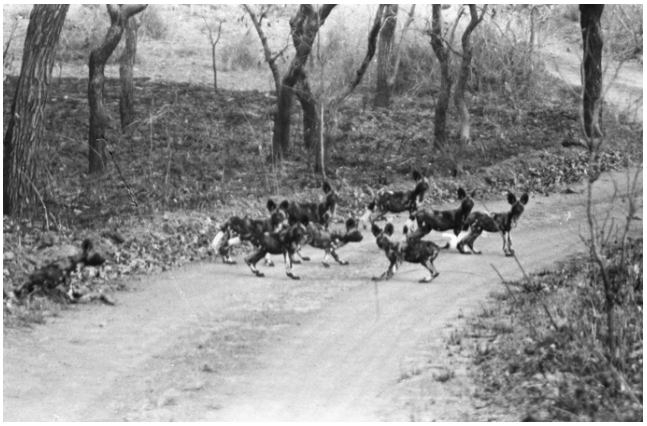

Figure 1: Photograph taken in 1967, the last confirmed observation of African wild dogs in the Bénoué Complex

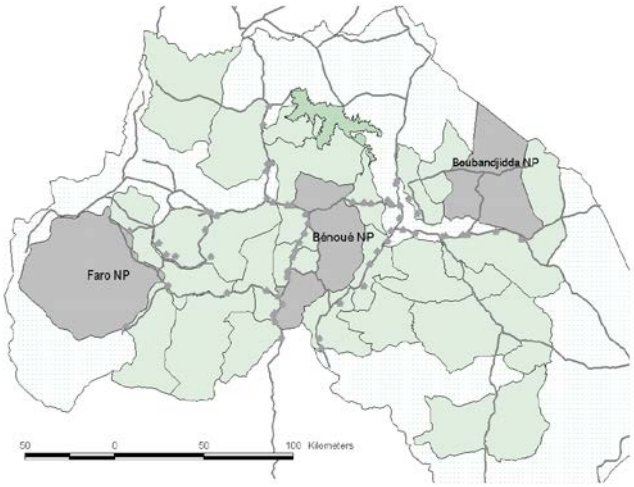

Figure 2: The North Province of Cameroon

Despite the presence of a vast range of relatively unspoiled habitat, which is an absolute requirement for the survival of the wide ranging African wild dog, 75% of the complex consists of hunting concessions. These hunting concessions are often managed in a conservative manner, mostly lacking legal follow-up of non-scientifically based hunting quota (Kwabong 2008). The official ban on African wild dog trophy hunting in 1999 has unfortunately not led to the recovery of the population, mainly due to the lack of incentives for hunting zone managers to conserve the species, in addition to a negative and incorrect perception by hunters of the species as being a fierce killer, impacting numbers of valuable game.

A three-year project was implemented by the Institute of Environmental Sciences of Leiden university (CML), in collaboration with the University of Dschang in Cameroon and Painted Dog Conservation (PDC) in Zimbabwe to determine the status of African wild dogs in the Bénoué complex, while investigating local perceptions on wild dog conservation and building capacity for the successful monitoring of large carnivores in the future.

Methods

The surveys were conducted throughout the Bénoué Complex and comprised of 1) a combined track survey and camera trapping technique and 2) opportunistic interviews with local stakeholders and following-up on den site observations. A total of five park guides were trained to conduct the track surveys either in teams of two on a motorbike or on a tracker seat in front of a Toyota Land cruiser. Trackers were equipped with a *Super Trackstick III* device, which enabled follow-up of their tasks by project leaders and mapping of all surveyed roads.

In total, 4,100km of transects on dirt roads were conducted throughout the complex, thereby recording for each encountered track GPS location, species and number of individuals of the four main large carnivore species: African wild dog, lion *Panthera leo*, leopard *P. pardus* and spotted hyaena *Crocuta crocuta*. In addition to the track surveys, *StealthCam* camera traps were installed along selected stretches of road transects at 2.5km intervals.

Interviews took place on an opportunistic basis with a wide range of stakeholders (for example, park staff, professional hunters, local communities) and throughout the complex. Any reports of a potential active wild dog den site was followed up by a team of two trackers on motorbike. When a den site appeared to be active, three camera traps were installed at the site to identify the species occupying the den.

Results and Discussion

Training of trackers to correctly identify tracks appeared to be crucial in this case, as initially trackers would often mistakenly identify hyaena tracks as being wild dog tracks. Analyses of the apparent wild dog tracks found in the central Bénoué National Park and in Faro National Park revealed that the tracks belonged to a domestic dog (G. Rasmussen pers. comm.). Although not a single camera trap photographed wild dogs, the camera trapping surveys appeared to be effective in recording presence of a diverse range of other species. As an example, where spoor counts failed to record presence of rare and elusive carnivores such as caracal *Felis caracal* and serval *Leptailurus serval*, camera traps did record these species.

Data from structured interviews of 109 resident livestock owners in 2006 and opportunistic interviews of 24 village chiefs between January 2008 and May 2010 revealed that wild dog sightings had decreased drastically over the past 15 years. Despite reports of 17 potential den sites, no active wild dog den was identified after installation of the camera traps.

Opportunistic interviews with hunting zone managers (HZM's) revealed that perception of wild dogs is generally negative. HZM's clearly indicated that they do not wish to have wild dogs in their area since they tend to "destroy all valuable game". HZM's indicated that nomadic cattle owners were particularly responsible for persecuting wild dogs previously and are the reason for their absence now. However, there was no evidence to support this view. On the contrary, there were indications of illegal killing of wild dogs by HZM's, as some African wild dog skins have reportedly been exported from hunting zones over the past years (Anonymous, pers. comm.).

Abundance indices from track counts appeared to be effective in predicting the presence and relative abundance of the more common species of large carnivores such as lions (1.2/100km^2), leopards (1.3/100km^2) and spotted hyaenas (2.6/100km^2). These three large carnivores occurred throughout the entire Bénoué complex in a variety of habitats, although they tend to avoid the edges of protected areas (all three species) and villages (lion and leopard), stressing their vulnerability to human-induced threats. Our data further reveal that lions occur in lower densities in hunting zones as compared to protected areas, which could have greater implications for management practices in the hunting concessions (Croes et al., in press.).

Taking into consideration known characteristics of wild dog ecology, we can conclude that under current management strategies for the Bénoué Complex, the remaining African wild dog population is functionally extirpated. This has great consequences for the status of wild dogs in the region, as our study area was thought to be one of the last strongholds for wild dogs in West and Central Africa (McNutt et al. 2008). Despite the knowledge that the species is resilient and capable of recuperating as soon as conditions are improved, management regimes for the entire complex should urgently and drastically im-

prove for population numbers to start increasing again. Under present conditions with high hunting pressure and a particularly unfavourable attitude among HZM's and hunters, restoration of the wild dog population is unlikely, and a further decrease in densities of other large carnivores can also be expected.

Raising awareness of African wild dog ecology and of wildlife ecology in general is crucial for the Bénoué complex. Negative perceptions should be addressed through education, while incentives should be created for local communities as well as for hunters. Most importantly, changes in laws and regulations at the governmental level are crucial to change current management strategies.

The techniques used during our surveys are repeatable, can be conducted by trained park staff and are cost-effective, especially since materials and skills are now present in the complex. The motorbike and the Super Trackstick III have proven to be excellent tools, particularly when local park staff is in charge of the survey work. The methods appear to be successful in determining status and distribution of most (large) carnivore species and we have thus developed an effective method to monitor medium to large-sized carnivores in a variety of habitats. Continuation of surveys as part of future monitoring of large carnivores in the region has already been established through the launch of the Large Carnivore Initiative (LCI) for West and Central Africa in November 2010 – http://www.largecarnivoresafrica.com/

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References

Breuer, T. 2003. Distribution and conservation of African wild dogs in Cameroon. *Canid News* 6:1.

Croes, B.M., Buij, R., Bauer, H., and Iongh de, H.H. 2008. *Management and conservation of large carnivores in West and Central Africa*. Proceedings of the international seminar organized by CEDC/CML, November 15-16 2006 in Maroua, Cameroon.

Croes, B.M., Funston, P.J., Rasmussen, G., Buij, R., Saleh, A., Tumenta, P.N., de Iongh, H.H. 2011. The impact of trophy hunting on lions (*Panthera leo*) and other large carnivores in the Bénoué Complex, northern Cameroon. *Biological Conservation* 144:3064-3072.

Fanshawe, J.H., Ginsberg, J.R., Sillero-Zubiri, C. and Woodroffe, R. 1997. The status and distribution of remaining wild dog populations. Pp. 11-57. In Woodroffe, R., Ginsberg, J.R. and Macdonald, D.W. (eds) The African wild dog status survey and conservation action plan, IUCN Canid Specialist Group, Gland, Switzerland and Cambridge, UK.

Kwabong, J.P. 2008. *Hunting of large carnivores in Cameroon over the past 20 years*. Pp 103-107. In: Croes, B.M., Buij, R., Bauer, H., and Iongh de, H.H.(eds.) Management and conservation of large carnivores in West and Central Africa. Proceedings of the international seminar organized by CEDC/CML, November 15-16 2006 in Maroua, Cameroon.

Mayaka, T.B. 2002. *Value Wildlife! An ecological and economic assessment of wildlife use in northern Cameroon*. PhD thesis, CML Leiden University.

McNutt, J.W., Mills, M.G.L., McCreery, K., Rasmussen, G., Robbins, R. & Woodroffe, R. 2008. Lycaon pictus. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. <http://www.iucnredlist.org/>. Downloaded on 15 December 2011.

Rasmussen, G. Croes, B.M., de Iongh H.H. and Buij, R. 2008. Conservation priorities for *Lycaon pictus* in Cameroon using lessons from Zimbabwe. *Progress report to WWF-NL*.

Biographical sketches

Barbara Croes (Msc) is based in the Netherlands and was field coordinator to the large carnivore monitoring programme in North Cameroon, through CML Leiden University and its field station in Maroua (CEDC) between 2006 and 2010.

Gregory Rasmussen (PhD) is based at WildCRU in Oxford, UK and founded the Painted Dog Conservation in 1992. He is working to extend the PDC programme to protect highly threatened wild dog populations in West- and Central Africa.

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