

Protecting the Garden of Eden

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Dr Michael Kock

At first sight, the Central African rainforest is a picturesque paradise, filled with luscious vegetation, amazing animals, and birds of all kinds. Openings in the closed canopy forest (known as ‘bais’ in the local Ba’aka language), where animals come together to feed off of the nutritious and enriched earth, forbs, sedges and grasses, make it a true Garden of Eden. Lowland gorillas, chimpanzees, forest buffalo, moustached monkeys, blue duiker and forest elephants are some of the mammals that inhabit the forest, which stretches millions of square kilometres across west, central and into east Africa.

Sadly, the forest is rapidly changing. The constant rise in logging concessions, many of which are illegal, the voluminous bush meat trade, and poaching are putting the animals of the forest in huge jeopardy. As with so much of Africa’s wildlife, the ivory of forest elephants is becoming a valuable commodity, and poaching is reducing their numbers rapidly.



African Parks (AP), a dynamic non-profit organisation that takes total responsibility for the rehabilitation and long-term management of national parks in partnership with African governments, wildlife

organisations and local communities, has called on one of the Faculty of Veterinary Science's leading wildlife veterinarians to assist them in the challenging task of determining the actual effects of poaching on forest elephants.

Dr Michael Kock, of the Department of Production Animal Studies at the University of Pretoria's Faculty of Veterinary Science, has more than 30 years' experience as a wildlife vet, having started his career in 1980. Kock has worked on four continents and at several universities and conservation organisations across the world. In 2010, he was awarded the Alumni Achievement Award from the University of California, Davis, for his wildlife health, conservation and management work. Kock is regarded as one of the top forest elephant veterinary experts in the world, having successfully worked on over 40 forest elephants, a feat in a challenging environment that not many can claim.

Forest elephants are somewhat smaller than the savannah elephants of southern Africa, and are now considered genetically distinct, weighing between two and three tonnes and standing at almost two and a half meters tall, compared to the five tonne savannah elephants that measure between three and four meters tall. The shape of their tusks is also distinctly different: forest elephants' tusks are straight, rather than curved, and often stained from the forest. Their ears are also more oval-shaped, while their skulls also have a slightly different shape.

Determining forest elephant numbers is difficult because of the habitat in which they live. Aerial surveys, used when surveying savannah elephants, are not possible in the closed canopy forests of central Africa. AP, reliant on Kock's expertise, wanted to get a better idea of these elephants' movements, launching a pilot project to place GPS tracking collars on ten elephants in the Odzala-Kokoua National Park. Odzala-Kokoua is a national park in the Republic of Congo, also known as Congo-Brazzaville, with an expansive area of 13 500 km².

Conservationists have noticed that, as a result of the pressures from high levels of poaching, the very intelligent forest elephants are changing their habits and appear to be moving into better protected areas, such as national parks. In fact, AP suspects that poaching pressure is causing elephants to move deep into the parks, into areas that may well be like safe elephant 'sinks'. 'Elephants are very clever at finding places to escape persecution, seeking out safe refuges,' says Kock. As a result, tracking them is difficult, even for the most experienced trackers that form part of the team.

The central African forest is wet and humid. Swampy areas are plentiful, and trekking through them is slow and exhausting. Elephants use the interlocking vines of the family Marantaceae as a refuge, knowing they are nearly impossible for people to walk through.

During the one month pilot project, a small team, made up of Kock as veterinarian, an ecologist, and Ba'aka (indigenous forest people) trackers walked for hours every day, covering approximately 650 km of

forest. Considering the challenging terrain, getting to the animals is not always easy and relies heavily on the tracking skills of the Ba'aka.

When embarking on such a collaring operation, Kock stresses the importance of following certain principles. A key aspect of immobilising an elephant is getting to the animal as quickly as possible, ensuring their massive bodies fall safely. While elephants tolerate the immobilisation drugs well, Kock explains that if they should fall on their trunks, they will die. Falling on their chests puts too much pressure on the sternum and is also very dangerous due to the lack of a pleural space, ribs and diaphragm, which are important in expanding the chest. Once the animal is immobilised, Kock and the team work quickly to collar the elephant with a GPS transmitter. Initial satellite data from the pilot project indicates that the elephants are indeed spending more time in the thickest parts of the forest in efforts to escape poachers.



Over the years Kock has worked in the forest, he has noticed a significant decline in elephant numbers. Areas that were once thriving with elephant life are now eerie sites, with elephant graveyards, stark tokens of two-footed forest invaders. This is not only true of the forests: across all of Africa, elephants are under great pressure, and in areas where elephants once roamed freely, numbers have been halved due to poaching. Unfortunately, poaching for ivory and rhino horn has become big business for terrorist groups linked to the likes of Al Shaabab in Somalia, and ISIS. In other words, the money from these animals' parts supports and fuels insurgents. Kock and AP hope to work in other parts of the forest later this year, in efforts to save this species.

Dr Kock and the Faculty of Veterinary Science at Onderstepoort acknowledge the challenges facing conservation today and are aware that poverty is a motivation to poach. Recognising that conservation is dependent on community support, Kock teaches the importance of working with people to create a sense of ownership and value. He believes in the power of education and is proud to take the opportunity to share his knowledge and expertise in the hope of developing good and motivated environmental stewards, be they students or community members, who will continue to work for the conservation of Africa's greatest asset, its wildlife.

- Author Louise de Bruin