

Tanzania

GREEN Elephants

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(PART TWO -
CATCH AND RELEASE)

Aerial Combat over the Ruvuma

Banking steeply, Peter steers our Eurocopter towards the Ruvuma River. It's October 2002 and we've started to remove the – doubtless unloved – radio collars we'd attached to the elephants two years ago. After three days of fruitless searching, today we have located, immobilized, and re-examined our first elephant and removed its collar. The helicopter is now flying two meters above the water into the setting sun. The two vets, Thomas and Frank, are again sitting behind me, with Saidi, our tracker from the nearby village of Magazini, between them. Our spirits are high after a nerve-racking chase, and the adrenalin is still coursing through our veins. The rotor clatters above us as we fly low at 200 kilometers per hour towards our camp, almost skimming the water beneath

the canopy of trees along the riverbank. Peter leans like a motorcyclist into the bends of the river.

Four hundred meters ahead we spot two fishermen, or poachers, standing in a canoe, punting through the water. We climb quickly to 150 feet. We don't want to behave like complete jobs of the skies, but the two canoeists are so frightened by the sight of this usual flying object that, notwithstanding our rapid gain in altitude, they dive head first into the river to seek cover. Ten minutes later we're banking gracefully to the right over our riverside camp, giving the thumbs-up to the people on the ground, before landing some distance away in an immense cloud of dust whipped up by the helicopter.

As we mull over the results of our first capture operation, it becomes clear that we will never be able to retrieve all the collars

from elephants that have spread out in all directions in this impassable and largely pathless wilderness. We have learned that many researchers don't even bother with the costly and time-consuming business of collecting collars. We however consider it our duty to remove them from the poor old pachyderms.

In the previous year, we had a helicopter sent up from South Africa. We had to replace some of the collars, and capturing elephants was much quicker, easier, and less risky with aerial support. In this the third and final year we again hire a helicopter from South Africa. This time it's a modern Eurocopter and Peter is the pilot, who has seventeen years of flying experience in the Kruger National Park. He has taken part in countless culling operations when whole herds of elephants were shot from the air because the fenced-in national park would



Helicopters always attract a lot of attention in Africa.

otherwise have been stripped bare by the fecund pachyderms. Now he's taken early retirement. People with his skin color can no longer make a career in the South African national parks system, and in any case, after so many years of flying in extreme conditions, his nerves are worn to a frazzle.

He has tempted providence long enough, but for us he'll fly again, he says. I sit next to him and, equipped with a GPS and a map, I have the job of navigating. Robert, the veterinarian, has stayed behind in Berlin. Every day he retrieves the exact coordinates of the elephants we're tracking from Paris. The radio transmitters send their data at regular intervals to a satellite, and the signals are picked up in France. In this way we can always tell, with a delay of a few hours, though occasionally days, where the elephants have been. We fly to the

area, and using a radio direction-finding device that looks like the aerial of a small television, we try to pick up the VHF signals of the second radio transmitter fitted to the collar.

To speed things up and save on costly helicopter hours, Friedrich, the German-Namibian rhino researcher from the Selous, has joined us with our small two-seater Cessna 150. He too makes reconnaissance flights to help us locate the elephants. By now we've found most of the pachyderms without incident.

Flying low overhead, we shoot them with the tranquillizer gun and dart, wait until they lie down, chase away the other elephants, land, then carry out extensive tests on them. We cut through the collars and take everything with us, as the transmitters have additional stored data that we haven't received via satellite.

On the fourth morning we get another opportunity to strain Peter's raw nerves still further. After stalking from the air without success, we finally find a small group of ten animals. They try to run away from our noisy bird as fast as they can through the sparse *miombo* woodland. We stay far enough back so we don't throw them into an even worse state of panic. We have to wait for the terrain to open out, so that we can fly low enough to shoot the dart. The direction finder shows that the young cow, which we immobilized the year before last near the Mbarangandu River, is among them. We need a clearing in which to land when the animal lies down after about ten minutes. Now there are fewer trees and the helicopter, like a bird of prey, pounces on its victim from an altitude of 100 meters, and at a distance of 300 meters from behind.



Thomas has seen the collar. “She’s in the middle,” he calls to Frank over the helicopter’s intercom. Secured by a lap belt and sitting on the right at the back next to the open door, Frank holds the dart gun. We’ve removed both rear doors, so that we can shoot from either side. It’s noisy and the wind is tugging at the things in the cabin. Everything has to be firmly secured, including my rifle, which is on the floor under the back seat. If a loose jacket were to blow out of the door and get caught in the rear rotor, we could crash. The leading cow keeps changing direction. Peter is flying low now, occasionally between trees, and about fifteen meters above the cow. But, as each opportunity arises, there’s something Frank is not quite happy about. “Shoot, damn it,” shouts Peter, but this time the dart’s already on its way. We stay with them to see whether the dart has found its target. “It has,” I call to Peter over the intercom, and he is already pulling the helicopter up and back.

We retire to wait, far enough away to allow the animals to calm down, but still within sight of the group because even from the air it’s all too easy to lose them. After ten minutes we take a close look. There are still ten elephants. They are moving along the edge of a gallery forest with thickets. When, three minutes later, they emerge from the forest, still going at a good pace, we count them again - eight animals this time. What a bummer! The calf isn’t running with the herd but has stayed with the cow. We won’t be able to work. We fly over the dense forest. The cow

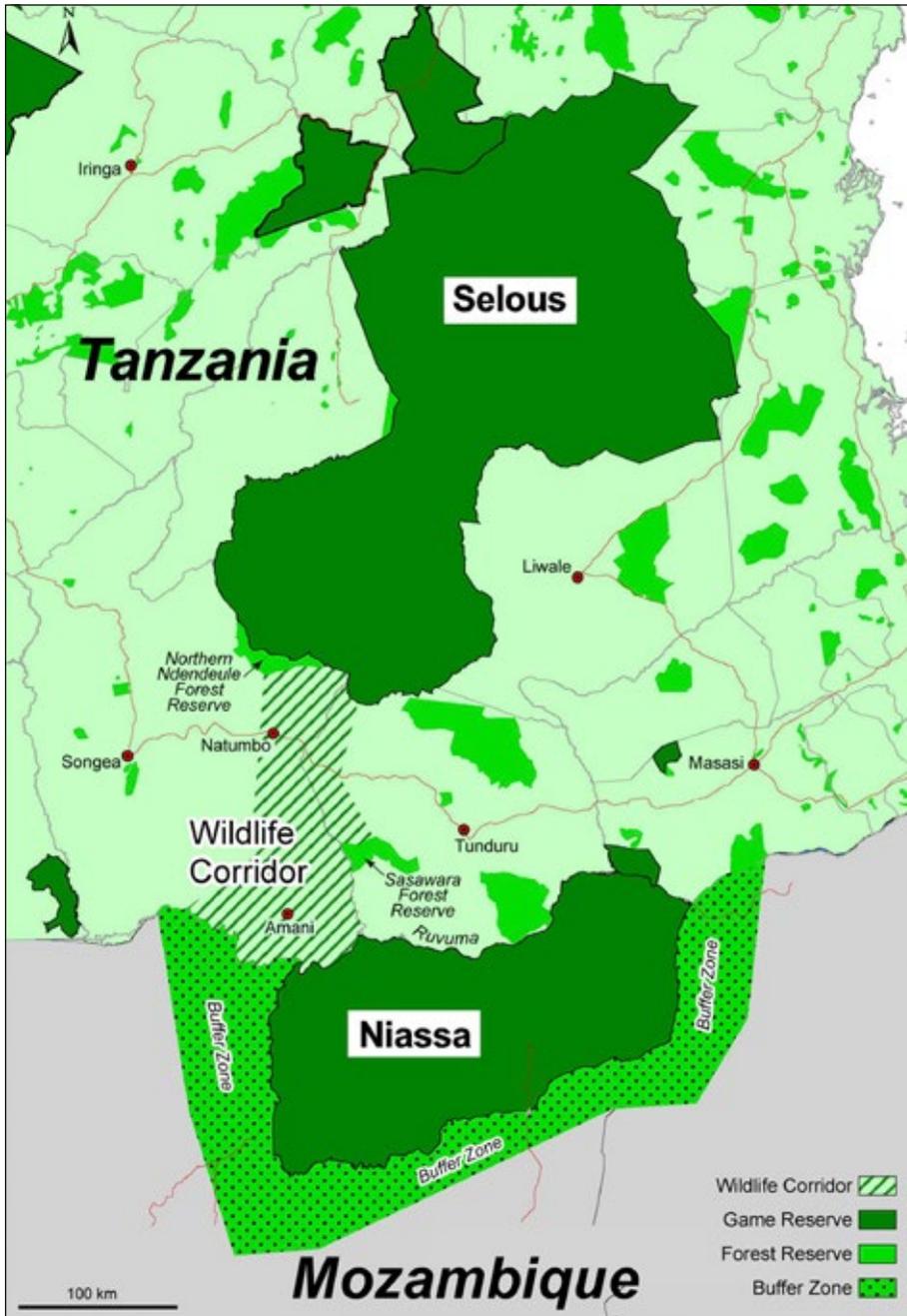
must be found quickly. If she’s fallen awkwardly with her head against a tree and her trunk is compressed, she could suffocate within minutes.

There she is, lying on the edge of brush and thicket. The calf is watching over its mother. It appears to be trying to persuade her to get up. It’s a heartbreaking sight, but now we have to act quickly. In fact, what we should do is retrieve the fleeing herd so they can take the calf with them. An experienced pilot like Peter, who is familiar with the behavior of wild animals, can drive a herd of elephants just as experienced cowboys on horseback can drive a herd of cattle. But that would take too long. All we can do now is try to drive the calf away. It runs in the right direction when the helicopter drives it, but each time it disappears into the cover of a thicket, only to reappear again a few minutes later next to its mother. It’s hopeless.

I suggest we fly low and that I make a din with the handgun to try to at least chase it away. “It’s pointless,” shouts Peter, “But, do have a go!” I draw my SIG/Sauer pistol, hold it out of the window into the strong wind and load a bullet into the firing chamber. “For heaven’s sake don’t shoot upwards!” warns Peter. I empty two 16-shot magazines in the direction of the ground. As expected, it has no effect.

Time is running short. The cow is lying on her sternum. That’s no good at all, as her own weight can compress her lungs, making

Selous – Niassa Wildlife Corridor



Left: The pilot's view from the helicopter.

Above: The ultimate goal of our endeavor was to establish a wildlife corridor between the Selous and Niassa National Parks.

breathing difficult. In this position the animal can suffocate.

Peter looks for a suitable place to land. The next clearing is 500 meters away and really far too small to land on, but we'll manage somehow. We take a final look at some prominent treetops near the animals that will serve as landmarks, take a quick compass bearing, and then we're out, heads down.

Saidi hands me the rifle he's unclamped as the helicopter landed. Frank and I run off; we're on our own now. Suddenly everything is different. We no longer have the security of the helicopter. Somewhere there is a sedated cow with an aggressive calf, and every other elephant within a broad circumference knows an animal is in danger. Communication works well among elephants. What if the herd comes back?

Five hundred meters in the bush is a long way, and things look very different on the ground than they do from the air. At last we find the two of them. The little calf is still urging its mother to get up. "Little" is relative. It, no doubt, weighs at least half a ton. We try everything we can think of to drive it away. If we get too close it turns on us, flaps its ears threateningly and trumpets. "Whatever happens," I call to Frank, "I'm not going to shoot the little bugger. Climb a tree if you have to!" We could immobilize it too, but then we'd have to wait until the drug worked, and the cow has already been on the ground too long for our liking. In any case, the dose in the dart is intended for a cow. It's too strong for a young animal.

We decide to create a terrible ruckus. We charge towards the calf and I empty the last magazine of my 9 mm pistol. In the end it's all a bit too much for the calf, which disappears into the thick brush. We grab our chance, cut through the collar as quickly as we can and inject the reversal drug into an ear vein of the heavily-panting cow. We withdraw quickly. We'll have to do without an examination this time.

When the helicopter is airborne again, we look back from a distance. The cow is back on her feet, the calf pressed close up against her. She'll have a hangover for a day or so, and feel as if she'd eaten an extra



large portion of the fermented fruits of the *mvula* tree. She'll be careful to stay well clear of aircraft in the next few years.

Death in the Afternoon

This morning we're looking for a middle-aged bull near the Sasawara Forest Reserve. He is a pretty mobile fellow who likes to roam. Something must have happened to him in May, as his radius of movement suddenly narrowed. We've been searching for him for over an hour, but the radio signal is playing tricks on us. Sometimes it's strong but at other times it's quite weak, as if he is a long way away. In practice, nothing about this equipment ever seems to correspond to the instruction booklet. Suddenly, we see four large bulls running away over a ridge ahead of us. Yes, the last bull, following the others at some distance, has a collar. That's him. He's the guy we're after.

First we have to find a suitable spot to immobilize him. Conveniently, they're running towards a large marshy, treeless plain. Peter nudges them gently from the side to keep them on track. They're running into the open. These conditions are ideal. The helicopter circles low. The bulls stop to defend themselves. We're perhaps twenty

meters above the collared bull. The dart hits home. Peter lifts the helicopter so quickly that my stomach can't keep up, and appears for an instant to stay where it is. We look back at the elephants still standing where we left them. We disappear quickly behind a line of hills and wait. The bull should be down in twelve minutes.

The water is not deep, but a sedated elephant can drown in twenty centimeters of water. Four minutes later we peep over our hill to see whether the elephants are still in the same place. Our bull is already on the ground. Heavens, something's wrong.

We hurry over to the herd, make a few rapid approaches at low altitude and the other three bulls take to their heels. Peter can't land in the bog. As the helicopter hovers low over the ground near the bull we jump out. The vets check his heartbeat. We're too late. The elephant is already dead. We're all thoroughly crestfallen. Here we are, trying to remove collars from elephants at great effort and expense, occasionally putting our own lives at risk, and now this. The vets force themselves to carry out the necessary tests and take the usual samples. Saidi and I lend a hand; since we have a good view, there's no need to stand guard, weapons at the ready, in case elephants suddenly appear.

We discuss the possible causes. Why did the elephant die so quickly, despite ideal immobilization conditions? We have a good twenty minutes to work on the elephant. In one hour it'll be dark and we need about half an hour to fly home. So we decide to do an autopsy. Soon we know there is something wrong with the elephant. He's anemic, i.e. his blood shows signs of pathological changes, though they are merely symptomatic of something else.

In humans too, anemia is associated with whitish mucous membranes, impaired performance and weakness. This explains why the bull was trailing behind the others as they ran away from the helicopter. But, why?

After searching for a while we find the answer. Thomas cuts into an area of scar tissue on the surface of the heart and removes an almost-intact soft-nose .375-caliber bullet. The elephant had a bullet lodged in his heart!

He must have been wounded in May, which is outside the hunting season. Nor was it inside a hunting block. Anyhow, a trophy hunter wouldn't have gone for a bull with small tusks like his. No, it could have been a poacher, but the weight of evidence seems to support the suspicion that he was hit by a bullet fired from the rifle of a



government game scout on crop protection duty. When making its last bulk purchase, the Wildlife Division, in its wisdom and resistance to advice, had yet again bought unsuitable hard-nose ammunition for the smaller caliber weapons used for hunting, such as the .308 and .30-06. And, for the .458 and .375 caliber rifles used against elephants to protect crops, it had purchased completely unsuitable soft-nose bullets. The bullets mushroom and consequently don't have the necessary penetration on these huge animals. These bullets only wound elephants, not kill them. It's little consolation to us to know, as we do now, why our elephant died.

Wildlife Knows no Borders

Only two collars remain. Inconveniently, both of them are transmitting their signals from neighboring Mozambique. One of them is located by Friedrich with the small plane. It's not moving, so it's on the ground. Our Tanzanian veterinarians will later undertake a fruitless expedition with Mozambican game scouts to find the transmitter. Since it's still transmitting, we pass the coordinates to Mozambique, and Baldeo the warden of the Niassa Game Reserve eventually tracks down a group

of elephant poachers who are carrying the collar with them.

Friedrich can't help us find the second elephant in Mozambique. The previous day he'd flown to Songea with Madatta, the game officer in charge of the district, to fetch engine oil that had been sent to us by bus from Dar es Salaam. After take-off the single engine Cessna 150 failed to gain altitude. Friedrich attempted to return to the airfield, which is always the wrong thing to do in such circumstances, and crash-landed in a maize field.

Top left: It takes a large team to successfully collar elephants.

Above: Flying low above the Ruvuma River.

Bottom: Local villagers posing for a photo.





Top: Examining and collaring an elephant must be done expediently, while someone stands guard.

Bottom: Happily displaying the retrieved radio collars at the conclusion of the project.

The radio report caused great consternation in our group, but to our relief we soon heard via satellite telephone that, although the plane is destroyed, its two occupants are unharmed apart from a few scratches and bruises. With a full tank, two people on board, twenty-five liters of oil and 100 rounds of elephant ammunition they'd crammed in as well, the light aircraft was overloaded, especially in that heat and at 1,000 meters above sea level. A glance at the handbook would have told the pilot that. But, in Africa, a truck is loaded until it's full, even if the vehicle is already on its knees. And planes get the same treatment.

Now we have to find the last elephant on our own. We immobilized him a year earlier on a peninsula of the Ruvuma River. It takes us an hour to pick up the signal from the young bull using the VHF transmitter, but our problems are only just beginning. We are flying in a depression with mountains on either side, which are reflecting the VHF signal, making it impossible to verify his precise location.

Peter gets hold of the earphones and presses them over his ears so that he can hear the exact changes in the signals irrespective of the flight direction, react immediately, and set the helicopter on the right course. It doesn't work. The two signals from right and left are not converging, as they would be if we were getting closer. As always, when Peter is concentrating hard at the controls and things are not going

his way, he keeps up a constant barrage of swearing. We have to hurry as the needles of the fuel gauges are dipping ominously. A few days earlier Peter had simply landed in the village of Namtumbo – ignoring the crowds of curious onlookers and the traffic chaos – and refueled with the kerosene that people use for cooking. It's more or less the same as the jet fuel the helicopter needs. But here there is no filling station for miles around. And not long afterwards there's no filling station at Namtumbo either, the pump attendant having ignored his own warning sign “*Usivute Sigara*”, No Smoking!

Eventually we catch sight of the bull. He's alone, running steadily and cautiously, and using every bit of cover. Now and again we lose him when he drops down into a valley and disappears under the thick canopy. We are well into the dry season by now and the trees are bare, so we do at least get brief glimpses of him. If we get too close he tries to attack us. Peter uses the helicopter to try to drive him to more open ground. This has always worked before but it doesn't this time. The *tembo* refuses to be driven.

The bull is around thirty years old. At this age they're not to be trifled with. Eventually there's a gap in the canopy and Peter immediately grasps his chance. Frank shoots, also without a moment's hesitation. Our teamwork is superb by this time. The dart lodges in the muscle flesh of the animal's back, as it should.

At first the bull doesn't react, but then he sets off again at a run. Five minutes, ten minutes, fifteen minutes. We have to admit it hasn't worked. Most likely the syringe hasn't discharged its load of M99.

We do the same performance all over again. This time the dart hits home. Ten minutes later he is in a “down position”. Frank, Thomas and I jump out of the helicopter before it lands. We are in a hurry, as the fuel is dwindling. We have to fly straight back because we have only enough kerosene to reach camp in a straight line. We have no bad weather reserve.

The elephant is waiting for us in a sitting position, fanning his ears. His eyes are open. It's strange to be approaching an

elephant that appears not to be in a deep sleep. We cut off the collar, take a blood sample and administer the mobilization jab. There's no time for further tests.

We run to the nearby helicopter that is waiting for us with its engine running. Our bull is back on his feet as we are airborne. We wave a last goodbye and the helicopter whisks us off in the direction of home. Our mood couldn't be better. Peter has stopped cursing and started singing. We have successfully concluded the largest-ever field research study on the migratory movements of elephants living truly in the wild. And we have relieved the elephants of their unloved necklaces.

Peace Park

The results of our work, together with the information obtained from interviewing local hunters and other studies conducted by Donald, our Tanzanian PhD student, enable us to construct a good picture of elephant movements in the corridor. Individual bulls migrate from the Selous right down to Niassa. But most elephants move within a much smaller radius, as the ideal living conditions make migration over long distances unnecessary. Since their territories overlap, a genetic exchange does take place between the two reserves. With the help of the study we succeeded in raising the funds necessary to protect the corridor.

Today, the villages in the corridor have taken charge of the protection of their wildlife. There is coordinated wildlife management over an area of about 110,000 square kilometers. The vision of a trans-border “peace park”, as these protected areas in the south of the continent are called, is no longer just a dream, it can become a reality. I say “can” advisedly because there are too many corrupt politicians and officials who could still thwart the plans of the villages and conservationists. Precious stones, gold, tropical timbers, ivory and arable land in the corridor are just too alluring. The three-year research project made sense. And it has proven to me once again that the attraction of hunting lies in stalking and chasing wild animals, not necessarily in killing them. ■