

The wonder of ELEPHANTS

The world's largest land animal – with a brain bigger than ours and similar family values – has been worshipped as a god, hunted for its ivory, feared for its bravery and has awed humankind since our paths first crossed in the mists of time. Don Pinnock set off on a journey to find out how *Loxodonta africana* was doing in Southern Africa.

In the golden silence of late afternoon, the Tuli woodland seemed to be holding its breath. Then it exhaled elephants. A large matriarch appeared from behind a towering nyala tree and the air pulsed with the sort of subliminal rumble you feel rather than hear. Following her, in orderly file, came Africa's grey ghosts in all shapes and sizes: mothers gently caressing youngsters still trying to work out what to do with their trunks, bulls not yet ready to leave the herd, teenagers testing their head shaking and ear flapping.

'Therese's group,' said researcher Jeanetta Selier as they swung out across the valley floor. 'She's a great leader.'

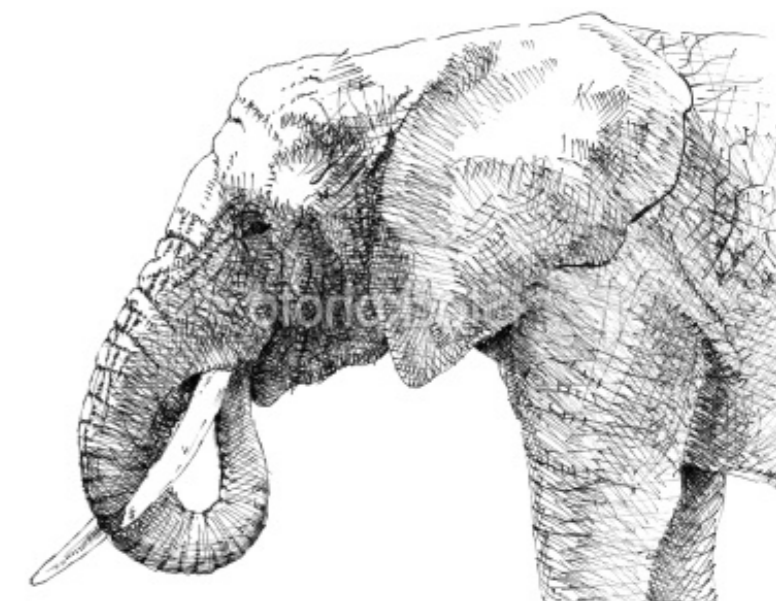
I counted 40 before they disappeared into the shadows of sunset, making hardly any sounds we could hear. 'Aren't they simply magnificent,' asked Jeanetta, who's been studying them on the Mashatu concession for 10 years. 'I can't understand what drives a hunter to shoot a creature like that.'

'We killed off the mammoths, the dodos and much more. But a world without elephants would be a lonely place. They're so sensitive, so wise, so caring. And the survival knowledge of centuries lives in the minds of the trophy bulls and old cows we see fit to kill.'

My quest to find out how *Loxodonta africana* was doing in Southern Africa had begun nearly a month earlier, thousands of kilometres further west on the edge of Namibia's Skeleton Coast. There, in the Kaokoveld, tall, thin elephants generally inhabit dry valleys, dig for water and eat sparingly in the crisp desert air. The trouble was, just then, there were no desert elephants to be seen.

The reason was the highest rainfall in living memory. Grass everywhere, water all over the place and happy elephants wandering far from the waterholes where people usually view them. Droughts are good for people and bad for elephants. This year it was the other way round.

It was fortunate that I was travelling with incurable optimists – psychiatrist, naturalist and writer Ian McCallum along with our wives, Sharon and Patricia. We began by



driving up to Purros in Namibia's northwest corner where you normally find elephants looking for water in the riverbeds. To get there we forded 12 flooded rivers, water sometimes coming over the bonnet of my Toyota Land Cruiser, and soon realised the beasts had no reason to scrounge for fluid. They'd taken to the hills.

'Beautiful scenery,' remarked Ian, 'who needs elephants?'

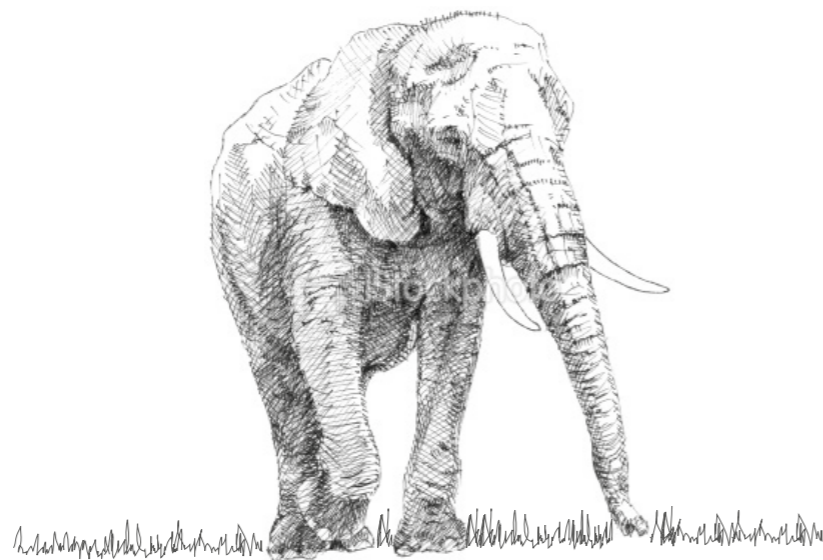
'I do,' I replied, 'and I'm not sure I like the idea of drowning in a desert.' He gave me one of his penetrating looks and said: 'In life you need to be willing to be disturbed.'

Our guide was legendary game ranger and author Chris Bakkes, notable for his knowledge of the desert region, the absence of much of his left arm bitten off by a croc and his one-eyed dog, Tier, who lost a few bits to a leopard. That evening he offered me a beer with the warning: 'I never trust a man who doesn't drink beer or a land without rocks.' I took the proffered can and asked him why, in more normal times, elephants chose to live in a desert.

'It's all about the geology,' he answered. 'When South America separated from Africa millions of years ago, great cracks appeared and liquid basalts bled out of Earth's crust just here. Basalt is dense and holds water. So in these hills are natural aquifers that leak water into the riverbeds. The Hoarusib, Hoanib, Uniab, Huab, Ugab. There's food and water if you know where to look. Elephants do, so do black rhinos and other game. But right now elephants are all over the place. Hard to see.'

We spent the day in the beautiful campsite at Purros, then backtracked to Palmwag and up to Etosha. The pans in the park stretched to the horizon, the grass was hippo high and shimmering silver, springbok were leaping like deranged rabbits but the elephants were elsewhere. So we headed for Kaudom on the Botswana border.

The park has beautiful leadwood forests, sand roads from hell and, just then, no elephants. Along the way were some heaps of dry elephant dung over which we became



Herds like this one in Mashatu are led by matriarchs which embody immense wisdom learned from their mothers and accumulated over lifetimes of subtle communication and exploration.

The culling debate

There's general agreement within Southern Africa that elephants have a high level of social organisation and consciousness and, because of this, management requires high ethical standards. But it's also true that if you put a fence around a wilderness area,

you're required to manage it. Most debates around elephant numbers have centred on or been initiated by Sanparks and, particularly, Kruger National Park. The current approach is to focus not on the number of elephants, but on the resilience of the ecosystem as a whole.

The outcome of extensive consultation, going back several decades, is that management of elephant numbers should first entail removing fences so elephants can move further afield, reducing water points (more than 50 per cent of Kruger National Park's water-

holes have already been closed), keeping elephants out of sensitive areas, using contraception or physically relocating elephants before deciding to cull.

These measures have received widespread acceptance across Southern Africa.

unreasonably excited. We asked the warden when last he'd seen elephants. 'Before the rains,' he said. 'Maybe four months ago.' So we headed further east, leaving the park to hornbills and tree squirrels.

The first elephant in 4000 kilometres of travel appeared in the Bwabwata National Park and turned his back on us. But we heard that there were herds in Mudumu National Park – possibly from the Savuti Marsh and Linyanti Floodplain in Botswana – gathering for their winter migration into southern Angola. They emerged dramatically from the Kwando River one hot afternoon, right in front of my vehicle like breaching whales, black, wet and dangerously close. We had finally found the elephants.

When we arrived in Kasane, Botswana, Michael Chase and Kelly Landen of Elephants Without Borders were putting the final touches to a weighty report on animals in the vast area about to be consolidated into the KAZA (Kavango-Zambezi) Transfrontier Conservation Area, the world's largest wild reserve. The TFCA, about the size of Italy, contains Africa's largest elephant population and spans five countries – Namibia, Botswana, Angola, Zambia and Zimbabwe.

'Pick up any publication,' said Michael, 'and it will tell you elephants are increasing and that it's a problem. But are they really? We wanted to find out. We flew transects two kilometres apart over huge areas of Botswana, Caprivi and southern Angola and found the population was up in

some areas, down in others but basically stable. One reason is that they're returning to Angola.'

In that country's interminable civil conflict, Jonas Savimbi's troops are thought to have slaughtered about 150000 elephants for meat and to finance the war by selling ivory. All the rhino went the same way. When Michael surveyed strife-torn Luiana National Park in 2001 there were 38 elephants, in 2005 it had jumped to 3000 and by 2008 the count was 8000. How did they know it was safe to return to Angola?

'The country's remembered by a generation of elephants still alive today,' said Michael, 'and an elephant never forgets. They still recognise the pathways to food and water and the timing of seasons. They remember where the hunters are. In a sense, they're Angolan refugees returning home.'

'The bulls are the scouts, leaving the vicinity of Botswana's conservation areas on exploration journeys. They move from the Okavango Delta up the Kwando River, streak across the Caprivi at night and into Angola. There are thought to be millions of landmines in southeast Angola. I don't know how they avoid them – probably by smell – but they do.'

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Delta crash

While elephants are doing quite well in Botswana, other wild animals are seemingly in crisis. An aerial survey of elephants and wildlife in Northern Botswana done by Michael Chase and Kelly Landen of Elephants Without Borders last year found 11

species in massive decline in the Okavango Delta, long considered the womb of wildlife in the region.

Comparing surveys going back to 1993, wildebeest are shown to have crashed by 90 per cent, giraffe by 65 per cent, tsessebe by 83 per cent,

lechwe by 58 per cent and zebra by 53 per cent. From 1999 to the present – a period of only 10 years – the running average for species decline is around 61 per cent. Zebra are a fraction of what they were a decade ago.

'It's a catastrophic loss of

wildlife,' Michael said, 'and we can't be certain about why. Rainfall is one factor – we're only just coming out of a long dry cycle. Then there's the huge bush fires, human encroachment and habitat loss. The Delta's wildlife is in trouble.'

Then they return and fetch the family herds.'

The distance elephants walk is staggering. Michael and Kelly have tracked a collared elephant that covered 32000 kilometres in two years, the greatest distance ever recorded for the species. 'They look for food and water,' said Michael. 'But they're also searching for sanctuaries far from humans.'

'So how are elephants doing in Africa?' I asked. 'President Ian Khama's passionate about wildlife, which translates into great protection in Botswana,' said Michael. 'In our area they're doing okay – our 2010 dry-season aerial survey estimated 130000 elephants in northern Botswana. In Tanzania, Kenya and Mozambique they're not so well protected and poaching is increasing. They're also losing habitat there faster than we can think. Calf mortality is high. In the DRC the elephant population is going down fast. Soon they'll be locally extinct.'

'For elephants to survive we need to identify safe corridors, linkages between areas, networks, dispersal areas, transfrontier parks. We need to let their movement draw the lines that define wildlife ecosystems. There's not much time left. Their future is in our hands. We have to get it right and do it now while we still have the opportunity.'

We left Botswana and entered Zimbabwe's Hwange National Park at its northern gate near Mpandamatenga. The camps are dilapidated but faithful staff are doing what they can to keep them going. From Sinamatella camp, high on a hill, we

watched two large bulls grazing companionably, and a large tusker in the campsite surprised my wife as she headed for the bathroom at sunrise. There are rumours that hunting will soon be allowed in Hwange. Add that to the poaching and a disaster could be on the way in one of Africa's truly great parks.

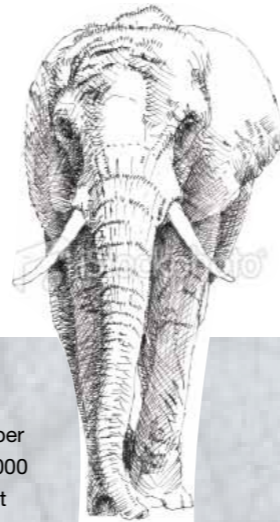
Our last stop was Mashatu in Botswana's Tuli Circle, west of Messina. There I asked Jeanetta Selier about elephant communication, intrigued by something I'd witnessed back in Chobe. Guided by the park's honorary vet, Clay Wilson, I'd watched an old bull, at the rear of a line of elephants rumble and step forward. Each one in the line, without looking round, began walking simultaneously as if he'd said 'Go!' Do elephants have a language? Jeanetta seemed the right person to ask.

'Elephants have a very complex communication system,' she said as we watched a mother fondling her baby with a tender trunk. 'There's body language, audible and subsonic sounds and seismic waves transmitted through their toes. When a female is ready to mate she sings – in multi-layered cadences – what I call an oestrus song to signal ovulation. Quite beautiful.'

Standing near a herd, we could catch the upper frequencies of their conversation. Sensitive recording equipment has recently shown its complexity. Elephant ears detect the lowest frequency sounds in the animal kingdom. Researcher Caitlin O'Connell-Rodwell of Stanford University discovered that at certain times an entire herd will freeze and lean



TOP LEFT: After a decade of working with elephants, researcher Jeanetta Selier is almost one of the herd. **BOTTOM LEFT:** A clean elephant is a magnificent thing, but you seldom see one as they emerge from a bath and cover themselves in cooling mud.



How many elephants?

In comparison to human population, the number of elephants is minute. There are around 280 000 in nine countries of Southern Africa plus about 200 000 forest elephants and perhaps 20 000 in west Africa. That equals an African population of some half a million. Factor in about 30 000 elephants in Asia and you end up with a global elephant population equal to the human population of East London. Around 9 000 are killed each year.



What we drove

Research for this feature required a lot of rough terrain driving. We used a Toyota Land Cruiser supplied by Britz 4x4 Rentals. Tel 011-396-1860 or 021-982-5107, email info@britz.com, www.britz.co.za.



forward on their toenails. At such moments she recorded groundwaves conveying complex sounds at around 20 hertz with harmonics from 40 to 80 hertz.

She found that seismic waves travelled through their feet and up their legs and shoulders to their middle ears. Different signals elicited specific behaviours in the herd, suggesting a form of language with structured syntax. Seismic groundwaves can travel immense distances, which explains how bulls on expeditions to faraway Angola unerringly reunite with the herd to lead them northwards.

This ability is aided by pathways between waterholes remembered and communicated over generations by older bulls and matriarchs. It's likely, according to Michael Chase, their intellect and ability is still beyond our imagination.

Infrasound and seismic communication is an ability shared by whales, dolphins and some insects. Biologist Lyall Watson once witnessed an elephant and a whale in what appeared to be rapt conversation near Knysna.

'The blue whale was on the surface again, pointed inshore, resting, her blowhole clearly visible,' he wrote. 'The matriarch was here for the whale! The largest animal in the ocean and the largest living land animal were no more than a hundred yards apart, and I was convinced they were communicating.'

'In infrasound, in concert, sharing big brains and long lives, understanding the pain of high investment in a few precious offspring, aware of the importance and the pleasure of complex sociality ... matriarch to matriarch, almost the last of their kind.'

From Mashatu we turned homeward through the seemingly endless hunting concessions of northern Limpopo. Jeanetta was right – without elephants around we felt strangely lonely. On the long, straight road through the bushveld, Michael Chase's question kept demanding an answer: 'Elephants are a flagship species. If we can't save the African elephant, what hope is there for the rest of Africa's wildlife?' ■