GREY MATTERS

Here: an elephant calf is usually weaned between 4-5 years. Right: a butchered baby elephant

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Hwange National Park in western Zimbabwe may be home to one of the world's most incredible wildlife spectacles, but each summer the park moves further towards crisis point as thousands of malnourished elephants jostle aggressively around its arid pans. Gemma Catlin and Aaron Gekoski explain why

Hwange National Park, tucked away in the north east corner of Zimbabwe, is one of Africa's largest and most prolific conservation areas. At over 14,600 square kilometres – an area bigger than Northern Ireland – the park is enormous. Roads are tracks, lodges are hidden and safari vehicles are few and far between. Hwange is a rare and delightful example of what wildlife destinations were like before some of them became homogenised, commercial operations.

The park features some of Southern Africa's most diverse landscapes, including miombo and false mopane woodlands, teak forests and grassy savannahs. In among this vast scene roam herbivores such as wildebeest, buffalo, impala, kudu, eland and sable, closely pursued by lions, leopards, cheetahs, hyenas and wild dogs. Then there's the birdlife: over 400 species.

However, the park's most famous residents are, unquestionably, its enormous herds of elephants: over 30,000 *proboscidea* wander Hwange's landscape. On paper, this sounds as rosy as an African sunset but major problems are lurking amid the ilala palms and undergrowth. As each summer passes, Hwange draws closer to crisis point and officials now face an impossible predicament.

The issues can be traced back to 1929 and the arrival of the park's first warden, an enthusiastic 22-year old Ted Davison. Each summer, Ted – a keen conservationist – watched with concern as Hwange's modest elephant populations migrated and returned in diminishing numbers. As human settlements developed, migration routes narrowed and conflicts between man and wildlife escalated.

Davison decided to end the animals' annual battle by offering them a year-round suitable and safe environment. In return he hoped tourism would

thrive and generate revenues that would secure the park's future. And so, with the best intentions, Davison dug wells and installed windmills.

The year-round water supplies that followed gave the elephants little reason to leave and their numbers multiplied. Before long, Hwange was heralded as a significant wildlife destination and Davison proclaimed a hero. No one could have foreseen what would happen to Hwange's 'moderate' elephant population.

With no natural predators (other than man), populations escalated at around 5 per cent each year, doubling in less than a decade. Today, it is estimated that Hwange is home to between 30,000 and 50,000 pachyderms: over double the park's recommended capacity. Too many elephants may seem like a nice problem to have but, when the land can neither provide for nor protect them, it's a ticking time bomb.

An elephant's ineffective digestive system means that it spends approximately 16 hours a day eating up to 275kg of grass, leaves and shrubs.

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Based on these figures, we can guesstimate that Hwange's residents munch their way through more than 10,000 tons of food every day. In September and October, there simply isn't that much to go around.

SUMMER STRUGGLE

Zimbabwe's summers can be brutal. Day after relentless day temperatures top 40 degrees. Every scrap of food is quickly devoured and thousands of malnourished and thirsty elephants rove the desolate landscape. As they push and shove around the arid pans, their distressed bellows can be heard far away. Skin stretches over impossibly thin torsos. Sunken skulls wrinkle with dehydration. The smell of death clings to the heavy air. As each year passes and populations continue to rise, the elephants' struggle intensifies.

Clockwise from above left: Bomani Lodge; thirsty elephants crowd a waterhole; a malnourished local family

There are few people who have spent more time with elephants than Mark Butcher. The ex-Provincial Wildlife Officer spent years watching the park's struggle to pump the critical water supplies. His communal land's lodge, Bomani, employs a team of attendants that work night and day to ensure that over 30 square miles of pans never run dry. He has also founded the Imvelo Elephant Trust, where the aim is to find and implement a long-lasting solution to Hwange's unquestionably giant elephant problem.

'Butch', as he's known, concedes that maintaining the artificial situation is merely a "short-term band-aid." However, since the problem is inherent, and in the absence of alternative suggestions, he considers himself obligated. "I may believe that pumping water is not the answer, but I cannot bring myself to close down and watch hundreds, if not thousands, of animals die," he says. "We need to find some fair and realistic long-term solutions that don't involve simply turning off all the water – that would be catastrophic for Hwange."

Meanwhile, world-renowned elephant expert Professor Rudi van Aarde maintains that it's the very provision of water that is issuing the elephants' death certificates. "If water is placed where the land cannot provide then we are setting an ecological trap," he argues. "A non-suitable landscape that's been made 'suitable' is still not suitable. We're advocating something is available when it's not. That's wrong. That's not conservation."

Van Aarde promotes 'rezoning'. "Build ecological networks by inter-connecting protected areas, including both ideal and non-ideal elephant habitat. This will enable elephants to move freely across the land and for the availability of natural recourses to dictate their dispersal. They will thus become a structured population."

While this sounds good on paper, rezoning has implications beyond the elephant population. Large numbers of people would have to be re-housed. Not only would this exercise become a political and logistical nightmare, it would also cost millions. In one of the

MUTUAL BENEFIT

How responsible tourism helps everyone involved

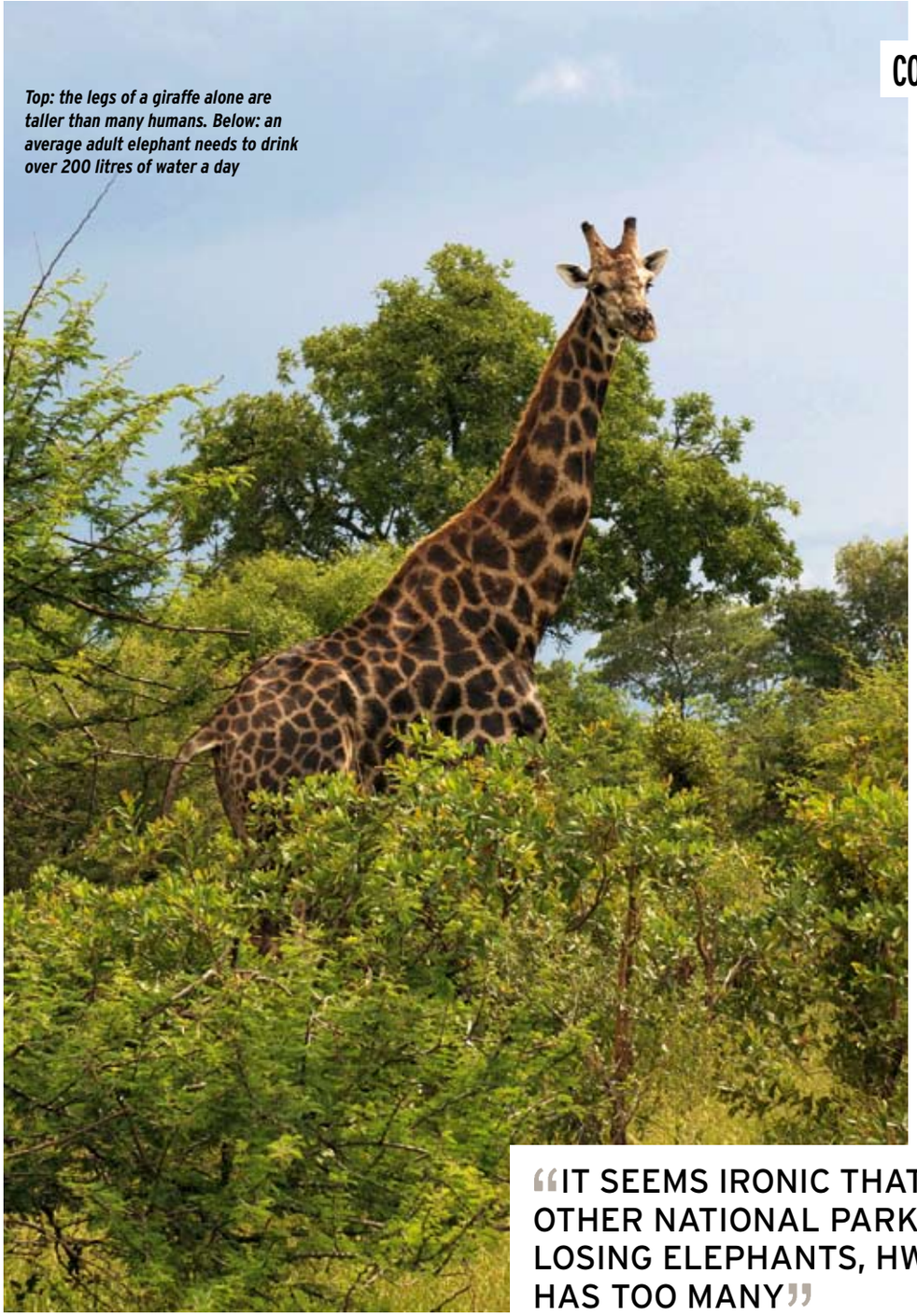
So what would happen if the water was turned off? Well, the first thing that would happen is that lots of elephants would die. Their meat would then be left to rot in the bush, next door to where thousands of starving people live.

The next thing to happen would be that wildlife numbers would plummet and Hwange would no longer be considered an attractive holiday destination. The tourist industry would collapse and communities would lose their major source of income. Everyone is a loser in this situation, with animals, the land and people all suffering.

At a local school, revenue generated by Imvelo has built a new classroom block, a library, shower block and teachers' accommodation. The funds have enabled countless boreholes and manual pumps to be installed, ensuring villages have access to clean running water. This has created a community that is passionate about wildlife. They view animals such as elephants as their future. As a result, they report poaching activities, educate their children in conservation and work closely with tour operators to help protect the park.

Only a few hours away, where the water pumps have been closed for many years, the story couldn't be more different. A safari camp lies derelict, its fence dismantled for snares. To the villagers here, wildlife is nothing more than a nuisance, a valuable source of protein or a poaching income. At the school, the difference is also stark. The children shelter in the shade while their teacher battles to engage them. Faces are painfully thin and clothes are dirty and ripped. Not one of these children can afford a uniform.

The disparity between these two, nearby communities proves the difference tourism makes to the preservation of national parks and their wildlife. The wellbeing and survival of animals, including elephants, is responsible for community development, the protection of the land and ultimately the country's recovery. People can help by selecting holidays that support those operators that strive to create symbiotic relationships between nature and man.



Top: the legs of a giraffe alone are taller than many humans. Below: an average adult elephant needs to drink over 200 litres of water a day

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poorest countries in the world, and one that has experienced decades of political genocide, the plan appears futile. Perhaps we need to think again.

CONTRACEPTION OPTION

Chap Masterson, the director and veterinarian for Zimbabwe's Wildlife Veterinary Trust, has ample experience in contracepting wild animal populations. "At one stage, I believed that immunising animals against pregnancy would solve several conservation issues," he says. "After all, it's simple, straightforward and humane. And for many years now it's been hailed a wonderful way to address 'elephant problems'." But Chap's work has also highlighted some ele-sized stumbling blocks. "The trouble is, contraception can only reduce population growth rates over a period of time. To achieve a zero increase, 70 per cent of Hwange's elephants would have to receive an initial vaccine, a booster, and an annual follow up for at least ten years."

This raises a number of logistical and financial issues. In addition, Chap has observed some extremely worrying sociological and behavioural issues in contraceived populations in recent years. "We don't yet know the long-term effects of contracepting a large elephant population. In a social species that is so geared towards reproductive success, the impacts could be catastrophic. Dare we take the risk? And is it really that humane after all?"

> "IT SEEMS IRONIC THAT WHILE OTHER NATIONAL PARKS ARE LOSING ELEPHANTS, HWANGE HAS TOO MANY"

Dr. David Cumming, an ecologist and the national park's one-time deputy director, believes consideration must be given to the social and economic costs of allowing elephant populations to continue growing: the impact they will have on delicate eco-systems and the much-needed tourist industry. However, he concedes that there seems to be no single solution.

It seems ironic that while other national parks are losing elephants to poaching, Hwange has too many. Why not move Hwange's elephants where they're needed? It's been done before.

"Translocation, if you can find the space and money, may offer a viable

option," says Dr. Cumming. "But how many elephants can you realistically translocate in a year? Maybe 500, say even 1,000. But where are you going to put them? And aren't we simply transferring a problem somewhere else?" It seems that for smaller numbers it may work, but the logistical and financial issues involved – it costs at least £1,500 per animal and there's minimal suitable space – means it fails to offer the entire resolution.

EMOTIONAL RESPONSE

Historically, many southern African countries managed their elephant populations through culling, deemed an effective and manageable approach, and in many cases endorsed by conservation groups such as WWF. So could a staggered mass cull solve the problem? Sustainable numbers could be achieved and suffering is comparably minor: starve to death in a locked room, or a single bullet to the head? However, images of 'bloodthirsty' hunters and stories of dwindling elephant populations have turned culling into a political hot potato. Not only is culling unpalatable, it would also quickly condemn Zimbabwe's critical tourist industry. And even if such a thing were sanctioned, the elephant population is now so extreme that it would require an impossible level of manpower, resources, experience and, of course, money.

Above: children celebrate the arrival of a recently deceased elephant; a rare source of meat for them. Below: small elephant groups are led by an older matriarch while bulls tend to live a solitary life

Hwange's elephant dilemma is surrounded by many more debates but most people agree that something has to give – and soon. However, none of the proposed solutions so far address all the issues. Sadly, the most likely outcome seems to be a laissez-faire approach, possibly allowing 'nature' to run its course. In all probability, the park will reach a tipping point and one, or a number, of mass die-offs will occur. Painful images permeate the headlines and thousands of animals will suffer. Elephants are a keystone species, meaning they have a disproportionate effect on their environment relative to their biomass. In practise, this means that, thanks to their enormous appetites and penchant for pulling down trees, countless ecosystems and hundreds of species thrive. They are essential for the preservation of African landscapes and we, as the source of their demise, have an obligation to offer a fair and humane solution. WT

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Ecomentaries has produced a documentary about Hwange. See www.ecomentaries.org, in partnership with www.imveloelephanttrust.com