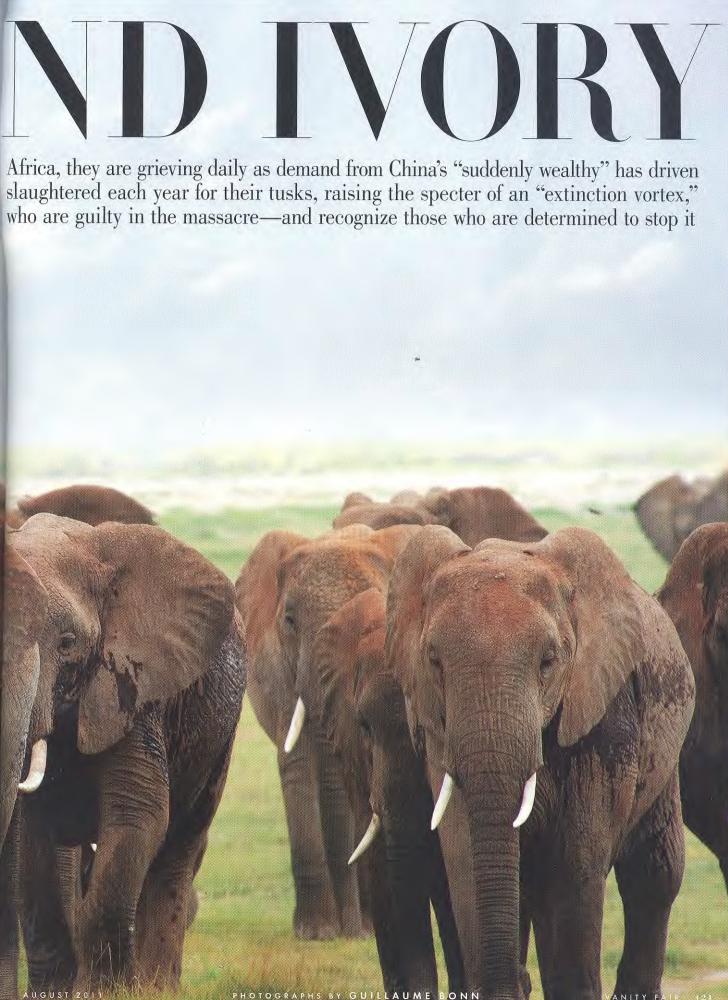
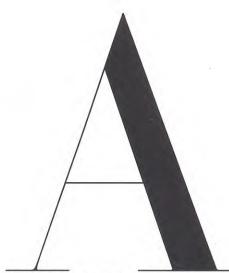
AGONY A

Highly emotional and completely guileless, elephants mourn their dead—and across the price of ivory to \$700 a pound or more. With tens of thousands of elephants being ALEX SHOUMATOFF travels from Kenya to Seattle to Guangzhou, China, to expose those

RANGE LIFE

A herd of elephants, photographed in Amboseli National Park, Kenya. With China's growing appetite for ivory, poaching is on the rise all over Africa.





has been found. On the Kuku Group Ranch, one of the sectors allotted to the once nomadic Maasai that surround Amboseli National Park, in southern Kenya. Amboseli is home to some 1,200 elephants who regularly wander into the group ranches, these being part of their original, natural habitat. More than 7,000 Maasai live in scattered fenced-in compounds called bomas with their extended families and their cattle on Kuku's 280,000 acres. Traditionally, the Maasai coexisted with their wildlife. They rarely killed elephants, because they revered them and regarded them as almost human, as having souls like us. Neighboring tribespeople believe that elephants were once people who were turned into animals because of their vanity and given beautiful, flashy white tusks, which condemned them, in the strangely truthful logic of myth, to be forever hunted and killed in the name of human vanity. And Maasai believe when a young woman is getting married and her groom comes to get her from her village she musn't look back or she will become an elephant. "But in the last few years, everything has changed," a member of the tribe told

being arrested for possession of ivory at Jomo Kenyatta are Chinese nationals, and half the poaching in Kenya is happening within 20 miles of one of the five massive Chinese road-building projects in various stages of completion.

There had been almost no poaching around Amboseli for 30 years before a Chinese company got the contract to build a 70-mile-long highway just above the park. Since the road crews arrived, in 2009, four of Amboseli's magnificent big-tusked bulls have been killed, and the latest word is that the poachers are now going after the matriarchs—a social and genetic disaster, because elephants live in matriarchies, and removing the best breeders of both sexes from the gene pool could funnel the Amboseli population into what is known as an "extinction vortex."

Unfortunately, this problem isn't limited to just Kenya. Across the continent, in their 37 range states, from Mali to South Africa, Ethiopia to Gabon, elephants are being killed, some believe, at the rate of around 100 a day, 36,500 a year. But like so many things in Africa, it is impossible to know how many elephants there really are (estimates run from 400,000 to 650,000), how many are being slaughtered for their tusks (figures range from "more than 4,000" to "as many as 60,000" a year), or how much ivory is being smuggled to Asia (over the last 10 years, an annual average of roughly 45,000 pounds has been seized in Asia or en route). But the International Fund for Animal Welfare (IFAW) believes roughly 100 elephants are being killed each day, and this lines up with two of the most plausible estimates.

A Kenya Wildlife Service official and Soila Sayialel, the deputy director of the Amboseli Elephant Research Project, have invited me to come along as they investigate the carcass found on the Kuku Group Ranch.

Soila, a local Maasai woman in her 40s, has been working with Cynthia Moss—the revered 71-year-old American conservationist who started the project in 1972—for 25 years and wants to know if this latest victim is one of Amboseli's elephants. A week earlier, K.W.S. rangers shot dead two poachers right outside the

ACROSS AFRICA, IN THEIR 37 RANGE STATES, ELEPHANTS ARE BEING KILLED, SOME BELIEVE, AT THE RATE OF AROUND 100 A DAY.

nother carcass

me. "The need for money has changed the hearts of the Maasai." In 2008, post-election ethnic violence followed by the global recession halved tourism to Kenya, making the wildlife in the parks even harder to protect. Then, in 2009, one of the worst droughts in living memory hit much of the country. More than 400 elephants in Amboseli died. The Maasai lost many of their cows and are still struggling, while the price of ivory is higher than ever, so increasing numbers of them are risking the misfortune that killing an elephant could bring on their families, according to their traditional thinking, and are getting into poaching. There are brokers just across the Tanzania border who are paying cash-around \$20 a pound-for raw ivory and selling it to the Chinese. Or perhaps there is a series of transactions, a series of middlemen, but ultimately what is not being picked up by the Kenya Wildlife Service's sniffing dogs at Jomo Kenyatta International Airport, in Nairobi, is making its way by all kinds of circuitous routes to China, where raw ivory is now fetching \$700 or more a pound. Ninety percent of the passengers who are

park who had just killed Magna, one of the big breeding bulls.

The poaching is even worse in the northern part of the country. A few weeks ago, two poachers were killed and a ranger was wounded in a firefight in Meru National Park. Al-Shabaab, the Islamist youth militia which is in league with al-Qaeda and controls most of Somalia, has been coming over the border and killing elephants in Arawale National Reserve. Ivory, like the blood diamonds of other African conflicts, is funding many rebel groups in Africa, and Kenya, K.W.S. director Julius Kipng'etich told me, "is in the unenviable position of sharing over 1,700 kilometers of border with three countries with civil wars that are awash with firearms: Somalia, Ethiopia, and Sudan." Nothing less than a full-scale military operation is going to stop the poaching in the north.

But Kenya's poaching problem is nothing compared with that of some other African range states. It's only losing a few hundred elephants a year. (Kenya has zero tolerance for poaching and banned the sale of all ivory, including its old stock, in 1989. There has also

BLOOD IVORY

A carving for sale in Guangzhou, China. This piece is priced at 138,000 yuan (\$21,300).

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been a blanket ban on all hunting since 1977.) Gabon, Zambia, Zimbabwe, and Tanzania are losing thousands. Chad, home to 15,000 elephants in 1979, has less than 400 left. Sierra Leone is down to single digits.

This April was the cruelest month in the current wave of killing. Then, in the first week of May alone, a ton of ivory was confiscated in Kenya, more than 1,300 pounds in Vietnam—from Tanzania and a Chinese man was arrested at Entebbe airport in Uganda with 34 pieces of ivory. To top it off, a South Korean diplomat was caught trying to bring 16 tusks into Seoul. The carnage is escalating.

During the great elephanticide of the 1970s and 1980s, Africa's elephant population was cut from an estimated 1.3 million to some 600,000, and Kenya's elephant population went from 120,000 to 15,000. (It is now about twice that.) At the height of the slaughter, it is believed, 70,000 elephants a year were being killed continent-wide. The death toll may be half that now, but there are only half as many elephants left. been sliced off. Bracelets of black elephant-tail hair are still bought by tourists. The animal has been speared on both sides, 23 times. Soila counts the holes. This was a savage, low-tech, local poaching. An opportunistic poaching. If it had been a deliberate one, poison would have been used. If poison had been used, the elephant would not have had to be speared so many times or have gotten this far.

The poison, known as *mbaya* (Swahili for evil), is a concoction brewed from the leaves of two trees and the livers of puffer fish from the coast. Applied to an arrowhead or a spear tip, it is so powerful that it kills an elephant in five minutes and breaks down its flesh so quickly that after two or three days the tusks just slide out.

Soila puts on rubber gloves, draws some blood from the carcass, and slices off a section of flesh to send to the lab at Duke University, which will determine if it has the Amboseli genotype. She thinks it is no more than two or three days old. The poachers could have been some of the scouts who were employed by a private foundation to protect the ranch's wildlife but have been dismissed until

DURING THE GREAT ELEPHANTICIDE OF THE 1970S AND 1980S, AFRICA'S ELEPHANT POPULATION WAS CUT FROM 1.3 MILLION TO 600,000.

The previous slaughter was driven by Japan's economic boom. This new crisis is driven by China's nouveaux riches, or *bao fa hu* (the "suddenly wealthy"), who are as numerous as the entire population of Japan. The main consumers are middle-aged men who have just made it into the middle class and are eager to flaunt their ability to make expensive discretionary purchases. Beautiful ivory carvings are traditional symbols of wealth and status.

oila expertly navigates the cavernously potholed dirt road that leads to Kuku, at one of whose bomas we pick up Johanus, the Maasai scout who found the carcass. Johanus was looking for lion tracks down by the river a few mornings ago when he picked up the blood trail of an elephant and started to follow it. The wounded elephant was making for the safety of nearby Tsavo National Park. It was accompanied by another elephant who was not bleeding, and they were being followed by two men-local Maasai, Johanus tells us, because they were wearing tire-tread sandals of local manufacture. Johanus shows us the four sets of prints, which we pick up at the river. We follow them up a slope of jagged red stones-an old lava field, with patches of grass and thickets of flat-topped acacia trees, which several stocky, mud-reddened zebras and frisky impalas melt into as we approach. After half an hour of tortuous progress, Johanus says we are here.

We are greeted by the nauseating stench of rotting flesh. Fifty yards from the blood trail, the dead, decomposing elephant is kneeling in a pool of its own fluid, which is swarming with flies. The carcass was covered with branches by the poachers so it wouldn't attract vultures, which would alert the K.W.S. pilots who make daily flyovers to its presence. Its face is completely gone, hacked off by a machete: no eyes, no trunk, no tusks. The trunk, Soila suspects, was taken by hyenas. The tusks were chopped out with an ax. The elephant's cheekless mouth is a gaping black hole, like one of Francis Bacon's silent-scream paintings. The elephant's tail has further notice because of a power struggle with the group-ranch leadership. The scouts know the movements of the elephants on the ranch and are now in desperate need of money. Suspicion falls on one in particular, a reformed poacher who may have gone back to his old ways. "We will get them," the K.W.S. official assures me.

Amboseli National Park



e return to Amboseli in silence. On the other side of the Chinese road, a huge bull, with magnificent, perfectly symmetrical tusks, emerges from the trees. "It is Upendo [love in Swahili]," Soila says. "He has recognized the sound of the vehicle

and come out to say hello." Upendo lifts his trunk into the air and, swiveling it like a periscope, gives us the sniff-over, which indicates a certain level of suspicion. He detects strange male testosterone in the vehicle and hears the excited clicking of cameras; flapping his ears with a parting snort, he quickly backtracks into the thicket. "He is telling us, 'I'm fed up with you guys. No more pictures,'" Soila explains.

There are still a few hours of daylight to watch the elephants in the park. The rains have come, and with all the newly flushed grass they are able to congregate in extended-family groups of 70 or more. We observe one group twisting up bundles of grass with their trunks and stuffing them into their mouths. A full-grown elephant needs to eat about 300 pounds of vegetation a day. They can live to 65 or more and, like humans, reach sexual maturity in their early teens.

Babies are running between the legs of their mothers, trying to suckle some milk from their teats. Two two-year-olds have locked trunks and are having a tug-of-war. A randy bull in musth—Hindi for intoxication—is hanging around the periphery. It was here in 1978 that Cynthia Moss's colleague Joyce Poole discovered that musth is not a disease, as it had been thought to be, but a phase of up to five months in the reproductive cycle of



Constant little dramas are going on in this group. An eight-year-old bull, still a mama's boy dependent on her milk. lets out a wounded bellow as his mother, having a newborn to feed, tells him with a jab of her tusk to shove off. Elephants are highly emotional. Whatever they are feeling, they let it out immediately, and the histrionics are over and forgotten in a moment, lasting no longer than the cloud formations that are constantly coming apart and re-forming overhead. There is no guile in pachyderms. They are highly sentient, totally alive to what is going on, fully in the moment in ways we are only beginning to understand. They can pick up the rumble of a distant thunderstorm seismically through the soles of their feet, and family groups a mile or two apart keep in constant touch with an assortment of farcarrying infrasounds too low for us to hear. No one really knows what they are saying or thinking. Scientists are only starting to talk cautiously about "empathy" and "neurocognition."

Soila says that each elephant has its own personality. "Some are talkative, some are bad-hearted, some are stupid," she says. "They are very much like us. Sometimes when I am watching them, I forget that I am working. I forget that they are elephants and I am human." But elephants are not human, of course. They are something much more ancient and primordial, living on a different plane of existence. Long before we arrived on the scene, they worked out a way of being in the world that has not fundamentally changed and is sustainable, and not predatory or destructive. We have been in close association with elephants from the beginning. The few dozen humans who left Africa may have even followed an elephant trail, but the proboscideans are on a distant branch of the tree of life, closer to manatees and aardvarks than to primates. It is amazing, really, that something so antediluvian and unlike us is still here. This is the feeling we get as we are watching these elephants. They are what they are, and they put things into badly needed perspective. The world needs them. We need them.

I have been in running contact with elephants for 30 years, but only on this six-week reporting safari am I beginning to understand the wavelength they are on. I have already had communication breakthroughs in the last month with three elephants, moments when "Adam's wall," as the barrier between us and animals has been called, seemed to come down. The first was in Myrtle Beach, South Carolina, where I spent a few days with a 28-year-old Zimbabwean ivory orphan named Bubbles, who was raised from the age of two by an animal trainer named Bhagavan Antle. "Bubbles is my oldest and most devoted friend," Antle told me. He trained her to be an entertainment elephant—she has been in *Doctor Dolittle* with Eddie Murphy, the second *Ace Ventura* movie, and a Janet Jackson video.

I went swimming with Bubbles in the Intracoastal Waterway, and she kept playfully hoisting me out of the water with her trunk and tossing me over her head back into it. She is totally habituated to humans and "doesn't get along with other elephants at all," Antle told me. "When I'm not on the property, she guards it like a pit bull. Even the staff can't get close to her." The two of us rode her into the forest, where every few feet she would snap off a branch of wax



MOMBASA

myrtle and stuff it into her mouth. "The world is her salad," Antle explained. He said that Bubbles could recognize the sound of his pickup making its way home through the rush-hour traffic, and that she always recognized a guest who had been there before and gave him or her special attention, and over the years she had done her routine for tens of thousands of them. "Bubbles is an ambassador of what is being lost, and she takes her job very seriously," he told me.

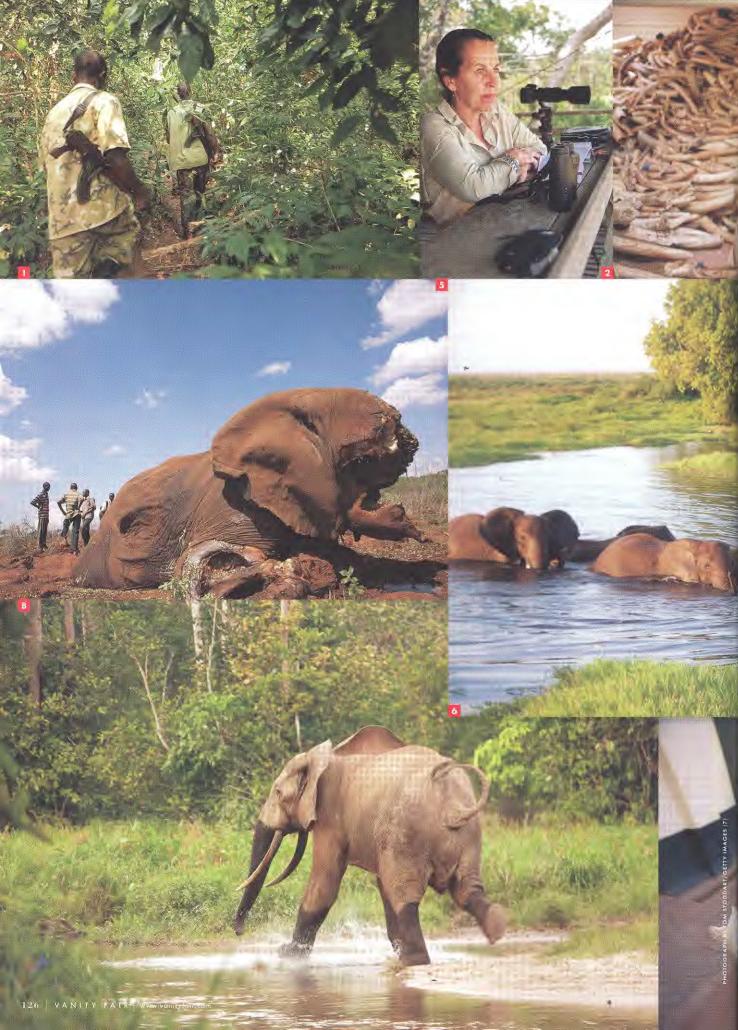
Bubbles' eyes especially got to me. Screened by thick black lashes, they were dolorous, humorous, knowing, forgiving, the eyes of an ancient sage, a highly evolved being, the eyes of Einstein.

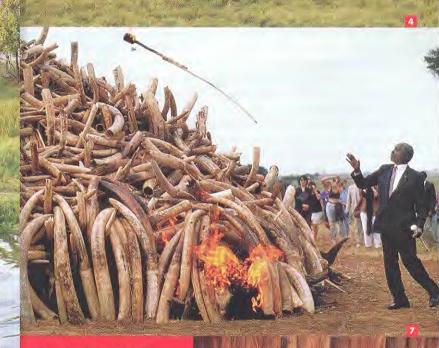
As the sun sets in Amboseli, the clouds break and we catch a glimpse of Kilimanjaro's summit cone, coated with new snow. All the elephants head for the swamp in long single-file columns, huge convoys making their way across the timeless savanna toward the vanishing point, as they have been doing for eons, "as if they had an appointment at the end of the world," Isak Dinesen wrote in *Out of Africa*.

Seattle

rying to intercept an ivory shipment is like trying to guess what dish the bean is under in a shell game, Sam Wasser, a Seattle-based conservation biologist, tells me. Wasser has developed the ability to sequence the DNA of a piece of seized ivory, which is the only way to find out where in Africa

it is actually from. This is a hugely important tool. The ivory in a 2006 seizure in Hong Kong shipped from Douala, Cameroon, for instance, turned out, by DNA sequencing, to have come from neighboring Gabon. This was the first inkling anybody had that there is widespread poaching there; Gabon had previously been





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TUSKS AND TARGETS

(1) An anti-poaching patrol in Dzanga-Ndoki National Park, Central African Republic. (2) Andrea Turkalo surveying the Dzanga Bai, in Dzanga-Ndoki. (3) Julius Kipng'etich, director of the Kenvan Wildlife Services, in the K.W.S. strong room, in Nairobi. (4) Elephants in Amboseli National Park, Kenya. (5) An elephant carcass on the Kuku Group Ranch, Kenya. (6) Elephants in Amboseli. (7) Then Kenyan president Daniel arap Moi igniting ivory and rhino horns in 1989. (8) Luther, a forest elephant, in the Modoubou River in Dzanga-Ndoki. (9) A suspected poacher in Kenya. (10) Dr. Iain Douglas-Hamilton, founder and director of Save the Elephants, photographed at his home outside Nairobi.

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regarded as a success story. Wasser was also able to determine that 60 percent of the ivory going to Asia in 2009 was coming from Tanzania, and that Zambia was—and is—another major source. This was explosive information when it was presented last May in Doha, Qatar, where Tanzania and Zambia were petitioning the Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES) for permission to sell their old ivory stocks. His revelation of the extent of the poaching in these two countries was instrumental in getting their applications quashed.

In the case of the Kuku Ranch carcass, we know where the tusks are from. The question is, where did they go? The poachers probably walked them over the border into Tanzania and sold them to a broker in one of the four towns where ivory is known to be bought and sold. From there-after changing hands a few times-it is likely they were hidden in one of the charcoal lorries that go back and forth between Kenya and Tanzania and re-entered Kenya. From there, they could have made their way to Nairobi or Mombasa. Once ivory gets to Nairobi and is ready to be shipped, the Chinese involvement becomes traceable. Hundreds of thousands of Chinese workers and other temporary laborers are employed on road, logging, mining, and oil-drilling crews in all of the elephants' range states. Some manage to make it home with a few pounds of ivory hidden in their suitcases, thus doubling their meager earnings, or they are recruited as carriers for higher-ups. But they are not the real problem. The real problem is the managers, who have the resources to directly commission some local to kill an elephant and bring them the tusks, and diplomats, whose bags are not checked, and the Chinese businessmen, who are taking over the economy of Africa.

In the last decade the number of Chinese residents in Africa has grown from 70,000 to more than a million. China's trade on the continent—\$114 billion last year—is expected to keep increasing by over 40 percent a year. According to Traffic, a nonprofit wildlifetrade-monitoring network, each day, somewhere in the world, an average of two Chinese nationals are arrested with ivory.

ack to the tusks. Maybe the smugglers deliver them to Mombasa. K.W.S. knows the networks. Once there, little boats come from big ships offshore to private wharves of local "tycoons" with heroin and guns and return with ivory. The drug, arms, money-laundering, and ivory trades are intertwined, K.W.S.'s Julius Kipng'etich told me. Where you have one, you have the others. Once on the big ship, the ivory is hidden in shipping containers with legal consignments like sisal (the fibrous agave that twine is made from), avocados, or pottery.

All over Africa, ivory from freshly killed elephants is being put on planes or ships and is hopscotching around the Middle East and Asia: to Beirut, Dubai, Bangkok (the big hub at the moment), Taipei, Vietnam, Singapore, Kuala Lumpur, Shanghai, Hong Kong, Macao. One consignment hidden in sisal made it all the way from Tanzania to the Philippines and was sent from there to Taiwan, whose customs thought, Sisal from Tanzania going to the Philippines, the world capital of sisal production? That's like importing oranges to Florida. So they opened the crates, and there were 484 pieces of ivory.

Once a shipment leaves Africa, it never goes directly to the final destination. The routes are constantly changing. It's a shell game, as Wasser says. But eventually most of the ivory arrives, by land, sea, air, or a combination thereof, in Guangzhou, formerly Canton, China's main ivory-carving-and-trading center, just up the coast from Hong Kong. All roads lead to Guangzhou. There are around 100 master carvers in this humming city of eight million. Most of

them are working in illegal factories. But there are also legal, stateowned factories, which get their ivory from the one-off sales of old stock that CITES allowed South Africa, Botswana, Namibia, and Zimbabwe to have in 2008. These sales supplied 100 tons of ivory to the Chinese and Japanese markets. The argument for allowing them to happen was that China and Japan would be happy with so much ivory, and the poaching would be reduced, but they have had the opposite effect: the poaching has been showing a steady rise, and a lot of illegal ivory is being passed off as old stock.

Obviously, no ivory should be sold, legally or illegally. It has to be taken off the table completely. You can't keep feeding the demand and providing incentives to poor Africans to continue killing their elephants. That—and educating the Chinese—is the only hope for the remaining ones in the wild. All of Africa needs to follow the lead of Kenya, which burned its ivory stock in 1989. As he ignited the 12 tons of tusks, thus depriving the government of millions of dollars of revenue, in a huge conflagration that remains the single most important event in the history of the battle for the elephants, then president Daniel arap Moi declared, "To stop the poacher, the trader must also be stopped, and to stop the trader, the final buyer must be convinced not to buy ivory. I appeal to people all over the world to stop buying ivory."

Hong Kong

n the corridor leading from my plane to the formalities in Hong Kong International Airport, there is a display cabinet of forbidden wildlife products, including a hawksbillturtle shell and an elaborately carved elephant tusk. But this isn't stopping Hong Kong and adjacent Macao from being two of the main destinations for African ivory. A few days ago 2,200 pounds of ivory were seized on the beach of the Westin hotel in Macao. Using the commonly accepted figure of 12.6 pounds for the average pair of tusks, that would be 175 elephants. An average 45,000 pounds of ivory a year have been seized in the past decade. Using Interpol's 10 percent estimate, which is based on the amount of drugs they believe they are intercepting—meaning 90 percent gets past them—that would be 450,000 pounds, or more than 35,000 elephants a year. So IFAW's 36,500-a-year estimate, 100 a day, is definitely possible.

In the shopping arcade of the hotel where I am staying, there are a few bangles identified as "genuine ivory" for sale. Their prices range from \$200 to \$600. "I thought ivory was banned," I tell the saleswoman.

"This is a free port. You can buy whatever you want," she says.

"But there's a display at the airport that says it's forbidden," I say, and the woman, shamelessly quick on her feet, says, "Well, yes, African ivory is. But this is mammoth ivory. Status fine." But the bangles are pure, creamy white, unlike mammoth ivory, which is nut-colored or streaky—this is unquestionably savanna ivory from Africa.

An American couple with southern accents are fingering the bangles covetously. "I wouldn't think of buying them if I were you," I warn them. "A guy in Atlanta was just fined \$400,000 for bringing some old ivory piano keys into the country."

American law says that you can bring in only ivory documented to be at least 100 years old or meeting CITES-approved exceptions to the U.S. Endangered Species Act like trophy tusks from countries, such as Tanzania or Zimbabwe, where sport hunting is permitted. If these bangles were legal, the saleswoman would have said so and had the paperwork.

I scowl at the American couple, and they hand the bangles back to the saleswoman, who scowls at me. The couple leave. I scowl back at the saleswoman.

Guangzhou

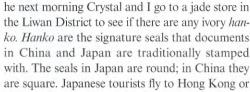
take the evening train to Guangzhou, a big wholesale city and a mecca for thousands of African traders, who buy apparel and footwear to take back home to sell in Dakar or Kinshasa. The three men sitting next to me are Congolese.

Guangzhou has a growing population of eight million people, and thickets of brand-new high-rises with kitschy pagodas on their roofs and lots of neon signage. It's like Disney World, this crass new capitalist China. You can feel the economic vibrance and might of the next global superpower.

I rendezvous with "Crystal," an undercover investigator for IFAW. Crystal is Chinese, in her 30s, and tiny, half my size, and she is absolutely passionate about elephants, even though she has never met one in the flesh.

"Elephants are a global priority," she tells me. "Tigers are an Asian priority, and we are trying to do something for the stray cats. China has no animal-welfare laws." Although the killing of a panda or an elephant was a capital offense until last year. There are only a few hundred wild elephants in China, all of control system and a desire for "affordable" ivory. Fourteen and a half percent of those polled were already ivory consumers, and 76 percent were willing to break the law to buy ivory at a cheaper price.

Liwan District, Guangzhou



Shanghai for the weekend, where ivory is cheaper, and pick up a cylinder of ivory and take it back to a Japanese *hanko* shop that will then carve their seal. There are plenty of perfectly good substitutes, like ox bone or wood, but ivory *hanko* have cachet. It's like owning a Mont Blanc pen.

The salesman tells us there is strict government control of ivory. "We can't sell ivory publicly, but"—his voice lowers—"I have a friend who can do it. How many *hanko* you want?"

We continue to the Hualin Street wholesale jade market, which

THE PREVIOUS SLAUGHTER was driven by Japan's economic boom. This new crisis is driven by china's *bao fa hu* (the "suddenly wealthy").

them in the extreme south of Yunnan Province, near the Laos and Burma borders. They are the Asian species, *Elephas maximus*, of which there are around 50,000 left—about one-tenth of the African population. Most of them are in India, and their annual mortality from poaching comes to only 300 or 400.

In Guangzhou there are markets that specialize in wild-animal meat like snakes and rats, and there's a special cat market. You pick the cat you want to eat, then they kill it and sell you the meat. There's a saying that the southern Chinese will eat anything with legs except a table, and anything with wings except a plane. I've been hearing that this is also now a problem with the Chinese in Africa-and not only those from the South-who are eating domestic dogs and cats, baboons, painted dogs, and leopard tortoises and making soup from the marrow of lower leg bones of giraffes and from lion bones. Grace Ge Gabriel, Crystal's boss in Beijing, laments, "Chinese society today is ruled by one principle only: Make Money for Me. On the way to make riches for oneself, there is no concern for anything, including other people and the environment, let alone animals. Unfortunately, the south-Chinese practice of 'eating everything in sight' is adopted by a lot more people now. And the Chinese have the ability to travel all over the world now. Especially in countries where law and order are not well established, these Chinese feel that they can get away with eating anything and everything."

"Another problem," Crystal explains, "is that the Chinese word for ivory is elephant's teeth—*xiang ya.* We did a survey. Seventy percent thought tusks can fall out and be collected by traders and grow back, that getting ivory did not mean the elephant is killed, and more than 80 percent would reject ivory products and not buy any more if they knew elephants were being killed, so it's ignorance."

But the same survey found reluctance to comply with the ivory-

has all kinds of beautiful stuff, not only jade. Contraband wildlife artifacts are openly displayed. One stall has hawksbill-turtle-shell eyeglass frames and combs. In another the man shows us two ivory bangles, a tiny abacus, a little Buddha, and a small tusk carved with a cabbage-leaf motif. He has his own factory in Fujian Province. The ivory comes from Africa by ship to a port near Taiwan. With a little coaxing he brings out the big stuff, wrapped in plastic: a two-foot-long tusk with the cabbage-leaf design for 28,000 yuan (a little more than \$4,000).

"Do they have to kill the elephant?," I ask him.

"No," he says. "After you get the ivory, teeth grow again, just like human teeth."

In the morning I say good-bye to Crystal. "You will see many changes in your lifetime," I tell her. "China will have taken over the world, and maybe there will be no more elephants."

"I will never let that happen," she promises me.

Nairobi

sit down with Iain Douglas-Hamilton, who has probably done more for Africa's elephants than anybody. A pioneer in the study of elephant behavior and the founder of Save the Elephants, Douglas-Hamilton is at his computer in his home office, watching his 23 radio-collared elephants move in and around Samburu National Park, 200 miles north. Samburu, like Amboseli, is a threatened piece of paradisal Africa. There's also a Chinese road-building project nearby, and with a mushrooming, cash-starved local population, poaching is on the rise.

Save the Elephants is headquartered at Samburu, and Douglas-Hamilton knows most of its 900 elephants there intimately. Signals from the collared ones are being beamed to a local cell-phone transmission tower, and he is monitoring their movements by satel-

ELEPHANTS ARE ON A DISTANT BRANCH OF THE TREE OF LIFE. IT IS AMAZING THAT SOMETHING SO ANTEDILUVIAN AND UNLIKE US IS STILL HERE.

THE LAST EDEN

Forest elephants in the Dzanga Bai, Dzanga-Ndoki National Park, Central African Republic.

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a fragment of

lite. A month later, the slowly streaking red line on his screen, which is tracking one of Samburu's beloved matriarchs, Resilience, of the Virtues group, will suddenly stop. He alerts K.W.S., whose rangers rush to the scene and find Resilience gunned down by a spray of bullets. The Virtues have almost been wiped out. The Hope and Enthusiasm groups are gone, and four of the seven collared elephants on Mount Kenya have been lost this year as well.

Douglas-Hamilton, now 68, has been studying elephants in Africa since 1965. He has just returned from China. "We went to listen and learn," he tells me in his posh British accent. (His father was a Scottish lord.) "I'm quite optimistic that a long-term relationship can be established. We were taken to see their few hundred elephants by some people who cared deeply about them. And they are coming to Samburu to experience the delight of ours. If the Chinese treated Africa's elephants as nicely as they treat their own, there wouldn't be this problem."

Douglas-Hamilton tells me about an important initiative by WildAid, which is using Chinese celebrities, like N.B.A. star Yao Ming and Jackie Chan, to get out the message. I call Peter Knights, the outfit's director, in San Francisco. "It's a combination of new money and old ideas," he tells me, "a huge bubble we're trying to burst." Funding conservation at the consumer end is not as easy as it is for fieldwork with the animals, but the Chinese government has been very supportive. CCTV, the stateowned television station, and a whole range of other outlets have donated media time and aired everything from 15- to 30-second public-service announcements to five-minute shorts to half-hour documentaries.

"The younger generation gets it," Knights continues. "It's the aging new wealthy, who have tremendous purchasing power and see acquiring ivory as part of holding on to their historic Chinese-ness, who have to be reached-before there's no more ivory left to buy."

But China isn't the only problem. The organizations and African government authorities that are supposed to be monitoring and controlling the poaching and the ivory trade are underfunded, under-manned, lacking, their many critics say, in transparency and proper outside peer review, and, in some cases, compromised by hidden agendas. Dr. Richard Leakey, who thought up and pushed through the famous bonfire of Kenya's old-stock ivory in 1989 and became the newly reconstituted and motivated K.W.S.'s first director (at which post he survived three attempts on his life, including a suspicious plane crash that cost him both his legs), told me-he was the only critic to go on the record-"CITES is now anachronistic and a sham. It's funded and controlled by the ivory trade-and should be put away. The very concept of trade in high-value wildlife species as a tool for conservation is completely untenable." A man deeply involved in elephant poaching and smuggling interdiction compared CITES to the U.S. Securities and Exchange Commission: "It was created to become a regulator, and became a facilitator, and the victim is not millions of people, but nature."

raffic, which compiles the ivory-seizure figures, is, curiously, also in favor of "sustainable trade." Only one person, Thomas Milliken in Harare, Zimbabwe, the head of Traffic's African operation, is supposed to be on top of all the seizures continent-wide. The reviews on Milliken, whose reports are presented as faits accomplis, are very mixed.

No one I talked to accused MIKE (Monitoring the Illegal Killing of Elephants), an arm of CITES, of being compromised, but I spent two hours discussing its work with its director, Julian Blanc, in Nairobi, and came away with the conclusion, which I am not alone in having, that its figures do not begin to reflect what is actually happening. MIKE's numbers are based on whatever figures the government authorities give it, and the government figures are often low, because their wildlife people want to look like they're doing a good job or because some of their rangers and top officials may be involved in the poaching themselves or because they don't have the information. The entries for some countries in the tallies Blanc provided me with were blank. And if MIKE or Traffic questions the numbers the governments give them, they aren't going to get anything, so they have to go along with them. Outsiders who ask too many questions or accuse the politicos in their host country of malfeasance run the risk of being thrown out, or even, as in Dian Fossey's case, killed. MIKE funds a lot of important basic research and provides logistical and financial support to elephant surveys in Asia and Africa. Traffic just put out a hard-hitting report on the persistent ivory trade in Japan, and Milliken's work can be excellent, so it's not a black-and-white situation. Douglas-Hamilton, who is trying to make these institutions work-because without them there would be nothing at all-cautions against "throwing out the baby with the bathwater. Traffic and MIKE are the only ones who are making every attempt to get the correct figures."

But many things conspire against even the most honest and rigorous attempts to learn what is really happening to Africa's remaining wild elephants. How many carcasses are covered with branches or otherwise elude the rangers on the ground? How many elephants hidden in the trees are being missed by the aerial census takers? How many elephants are being double-counted because they have crossed a national border or wandered into the next aerial transect? How many confiscated tusks are not making it to the strong room, or are disappearing from it and being shipped to Asia in the illegal consignments? And this barely scratches the surface of the unknowns.

Hwange National Park, Zimbabwe

oreign journalists are not welcome in Mugabe's failed state. There are reports of some getting roughed up and thrown in prison or put on the next plane. So I decide to enter as a tourist, listing my profession as musician. I am coming to see Victoria Falls and the country's other wonders. I don't tell

them I'll be going around with Johnny Rodrigues, who runs the Zimbabwe Conservation Task Force, which he founded in 1999 with 16 other concerned citizens.

Johnny, 62, a diesel mechanic by day, is short but solid as a rock. Back in the day, he did covert operations in the Rhodesian Army against Mugabe's ZANLA guerrillas. He looks like a cross between Robert Shaw and Norman Mailer, only Portuguese. His parents were from Madeira and moved to Harare when he was four. Last year, Johnny exposed Mugabe for serving the meat of three elephants at one of his re-election rallies. He has had death threats, survived two attempts to drive him off the road, and been declared an enemy of the state. Of his 16 original collaborators, most have left the country, and the ones still here are afraid of having anything to do with him. But he remains absolutely fearless. "I put my balls on the table long ago. If they want to kill me, they can put the bullet right here," he says, pointing to the middle of his forehead.

We drive down to Hwange National Park, which is as big as Connecticut but has only around 60 rangers on anti-poaching patrols.



Hwange is the largest park in Zimbabwe and has one of the largest herds of elephants in Africa. It's supposed to be 50,000, but Johnny doesn't believe it. "Where are they then?" he asks after we spend the day driving 300 miles all over the park and only see, at sunset, two bulls and a smaller elephant quickly cross the road. There are none in the 75 pans, or artificial water holes, none in the vleis, the grassy vales between the forested little hills, only a few skittish zebras and impalas and warthogs, a tiny fraction of what there used to be.

What we do see are the skeletons of dozens of elephants that have been killed right along the road: huge pelvises and skulls and leg bones, already bleached white by the sun, scattered around among the teak trees, with piles of dung left by other elephants, which is how they express sorrow at the death of one of their own. Elephants are clearly aware of death and capable of grief. cal communities. They have a 500-elephant quota, which they are petitioning to be increased by 180. Then the cronies of Mugabe to whom he gave the private game conservancies he confiscated. They have converted them into hunting camps and are liquidating the animals. Each has a slaughterhouse and some have their own butchery and boneyard. I've seen pictures of one of them that was solid white bone for several acres. They supply bushmeat to the tourist lodges and the local food stores. And finally there are the industrial South African poachers who fly over the border from Limpopo and are helped by Zimbabwean exiles who know the ropes and where animals are and who to pay off. They are very organized. Two were just caught with 2,000 zebra skins."

With all this killing, Johnny doesn't think there are anywhere near 100,000 to 120,000 elephants in Zimbabwe, as the govern-

OVER THE LAST 10 YEARS, AN ANNUAL AVERAGE OF ROUGHLY 45,000 POUNDS OF IVORY HAS BEEN SEIZED IN ASIA OR EN ROUTE.

The smell of putrescence leads us to a carcass whose decomposition is more advanced than the one at Kuku Group Ranch. This one died on its side. Its skin is draped over its staggered, fleshless legs like a deflated balloon; the upper half of its rib cage is missing, its innards gutted by hyenas and vultures. The tusks are long gone. We learned about this victim from two of Johnny's informants. It was killed half a mile inside the park border. The rangers tracked the killers to the adjacent hunting lodge. The lodge's guides claimed they shot it on their property; it was part of its six-elephant annual quota. The wounded animal fled into the park—and they took its tusks because they were rightfully theirs.

imbabwe's dozens of hunting lodges cater to trophyhunters, most of whom are from Texas, Germany, Saudi Arabia, and Mexico. They pay between \$10,000 and \$60,000—money that goes to the government and the lodge—to kill a big bull and are allowed to ship home its head and tusks. A video on YouTube called "elephant safari kill shot" shows an American man sneaking up to within 30 or 40 yards of an elephant in some trees and dropping it with a brain shot, then exulting, "We did it! Oh man! Big-game hunting is one of the most exciting things there is in the world. You got your grizzlies, you got your lions, you got leopards, you got your buffalo. But I'm here to tell you, baby: ain't nothing like the elephant!"

And the hunters are only one type of human predator the elephants in Zimbabwe have to worry about, Johnny explains. "The rangers are killing them and other animals for rations, which they are allowed to do every Thursday, and if they didn't they would starve, because the government isn't giving them anything to eat," he says. "Then the local people who are setting snares. You can't blame them because they have to feed their families, and there's 80 percent unemployment. Then the military, who have posts all over the country and elephant quotas that nobody is reinforcing, so they are exceeding them and selling the ivory to the Chinese. Then the professional hunters who are providing meat to the loment is claiming. He suspects it's more like 30,000 to 40,000. There hasn't been a census since 2006, when 85,000, give or take 7,000, were counted. "We have investigators who flew around in Chizarira Park, and all they saw was 900 carcasses, and we know a lot of the ivory is being sold to the Chinese," he says.

At a pan called the Hide we find five giraffes. "Hello, boys," Johnny says to them, and, firing up a cigarette, reflects, "We have much to learn from the animals. When they come to the water holes, each species has its turn. I made a 24-hour video of this pan five years ago, when there was still wildlife in the park. Elephant, giraffe, zebras, sable, kudu, warthog, baboons, buffalo, even hyenas and jackals—all your different species came, and each took its turn to take a drink. It was like Noah's Ark. And after all had a drink they came back a second time, each in its turn. And you say to yourself, Why can't humans learn from that? We'd kill each other to get to the water."

Victoria Falls, Zimbabwe

here is ivory for sale right in the tourist shops in downtown Victoria Falls. A saleswoman shows us a two-foot tusk carved into a curving procession of elephants that costs \$2,000. The tusk doesn't have the requisite parks-department stamp. The saleswoman in another store has a

two-and-a-half-foot tusk with a longer procession of carved elephants that she'll let me have for the

same price. She says it is ivory from culls.

South Africa put a stop to culling in 1994, but it is still going on in Zimbabwe. Between 1960 and 1994, 46,755 elephants were culled here. The rationale was "to conserve biological diversity," which was

supposedly being destroyed by excessive numbers of elephants. As many as 5,000 were shot and killed in Hwange in the space of three months in 1980, and in 2008 some British hunters were allowed to wipe out an entire family group of 11 in Hwange, as part of a cull of its population of supposedly 50,000. According to

PHOTOGRAPHS BY

CYRIL CHRISTO

AND MARIE

WILKINSON.

Graham Child, a former director of National Parks and Wildlife Management in Zimbabwe, "Since '86, and especially 1992, the department has been using high numbers as a political pawn and for generating income mainly from sport hunting, and concerns for habitats on which the future of elephants and many other wildlife depend appear to have been forsaken."

In South Africa between 1967 and 1999, 14,629 elephants in Kruger National Park were culled, to keep the population at the park's perceived carrying capacity of 7,000. Dr. Markus Hofmeyr, head of Kruger's veterinary wildlife services, wrote the standard operating procedure for culling: you start with a brain shot from a helicopter with a high-caliber weapon, not less than a .375. "The spasmodic jerking of one or more legs is frequently indicative of a good brain shot." Once the animal has collapsed, you fire a second "insurance" shot to make sure it is dead. Your first target should be the matriarch, "which anchors and confuses the rest of the group, [so they can be] quickly dispatched, as they mill around." After some orphan bulls who had watched their mothers killed grew up into psychotic teenagers who raped rhinos and attacked tourists in Pilanes National Park, this procedure was modified. Now if you're going to do it, the most "ethical" thing is to kill them all, to gun down the whole family. South Africa is keeping open the resumption of "lethal management" as an option.

Central African Republic

I catch a plane to Bangui, the capital of the Central African Republic, a country of four and a half million that used to be part of French Equatorial Africa. This is deep, dark Africa, pulsating with insect din and birdsong and joyous music that people burst into at the drop of a hat. It is nothing like East Africa, a white man's playground, or South Africa, which is like an outpost of Europe.

It's a grueling, 12-hour, 300-mile drive to Bayanga, at the southern tip of the country, the knifepoint dividing Cameroon and the Republic of the Congo (Little Congo, not to be confused with Big Congo, the Democratic Republic of the Congo, formerly Zaire), where the tri-national park I'm visiting is. In the 1970s there were some 50,000 forest elephants in the Central African Republic. Now there are maybe 3,000. Big Congo, once the stronghold of the forest elephants-Douglas-Hamilton estimated there were 300,000-plus in 1979-has around 20,000 left. Loggers and miners from Cameroon-said to be in cahoots with local government officials-are wiping out adjacent Gabon's approximately 60,000 forest elephants at the rate of a few thousand a year. Central Africa is getting hammered.

My destination is Dzanga Bai, a 550-by-275-yard clearing in the forest which everyone has been telling me is the last Eden for the forest elephants. Since 1990 an American woman, Andrea Turkalo, has been studying and keeping a watchful eye on the elephants who frequent the *bai*, or clearing.

After several hours of driving we enter towering virgin tropical forest. The trees' naked columns shoot 120 to 150 feet up before putting out crowns and look like (as Tim Cahill has described the Amazon rain forest) monstrous stalks of broccoli. I begin to see pygmies, small forest people as gentle and innocent as the elephants, bathing in little brown streams in blizzards of butterflies. These are the Bayaka. There are 100,000 pygmies in the C.A.R., neighboring Cameroon, and Little Congo. Many of the mammals in the forests of central Africa-elephants, giraffes, buffalo-are smaller in size, the better to move around in the dense vegetation. Forest elephants (Loxodonta cyclotis) generally have smaller ears and shorter, harder, straighter, more orange tusks than the savanna or bush elephants (L. africana), and a different number of toenails. DNA analysis, resolving a long-standing debate, has just established that they are separate species, with no more overlap than the Indian elephant and the extinct woolly mammoth from which it evolved.

I don't pull into the Doli Lodge, in Bayanga, till 11 P.M. The Doli is on a big river, the Sangha, gliding through the forest. In the morning I meet Andrea. She is 59, dressed in field khaki, with Moroccan silver bracelets. She has high Ukrainian cheekbones from her father, who was a prison guard in Taunton, Massachusetts.

As we drive to her camp, 15 miles into the glorious green forest, I ask Andrea how she happened to wind up here, devoting her life to elephants. She tells me that she was in the Peace Corps in northern C.A.R. in the early 80s, at the height of the previous poaching epidemic. "I didn't know a thing about elephants, and suddenly I was seeing seven carcasses a day," she says. "They were being killed by horsemen from Sudan. We never saw them." Andrea was married to Michael Fay, another major hero in the battle for the elephants. Fay persuaded Gabon to create 13 national parks to protect its large forest population, after walking across central Africa for 455 days to find out where they were. After she and Michael split up in 2003, Andrea stayed on at the bai.

Something hidden in the vegetation only 50 feet from us barks menacingly. "It's a gorilla," Andrea says—one of the 5,000 or so in the vicinity.

The *bai* is a 45-minute walk along a little river, then into magical forest. We head down to the river with Azobe, one of the four Babenzele pygmies who help Andrea take care of the camp. The Babenzele, a local group of Bayaka, are generally taller and darker-skinned than the pygmies of the Ituri Forest I hung out with in Big Congo 30 years ago. Azobe is barefoot and wears only shorts, but his neck and wrists are decorated with intricate glass-and-seed beadwork. A big bull is standing in the water—Luther, whom Andrea hadn't seen in three years and who suddenly reappeared a few days ago. Ears flaring, Luther raises his trunk and gives us the sniff-over. Azobe, slapping the water with his machete, shoos him back behind the bend.

The riverbank is littered with elephant dung. Andrea kicks apart one of the boluses, and it is full of big, hard-shelled seeds—*Pandanus, Drypetes*, and *Gambeya*. A new study has found that forest elephants are essential to central Africa's forests for tree-seed dispersal. They can carry heavy seeds like these (which wouldn't get very far on their own) in their gut for 50 miles before voiding them. Another study measures the rapid, prodigious growth of the forest trees and concludes that central Africa is the second-most-important equatorial sink for atmospheric carbon after the Amazon, so elephants are important for controlling global warming, on top of everything else.

s we near the bai, we hear trumpeting A and sounds of boisterous, gregarious agitation. We tiptoe up the stairs to the Mirador, as Andrea calls her platform, and there they all are. Dozens of elephants are milling around in clusters that are constantly forming and breaking apart. A perfect illustration of elephants' "fission-fusion" society, as one scientist describes it. Half of them are peach-colored from rolling around in the mud. Three big bulls have their trunks stuck deep into holes in the bare clay of the clearing and are sucking up its minerals, which help them digest the alkaloids and other nasty compounds in the leaves they eat. Every few minutes one of them pulls out his clay-stuffed trunk and aspirates it into his mouth. This is the elephants' primary reason for being here, and there's a pecking order for who gets to suck at the holes. The big bulls, of course, have the honors. As the dry season progresses, there are fewer fruits, and the elephants have to eat more foliage, so the visits to the bai become more frequent and prolonged. This is also when the males usually come into musth, so there is a lot of sexual activity. The bai is a social arena with all kinds of interactions constantly going on, a nonstop soap opera, a parallel universe, that never ceases to amaze and amuse Andrea.

"There are at least 50 other *bais* in central Africa, but Dzanga is the jewel. I like to call it the spiritual center of the forest elephants," she whispers. Scanning the scene with binoculars, she spots, way up at the top of the *bai*, 500 yards away, a tiny baby. It couldn't be more than a week old. "Births are rare in the *bai*," she tells me. "The females prefer to have their babies in the privacy of the forest, because here all the elephants come and hassle them."

Deaths in the *bai* are also rare. Footage from here in 2000 shows a procession of clearly distressed elephants, 127 of them over the course of two days, paying their last respects to a dead baby lying on one of the paths to the *bai*, caressing it with their trunks, trying to prod it back to life, placing their feet over its heart to see if it is still beating. One young male tried to lift it 57 times.

Everything else between birth and death seems to be happening. A little calf calls pitifully for its mom, who is only 50 yards away. An older juvenile who is trying to snag some milk from its mother's teat lets out the wounded *awooga* protest call as she pushes him away.

Two young bulls are sparring, fencing with their tusks. Two big bulls are staring each other down like prizefighters before the first-round bell. It looks like there's going to be a major rumble in the jungle, but they back away. Real fights are rare in the bai. One of the Agaves, as Andrea named this family, is having a snooze on its feet. "They have such weird sleeping patterns," she says. "They only need three hours of sleep. Some don't seem to sleep at all." I wonder if this has anything to do with the elephants' enormous, convoluted hippocampus-the part of the limbic system that plays major roles in long-term memory and spatial navigation. Humans need eight hours to delete (or file away) the hundreds of thousands of sensory impressions we absorb unconsciously and consciously in the course of the day. But elephants have this huge engine, this enormous hard drive which can store much more information than ours can and also accounts for their famously prodigious memory.

A bull in musth, whom Andrea doesn't recognize, enters stage left and advertises his sexual state with a big, strong, low, pulsating roar. Scanning the bai for estrous females with the Jacobson's organ in his mouth, he picks up on Aurora, who does a little come-hither shuffle, and he starts to follow her around. The other females watch with interest. "The musth male guards the estrous female for a day or two," Andrea explains, "and when they finally copulate, the other females send up a nuptial chorus, a screaming cacophony of rumbles. She can be inseminated by more than one bull. You never know the father of the calf. A couple of years ago Hilton comes in and heads right for a musth bull who is guarding Leila and drives him off, and while he is chasing him, meanwhile, a little bull, Caligula, copulates with her. He seizes the opportunity, zooms in on that little window. This is known as sneaky-fucker behavior."

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m K}$ atie Payne—an expert on whale and el-ephant vocalizations who strung up the bai with microphones and did the pioneering research on elephant infrasound communication here in 2002 and 2003-tells me, when I ask if she thinks elephants can sing, that an estrous female who has been mated by a young male and is looking for someone bigger and fitter will produce this powerful, low, melodious rumble that can last 45 minutes. This is one of the many things that we haven't found out yet about the elephant tribe: these sounds they make that are too low for humans to hear and carry much farther than their audible vocalizations-are they some kind of secret language (an idea that has seized the popular imagination) or just an extension of the audible sounds, the low part of a graded sequence that echoes the same message?

"I've gotten a lot of solace from the elephants," Andrea muses. "They're probably the best friends I have. People are the scary ones."

Of particular concern are the Sudanese poachers, who are descending on Bayanga and were just routed and scattered by government troops, who took two casualties, and the logging camps encroaching on the reserve, whose workers are living off locally poached bushmeat, including elephant. "I feel there is a compression going on," Andrea tells me. "The *bai* is chockablock with elephants," swarming to their last and only sanctuary.

The day shift begins clearing out, and the night shift—a different crowd, many of whom have had brushes with poachers and are nervous about being out in the open in broad daylight—is coming in to get its mineral fix. So ends another day in the *bai*—nothing earth-shattering, nothing worthy of the evening news, just another day at play in the fields of the Lord, the usual sound and fury, signifying nothing. \Box

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Joseph Heller



CONTINUED FROM PAGE 119 Yossarian loves him "at first sight." "He had seen reverends and rabbis, ministers and mullahs, priests and pairs of nuns. He had seen ordnance officers and quartermaster officers and post exchange officers and other spooky military anomalies. Once he had even seen a justification, but that was a long time before and then it was such a fleeting glimpse that it might easily have been an hallucination." Yossarian speaks to the chaplain—a slapstick and meaningless dialogue. Eventually, the Texan's friendliness drives his comrades batty. They clear out of the ward and return to duty. That's the story.

The charm and energy of the piece, its originality, lay in its playful language: There is a "vortex of specialists" swirling through the ward; a patient has "a urologist for his urine. a lymphologist for his lymph, an endocrinologist for his endocrines, a psychologist for his psyche, a dermatologist for his derma . . . [and] a pathologist for his pathos." "Catch-18"-an arbitrary phrase-is a rule requiring officers who censor enlisted men's letters to sign their names to the pages. In the hospital, Yossarian, a low-level officer, spends his days editing letters and signing them, out of boredom and glee, "Washington Irving" or "Irving Washington." Instead of deleting sensitive information, he declares "Death to all modifiers." He scratches out adjectives and adverbs or. "reach[ing] a much higher plane of creativity," attacks everything but articles. "A," "an," and "the" remain on the page. Everything else, he tosses. At one point, the army sends an undercover man into the ward. He poses as a patient. His job is to suss out the prankster. In the end, he catches pneumonia and is the only one left in the hospital when the others leave.

A year would pass before Heller finished drafting a second chapter of his novel. He was working for *Time* now. At home and at work, the index cards piled up. Very early, Heller imagined most of the major characters in the novel and devoted cards to them, with detailed notes about their backgrounds, characteristics, and fates. He outlined each potential chapter and studiously catalogued each mission he had flown during the war, intending to use them as structural elements in the story.

Ideas rejected. Structure shuffled. Small changes: eventually, a character named Aarky was re-christened Aarfy. Bigger changes: an entrepreneurial soldier, Milo Minderbinder, "exposed" as a ruthless, moneymaking crook in an early vision of the novel, developed into a more nuanced figure, amoral rather than simply villainous. Meta-