



WORLD

KILLING FIELDS

How Asia's growing appetite for traditional medicine is threatening Africa's rhinos

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Knocked out

A black rhino lies in the South African bush after having a microchip inserted in its horn

Photographs by Dominic Nahr for TIME

NESTLED IN THE GOLDEN BUSH grass of an open savanna, a black rhinoceros lies on her side. Her head is haloed by a dried pool of blood. The animal's horns have been sawed off at the stump. Her eyes have been gouged out. "That's a new thing," notes Rusty Hustler, the manager of South Africa's North West Parks and Tourism Board, whose job includes tracking the escalating number of endangered rhinos poached for their body parts. "The Vietnamese have started keeping the eyes for medicine."

Hustler and an animal pathologist begin the postmortem. The stench and the proliferation of flies and maggots indicate that the beast, which was found at the Shingalana private game reserve by a local guide, has been dead at least a week. Eight bullet cartridges are scattered near the carcass. Wearing white boots and blue latex gloves, the pair get to work, sharpening a series of butcher's knives, then ripping into the rhino. A metal detector is passed over the exposed flesh. After an hour, the metal detector squeaks, then emits a louder shriek. The pathologist reaches the heart. "That's the kill shot," says Hustler, slicing the heart to uncover an inch-long slug.

The South Africans rest and survey their grisly work. In 1993 international trade in rhino horn was banned by the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), which now includes 175 member countries and regions. But somewhere, almost assuredly on an illicit route to Asia, the horns and eyes of a 9-year-old female *Diceros bicornis* are traveling, destined for often desperate people who believe in the mystical curative powers of the rhinoceros.

Unlike the elephant, its pachyderm cousin, the rhinoceros possesses little of the majesty needed to evoke worldwide sympathy. It is shy, low-slung, seriously nearsighted. It does not dazzle with its intelligence. Yet for millennia, these bulky lawn mowers have entranced humans with the agglutinated hair that makes up

their horns. Ancient Arabs carved dagger handles from it; Yemen was a popular destination for the animal's parts through the 1980s. Western colonialists in Asia and Africa lined their parlors with rhino-horn trophies and sometimes fashioned ashtrays out of the beasts' feet. Most of all, though, rhino horn was prized in Asia for its purported medicinal value. Ancient traditional Chinese medicine texts recommended the powdered horn for ailments like fever and arthritis, and modern-day practitioners have prescribed it for high blood pressure and even cancer. (Common lore notwithstanding, rhino horn is not considered an aphrodisiac.) So treasured was rhino horn that some of China's tributary states in Indochina were sometimes known in imperial shorthand as the lands of the rhino.

Not long ago, the Asian passion for rhino horn was, in the grand scheme of things, manageable. But now that newly moneyed nations like China and Vietnam are part of trade networks that girdle the earth and move products at jet speed, the fate of the rhinoceros hangs in the balance. This is the story of an animal under threat.

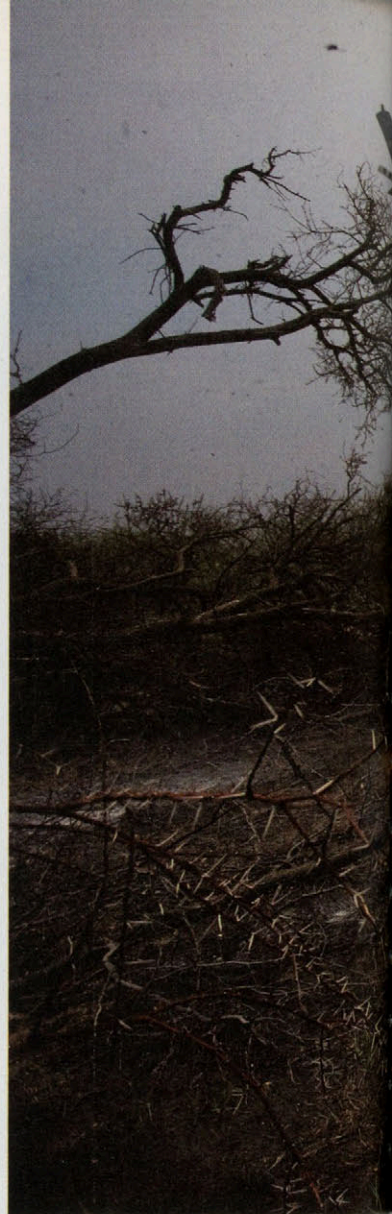
Close to the Tipping Point

THERE ARE FIVE SPECIES OF RHINOCEROS in the world: two in Africa and three in Asia. Two of the three Asian populations—the Sumatran and Javan varieties—are on the brink of extinction. The story in southern Africa is more heartening. Back in the 1960s, the African black rhino numbered about 100,000, but its population waned to just 2,400 in the early 1990s. Today its numbers have doubled to about 4,800—still low, but heading in the right direction. The real conservation success story has been the dramatic rebound of the African white rhino. A century ago, there were as few as 50 of the beasts alive. Now, because of field-conservation efforts, relocation of animals to safer regions and expanded wildlife refuges, the population has reached around 20,000.

But over the past few years, the news from Africa has turned dire. Poaching, once restrained, has skyrocketed. From

2000 to 2007, only about a dozen rhinos were poached each year in South Africa, where nearly 90% of all rhinos live, according to the WWF. But last year, 333 were illegally slaughtered there, nearly all found with their horns chopped off. "Poaching is like a bush fire," says Raoul du Toit, a Zimbabwean environmentalist who won the prestigious Goldman Prize this year for his efforts to nurture critically endangered black-rhino populations. "It starts small, but it spreads and turns into a conflagration very rapidly." Although the current poaching levels are not high enough to suppress the natural population growth of rhinos in southern Africa, they are edging ever closer to the tipping point. "We look on this as an emergency," says Josef Okori, the manager of the African Rhino Program for the WWF. "We are waging a protracted war."

And it is a real fight. Today's illicit rhino-horn trade isn't just small-time





poachers picking off a stray beast or two. Instead, law-enforcement officials say, global criminal syndicates are orchestrating the lucrative business. By weight, rhino horn can be worth more than gold, fetching tens of thousands of dollars a kilogram in China or Vietnam, by far the two biggest markets for the illegal material, according to environmental watchdog groups. And because individual horns are compact, they can be transported easily.

The value of rhino horn explains why poachers often use expensive equipment like light aircraft, helicopters, tranquilizer guns and night-vision goggles to pursue their quarry—overwhelming conservation efforts by underfunded national wildlife commissions. African game ranchers, safari guides and wildlife officials—precisely those who should be protecting the beasts—have been caught dabbling in the trade. At the same time, Asian criminals posing as big-game hunt-

ers are spending tens of thousands of dollars on licenses that allow them to legally shoot rhinos in South Africa, adding a respectable veneer to a nasty pursuit. A continent away, Chinese business interests are investing lavishly in a shadowy rhino-farming scheme that threatens to contravene international law. Taken together, these elements amount to “the most sophisticated organized crime that the convention has had to face in its history,” says John Sellar, head of the enforcement office for the CITES secretariat.

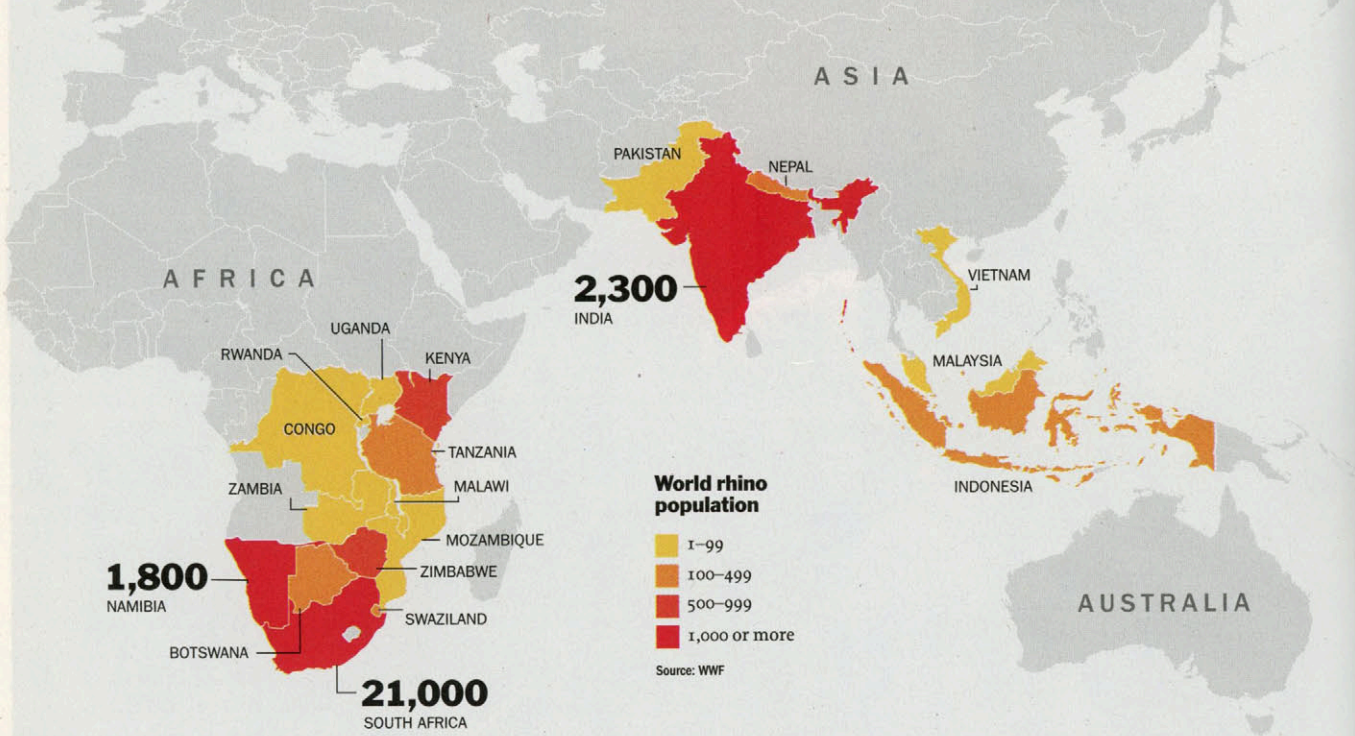
Sellar believes that wildlife crime is linked to a host of other criminal-syndicate pursuits. When Interpol organized a two-day operation to nab ivory and rhino-horn smugglers across six countries in southern Africa last year, only a handful of rhinoceros horns were recovered. But the effort resulted in 41 arrests and netted illegal immigrants, illicitly procured gold, banned firearms and even

Poaching prevention Tracing poached horn is a way of fighting the gangs that distribute it. Here South African game park employees put a microchip in a black rhino

an unlicensed ivory-processing factory. “It can be very difficult to prove a conspiracy that reaches from Vietnam to South Africa and in between,” says Sellar. “But some of the money that was being paid to exploit the legal hunting in South Africa, there’s no way that the individuals were getting their return on that, which indicates that this is simply organized crime laundering their money.”

True breakthroughs in the fight against rhino-horn smuggling won’t happen unless police in countries like China and Vietnam, plus transit countries like Thailand and Malaysia, cooperate fully by following the illegal trail to the big criminal bosses. “We have significant resources, but we’re directing them toward the easier

WHERE THE RHINOS ARE



options, like poachers and people connected with seizures," says Justin Gosling, Interpol's environmental-crime liaison officer for Asia and the South Pacific, at an environmental-crime convention in Lyon, France. "If we could just target and prosecute a handful of significant individuals, we could make a massive dent in these crimes."

For now, the poachers and their overlords have the upper hand. In 2001 police recovered two-thirds of poached rhino horns, according to data gathered by the International Union for Conservation of Nature, an environmental NGO. By 2009 the number was less than 8%. True, about a dozen poachers have been killed in shoot-outs in South Africa and one in Nepal this year, and more than 80 arrests have been made in connection with the illegal rhino trade. In 2010, prison sentences were meted out in Zimbabwe, South Africa, China and the U.S. But complicit officials are common, say law-enforcement experts. A member of one of Zimbabwe's crack commando units was in charge of one poaching gang, helping policemen smuggle horns and tusks out of national parks, says Sellar. Those who are genuinely trying to stop the trade are

outmanned and outgunned. Many wildlife law-enforcement agencies don't even have arrest powers. "We are out there, guns blazing," says David Mbunda, head of South African National Parks. "It may not be tomorrow, but eventually we want to bring this scourge to a complete stop." In the meantime, the rhinoceros killings continue. In the first quarter of this year, 138 South African rhinos were poached, putting 2011 on pace to far exceed last year in kills. Rhino horn remains easily available in Asia, whether from online vendors or traditional-medicine shops. "This is not a crisis just for South Africa," says Lieut. Colonel Lineo Grace Motsepe, the commander of the endangered-species desk of the South African police service. "It's a crisis for the whole world."

A Rumored Cure for Cancer

THE TRADITIONAL-MEDICINE STORE ON Hanoi's Lan Ong Street smells ancient and enigmatic, its glass jars and wooden drawers filled with sea horses, deer antlers and a forest's worth of shriveled fungi. The friendly pharmacist listens to a story about a grandfather with cancer and nods. "We can get it for you," she says, dispatching her husband down the street. A few

minutes later, he returns and unwraps a paper-covered package. A chunk of rhino horn tumbles out, its amber striations gleaming in the afternoon light. More than 6,200 miles (10,000 km) from southern Africa, the horn still smells of savanna. The price: \$3,500 for 100 grams.

Vietnam has become a key market for rhino horn. A few years ago, intriguing rumors began circulating that someone very high up in the country's communist leadership was believed to have been cured of cancer by taking rhino-horn powder. Cancer had not been linked to rhino horn in Asian traditional-medicine tomes. The rumor of a cancer cure, however, tantalized the Vietnamese, particularly those who have accumulated wealth from the country's economic reforms.

When alarmed South African wildlife officials visited Hanoi last October to discuss Vietnam's role in the rhino-horn trade, they were told that the country was mainly a transit route for voracious Chinese consumers. (This was better than the outcome of a previous trip, when a high-ranking Vietnamese Forestry Ministry official walked out of a meeting with international wildlife monitors.) But Vietnam is clearly an end destination for



Traditional medicine

In Vietnam a woman displays a piece of illegally purchased African rhino horn, top. A specially designed bowl for grinding the horn, thought to be a powerful medicine, above

animal parts, not merely a way station. Even as the South Africans were meeting with their Vietnamese counterparts, Hanoi abounded with rhino-horn paraphernalia not openly available in other countries. "Vietnam has stopped some people trying to smuggle in rhino horn at various border checkpoints, but otherwise I've seen nothing indicating a crackdown on the trade," says Tom Milliken, East/Southern Africa director for the wildlife-trade-monitoring network Traffic. "In all my years of monitoring rhino horn, I've never seen entire local industries catering to the consumption of horn like I have seen in Vietnam."

No kidding. In a factory on the outskirts of Hanoi, the Thien Duc company churns out unusual wares: machines used to hold and pulverize chunks of rhino horn by rubbing them against dishes with rough interiors. The electronic grinders and ceramic bowls are sold at a downtown badminton shop. The store's owner, Thanh (he wouldn't give his full name), sells a machine or two every week along with around 10 of the specialized dishes. His customers, he says, are often communist bureaucrats who aren't sick but need something to revive them after

long nights at state-funded banquets. "It's a good gift to give government officials," he tells TIME. "It's really fashionable now." Sure enough, a car with official plates pulls up in front of the store.

That the Vietnamese agreed to meet the South African delegation last year signals that they acknowledge the problem. Nevertheless, more Vietnamese have been caught in South Africa trying to take rhino horn out of the country than have been detained back home. Just before the soccer World Cup last year, three Vietnamese were arrested at the Johannesburg airport with 24 pieces of rhino horn. Even more alarming, the Vietnamese government has been implicated in the illicit trade. An economic attaché from the Vietnamese embassy in Pretoria was twice nabbed with rhino horn but invoked diplomatic immunity. In 2008 a South African investigative TV show secretly filmed another Vietnamese diplomat buying rhino horn on the steps of the embassy, then casually walking back inside. She was recalled home.

Vietnamese in South Africa have also abused a loophole in restrictions on the rhino trade. Under CITES regulations, a limited number of rhino hunts are allowed each year, mostly at private game ranches. Some of the money raised by these licensed hunts is meant to fund conservation efforts, but the horns themselves are not supposed to be used for medicine. If they apply for another permit, hunters are allowed to take home trophy horns that have microchips inserted in them for tracking. But in reality, there is little oversight of the trade, leading criminals to pose as big-game hunters for access to horn.

In 2003, for the first time ever, CITES permits were issued to purported Vietnamese hunters, who legally exported nine trophies. In the first nine months of 2010, the number of Vietnamese trophy-permit applications had reached 107—this from a country with little tradition of sport hunting. (Over the past few years, there has also been a sharp rise in Chinese rhino-trophy applications.) Some of the so-called hunters from Vietnam were so inexperienced, they had to be taught how to shoot a gun, according to South African court testimony. Others, say police, simply had their local guides dispatch the rhinos for them, which is illegal. So far, a handful of Vietnamese have been arrested in South Africa for taking advantage of trophy hunts. But earlier this year, a South African hunter

who killed a rhino for a Vietnamese client was fined a mere \$4,300.

By 2008, suspicious South African officials began limiting each hunter to just one rhino kill per year. Rhino poaching increased almost immediately, as did the number of Vietnamese applying for trophy-hunting permits. Vietnamese keep getting arrested trying to smuggle horns out of South Africa. In January a Vietnamese man and woman were detained at the Pretoria airport trying to sneak out four unlicensed horns from animals they shot during a trophy hunt just days earlier.

Asian criminals can't succeed without the help of private game ranchers. In September, a South African court will try a landmark case against two private-game-park operators, two veterinarians, a professional hunter and six others, who are accused of running a rhino-horn syndicate that bought surplus animals from the South African wildlife service and then secretly slaughtered them for their horns.

Is all the cost and risk of these criminal activities worth it? Does rhino horn actually work against disease? Studies by pharmaceutical company Hoffmann-La Roche and the Zoological Society of London have reported no medicinal value in rhino horn, which, like fingernails, is composed of agglutinated hair and contains proteins like keratin. But many Asians believe thousands of years of traditional medicine lore cannot be wrong. In China, where rhino horn is banned for use in traditional medicine, Zhou Lei of the Chinese Society of Traditional Chinese Medicine says he supports the government policy but adds, "Personally I think it's wasteful to not make use of such precious materials if they come from rhinos that died naturally."

Hanoi resident Nga Do (who does not want her full name used) is suffering from cancer. Doctors recommended rhino horn, so she bought a chunk for \$2,000. The source? A friend who accompanied Vietnamese government officials to South Africa. A man who works as head of security for a government institute in Hanoi says he spent \$5,000 for a rhino-horn treatment for his liver disease, receiving his cache from someone who worked for a Vietnamese embassy in southern Africa. "If you want it, you can get it easily," says the man, who claims the smoky-tasting liquid produced by mixing rhino-horn powder with water is rejuvenating. Javan rhinos used to be plentiful in Vietnam,

but both of these patients had to reach across the world for their remedies. A year ago, what may have been Vietnam's last rhino was killed in a national park. Its horn was hacked off its face.

Breeding Rhinos for Horn

IN HIS DUSTY LIVING ROOM PILED HIGH with scientific journals and outdated computers, Jia Qian slurps down a bowl of noodles before leaving for the Beijing airport. The retired head of the National Traditional Chinese Medicine Strategy Research Project is off to yet another conference in southern China as part of his unorthodox campaign to relegalize rhino horn for use in traditional Chinese medicine. Back in 1993, because of its CITES obligation, China banned rhino horn for medicinal purposes; as recently as last year, the country's official traditional-medicine authority publicly refuted the horn's curative powers. But Jia, 70, believes rhino horn can help cure everything from fevers and brain hemorrhages to SARS and AIDS. "The reason the Chinese government hasn't used rhino horn for these diseases is because some people were Western trained and tainted by Western thought," says Jia. "Other people were weak and gave in to foreign pressure."

Not everyone in China has been infected by Western dogma. From 2006 to 2009, China imported 121 rhinos from South Africa, according to South African data. During that time, China was the only country to purchase more than a handful of the animals for zoological or breeding purposes. Why, exactly? In March 2010, at a CITES meeting in Qatar, Chinese delegate Liu Xiaoping stood up to quash any rumors. China had absolutely no plans to dehorn South African rhinos and deviate from the terms of its import licenses or rescind its ban on using the animal's body parts, Liu said indignantly, according to the testimony of other participants. (Speaking to *TIME*, Liu now denies having said in Qatar that China had no intention of farming rhinos for their horn and refuses to speak further on the subject.) But shortly after Liu's speech in Qatar, a Chinese research paper surfaced, titled "Proposal for Protection of the Rhinoceros and the Sustainable Use of Rhinoceros Horn." The article, originally published in 2008, referred to a rhino project on China's southern Hainan Island, where "initial progress achieved in research to extract rhinoceros horn from live rhinoceroses merits the attention and

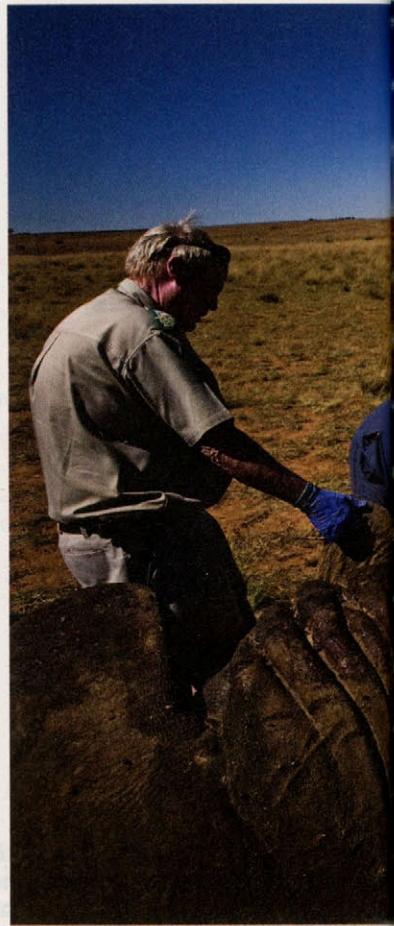
support of relevant institutions." The co-author of the report? Senior traditional-medicine researcher Jia, who *TIME* has learned is part of a secretive, multimillion-dollar Chinese effort to cultivate rhinos for their horn.

Back in 2006, local media in Sanya, Hainan's sun-and-surf town, trumpeted a future tourism hot spot: a safari park called Africa View packed with 50 types of animals, including lions, antelopes and, most of all, rhinoceroses. Two years later, a local newspaper photographer visited. No animals were in evidence, save 60 or so rhinos living in rows of concrete pens, which he photographed. Africa View still has not opened; locals say construction in the park has ceased. An official surnamed Li at the Sanya Tourism Commission, who once toured the park and saw rhinos there, says he has no idea why Africa View hasn't opened yet. "I don't know who the investors are," he told *TIME*.

The park's parent company, *TIME* has learned, is called the Hawk Group. Based in Manchuria, in China's northeast, the company oversees an eclectic business portfolio. It is mainly an arms manufacturer. But the company—which is headed by Zhang Juyan, a member of China's National People's Congress—also dabbles in traditional Chinese medicine through a subsidiary called Longhui. That arm oversees a zoo in the eastern Chinese city of Hangzhou as well as Hainan's Africa View park.

Though Africa View was sold as a tourism destination to Hainan media, Longhui's website makes the firm's true ambitions clear: "To provide our pharmaceutical raw materials, the company has built an endangered animals breeding station in Sanya, Hainan province. The company has imported a large number of endangered animals, laying a solid foundation for its long-term development." An online business plan states that Longhui aims to produce various rhino-horn products, including 500,000 "rhino horn detox pills," and projects annual sales revenue of \$60 million.

Representatives of Hawk, Longhui and the State Forestry Administration all refused to talk to *TIME* about the Sanya project. Permission for *TIME* to visit was not given, supposedly because the park is "under renovation." However, Wang Yujia, a media-department representative at the Hangzhou Wild Animal World, which helped facilitate the import of South African rhinos to Hainan,



spoke openly. "Rhinos are very precious animals, and their horns are most valuable as medicine," she said, confirming that the project's focus has not been tourism. "Our group runs a pharmaceutical company that makes those drugs. It's all part of the same system."

The Sanya facility does not appear to be Longhui's only rhino-horn farm. Last year, at least 16 white rhinos from South Africa were imported to Yunnan province in southwest China, according to provincial statistics. A February announcement from the Yunnan Entry-Exit Inspection and Quarantine Bureau declared that Hawk Group head Zhang "has an ambition: to establish the largest rhinoceros industrial base in China. He is planning to import at least 40 rhinos this year and hopes to expand [the Yunnan] population to 200 within five years."

In June 2010, China's patent office published a curious patent application. Zhang claimed to have co-invented something called a "self-suction living rhinoceros



Slaughtered Investigators dig for bullets inside a poached rhino as the manager of a South African game reserve covers his face in disgust

horn and the farmed material can't meet the rush of orders? In 2008 a legal auction of 119 tons of ivory didn't halt elephant poaching in Africa; in fact, some believe the influx of tusks catalyzed further slaughter of elephants as more people developed a taste for ivory. "The natural world is scarred with the unintended consequences of good business plans," says Traffic's Milliken. "The scale of the Chinese market is potentially so awesome, one miscalculation and we potentially could lose entire species."

Blood in the Bush

JOHN BASSI BANKS HIS BELL JET RANGER UP the side of a mountain, turns and sweeps back into the valley below, skimming the acacia trees that are a favorite rhino snack. Behind him, Charlotte Moueix leans out the helicopter door, gun ready. Below them is Pilanesberg National Park, in South Africa's northwest. A mother black rhino and her baby trot past. As the chopper hovers above, the calf, perhaps a year old, swirls around, plants its feet on the ground and snorts, ready to charge the strange flying beast above. Moueix fires. The baby takes off but begins to totter and stumble, burying his nose—and tiny horns—in a thornbush.

Bassi touches down some 50 yards (45.7 m) away. Moueix jogs toward the animal and extracts the dart. Then another colleague takes a hand drill and bores holes in the baby rhino's horns. Microchips with identifying codes are inserted so that if the animal is poached, its horns can be traced. Soon Moueix injects the calf with a reviving agent, and in three minutes the animal is trotting away, a bit dazed but unharmed. The team will dart and microchip three more calves that day. They work from dawn until dusk. "I can't remember what happened two days ago," says Bassi, his eyes bloodshot. "I'm so tired. And I'm so sick of finding dead rhinos. I'm sick of the smell of them." Until last year, Pilanesberg park had never lost a rhino. But a dozen were poached in 2010. In the wild, the stench of death is never far away. But with humans slaughtering rhinos for their horn, even more blood will run in the African bush. —WITH REPORTING BY JEFFREY T. IVERSON/LYON AND JESSIE JIANG/BEIJING

horn-scraping tool." The online business plan, which appeared on a district government website, states that Longhui's "live rhino-horn grinding technology research has been approved by the State Forestry Administration." But under current CITES regulations by which China is bound, trading in rhino horn for medicinal purposes—whether from live or dead animals—remains illegal.

Harvesting horn from live rhinoceroses is largely unknown territory, although biologists estimate that a rhino's horn naturally grows around 3.9 in. (10 cm) a year. (Like fingernails or hair, rhino horn regenerates.) In many parts of the world, confining wild animals for their body parts is taboo. But China has a history of harvesting bones from caged tigers and bile from moon bears, all for purported medicinal benefit. Jia, the scientist who has been involved in setting up both of Hawk's rhino farms, says his research shows that one live rhino can supply 1 kg of powdered horn annually.

"Farming rhinos in China for their horns will definitely be allowed eventually," he says. "It's just a question of when."

Jia contends that rhino farming will help protect wild animals that might otherwise be poached. The live horn-grinding technique, he says, ensures that the farmed specimens aren't killed. Some prominent African wildlife experts also advocate rhino farming as the only practical way to cut down on illegal hunting. Hawk Group, which Jia says spent 1 million yuan (\$154,000) to import each animal, presumably hopes to corner this lucrative market in China. But while countries like Japan put aside some of the profits made from legal animal-part sales for conservation, China does not have such a scheme. In fact, it hasn't even publicly admitted to any plans to farm rhinos for their horns.

Conservationists also point out that endangered-animal economics are complicated. What will happen if demand in China—and elsewhere in Asia—is kindled by the availability of legal rhino