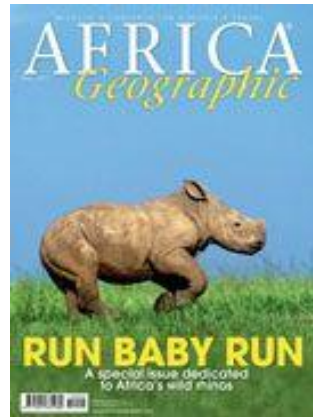


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April 2012: All about rhinos

Special issue - rhinos & the poaching crisis

80 and counting...

That's the number of rhinos killed in South Africa in the first two months of 2012. We dedicate this entire issue to finding out about rhinos and their precious horn, establishing exactly what is driving the poaching onslaught and examining the pros and cons of suggested solutions.

features

All about rhinos

Find out what we know about Africa's rhino species – how many there are and where they live – and about their horns, the unique evolutionary attribute that arguably makes them the most controversial and written-about animals of our time.

A chequered past

Prior to colonial times, Africa's rhino population across all species is thought to have numbered in the hundreds of thousands, possibly over a million. From the 1800s to the present, our summary tells their story. Rhino numbers, however, remained guesswork until the 1960s – and even today there is an element of uncertainty that is compounded by secrecy for security reasons.



The crisis

Crisis? What crisis? After all, rhino numbers for both species in southern Africa are actually increasing. It sounds crazy given a poaching scenario that is seemingly so out of hand, but it is true. It doesn't mean that rhinos in the wild aren't in trouble though – they are. We unpick the inner workings of the poaching syndicates and look at what we know about the Vietnamese and Chinese consumers who are driving the demand.



The solutions

We know rhinos are in trouble. We know we want to save them. But how do we do this, in the face of such seemingly overwhelming odds? The proposed solutions are as hotly debated as they are numerous. Do we increase security and penalties, should we stop legal trophy hunting or focus our efforts on changing mindsets in Asia? We evaluate every one, including the hottest potato of them all: calls to legalise the trade in horn.

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Peter Borchert
Founder

We chose our engaging little model for the cover of this issue for two reasons: relief from the brutal images that inevitably accompany so many stories about rhinos these days, and as a message of encouragement: for as long as there are rhinos being born that will grow up in the wildest of possible circumstances, there is hope for the species. Our exhortation 'RUN BABY RUN' is, therefore, as much a call for our baby pachyderm to be the essence of what it is, as it is a call to run for its very life.



FINAL DESTINATION

KARL AMMANN (2)

The upsurge in poaching and the black market prices for horn exist because there is a demand. But who is buying rhino horn, and why? The answers to these questions are critical if shrinking the market is to be a serious strategy in the fight to save rhinos. **Tom Milliken**, TRAFFIC's Global Elephant and Rhino Programme Lead, discusses what we know about the trade's primary market, Vietnam.

TCM FOR BEGINNERS

'Traditional Chinese Medicine (TCM) is based on the idea of maintaining and restoring balance,' says rhino ecologist Felix Patton. During the thousands of years that it has been practised (written records date from 1–2 BC), diseases have been classified according to a multitude of clinical patterns. These indicate whether an illness is hot or cold in nature, located superficially or deep within the body, and developing acutely or slowly. Once the pattern has been established, a 'materia medica formula' may be suggested. The materials, which include animal parts, plants and minerals, are believed to have different properties ranging from hot or cold to ascending, floating or sedative. Rhino horn is cold, salty and sour and, according to one old TCM textbook, is used to 'cool blood, clear heat, resolve toxin [and] settle fright'.

'Fever' in TCM covers not only a rise in body temperature, but also a patient's subjective feeling of heat within their body, explained scientists at the Chinese University of Hong Kong during their search for suitable alternatives. As a 'cold' drug, rhino horn is indicated for 'hot' diseases, but only when the heat is trapped deep within the body, in specific areas. 'The conceptual function of rhino horn in Chinese medicine is more far-reaching than just reducing fever,' they conclude. *Sarah Borchert*

In June 2011, Hang, a 21-year-old Vietnamese woman suffering with a mouth rash, invested a large sum of money in a 'super cure': rhino horn. The Hanoi resident had become convinced that the horn was a good medicine for releasing heat and poison, a perfect treatment for her mouth problems. Two days after preparing a rhino-horn concoction herself, Hang's face and arms erupted in severe erythema and pimples and she developed a fever.

Her next stop was Bach Mai Hospital's Clinical Allergy-Immunity Department, where she was diagnosed with an allergic reaction and poisoning, a direct result of ingesting rhino horn. In a statement to the local press, the hospital's Dr Nguyen Huu Truong openly discredited the efficacy of rhino horn as a medicine and warned the public that self-medication could have extremely detrimental consequences.

Truong's objections aside, the resurgent rhino horn trade continues to grip Vietnam, making the South-east Asian country the epicentre of global demand and the principal driver of South Africa's current rhino poaching crisis. TRAFFIC has documented that most rhino horn trade trails today lead to Vietnam, with very limited evidence of cross-border trade with neighbouring China.

While the precise details of China's rhino horn trade are vague and poorly understood, Vietnam's obsession with the substance is coming into high relief. According to TRAFFIC's research, self-medicating women like Hang represent one of four consumer groups actively

no cure for cancer

'There is no evidence that rhino horn is an effective cure for cancer and this is not documented in TCM nor is it approved by the clinical research in traditional Chinese medicine.'
American College of Traditional Chinese Medicine

fuelling the trade. She exemplifies a relatively recent trend among affluent young Vietnamese people, especially new mothers, who feel it is important to keep a small quantity of rhino horn at hand to treat high fever and other ailments, particularly in their children. The volume of rhino horn used

for this purpose seems to be significant and the medication is promoted through social media, much to the chagrin of modern medical practitioners like Dr Truong. This home usage of rhino horn appears unique to Vietnam and is supported by the ancillary production of paraphernalia, such as special bowls with serrated surfaces for grinding the horn into powder.

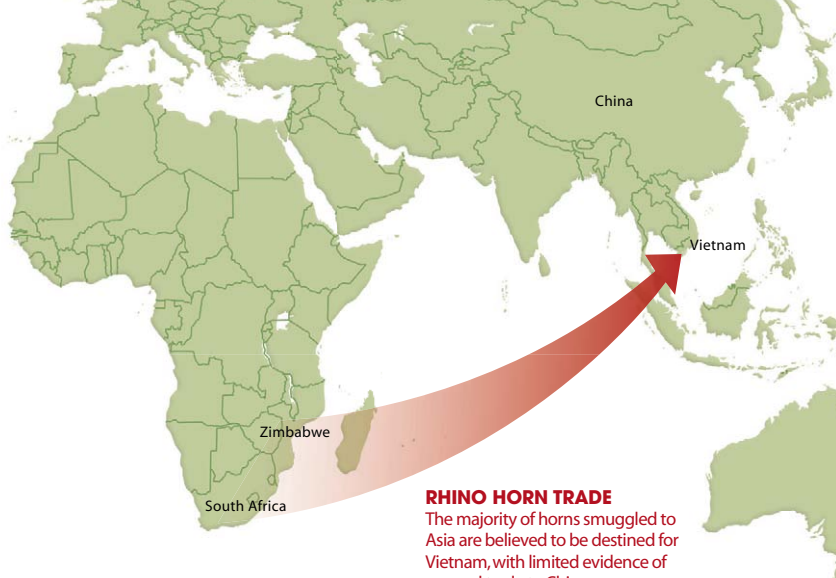


ABOVE Despite its illegal state, rhino horn (both fake and the real deal) is sold openly on the streets of Hanoi, Vietnam. This horn is almost certainly a fake, as pieces are flaking off during the cutting process.

OPPOSITE A street in the older part of Hanoi, where many stores selling traditional Chinese medicines are located.

A second group of consumers comprises desperate individuals who suffer from life-threatening diseases such as cancer and turn to rhino horn in the hope of a miracle cure. They are hugely vulnerable to notions of a panacea, especially when these are promoted by respected traditional medicine doctors or well-intentioned family members. And so the sensational 'urban myths' of wondrous rhino horn cures – the prime minister defying liver cancer, the dutiful husband sacrificing a fortune to save his beloved wife, a celebrity pulled back from the brink – are perpetuated and sustained. But try to locate the healed inspiration behind the tale, and all the substance goes 'wobbly'. While the key attribute of effective urban myth is its elusiveness, soaring cancer rates in Vietnam remain a sobering fact.

A third, and possibly the largest, consumer group entails habitual users of rhino horn: usually wealthy, middle-aged, urban-dwelling individuals who turn to it as a rejuvenating, detoxifying beverage for restoring general health following too much of the 'good life' – rich food, alcohol and drugs. Comprising mainly high-flying businesspeople, these are ►



RHINO HORN TRADE

The majority of horns smuggled to Asia are believed to be destined for Vietnam, with limited evidence of onward trade to China.

THE DRAGON STIRS

According to TRAFFIC's Tom Milliken, there are two historical avenues of rhino horn trade within China, both involving Traditional Chinese Medicine or TCM. Contrary to some Western perceptions, TCM is underpinned by a large manufacturing sector, which produces and packages brand-name products for sale and distribution. Before 1993, this sector was the largest consumer of rhino horn, but that changed when China banned its use and all mention of it was removed from product packaging. 'We remain of the view that this avenue of trade remains dormant and is not driving contemporary rhino horn trade today,' says Milliken.

The second avenue of rhino horn trade in China was through direct, over-the-counter transactions between TCM doctors – who diagnose an ailment, prescribe a treatment and then prepare and sell the medicine – and their patients. Traditionally, many practitioners kept a rhino horn for such use, although this represented a smaller volume of consumption. (Research conducted by TRAFFIC in the 1990s indicated that a horn could typically last 20 years in the hands of a TCM doctor.)

However, such trade is more difficult to regulate, given the number of doctors in China and the issues of confidentiality concerning the treatments they prescribe. 'This is,' says Milliken, 'where we believe some degree of resurgent rhino horn trade is occurring, but it is difficult to quantify until we instigate further market research.'

Steve Trent, president of the advocacy group WildAid, which campaigns to reduce consumer demand for endangered wildlife products, believes that the current market in China is relatively small. 'People who use horn are those who are wealthy enough to afford it,' he says. 'The market does, however, have huge potential to grow because the use of horn is so deeply ingrained.'

Finally, the modern evolution of China is changing many things, traditional medicine included. According to Milliken, 'Some version of the Vietnam story is likely to be somewhere in the China equation too. The casual association of rhino horn as a detoxifying agent among the increasing circle of China's newly rich, the role of the Internet and social media marketing ... we need to dig deeper, but my instincts tell me this is where we'll find a new vein of rhino horn consumption.' Sarah Borchert

FAKE!

Veteran wildlife investigator Karl Ammann has been researching street trade in Vietnam and China. Almost all the 'rhino horn' that has been acquired this way has been confirmed by DNA analysis to be fake. Not only does this point to the levels of demand for horn, but also to the fraud within the trade – and the additional law-enforcement challenges this presents. Here is an excerpt from a transaction with a dealer in Dien Bien Phu, Vietnam.

Q: Could you find me rhino horn? I want to buy some. I would like to buy real horn, not fake. I have been cheated several times because all the horn I bought before is fake.

A: I bought one horn of 1.6 kilos at the price of 1.8 billion Vietnamese Dong (VND) (US\$90 000) recently.

Q: Is this a whole horn or just a part of it?

A: The whole horn.

Q: Why was it so small? I thought minimum weight is often four kilos or more?

A: It depends.

Q: Is it African rhino horn or Asian?

A: It is African horn, Asian is really hard to find now.

Q: How much for an Asian horn and how much for an African one?

A: Asian horn is 30 million VND (US\$1 500) more expensive than African horn. African horn is 65 million VND per 100 grams. Asian horn is 95 million VND per 100 grams.

Q: I have a friend and his father now has cancer, so does he need to buy rhino horn to cure the disease?

A: You are dreaming. Rhino horn can never cure cancer. People buy it maybe as a last resort.

Q: Do you have any pieces of horn left?

A: Sorry, I have not got any left. I have not traded horn for two months. I had the last piece, which weighed 12 grams, but some policemen from the drug-trafficking prevention unit visited me. I ground some and then offered it to them. Then they took the rest when they left. They said they will give me money later.

Q: What is rhino horn good for?

A: It is good if you eat poisonous or bad food or when you have drunk too much. It will help you to recover easily.



KARL AMMANN (2)

ABOVE A typical display in a TCM store.

LEFT, BELOW An 'African' horn for sale in Vientiane, Laos. The bottom part of the horn displays protrusions more usually found in Asian species, suggesting that it is almost certainly a fake.

status-seekers who personify the Asian notion of 'face consumption', whereby individuals measure social self-worth and acceptance against the consumptive habits of their peers.

If conservation leadership were a strong trait in Vietnamese political circles, the fourth group of consumers would simply not exist. Unfortunately, it is believed that many rhino horns are purchased and offered as status-conferring gifts to important political officials within the country. It is not possible to quantify the volume of horns used this way, but the practice does occur, as evidenced by publicised instances of bribery. In 2010, for example, a local district chairman was apparently sentenced to 26 years imprisonment for accepting a rhino horn bribe. Such consumption fosters the direct involvement of government officials in the illegal trade and probably is a key factor behind instances of Vietnamese embassy personnel engaged in rhino horn dealing in Africa.

Regardless of the group, all of these rhino horn consumers share a common trait: they are breaking Vietnamese law. The trade in rhinos and their products is regulated, and legislation provides for either fines or prison sentences to be issued, depending on whether or not the violation resulted in 'serious consequences'. Ostensibly, Vietnam's legislation makes it illegal to 'transport, process, advertise, trade, use, hide,

horny let-down
Rhino horn is NOT used in Asian cultures as an aphrodisiac.

don't bother biting your nails

'Although horn, hair and fingernails are all made of keratin, you can't presume that the chemical composition of each is identical. Since chemical composition may have implications for medicinal properties, it is misleading to state that chewing fingernails will have the same medicinal effect as taking rhino horn.'
Felix Patton

export or import' rhino horn for commercial purposes.

In reality, implementation of these regulations falters. While occasional seizures of rhino horn indicate that effective law enforcement is starting to emerge, in general the traditional medicine markets flourish with an openness not usually observed in other Asian countries. Notwithstanding the 'fake' rhino horn that is rampant (see opposite), many consumers acquire their stocks from traditional medicine dealers or doctors found in every major city in the country, offering the full array of plant and animal products that underpin traditional medicine practices.

Other avenues of trade do exist. Internet trading of rhino horn, for example, is a relatively new feature. TRAFFIC has tracked such activity on at least six different Vietnamese-language websites. Finally, a number of dealers have reported getting their supplies from government officials who procure horn while they are on missions to Africa.

With the reported extinction of Vietnam's own Javan rhino population just last year and increasing publicity about Vietnamese nationals being arrested, prosecuted and hit with whopping prison sentences in South Africa, local environmental activists and journalists are beginning to raise the profile of rhino horn trade issues. Within CITES circles as well, Vietnamese officials are facing increasing pressure to act more vigorously against rhino horn trafficking in their country.

But for the moment, rising affluence, notions of status and traditional culture are trumping effective law enforcement, and Vietnam's appetite for rhino horn is creating a full-on assault on Africa's rhinos. **AG**

TRAFFIC's report, 'The South Africa-Vietnam Rhino Trade Dynamic: A deadly combination of government lapses, private sector greed and Asian crime syndicates' is due out in May 2012.

DOES IT, OR DOESN'T IT HAVE MEDICINAL VALUE?

Unfortunately, the answer is more complicated than a simple yes or no. In popular media, two studies are widely quoted as evidence that rhino horn has no medicinal qualities, but according to rhino ecologist Dr Felix Patton and director of the Rhino Resource Centre Dr Kees Rookmaaker, neither can be verified. The results of the first, conducted by pharmaceutical giant Hoffman LaRoche in 1980 for WWF, have only ever appeared in a short report published by *The Environmentalist* in 1983. In it a WWF spokesperson said the tests showed that rhino horn contained 'no analgesic, anti-inflammatory, anti-spasmodic nor diuretic properties,' among others. However, the original report was not published in full, and WWF, Hoffman LaRoche and the IUCN confirm that they are unable to trace it.

The second refers to a study by Dr Raj Amin of the Zoological Society of London (ZSL), who appears in a short video in which he says, 'There is no evidence at all that any constituents of rhino horn have any medical property.' Amin's investigation, however, pertained to rhino-horn fingerprinting and ZSL confirms that it has never conducted any studies on the medicinal properties of horn.

So, what studies have been done? During the 1990s, Dr Paul Puihay But conducted a range of experiments to test the effectiveness of rhino horn and its substitutes. He concluded that the horn did have an effect and should not be dismissed lightly.

Many other tests have focused on finding acceptable alternatives. In 1993, the Chinese Association of Medicine and Philosophy recommended using the plant extracts *Rehmanniae Radix* and *Rhizoma Coptidis* instead of rhino horn, and a 2006 study funded by the UK government and IFAW identified nine potential botanical replacements for it. In 2011 Liu et al conducted tests on water buffalo and yak horns and found them to be suitable substitutes as well. The 2010 edition of *Chinese Pharmacopoeia* excluded any reference to rhinos and promoted water buffalo instead.

It seems, then, that the jury is still out. In the meantime, though, there do appear to be a number of viable alternatives to rhino horn. In the words of a TCM practitioner who spoke to *Africa Geographic*: 'Oh, rhino horn definitely works! But it is no longer in the medical books – we don't need it any more because Western medicine is much more effective.' *Sarah Borchert*



LEFT The plant extract *Rehmanniae Radix* has been officially recommended as a suitable substitute for rhino horn.

FAR LEFT The entrance to the Tasly Pharmaceuticals company, one of China's largest manufacturers of TCM remedies. This sector used to be the main consumer of rhino horn but, since the 1993 ban, demand has been dormant.



FEI WANG

