

## Poaching for traditional Chinese medicine

Try this: Ask the person next to you what he or she thinks rhino horn might be used for in traditional Chinese medicine (TCM). Chances are, they'll tell you it is used as an aphrodisiac. It is not. In certain Asian countries, ground rhino horn is used to cure almost everything *but* impotence and sexual inadequacy. In Bernard Read's translation of the 1597 Chinese materia medica "Pen Ts'ao Kang Mu", the complete section on rhinoceros horn ("the best is from a freshly killed male animal") reads as follows, with no mention of any aphrodisiac qualities:

"It should not be taken by pregnant women; it will kill the foetus. As an antidote to poisons (in Europe it was said to fall to pieces if poison were poured into it). To cure devil possession and keep away all evil spirits and miasmas. For gelsemium [jasmine] and snake poisoning. To remove hallucinations and bewitching nightmares. Continuous administration lightens the body and makes one very robust. For typhoid, headache, and feverish colds. For carbuncles and boils full of pus. For intermittent fevers with delirium. To expel fear and anxiety, to calm the liver and clear the vision. It is a sedative to the viscera, a tonic, antipyretic. It dissolves phlegm. It is an antidote to the evil miasma of hill streams. For infantile convulsions and dysentery. Ashed and taken with water to treat violent vomiting, food poisoning, and overdosage of poisonous drugs. For arthritis, melancholia, loss of the voice. Ground up into a paste with water it is given for hematemesis [throat hemorrhage], epistaxis [nosebleeds], rectal bleeding, heavy smallpox, etc.

Because it was believed to provide such a pharmacological bounty, it is perhaps superfluous for rhino horn also to serve as a love potion. How then did rhino horn acquire its aphrodisiacal reputation? Probably from Western writers who had only a passing acquaintance with Chinese traditional medicine. One such was J.A. Hunter, (who was reputed to have shot more than a thousand rhinos, see the article on Habitat Loss in this Information Pack) who, in 1952, wrote:

"The horns are worth thirty shillings a pound or more – ten shillings more than the finest grade of ivory. These horns are used for a curious purpose. Orientals consider them a powerful aphrodisiac and there is an unlimited demand for them in India and Arabia. No doubt any man who has a harem of thirty or more beautiful women occasionally feels the need for a little artificial stimulant."

Hunter tried it himself, but perhaps because he was alone, it did not work. "I closely followed the recipe given me by an Indian trader," he wrote. "Take about one square inch of rhino horn, file it into a powder form, put it in a muslin bag like a tea bag, and boil it in a cup of water until the water turns dark brown. I took several doses of the concoction but regret to report that I felt no effects. Possibly I lacked faith. It is also possible that a man in the bush, surrounded by nothing but rhinos and native scouts, does not receive the proper inspiration to make the dose effective."

In his 1962 study of the animals of East Africa, C.A. Spinage seemed to share the belief that Asians were interested in the horn as an aphrodisiac and were willing to pay handsomely for it: "On account of mysterious aphrodisiac properties attributed to the horn by certain Asiatic peoples, the Rhino has been sorely persecuted... With its horn fetching the present high price the prospects of its continued survival in the face of the poachers' onslaught are not very bright." The anthropologist Louis Leakey also shared this misunderstanding. In his 1969 book on African wildlife, he commented that rhinos were "in grave danger from poachers because rhino horn commands a high price in the Far East, where it is rated as an aphrodisiac." And in *S.O.S. Rhino*, C.A.W. Guggisberg asserted that: "The superstition that has done more harm to the rhinoceros family than all others is undoubtedly the Chinese belief in the powerful aphrodisiac properties of the horns. Through the centuries untold generations of aged gentlemen have been imbibing powdered rhino horn in some appropriate drink, hoping to feel like a twenty-year-old when next entering the harem!"

Even without aphrodisiacal properties, however, rhino horn is one of the mainstays of TCM, and its collection has been responsible for the death of tens of thousands of rhinos around the world. Make no mistake: those people who use rhino horn to cure medical ailments really believe it works. That's what drives up the demand on which the poachers thrive. As Ann and Steve Toon commented in 2002, "For practitioners of traditional Asian medicine, rhino horn is not perceived as a frivolous love potion, but as an irreplaceable pharmaceutical necessity." And Eric Dinerstein (2003), concurs: "In fact, traditional Chinese medicine never has used rhinoceros horn as an aphrodisiac: this is a myth of the Western media and in some parts of Asia is viewed as a kind of anti-Chinese hysteria."

Rhino horn has been an integral component of TCM for thousands of years. It matters little where the rhinos come from; the horn of a rhinoceros from any continent may be used for medical purposes. In East Africa – primarily Kenya, Uganda and Tanzania – statistics on rhino horn harvesting have been kept since 1926. Over this period, most of the rhinos killed were black rhinos, although the "harvesters" would not pass up a white rhino if it appeared in their gunsights. During the 1930s, according to Nigel Leader-Williams (1992), declared exports from East Africa (then under British rule) averaged about 1,600 kilograms (3,520 pounds) per year, which meant the death of some 555 black rhinos annually. During World War II, the numbers soared to 2,500 kilograms (5,500 pounds), for which approximately 860 rhinos died each year. During the 1950s and 1960s, the auction houses reported about 1,800 kilograms (3,960 pounds) per year; which would have entailed the death of about 600 rhinos every year in that period. In the 1970s, the numbers skyrocketed again, to 3,400 kilograms (7,480 pounds), and every year in that decade, 1,180 rhinos died. Leader-Williams (now Professor of Biodiversity Management of the Durrell Institute for Conservation and Ecology at the University of Kent) identifies the Far East's primary consuming nations as Hong Kong (which was separate from the People's Republic of China until 1997), mainland China,

Taiwan, Singapore, Japan, South Korea, Peninsular Malaysia, Sabah Malaysia, Brunei, Macau, and Thailand, while the major Asian importers of African rhino horn were, not surprisingly, the first three on this list – mainland China, Hong Kong and Taiwan.

In the 1960s and 1970s, Hong Kong was the world's largest importer of rhino horn. Although the government officially banned all imports in 1979, rhino horn was smuggled in from Macao, Burma, Indonesia, Malaysia, India, Taiwan, and South Africa. At the 1987 CITES meeting in Ottawa, participating parties agreed to abate the rhino crisis by closing down the trade in rhino products completely. British Prime Minister Margaret Thatcher promised the ban would take effect later that year. This never happened in an effective way, of course, but there were suggestions that substitutes for actual rhino parts might suffice for TCM. Scientists at the China Pharmacological Institute proposed using buffalo horn (made of keratin, as are rhino horns), and the manager of China's National Health Medicines Products said that all their new medicines now used buffalo horn instead of rhino horn. In the section on "Heat-clearing, blood-cooling medicinals" in Wiseman and Ellis's 1996 "Fundamentals of Traditional Chinese Medicine", we find the admission that all those rhinos didn't have to be killed at all. After a list of all the symptoms that rhinoceros horn can alleviate, there is this note: "The rhinoceros is an endangered species. Please use water buffalo horn as a substitute."

Taiwanese self-made millionaires are notorious for their conspicuous consumption of rare and exotic wildlife, and the Chinese traditional adage that animals exist primarily for exploitation is nowhere more pronounced than on Taiwan. Most of the rhino horn for sale there comes from South Africa. The demand for Asian horn in particular is increasing and wealthy Taiwanese, aware that prices will rise even higher as rhinoceros numbers decline, are buying it as an investment. In those regions where rhino horn products are dispensed – legally or illegally – the most popular medicines are used for tranquilisers, for relieving dizziness, building energy, nourishing the blood, curing laryngitis, or simply, as the old snake-oil salesmen would have it, "Curing whatever ails you."

Keratin – the major protein components of hair, wool, nails, horn, hoofs and the quills of feathers – in rhinoceros horn is chemically complex and contains large quantities of sulphur-containing amino acids, particularly cysteine, but also tyrosine, histidine, lysine, and arginine, and the salts calcium carbonate and calcium phosphate. Rhino horns are composed primarily of keratin, but so too are rhino nails. Three to a foot, for a grand total of twelve per rhino, the nails can also be shaved or powdered for pharmaceuticals. You cannot carve a *jambiya* handle from a toenail, but shaved or powdered rhinoceros keratin, with all its believed powers, might be beneficial regardless of which part of the rhino it comes from.

The scarcity of rhinos today, and the corresponding intermittent availability of rhino

horn only drives the price higher, and intensifies the pressure on the declining rhino populations. For people whose annual income is often far below the subsistence level, the opportunity to change one's life by killing a large, ungainly, and otherwise seemingly "useless" animal must be overwhelming. How much is rhino horn worth? In Nowak's revision of "Walker's Mammals of the World", we read:

"*R. unicornis* is jeopardized by loss of habitat to the expanding human population and illegal killing, especially in response to the astonishing rise in the value of the horn. The wholesale value of Asian rhino horn increased from US \$35 per kg [2.2 pounds] in 1972 to \$9,000 per kilogram in the mid-1980s. The retail price, after the horn has been shaved or powdered for sale, has at times in certain East Asian markets reached \$20,000-\$30,000 per kilo. In contrast, in May 1990, pure gold was worth about \$13,000 per kilo."

(NB: Please also refer to the article on Poaching for luxury products in this Section for further details of the value of rhino horn.)

Throughout those markets, the trade in rhino horn for medicinal purposes is a very big business, but because much of it is conducted through various black markets, its true magnitude may never be known.

The Taiwanese make up much of the market for horn imported to Asia from South Africa, Mozambique, Tanzania, and Zimbabwe – wherever black rhinos can still be found. Like the Taiwanese, many Koreans are devoted practitioners of traditional medical arts, and are prepared to import substantial amounts of substances not naturally found in their country. Korean traditional medicine is based on the Chinese version, which is said to have come to Korea during the sixth century. "Rhinoceros horn," wrote Judy Mills in 1993, "is an ingredient in five... medicines still popular among doctors of Oriental medicine in Korea today. These rhinoceros horn derivatives are used to treat maladies including stroke, nosebleeds, dermatitis, headache, facial paralysis, high blood pressure, and coma. The most popular of these medicines is Woo Hwang Chang Shim Won, a medicine ball made from rhinoceros horn, musk, cow gallstones, and a number of herbs." In 1992, after the US government threatened to impose sanctions via the Pelly Amendment on South Korea for failure to police the trade in rhino horn, the price of rhino horn in South Korea doubled. Among the some 7,000 doctors licensed to practice Korean medicine in South Korea (no figures are available for North Korea), there was little diminution of prescriptions written for Woo Hwang Chang Shim Won after 1992. In fact, it is not clear that the use of rhino horn for medicinal purposes has decreased at all.

Indeed, it is not clear that rhino horn serves any medicinal purpose whatsoever, but it is a testimony to the power of tradition that millions of people believe that it does.

Of course, if people want to believe in prayer, acupuncture or voodoo as a cure for what ails them, there is no reason why they shouldn't, but if animals are being killed to provide nostrums that have been shown to be useless, then there is a very good reason to curtail the use of rhino horn. There are five species of rhinoceros, and with the exception of one subspecies of the African white rhino, all are in danger of being hunted to extinction for their horns. Rhinos as we know them have been around for millions of years, but Dr H. Sapiens has created a predicament from which they might never recover. It is heartbreaking to realise that the world's rhinos are being eliminated from the face of the earth in the name of medications that probably don't work.

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