

The spectacular rhinoceros has been around since the Eocene era some 60-million years ago, when many primitive mammal forms disappeared and modern mammal species made their appearance. Always one of the *dramatis personae* on the global stage, an early form of rhino, the 6-metre-high Baluchitherium was the largest land mammal in existence. For countless millions of years rhinos wandered over much of the face of the Earth without serious challenge or opposition – until modern man came along. Today, mainly because of the use of rhino horn in traditional Oriental medicine, rhino numbers worldwide have been reduced to no more than 11 000.

Powdered rhino horn has been used in traditional Oriental medicine for at least 3 600 years. The innovativeness of the Chinese has long been known, and admired – think of spaghetti and silk, gunpowder and fireworks, printing and paper. Their firm belief in the efficacy of animal products as medical cure-alls was established in the earliest times, and continues to this day, and this firm belief is now held throughout much of the rest of Asia. Not only the unfortunate rhino's horn is used, but also its blood, flesh, bones, skin, stomach, penis, hooves, dung and urine (this last collected from zoo animals for use as a cure for sore throats and asthma). But the medical imagination of the Orient goes way beyond the rhino – tiger skin, bones and penises, bear fat, gall bladders and bile, body parts from musk deer and saiga antelope, giant salamanders, rare snakes and pangolins, apes and monkeys. Apart from the pharmacist's mortar and pestle, many of these products are also destined for the wok and the diningroom table, in fact, Asia has been described as a Black Hole for Endangered Species. But back to medicine...

Over the aeons, the use of Chinese medicine spread to most of the East, including Japan, Taiwan, Korea, Hong Kong, Singapore, Thailand, Burma and Nepal, and there are indications that it is also being used in Asian communities in North America and Europe. It is therefore reasonable to suppose that more than one-and-a-half BILLION people, more than a quarter of the Earth's population, are potentially exposed to the use of rhino horn in traditional medicine. Rhino horn is used for a wide variety of medical reasons, but one of the myths that needs

RHINO HORN: MIRACLE MEDICINE OR MYTHICAL MAGIC?



IMMEDIATE debunking is that it is used mainly as an aphrodisiac. The Gujarati people in India do use the substance as an aphrodisiac, and there are probably other isolated pockets of such usage elsewhere, but generally speaking rhino horn is NOT used as a sexual stimulant.

As medicine it is sold in two forms, as 'raw' horn by pharmacists who make up the medicine for customers from horn held in stock, and as a constituent of manufactured medicines. There are also two major type distinctions – 'Fire' (or Asian) horn, which is believed to be more efficacious than 'Water' (or African) horn. In most Asian countries traditional medicine is OFFICIAL medicine, therefore rhino horn is prescribed by licenced doctors and pharmacists and in public, as well as private hospitals and clinics. Its main usage is as a heat or fever-reducing drug, but it must be realised that Chinese medicine is based on the principle of homeostasis, where 'heat' or 'fever' is not merely manifested as high body temperature.

Oriental medical text books from the Shen Nong Ben Cao Jong written in the first century BC to those still being written today, prescribe rhino horn as an anti-pyretic, as a detoxicant for insect- and snake-bite, as a "cleanser of the liver and stomach", as a cure for the common cold, typhoid, jaundice, rashes, the vomiting and excretion of blood, delirium and abscesses, and for soothing the nerves and improving the eyesight.

Modern textbooks used in medical universities today specifically recommend rhino horn

for dispelling heat and cooling the blood, as well as in the treatment of febrile diseases, influenza, high fever, poisoning, convulsion, epilepsy, restlessness, delirium, macular eruptions, haemoptysis, epistaxis, carbuncle, malignant swelling, abscesses and even possibly AIDS. It is also commonly held that rhino horn may be used in the treatment of hepatitis, leukemia, haemorrhage, rhinitis, meningitis, cerebrovascular diseases, gastrorrhagia, severe external burns, dermatitis, stroke, common headaches and dizziness, and it can also be used as a general "pick-me-up" or tonic.

There are even documented cases of veterinarians prescribing rhino horn for the treatment of distemper in lap dogs in Taiwan. Daily doses for human treatment range from 0.08g upwards. Annual consumption in Taiwan alone (population 21-million) is estimated to be anything from 400kg to 1-tonne, at a retail cost of some US\$7 000 per kilogramme. The average live rhino in the wild carries perhaps 2.5kg of horn.

DOES IT WORK? Oriental traditional medicine undoubtedly works, but the issue surrounding rhino horn is far more complex. As the substance is no more than keratin, it can be argued that it is no more effective as a medical treatment than fingernail parings. Recent Western laboratory tests on rats have indicated that it does act as an anti-pyretic, but using doses 100-times higher than would be taken by a human, with the added doubt factor that the initial pyrexia was induced in the rats anyway. Alternatives? Yes, including saiga antelope (which is itself already becoming endangered), water buffalo and common cattle horn, and in the plant world *Chrysanthemum merifium*, *Odontochilus inabai*, *Bupleurum fulcatum* and *Coptis chinensis*, among others.

However, the issue is not really whether rhino horn is an effective medical treatment or not, but that some 1 500-million people believe it is. There are about 11 000 rhinos left in the wild, enough to supply just a small portion of the East's annual needs, so the real question is – when will you and I see our last free-roaming rhino on the African bush or in an Asian jungle?

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