

TRAFFIC examines musk deer farming in China

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Musk deer in the Musk Deer Captive Breeding Research Group of East China Normal University, Shanghai, Chongmingdao Musk Deer Farm.
Credits: TRAFFIC East Asia

Musk deer (*Moschus spp.*) have been hunted for many centuries for musk – used predominantly in traditional forms of medicine, but also in the perfume industry.

Records of the use of musk in traditional Chinese medicine (TCM) date back to the Han Dynasty (200 BC – 200 AD). Musk has a wide range of uses, including stimulation of circulation of qi ('life force') and blood as well as being a catalyst for other medicinal materials.

Musk deer are native to Asia, and are distributed from the Arctic Circle to the Hindu Kush/Himalayan region of Afghanistan, Nepal, Pakistan and India in the south, and east to Viet Nam.

Despite national laws in nearly all range States protecting musk deer and international trade regulated by CITES, populations of musk deer continue to decline throughout their range. Illegal hunting and trade of musk for use in traditional medicines poses the biggest threat to musk deer, although habitat destruction is also serious concern.

China's populations of musk deer are listed as Class II protected species under China's Wild Animal Protection Law (1988), and hunting of musk deer in China has been banned since 1989. However, in reality enforcement remains problematic and population estimates for China indicate an alarming decline from over three million in the 1950s to between 200,000 and 300,000 in the 1990s.



Legally acquired musk pods of a Hong Kong trader
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China continues to export hundreds of thousands of medicinal preparations purporting to contain musk every year, although the majority of these most likely contain synthetic musk. However, some TCM companies continue to illegally obtain genuine musk for use in certain medicinal preparations.

Captive breeding of musk deer has been suggested by some as a means of meeting demand for musk whilst also alleviating pressure on wild musk deer. TRAFFIC East Asia recently examined the captive breeding of musk deer in China to assess whether it was a viable conservation tool for wild populations of musk deer. This project was supported by WWF-UK.

Despite improved techniques, musk deer are extremely difficult to raise in captivity and only male musk deer produce musk. Demand in China alone is estimated to be annually in the region of 1000 kg of musk and to produce this amount, approximately 84,000 captive-bred male musk deer would be required.

Although operational since the late 1950s, China's current captive population is approximately 1,400 of which only about 450 are male musk deer, producing a total of about 6kg of musk per year. This clearly does not present a viable means of meeting China demand for musk. However, with careful management, captive breeding operations could serve as a genetic 'safety' net for wild populations providing that illegal hunting is also brought under control.

Enforcement of China's impressive 'paper' regulations is clearly needed and could be facilitated through better coordination between musk deer breeders, wildlife management authorities and medicinal authorities.



Captive breeding compound, Sichuan Institute of Musk Deer Breeding
Credits : TRAFFIC East Asia

Accurate labelling of medicines is also an urgent requirement, as it would enable consumers to make informed choices when purchasing medicines, as well as facilitating regulation of threatened species in trade.

TRAFFIC East Asia's principal recommendation is the establishment of a cross-sectoral coordinating body on wildlife conservation and traditional health care to facilitate understanding and enforcement of the legislation and regulations protecting musk deer in China..