

Bear Markets: Singapore

A summary of the findings of: *'The trade in bear gall bladder and bile products in Singapore'* published by Animal Concerns Research and Education Society (ACRES) 2001.

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This report is based on a study by the Animal Concerns Research and Education Society (ACRES) in 2001. The aims were to determine: the prevalence of the sale of bear gall bladders and bile products in Singapore; the types, prices, sources, supply frequency, import and export patterns of bear gall bladders and bile products on sale; the level of awareness of legal restrictions surrounding the trade among TCM shopkeepers; the regularity and types of consumers; Singapore's regulatory framework relating to these products; how the bile farming industry operates. Also to recommend measures to address the illegal trade in bear gall bladders and bile products, and to educate consumers on the illegal trade in bear gall bladders and bile products and the bear bile farming industry.

During the WSPA study of bear farms in China from 1999-2000 (see page 28), some farms reported that they were illegally exporting their products to countries such as Singapore, Japan, Taiwan, Hong Kong, Philippines and Korea. A 1991 study by J.A. Mills and C. Servheen of TRAFFIC, USA, found bear gall bladders in 16 out of 25 Chinese medicine shops in Singapore¹. Of the nine which did not have gall bladders, several said they could refer the investigators to shops that did and several asked the investigators if they were selling gall bladders.

Between May 2001 and July 2001, the ACRES researchers visited 68 Traditional Chinese Medicine (TCM) shops in fourteen areas in Singapore to study the sale of bear gall bladders and bile products.

Intact bear galls on sale in Singapore, kept discreetly in a medicated oil box locked inside a display shelf.



Traditional Chinese Medicine (TCM) in Singapore

Traditional Chinese Medicine (TCM) has more than 5000 years of history. It is seen as part Singapore's heritage and Chinese culture². There are about 800 Chinese medicine and herbal shops in Housing Development Board (the body that provides public housing in Singapore) estates themselves and according to a recent Ministry of Health survey, about 10,000 Singaporeans visit TCM physicians every day³. The role of TCM in Singapore is seen to be complementary to the Western based healthcare system. TCM has made great strides in Singapore in the past decade, including:

- Trade in traditional Chinese medicines between Singapore and China reached S\$50.6 million (US\$27.8 million), with imports and exports amounting to S\$41.7 million (US\$22.9 million) and S\$8.9 million (US\$4.9 million) respectively in 1998⁴.
- A Memorandum of Understanding was signed between the Ministry of Health and the People's Republic of China in July 1999 in the area of TCM. It aims to encourage bilateral co-operation and the mutual exchange of expertise on the teaching, practice and regulation of TCM⁵.
- The TCM task force was formed in July 2000 to evaluate opportunities, assess Singapore's research capability in the field and make recommendations to the Biomedical Research Council by the end of 2001. One of the recommendations is likely to be a degree programme in TCM at a local University³.
- The Traditional Chinese Medicine Practitioners Bill, passed in Parliament in November 2000, came into effect in 2001, starting with the registration of acupuncturists.
- The implementation of regulations to control Chinese Proprietary Medicine (CPM) entered its third phase in September 2001. The regulations cover the import, manufacture, sale and supply of CPM and ensure that CPM products sold locally are safe and properly certified.
- The first Singapore Traditional Chinese Medicine Research Symposium was held in November 2001. It was announced here that Singapore is taking steps to standardise the use of herbs and other raw ingredients in Chinese medicine in its bid to become a world-class centre for TCM.

Bear bile and TCM

Bear gall bladders and bile products are used to treat a range of complaints such as fever, haemorrhoids, conjunctivitis and liver diseases. It has been proven that ursodeoxycholic acid (UDCA), the ingredient in bear bile (the giant panda is the only bear that does not produce ursodeoxycholic acid), can be successfully used to treat certain liver problems and the dissolution of gallstones⁶. Powdered gall bladder and bile are now also used as ingredients in teas, wines and tonics and in items such as shampoos and throat lozenges.

Bile can be extracted from live bears or from gall bladders of dead bears. To remove intact gall bladders, bears have to be killed. There is mounting evidence that the demand for bear bile and gall bladders in Asia has adversely affected nearly all bear species⁷.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES regulates international trade in CITES-listed species of live animals and plants, and their parts and derivatives, based on a



Samples of bear products found in Singapore.

system of permits which must be presented before consignments leave or enter a country. Singapore became a signatory (or Party) to the Convention on 30 November 1986. (see pages 59 – 62)

Various decisions of the Conference of the Parties to CITES in effect after the 11th meeting encourage national action on the issue.

- Parties should report to the Secretariat on whether their national or sub-national legislation controls trade in bear parts and derivatives, as well as in products labelled as containing parts and derivatives of bear, and whether such controls apply to all CITES-listed bear species.
- Parties should inform the Secretariat what specific penalties exist for violations of existing national and sub-national laws to regulate the trade in bear parts.
- Parties should consider, where appropriate, introducing measures within their territory to facilitate implementation of CITES with respect to the trade in bear parts and derivatives and products labelled as containing parts and derivatives of bear.
- Parties are encouraged to evaluate the recommendations of the CITES Tiger Missions Technical Team and CITES Political Missions and, where appropriate, to apply these recommendations to the conservation of bears and trade in bear specimens, particularly with respect to bear species included in Appendix I.

Bear farms

Bear farming started in China in 1984, with bears reared intensively for their bile (see pages 28 – 58). Korea banned bear farming in the early 1990s. Existing bear farms which hold about 1000 bears are not permitted to sell or trade bear parts and bile in the country. Vietnam has at least 500 bears in farms. These have been reported to have been illegally caught in the wild⁸.

The focus of this report, is on China as it has the largest bear bile farming industry in the world. The CITES Management Authority of China and the Ministry of Forestry (MOF) report that there were 7002 bears in 247 bear farms in China in 1998⁹. These would almost exclusively be Appendix 1 bears, commonly the Asiatic black bear (see pages 28–58).

None of China's bear farms is registered with the CITES Secretariat, which would allow Appendix I bears, bear parts or bear derivatives originating from captive breeding facilities to be commercially traded internationally. This trade would also require relevant permits. (see page 61)

Chinese bear parts or derivatives have been found outside of China⁸. This means they would have been illegally exported from China and illegally imported into the consuming country. This is in violation of CITES as well as the national legislation of CITES Parties.

China repeatedly claims that the use of bear gallbladder and bile products are part of the culture of TCM. Yet, according to the Chinese Ministry of Forestry, before 1980, the market demand for bear gall bladder in China was only 500 kg per year. However, the output of dry bile powder in farms has risen dramatically to 7000 kg per year from 1996 to 1998, of which only 4000 kg could be consumed each year in China. This also indicates there is a significant stockpile of the product. It is anticipated that eventually China will attempt to get this product legally onto the international market.

China has argued that bear farming is able to reduce the poaching of China's Appendix I bears. Officials of China's Management Authority and the State Administration for Traditional Chinese Medicine have termed bear farming as a conservation success^{22,23}. However no documented evidence has been found for this. Experts suggest the contrary. And so does the evidence.

Christopher Servheen of the International Union for the Conservation of Nature Bear Specialist Group states: *“Increased commercial demand (for bear bile) will in turn increase profit potential, with a resulting increased demand for bear for use on farms. Some of this increase could come from captive breeding, but some would also likely be satisfied by capture of live bears from the wild...In summary, bear farming will increase and legitimise the use of a product that will continue to come from wild bears and therefore negatively impact on their populations.”*¹⁰

“There is also fear that widespread availability of farmed bear bile at low prices will stimulate demand not only from farmed bile but also for the gall bladders of wild bears.”¹¹

Mills also reports that some Asian consumers believe bile from wild bears is superior to that from farmed bears⁷. Further, bear farms have a high mortality rate. Thus the poaching of bears in China, Vietnam, Myanmar, Laos, India, and Thailand continues. All the farms surveyed in WSPA's investigation⁸ admitted to supplementing captive populations in China's bear farms with wild-caught bears.

There is considerable evidence of suffering and stress on even the most modern of Chinese bear farms (see pages 28–58).



Conditions on China's bear farms have received international criticism.

Sale of bear gall bladders in Singapore, 1991

Mills and Servheen, TRAFFIC, USA, found bear gall bladders in 16 out of 25 Chinese medicine shops in Singapore in 1991. Of the nine which did not have gall bladders, several said they could refer the investigators to shops that did and several asked them if they were selling gall bladders. They saw a total of more than 150 whole gall bladders allegedly from bears during the investigation. Most shopkeepers had the gall bladders displayed prominently and nobody mentioned that the trade was illegal. Most of them were said to have originated in China. Others were said to have come from Indonesia, Nepal, Russia, Burma, Malaysia, India and the United States of America. Customers included Japanese and Koreans¹.

A staff physician from Thong Chai Medical Institution was quoted as informing the investigators that the demand for bear bile was increasing, *“Not because of money but because bear bile has a long history and is very effective...Bear bile is like the real pearl or wild ginseng - very precious.”* Another staff member said that the best quality galls came from the United States and the origin of preference, in descending order, was the United States, India and Nepal¹.

The investigators also spoke with a representative from the Agri-food and Veterinary Authority (AVA) which was then known as the Primary Production Department. The representative said that he and his staff had surveyed medicine shops looking for gall bladders two or three years earlier and concluded that fewer than 10 percent sold them.¹

He also reported that problems with catching perpetrators stemmed from how wildlife traders could identify a law enforcement officer, the difficulty of catching trafficking in the act, claims by traders that the bear products they had were acquired before Singapore became a party to CITES and claims that their bear products were from Appendix II bears. These were used to formulate the questions that the researchers from the ACRES study asked the shopkeepers in 2001¹.

Singapore's regulatory framework

Endangered Species (Import And Export) Act Cap. 92a

The Endangered Species (Import and Export) Act of Singapore, is the national legislation that gives effect to CITES controls on import and export of wildlife and wildlife products. The Act applies to any import or export transactions undertaken by commercial organisations, scientific institutions, zoos, tourists, migrants and the general public. The relevant section for the purpose of this study is:

Section 4 – Restriction on import, export, re-export or introduction from sea of scheduled species

1. No person shall import, export, re-export or introduce from the sea any scheduled species without a permit.
2. No person shall have in his possession, under his control, sell, offer or expose for sale, or display to the public any scheduled species which has been imported or introduced from the sea in contravention of subsection (1).
3. Any person who contravenes subsection (1) or (2) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$5,000 or to imprisonment for a term not exceeding 12 months or to both and, in the case of a second or subsequent conviction, to a fine not exceeding \$10,000 or to imprisonment for a term not exceeding 12 months or to both.

“Ursidae” (or large bears) is listed in the First Schedule. The provisions of the ESA can apply to products and derivatives as well.

Working policy on bear gall bladders in TCM

A check with the local CITES Management Authority revealed that they have not received any applications for the import of bear gall bladders or bear gall products for commercial purposes.

Medicines Act (Chapter 176, Sections 44,45, 46 and 52), Medicines (Labelling of Chinese Proprietary Medicine) Regulations

The Medicines Act is also relevant for this study, with specific reference to the labelling regulations that have been coming into effect in phases since 1999. Phase 1, which took effect on 1 Sept 1999, covered all Chinese Proprietary Medicine (CPM) tablets and capsules; phase 2 covered tablets, capsules and liquid preparations and phase 3 which came into effect on 1 September 2001 covered the remaining types of CPM (with a few exemptions which are not relevant for the purposes of this study).

The CPM are required to have full labelling in English of information such as the trade or brand name, the appropriate non-proprietary name of the Chinese proprietary medicine, the batch reference and the expiry date. These regulations are enforced by the Health Sciences Authority.

This means that shopkeepers who did not adhere to this Act and had no permits to trade in bear products were violating both laws.

Relevant authorities

The Agri-Food and Veterinary Authority (AVA) is the authority responsible for the implementation of CITES in Singapore. The CITES Management and Scientific Authority come under the purview of the AVA.

The Customs and Excise Department helps the AVA to enforce CITES at all Singapore entry and exit points.

The Singapore Police Force are authorised under the Endangered Species (Import and Export) Act of Singapore to enforce the act.

Health Sciences Authority (HSA): The Centre for Pharmaceutical Administration regulates pharmaceutical and other health related products such as Chinese medicines to safeguard public health in Singapore. They are also vested with the responsibility of prosecuting the illegal sale of medicinal products and poisons.

Traditional and Complementary Medicine Branch, Ministry of Health (TCM Branch, MOH): One of the roles of the TCM Branch at the Ministry of Health is to deal with issues related to the registration and regulation of TCM practitioners and Traditional Chinese medicinal material.

The ACRES investigation 2001

Three ACRES field researchers, who worked in pairs, asked TCM shopkeepers whether they sold bear gall bladder or bile products. If asked what the products were for, they said that it was for the treatment of liver disease. The researchers utilised a standardised set of questions to guide the researchers in their interviews. However, it was not always possible to ask all questions and sometimes it was possible to get more information, depending on the respondents.

Sixty-eight TCM medicine and herb shops with significant geographical spread were randomly selected from the Yellow Pages directory and also picked randomly when researchers were in a certain area. The shops were at:

- Ang Mo Kio
- Bedok North
- Bugis
- Bukit Batok
- Bukit Gombak
- Chinatown
- Clementi
- Hougang
- Jalan Bukit Merah
- Red Hill
- Tampines
- Toa Payoh
- Woodlands
- Yishun

Most of these are residential areas.

Definitions:

1. When the terms “bear bile pills”, “ bear bile ointment”, “intact gall bladders”, “bear bile crystals”, “bear bile powder” and “bear claws” are referred to in this report, they are based on the claims of the shopkeepers and taken to be authentic. It was not within the ambit of the study to verify the authenticity of the products.
2. When a shop is categorised as **selling bear bile products or bear gall bladders**, it refers to shops whose shopkeepers had or said they stocked products which they purported as being from bears. This would include shops that said they were out of stock of the products. In the few instances that shopkeepers admitted to selling certain imitation products or products from “bear-like” animals, they were categorised as not selling those particular bear products.
3. The term “shopkeeper” is used to mean any person who served the researchers at the shop. At times, when the designation was clearer, terms such as “store assistant” are used.

Findings

TCM products found in the surveyed shops may be classified into seven main categories:

- 1) Manufactured bear bile pills
- 2) Intact bear gall bladders
- 3) Pills made of powder self-grounded from imported galls
- 4) Bear bile crystals
- 5) Pills made from imported bile powder
- 6) Bear bile powder
- 7) Manufactured bear bile ointment

Bear claws were found in one shop.

Of the 50 shops selling bear products, 35 were found to sell manufactured bear bile pills, 29 sold intact bear gall bladders, 13 shops regularly made their own pills for sale from intact gall bladders they ground themselves, four sold bear bile crystals, two sold pills made from imported bear bile powder, two sold bear bile powder itself, one sold bear bile ointment and one sold bear claws. In summary, 50 (73.5%) of the 68 shops surveyed in 14 areas in Singapore sold bear gall bladders or

bile products (see Table1). It was common to find each shop carrying a variety of bear bile products.

Table 1: Data on bear bile and other bear products found on sale in the study

Types of Products	No. of Shops Selling	% of Shops (Total being all shops selling bear products)
Manufactured Bear Bile Pills	35	70%
Intact Gall Bladders	29	58%
Pills made from Powder Self-Grounded from Gall Bladders	13	26%
Bear Bile Crystals	4	8%
Pills made from Imported Bear Bile Powder	2	4%
Bear Bile Powder	2	4%
Bear Bile Ointment	1	2%
Bear Claws	1	2%

Bear bile products available

Manufactured bear bile pills: The study revealed that what was claimed to be manufactured bear bile pills were sold in 35 of the 50 (70%) shops surveyed to be carrying bear products.

The gelatine cases enclosing the bear bile powder were usually translucent and yellow. The powder contained

within was sometimes yellowish. Pills of this colour usually had the Chinese characters, “yu yao” (shopkeepers said this referred to capsules available for encapsulating bear bile) on the capsule. Other pills had black powder contained in plain, translucent capsules.

The containers of pills were usually kept behind counters or otherwise out of public view, with access on request.

Shopkeepers generally reported that bear bile pills tended to sell better than bear gall bladders. Two shopkeepers stated that some customers purchased the pills in bulk, for example, more than 100 pills at one time.

Intact bear gall bladders: Twenty-nine shops sold intact bear gall bladders. These shops had at least half a gall bladder for sale, and it was common to find shops that sold a variety of gall bladders. The gall bladders were generally black, with some still soft and tender, whilst others were dry and hard. According to a shopkeeper at Woodlands, the quality of bear gall bladders improved the longer they were kept. A few shops that the researchers visited had gall bladders for sale that had been purchased 2–3 years earlier. Most of the gall bladders were kept from public view and access. Intact gall bladders were reported by shopkeepers to be from poached bears, and imported mainly from China but Malaysia, Indonesia, India, Nepal and Vietnam were also mentioned as sources.

Some shopkeepers recommended gall bladders over bile pills as they claimed that it was more cost efficient to buy a gall bladder and make one’s own pills. Some shopkeepers offered to cut and grind the gall bladders into powder and encapsulate the powder for a cost if the customers did not want to do the preparation themselves.

Pills made of powder self-grounded from imported gall bladders: Shopkeepers from 13 shops claimed to make bear bile powder by cutting and grinding gall bladders, which they had purchased from distributors or self-imported. They then produced pills with this bear bile powder. Some reported that they usually mixed the bear bile powder with other Chinese herbal powders.

These pills tended to be priced higher than manufactured ones. Some of the shopkeepers who sold these pills recommended them over the manufactured ones because having made these pills themselves, they could attest to their authenticity and efficacy.

Bear bile crystals: Four shops were selling bear bile crystals in small vials. Labels stating the product name, manufacturer’s name, place of manufacture and table of contents were usually found on these bottles. The crystals were noted to be directly packaged from the source country, China. Some of the crystals had solidified and become clumpy.

Pills made from imported bear bile powder: Two shops imported bear bile powder so they could encapsulate them into pills. One mixed the bear bile powder with Chinese herbs while the other mixed it with pearl powder to prevent it from clumping.

Bear bile powder: Two shops sold bear bile powder itself. One store assistant said that the sale of bear bile powder had taken over intact gall bladder sale because gall bladders were becoming increasingly difficult to obtain and import as it was illegal to trade in bear products in Singapore, Malaysia and in the region. He said that the powder was from farmed bears and could describe the bile extraction process.

Bear bile ointment: There was one shop that sold bear bile ointment, “Fel Ursi Hemorrhoids Ointment” made in China. The shopkeeper said that this product was illegal because it contained an endangered plant species, “huang lian” which had been banned by the Ministry of Environment. He recommended that the researchers buy the ointment as they could not be bought elsewhere.

Bear claws: The shopkeeper at the shop selling bear claws said that it was meant to be used as a pendant to ward off evil spirits.

Price of products

Of all bear bile products found, bear gall bladders were usually the highest priced while manufactured bear bile products were usually the lowest priced (See Table 2).

The study revealed that bear gall bladder prices ranged from S\$15.00 (US\$8.25) per gall to as much as S\$800.00 (US\$440) per 37.5 grams (“liang”) or S\$21.3 (US\$11.7) per gram.

Manufactured bear bile pills, were the least expensive, commonly being sold for about S\$1 (US\$0.55) per pill. This could be due to the fact that some were reported to have been mixed with other Chinese herbs. Being the cheapest form of bear bile product, and being conveniently “ready-made”, such pills were reported to be popular among consumers.

Pills encapsulated by shopkeepers from gall bladders they ground themselves tended to be sold at a slightly higher price than manufactured ones. One shopkeeper told researchers that he would sell each pill for S\$5.00 (US\$2.75) if he made them instead of selling them at S\$1 each (US\$0.55), indicating that labour costs were reflected in these higher prices. The price of these self-made pills was also found to vary depending on the percentage of bear bile powder in the capsule. Some shopkeepers made pills that contained a mixture of bile powder and other herbs; others used pure bear bile powder to make the pills. Generally, the latter was quoted a higher price than the former.

Bear bile crystals, produced and packaged in China, were considered more valuable and therefore priced higher.

One shop also sold tubes of haemorrhoid ointment containing bear bile, which were priced at S\$3.50 (US\$1.93) per tube.

Comparatively, the price of intact gall bladders varied the most, with each shop quoting a different price for their galls. It is purported that some of the lowest priced ones could have been unauthentic.

Recognition of illegal trade by shopkeepers

Of the 50 shops that sold bear gall bladders and bile products, nine shopkeepers mentioned that the trade was illegal and 6 knew that bears were protected species, especially in China. Among these, two claimed that they deliberately left their products unlabelled so as to prevent identification by authorities. Another shopkeeper said that rules and regulations were stricter for the ivory trade. One admitted that if caught, a jail sentence would be mandatory. And another said that the gall bladder he had was imported before it had become illegal to trade in it in Singapore.

One shopkeeper, who sold a variety of bear products, made an interesting point about the illegal trade in bears compared to the illegal trade in plants. He told researchers that the trade in bear products was illegal but that he was only more cautious when selling the “Fel Ursi Hemorrhoids Ointment” as this contained an ingredient, “huang lian” (what he claimed to be an endangered plant species), already banned by Singapore’s Ministry of Environment. When asked about his difference in treatment of both endangered species (bears and plants), he explained that bear protection was an “international” issue while “huang lian” was a “domestic” issue. According to him, the Singapore government had stricter regulations against the sale of “huang lian” products as compared to bear products, thus the reason for hiding the bear ointments more carefully from public view.

Twelve who sold bear products claimed that the trade was legal but did not say that they had any permits to trade in the products. One said that his products had been checked by Singapore authorities upon entry and were thus authentic. Another said that while gall bladders could not be sold, the bear bile crystals could be sold. This was echoed by another who said that she used to sell bear gall bladders but not any longer due to worldwide bear protection laws; however she still sold

Table 2: Data on prices of bear bile products and other bear parts found for sale in study

Product	Lowest Quoted Price	Highest Quoted Price	Common Price Quoted
Manufactured Bear Bile Pills	S\$0.80 (US\$0.44) per pill	S\$5.15 (US\$2.83) per pill	S\$1.00 - S\$2.00 (US\$0.55 - US\$1.10) per pill
Intact Gall Bladders	S\$15.00 (US\$8.25) per gall (small)	S\$800.00 (US\$440) per <i>liang</i> *	S\$100.00 - S\$300.00 (US\$55 - US\$165) per <i>liang</i> which works out to S\$2.67 - S\$8 (US\$1.47 - US\$4.40) per gram or S\$100-S\$200 (US\$55-US\$110) per gall
Pills made of Powder Self-Grounded from Gall Bladders	S\$1.00 (US\$0.55) per pill	S\$6 (US\$3.30) per pill	S\$2.00 (US\$1.10) per pill
Bear Bile Crystals	S\$12 per vial or S\$58 for 5 vials	\$30 per vial	
Pills made from Imported Bear Bile Powder	S\$2.00 (US\$1.10) per pill	S\$7.00 (US\$3.85) per pill	
Bear Bile Powder			Only prices quoted: S\$50(US\$27.50) for 2 vials in a box and S\$35 (US\$19.25) per vial
Bear Bile Ointment			Only price quoted: S\$3.50 (US\$1.93)
Bear Claws	S\$50.00 (US\$27.5) for each small claw	S\$80.00 (US\$44) for each big claw	

Notes: * 1 “liang” = 37.5 grams

bear bile pills. One said that while bear bile products could be legally traded, she had an antelope horn that was illegal to sell.

At least four shopkeepers advised researchers there might be Customs related problems if the products were taken out of Singapore, with some advising researchers to conceal such products or not keep them in their original packaging. In contrast, one said since it was not a drug-related problem, there should not be a problem.

Shopkeepers from at least five shops could even vividly describe to the investigators how bears were killed to get their gall bladders or how bile was extracted from bears in farms. One shopkeeper vividly described the brutal way in which Vietnamese hunters “kan” (chop) the Vietnamese black bears on sight.

Of the 18 shopkeepers not selling bear products, four said that it was illegal to trade in bear products, with three of them being aware of bear protection. One said that one could obtain such products in Johor Bahru. In addition, two shopkeepers did not say that it was illegal but were aware of bear

protection and one was specifically not trading in bear products due to this. Further, one shopkeeper said that a licence was needed to trade in bear products; he was also aware of bear protection.

Other shopkeepers did not mention the legal status of bear products but their responses suggested that they could be aware that the trade was illegal. This ranged from nervousness to becoming evasive when the researchers asked certain probing questions.

At least three shopkeepers mentioned the HSA labelling regulations. One said that from September 2001, it would become illegal to sell bear bile products and that any unlabelled products displayed for sale would be confiscated. She said that the regulations were for the protection of bears.

Another shopkeeper showed researchers a document containing the new HSA Regulations and said that from September 2001, all imported animal products would have to be tagged and inspected. He went through the document with the researchers and explained, in detail, the implications of the regulations on his trade, that is, he said that he would have to be more careful with the sale of animal products and how certain herbs would become more limited and even be prevented from being sold due to concerns for customer safety. He told researchers that if they filed a report against him, he would deny the sale of the bear bile pills and claim that they were for his personal consumption and not for sale. He said that that was why he was not afraid of showing researchers the HSA document and telling the researchers to conceal the products when travelling and going through Customs checks.

One shopkeeper who did not sell bear products said that soon all animal products would have to be reviewed or examined by the Health Ministry and that this was more to protect the consumers' health than for animal protection reasons.

Some of these responses illustrate a mistaken understanding of the regulations. For example, it is already illegal to trade in bear gall bladder products without CITES permits; the HSA regulations alluded to only relate to labelling; they also have nothing to do with bear protection. And these responses suggest that shopkeepers were probably not aware that the labelling requirements for pills already came into effect in September 1999.

Most of the bear products were not openly displayed and it was a common sight to see the shopkeepers retrieving the products from an area in the shop well hidden from public view and inaccessible to customers.

In addition, it was also common to find bile medicines and galls that were devoid of labels, manufacturer's name, dates of production and expiry, and ingredients content. The pills were usually stored in an unlabelled container, with only the Chinese characters, "xiong dan" (bear bile), written on the container's cap.

Import routes

Singapore has no bears to be poached or farmed. Thus bear products sold locally must have been imported. The study shows that there are various ways by which bear products are imported into Singapore for sale. The findings also demonstrate that China was reported by the shopkeepers to be the most common source of import of bear gall bladders and bile products (See Table 3).

Other imports were reported to be from countries such as Malaysia, Indonesia, India and Nepal. A shopkeeper at Toa Payoh mentioned that since bears were hard to hunt nowadays it was not important where they were hunted or what breed they belonged; it only mattered that they were bears. Another shopkeeper at Bukit Batok West, who sold gall bladders from bears hunted in India, claimed that bear hunting in India was increasingly common as laws there were much less strict than those found in China.

A shopkeeper from Tampines told researchers that even China had to import bear products from overseas because of the dwindling number of bears at home. Another shopkeeper from Chinatown made a similar remark when he commented that it was likely that the gall bladder he had could have been exported to China from Indonesia and then exported from China to Singapore.

Table 3: Data on reported sources of bear gall

SOURCE According to shopkeepers	Manufactured Bear Bile Pills	Intact Bear Gall Bladders	Pills made of Powder Self-Grounded from Bear Gall Bladders	Bear Bile Crystals	Pills made from Imported Bile Powder	Bear Bile powder	Bear bile ointment
	No. of Shops	No. of Shops	No. of Shops	No. of Shops	No. of Shops	No. of shops	No. of shops
China	19 + 1 who said it <i>could</i> be from China	23	8	4		1	1
Malaysia	1	2	1				
Indonesia	1 (shopkeeper said it <i>could</i> be from Indonesia)	3	1				
Nepal		1	1				
India		2	1				
Russia		1-between Russia and Siberia	1-between Russia and Siberia				
Siberia		1					
Vietnam		1	1				

Illegal import by wholesalers/distributors

Some shops selling bear bile pills and gall bladders claimed to have a regular (even monthly) supply from local distributors.

At a shop in Clementi, researchers met a wholesaler, who called himself Mr Cai. He told researchers that, currently, he imported one to two kilogrammes of bear bile powder per month, then sold it to TCM shops for S\$800 (US\$440) per 37.5g (“liang”).

A bear bile crystal product was labelled as having been exported from a company in China and imported by a local importer. A booklet accompanying the product said that it was exported from the Sichuan province and that the company also sold other medicinal and health products. The product description was ‘100% Sichuan Bear Bile’.

At a shop in Hougang, researchers found black bear bile pills packaged into white bottles with Chinese characters printed on their red labels in front. They were sold in quantities of 100 pills in each bottle. A label on the bottle indicated it was a product of China and also provided details of its

batch number (B/N. 9812023) as well as its expiry date (Dec 2003). Other details included were the name of the product, “ Jin Si Dan Wan” (bile capsules from “Golden bear”), as well as the list of ingredients and the uses of bear bile pills for various ailments (written in English and Chinese).

“Fusong Pharmaceutical Co Ltd China” was also listed on the label. According to the shopkeeper, the bile powder was obtained from farmed bears in China. He also “assured” researchers that these black pills were checked by authorities in Singapore upon entry and were therefore genuine.

Not all distributors were found to be local. A shopkeeper from Jalan Bukit Merah, for instance, said that they regularly placed orders for gall bladders from a Vietnamese supplier who usually visited the shop personally. In the case of a shop at Chinatown, the shopkeeper told the researchers that a bear products exporter from Russia (probably a Chinese based on comments made by shopkeeper) personally comes to Singapore regularly to deliver the goods. According to the shopkeeper, there were people living between Russia and Siberia who were involved in the bear trade.

Illegal import by shopkeepers and individuals

At least two shopkeepers told investigators that they personally made occasional trips to China to buy bear bile products for sale in Singapore. One shopkeeper in Marsiling informed researchers that his father would be bringing new stocks of gall bladders when he returned from China soon.

Regularity of supply

Table 4 provides information on the regularity of supply of bear bile products for some of the 50 shops which sold them. Shopkeepers from at least 13 shops informed researchers that they had regular supplies of bear bile products, and that they usually ordered new stocks as soon as their existing stocks were sold out.

About four shopkeepers said that future supplies of bear products might be difficult to determine. Two of these attributed it to the regulations by HSA in September, another to difficulties hunting bears and another to the difficulty in obtaining gall bladders because it was illegal to trade in bear products in Singapore, Malaysia and the region.

Four shopkeepers were not certain of when exactly imports would arrive and one said he might not always have the time to encapsulate bear bile into pills. Another claimed that he would not trade in bear bile after the current stock sold out, due to ethical reasons.

One shopkeepers reported that he had purchased the bear gall bladders he was selling two to three years ago; one said he had bought it before it had become illegal to import it and another said that the gall bladders he had had been delivered to his shop in 1999; another said he had received the gall bladders a few months before July 2001.

Table 4: Data on regularity of supply of bear gall bladder and bile products in Singapore, May – July, 2001

Supply	No. of Shops
Regular	13
Difficulties in obtaining future supply	4
Uncertain of arrival of imports	4
Will not sell after current stock sells out	1



Severe confinement on a Chinese bear farm.

Products from poached wild bears and farmed bears

There are two sources of intact gall bladders – those from poached bears and those from unproductive bears killed/dead in farms. At least 17 shopkeepers said that some of their bear products were from bears in the wild, mostly China. Nine reported that some of their products were from farmed bears; some of whom could describe the bile extraction process. One shopkeeper claimed that wild bears were caught, tapped for their bile then released.

Conversation Between Shopkeeper And Researcher (In Mandarin)

Shopkeeper: *Now people don't kill bears anymore because they're protected.*

Researcher: *So the situation is now better for the bears?*

Shopkeeper: *Well, actually not that much better. Imagine if you're the bear – you're inside a small cage, you cannot move around. It's also very stressful so you know, it's something for you to think about. ...*

This shopkeeper sold intact bear gall bladders and bile crystals from bear farms in China.

One shopkeeper from Jalan Bukit Merah described how in Vietnam, hunters “kan” (chop) the Vietnamese black bears on sight.

Sale of imitation bear bile products

Although the bear bile pills shown to the researchers were claimed to be authentic, some shopkeepers reported that some of the manufactured bear bile pills sold in Singapore were not genuine. Two shopkeepers initially claimed that their products were bear bile but later said that they were from “bear-like” animals but could not clarify this further. At least seven other shopkeepers mentioned that gall bladders purported to be from bears could be from other sources. The most common source was snakes. Other sources mentioned were cows and pigs. One shopkeeper who

did not sell bear gall bladders claimed that other shops which claimed to sell them could possibly be selling tiger, snake, wild boar and even dog gall bladders as bear gall bladders.

Eleven shopkeepers who sold bear bile pills said that their pills had bear bile mixed with Chinese herbs. One mentioned the herb “gan cao”. One mentioned that it was mixed with pearl powder to prevent clumping.

Some shopkeepers gave the impression that they knew how to differentiate authentic and imitation bear gall bladders. For example, a shopkeeper at Bukit Batok appeared to know which gall bladders were from bears despite the fact that the container which stored the bear gall bladders also contained what were reported to be gall bladders from snakes and crocodiles. One shopkeeper from Chinatown demonstrated how to distinguish a genuine bear gall bladder. He claimed that when one cut the bear gall bladder at a certain angle, one would see a certain spider web-like design which could not be found in snake gall bladders. One pressed a gall bladder against the nose of one of the researchers to “prove” that it was from a bear.

Customer demand – the main reason for supply

Shopkeepers from 24 shops (48%) which sold bear gall bladders and bile products claimed to have a regular supply of customers, regular clientele and those who bought in bulk of about 100 pills at one time.

Overall, customers included Chinese from Singapore and China and others from Korea, Australia, Tibet, Philippines, Indonesia, and Malaysia. One shopkeeper from Jalan Bukit Merah told researchers that Korean customers frequently purchased several intact galls from him during each visit. According to two shops, local taxi-drivers regularly purchased bile pills from them, with one saying that this was to reduce “heatiness”. Another shopkeeper mentioned that Indians and Chinese also bought bear bile products to reduce “heatiness”. Customers from Tibet were said to purchase the products to aid internal injuries.

Table 5: Data on profiles of consumers of bear gall bladders and bile products, May – July 2001

Profile of consumers according to shopkeepers	Number of shops
Chinese Singaporeans	7
Chinese from China	3
Korean (including sailors)	3
Taxi drivers	2
Indian	2
Malay	1
From Australia	1
From Tibet	1
From Philippines	1
From Indonesia	1

Public safety concerns - unlabelled or poorly labelled products and hygiene

Many of the specimens found in the study were unlabelled. Others often had the Chinese characters, “xiong dan” (bear bile) scribbled on their packaging or container but no other information.

Many products were handled with bare hands, including pills. One shopkeeper pressed a bear gall bladder against the nose of one of the researchers to “prove” its authenticity.

Recalled bear gall product

During the course of research for this study, it was found that the Health Sciences Authority's website lists one bear gall product as having been recalled for containing a certain level of arsenic in 2000 (See Table 6).

Table 6: Data on recalled bear gall product, Singapore, July – September 2000

Product	Manufacturer	Batch No/Expiry Date	Recall date	Recall Class	Reason/Comments
Bear Gall & Radix Pseudoginseng Tieh Ta Wan	Kang Sheng Chinese Medicine Manufacturer, Singapore	B/N: 030003	10/7/00	Class II	Contain 37.2ppm of arsenic

Source: "Product Recall for July to September 2000", Centre for Pharmaceutical Administration, Health Sciences Authority website, 31 Oct 2001

Analysis

Prevalence of sale

73.5% of shops visited claimed to import and sell bear gall bladder or bile products. Most said their bear products were from Appendix I listed Asian species of bears, which means no CITES permits could have been likely to be issued for products imported after Singapore started enforcing its obligations as a CITES Party. The need for enforcement of the ESA is urgent.

In this study, if gall bladders were claimed to have been used for preparation into other forms, they were not included in the survey as intact gall bladders but in their final form, which was mostly, pills. This could explain the difference between intact gall bladders found in this study (42.6%) and those found in the study by TRAFFIC USA in 1991 (64%) of shops visited. This could indicate increasing consumer acceptance of ready-made over the counter medicines and a move from buying ingredients for preparation at home.

The trade goes underground

A key difference in the findings of the two studies was that in TRAFFIC's study, most shops had the gall bladders displayed prominently and nobody mentioned that the trade was illegal. In the current study, many of the products were kept from public view or access. Some were obviously hidden. Also, in the current study, nine shopkeepers reported that the trade was illegal and another six knew about bear protection. This points to increasing awareness of the legal status of the trade. However, many other shopkeepers still said that the trade was legal.

A few shopkeepers' responses highlight the need for more education for the TCM traders on bear conservation and welfare as well as the ESA. One shopkeeper pointed out that infringement of "domestic" banning of an endangered plant species was more serious than infringement of an "international" issue of bear protection and two others thought that it was only illegal to trade in gall bladders but not products made from bear derivatives.

Evolution of international trade routes

Both the current study and the one by TRAFFIC USA in 1991 identified China as the main source for bear gall bladders. The current study also found that patterns of this trade involving Indonesia, Nepal, Russia and India have been fairly consistent over the past decade, since the TRAFFIC investigation was undertaken.

Vietnam seems to have emerged as a source country as it was named at least twice in the current study but not mentioned in the earlier study. There are fewer regulations governing Vietnam's bear bile farms. For example, Vietnam has no regulations for cage size in their bear bile farms. Efforts need to be channelled towards ensuring that the Vietnam trade does not expand.

The ACRES, despite having a much larger sample size, did not find any gall bladders from the USA or Burma as in the previous study. This could be indicative of other countries replacing or at least overtaking these as sources of bear gall bladders for sale in Singapore.

Well-developed import system

The study has shown that there is a well developed and regular local import and distribution system for bear gall bladder and bile products. Importers and shopkeepers who imported bear gall bladder and bile products without the necessary CITES permits were in violation of the ESA. It is imperative that efforts are made to identify and understand more about bear parts trade patterns in Singapore from importers; they would be able to provide important information on source countries as well as how exactly they import the products without detection by Authorities or perhaps even demonstrate that they were unaware that the trade is illegal. Educational efforts to curb the trade must also include this group, in addition to the shopkeepers, so that both have a consistent understanding of the law and penalties for violating it.

Challenges for customs - identification of goods and personal luggage

There have been no recent reported seizures of bear gall bladders or bile products by the Customs and Excise Department in Singapore.

Personal luggage appears to be one important way of importing bear products into Singapore. This was evident through the reports of foreign importers delivering products directly as well as shopkeepers or as in the case of one shopkeeper, his father, carrying in bear products personally. The quantities involved may seem small but as they are regular, they amount to substantial illegal trade over time.

Consumers

The majority of consumers of the bear gall bladder and bile products were Chinese; thus efforts to educate them on purchasing the products must be culturally sensitive and communicated in English and Chinese.

Both the ACRES and TRAFFIC studies highlighted Koreans as consumers with one shopkeeper in the recent study claiming that Korean customers bought several intact gall bladders at one time. Educational programmes must take this into consideration.

Using bile products to combat "heatiness" was cited a few times. Herbal alternatives to treatment of this should be studied and promoted.



Bears on a small Chinese bear farm.

Enforcement agencies identified by traders

It was significant to note that not one of the shopkeepers visited mentioned the AVA, CITES Management Authority or Police as enforcement agencies that would have some effect on their sale of bear bile products. The HSA, Customs, Ministry of Health and Ministry of Environment were mentioned. This is probably attributed to the fact that there has been a lot of focus on TCM use and public safety. This is laudable but this points at the need for more direct and regular communication between AVA and the TCM community so that they are aware that their products could have implications for serious international conservation issues and that the AVA has a direct impact on what they can trade in.

Poached or farmed - equally damaging

Some claims of bear bile products being from wild bears could have been made to make a sale based on consumer beliefs that bile from wild bears is superior to that from captive bears (Maas, 2000). A few shopkeepers even said bears could not be farmed; one said that this was because they were wild and another said this was because they were too large. Ignorance was their only reason for supposing their products were from from wild bears. Some of these products could have indeed come from bear farms.

Trading in parts or derivatives of poached bears or farmed bears without necessary permits are both illegal. The bear farming industry has the ability to fuel demand for bear bile products, which still adversely affects wild bear populations. Both are also inhumane. These point at the need for bear gall bladders and bile products to be replaced by alternatives completely.

Imitation or genuine

The methods used or described by three of the shopkeepers to distinguish bear products from imitation products contradict the scientific literature. Knights clarifies that chemical analysis is required to definitively identify that a gall bladder is from a bear¹². Even then, he notes that it is

impossible to identify which species of bear the product comes from unless scraps of liver are still attached; these can be analysed for DNA. He notes, it is impossible to determine whether a gall bladder is from a protected species or one that can be legally traded, let alone which country the bear was from or whether it was poached.

Forensic testing should be made available, but if one does not want to add to the pressures on resources in enforcement agencies, it is simple to consider, under ESA, any product presented by a trader as being from an endangered species, as being authentic.

In any case, the perpetrator can be charged for cheating or be charged under the Medicines Act for false description of the product or misleading as to the nature or quality of the product or as to the uses or effects of medicinal products of that description.

Creative prosecutorial input is needed so that law enforcement is many steps ahead of criminals. Till the ESA can be strengthened, and it must be urgently, other relevant laws that have been flouted have to be used to penalise perpetrators.

Claim of pre-Convention stock or those from Appendix II bears

The TRAFFIC report in 1991 reported that one of the difficulties faced by the authorities in nabbing perpetrators was that the latter claimed that they had acquired the specimens before Singapore became a CITES Party or because the specimens were from bears from Appendix II.

This study has produced evidence of several shopkeepers admitting recent acquisition/import of bear gall bladders and bile products and regular supply of them. It should be acted upon. Such evidence can also be procured by enforcement agencies through covert investigations.

Registration and marking/tagging systems for pre-Convention stock need to remain a priority. But most importantly, to ensure the survival of bears, all stocks of bear products should not be allowed for sale, just like tiger bones.

The AVA has not received any applications to import of bear products. So those who claim they have Appendix II specimens would have not have the necessary permits to be selling them. And if pre-convention stocks are registered with the AVA, shopkeepers should be finding it more difficult to justify their sale in the manner as they were purported to have done in the TRAFFIC report in 1991¹.

At time of going to press, ACRES and WSPA are determining how long bear gall bladders and bile products can be kept and be fit for human consumption. It is questionable if pre-convention stock would be safe for human consumption.

Unlabelled products

At least 2 shopkeepers intentionally left their bear products unlabelled to prevent identification by authorities, an example of the importance of forensic testing.

In addition, this would be in violation of the Medicines Act (Chapter 176), Medicines (Labelling of Chinese Proprietary Medicines) Regulations.

Improved communication between regulatory bodies

As stated earlier, one “bear gall” product was recalled by HSA for containing a certain level of arsenic in 2000. In such instances, traders should be investigated for violations under the ESA, and good communication between AVA and HSA.

It would also be desirable for the website to state that bear gall products are not permitted to be imported into and sold in Singapore without relevant CITES permits.

Such sharing and cross-referencing of information is vital between all relevant authorities to ensure that the ESA is enforced and wildlife crime is tackled expeditiously.

Substitutes for bear bile

Two of the TCM shopkeepers in the study who did not sell bear bile products mentioned that there are herbal alternatives to it. This is a healthy sign that there already exists some local awareness of substitutes. This needs to be encouraged. There are also synthetic versions (see page 19).

Recommendations for authorities and related parties

Some of the recommendations presented here echo aims for Parties borne out of CITES' Strategic vision as it enters the new millennium. These were presented at the 11th meeting of the Conference of the Parties to CITES. These recommendations are marked with "(CITES aim)".

CITES

Based on the adverse affects on wild bear populations, animal welfare concerns, the alternatives that exist to bear bile and the overwhelming concerns from the scientific community about bear farming, the Singapore CITES Management Authority is asked not to support any moves for bear farms in China or Vietnam to be legally registered under the CITES convention as captive breeding facilities.

The local CITES Management Authority should also proactively argue for strict animal welfare standards, determined with international animal welfare organisations such as WSPA, to be incorporated into proposed guidelines for registration of captive breeding facilities under CITES.

Incorporate conservation issues into meetings arising from Memorandum of Understanding with China

The Ministry of Health is urged to raise the status of CITES enforcement, conservation and animal welfare concerns in TCM during official discourse that arises out of the Memorandum of Understanding between Singapore and China as well as any plans to come up with a TCM development plan¹³. This should:

- re-iterate Singapore's commitment towards CITES enforcement, using the ACRES study as an example, and state that it looks forward to China's cooperation on CITES enforcement;
- ensure that TCM products originating from China do not involve the illegal use of endangered species such as bears or the use of species who undergo poor animal welfare standards in farming practices;
- urge China to open existing bear farms for international inspections to assess the conservation impacts of bear farming and standards of animal welfare;
- urge China to end bear bile farming based on the recommendations of scientific experts world-wide.

It is recommended that these be tabled for discussion at the next Sino-Singapore Committee meeting.

Proposed amendments to the Endangered Species (Import And Export) Act (ESA)

Trade in wildlife is the world's third largest illegal trade, behind drugs and firearms, and is worth an estimated five to ten billion US dollars a year¹⁴. Legislation and its enforcement concerning this trade should reflect Singapore treatment of drug and firearms smuggling.

This would require:

An enhanced penalty framework

Increased penalties – fines and jail sentences

Reduction in cases being compounded

Reverse the onus of proof

Parties are urged to encourage the judiciary to apply more appropriate penalties when dealing with wildlife crime (CITES aim).

Currently, the penalty for illegal trafficking in wildlife and wildlife products is S\$5000 (US\$2750) for international trade and S\$2000 (US\$1100) for domestic trade. These penalties should be reviewed and revised upwards as they are too low enough to have any real deterrent effect, especially to commercial traders as opposed to individual consumers. Fines may be regarded by the traders as a “cost” of engaging in the illegal trade as Lye observes¹⁵. Lye has also reported that AVA (previously PPD) has agreed that it should be raised to at least S\$50,000 (US\$27500).

Additionally, the fines are usually imposed on a per consignment species, not a per specimen species. Where there is a large consignment, this should be on a specimen basis.

Furthermore, most cases are brought before the Magistrates Courts. The judges here, as opposed to the High Court, are limited in the amount of fines and damages that they can award. Similarly, the more serious criminal offences are heard before the High Court. The offences under the ESA should come within the jurisdiction of the High Court and not the lower courts. This would send out a clear message as to how seriously Singapore views its CITES commitment. Wildlife crime can only be addressed if it is accorded the appropriate gravity within the legislative framework.

It is laudable that jail sentences are now being meted out for those involved in wildlife crime, for example, Lawrence Kuan Kok Choon, who was fined S\$10,000 and jailed for a year for illegal possession of endangered birds in 2000¹⁶. However, imposition of mandatory jail sentences should be increased substantially especially since there are significant number of traders who continue despite being aware that the trade is illegal.

Fewer cases should be compounded. Lye has reported that many offences are compounded for a sum not exceeding S\$1000 (US\$550)¹⁵. This is for what is assessed to be “less serious cases” (for example, first time offenders) where the composition is S\$200-S\$500 (US\$110 - US\$275).

If proven guilty, despite it being a first time offence, one can be meted capital punishment in Singapore. Compositions serve as poor deterrents and send strong signals to the perpetrators and society that very little importance is attached to wildlife crime. When someone is assessed as being a first time offender and has his case compounded, the system is neglecting the fact that this was the time he was caught, probably not the first time he had committed the crime. And because wildlife crime has international repercussions, the category of “less serious cases” should be streamlined substantially.

There should be a presumption that possession of banned CITES specimens is an offence unless an appropriate permit is produced. Australia's Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection) Bill 2001, lauded widely, now has such an enforcement provision.

Incorporating new provisions into the ESA

Compare efficacy of provisions: Parties are encouraged to exchange experience on provisions in their respective pieces of legislations that work well or not well (CITES aim). Such sharing of knowledge would help refine the ESA into a piece of legislation with fewer loopholes.

Restrict sale of bear gall bladders and bile products: It is commendable that the AVA has a working policy on not issuing permits for bear gall bladders for TCM use. This should be codified in the Act, restricting sale per se of bear parts and derivatives (and products claiming to contain them). They should be provided for under Section 5 of the Act currently only covering tigers and rhinos. CITES is urging Parties to align provisions for bears with those for tigers. For example, parties have been encouraged to evaluate the recommendations of the CITES Tiger Missions Technical Team and CITES Political Missions and, where appropriate, to apply these to the conservation of bears and trade in bear specimens, particularly with species included in Appendix I.

Claims of authenticity of product: It should be made illegal to trade in specimens/products that even claim to be/contain endangered species. It is proposed that verbal and written claims be provided for, if there is evidence to proof the verbal claim. In Britain it is illegal to sell, or keep for sale, any part of these species or any product that contains or claims to contain them, even if it does not. Such treatment of product claims was also decided at the last Conference of the Parties where Parties were urged to consider, where appropriate, introducing measures within their territory to facilitate implementation of CITES with respect to the trade in bear parts and derivatives and products labelled as containing parts and derivatives of bear.

Provide for stronger powers of enforcement: As Lye recommends¹⁵, the law should provide for stronger powers of enforcement, which should include the power to examine persons, take down written statements which are admissible in court, the power to demand the names and addresses of persons involved, and the power to require the attendance of witnesses in court.

Restructuring the ESA

The ESA should be redrafted and reorganised so that it is more accessible to the members of the public. One key way where the ESA may be streamlined is regarding the lack of distinguishing of CITES Appendix I and II species. Appendix I and II of CITES have been collapsed into a single Schedule 1. Appendix I deals with trade in highly endangered species which is prohibited. Appendix II deals in trade in other types of endangered species which requires a permit. This distinction between prohibited trade and licensed trade should be maintained in the Schedules to avoid confusion and facilitate enforcement.

Information disclosure

AVA could issue more press statements on wildlife issues and disclose information following prosecutions of traders. This would provide guidance to wildlife traders as well as the general public and assist in the implementation of the CITES objectives.

Improving enforcement of the Endangered Species (Import And Export) Act

Collaborate with NGOs – CITES has urged Parties to:

- Recognise the significant contributions of NGOs to the CITES process and encourage greater NGO participation in CITES outreach
- Meet regularly with NGOs
- Enhance communication and collaboration with NGOs

A strong partnership with NGOs, both local and international, should be considered at various levels, from inviting feedback for proposed amendments to the ESA and providing training for enforcement to public education efforts.

Increase manpower at AVA, CITES Management Authority: There is a need for increased manpower within the Agri-food and Veterinary Authority to do frequent undercover inspections related to wildlife crime as well as preventive educational work. Lye has noted that the Unit was understaffed¹⁵.

Establish a 'Wildlife Crime' Department under the Singapore Police force: The results of this study show how widespread the sale of illegal bear products is within the TCM community. Furthermore, it has recently been reported that more people in Singapore are keeping exotic animals illegally²¹. Such trends signal the need for more pronounced enforcement of the ESA.

The Police Force has the resources that the CITES Management Authority may not have, to channel towards enforcement through activities such as frequent undercover inspections.

In 1995, the Metropolitan Police in London launched "Operation Charm" as an initiative against the illegal trade in endangered species in London. Since then, police officers have seized thousands of items claiming to contain endangered species, as well as body parts of tigers, rhinos, bears and other protected animals and plants. A number of traders have since been prosecuted and convicted in the Courts. The Police have also created public education materials.

Plan strategically for covert investigations: Much information can be elicited from traders dealing in wildlife crime by law enforcement officers if they undertake carefully planned covert investigations. One way of addressing the problem of being identified by wildlife traders is to assign officers who do not typify stereotypical notions of law enforcement officers. For example, perhaps more females could be used. The current study was undertaken by females; this could have helped elicit such detailed information from shopkeepers as the latter's guard may be lower with females than males. Another way to address this is to have a larger pool of officers, like from the Police Force, who do covert investigations so that they are not recognised easily.

Provide training for all authorities: CITES has urged Parties to convene workshops to identify functional roles and train all levels of administration and related agencies responsible for CITES enforcement. It is recommended that this be extended to agencies which deal with TCM but not necessarily CITES.

The AVA is commended for its training of Customs officers. It is recommended that training in inspection, identification and confiscation of illegal endangered species products, enforcing the ESA provisions and understanding the importance of arresting wildlife crime be supplemented with the aid of international conservation/animal welfare organisations who are able to provide highly specialised training and a current and international account of the wildlife trafficking scene. In addition to providing training in the technical aspects of ESA and CITES, the spirit of conservation and animal welfare should also be emphasised.

- This should include, if it does not already, the Health Sciences Authority, which checks consignments of Chinese proprietary medicines. Although the HSA is not specifically checking for violations of the ESA, if confronted with products that are made from endangered species without the relevant permits, they are well positioned to report this to AVA.

- One of the CITES aims is to educate the judiciary of the social and economic significance of conservation threats posed by illegal trade in wild fauna and flora. Public Prosecutors should also be trained accordingly.

Coordination between agencies: Agreements should be developed and implemented among all relevant bodies for the enforcement of the ESA. This will allow for maximum transfer of knowledge, skills and resources and ensure consistent outcomes in the interpretation and implementation of the ESA.

Increased customs enforcement: More stringent checks are recommended for goods for TCM as well as personal luggage. Travellers from common source countries of bear gall bladders could be subjected to more stringent checks. The use of sniffer dogs should be explored.

Smugglers in other countries have been reported to try and avoid detection by dipping whole gall bladders in chocolate and calling them chocolate figs or hiding them in strong smelling substances like coffee¹⁷. Such methods of smuggling need to be made known to Customs.

Detection of contraband is admittedly very difficult so as CITES recommends, exemplary enforcement actions should be formally recognised and awarded.

Utilising technology: Singapore is technologically highly advanced and surely has the capacity to identify and use technologies (e.g. digital technology, microchips, barcodes, holograms, DNA tests) to better implement CITES (COP aim).

Prevention through education

CITES urges parties to “promote awareness of the impacts of consumption patterns and demands on species conservation” and “meet regularly with targeted groups and encourage their active participation” (COP aims).

Educate TCM community, especially traders: Twenty-four percent of shopkeepers who sold bear products claimed that the trade was legal. It is thus strongly recommended that AVA directly educates the TCM community, particularly the TCM traders on not only the letter of the law but also the spirit of the ESA.

TRAFFIC East Asia ¹⁸ notes that “*Communication between relevant government agencies and the TCM community is essential to the creation of any workable management system for bear gall bladders. Regulations of wildlife products used in TCM involves changing centuries of medical practices. Such changes cannot be achieved through legislation alone, especially if the primary user groups do not understand or accept the rationale behind such regulation.*”¹⁸.

English and Chinese circulars informing traders of what they are not allowed to trade in should be sent to them regularly. Just as importantly, other methods such as workshops held in cooperation with relevant TCM associations would help the traders gain a better understanding of the rationale for the legislation.

These efforts should also be geared towards understanding how the TCM community thinks and how best to garner their cooperation.

In Taiwan, for example, the Government, in cooperation with others, has produced materials such as film, posters, stickers, phone cards and advertisements aimed at raising awareness of bear

conservation issues among TCM community and general public. It has also issued a report to all TCM practitioners, organised workshops on wildlife conservation for TCM practitioners and ivory/gall bladder specimen identification sessions for field personnel.

Include conservation and animal welfare in the syllabus of TCM training and tertiary programmes: CITES, conservation, animal welfare and herbal alternatives to animal parts should be incorporated into the syllabus of any TCM training or tertiary programmes. Middlesex University in the United Kingdom has such as a TCM programme.

Promote herbal alternatives: There exists much literature on herbal alternatives to bear and other endangered species products in TCM. This should be promoted to the TCM community together with any educational effort. In particular, herbal alternatives to reduce “heatiness” should be highlighted as this was mentioned as a reason for consumption of bear bile products during the study,

Initiate an incentive programme: It is recommended that an incentive programme for traders to not trade in illegal endangered species be initiated. This could take the form of traders signing an undertaking that they will not knowingly trade in products made from endangered species. In return, they get a window sticker, which shows their commitment to trading lawfully. This can be displayed on their premises to attract the increasing number of customers who care about wildlife and animal protection issues in Singapore. The Metropolitan Police in London and Animals Asia Foundation in Hong Kong have both have started such programmes.

It is hoped that TCM associations such as The Singapore Chinese Druggists’ Association would be supportive of such programmes since their Code of Conduct includes a commitment “not to sell what the Government says we cannot sell.”¹⁹

Educate consumers: The study clearly illustrated how consumers are creating a high demand for bear gall bladder and bile products. English and Chinese education programmes for consumers on not purchasing endangered species products which are traded illegally should be initiated (or supported if NGOs undertake them). The AVA’s efforts in this area must be commended. They have exhibits and brochures on the ESA for the public. More such efforts should be undertaken. For example, several Mass Rapid Transit Stations have advertisement panels which show an image of an endangered species. With some relevant text, these posters can be transformed into powerful educational tools to encourage consumers not to buy endangered species products. Phone cards are another inexpensive medium for such messages.

Educate consumers visiting Singapore: The study has shown how visitors to Singapore, especially from countries such as Koreans, purchase bear products. Awareness material on import and export of endangered species should be created and displayed at the Singapore Changi Airport. This can be found in many airports worldwide and would be becoming of the Singapore Changi Airport as a world-class airport.

Educate tourists: Tour operators and associations should educate tourists to not purchase illegal endangered species products. Awareness materials could be targeted at particular tourists such as Koreans who have been identified as key consumers of bear gall bladder and bile products.

Conclusions

ACRES acknowledges the important role TCM plays in providing complementary health care to Singaporeans. TCM is part of a great historical tradition and part of the culture of many Chinese Singaporeans and must be preserved. The TCM industry in Singapore has become much more developed, technologically advanced and professional and it is believed that it would have the

capacity to understand how its wisdom can only be enhanced by incorporating emerging global concerns of conservation and animal welfare into its practice.

ACRES agrees that Singapore has the potential to fulfil its goal of becoming an international centre for the research, manufacture and trading of Chinese medicine^{3,20}. It is believed that Singapore would be one important way by which Singapore can achieve such international standing.

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