
CONSUMER REPORT ON

**THE TRADE IN BEAR GALL BLADDER
AND BEAR BILE PRODUCTS IN SINGAPORE**

by the

**ANIMAL CONCERNS RESEARCH
AND EDUCATION SOCIETY (ACRES)**

as part of the
**Libearty Campaign by the
WORLD SOCIETY FOR THE PROTECTION OF ANIMALS**

Published by Animal Concerns Research and Education Society (ACRES).
Copyright © ACRES, 2001. All rights reserved. No part of this report may be reproduced
or copied in any manner whatsoever without written permission of ACRES.

Authors: Vadivu Govind, Sandra Ho

Project Co-ordinators: Guna Subramaniam, Vadivu Govind

Researchers include: Becky Sim, Magdalene Tan

Still photographs of products: Mark Silberstein

Cover Design: Saatchi & Saatchi

CONTENTS

1	OVERVIEW	1
1.1	Introduction -----	1
1.2	Objectives of study -----	2
2	LITERATURE REVIEW	3
2.1	Traditional Chinese Medicine in Singapore -----	3
2.2	Bear Bile and Traditional Chinese Medicine -----	3
2.3	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) -----	4
2.4	Bear Farms -----	4
2.5	CITES and Bear Farms -----	5
2.6	Bear Farms and Conservation -----	5
2.7	Bear Bile Farms and Animal Welfare -----	6

3	THE LOCAL REGULATORY FRAMEWORK	8
3.1	Endangered Species (Import and Export) Act -----	8
3.2	No Permits Issued Locally Thus Far -----	8
3.3	Medicines Act -----	8
3.4	Relevant Authorities -----	9
4	ACRES INVESTIGATION IN 2001	10
4.1	Method -----	10
4.2	Definitions and Parameters -----	11
4.3	Findings -----	12
4.3.1	Categories of Products -----	12
4.3.2	Price of Products -----	16
4.3.3	Recognition Of Illegal Trade By Shopkeepers -----	18
4.3.4	Routes of Importation -----	20

4.3.5	Illegal Import by Wholesalers/Distributors -----	22
4.3.6	Illegal Import by Shopkeepers and Individuals -----	22
4.3.7	Regularity of Supply -----	22
4.3.8	Products from Poached Wild Bears and Farmed Bears -----	23
4.3.9	Customer Demand The Main Reason for Supply -----	24
4.3.10	Public Safety Concerns – Unlabelled or Poorly Labelled Products and Hygiene -----	24
5	SUBSTITUTES FOR BEAR BILE	25
6	CONCLUSION	26
	BIBLIOGRAPHY	27
	APPENDICES	29

1 OVERVIEW

1.1 Introduction

This report is based on a study that researchers from the Animal Concerns Research and Education Society (ACRES) undertook between May 2001 and July 2001.

The study was undertaken due to the results of 2 other studies. One was a field investigation undertaken by the World Society for the Protection of Animals (WSPA) to study bear farms in China from 1999-2000. WSPA investigators visited 11 farms which held approximately one-third (2250 bears) of the total captive bear population in China (about 7000 bears). During this investigation, some bear farms reported that they were illegally exporting their products to countries such as Singapore, Japan, Taiwan, Hong Kong, Philippines and Korea.

An earlier study, undertaken by J.A. Mills and C. Servheen, from TRAFFIC¹ 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 the investigators if they were selling gall bladders.

These studies pointed to a need to examine the current illegal trade in bear gall bladders and bile products in Singapore, the relevant regulatory framework and determine relevant follow-up actions. Thus the researchers visited 68 Traditional Chinese Medicine (TCM) shops in 14 areas in Singapore to study the sale of bear gall bladders and bile products.

¹ TRAFFIC is a wildlife trade monitoring organisation, founded largely to assist in the implementation of CITES.

1.2 Objectives of Study

- (a) To determine the prevalence of the sale of bear gall bladders and bile products in Singapore.
- (b) To determine the types, prices, sources, supply frequency, import and export patterns of bear gall bladders and bile products on sale.
- (c) To determine the level of awareness of legal restrictions surrounding the bear gall bladder trade and bear bile trade among TCM shopkeepers.
- (d) To determine regularity and types of consumers for bear gall bladders and bile products.
- (e) To understand the bear bile farming industry.
- (f) To understand the regulatory framework pertaining to TCM and the sale of bear gall bladder and bear bile products.
- (g) To recommend measures to address the illegal trade in bear gall bladders and bile products.
- (h) To educate consumers on the illegal trade in bear gall bladders and bile products and the bear bile farming industry.

2 LITERATURE REVIEW

2.1 Traditional Chinese Medicine in Singapore

Traditional Chinese Medicine has more than 5000 years of history. It is seen as part Singapore's heritage and Chinese culture (Ministry of Health, 1995). There are about 800 Chinese medicine and herbal shops in Housing Development Board ² estates themselves and according to a recent Ministry of Health survey, about 10,000 Singaporeans visit TCM physicians every day (The Straits Times, 9 September 2001). The role of TCM in Singapore is seen to be complementary to Western based healthcare system. TCM has achieved great strides in Singapore in the past decade. Some of the more recent developments in the field have been the following:

- 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 TCM (The Straits Times, 24 Jul 1999).
- 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 this year. One of the recommendations is likely to be a degree programme in TCM at a local University (The Sunday Times, 9 Sept 2001).
- 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.

2.2 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 bear³ bile, can be successfully used to treat certain liver problems and the dissolution of gallstones (Maas, 2000). 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 species (Mills et al., 1995).

² The Housing Development Board is the body that provides public housing in Singapore.

³ The Giant Panda is the only bear that does not produce ursodeoxycholic acid.

2.3 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 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.

CITES Species

Appendix I species are highly endangered and could become extinct if their trade is not severely restricted. Trade for primarily commercial purposes is prohibited; CITES permits are issued only under special circumstances (e.g. zoos, scientific research etc). All Asian bear species belong to Appendix I. These include the Asiatic Black Bear, Asian populations of the Brown Bear, the Sun Bear, the Sloth Bear and the Giant Panda.

Appendix II species are threatened and their trade is regulated. Commercial trade is allowed and must be accompanied by CITES permits. An example would be the American Black Bear.

Appendix III species are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

2.4 Bear Farms

Bear farming started in China in 1984. Currently in many bear farms, catheters are surgically implanted into the gall bladders of bears so that bile can be extracted. In other farms, a fistula tissue duct leading to the gall bladder is used to collect the bile. Many die as a result of the surgery. Those that survive are confined in cages so small that they can hardly turn around, sit up or stretch out. Some bears live like this for about 15 years.

China 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 1998 (Fan, 1999). These would almost exclusively be Appendix I bears, commonly the Asiatic Black Bear.

2.5 CITES and Bear Farms

None of China's bear farms is registered with the CITES Secretariat. This is required if Appendix I bears, bear parts or bear derivatives originating from such captive breeding facilities are to be traded internationally for commercial purposes. This trade would also require relevant permits.

Chinese bear parts or derivatives have been found outside of China (Watkins and Hsieh, 2000). 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.

2.6 Bear Farms and Conservation

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 (Qing Jian Hua, Deputy Director, The People's Republic of China Endangered Species of Wild Fauna and Flora Import and Export Office, pers. Comm. to TRAFFIC East Asia, 1996; Chen Heng, Director, Department of Circulation and Production, State Administration for Traditional Chinese Medicine, pers. Comm. to TRAFFIC East Asia, 1996).

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.”

Servheen C. 1995, "Bear farms and the impact on bear populations," in proceeding 2nd Int. Symposium on Trade of Bear Parts, Rose, D.A. & Gaski, A.L. Eds.pp.31

Mills (1995) also reports that some Asian consumers believe bile from wild bears is superior to that from farmed bears. Further, bear farms have a high mortality rate. Thus the poaching of bears in countries such as China, Vietnam, Myanmar, Laos, India and Thailand continues. All the farms surveyed in WSPA's investigation (2000) admitted to supplementing captive populations in China's bear farms with wild-caught bears.

2.7 Bear Bile Farms and Animal Welfare

Chinese authorities have been reported to claim that some bear farms have reached the CITES criteria for a captive breeding facility and have met animal welfare standards but the WSPA investigation found evidence contrary to this (Watkins and Hsieh, 2000). They found that even attempts to improve standards at Government “model farms” have not addressed basic animal welfare problems.

The investigators found bears mainly confined in small cages and suffering from stress, injuries, infections and a high mortality rate. Such reports have also been made by Animals Asia Foundation (AAF), which has visited bear farms in China and Vietnam.

Dr Barbara Maas (2000) has studied reports from WSPA and AAF and analysed the scientific literature related to bear farming in China. Some of her findings related to animal welfare problems at the farms are:

- Cubs are separated from their mothers when they are two to three months old. This causes stress as they usually stay with their mothers for two to three years in the wild. Some farms train the cubs for circus-style performances or even boxing. Trainers have been observed hitting bears on the head with wooden sticks during such training.
- Majority of the bears were confined individually in cages measuring as small as 0.6m x 0.6m x 1.2m or 1.5m x 0.7m x 0.7m. The bears could hardly turn around, sit up, stretch out, and lie down on their side or on their backs without bending their legs and / or necks. Even in the “model” farms, injuries to the head, paws and back from repeated rubbing and banging against the cage bars was present on many animals.

Maas (2000) observes that many of the cages permanently holding bears in Asian bear bile farms fail to even meet the size requirements for bear shipping crates under the International Air Transport Association (IATA), which stipulate that the animals “must be provided with space to lie comfortably” and “turn around” (IATA, 1997).

- Many bears exhibited behavioural problems such as chronic stereotypy⁴, aggressive behaviour, agitation, nervousness and excessive inactivity. Abnormal behaviours such as stereotypy were seen repeatedly among bears in all the farms WSPA visited. Some shook their heads continually and others bit bars of the cages.

⁴ Stereotypies are repeatedly performed, relatively invariant movement patterns with no apparent function or goal (Odberg, 1978).

- Most of the surgery to enable bile extraction was performed by farm owners or senior staff who admitted that they had no veterinary training. Bears had inflamed and bleeding wounds, open incisions for bile extraction and tumour swellings in the abdominal area. Many bears were fitted with stainless steel catheters and the majority suffered from chronically infected abdominal wounds around the implantation site. Where bears were harnessed, the abdominal skin and tissue underneath the corset looked sore and inflamed.

Zhu and colleagues (1991), who are related to a Sichuan bear farm, report that most bears will suffer varying kinds and degrees of inflammation of the gall bladder as well as at the catheter exit site, “festering wounds”, and increased discharge from the catheter after a certain period of bile extraction.

- Farms extract bile from bears once or twice a day, depending on how much stock is needed. Some bears were focused on eating or drinking and did not react much while their bile was drained. However others twitched, jerked, gnashed their teeth, trembled, kicked, bit or uttered distress vocalisations. Some have been reported to curl up after the procedure shivering and holding their paws to their stomach. After bile collection, many bears began to stereotype by swaying or bouncing vigorously up and down, often with their eyes facing the ground, or by rubbing their heads or the sides of their bodies fiercely against the bars of their cages.
- When they cannot produce sufficient bile, the bears were usually put in another cage where they wait to die through sickness or are killed for their paws and gall bladder. Three farms admitted to WSPA that bears’ paws could also be cut off if customers requested fresh paw.
- During interviews with Chinese specialists in bear farming techniques, it was reported that for every two successful bile fistula implantations, there are another two to three deaths, due to complications and infections. A bear’s life span also becomes shorter after the operation.
- Although bear farms claim that the breeding rate is getting higher, they still have a problem with bear cubs being eaten by their new mother. On many occasions, the mothers even eat their own paws. In the wild, this behaviour is rare and suggests that the mother is under severe stress.

3 THE LOCAL REGULATORY FRAMEWORK

3.1 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.

3.2 No Permits Issued Locally Thus Far

A check with the local CITES Section of the AVA revealed that they have not issued permits for the import of bear gall bladders or bear gall bladder products for primarily commercial purposes as they have not received such applications thus far.

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

The Medicines Act is the other piece of legislation that is 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 have 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.

3.4 Relevant Authorities

3.4.1 Agri-Food and Veterinary Authority (AVA)

The 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.

3.4.2 Customs and Excise Department

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

3.4.3 Singapore Police Force

The ESA recognises the Police as authorised officers who can enforce it.

3.4.4 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 with regards to the illegal sale of medicinal products and poisons.

3.4.5 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.

4.1 Method

4.1.1 Design

Three 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.

4.1.2 Reliability

The study has aimed to be scientifically reliable through the use of one standardised set of questions to guide the researchers in their interviews (See Appendix 1). However, as is the case with certain sample groups, it was not always possible to ask all questions and sometimes it was possible to get more information, depending on how forthcoming with information the respondents were.

4.1.2 Sample

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.

4.2 Definitions and Parameters

1. When the terms “bear products”, “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.

4.3 Findings

4.3.1 Categories of Products



Samples of bear products found in Singapore

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 shops were found to sell manufactured bear bile pills, 29 shops sold intact bear gall bladders, 13 shops regularly made their own pills for sale from powder self-grounded from intact gall bladders, 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 Table 1). 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 FOR SALE IN STUDY, SINGAPORE, MAY 2001 - JULY 2001

Types of Products	No. of Shops Selling (Total being all shops selling bear products)	% of Shops
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%

Manufactured Bear Bile Pills

The study revealed that what were claimed to be manufactured bear bile pills were sold in 35 of the 50 (70%) shops 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 pills were commonly stored in a small, transparent container that could hold as many as 50 pills. These containers were usually kept behind counters or within other parts of the shop not in view of the public. Thus customers usually had no direct access to these products unless assistance from the shopkeepers was requested.

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 had intact bear gall bladders for sale. Each of 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 observed to be generally black. Some were still soft and tender at the time of the study; others were dry and hard. According to a shopkeeper at Woodlands, the quality of bear gall bladders was enhanced the longer they were kept. A few shops that the researchers visited had gall bladders for sale that had been purchased two to three years ago.

Intact gall bladders were reported by shopkeepers to have been extracted from poached bears, and imported mainly from China but Malaysia, Indonesia, India, Nepal and Vietnam were also mentioned as source countries.

Most of the gall bladders were kept away from public view and access. They were usually stored in all kinds of containers ranging from Tupper-ware to medical oil boxes.

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, and then encapsulating them for sale as bear bile pills. Some reported that they usually mixed the bear bile powder with other Chinese herbal powders.

These pills tended to be priced higher than the 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 found to sell bear bile crystals. They were sold 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.

4.3.2 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).



A shopkeeper calculates the price of a gall bladder. Intact bladders were the most expensive bear products found.

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.

TABLE 2: DATA ON PRICES OF BEAR BILE PRODUCTS AND OTHER BEAR PARTS FOUND FOR SALE IN STUDY, SINGAPORE, MAY 2001 – JULY 2001

Product	Lowest Price Quoted	Highest Price Quoted	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

4.3.3 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 had been imported before it had become illegal to trade in it in Singapore.

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. And given that most of their products were purported to be from Asian bears, no permits could have been issued anyway. 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 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 that 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.



These gall bladders were innocuously kept in a medicated oil box (finger pointing at box) and kept locked in a display shelf.

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 containers, with only the Chinese characters, “*xiong dan*” (bear bile), written on the container’s cap.

These common practices of keeping the bear products out of public view and access and not labeling them/properly could point to deliberate attempts to surreptitiously engage in illegal trade in bear products.

4.3.4 Routes of Importation

Singapore has no bears to be poached or farmed. Thus bear products sold locally have to 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 BLADDERS AND BILE PRODUCTS FOUND IN STUDY, SINGAPORE, MAY 2001-JULY 2001

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				

4.3.5 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 labeled as having been exported from a company in China and imported by a local importer.

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. It was noted on the bottle that the product was imported and assembled by a local company.

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.

4.3.6 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.

4.3.7 Regularity of Supply

Table 4 provides information on the regularity of supply of bear bile products for some of the 50 shops which sold bear products. 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. This regular restocking of supply suggests the freshness of products on sale, as well as indicates a regular demand for them.

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 attributed it to how difficult it was to hunt bears and another attributed the difficulty in obtaining gall bladders to the fact that 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 shopkeeper claimed that he would not trade in bear bile after the current stock sold out, due to ethical reasons.

TABLE 4: DATA ON REGULARITY OF SUPPLY OF BEAR GALL BLADDERS AND BILE PRODUCTS IN SINGAPORE, MAY 2001-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

4.3.8 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.

4.3.9 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 PROFILE OF CONSUMERS OF BEAR GALL BLADDERS AND BILE PRODUCTS IN STUDY, SINGAPORE, MAY 2001-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

4.3.10 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 was observed.

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.

5 SUBSTITUTES FOR BEAR BILE

A report by the Chinese Association of Medicine and Philosophy and EarthCare (Hong Kong), funded by the International Fund for Animal Welfare, has established that there are at least 54 herbal alternatives to bear bile in its various medical applications. Among these are the Chinese ivy stem, Madagascar Periwinkle herb, Dandelion, Japanese Thistle herb and Chrysanthemum. The report also emphasised that plant-derived alternatives are cheaper, more readily available and just as effective.

It is worthy to note the support for herbal substitutes garnered by the Animals Asia Foundation from the TCM community:

We definitely do not have to use bear bile as it can be replaced by herbs, which are cheaper too.

Dr Sun Ji Xian, the Chinese Association of Preventative Medicine, Beijing, China

Herbal alternatives have the same effect – so why kill the animals?

Dr Ho Ka Cheong, President Hong Kong Chinese Herbalist Association Ltd

There are many hundreds of ingredients in our Pharmacopoeia, and whatever beneficial effect may be achieved by using endangered species, there are equally beneficial effects by using other alternatives. Please understand that we are in the business of healing people, not in the business of causing danger to wild animal species.

Word-Fei Cheung, Assistant Manager of the Institute of Chinese Medicine, China.

6 CONCLUSION

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 professionalised 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 (The Sunday Times, 9 Sept 2001 and The Straits Times, 13 Nov 2001). It is believed that eliminating the illegal use of endangered wildlife specimens among the TCM traders would be one important way by which Singapore can achieve such international standing.

AS A CONSUMER, YOU CAN HELP

- **Do not buy bear gall bladder or bile products. Use herbal alternatives.**
 - **Share this information with your family and friends.**
 - **Support efforts to end bear farming.**

BIBLIOGRAPHY

- Birds flying home, business class, 21 March 2001, The Straits Times.
- Brought to Heal, 9 September 2001, The Sunday Times.
- Carey, J.E. (1999). Improving the efficacy of CITES by providing the proper incentives to protect endangered species in Washington University Law Quarterly, 77: 1291. Washington University.
- Fan, Z. (1999). The Development of Bear Farming in China in "3rd International Symposium on the Trade of Bear Parts", abstract booklet: 47.
- International Air Transport Association, (1997), Container requirements 72, 255-256.
- Kang, T.S., Lee K.H., Phipps, M., Parry-Jones, R. & Mills, J. (1996). A TRAFFIC Network Report to the CITES Animals Committee on the East Asian Market for Bear Gall Bladder. TRAFFIC East Asia.
- Knights, P. (1996). The Global Underground Trade in Bear Parts. Investigative Network & Humane Society of the United States.
- Lye, L. (1999). The Implementation of the Convention on International Trade in Endangered Species in Singapore, Offprint from Journal of International Wildlife Law and Policy, Vol 2, Number 1. Kluwer Law International.
- Mills, J.A. & Servheen, C. (1991). The Asian Trade in Bears and Bear Parts. Washington DC: TRAFFIC USA.
- Mills, J.A., Chan, S. & Ishihara, A. (1995). The Bear Facts: The East Asian Market for Bear Gall Bladder. A TRAFFIC Species in Danger report. TRAFFIC East Asia.
- Mills, J.A. (Eds.) (1997). New Information on East Asia's market for Bear Gall Bladders, TRAFFIC Bulletin, Vol. 16, No.3:108.
- Maas, B. (2000). The Veterinary, Behavioural and Welfare implications of Bear Farming in Asia. London: World Society for the Protection of Animals.
- New rules on ready to use Chinese medicines, 1 September 01, The Straits Times
- Odberg, F.O. (1978). Abnormal Behaviours: Stereotypies. Proceedings of the First World congress of Ethology Applied to Zootechnics, Madrid 47580.
- Servheen C. (1995) Bear farms and the impact on bear populations. (Eds.) Rose, D.A. & Gaski, A.L. Proceedings of 2nd International Symposium on Trade of Bear Parts:..31.

Sino-S'pore pact on traditional medicine, 24 Jul 1999, The Straits Times.

S'pore to standardise use of Chinese herbs, 13 November 2001, The Straits Times.

S'pore urged to draw up Chinese medicine plan, 21 September 2001, The Straits Times.

S'pore wants bigger dose of Chinese medicine, 1 November 1999, The Straits Times.

Some Physicians own medicine shops, 8 October 1989, The Straits Times.

Traditional Chinese Medicine: A Report by the Committee on Traditional Chinese Medicine (1995). Singapore: Ministry of Health.

The Herbal Alternatives to Bear Bile in Chinese Medicine, Hong Kong: The Association of Chinese Medicine and Philosophy & EarthCare Society.

Watkins, V. and Hsieh Y. (2000). Chinese Bear Farming. London: World Society for the Protection of Animals.

Hsieh, Y. (2000). From Cage to Consumer: An Investigation into the illegal sale of Chinese bear bile and bear gall products in North America. London: World Society for the Protection of Animals.

Zhu, S., et al. (1991). Study on Raising Bears and Bile Extraction from Living Bears. Second East Asiatic Bear Conference.

APPENDIX 1

INTERVIEW GUIDE

1. Does shopkeeper sell alleged bear gall bladder or bile products?
2. What forms do the bear products come in?
3. What are the prices of the bear products?
4. Where are the bear products imported from? What bears do they originate from?
5. Is supply current and regular?
6. What is the local import system like?
7. What is shopkeepers' awareness level on legal restrictions surrounding the trade?
8. Do shopkeepers show awareness of bears being endangered and protected?
9. What is their response to products being brought out of Singapore?
10. What is the profile of the consumers according to shopkeepers?