

The Trade in Bears and Bear Parts

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Introduction

Parts of bears have been used in traditional Chinese medicine for thousands of years in Asia. The use originated in China, and then was adopted by users in Korea and Japan. Today, the use of traditional Chinese medicine is widespread throughout Asia and in Asian communities in North America and Europe. Bear bile from the bear gall bladder is one of the most treasured of traditional Chinese medicines. Prescriptions for bear gall first appeared in writing in the 7th century (Bensky and Gamble 1986). Bear parts once used in traditional medicine include fat, meat, paws, gall, spinal cord, blood, and bones (Read 1982). Practitioners of traditional Chinese medicine prescribe bear gall for serious liver diseases, heart disease, hemorrhoids and other illnesses (Mills and Servheen 1991). Bear bile is believed to have special qualities to treat ailments of the liver, stomach and a diverse illnesses from fever to digestive disorders. The use of traditional medicines such as bear gall has continued despite the westernization of many Asian countries and the rapid increase in wealth in certain Asian countries such as Taiwan, Japan and South Korea, and China (Mills and Servheen 1991). Bear skins are also valued for trade in some areas.

Bear bile from wild bears is difficult to obtain today as many populations of Asian bears have been reduced in numbers and range due to a combination of habitat loss and excess killing, much of which is for the use of bears in traditional medicine. This combination of rarity and assumed potency makes bear bile one of the most valuable of traditional medicines.

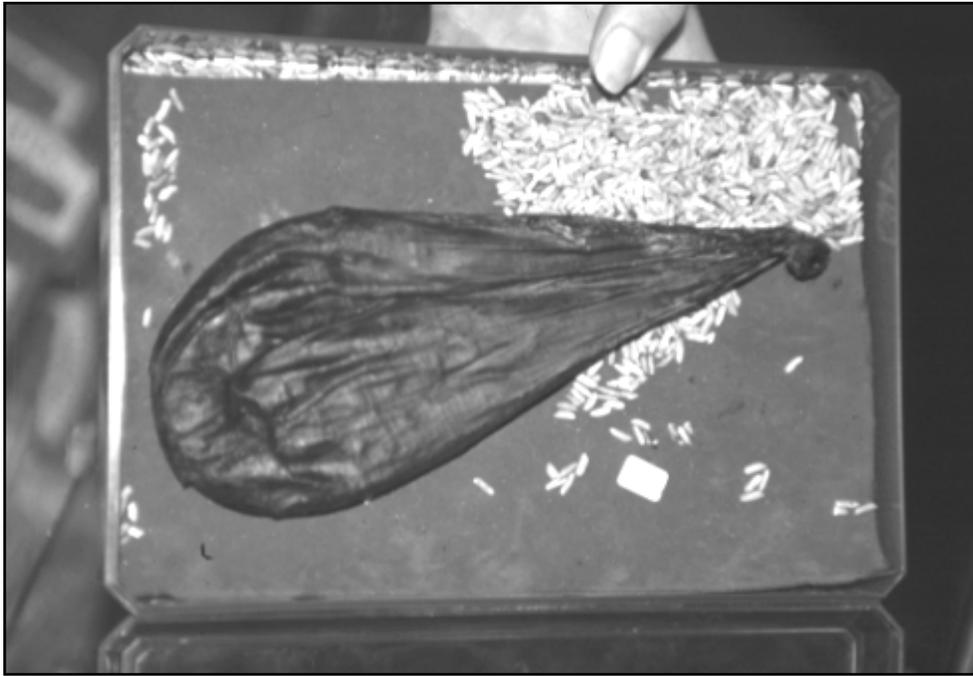
Origins of bile in trade

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is the foremost tool for regulating international trade in wildlife and currently has 143 signatories. The Convention prohibits international trade for commercial purposes for those species which may be threatened with extinction and are listed under Appendix I of the Convention. Appendix II lists species which are not now threatened by extinction, but which may become so if trade is not strictly regulated and monitored. Commercial trade in Appendix II species is allowed only if the state of export issues permits reporting that the trade will not be detrimental to the survival of the species in the wild. All species of bears are included in

Table 4.1. Bear species and their listing under CITES.

Scientific name	Common name	CITES listing
<i>Ailuropoda melanoleuca</i>	Giant panda	I
<i>Helarctos malayanus</i>	Sun bear; honey bear	I
<i>Melursus ursinus</i>	Sloth bear	I
<i>Tremarctos ornatus</i>	Spectacled bear	I
<i>Ursus americanus</i>	American black bear	II
<i>Ursus arctos</i> (all North American populations except <i>U. a. nelsoni</i> .)	Brown bear; grizzly bear	II
<i>Ursus arctos nelsoni</i> ¹	Mexican grizzly bear	I
<i>Ursus arctos</i> (all European populations)	European brown bear	II
<i>Ursus arctos</i> (all Asian populations including Iran, Iraq, Syria, Turkey, and former USSR areas except those listed specifically as Appendix I)	Brown bear	II
<i>Ursus arctos</i> (Bhutan, Chinese, and Mongolian populations)	Asian brown bear	I
<i>Ursus arctos pruinosus</i> ²	Tibetan blue bear	I
<i>Ursus arctos isabellinus</i> ²	Red bear	I
<i>Ursus maritimus</i>	Polar bear	II
<i>Ursus thibetanus</i>	Asiatic black bear	I

¹ Extinct
² The Bear Specialist Group is on record against the subspecific designation for *U. a. pruinosus* and *U. a. isabellinus* and instead believes these brown bears should be identified on the basis of geographic distribution



Asiatic black bear (*Ursus thibetanus*) gall bladder for sale in Singapore.

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either Appendix I or Appendix II of the Convention (Table 4.1).

Asian countries with low economic wealth levels and/or little belief in traditional medicine are usually exporters of bear parts to more wealthy countries. Exporting countries include Russia, Laos, Vietnam, and Nepal where belief in the traditional medicine involving bear parts product is low and economies are weak, China where belief is strong but need for export income is high, and perhaps the United States and Canada where belief is limited to some Asian communities and bear populations are high. Until recently, South Korea, Hong Kong, Taiwan, and Japan were economic powers with considerable wealth, and prices for bear bile were highest in these countries (Mills and Servheen 1991, Mills *et al.* 1995). North American bears are also a source for bear bile used in Asia and in Asian communities in the USA and Canada. The specific numbers of bear parts in the bear trade are unknown as most of the trade is illegal and thus not reported. This lack of information on the numbers of parts in the illegal international market confounds understanding of the impacts of the trade.

Use and demand for bear parts is also high in Asian communities in Canada and the USA where the use of traditional medicine is often mixed with more “western” medical treatments. In many Asian medical communities, the use of traditional medicines is increasingly combined with “western” medicine. Belief in the value of many traditional medicines exists in a high percentage of Asian residents, and for serious illnesses, such as liver disease, valued traditional medicines such as bear bile are sometimes combined with “western” medical drug therapy and even surgical procedures.

Value of bear parts

Prices for bear bile have risen as the availability of the product declines and as users become more affluent. Documentation of this rise in prices is confounded in recent times by changing currency values, opening of international borders, and increasing amounts of farmed bile and counterfeit bile in markets in Asia. Many users of traditional Chinese medicine have the wealth to pay extreme sums for medicinal products. Bear bile is expensive because of the rarity of wild bears in Asia and the difficulty of obtaining bile from wild bears. Bile from wild bears is thought by many users to be more potent (Mills and Servheen 1991) and thus more valuable than bile from captive bears. Prices paid for individual wild bear gall in 1995 varied from US\$5 to US\$500 per gram (Table 4.2) (Mills *et al.* 1995). An

Table 4.2. Retain prices for bile being sold as bear bile in Asia, 1994–1995 (from Mills *et al.* 1995).

Prices are US\$ per gram. Some of the bile in this survey was likely either of undocumented origin to the seller or was known to be from animals other than bears. This is the reason for the wide diversity in price.

Origin	Hong Kong	Macao	Korea
Australia	-	\$21	-
China	\$17–35	\$1–69	\$10–167
Europe	-	\$52	-
Hong Kong	-	-	\$63
India	-	\$27	-
Nepal	-	\$7	\$50
Russia	\$45	-	\$23–167
Unknown	\$21	\$5–14	\$13
USA	-	\$5	\$33–100
Zoo	-	-	\$500

Table 4.3. Bear gall bladder prices in North America by level of the market for some US states and Canadian provinces in 1994–1995 (from Mills *et al.* 1995; Rose and Gaski 1995; Gaski 1997).

Prices are US\$ per whole gall bladder unless otherwise specified. Underlined state/province allowed sale for year of survey.

Origin	Year	Hunter	Middle-man	Retail
<u>Idaho</u>	1994	\$20–25	-	-
Colorado	1994	\$40–120	-	-
<u>Maine</u>	1995	\$45–50*	-	-
Arizona	1994	\$50–25*	-	-
<u>Saskatchewan</u>	1994	\$80–100	-	-
		\$7–9/gram	-	-
Washington	1994	\$100–150*	-	-
British Columbia	1994	\$150–250	\$800	\$1,200
		\$7–9/gram	-	-
Manitoba	1994	\$8–15	-	-
California	1994	\$180–200	\$400	\$1,200–2,000
Alaska	1994	\$250–1,000 ¹	-	-
		\$40/ounce - \$40/gram	-	-
	1995	-	-	\$1,000–1,800
Price Range	1994–1995	\$20–150	\$800	\$1,000–2,000
	1994–1995	\$45–250*	-	-
	1994–1995	\$250–1,000 ¹	-	-

* Wet weight for whole gall bladder.

¹ Brown bear (*Ursus arctos*) gall specifically.

extreme price was as high as US\$55,000 for a gall bladder from an illegally killed Asiatic black bear in South Korea (Mills and Servheen 1991).

Value of bile increases as it moves up the marketing ladder. A gall bladder that may cost US\$150 if bought from the hunter in North America may cost US\$1,200 or more at the retail level in North America (Table 4.3) and more in Asian retail markets. Prices for entire gall bladders are less expensive per gram than prices for small amounts of bile. The average dried bear gall bladder can range in size from 50 to 125g.

Prices vary according to the location of sale, proof of authenticity, and eagerness of the buyer. The highest prices have been recorded in South Korea where the use of bear bile is highly favored, local populations of Asiatic black bear are extinct in the wild, and where economic prosperity has given many people the ability to pay such high sums for medical products. Bile from wild bears draws the highest prices (Mills and Servheen 1991). Asiatic black bears were the origin of most bear bile for thousands of years of traditional Chinese medicine, and this is the species of preference for many users. However, since bile is unrecognizable as to species of origin, the species of bear is usually of little interest at the retail bile sale level.

There is considerable counterfeit bear bile for sale throughout the traditional medicine market ranging from 98% to 26% of tested samples (Table 4.4). False marketing is simple because gall bladders and the bile itself cannot be reliably differentiated by sight and color between species as different as bears, pigs, goats, cows, and even humans. Some traditional practitioners claim to be able to identify

bear bile by sight, taste, smell, and through various “tests” such as placing some bile in a water glass and observing how it sinks to the bottom or how fast it dissolves. The precise effectiveness of such identification procedures are unknown, but some dealers believe their methods have great accuracy and are willing to pay considerable amounts for bile determined as authentic by such methods. The extent of false bile in the market is very high (Table 4.4) due in large part to the ease of deception, the rarity of wild bear bile, the ease of counterfeiting, and the high value of the product. Even manufactured traditional medicines said to have bear bile as an ingredient and which are commonly produced in China, Hong Kong and other

Table 4.4. Authenticity of bear gall bladders purchased from legal sources or seized from illegal trade as confirmed by chemical analyses (Mills *et al.* 1995; McCracken *et al.* 1995; Lau *et al.* 1994; California Dept. of Fish and Game 1992; Gaski 1997).

Origin	% actually bear	Sample size
Illegal market		
Asia ¹	2	n=143
California	10	n=?
Canada	74	n=489
United States	49	n=871
Legal market		
Hong Kong	35	n=81
Taiwan	63	n=24

¹ Samples seized in Hong Kong, India, Malaysia, and Taiwan.

areas may contain little real bear bile. Of five such manufactured traditional medicines tested, only two contained actual bear bile (Gaski 1997).

Bear farming

An important new activity associated with the trade in bear bile is the commercial farming of bears for production of bile without the need to kill the bear. This practice began in 1984 when North Koreans succeeded in extracting bile from living bears (Fan and Song 1997). The practice quickly spread to China which now is most active in the bear farming business. As of 1996, there were reported to be 481 bear farms in China holding 7,370 Asiatic black bears (*Ursus thibetanus*), 263 brown bears (*Ursus arctos*), and 9 sun bears (*Helarctos malayanus*) (Fan and Song 1997). Previously it was rumored that the goal of Chinese bear farming was to establish 40,000 bears in active bile extraction farms (Mills and Servheen 1991). This goal is now questionable considering that prices for farmed bile have decreased since 1988 from \$2,400/kg to \$360/kg in 1996 (Fan and Song 1997). Farmed bile production from a captive bear averages 1,500g/year. The total bile production of all Chinese bear farms was 7,800kg in 1995 (Fan and Song 1997). If these figures are correct, the reported annual production of 7,800kg would equate to 5,200 captive bears in farms producing 1,500g each annually.

Production of bile from captive bears involves surgically placing a tube in the bile duct of the living bear and draining bile into a tube that is periodically drained or continuously drained into a container or plastic sac. The donor bear must be restrained so they do not pull out the tube. Restraint is accomplished by placing the bear in a squeeze cage so that it cannot stand, move, or turn around for the months that the tube is in place and the bile is being drained. Another method of restraint involves fitting the bear with a "jacket" to prevent it from reaching the area where the tube exits the abdomen. Impacts on bears subjected to such treatment can produce physical and behavioral abnormalities, systemic infection, pain, discomfort, suffering, and even death (Robinson 1997).

There is continuing debate about the value of bear farming to conservation. It is fair to say that there are some conservation advantages and disadvantages to bear farming. While it is true that farmed bile does replace some bile from wild bears in the market, there also continues to be demand for wild bear bile which is thought to be more potent and effective in traditional medicine. It is well-known that there are three types of bear bile recognized by most marketers and practitioners of traditional medicine: real bile from wild bears; counterfeit non-bear bile from other species sold as bear bile; and bile from farmed bears (Mills *et al.* 1995; Gaski 1997). Bile from wild bears has the

highest value (Mills and Servheen 1991). This three-tiered market and the fact that farmed bile is of less value medicinally and financially than bile from wild bears means that there will continue to be demand for bile from wild bears no matter how much farmed bile is available (Servheen 1997). This is especially true for those users who can afford to pay for the wild product. Another potential problem with production of farmed bile is by making bear bile more available in the marketplace farmed bile promotes and accelerates the demand for bear bile among a wider consumer audience. This relationship between increased availability of product and increased demand is substantiated by the statement of an Asian dealer in bear bile (cited in Gaski 1997, p. 65) that dealers in bear bile "began buying pig and cow gall bladders in the USA more than a decade ago in order to increase supply and therefore demand for galls". Bear farms are commercial operations requiring considerable investment and capital for maintenance and upkeep of resident captive bears. When prices and demand for farmed bile decline as they have in recent years, there is a need for increased marketing and promotion of bile. Bile farming legitimizes the use of this product whose use has detrimentally impacted wild bear populations throughout Asia. While this legitimization due to farming and commercial sale of bile is not the sole factor maintaining the bile trade, it does increase the trade and the acceptability of such trade.

The future of trade in bear parts in North America

As Asian bear populations decline and wild bear bile and other bear parts become more difficult to obtain, sources of bear parts outside Asia will be developed by traders and others willing to make significant profits. North America has more bears than all of the rest of the world combined. Increasing Asian populations in many urban areas of both Canada and the USA bring with them their beliefs and demands for traditional products. Many of these people also recognize the disparity in demand and price for bear parts between North America and Asia, and see a way to make profits from this disparity. Bear bile and gall bladders are easily smuggled and inspection of luggage for such items on leaving Canada and the USA is limited. Asian communities in North America are increasing demand for traditional medicine products within the continent. Laws concerning the commercial sale of bear parts vary throughout Canada and the USA complicating matters for law enforcement professionals. All of these factors contribute to the increase in trade of bear parts, particularly gall bladders, in North America.

Commercialization of wildlife and unregulated trade have been contributing factors in the reduction and loss of many wildlife species. At the turn of the century in North

America, populations of ducks were killed for commercial meat sale, egrets were sought for their tail plumes, beaver were sought for their fur, and even elk and deer in many areas were at an all-time low due to unregulated commercial activity to kill these animals and sell their parts for profit. Tens of millions of bison were wiped out as a wild species on the great plains due to commercial killing in just 40 years. Today, populations of rhinos and Siberian tigers are on the verge of extinction due to demand for their parts for use in traditional Chinese medicine and in Yemen in the case of rhinos. Elephant populations throughout Africa were depleted due to world demand for ivory. Once commercial profits can be made from anything including wildlife, there will be those who will try to make that profit despite laws to the contrary. The ongoing trade in illegal drugs is an example of this. The tendency to trade in such items is increased with increasing profit. The prices paid for bear bile in wealthy Asian countries now rival the prices for illegal drugs. In many areas of Asia it is thought that the organized networks selling drugs also handle bear gall bladders because of the high profits involved. The only difference is the limited fines and minimal risk of jail time in selling bear parts. Given this combination, it is likely that the demand for trade in bear parts will increase in North America. As wild bears in Asia continue to decline, North America will be one of the only places in the world to obtain gall bladders from wild bears. Demand for traditional Chinese medicine products is solid and may be increasing. Today there are 1.2 billion potential or actual users of traditional Chinese medicine worldwide. This demand will continue to fuel trade in bear parts unless changes in belief systems, or law enforcement and legal penalties can limit such activity.

Control of trade in bear parts

The control of trade in bears and bear parts is one of the most difficult of all bear conservation issues. No clear solution exists. However, the recent dialogues between conservationists and traditional Asian medicine practitioners give cause for optimism. There is a growing realization that the two groups can work together, respecting each other's beliefs to achieve a common purpose. It is clear that certain products in traditional Asian medicine cannot be substituted at present, and for these products, careful husbanding of the resource is necessary to ensure long-term survival of the species, both from a conservation perspective and from the perspective of supplying needed ingredients. Care must be used in any approach because the belief systems associated with the use of traditional Chinese medicine are rooted in the cultural systems of Asian society and criticisms of the belief system can be interpreted as criticism of the society and culture that developed this belief system.

Sas-rolfes (1997, p. 91) has suggested that a legal ban on trade would drive up the illegal market price for bear parts, drive up the poaching of wild bears and increase factory farming of bears in China. He also believes that elimination of farming would only increase pressure on wild bears. He advocates a three part approach:

1. Gain control of the supply of bear parts without restricting it unnecessarily. This would require adequate field protection, backed by appropriate law enforcement and carefully designed regulated harvesting.
2. Facilitate and expand the legal supply of bear products to out-compete illegal suppliers. This could imply more humane forms of bear farming, or better collection techniques of products from wild-hunted bears.
3. Encourage consumers to change their tastes and to substitute products. This implies concerted, long-term campaigns using moral persuasion to convince consumers of bear products to change their cultural attitudes and habits.

Servheen (1997, p.237–239) proposed the following alternate plan of action to limit the trade and its impacts on bear populations:

A successful approach to management of the trade in bears and bear parts will have multiple targets and each target will have to be addressed simultaneously for success:

1. Maintain regulations with continued efforts to improve standardization of existing regulatory mechanisms. This will send an important message to those involved in the trade. Conflicting laws in Canada and the United States relating to the trade in bear parts send a confused message to consumer countries. However, it is important not to be dependent on regulations.
2. Expand outreach efforts to consumers based on the impacts of the trade on wild bear populations and the availability and efficacy of alternatives to bear bile in traditional Chinese medicine. Such outreach efforts can best be done with consumer country government involvement and support.
3. Continue to send a clear message that farming of bears for bile production is not a solution for conservation of Asian bears. Farming of bile requires and is associated with marketing of the product. Marketing increases demand and makes use of bear bile acceptable. Farming of bile will continue a two-tiered consumer system: users of farmed bile and users of real bile with a large difference in price between them.
4. Expand our knowledge base of wild Asian bear populations. Documentation of the effects of trade as a mortality factor on Asian bear populations could be a key education and outreach tool as well as an important incentive to address the trade issue with more aggressive actions if necessary. Such research would also gather critical information on basic ecological factors on Asian

bear species necessary to their conservation and management. The basis of sport hunting of North American bears is careful limitation of mortality to sustainable mortality levels. This mortality management is based on sound biological information on the hunted populations. Mortality of Asian bear populations is not managed nor is it known what level of mortality is ongoing or sustainable. Given the demand for bears for traditional uses in Asia, and ongoing habitat losses due to human development and human population increases in Asia, this lack of knowledge about Asian bears is a recipe for disaster. Given what we know about Asian demand for bear parts, it seems reasonable to assume that mortality of many populations of Asian bears is excessive and not sustainable, and many populations and subpopulations are declining in numbers and range. The management of bear hunting at sustainable levels in North America is paid for by the hunters through purchase of hunting licenses. If users of bear parts in Asia supported research and management of Asian bear populations to assure that these populations could sustain the mortality resulting from the use of bear parts, there would be much less international conservation concern about such use.

5. We must continue to build ownership of bear conservation in Asia and worldwide. Interest in bear conservation is critical so people who use bear parts and live in bear habitat are willing to make the sacrifices to assure a future for wild bears. This ownership in bear conservation must be built through education and outreach efforts. Bears must have a value to local people if they are to be maintained and conserved at a local level. While this value may be related to sustainable use related to trade or hunting, it may also be an existence value, or value related to tourism. The importance of local value for the existence of animal populations is critical for their conservation, especially in areas where governments cannot afford elaborate conservation programs. This value will be built on local ownership of the animals and their continued existence.

There are four basic needs for successful Asian bear conservation programs for the bear populations most impacted by the trade in bears parts (Servheen 1998):

1. *Biological data* on Asian bear species.
2. *Social support* from those in bear range states and consumer countries built on an increasing awareness of the links between demand for bear products and the poor conservation status of many species and populations of bears in Asia.
3. *Political support* from central and local governments to achieve conservation success. There must be depth to this support so that necessary difficult decisions can and will be made when necessary to conserve bears.
4. *An organizational structure* including knowledgeable people in each country to enforce laws, develop and use biological data to properly manage bear populations, and to develop education and outreach programs for local publics.

The solution to the control and management of the trade in bear parts is not simple nor is it a one-step process. It will require further sensitive dialogue between conservationists and traditional medicine practitioners. It will require efforts to raise public knowledge of the endangered status of many species and populations of bears, and efforts to promote careful examination of existing beliefs in traditional medicine ingredients. The development of solutions for addressing the bear trade issue may well benefit from an examination of systems being tried for other endangered species which are also in demand for medicinal products such as rhinos, tigers, and musk deer. Successful management of the trade in bear parts will require understanding how and why people develop and maintain their beliefs in the use of some traditional wild animal products for medical purposes. The impacts of the bear trade on Asian bear populations cannot be assessed quantitatively, and it is clear that more information on the biological status of these populations and on the levels of off take for trade is urgently needed. Until more information is available on Asian bear populations, speculation about the specific impact of the trade in bears and bear parts on the conservation of Asian bear populations will be just that – speculation. However, even in the absence of detailed data, it is clear that the cumulative effects of habitat loss, human settlement in bear habitat, and the trade in bears and their parts creates a very serious threat to the future of Asian bears.