



WHILE SUPPLIES LAST

The Sale of Tiger
and Other
Endangered Species
Medicines in North America

TRAFFIC
— NORTH AMERICA —



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WHILE SUPPLIES LAST

The Sale of Tiger and Other Endangered Species Medicines in North America

1996-1997

Edited by

Andrea L. Gaski

January 1998
(Revised)

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While Supplies Last: The Sale of Tiger and Other Endangered Species Medicines in North America (1996–1997)

A TRAFFIC North America report

January 1998

Executive Summary

Rhinos and Tigers are among the most critically endangered large mammals in the world and are the focus of extensive global conservation efforts to halt their decline. Consumer demand for and trade in their parts and derivatives supply luxury markets as well as markets for cultural and medicinal needs. One of the most complex and far-reaching of these demands is for use in traditional medicines. Traditional Chinese medicine (TCM) uses these animal derivatives to prepare medications in two forms--as individually prepared prescriptions and as over-the-counter medicines. Most of these latter medicines are labelled as having been manufactured in China and are sold in markets worldwide.

Conservationists have long debated the threat posed by the trade in medicines containing or claiming to contain protected and regulated species. But most believe, for the most part, that whether or not the medicines contain these species, the advertising and promotion of these products as containing these animal parts both maintains consumer demand and perpetuates the conservation problem. As such, they should be treated as if they contain these derivatives and their trade should be prohibited or regulated as dictated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Commercial trade of raw rhino horn and of Tiger or leopard bone and their derivative products is prohibited by international treaty (all are listed in Appendix I of CITES) as well as by domestic legislation in several countries, including China, Canada, and the United States. In Canada and the United States, the burden of proving that those products actually contain the species listed rests with the government. So although seizures at the port of entry occur when occasionally intercepted, few, if any, prosecutions have occurred of those dealing in these medicines because current forensic techniques are as yet unable to detect many of the derivatives in these products. As a result, the offer for sale of these undoubtedly illegally imported medicines in North American markets continues because of lack of a strong law enforcement deterrent and

presumably, a lack of consumer awareness. Conservationists believe that the ongoing availability of these products in North America constitutes a violation of CITES and of domestic legislation, is a threat to the species concerned, and should be stopped by wildlife law enforcement agencies.

TRAFFIC North America investigated the display and sale of endangered species products in two Canadian and five US cities beginning in late 1996 through fall of 1997. TRAFFIC focused on North American Chinatowns because of the concentration of shops that presumably sell those products and that these neighborhoods were visited by Chinese and non-Chinese alike. The TRAFFIC investigator posed as a customer but did not make any attempt to trick any shop owner into offering to sell a product that might not normally have been readily available in the shop.

TRAFFIC gathered information on offers to sell medicines that contain or claim to contain legally protected species – rhino *Rhinocerotidae spp.*, Tiger *Panthera tigris* and Leopard *P. pardus*. TRAFFIC also collected information on medicines that contain or claim to contain legally regulated species – Musk Deer *Moschus spp.* and bear *Ursidae spp.* Legally protected species are those that cannot be commercially imported into Canada and the United States for commercial purposes under CITES provisions. Legally regulated species are those that are governed by CITES and that generally may be imported with a permit from the country of origin or of re-export.

Of the 110 shops surveyed, 50 percent offered for sale one or more protected species medicines or medicines or products that contained or claimed to contain the target protected species – Tiger, rhinos and leopard. The medicines most commonly found offered for sale were those that contained or claimed to contain musk deer and Tiger parts and products. The least commonly found medicines were those containing or claiming to bear parts and products. At least 31 different types of rhino – or Tiger – containing medicines, produced by between 29 and 34 different manufacturers, were found offered for sale during the survey.

The cities with the greatest percentage of shops that offer for sale medicines containing presumably illegally imported protected species are in descending order: New York; Vancouver, Seattle, Toronto, San Francisco, Atlanta, and Los Angeles.

TRAFFIC concludes that:

- Protected species medicines are readily available in North America
- Protected species medicines are available because of legal inadequacies
- North America appears to be a significant market for these medicines
- Illegal stockpiles of these medicines may exist
- Public outreach must be initiated to eliminate these markets

TRAFFIC recommends that:

- Regional law enforcement needs to be increased
- Legislation to control internal trade needs to be strengthened
- Stockpiles and manufacturers have to be identified and inventoried
- Collaborative North American public outreach efforts is required
- Increased US Tiger and rhino funding allocations and distribution is essential

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WHAT
IS
THE
CURRENT
SITUATION?

In the twelve-year Chinese calendar, 1998 is the Year of the Tiger. It is also the 25th anniversary of CITES--the Convention on International Trade in Endangered Species of Wild Fauna and Flora. The coincidence of these two auspicious events, one in Chinese culture and one in wildlife conservation, provides an appropriate backdrop to the release of this report, which is part of a two-part research project on the market for and use of rhinoceros and tiger products in North America. The project was designed to assist the CITES parties, North American governments, and other interested organizations and agencies in reducing and eventually eliminating the demand for wild tiger and rhino parts in North America.

Rhinos and tigers are among the most critically endangered large mammals in the world and are the focus of extensive global conservation efforts to halt their decline. Although habitat loss was and is the primary cause of the decline of these animals, international illegal trade of their parts and derivatives is also of intense concern. Consumer demand for and trade in these parts and derivatives supply luxury markets as well as markets for cultural and medicinal needs. One of the most complex and far-reaching of these demands is for use in traditional medicines. Hundreds of millions of people throughout the world depend on traditional medicine systems that, in turn, depend on wild animal and plant derivatives as ingredients of medicines and tonics. Conservationists believe that uncontrolled demand--particularly of endangered species, such as tigers and rhinos--is a threat to those species' survival. Examples of the species used in traditional medicine along with the disorders and illnesses they are intended to treat appear in Table 1.

Spearheading the international initiative to halt the trade of tiger and rhinoceros parts, the parties to CITES passed two resolutions in 1994 (see appendices 1 and 2) that highlighted ongoing problems with illegal trade of these species. The resolutions requested that the CITES parties and other relevant organizations escalate their law enforcement efforts to halt persistent poaching and illegal trade to eliminate demand for rhino and tiger products, and to consolidate stockpiles of tiger parts and derivatives. In 1997, the CITES parties strengthened the tiger resolution, asking the CITES Standing Committee to periodically provide annual updates on country-by-country progress in law enforcement efforts and legislative amendments to stop the illegal trade. During discussions before the passage of this amended resolution in 1997, many parties affected by the export ban strongly expressed their concern that some countries, particularly developed countries, were not making a sufficient effort to eliminate the trade in products labeled as containing tiger parts or derivatives.

At the same time, CITES parties passed another resolution (see appendix 3) recommending that parties increase collaborative public awareness efforts within the traditional medicine industry and medical systems. The parties determined that these efforts needed to focus on conservation of overexploited wild species, such as rhinos and tigers. The resolution also recommended that law enforcement be increased, forensics analyses be developed or improved, substitutes or alternatives be sought, and captive-bred or artificially propagated sources of wild specimens be developed. A number of nongovernmental organizations responded to the CITES requests that countries develop public outreach projects and materials and provide technical support. The international TRAFFIC Network, which now consists of 20 offices worldwide, provides

governments with up-to-date information on these exploited species to help develop a profile of the trade and to identify those dealing in and consuming the products (Callister and Bythewood 1995; Leader-Williams 1992; Mills 1997; Mills and Jackson 1994; Mulliken and Haywood 1994; Nowell et al. 1992; Gaski and Johnson 1994, and others).

Table 1. Traditional Chinese Medicinal Use of Select Wild Animal Parts

| Part Used | Indication Treated* |
|-------------|--|
| Bear Gall | high fever and convulsions; spasms; hot skin lesions; red, painful, swollen eyes; trauma; sprains; swelling and pain; hemorrhoids |
| Musk Grains | convulsions; delirium; stupor and fainting; closed disorders; tetanic collapse; phlegm collapse; seizures; swelling and pain; toxic sores; carbuncles; coronary artery disease |
| Rhino Horn | extreme heat or heat signs; high fever; erythema; purpura; nosebleed; vomiting of blood; convulsions; delirium; manic behavior |
| Tiger Bone | migratory joint pain and stiffness; paralysis; weak knees and legs; spasms; stiffness and pain the lower back; pain in bones |

Source: Bensky & Gamble, 1993

* TCM evaluates disorders or imbalances in the whole body or system rather than focusing solely on symptoms or indications.

The North American Market for Endangered Species

Long before CITES passed the 1994 and 1997 rhino and tiger resolutions, it was presumed that the demand for rhino and tiger parts and products had been reduced or almost eliminated in the United States. In 1973, when the U.S. Endangered Species Act (ESA) came into effect, the commercial trade of many ESA-designated species, including the tiger and all endangered rhino populations, was prohibited. The ban restricted supplies for the consumer's luxury demand to buy tiger skins for decoration and adornment, and tiger and rhino sport-hunting trophies, but the some demand for tiger and rhino parts and products--as used in traditional East Asian medicine--persists in North America and has yet to be addressed regionally or nationally.

Traditional Chinese medicine (TCM) uses animal and plant derivatives to prepare medications in two forms--as individually prepared prescriptions and as over-the-counter medicines. Unprocessed or partially processed animal and plant parts--"materia medica"--are mixed according to ancient formulas, usually by a traditional practitioner. Just as in so-called modern Western medicine, prescriptions are dispensed after a practitioner has diagnosed the disorder or illness of the patient. The medicines are usually mixed in traditional medicine shops or clinics but may be prepared and consumed at home. These same animal parts may also be mixed according to such formulas but then processed into pills, tablets, or tonics. These medicines are produced in mass quantities and packaged in a factory. The consumer purchases these products the same way as Western over-the-counter medicines, often selecting the medication upon the recommendation of a sales clerk or family member, or using their own judgment. Most of these medicines are manufactured in China and are sold in markets worldwide.

Conservationists have long debated the threat posed by the trade in medicines containing or claiming to contain protected and regulated species. To date, wildlife forensics analyses of these medicines indicate that many do not actually contain the parts or derivatives of the animals identified on the medicines' lists of ingredients. These same tests, however, often cannot detect very low levels of animal parts in medicines nor identify parts or derivatives that have been changed by high temperatures or other processing. Also, some of the tests used are not very specific. For example, the test to verify the presence of tiger bone can determine the presence of bone but cannot identify the species or even recognize the source as cat. Conservationists believe, for the most part, that whether or not the medicines contain these species, the advertising and promoting of these products as containing animal parts sustains consumer demand and perpetuates the conservation problem. Recognizing this and the still growing science of wildlife forensics, the parties to CITES decided (Resolution Conf. 9.6) that these medicines should be treated as if they contain these derivatives or as "readily recognizable" parts and derivatives in CITES lingo. As such, trade in these medicines should be prohibited or regulated, depending on the species. In the 1994 resolutions on tiger and rhino trade, CITES parties also recommended that all parties eliminate the demand for tiger and rhino products.

Eliminating the demand for a product--especially one that has humanitarian and cultural roots--is a difficult task and one that requires a multidisciplinary approach. Traditional tools, such as better implementation of CITES or increased efforts toward cooperative law enforcement, will not fully stop the illegal trade. Because most of the international trade of tiger parts used in traditional medicine is illegal in countries under CITES and the ESA--as well as in China, where the manufactured medicines are produced--TRAFFIC recognized that before efforts could be undertaken to eliminate the trade (as requested by the resolutions), the market would have to be more defined and consumers identified. By its very nature, the illegality of the market precludes precisely documenting the exact numbers of consumers and products used. By using standard surveying techniques and sociological research, TRAFFIC planned, instead, to identify and assess the behavior of the persons demanding the products, as well as the nature of the demand itself.

To understand the behavior of the person demanding these products, in July 1997, TRAFFIC North America hired a professional market research firm. Using East Asian researchers and the appropriate languages, the firm surveyed ethnic Chinese-Americans on their use and knowledge of endangered species derivatives for medicines. Traditional East Asian medicine has used the parts and products of rhinos, tigers, and other animals for centuries. A recent TRAFFIC report highlights the persistent trade in these products among some consumers in spite of legal prohibitions (Mills 1997). Because East Asian traditional medicine has its roots in the more ancient traditional Chinese medicine, TRAFFIC decided to focus on TCM rather than the larger and more broadly defined East Asian medicine market and its demand. Focusing on the roots of the tradition should make the results more applicable. The results of that survey will be released in the near future.

To clearly understand the nature of the demand, TRAFFIC North America investigated the display and sale of endangered species products in Canada and the United States. Initiated in late 1996 and completed in the fall of 1997, the investigation documented the variety and availability of manufactured traditional medicines that contained or claimed to contain parts and products from endangered and regulated wildlife throughout the region. The investigator used for comparison a 1995 TRAFFIC report that documented the types of products containing protected and regulated species sold in the United States (Gaski and Johnson 1994). The 1996-97 survey results also were compared with a similar survey (Mills 1996) that was conducted over a three-year period in mainland China, where most tiger and rhino products are manufactured and may still be, despite a manufacturing and export ban imposed in the mid-1990s. These comparisons helped to gauge the importance and, therefore, the significance of North American markets for these products. This report chronicles the results of that survey.

The Legality of the North American Market

Commercial trade of raw rhino horn and of tiger or leopard bone and their derivative products is prohibited by international treaty (all are listed in Appendix I of CITES) as well as by domestic legislation in several countries, including China (Notice Promulgated by the State Council on the Prohibition of Trade in Rhinoceros Horn and Tiger Bone), the United States (Endangered Species Act [ESA] and the Lacey Act), and Canada (The Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act [WAPPIITA]).

The ESA prohibits the import of, export of, and interstate commerce in live animals, raw parts, or products of taxa listed as threatened or endangered, including rhinos (except Southern white rhinos) and tigers. Thus, the import and interstate commerce of medicines containing rhino horn and/or tiger bone is a violation of the ESA. The Lacey Act prohibits the import, export, transport, sale, or purchase of fish and wildlife taken or possessed in violation of state, federal, Indian tribal, or foreign laws. Thus, tiger bone or rhino horn medicines possessed in violation of foreign law and subsequently imported to the United States would violate the Lacey Act.

There are, however, two important drawbacks to the current legal situation in the United States. First, although a product may be labeled as containing rhino horn or tiger bone, under the ESA

and the Lacey Act, the burden of proving that those products actually contain the species listed rests with the government. As a result, few, if any, prosecutions have occurred involving the illegal importation of manufactured tiger bone and rhino horn medicines because current forensic techniques are as yet unable to identify tiger bone or rhino horn in medicinal products. Second, both the ESA and Lacey Act address the issue of import of, export of, and interstate commerce in rhino and tiger products, but they largely fail to address the sale of those products within a state. This enforcement area is currently left to state law, though few states have passed legislation to address the sale of foreign endangered species.

In 1993, China issued the Notice Promulgated by the State Council on the Prohibition of Trade in Rhinoceros Horn and Tiger Bone, which prohibited all use of derivatives of rhino horn and tiger bone, including the manufacture and export of commercial products (all production was banned after 29 May 1993 and export after 30 November 1993).

In Canada, WAPPRIITA prohibits commercial import, export, or possession for commercial sale of any part of or product derived from a listed endangered species under WAPPRIITA, which includes all CITES Appendix I species (Anon. 1997). It is also illegal to import any wildlife part or derivative that was obtained or exported in violation of the law of another country. Thus, the import and the interprovincial or interterritorial commerce of medicines containing rhinoceros horn or tiger bone would be a violation of WAPPRIITA. However, Canada has the same problem with enforcement as does the United States because the burden of proof lies with the government and it generally cannot be proven that these medicines contain tiger or other endangered species. As a result, no prosecutions have ever been successful. And while possession for the purpose of sale is federally prohibited, it is generally difficult, if not impossible, to trace the origin of medicines in shops back to their import into Canada.

Despite these legal prohibitions and the efforts of wildlife enforcement agencies (Gaski and Johnson 1994, Chalifour 1996), products containing or claiming to contain rhinoceros horn and tiger bone continue to be available in North America, particularly within Asian communities in large cities such as New York, San Francisco, Toronto, and Vancouver, where these items are used in TCM. Conservationists believe that this ongoing availability constitutes a violation of CITES and of domestic legislation, is a threat to the species concerned, and should be stopped by wildlife law enforcement agencies.

Canadian Efforts to Eliminate the Illegal Market

In mid-1994, a joint investigation by the Royal Canadian Mounted Police and the Canadian Wildlife Service (CWS) uncovered more than 19,000 illegally imported packaged tiger medicines and more than 26,000 other illegally imported packaged wildlife medicines in a British Columbian warehouse (Chalifour 1996). This discovery prompted a crackdown on illegal medicinal wildlife trade in the Pacific and Yukon CWS region of Canada. As part of this crackdown the region has adopted a policy of 100 percent referral by customs officials to CWS for inspection of any shipment declared as containing East Asian medicines (Chalifour pers. comm. 1998). Careful inspection of these shipments by CWS follows. A similar referral system

is in effect in the Ontario region of CWS, and other proactive or preventive efforts have also been undertaken in other regions as well. For example, many regional CWS offices work closely with importers of traditional East Asian medicine to ensure that importers are complying with the laws relating to medicines containing endangered species.

In 1996, a search warrant served by Revenue Canada Customs on another British Columbian company resulted in the seizure by CWS of 180 boxes of goods that contained illegally smuggled items such as raw tiger bone, bear gall bladders, and alligator parts (Chalifour 1996). Although there have been many seizures of tiger and rhino parts and products (including some raw parts) in Canada, there have been no successful prosecutions relating to the illegal trade in tiger or rhino parts or products.. Many CWS regions are also training customs agents to screen for and identify CITES goods coming into Canada.

Environment Canada has produced some materials to inform travelers and the traditional Asian medicine community about Canadian wildlife laws. For example, Environment Canada has published a multilingual brochure, poster, and video, "Endangered Species and the Traveler." (The brochure and video are available in English, French, Chinese, Vietnamese, Korean, and Japanese.) Environment Canada also teamed up with WWF-Canada and Karuna Community Services (a community Buddhist group in Toronto) in 1997 to produce a brochure on how WAPPRITA legislation applies to medicines that claim to contain wildlife and other ingredients derived from tigers or rhinos. Some CWS regions display CITES exhibits at international airports within their jurisdiction. The Pacific and Yukon CWS region, for instance, has an interactive, multilingual exhibit at the Vancouver airport. In partnership with WWF-Canada, the Ontario CWS office is hoping to place a similar exhibit in the Toronto airport.

Regulating trade in CITES products falls under federal jurisdiction. WAPPRITA also makes it an offense to transport any wild animal or plant part from one province or territory to another if it was taken, possessed, distributed, or transported in violation of a provincial or territorial law, or transported without provincial or territorial permits.

U.S. Efforts to Eliminate the Illegal Market

U.S. efforts to stop illegal trade are comparable to those in Canada, where most law enforcement efforts focus first on regional problems and then become even more focused on problems around urban ports. There does not seem to be a concerted national or even regional effort to address the illegal trade associated with traditional East Asian medicines. However, two interagency task forces, one in Los Angeles and a more recent one in San Francisco, arose from the preliminary law enforcement efforts that required the cooperation, expertise, and authority of a number of federal, state, and city wildlife, judicial, and health agencies. A more comprehensive discussion of these task forces can be found in the Los Angeles and San Francisco sections of this report. The efforts of these two task forces need to be emulated in other urban areas of the United States, particularly in New York City.

The CITES Management Authority of the United States and the U.S. Fish and Wildlife Service (USFWS) Office of Management Authority launched a pilot public outreach project in Los Angeles in 1995. The project is reviewed in the Los Angeles section of this report. While the USFWS has not been able to maintain the intensity of its efforts because of financial limitations, it has maintained contact with the traditional medicine community in Los Angeles and has continued to provide information through its Web site, factsheets and other materials, plus occasional presentations at symposia and traditional medicines meetings, when invited. In addition, the USFWS used materials developed by World Wildlife Fund to collaborate on a project with WWF and the American Zoo and Aquarium Association (AZA) to initiate a public outreach program in the traditional medicine community in Los Angeles. TRAFFIC North America and the World Wildlife Fund undertook this sociological survey of Chinese Americans to identify the demand for and use of medicinal products that use parts of endangered species, the attitudes of Chinese Americans toward the use of such medicines, and the conservation of endangered species. The report of that work is described in the introduction of this publication and will form the basis of an informative education outreach project in Los Angeles. In 1996, a small group of interested teachers attended a training session, and the USFWS provided substitute teachers to take their classes during that period (Anonymous 1997).

This U.S. outreach effort will involve the traditional medicine community in ongoing efforts to eliminate the trade and use of medicines made from illegally imported protected species. As a prelude to that effort, WWF will launch a plan for its "Year for the Tiger" during the Chinese lunar new year that is the "Year of the Tiger." Elements of that plan are to eliminate the trade of tiger products, establish tiger conservation trust funds for habitat protection, increase resources for tiger antipoaching efforts, and help to build public awareness of tiger endangerment around the world.

Other nongovernmental organizations in the United States, such as the Wildlife Conservation Society in New York, will be launching similar initiatives in 1998 for the Year of the Tiger.



**HOW
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FIND
OUT?**

TRAFFIC gathered information on offers to sell medicines that contain or claim to contain legally protected species--rhino (*Rhinocerotidae* spp.) and tiger (*Panthera tigris*). TRAFFIC also collected information on medicines that contain or claim to contain legally regulated species--musk deer (*Moschus* spp.) and bear (*Ursidae* spp.). This compilation was to differentiate between medicines that could never have been legally imported into North America and those that may have been legally imported if certain requirements had been met under Canadian or U.S. law or under CITES provisions. Another legally protected species--leopard (*Panthera pardus*)--was added as the survey began in response to increasing evidence that leopard is being used in place of tiger in many traditional medicines (Mills 1997; Gaski and Johnson 1995). Table 1 lists the medicinal uses of the parts and derivatives of those species. For this report, such medicines will be called protected species medicines or regulated species medicines.

Legally protected species are those that cannot be imported into the United States or Canada for commercial purposes under CITES provisions. The parts of all of those animals are prohibited from commercial trade by CITES Appendix I. In addition, the tiger, leopard, and all but one rhino population (the southern white rhino subspecies) are also listed in the United States as endangered under the ESA and cannot be traded commercially. The offer to sell medicines containing or claiming to contain those species in North America suggests that they were illegally imported.

Legally regulated species are those that are governed by CITES and that generally may be imported with a permit from the country of origin or of reexport. Two taxa in this investigation--musk deer and bears--are identified as regulated, although some populations or species within these taxa are listed in CITES Appendix I or II. Therefore, medicines that contain these taxa *may or may not* have been legally imported, depending on the species or population used. Six national populations of musk deer are listed in CITES Appendix I, and a few--notably the Chinese population--are listed in Appendix II. The former *may not* be imported for commercial purposes but the latter *may be* imported with permits. Most populations or species of bears also are listed in Appendix I, but a few--such as the North American black bear--are listed in Appendix II. Again, the former *may not* be imported for commercial purposes, and the latter *may be* imported with permits. So the offer to sell medicines containing or claiming to contain the words "musk" or "bear" does not necessarily suggest that they were illegally imported.

The United States is home to a small population of ethnic-Chinese, some of whom have lived here for many generations and some of whom have recently arrived from mainland China and other countries. The 1990 population of Chinese in the United States was 1.7 million, or about 0.7 percent of the U.S. population. The ethnic-Chinese population of Canada is about a third of the population of the United States, but it represents a larger percentage of the total population of Canada. The 1991 population of ethnic-Chinese in Canada was 587,000, or about 2 percent of Canada's population.

Because tradition and culture are such an intrinsic part of the lives of Chinese people, physical manifestations are evident wherever they live, particularly where they establish and maintain uniquely Chinese neighborhoods, known as Chinatowns in North America. TRAFFIC decided

to focus on documenting the availability of tiger and rhino medicines in North American Chinatowns because of the concentration of shops that presumably sell those products. TRAFFIC recognized that Chinatowns were visited by Chinese and non-Chinese alike and that the results of the survey would represent the market throughout North America.

Although the final study covered seven cities, TRAFFIC initially identified two U.S. cities with the largest Chinese populations--New York City and San Francisco--and two cities in Canada--Vancouver and Toronto. TRAFFIC thought Toronto would provide a central regional perspective. TRAFFIC added Atlanta to provide a southern U.S. perspective, plus two U.S. cities on the West Coast--Seattle and Los Angeles--because demographic information suggests that most of the Chinese-North American population lives on the West Coast.

TRAFFIC engaged the services of an independent researcher of Chinese descent (hereinafter referred to as the investigator, who is an expert in conducting such surveys. The investigator spoke fluent Mandarin Chinese. He was chosen for his expertise in traditional Chinese medicine in general and for his knowledge of manufactured TCM products specifically. Although the investigator posed as a customer and did not introduce himself as an investigator for TRAFFIC, there were no attempts to trick any shopowner into offering to sell a product that might not normally have been readily available in the shop. TRAFFIC wished to document products that would be readily available to any customer. However, if information on products not displayed was provided by the shopowner or sales clerk during conversations with the investigator, that information was noted.

TRAFFIC sent the investigator to the Chinatown section of each city to locate East Asian pharmacies and markets (hereinafter referred to as "shops") to be surveyed. The investigator surveyed every shop he encountered for the display of or offer to sell the target medicines. No effort was made to randomize the sample; however, this potential limitation in sampling design was likely offset by the high percentage of shops that were surveyed in each city. In other words, the investigator surveyed most shops in the Chinatowns of each city. TRAFFIC believes that this method strongly suggests that the samples were representative of each city and, therefore, comparable.

The investigator surveyed all open display areas for raw parts of rhino and tiger, as well as for manufactured medicines containing rhino horn and/or tiger bone. Whenever possible, the investigator reviewed the ingredients lists of manufactured medicines in both Chinese and English to see if rhino horn and/or tiger bone were listed. After exiting the shop, all displayed medicines listing rhino horn, tiger bone, leopard bone, musk, or bear bile were recorded along with the prices and dates of manufacture, if listed (normally, the medicines had no dates). During the course of a conversation, the investigator sometimes asked about the availability of raw rhino horn, tiger-bone wine, or tiger-bone plaster in a number of other shops. No assumptions were made regarding the actual ingredients of any commercial medicine, and only those medicines that listed the ingredients on or within the packaging were listed as protected species or regulated species medicines.

TRAFFIC used the same sampling methodology as that used in a survey conducted over a three year period, from 1993 through 1995 by TRAFFIC East Asia in China (Mills 1997) so that the results could be compared. Overall, TRAFFIC wanted to derive an accurate count of (1) the number of shops offering for sale one or more medicines listing tiger, rhino, leopard, bear, or musk deer as ingredients; (2) the average number of medicines of protected or regulated taxa offered for sale per shop; and (3) the number of different brands or types of medicines offered for sale.



WHAT
IS
AVAILABLE?

The seven cities selected as targets for the market survey represent a significant percentage of Chinese-North American populations. The five U.S. cities--Atlanta, Los Angeles, New York, San Francisco, and Seattle--included 61 percent of all Chinese-Americans living in the United States (according to the U.S. Bureau of the Census for 1990). The two Canadian cities--Toronto and Vancouver--had 69 percent of the total Chinese-Canadian population (according to Statistics Canada figures for 1991).

The survey results are summarized on a city-by-city basis in this section. Of the 110 shops surveyed, 50 percent (55 shops) offered for sale one or more protected species medicines, or medicines or products that contained or claimed to contain the target protected species--tiger, rhinos, and leopard. Forty-six percent (42 shops) offered for sale one or more regulated species

The cities with the greatest percentage of shops that offer for sale medicines containing protected species are in descending order: New York (83 percent, or 10 of 12 shops); Vancouver (63 percent, or 15 of 24 shops); Seattle (50 percent, or 6 of 12 shops); Toronto (50 percent, or 10 of 20 shops); Atlanta (50 percent, or 3 of 6 shops); San Francisco (42 percent, or 8 of 19 shops); and Los Angeles (18 percent, or 3 of 17 shops).

As shown in Figure 1, the medicines most commonly found offered for sale in North America were those that contained or claimed to contain tiger and musk parts and products. The least commonly found medicines were those containing or claiming to bear parts and products.

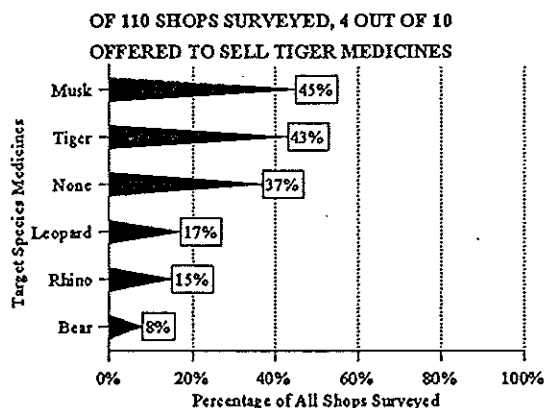


Figure 1.

Of protected species medicines, raw parts or medicines listing rhinoceros horn or tiger bone as ingredients were found in 55 shops (50 percent).

Raw rhinoceros horn was found in only one shop (less than one percent) in Vancouver. All other items found for sale were manufactured medicines. Tiger-bone plaster was found in 14 shops (13 percent) in six cities. Tiger-bone wine was found in six shops (6 percent), five of which were

in Vancouver. Medicines listing leopard bone as an ingredient were found in 18 shops (17 percent).

On a positive note, 40 shops (37 percent) surveyed did not offer to sell any protected or regulated species medicines. Of the total shops surveyed, 12 percent offered to sell regulated species medicines only--bear or musk deer--that may or may not have been legally imported.

At least 31 different types of rhino-or tiger-containing medicines, produced by between 29 and 34 different manufacturers, were found offered for sale during the survey. A precise count of manufacturers is not possible because the names of some manufacturers differed slightly on different labels and might actually represent the same company. For example, Guiyang Chinese Medicine Factory and Guiyang Chinese Medicine Pharmaceutical Factory may or may not be the same manufacturer.

Atlanta

The Chinese-American population in Atlanta, Georgia, was the smallest in all the cities surveyed. Approximately 11,000 Chinese-Americans live in Atlanta, representing about 0.6 percent of the U.S. Chinese-American population (according to the U.S. Bureau of the Census figures for 1990). The six shops surveyed in Atlanta's Chinatown were on New Peach Road and Buford Highway.

To TRAFFIC's knowledge, there have been no focused federal, state, or local law enforcement efforts to eliminate or even control the trade of protected species products in Atlanta. Also, there no outreach efforts appear to be in place to advise or educate Atlanta citizens about this problem.

What's For Sale?

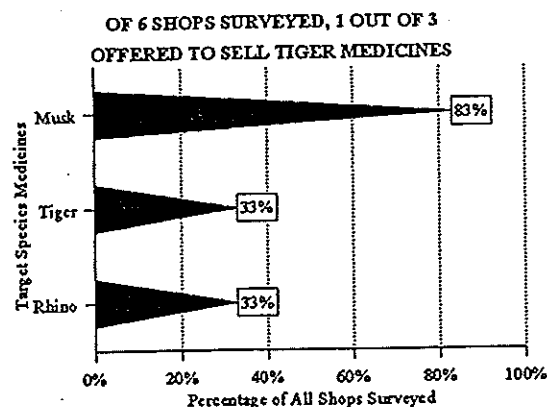


Figure 2.

The results and percentages shown in Figure 2 (and the discussion that follows) are not cumulative. Most Atlanta shops sold more than one medicine, and some shops sold protected and regulated species medicines. This small sample size limits the conclusions and comparisons that can be made regarding this city.

Because Atlanta's Chinatown is small, the investigator visited only six shops. As seen in Figure 2, musk was the most common species medicine found in those shops. Protected species medicines--containing or claiming to contain tiger, leopard, or rhino--were offered for sale in three shops (50 percent). One shop (17 percent) had tiger-bone plaster; none had raw rhino horn or tiger-bone wine. Three shops (50 percent) had other medicines that contained or claimed to contain rhino horn or tiger bone, with an average of one such item offered for sale per shop. One shop offered for sale five different types of medicines containing or claiming to contain tiger

bone or rhino horn as ingredients. All of the shops sold at least one protected or regulated species medicine.

In two shops, the salespeople told the investigator that tiger bone had been banned a long time ago. A musk medicine was recommended as a substitute for a tiger-bone plaster in one shop.

Only 3 of the 14 protected or regulated species medicines available for sale had the date of manufacture on the package--two were dated 1993 and the other 1991. In one shop, the salesperson said the medicine with tiger bone was shipped to the store within the past year. Two of the medicines offered for sale had crudely altered packaging. On one medicine, the tiger bone ingredient was listed but then crossed out with ink. On the other, a completely new list without tiger bone was glued over a list claiming the medicine contained tiger bone.

Los Angeles

The Chinese-American population in Los Angeles, California, is the third largest in all U.S. and North American cities surveyed. About 308,000 people, represent about 19 percent of the U.S. population of Chinese-American population (according to Bureau of the Census figures for 1990). The 17 shops surveyed in Los Angeles were on Broadway, North Spring, New High, and Hill streets.

Los Angeles is the site of major law enforcement and public outreach efforts, among them a law enforcement task force that focuses on traditional medicines. The recently-formed Wildlife Task Force is a multiagency initiative consisting of inspectors and agents from the U.S. Customs Service, U.S. Fish and Wildlife Service, Food and Drug Administration, and U.S. Department of Agriculture. The task force, developed by a team of U.S. Customs import specialists, seeks to address illegal wildlife trade in general and the illegal importation of traditional Chinese medicines specifically. The focus on TCM occurred largely because the rate of consumption of illegally imported endangered species in the Los Angeles area is one of the most significant in North America and there has been little success in combating the illegal trade into the city.

The task force meets regularly to discuss the successes and failures of past interdiction efforts and to make future plans to address the trade. The task force has conducted a number of concerted law enforcement efforts (called "blitzes") by thoroughly inspecting international cargo shipments, passenger flights from target countries, and packages from key countries at the international mail division.

One example of a successful blitz was an inspection of a China Eastern Airlines passenger flight. The agencies involved in the task force inspected the baggage of 223 passengers and found 45 violations, including 18 agriculture violations, 12 fish and wildlife violations, and 15 food and drug violations. Violations ranged from personal shipments of tiger bone plasters and musk deer medicines to a commercial shipment of herbal medicines.

On 28 January 1994, agents from the California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Bureau of Alcohol, Tobacco and Firearms, and Los Angeles Police Department broke up a bear parts poaching and smuggling operation. William Jin Taek Lee, a Korean-American businessman, allegedly operated a hunting club that arranged illegal bear hunts for overseas clients. Capping the 18-month investigation was the arrest of Joseph Chang, who purchased thousands of dollars worth of bear gallbladders from undercover agents. Chang was allegedly involved in a bear parts trading operation that extended to four western states (Anon. 1994).

In September 1994, Chang Hao An was apprehended at Los Angeles International Airport as he attempted to import a complete Amur tiger (*Panthera tigris altaica*) skeleton, along with 200 vials of dried bear bile, two large bear gallbladders, and 60 boxes containing rhinoceros horn, saiga antelope, and musk deer pills. U.S. Customs discovered the items in Chang's baggage and

detained him. Chang was arrested by U.S. Fish and Wildlife Service agents, prosecuted for smuggling, and sentenced to 21 months in prison (Anon. 1995).

On 6 September 1995, U.S. Customs and U.S. Fish and Wildlife Service officials seized more than five kilos of bear bile at Los Angeles International Airport. Agents also confiscated musk deer glands, rhinoceros horn pills, and tiger bone plasters from the clothes and baggage of four Chinese nationals. The subjects were charged with 10 counts of smuggling, unlawful importation of wildlife, and violations of the U.S. Endangered Species Act. All four defendants pled guilty to a misdemeanor. Two were released with time already served; the other two were sentenced to prison: one for one year and one for eight months (Anon. 1995a).

On 25 September 1995, U.S. Fish and Wildlife Service agents in Alaska seized 60 brown bear (*Ursus arctos*) gallbladders that were concealed in a shipment of two tons of Russian reindeer (*Rangifer tarandus*) velvet antler headed for Los Angeles (Anon. 1995b)

On 8 September 1995, U.S. Fish and Wildlife Service authorities at Los Angeles International Airport seized 45 brown bear gallbladders and 20 seal (*Callorhinus ursinus*) penises smuggled inside a commercial shipment of reindeer antlers from Russia (Anon. 1995c).

On 19 October 1995, the U.S. Fish and Wildlife Service launched a public education pilot program in Los Angeles to inform citizens that certain products for sale in Asian medicine shops may contain parts from endangered species, as well as toxins that may be potentially harmful to human health. The event was a joint effort among federal and state agencies and nongovernmental organizations to provide new information to consumers and to clarify U.S. law enforcement responsibilities for protecting endangered species.

The U.S. Fish and Wildlife Service worked closely with the Los Angeles Unified School District, the Los Angeles Zoo, TRAFFIC, and WWF to develop a TCM educational program that could be offered in middle schools, adult education programs, and workshops. Teachers received training enabling them to explain the health risks associated with the use of some packaged medicines, the laws protecting endangered species, and the reasons that possession and sale of products containing parts of endangered species may be illegal (Anon. 1995d).

What's for Sale?

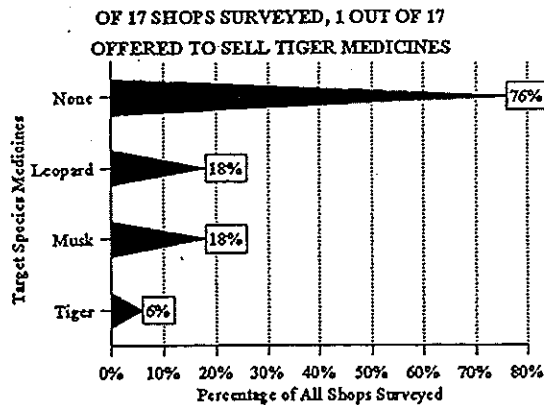


Figure 3.

The percentages in Figure 3 (and the discussion that follows) are not cumulative because some of the shops offered for sale more than one medicine and some offered for sale both protected and regulated species medicines.

Of the 17 shops in Los Angeles surveyed by the investigator, 13 (76 percent) did not offer for sale any protected or regulated species medicines. Leopard and musk were the most common species medicines offered for sale in the shops. Three shops (18 percent) offered for sale protected species medicines that contained or claimed to contain leopard or tiger, and one of those shops had two different brands. The average number of tiger and rhino items offered for sale per shop was insignificant, since only one shop offered to sell one rhino or tiger medicine. Three shops (18 percent) offered for sale protected species medicines and three offered for sale regulated species medicines.

Sales clerks in 12 of the 17 shops (71 percent) were aware of a ban on selling tiger bone. One clerk indicated that the sale of musk was also prohibited, and another indicated that the Food and Drug Administration prohibits the sale of any medicine containing tiger bone or musk. Another clerk said that tiger bone could not be imported or sold, and yet another said that it cannot be sold anywhere in the world because the tiger is a protected animal.

No medicines were seen with altered packaging and none had dates of manufacture. Coincidentally, Los Angeles was the last city surveyed, and the investigator concluded that Los Angeles was the "cleanest" city he had visited in North America.

New York City

The Chinese-American population in New York City was the second largest in all U.S. and North American cities surveyed. The approximate 321,000 people represent about 19 percent of the U.S. population of Chinese-Americans (according to U.S. Bureau of the Census figures for 1990). The 12 shops visited in New York City were on Canal, Lafayette, Mulberry, Elizabeth, Baxter, Bayard, and Mott streets.

To TRAFFIC's knowledge, there have been no focused federal, state, or local law enforcement efforts to eliminate or even control the trade of protected species products in New York City. However, the Wildlife Conservation Society in New York initiated a pilot strategy for public outreach that focuses on Chinese communities in the Flushing, Queens, and Manhattan Chinatowns, along with an education project that is initially working with school children of 8-10 years of age in the Brooklyn Chinese community (Bolze, pers. communication).

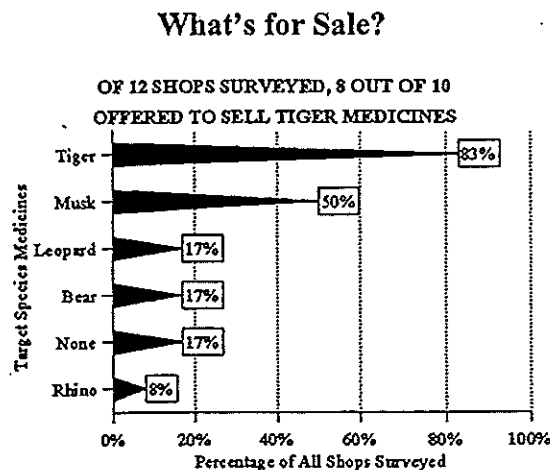


Figure 4.

The percentages in Figure 4 (and the discussion that follows) are not cumulative because some shops offered for sale more than one medicine and some offered for sale both protected and regulated species medicines.

Twelve shops were surveyed in New York City and only two (17 percent) did not offer for sale any protected or regulated species medicines. The most common species medicines offered for sale were those that contained or claimed to contain tiger and musk. Ten shops (83 percent) offered for sale protected species medicines that contained or claimed to contain tiger, leopard, or rhino. Five shops (42 percent) had tiger-bone plaster; none had raw rhino horn or tiger-bone wine. One shop offered up to four rhino or tiger medicines. The average number of rhino and tiger items offered for sale per shop was two.

Six shops (50 percent) offered for sale regulated species medicines that contained or claimed to contain musk or bear bile. One shop offered to sell four different brands of medicines that listed tiger bone, rhino, or a combination of both, as ingredients.

In 3 of the 12 shops (25 percent), sales clerks told the investigator that tiger bone was banned, and one clerk also indicated that musk was banned. Another sales clerk indicated that he was aware that someone in the city had been caught selling rhino horn.

None of the medicines offered for sale had dates of manufacture, and none had altered packaging. The name of one medicine, "Tianqi Shexiang Hugu Zhuifenggao," suggested that it contained tiger bone, but no ingredient list was printed or inserted in the package to confirm this.

San Francisco

The Chinese-American population in San Francisco, California, is the largest of all U.S. and North American cities surveyed. Approximately 332,000 people represent about 20 percent of the U.S. population of Chinese-Americans (according to U.S. Bureau of the Census figures for 1990). The 19 shops visited in San Francisco's Chinatown were on Stockton, Clay, Washington, Pacific, Grant, and Jackson streets.

Two years ago, San Francisco created a multiagency task force similar to the one in Los Angeles to address the illegal wildlife import and export in San Francisco. The task force is headed by a member of the U.S. Attorney's Office and has members from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Customs, U.S. Department of Agriculture, Food and Drug Administration, and California Department of Health Services. Given the large Chinese population and the TCM industry in the San Francisco area, the illegal trade in endangered species parts and products is the task force's primary concern.

To TRAFFIC's knowledge, there have been no focused public outreach efforts in San Francisco.

What's for Sale?

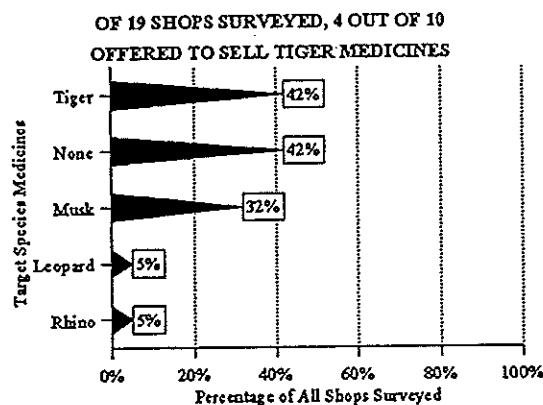


Figure 5.

Of the shops surveyed in San Francisco, 8 of 19 (42 percent) did not offer for sale any protected or regulated species medicines. The most common species medicines found in the 19 shops were those that contained or claimed to contain tiger (the most common) and musk. Eight shops (42 percent) offered for sale protected species medicines containing or claiming to contain tiger, leopard, or rhino. Two shops (11 percent) had tiger-bone plaster, but none had raw rhino horn or tiger-bone wine. Eight shops (42 percent) offered for sale other medicines with rhino horn or tiger bone or both. The average number of rhino horn or tiger bone items offered per shop was less than one. One shop offered to sell five different types of medicines that listed tiger bone or rhino horn as an ingredient.

Six shops (32 percent) offered to sell regulated species medicines. Six shops (32 percent) offered to sell medicines listing musk as an ingredient.

In six shops (32 percent), the sales clerks told the investigator that tiger bone was banned. None of the medicines had dates of manufacture. The packaging and ingredients lists of three medicines which were seen for sale elsewhere in the United States and Canada and were known to have tiger bone as an ingredient, did not list it on the package. No packages were altered nor were any ingredients struck off the lists, as seen in other cities.

Seattle

The Chinese-American population in Seattle, Washington, was the second smallest in all the cities surveyed. Approximately 29,000 people represent about two percent of the U.S. population of Chinese-Americans (according to the U.S. Bureau of the Census figures for 1990). The 12 shops surveyed in Seattle's Chinatown were on Maynard, King, and Weller streets, and on Beacon, Seventh, and 128th avenues.

To TRAFFIC's knowledge, there have been no focused federal, state, or local law enforcement efforts to eliminate or even control the trade of protected species products in Seattle. Also, no outreach efforts appear to have advised or educated Seattle citizens about this problem.

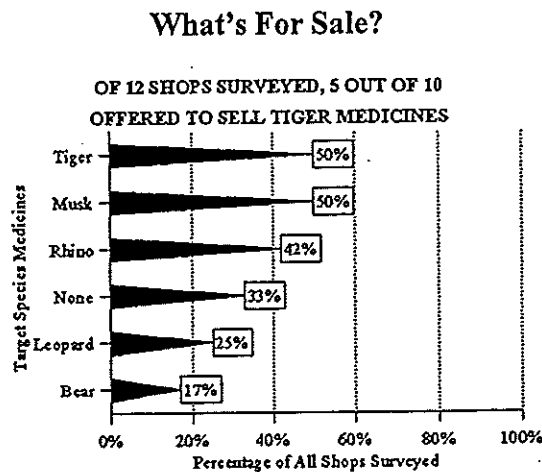


Figure 6.

The percentages in Figure 6 (and the discussion that follows) are not cumulative because some shops offered for sale more than one medicine and some offered for sale both protected and regulated species medicines.

Of the shops surveyed in Seattle, 4 of 12 (33 percent) did not offer for sale any protected or regulated species medicines. Of the 12, only 10 shops had commercial Asian medicines of any type. Tiger, rhino, and musk were the most common species medicines found in the shops surveyed. Six shops (50 percent) offered to sell protected species medicines. Rhino horn or tiger bone items were offered for sale in six shops (50 percent). The average number of rhino horn or tiger bone items offered for sale per shop was two.

Six shops (50 percent) had regulated species medicines. One shop had 11 different types of medicines listing tiger bone, rhino horn, musk, or leopard bone, or combinations of those, as ingredients.

In six shops (50 percent), sales clerks told the investigator that tiger bone was banned. One clerk said that tiger bone is illegal in the United States but is available in Asia. Another indicated that musk was also banned.

None of the medicines had dates of manufacture. None had altered packaging, although one medicine previously identified as claiming to contain rhino did not have an ingredient list, so it could have contained rhino.

Toronto

The Chinese-Canadian population in Toronto, Ontario, is the largest in any Canadian city and third largest in all North American cities surveyed. Approximately 210,000 people represent about 36 percent of the Chinese-Canadian population (according to Statistics Canada figures for 1991). The 20 shops visited in Toronto's Chinatown were on Dundas, St. Andrews, Huron, and Spadina streets.

Efforts to control trade in protected species in Toronto has been focused largely on importation. The CWS Ontario region recently completed a pilot project wherein they trained two customs officers in Toronto to be CITES specialists. Although successful, such training projects are not yet a permanent policy of the region. The same region also produced a multi-lingual brochure on WAPPRIITA and the trade in medicines containing wildlife ingredients, in cooperation with WWF Canada and Karuna Community Services (Anon. 1997).

To TRAFFIC's knowledge, there has been no comprehensive provincial or local law enforcement efforts to eliminate or even control the trade of protected species in Toronto. The above-mentioned brochure has been distributed and there are plans to have a formal meeting with importers of traditional medicine, however, no overall public awareness effort has been undertaken and no outreach efforts appear to have been initiated to advise or educate Toronto citizens about this problem.

What's for Sale?

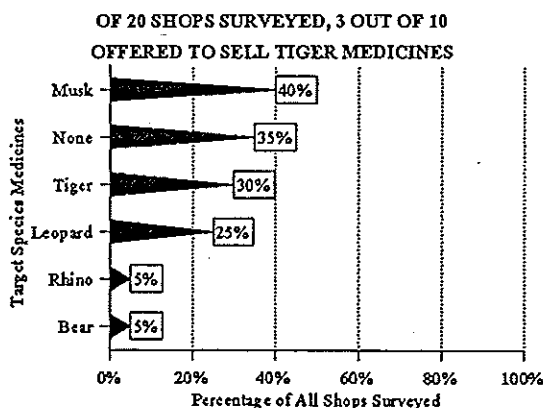


Figure 7.

The percentages in Figure 7 (and the discussion that follows) are not cumulative since some shops offered for sale more than one medicine and some offered for sale both protected and regulated species medicines.

Of the shops surveyed in Toronto, 7 of 20 (35 percent) did not offer for sale any protected or regulated species medicines. Tiger and musk were the most common species medicines found in the 20 shops surveyed. Protected species medicines containing or claiming to contain tiger, leopard, and rhino were found in ten shops (50 percent). Rhino horn or tiger bone items were found in seven shops (35 percent). Two shops (10 percent) had tiger-bone plaster; one shop (5 percent) claimed to have tiger-bone wine and no shops had raw rhino horn. Five shops (25 percent) had other commercial medicines with rhino horn or tiger bone. One shop offered to sell five rhino or tiger medicines. Eight shops (40 percent) offered regulated species medicines for sale. The average number of items per shop was less than one.

In nine shops (45 percent), the sales clerks told the investigator that tiger bone is banned from sale. One clerk said that tiger bone plasters cannot be found anywhere in the world because tigers are fully protected animals. Another said that rhino horn is banned from sale and that antelope or other horn can be used instead; even if rhino horn could be found in the city, it would be too expensive. Still another clerk said that rhinos are class one protected animals and that anyone caught selling horn can get 15 years in jail. One clerk helpfully offered another tiger bone plaster as an alternative, and another suggested that tiger bone wine may be available for between C\$25 and C\$125, a bottle depending on the brand, but it is kept in a secret place because of the ban.

None of the medicines had dates of manufacture and none of the packages were altered. Some brands were known from previous shops to have contained or claimed to contain tiger or rhino, but the packages examined did not list those ingredients. Interestingly, one of the medicines listed "African tiger bone" on the package. Because lion bone has been noted on medicine lists that formerly listed tiger bone, it is not certain if this was lion bone or the result of an effort to bypass prohibitions on "Asian tiger bone."

Vancouver

The Chinese-Canadian population in Vancouver, British Columbia, was the second largest in the two Canadian cities and fourth largest of all North American cities surveyed. Approximately 198,000 people represent about 33 percent of the Chinese-Canadian population (according to Statistics Canada figures for 1991). The 24 shops surveyed in Vancouver's Chinatown were on Main, Pender, Gore, Keefer, and Hasting streets.

The Pacific and Yukon CWS region of Canada has adopted a policy of 100 percent referral by customs officials to CWS for inspection of any shipment declared as containing East Asian medicines (Chalifour pers. comm. 1998). Careful inspection of these shipments by CWS follows. CWS regional staff have also been working closely with the importers of traditional East Asian medicine into the region to ensure that they are aware of WAPPRIITA rules. CWS staff in this region have occasionally gone into shops and seized CITES Appendix I items under WAPPRIITA prohibitions on sale. However, no prosecutions have ensued.

A number of federal cooperative law enforcement efforts have occurred in Vancouver. Reportedly, more than 211,000 items whose ingredients contained or claimed to contain endangered species derivatives were seized at the port of Vancouver in 1995, compared to only 1,200 items seized in 1987 (Anon. 1996).

On 28 June 1996, Canadian Customs inspectors and Canadian Wildlife Service (CWS) officers in Vancouver seized almost 20,000 items of illegally imported Asian medicines containing or claiming to contain parts or derivatives of endangered wildlife. The shipment, sent from Hong Kong, was destined for Canada's growing East Asian communities in Vancouver and Toronto (Anon. 1996).

On 29 March 1997, officers of the Ministry of Environment, Land and Parks along with regional conservation officers assisted by the Royal Canadian Mounted Police, seized 21 bear gallbladders at the Vancouver International Airport from a man traveling from Toronto to Vancouver (Anon. 1997).

On 11 April 1997, officers of the Ministry of Environment, Lands and Parks in Victoria, British Columbia, reported that charges had been filed against Chun Mau Wong for selling bear gallbladders between Seattle, Washington, and Vancouver, British Columbia, to an undercover officer on two occasions (Anon. 1997a). Although most of these cases have received local, national, and even international publicity, the only efforts to advise or educate Vancouver citizens about this problem are the CWS distribution of a joint CWS and WWF brochure on WAPPRIITA, meetings with importers of medicines, and visits to retail shops.

What's For Sale?

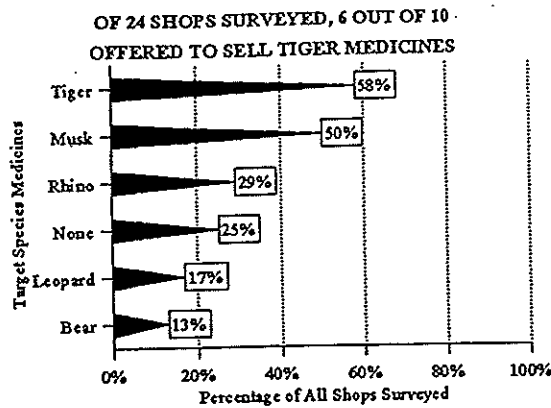


Figure 8.

The percentages shown in Figure 8 (and the discussion that follows) are not cumulative because shops offered for sale more than one medicine, and some offered for sale both protected and regulated species medicines.

Of the shops surveyed in Vancouver, 6 of 24 (25 percent) did not offer to sell any protected or regulated species medicines. Musk, tiger, and rhino were the most common species medicines found in the 24 surveyed shops. Protected species medicines were offered for sale in 15 shops (63 percent), with rhino horn or tiger bone items offered for sale in 14 shops (58 percent). Three shops had tiger-bone plaster (13 percent), and five had tiger-bone wine (21 percent). Raw rhino horn was offered for sale in one shop (4 percent). Twelve shops (50 percent) had only regulated species medicines. The average number of rhino and tiger items offered for sale in all shops surveyed was two.

In 14 shops (58 percent), the sales clerks told the investigator that tiger bone, rhino horn, and musk were banned. One clerk told the investigator that rhino horn might be available in the city but that no one would sell to a stranger because someone had been arrested for selling musk or bear bile. Another clerk also indicated that rhino horn might be available. Still another indicated that musk was illegal, but was not certain why.

None of the medicines had dates of manufacture. Two medicines had altered packaging on which the musk, tiger bone, and bear bile were covered by black ink. One medicine, "Huguzhuifeng" plaster, had tiger in its name but did not list tiger as an ingredient. Three medicines were known to have once had tiger bone as an ingredient, but it was no longer listed on the package. One medicine, "Diedazhitonggao," specifically indicated on its package that it "excluded any part of tiger."



**HOW
DOES
NORTH
AMERICA
COMPARE
TO
OTHER
MARKETS?**

Canada and the United States are not the only non-Asian countries that have an internal market for traditional medicines that contain or claim to contain protected species such as tiger and rhino. According to an analysis of Chinese CITES data by TRAFFIC International, 16 non-Asian countries--Australia, Belgium, Bulgaria, Canada, Cuba, Denmark, France, Ghana, Italy, Mauritius, the Netherlands, Panama, the former Soviet Union, Togo, the United Arab Emirates, and the United States--were documented destinations for tiger products from China (Mulliken and Haywood 1994). But, as noted in this 1994 analysis, these medicines are found in markets worldwide.

Australian and New Zealand Markets

An investigation by TRAFFIC Oceania in 1995 (Callister and Bythewood 1995) revealed that Australia and New Zealand had small markets and legislative problems that deterred effective implementation of CITES and internal controls. TRAFFIC Oceania visited 144 shops in three cities in Australia and 30 shops in two cities in New Zealand. TRAFFIC found that 3 of 20 shops in Australia and 4 of 20 shops in New Zealand sold tiger medicines, compared to 9 of 20 in Canada and 8 of 20 in the United States. (See Table 2.)

Table 2. Comparison of the Availability in Five Countries of Manufactured Products Claiming to Contain Rhino and Tiger Parts or Derivatives

| Country | Number of Shops/Cities Surveyed | Survey Year(s) | Percentage of Surveyed Shops Selling Tiger Products | Percentage of Surveyed Shops Selling Rhino Products |
|---------------|---------------------------------|----------------|---|---|
| Australia | 144 shops in 3 cities | 1995 | 14 percent | 3 percent |
| Canada | 44 shops in 2 cities | 1996-1997 | 45 percent | 18 percent |
| China | 280 shops in 7 cities | 1993-1995 | 3 percent | 4 percent |
| New Zealand | 30 shops in 2 cities | 1995 | 20 percent | 0 percent |
| United States | 66 shops in 5 cities | 1996-1997 | 41 percent | 14 percent |

Source: Callister and Bythewood 1995, Mills 1997.

The China Market

In mid-1993, China prohibited the internal and external trade and manufacture of tiger and rhino medicines. Following that ban, TRAFFIC East Asia began a three-year survey to determine the continued availability of medicines and of raw rhino and tiger products in China. In total, 13 cities were surveyed in China, however, to better compare the survey results with the North American survey (see Table 3), TRAFFIC North America calculated the results using seven Chinese cities visited in 1995 (see Table 4).

Results from China in 1996 showed that in these select seven cities, 54 of the 280 shops (19 percent) offered for sale rhino or tiger items. Eleven different types of rhino-or-tiger-containing commercial medicines were found that were produced by approximately 13 manufacturers (see Table 5). In the seven cities surveyed, 6 of 20 shops sold tiger medicines.

Based upon this information, TRAFFIC North America notes that the current availability of protected or regulated species medicines in these five western countries appears to be even greater than what was found by TRAFFIC East Asia in China in 1995. TRAFFIC East Asia found only a small residual trade of such medicines within China in the years since the complete prohibition on their sale, manufacture, and export. At the same time, however, TRAFFIC East Asia found that a few manufacturers were still willing to ship (and even manufacture) prohibited medicines to potential buyers outside China despite these prohibitions. The North American availability of rhino and tiger medicines manufactured in China suggests that there might be other manufacturers or exporters willing to break the law to export these medicines, or that stockpiles of these medicines remain both within or outside China.

This speculation on illegal manufacture in China, illegal export from China, or stockpiles in other countries is further supported by the fact that TRAFFIC North America identified a total of 31 medicines from at least 29 Chinese manufacturers for sale in North America (see Table 6). If we compare these results to those mentioned above from China, more than twice as many medicines are found in the United States and Canada than those found in China, the manufacturing source of such medicines. The list of medicines sold in the United States and Canada was compared to a list previously compiled by TRAFFIC of the late 1980s through the early 1990s (Gaski and Johnson 1994) documented 73 medicines containing or claiming to contain tiger parts. More information on the manufacturers and their stockpiles, if any, is needed.

Table 3. Summary of Data Collected During the TRAFFIC North America Survey of Asian Pharmacies and Markets in Selected North American Cities, 1996-1997.

| | Atlanta | Los Angeles | New York | San Francisco | Seattle | Toronto | Vancouver |
|---|------------|-------------|------------|---------------|-------------|------------|------------|
| Number of businesses surveyed | 6 | 17 | 12 | 19 | 12 | 20 | 24 |
| No. of businesses (%) with at least one RH/TB item [RH/TB item - raw RH, TBP, TBW, or other commercial medicine containing TB, RH, or both] | 3 (50.0%) | 1 (6.0%) | 10 (83.0%) | 8 (42.0%) | 6 (50.0%) | 7 (35.0%) | 14 (58.0%) |
| Number of businesses (%) with raw RH | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.17%) |
| Number of businesses (%) with TBP | 1 (16.7%) | 1 (5.9%) | 5 (41.7%) | 2 (10.5%) | 0 (0.0%) | 2 (10.0%) | 3 (12.5%) |
| Number of businesses (%) with TBW | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (5.0%) | 5 (20.8%) |
| Number of businesses (%) with other commercial medicines containing TB, RH, or both | 3 (50.0%) | 0 (0.0%) | 9 (75.0%) | 7 (36.8%) | 6 (60.0%) | 5 (25.0%) | 11 (45.8%) |
| Average number (range) of RH/TB items per business [includes only businesses with at least one item] | 2.33 (1-4) | 1.00 (1) | 2.70 (1-4) | 2.00 (1-5) | 5.17 (2-11) | 2.50 (1-5) | 2.71 (1-6) |
| Number of businesses (%) with commercial medicines containing LB [includes plasters and wines] | 0 (0.0%) | 3 (18.0%) | 2 (17.0%) | 1 (5.0%) | 3 (25.0%) | 5 (25.0%) | 4 (17.0%) |
| Number of businesses (%) with commercial medicines containing MK [includes plasters] | 5 (83.0%) | 3 (18.0%) | 6 (50.0%) | 6 (32.0%) | 6 (50.0%) | 8 (40.0%) | 12 (50.0%) |
| Number of businesses (%) with commercial medicines containing BB | 0 (0.0%) | 0 (0.0%) | 2 (17.0%) | 0 (0.0%) | 2 (17.0%) | 1 (5.0%) | 3 (13.0%) |

Formula: RH = rhinoceros horn; TB = tiger bone; TBP = tigerbone plaster; TBW = tigerbone wine or tigerbone-papaya wine; LB = leopard bone; MK = musk; BB = bear bile

Table 4. Summary of Data Collected During the TRAFFIC Network Survey of Businesses in Selected Cities in the People's Republic of China, 1996.

| | Beijing | Chengdu | Nanchang | Shanghai | Tianjin | Xi'an | Zhengzhou |
|---|------------|----------|-----------|----------|------------|----------|-----------|
| Number of businesses surveyed | 49 | 53 | 33 | 25 | 35 | 50 | 35 |
| No. businesses (%) with at least one RH/TB item [RH/TB item- raw RH, TBP, TBW, or other commercial medicine containing TB, RH, or both] | 11 (22.4%) | 1 (1.9%) | 6 (18.2%) | 2 (8.0%) | 23 (65.7%) | 4 (8.0%) | 7 (20.0%) |
| Number of businesses with raw RH or RHP | 0 | 1 | 2 | 0 | 1 | 2 | 4 |
| Number of businesses with TBP or TBW | 0 | 0 | 4 | 0 | 2 | 0 | 1 |
| Number of businesses (%) with other commercial medicines containing TB,RH, or both | 11 (22.4%) | 0 (0.0%) | 0 (0.0%) | 2 (8.0%) | 22 (62.9%) | 2 (4.0%) | 2 (5.7%) |

Formula: RH = rhinoceros horn; RHP = rhinoceros horn powder; TB = tiger bone; TBP = tigerbone plaster; TBW = tigerbone wine or tigerbone-papaya wine

Table 5. Commercial Medicines and Manufacturers Found During the TRAFFIC Network Survey of Businesses in Selected Cities in the People's Republic of China, 1996.

| Name of Medicine | Manufacturer | Contents |
|---------------------------|---|----------|
| <i>Angongniuhuangwan</i> | Tianjin Darentang Pharmaceutical Factory | RH |
| <i>Dahuoluodan</i> | Beijing Tongrentang Pharmaceutical Factory | TB |
| <i>Dahuoluodan</i> | Beijing Tongrentang 2nd Pharmaceutical Factory | RH, TB |
| <i>Dahuoluodan</i> | Fushun 2nd Chinese Medicine Pharmaceutical Factory | RH |
| <i>Hugujiu</i> | Beijing Tongrentang Pharmaceutical Factory | TB |
| <i>Huitianzaizaowan</i> | Harbin 1st Chinese Medicine Factory | TB, LB* |
| <i>Huitianzaizaowan</i> | Harbin 2nd Chinese Medicine Factory | RH, TB |
| <i>Huitianzaizaowan</i> | Liaoning Benxi Chinese Medicine Factory | RH, TB |
| <i>Huitianzaizaowan</i> | Chengchun People's Pharmaceutical Factory | RH, LB |
| <i>Huitianzaizaowan</i> | Heilongjiang Mudanjiang Pharmaceutical Factory | RH, TB |
| <i>Huitianzaizaowan</i> | Heilongjiang Mudanjiang Chinese Medicine Pharm. Factory | RH, TB |
| <i>Huitianzaizaowan</i> | Tianjin Darentang Pharmaceutical Factory | TB |
| <i>Jianbuhuqianwan</i> | Beijing Tongrentang Pharmaceutical Factory | RH |
| <i>Jufangzhibaosan</i> | Beijing Tongrentang Pharmaceutical Factory | RH |
| <i>Jufangzhibaosan</i> | Tianjin Darentang Pharmaceutical Factory | RH, AH |
| <i>Niuhuangqingxinwan</i> | ??? | RH |
| <i>Rhino Horn Powder</i> | Hubei Suizhou Zutian Pharmaceutical Factory | TB |
| <i>Tiger Bone Plaster</i> | Wuhan Jianmin Pharmaceutical Factory | TB |
| <i>Tiger Bone Wine</i> | Wuhan Fifth Pharmaceutical Factory | TB |
| <i>Tiger Bone Wine</i> | Wuhan Zhonglian Pharmaceutical Factory | TB |
| <i>Tiger Bone Wine</i> | Tianjin 2nd Chinese Medicine Factory | TB |

* = ingredients list not seen; these are probable contents

Table 6. Commercial Medicines and Manufacturers Found During the TRAFFIC North America Survey of Asian Pharmacies and Markets in Selected Cities in North America, 1996-1997.

| Name of Medicine | Manufacturer | Contents |
|--|---|--------------|
| <i>Chinese Chifeng Toukuwan</i> | China Nat'l Chemicals I & E Corp., Kwangtung Branch | TB |
| <i>Dahuoluodan</i> | Beijing Tongrentang Pharmaceutical Factory | TB |
| <i>Dahuoluodan</i> | Beijing Tongrentang Pharmaceutical Factory | RH, TB |
| <i>Dahuoluodan</i> | Foshan 1st Pharmaceutical Factory | TB, RH |
| <i>Dahuoluodan</i> | Guangzhou Chengliji Pharmaceutical Factory | RH, LB |
| <i>Dahuoluowan</i> | Lanzhou Foci Pharmaceutical Factory | TB, Musk, RH |
| <i>Duzhonghuguiwan</i> | Huabei Pharmaceutical Factory | TB |
| <i>Duzhonghuguiwan</i> | Guangchang Pharmaceutical Factory (Hong Kong) | TB |
| (To Chung Fu Quat Pills) | ("Kwong Cheong Medicine Manufactory") | |
| <i>Duzhonghuguiwan</i> | Guiyang Chinese Medicine Factory | TB |
| <i>Duzhonghuguiwan</i> | Guiyang Chinese Med. Pharmaceutical Factory | TB |
| <i>Hugubeitongwan</i> | Medicine No. 1 Manufactory of China Guangchow | TB |
| (Tiger-bone Pain Relieving Pills) | | |
| <i>Huguijiu</i> (Tiger Bone Wine) | Beijing Tongrentang Medical Wine Factory | TB |
| <i>Huguijiu</i> (Tiger-bone Wine) | Shandong ?? Pharmaceutical Factory | TB |
| <i>Hugumuguajiu</i> (Tiger-bone Papaya Wine) | Guangxi Wuzhou Longshan Pharmaceutical Factory | TB |
| <i>Hugumuguajiu</i> (Tiger Bone-Papaya Wine) | Lung Shan Distillery, Wuchow, China | TB |
| <i>Hugumuguajiu</i> (Tiger-bone Papaya Wine) | Shanghai Chinese Medicine Works | TB |
| <i>Jianbuhuguiwan</i> | Beijing 5th Pharmaceutical Factory | TB |
| <i>Jianbuhuguiwan</i> | Lanzhou Foci Pharmaceutical Factory | TB |

| Name of Medicine | Manufacturer | Contents |
|---|---|---|
| <i>Medicated Plasters of Moschus, Fel Ursi, Os Tigris and Yunnan Baiyao</i> | "A Product of Yunnan, China" | Musk, BGB (TB not listed although name says TB) |
| <i>Niuhuangqingxinwan</i> | Beijing Tongrentang Pharmaceutical Factory | RH |
| <i>(Qiangli) Renshenzaicao wan</i> | Foshan Lianhe Pharmaceutical Factory | TB, Musk, RH |
| <i>Qianglizhuifengtouguwan</i> | Guangzhou Lianhe Pharmaceutical Factory | TB |
| <i>Rhinoceros Skin and Green Turtle Pills</i> | Guangdong (Lianhe?) Pharmaceutical Factory | RH |
| <i>Shengrongtougwan</i> | Fusong Pharmaceutical Factory | TB |
| <i>(Ginseng Antler Tiger-bone Pill)</i> | Fu Sung Pharmaceutical Works | TB |
| <i>Shenrongtougwan</i> | | |
| <i>("Shenyung Huku Wan"; also labelled "Ginseng Antler Tiger-bone Pills")</i> | | |
| <i>Shenyung Huku Wan</i> | Fusung Pharmaceutical Works | TB |
| <i>(Ginseng Antler Tiger-bone Pills)</i> | | |
| <i>Shexiangchuijengtouguwan</i> | Guangzhou Medicinal Industry Company | Musk, TB |
| <i>Shexiangduzhongtougwan (capsules)</i> | Sichuan Medicines and Health Products Company | "Synthetic" Musk, "Synthetic" TB |
| <i>Shexianghugugao (Musk and Tiger-bone Plaster)</i> | Shenyang Changqing Pharmaceutical Factory | Musk, TB |
| <i>Shexianghuguan (Musk-Tiger Bone Pills)</i> | Chongqing Chinese Medicine Factory | Musk, TB |
| <i>Shexiangtanghuguan (Radix Caulophylli Pill)</i> | Weimin Medicine Manufactory | Musk, TB |
| <i>Shexiangxiogandanzhuifengwan (Rheumatism Pill)</i> | Jilin Chinese Medicine Manufactory | TB, Musk, BGB |
| <i>Shexiangzhuifengtougwan</i> | Guangzhou Chinese Medicine No. 1 Pharm. Factory | Musk, TB |

Table 6 continued.

| Name of Medicine | Manufacturer | Contents |
|---|--|----------------|
| <i>Shihyeguangwan</i> | Shandong Jinan Renim Pharmaceutical Factory | RH |
| <i>Tianna Duzhongtuguan</i> | China Nat'l Native Produce and Animal By-Products | TB |
| (<i>Tianna Duzhong Tiger-bone Pills</i>) | I & E Corp., Fuchen Branch, Chuanchow Office (Qianzhou, Fujian) | |
| <i>Tiannachuguan</i> | Chengdu 7th Pharmaceutical Factory | TB |
| <i>Tiannahuguan</i> | Chengdu Dongfeng (possibly = 7th) Pharm. Factory | TB |
| Special Strong <i>Tiannahuguan</i> | Qingdao Pharmaceutical Factory | TB |
| <i>Tiangtuguan</i> | Chengdu 7th Pharmaceutical Factory | TB |
| <i>Tiangtuhuguan</i> | Weimin Medicine Manufactory | TB, Musk |
| <i>Tiger Bone Pills</i> | Yat Chau Medicine Manufacturing Co. Ltd. (HK) | TB |
| <i>Tiger Bone Plaster</i> | China Chongqing Traditional Medicine Factory | TB paste, Musk |
| <i>TBP</i> | Chongqing Traditional Medicine Factory | Musk, TB |
| <i>TBP</i> (Musk and Tiger-bone Plaster) | 5th Chengdu Pharmaceutical Factory | Musk, TB |
| <i>TBP</i> | NOTE: Simplified packaging with no brand name or factory listed; trademark looks like that of "Erneishan Brand", therefore likely made by 5th Chengdu Pharm. Fact. | Musk, TB |
| <i>Tsei Hung Chui Fung Touku Wan</i> | Beijing Tongrentang Pharmaceutical Factory | Musk, TB, BGB |
| <i>Wulongerhujiu</i> (Five-dragon Two-tiger Wine) | Guangxi Wuzhou Longshan Pharmaceutical Factory | TB? |
| <i>Xianghushenfengshiwan</i> | Shandong ?? Pharmaceutical Factory | TB, BGB |
| (Bear Tiger Snake Rheumatic Pills) | | |
| <i>Yenshunzaizaowan</i> (= Renshenzaizaowan) | Foshan Lianhe Pharmaceutical Factory | Musk, TB, RH |
| <i>Zhenzhunihuangxijiaojieduwan</i> | Guangdong ?? Company | RH |



WHAT
DO
WE
NOW
KNOW?

1. Protected Species Medicines Are Readily Available In North America

Protected species medicines--those containing or claiming to contain tiger, rhino, and leopard--continue to be widely and openly available on the North American market as seen in the graphic below.

This is supported by the results that show that:

- ✓ a high percentage of shops (50 percent) offered to sell manufactured medicines listing rhino horn and/or tiger bone as ingredients were identified;
- ✓ these protected species medicines were offered for sale in all cities surveyed; and
- ✓ a large number and variety of brands of manufactured medicines were offered for sale.

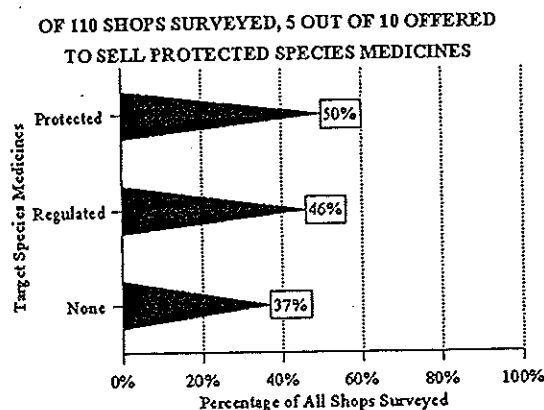


Figure 9.

These survey results are especially relevant because they were obtained by an investigator of Chinese descent who was a total stranger to the clerks and shopkeepers surveyed. If a stranger could obtain these results--in a system based strongly on trust and long-standing personal relationships--one might conclude that many more items, possibly even raw tiger bone or rhino horn, might be available to trusted regular customers.

2. Protected Species Medicines Are Available Because of Legal Inadequacies

The protected species medicines found in the survey are available because legal inadequacies or loopholes allow these medicines to be legally sold since they cannot be proved to be illegally imported. For example, since tiger bone medicines cannot at this time be forensically proved to contain tiger bone, the illegal import of these medicines cannot be proved in a court of law.

Prosecutors for both the Canadian and U.S. governments are required by federal law to show that the products do contain tiger bone. Because of this burden of proof requirement under both countries' federal laws and because most of these medicines are smuggled into both countries, these medicines are "legally sold" throughout the region since their illegality cannot be proved otherwise.

The market flourishes because of the "legal availability" of these medicines and the fact that almost 10 percent of ethnic-Chinese surveyed by TRAFFIC in July 1997 use or have used tiger bone medicines. This market continues even though it has been illegal to commercially import tiger products into the United States since 1972.

Therefore, of the 1.7 million Chinese-American population, at least 153,000 have used tiger medicines at least once. Thus, at least 153,000 individual packages of medicine that contain or claim to contain tiger were purchased or will be purchased by this small group of consumers in the United States. These numbers do not take into account other ethnic East Asian or even non-Asian users of these medicines. Herbal--and therefore traditional--packaged medicines have become popular with people of all ethnic background in Canada and the United States.

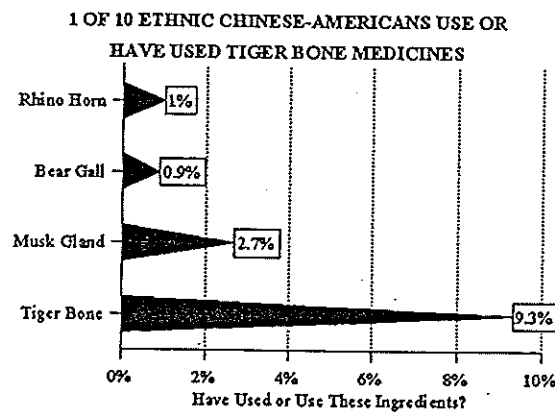


Figure 10.

3. North America Appears to Be a Significant Market for These Medicines

The openness and effective "legality" of the offer for sale of these products in North America suggests and even promotes the idea that the United States and Canada are significant Western markets for protected species medicines. Virtually all (except one in Hong Kong) of the rhino horn and tiger bone items found in the North American survey were commercially manufactured in China. There is also a greater variety of these medicines in North America than in China--41 percent of the shops in North America offered these products for sale as compared to 19 percent in China.

Overall, considerably more brands or types of manufactured medicines, made by more manufacturers, were offered for sale in North America in 1996-1997 than in China in 1996. Is the North American market encouraging the development of new products or sustaining a market for products that have been outlawed in China? The survey found that North America had 31 types of medicine compared to 11 types of medicine in China. Approximately 29 manufacturers were associated with the medicines offered for sale in North America, compared to approximately 13 manufacturers in China.

4. Illegal Stockpiles of These Medicines May Exist

The widespread availability and variety of manufactured medicines in North America three to four years after the Chinese ban went into effect suggests that commercial medicines claiming to contain rhino horn or tiger bone continue to be manufactured in or exported from China. This situation would clearly be a violation of Chinese law as well as U.S. and Canadian laws; therefore, it is important to document whether such manufacture and export is actually taking place. A second possibility for the continuing supply of these medicines is that another country is illegally reexporting stockpiled manufactured medicines that were imported at one time from China. Still another reason may be that one or more North American importers purchased and stockpiled these medicines as the Chinese ban went into effect and those stocks are a source of the trade.

Determining the age of medicines identified in the survey is difficult because very few of the medicines surveyed had a manufacture date on the package, and those that did were dated September 1993. (The Chinese prohibition went into effect in mid-1993.) Illegal imports of these medicines have been documented in the past in a TRAFFIC analysis of U.S. imports of protected and regulated medicines (Gaski and Johnson 1995), and such imports have been intercepted in law enforcement investigations.

5. Public Outreach Must Be Initiated to Eliminate These Markets

A lesson may be learned from the results of this survey. Los Angeles was the "cleanest" of all North American cities. In normal circumstances, the profile of Los Angeles would be very similar to that of San Francisco. Both are in California, both have large and historic Chinese-American populations, and both harbor a well-established and defined Chinatown. However, Los Angeles has been subjected to intensive, multi-year, cooperative law enforcement efforts by federal, state, and local law enforcement authorities. Subsequent court cases and sentences received extensive press coverage in the city and throughout the region, as well as in East Asia. During that time, the U.S. government also initiated a brief pilot project on public outreach on the use of traditional medicines that exploit endangered species.



**WHAT
CAN
BE
DONE?**

ACTION 1. Increase Regional Law Enforcement.

Both Canada and the United States have comprehensive laws to implement most of the provisions of CITES and to strongly penalize and deter illegal trade. Both countries also have wildlife legislation--the U.S. Lacey Act and a provision in Canada's WAPRIITA--that prohibit the import and interstate, interprovincial, or interterritorial commerce of animals taken in violation of the wildlife laws of any country, state, province, or territory. In addition, the combined force of law enforcement personnel in Canada and the United States focusing on wildlife trade issues exceeds the entire wildlife enforcement capacity of some continents. Therefore, although inadequacies exist in both countries' wildlife legislation that impede prosecution of illegal trade in endangered species medicines, these countries are clearly not doing enough on a nation-wide basis to stop illegal imports and eliminate markets and demand.

In addition, a key issue for law enforcement agencies in North America is the ability to determine whether commercially available medicines actually contain the rhino horn or tiger bone listed as ingredients. Forensic testing has thus far failed to detect measurable quantities of rhino horn or tiger bone in any of the many medicines tested. Without a way to definitively prove that parts and derivatives of protected species are actually present in these medicines, the U.S. and Canadian governments appear reluctant to prosecute businesses that sell these medicines.

Recommendation A: The U.S. Fish and Wildlife Service and the Canadian Wildlife Service should develop national strategies to address the issue of illegal trade in medicines advertised as containing endangered species. These strategies should draw upon the expertise and knowledge of federal, state, provincial, and territorial wildlife and other agencies. They should also utilize the legal authority of other government agencies, such as health, food and drug, and customs agencies. These strategies should centralize intelligence and other information related to source countries and importation methods most likely to involve illegal trade in endangered species parts. Since Canada and the United States are major markets for illegal endangered species products, both countries have an obligation to CITES to devote additional resources to wildlife trade controls.

Recommendation B: Individual states within the United States should consider adopting legislation that would prohibit the sale of medicines claiming to contain endangered species and their parts and products.

Recommendation C: U.S. states and Canadian provinces and territories should adopt legislation to prohibit the sale of products whose labels list protected or regulated species, especially medicines that list tiger and rhino as ingredients.

Recommendation D: The U.S. Fish and Wildlife Service's Clark R. Bavin National Forensics Laboratory, working with the Canadian Wildlife Service and other forensics scientists, should continue to promote the development of techniques (including the application of forensic science) for identifying parts and derivatives of endangered and protected species used in

traditional medicines, and should assist other countries by sharing this expertise and helping to solicit other external expertise.

ACTION 2. Strengthen Legislation to Control Internal Trade

At the 1994 CITES meeting held in Ft. Lauderdale, Florida, the parties to CITES specifically recommended that all countries interpret the term "readily recognizable derivative" as "any specimen which appears from an accompanying document, the packing or a marking or label, or from any other circumstances, to be a part or derivative of an animal or plant of a species included in the appendices," unless otherwise exempted. This recommendation was reinforced at the 1997 CITES meeting. As clearly illustrated by the results of the TRAFFIC survey, neither country has responded to this resolution or amended its legislation, regulations, or even national policy with regard to addressing this identification issue.

The lack of detectable quantities does not necessarily mean that rhino horn or tiger bone was *not* used to manufacture the medicine. Because the Chinese government recognized this problem, China's 1993 ban assumes that any commercial Chinese medicine listing rhino horn or tiger bone as an ingredient actually contains horn or bone. Most protected and regulated species medicines offered for sale in North American shops were manufactured in China.

Recommendation E: The U.S. Congress should pass the Rhino and Tiger Product Labeling Act in either its House or Senate form. The Act would prohibit the import, export, and sale of products labeled to contain certain endangered species. Subsequent to passage of the Act, the U.S. Fish and Wildlife Service, with the assistance and support of other agencies, including U.S. Customs, U.S. Food and Drug Administration, and state agencies, should make a concerted effort to aggressively enforce this legislation by pursuing and prosecuting those who violate its prohibitions.

Recommendation F: Canada should actively pursue the passage of a second regulation to WAPPRIITA or to non-wildlife legislation (such as that regulating customs or food labeling), prohibiting the import, export, and sale of products *labeled* to contain CITES Appendix I species. The Canadian Wildlife Service should work with other federal, provincial, and territorial agencies to enforce existing legislation, particularly on possession to sell, by aggressively prosecuting those who violate these prohibitions.

ACTION 3. Identify and Inventory Stockpiles and Manufacturers.

It is not a simple task to determine the dates of manufacture or of importation of commercial medicines. Whereas some of those medicines formerly displayed a production date on the box or ingredients list, very few of the commercial medicines seen in the current North American survey had manufacture dates (and all dates seen were before 29 May 1993). The only way to verify an importation date is to be present when the items are actually imported (as a Customs or wildlife inspector might be).

From the Chinese government's perspective, the only legal medicines now in the United States or Canada would have to come from stockpiles that existed before the ban, because the manufacture of these medicines has been illegal since May 1993. Whether such stockpiles actually exist is impossible to determine because no detailed inventories of manufacturers or importers in China or elsewhere are known to have been conducted at the time of the ban. Research done in 1995 by TRAFFIC East Asia (Mills 1997) suggests that some manufacturers were willing to export prohibited stockpiles to overseas buyers or even to manufacture prohibited medicines if specifically requested. The 1997 CITES tiger resolution specifically asks parties to consolidate and ensure adequate control of stocks of tiger parts and derivatives. China has made positive efforts to respond to CITES requests for such stockpile inventories in the past, and an immediate call for an inventory of any stockpiles by manufacturers or others would assist CITES law enforcement efforts throughout the world.

Recommendation G: The United States and Canadian CITES authorities, with the assistance of the CITES Secretariat, should ask the Chinese government to confirm that the status and security of stockpiles of these products in China and Hong Kong. These authorities should also ask for the same confirmation from other CITES parties, such as Singapore, Malaysia, Korea, Japan, Vietnam, and other countries that have exported similar manufactured medicines (made in China and elsewhere) to the United States and Canada. Both countries should also investigate the potential existence of such stockpiles within North America.

Recommendation H: It is critical to determine if commercial medicines containing or claiming to contain rhino horn or tiger bone continue to be manufactured in China. This knowledge can best be obtained by the Chinese increasing their use of overt monitoring of the manufacturing industry, combined with undercover investigations.

ACTION 4. Initiate Collaborative North American Public Outreach Efforts.

TRAFFIC believes that the impact of law enforcement initiatives, the subsequent publicity stemming from them, and associated public outreach efforts have changed the patterns of sale and use of protected species medicines in Los Angeles, although there are no baseline data to support this conclusion. Undoubtedly, when local--or, even better--nationwide or regionwide law enforcement efforts work in concert with focused public outreach initiatives, then shopowners and consumers will learn that trade in these medicines constitutes a law enforcement violation and a conservation problem and people will no longer offer them for sale or purchase them. This conclusion is supported by the anecdotal information collected during the survey of salesclerks' knowledge of local law enforcement efforts.

Recommendation I: Interested federal, state, provincial, and territorial government agencies, nongovernmental organizations, and traditional medicine communities and practitioners in North America should work together to initiate new outreach and education efforts in key consumer areas within the United States and Canada. These efforts should focus on the following:

- √ create an awareness of the plight of endangered species;

- √ establish a causal link between the decline of endangered species and the use of TCM;
- √ highlight effective alternatives and sustainable substitutes to these medicines;
- √ ensure that the message is not pointed solely at TCM use, which only villianizes TCM users. Present a clear message that TCM is only one element in a larger problem of habitat loss, human encroachment, poaching, and other pressures on wildlife.

ACTION 5. Increase U.S. Governmental Funding for Tiger Conservation and Trade Control.

The United States is one of the richest nations on earth and can provide, under the U.S. Rhino and Tiger Conservation Act and other programs, funds to organizations and governments to undertake research projects related to rhino and tiger conservation. It should especially direct those funds to projects intended to stop the chronic and extremely detrimental illegal trade in endangered species.

Recommendation J: The U.S. Congress should at least double the funding appropriated under the Rhino and Tiger Conservation Act as a response to the efforts of CITES parties to help tiger range states “demonstrably reduce the illegal trade in tiger parts and derivatives by the 11th meeting of the Conference of the Parties to CITES” (See appendix 1).

Recommendation K: The United States should proactively encourage governments of tiger range and consuming countries to apply for this funding and also to provide support to pursue effective alternatives and sustainable substitutes for protected or endangered species medicines, especially with regard to tiger bone and rhino horn.



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Appendix I

Conf. 9.13 (Rev.)

Conservation of and Trade in Tigers

AWARE that three subspecies of tiger, *Panthera tigris*, have become extinct within the last 50 years and that many of the surviving populations of the species have declined sharply within the last five years;

NOTING that wild populations of tigers are threatened by the combined effects of poaching and of habitat loss caused by disturbance, fragmentation and destruction;

AWARE also that the tiger is listed in Appendix I and international commerce in the species is prohibited;

NOTING that, despite inclusion of the species in Appendix I, illegal trade in tiger specimens has escalated, and could lead to extinction in the wild;

NOTING with alarm that the use of medicines and products containing tiger parts and derivatives exists in many countries of the world;

NOTING further that the Standing Committee has called upon all Parties and non-Parties to the Convention to take such measures as are required to halt the illegal trade in tigers and tiger parts and derivatives;

RECOGNIZING that strengthened technical co-operation between range and non-range States, and financial support, would contribute to more effective tiger conservation;

RECOGNIZING also that long-term solutions to the protection, conservation and management of the tiger and its habitat require the adoption of bold and unprecedented actions;

ACKNOWLEDGING that increased political commitment, financial resources and expertise in some range and consumer States will significantly improve the control of the illegal killing of tigers, trade in their parts and derivatives, and protection of their habitat;

APPRECIATING the positive actions taken by some consumer States to address the illegal trade in tiger parts and derivatives;

COMMENDING the initiatives by some range Parties to facilitate co-operation in tiger conservation, including:

- a) India, which, with co-sponsorship from the United Nations Environment Programme (UNEP), convened the first meeting of tiger range States, in March 1994, to establish a Global Tiger Forum, and also facilitated, with governmental and non-governmental support, the Global Tiger Forum in organizing a meeting of 11 tiger range States, three non-tiger range States and two donor agencies in March 1997 for the promotion of technical co-operation, inter-State tiger conservation strategies, training and capacity building programmes and developing information-sharing systems for conservation of the tiger and control of trade in tiger parts and derivatives through international co-operative efforts;
- b) Thailand, which convened a workshop in October 1994 to map distribution of tigers and the status of their forest habitat in a Geographic Information System and to initiate regional co-operative action in this regard;
- c) Nepal, which convened a workshop in March 1996 of 11 tiger range States to prepare a manual on systematic census techniques for tigers;

d) the Russian Federation, which, with the co-operation of other governments and NGOs, has established effective anti-poaching patrols, officially expanded protected areas for tigers, adopted a national strategy for the conservation of the Amur tiger and completed a national tiger census;

e) China, which convened a meeting of Asian countries, including tiger range and consumer States, to discuss means of strengthening co-operation on wildlife trade matters, which resulted in the adoption of the Beijing Statement (1995);

f) Viet Nam, which hosted a workshop in March 1995 to promote co-operation between the Lao People's Democratic Republic, Cambodia and Viet Nam to conserve tigers;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

URGES:

- a) all Parties and non-Parties, especially tiger range and consumer States, to adopt comprehensive legislation and enforcement controls as a matter of urgency, with the aim of eliminating trade in tiger parts and derivatives, in order to demonstrably reduce the illegal trade in tiger parts and derivatives by the 11th meeting of the Conference of the Parties;
- b) the Secretariat, where possible, to assist those Parties seeking to improve their legislation, by providing to them technical advice and relevant information;
- c) all Parties seeking to improve their legislation controlling the trade in tigers and tiger parts and derivatives, or to adopt such legislation, to include penalties adequate to deter illegal trade and to consider introducing national measures to facilitate implementation of CITES; such as voluntarily prohibiting internal trade in tigers and tiger parts and derivatives, as well as in products labelled as containing parts and derivatives of tiger;
- d) all Parties to treat any product claiming to contain tiger specimens as a readily recognizable tiger derivative and therefore subject to the provisions relating to Appendix-I species, as provided for in Resolution Conf. 9.6, and to enact legislation where it does not exist, to fully implement these provisions for such products;
- e) those Parties and non-Parties in whose countries stocks of tiger parts and derivatives exist to consolidate and ensure adequate control of such stocks;
- f) all range States and consumer States that are not party to CITES to accede to it at the earliest possible date; and
- g) tiger range and non-range States to support and participate in international tiger conservation programmes and consider joining the Global Tiger Forum;

Appendix 1 cont.

RECOMMENDS:

- a) that the governments of tiger range States and, where appropriate, non-range States, establish co-operative bilateral and multilateral arrangements for the management of shared wildlife species and protected habitats with common boundaries in order to achieve more effective control of illegal transborder movement of tigers and tiger parts and derivatives;
- b) that Parties and non-Parties convene regional workshops on law enforcement needs associated with transborder movement of tiger parts and derivatives, with technical assistance from the CITES Secretariat and, where available, financial support from interested governments and NGOs;
- c) that all range and consumer States strengthen communication and sharing of information by designating at least one contact person in order to establish a regional network to assist in the control of the illegal trade in tiger parts and derivatives; and
- d) all Parties and non-Parties to use fully the ECO-MESSAGE of ICPO-Interpol, which relates to standard procedures for exchange of intelligence data, for improved collaborative enforcement in the control of tiger trade;

REQUESTS:

- a) countries with the relevant expertise to encourage and support range and consumer States, as a matter of urgency, in the development of a forensic protocol for identifying tiger-bone derivatives in medicines and the establishment of forensic facilities, and to provide technical assistance to aid the detection and accurate identification of tiger parts and derived manufactured products; and

- b) that, since biological and distribution data are essential for the implementation of the Convention, donor nations assist in funding the infrastructure and the provision of expertise to develop computer databases and mapping, as well as any other necessary conservation management and enforcement techniques;

RECOMMENDS that the governments of tiger-consumer States:

- a) work with traditional-medicine communities and industries to develop strategies for eliminating the use and consumption of tiger parts and derivatives;
- b) carry out appropriate education and awareness campaigns, making use of indigenous knowledge and traditional wisdom, directed at appropriate rural urban communities and other targeted groups in range States, on the ecological importance of the tiger, its prey and its habitat; and
- c) where necessary and appropriate, remove tiger parts and derivatives from the official pharmacopeia and include acceptable substitute products that do not endanger other wild species, and introduce programmes to educate industry and user groups in consumer States in order to eliminate the use of tiger-derived substances and promote the adoption of alternatives; and

CALLS UPON all governments and intergovernmental organizations, international aid agencies, and non-governmental organizations to provide, as a matter of urgency, funds and other assistance to stop the illegal trade in tigers and tiger parts and derivatives and to ensure the survival of the tiger in the wild.

Appendix 2

Conf. 9.14

Conservation of Rhinoceros in Asia and Africa

DEEPLY CONCERNED that many rhinoceros populations have continued to decline drastically and that four of the five species are threatened with extinction;

RECALLING that the Conference of the Parties included all species of rhinoceros in Appendix I of the Convention in 1977 and adopted Resolution Conf. 3.11 on the Trade in Rhinoceros Horn (New Delhi, 1981) and Resolution Conf. 6.10 on the Trade in Rhinoceros Products (Ottawa, 1987);

RECALLING further that, at its eighth meeting (Kyoto, 1992), the Conference of the Parties directed the Standing Committee to address rhinoceros conservation problems;

NOTING the detailed consideration given to rhinoceros conservation at the 28th (Lausanne, 1992), 29th (Washington, D. C., 1993), 30th (Brussels, 1993) and 31st (Geneva, 1994) meetings of the Standing Committee, and the recent actions of the Committee;

NOTING also the recommendations of the Animals Committee (Harare, 1992; Brussels, 1993);

RECALLING the resolutions and recommendations of the United Nations Environment Programme Conference between the Rhinoceros Range States, Consumer States and Donors on Financing the Conservation of the Rhinoceros (Nairobi, 1993);

COMMENDING the efforts made by range States to protect their rhinoceros populations against illegal hunting, often under very difficult circumstances;

COMMENDING further the recent measures taken by countries to control and reduce use of rhinoceros horn, especially countries where use is part of a cultural tradition extending back many centuries;

CONCLUDING that all the above measures have not arrested the decline of rhinoceros populations;

RECOGNIZING that the illegal trade in rhinoceros horn is now known to be a global law enforcement problem, extending beyond range States and traditional consuming countries;

AWARE that, given the social, economic and cultural realities in many producer and consumer States, emphasis solely on law enforcement has failed to remove the threat to rhinoceroses;

CONSCIOUS that stocks of rhinoceros horn continue to accumulate in some countries and that the call for their destruction, as recommended by Resolution Conf. 6.10, has not been implemented and is no longer considered appropriate by a number of Parties;

CONCERNED that the destruction of stocks of rhinoceros horn could in all probability increase the risks to remaining rhinoceros populations;

RECOGNIZING that recent international measures have had a number of unintended consequences, including driving the trade further underground, and have coincided with a rise in price in some consumer countries;

RECOGNIZING further that there is a diversity of opinion as to the most effective approaches to the conservation of rhinoceroses in Asia and Africa;

CONCERNED that the direct threats to rhinoceros populations are not being reduced, and that the cost of ensuring adequate security for them is increasing and can

not easily be met by many range States under the present conditions;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

URGES:

- those Parties that have legal stocks of rhinoceros horn to identify, mark, register and secure all such stocks;
- all Parties to implement adequate legislation, including internal trade restrictions, aimed at reducing illegal trade in rhinoceros products;
- range States to be vigilant in their law enforcement efforts and to place increased emphasis on the prevention of illegal hunting and on early detection of potential offenders;
- that law enforcement co-operation between States be increased in order to curtail trafficking in rhinoceros horn; and
- the consumer States to work with traditional-medicine communities and industries to develop strategies for eliminating the use and consumption of rhinoceros parts and derivatives;

DIRECTS the Standing Committee to continue to pursue actions aimed at reducing illegal trade, ensuring that:

- all such activities are accompanied by evaluations of their effectiveness;
- standardized indicators of success are developed to measure changes in levels of illegal hunting and of the status of rhinoceros populations in the range States; and
- the policies guiding interventions are responsive to the outcome of evaluations and are modified accordingly;

RECOMMENDS that each range State develop for its rhinoceros population a recovery plan that, *inter alia*:

- is appropriate for the situation in its country;
- will not adversely affect rhinoceros conservation in other range States;
- includes provisions for the reinvestment of revenues derived from use of rhinoceros that is consistent with the Convention, in order to offset the high costs of their conservation; and
- aims towards a long-term goal of sustaining, on a basis of self-sufficiency, their rhinoceros conservation efforts;

URGES:

- potential donors to assist with the funding efforts of the range States to implement rhinoceros recovery plans; and
- the Global Environment Facility to fund the protection of rhinoceros populations within the context of broadly based projects for the conservation of biological diversity;

CALLS for constructive engagement amongst all Parties to the Convention to achieve the aims of this Resolution; and

REPEALS the Resolutions listed hereunder:

- Resolution Conf. 3.11 (New Delhi, 1981) – Trade in Rhinoceros Horn; and
- Resolution Conf. 6.10 (Ottawa, 1987) – Trade in Rhinoceros Products.

Appendix 3

Conf. 10.19

Traditional Medicines

RECOGNIZING that wild fauna and flora are used in many forms of traditional medicine and that continued and uncontrolled use of several endangered species in traditional medicine has been the subject of concern among range States and consumer countries in view of the potential threat to the long-term survival of these species and the development of traditional medicines on a sustainable basis;

RECOGNIZING that most traditional-medicine systems in East Asia were derived from traditional Chinese medicine which is a rational system of thought and practice developed over several millennia and involving extensive clinical observation and testing;

AWARE that the World Health Organization has acknowledged the importance of traditional medicines to the world's medicinal security and that millions of people depend on these medicines for primary health care;

CONVINCED of the need to improve understanding about the significance of traditional medicines in the world's health care systems whilst addressing the problems of over-exploitation of certain wild species;

ACKNOWLEDGING that many forms of traditional medicine depend on the sustainable harvesting of wild species;

RECALLING Resolutions Conf 8.15 and Conf. 9.19, adopted at the eighth and ninth meetings of the Conference of the Parties (Kyoto, 1992; Fort Lauderdale, 1994) which acknowledge that pressure on wild populations may be relieved by captive breeding and artificial propagation;

RECOGNIZING the importance of research into the use of substitutes for specimens of endangered species;

BELIEVING that adequate measures should be taken to conserve wild species at risk of over-exploitation to avoid their becoming threatened to the point where more severe measures may be necessary as in the case of the rhinoceroses and the tiger;

CONVINCED of the importance of comprehensive national legislation and its effective enforcement for the implementation of the Convention in all party States;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

RECOMMENDS that the Parties:

- a) work closely with groups of traditional-medicine practitioners and consumers in developing public education and awareness programmes towards the reduction and eventual elimination of illegal use of endangered species, and developing awareness of the need to avoid over-exploitation of other wild species;
- b) ensure that, in accordance with Resolution Conf. 9.6 adopted at the ninth meeting of the Conference of the Parties (Fort Lauderdale, 1994), their national legislation effectively controls trade in all parts and derivatives of species used for healing purposes and trade in medicinal products containing or purporting to contain them;
- c) strengthen efforts to enforce legislation governing trade in threatened and endangered species and capitalize on the value of such action in focusing public attention on the importance of safeguarding wild populations;
- d) promote the development of techniques, including the application of forensic science, for identifying parts and derivatives used in traditional medicines;
- e) investigate the potential for further use in traditional medicines of substitutes for specimens of threatened wild species, ensuring that this does not lead to other species becoming threatened; and
- f) consider, where appropriate and with sufficient safeguards, the application of artificial propagation and, in certain circumstances, captive breeding, to meet the needs of traditional medicines where this would relieve pressure on wild populations of species and is in accordance with their national legislation; and

URGES potential donors to assist with funding actions to implement the measures in this Resolution.