

# OF TIGER TREATMENTS & RHINO REMEDIES:

TRADE IN ENDANGERED SPECIES  
MEDICINES IN AUSTRALIA  
AND NEW ZEALAND

Debra J. Callister & Tara Bythewood



**TRAFFIC OCEANIA**

With the kind support of



Published by TRAFFIC Oceania, Sydney, Australia.

© 1995 TRAFFIC Oceania.

All rights reserved.

All material appearing in this publication is copyrighted and may be reproduced with permission. Any reproduction in full or in part of this publication must credit TRAFFIC Oceania as the copyright owner.

The views of the authors expressed in this publication do not necessarily reflect those of the TRAFFIC Network, WWF or IUCN - The World Conservation Union.

The designations of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of TRAFFIC or its supporting organisations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The TRAFFIC symbol copyright and Registered Trademark ownership is held by WWF. TRAFFIC is a joint programme of WWF and IUCN.

ISBN 0 646 24157 5

---

Front cover illustration by Bryan Poole (Tel: 441 71 254 1213)

Printed on recycled paper.

**OF TIGER TREATMENTS &  
RHINO REMEDIES:**

**TRADE IN ENDANGERED  
SPECIES MEDICINES IN  
AUSTRALIA AND NEW  
ZEALAND**

Debra J. Callister & Tara Bythewood

---

May 1995

## TABLE OF CONTENTS

List of Tables	ii
Acknowledgments	iii
I. Introduction	1
II. Background	2
A. Status of Target Species in the Wild.	2
B. Use of Target Species in Traditional Chinese Medicine	3
C. National and International Initiatives Aimed at Stopping Illegal Trade to Consumer Countries	5
1. CITES	5
2. Other Relevant Initiatives	9
III. The Surveys	9
A. Method.	9
B. Results	10
1. Australia - Manufactured Products	10
2. New Zealand - Manufactured Products	14
3. Raw Products	15
C. Additional Information Derived Outside the Survey	16
IV. Legislative and Administrative Controls and Actions	17
A. Australia	17
1. Legislation.	17
2. Enforcement Action	19
B. New Zealand	23
1. Legislation.	23
2. Enforcement Action.	23
V. Discussion	24
VI. Conclusions and Recommendations	28
VII. References	31

## LIST OF TABLES

Table 1.	Status in the CITES appendices of certain animal species used as ingredients in traditional Chinese medicine	7
Table 2.	Number and percentage of premises surveyed in Australia in February 1995 which were selling one or more products claiming to contain, or be, target CITES-listed species	11
Table 3.	List of manufactured products found during surveys in Australia and New Zealand, February 1995, which listed tiger, leopard, rhino, musk and/or saiga antelope as an ingredient, showing number of shops where the product was observed and presence of target ingredients	12-13
Table 4.	List of manufactured products found during surveys in Australia and New Zealand, February 1995, which listed pangolin, bear, elephant and/or seal as an ingredient, showing number of shops where the product was observed and presence of target ingredients	14
Table 5.	Number and percentage of premises surveyed in New Zealand in February 1995 which were selling one or more products claiming to contain, or be, target CITES-listed species	15
Table 6.	Australian government seizures of traditional Chinese medicine containing bear, leopard, musk, rhino and tiger under the <i>Wildlife Protection (Regulation of Exports &amp; Imports) Act 1982</i> , July 1991 - March 1995	19-21

## ACKNOWLEDGMENTS

Financial support for the surveys was kindly provided by WWF Australia from their 'Taskforce Tiger' campaign fund which included a generous donation from Mrs Ann McIntosh. The cover illustration was provided and commissioned by WWF United Kingdom. The authors would like to thank the following individuals and organisations for assisting in arranging the surveys, providing additional data for the report and/or reviewing a draft of this report: WWF Australia, especially Lisa Burmeister and David Butcher; Bronwen Golder, WWF New Zealand; Judy Mills and Rob Parry-Jones, TRAFFIC East Asia; Glenn Sant, TRAFFIC Oceania; Wildlife Protection Authority, Australian Nature Conservation Agency; New Zealand CITES Task Force, particularly Colin Hitchcock; Anne Panaho, New Zealand Ministry of Agriculture and Fisheries; and David Maloney and Serryn O'Regan, Allen, Allen & Hemsley. Layout and design of the report was completed by Jane McClory and Lisa Burmeister of WWF Australia. Completion of this study would not have been possible without the contribution of the consultant who carried out the surveys, who wishes to remain anonymous.

## I. INTRODUCTION

Over recent years, the issue of use of parts from endangered species such as tiger *Panthera tigris* and rhinoceros *Rhinocerotidae* spp. as ingredients in traditional Chinese medicine (TCM) has become an international conservation cause célèbre. The reasons are fairly obvious - poaching for the illegal trade is driving these species to the brink of extinction, with the TCM market being one of the prime consumers of the poached goods.

Demand exists for both raw product and packaged manufactured medicines containing, or claiming to contain, wildlife derivatives such as rhino horn, tiger bone or musk deer *Moschus* spp. Use of wildlife in TCM is not a new phenomenon but has a tradition many centuries old. Nor, as is often erroneously reported, are the uses of these substances relatively frivolous, such as to improve sexual performance. Many of the medicines in which endangered species are commonly used, are for the treatment of serious complaints such as rheumatism, fever and epilepsy (Zhang, 1990a;b).

TRAFFIC has been at the forefront of efforts to try and stop the illegal trade in species such as rhinos and tigers and has carried out considerable amounts of work in both range States and consumer countries in the Far East. More recently, however, we have begun to investigate markets in western countries with populations of East Asian ethnicity. These surveys have indicated that raw and manufactured products containing endangered species are also available in these markets.

With this in mind, it was thought that it would be beneficial to examine the availability of TCM containing selected wildlife species in Australia and New Zealand. Both countries have long-established Asian communities originating from countries and territories such as China, Hong Kong, South Korea and so on. They are also both members of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and have strict national laws controlling the import and export of species which fall under the provisions of the Convention.

The method employed in this study is outlined in section III.A. For reasons which are explained there, it was decided to focus on a single species - tiger. However, additional data on medicines claiming to contain a number of other species were also able to be obtained. The species for which the most data were gathered were tiger, rhino, bear *Ursidae* spp., musk deer, leopard *Panthera pardus* (including clouded leopard *Neofelis nebulosa*) and saiga antelope *Saiga tartarica*. These animals constitute the principal and subsidiary target species for this study.

Significant amounts of the data in this report, particularly in section III, are based on the confidential report of a consultant employed by TRAFFIC Oceania to carry out the covert surveys.

## II. BACKGROUND

### A. Status of Target Species in the Wild

BEAR - There are eight species of bear - the sun bear *Helarctos malayanus* (south-east Asia), sloth bear *Melursus ursinus* (Indian subcontinent), Asiatic black bear *Ursus* (= *Selenarctos*) *thibetanus* (central and eastern Asia), brown bear *U. arctos* (Eurasia, Japan, North America), American black bear *U. americanus* (North America), polar bear *U. maritimus* (northern Eurasia, northern North America), giant panda *Ailuropoda melanoleuca* (Central China) and spectacled bear *Tremarctos ornatus* (Andean South America) (Nowak, 1991, cited in McCracken, et al., 1995, Parry-Jones, *in litt.*). Populations of all bear species, with the exception of the polar bear, American black bear and some populations of brown bear, have declined significantly in recent decades; the primary causes of decline have been human persecution and habitat loss (McCracken, et al., 1995). IUCN - The World Conservation Union accords a threatened status<sup>1</sup> to all bear species except the brown bear and American black bear (although the Mexican grizzly bear *U.a. nelsoni* is extinct) - the giant panda is Endangered and the five remaining species are considered Vulnerable (Groombridge, 1993). While traditionally, medicinal bear gall was sourced from the Asiatic black bear and brown bear (Zhang, 1990a), gall bladders from all bear species except giant panda are now used in TCM (Mills & Servheen, 1991).

LEOPARD - Parts, particularly bones, of both leopard and clouded leopard are used in TCM (Zhang & Zhang, 1994). The clouded leopard has a conservation status of Vulnerable according to IUCN. Globally, leopards are not considered threatened by IUCN but three sub-species are classified as Endangered (Amur leopard *P.p. orientalis*, South Arabian leopard *P.p. nimr*, Sri Lankan leopard *P.p. kotiya*), one as Vulnerable (North Chinese leopard *P.p. japonensis*) and two as Indeterminate (North Persian leopard *P.p. saxicolor*, Javan leopard *P.p. melas*) (Groombridge, 1993). Conversely, all populations of leopard are listed as either endangered or threatened under the United States *Endangered Species Act* (Gaski & Johnson, 1994). The leopard is distributed from Java up through Asia to south-east Siberia, across Asia Minor and into and through Africa (Corbet & Hill, 1980). Clouded leopard is found from the islands of Borneo and Sumatra up through south-east Asia into India, Bhutan, Nepal, China and Taiwan (Groombridge, 1993).

MUSK - There is disagreement on the taxonomy of musk deer. Green (1985) recognises three species (Siberian musk deer *Moschus moschiferus*, dwarf musk deer *M. berezovskii*, Himalayan or alpine musk deer *M. chrysogaster*) and Wilson & Reeder (1993) a fourth (*M. fuscus*) (both cited in Gaski & Johnson, 1994). Musk deer are killed for the musk gland of the male deer, from which medicinal musk is derived (Zhang, 1990a). *M. moschiferus*, found in China, North and South Korea, Russia and Mongolia, is classified by IUCN as Endangered (Groombridge, 1993).

---

1 The definition of the threatened species categories used by IUCN is as follows:-  
Endangered - Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating.  
Vulnerable - Taxa believed likely to move into the 'Endangered' category in the near future if the causal factors continue operating.  
Rare - Taxa with small world populations that are not at present 'Endangered' or 'Vulnerable', but are at risk.  
Indeterminate - Taxa known to be 'Endangered', 'Vulnerable' or 'Rare' but where there is not enough information to say which of the three categories is appropriate. (Groombridge, 1993)

*Moschus* spp. populations of Afghanistan, Bhutan, China (Tibet, Yunnan), India, Myanmar, Nepal, Pakistan and India (Sikkim) are listed as endangered under the US *Endangered Species Act* (Gaski & Johnson, 1994).

**RHINOCEROS** - There are five species of rhinoceros - white rhinoceros *Ceratotherium simum* and black rhinoceros *Diceros bicornis* found in Africa, and greater one-horned (Indian) rhinoceros *Rhinoceros unicornis*, Javan rhinoceros *Rhinoceros sondaicus* and Sumatran rhinoceros *Dicerorhinus sumatrensis* found in Asia. Wild populations of the five species are estimated at 6784, 2550, 2004, <75 and 450-800 respectively (Kemf & Jackson, 1994), or slightly over 12,000 animals across the five species. Rhinos remain among the most endangered large mammals in the world. Population declines of rhino, particularly African rhino, have been dramatic. For example, black rhino populations have declined from around 70,000 animals in the late 1960s (Cumming, *et al.*, 1990) to 2550 by mid-1994 (Kemf & Jackson, 1994). Rhino populations have been negatively affected by habitat loss, particularly in Asia (Khan, 1989; Leader-Williams, 1992). The primary threat, however, has been demand for their horn for use in TCM and for the manufacture of dagger handles in certain middle eastern countries (Khan, 1989; Cumming, *et al.*, 1990). Medicinal demand initially impacted on Asian rhino populations, with demand for African horn growing as Asian rhino populations declined (Cumming, *et al.*, 1990).

**SAIGA ANTELOPE** - The saiga antelope is the main source of "Antelope's Horn" used in TCM (Zhang, 1990a). There are two subspecies: the Mongolian saiga *S.t. mongolica* is Endangered (Groombridge, 1993); populations of *S.t. tartarica* have declined by around 80% since the late 1950s (based on data from Teer, 1991 and Teer & Lindzey, 1994, both cited in Anon., 1994a). There are two major populations of *S.t. tartarica*, one in Kalmykia and the larger in Kazakhstan (both part of the former Soviet Union) (Anon., 1994a; Milner-Gulland, 1994). In addition to hunting, saiga populations are also negatively impacted by habitat loss, predation by feral dogs and disruption of migration routes (Milner-Gulland, 1994).

**TIGER** - The tiger, one of the world's most magnificent animals, is also one of the most endangered. At the turn of the century there may have been as many as 100,000 tigers remaining in the wild (Jackson & Kemf, 1994). Today, the tiger population has been reduced by as much as 95 percent. According to figures compiled by the Chairman of the IUCN/Species Survival Commission Cat Specialist Group, in 1994 there were between 5080 and 7380 tigers remaining in the wild (Anon., 1994b). There are eight recognised sub-species of tiger - three are already extinct - the Bali tiger *P.t. balica*, Javan tiger *P.t. sondaica* and Caspian tiger *P.t. virgata*. The other five sub-species are dangerously close to meeting the same fate with estimated minimum and maximum populations in 1994 as follows: Bengal tiger *P.t. tigris* 3250 - 4700; Siberian or Amur tiger *P.t. altaica* 150 - 200; South China tiger *P.t. amoyensis* 30 - 80; Sumatran tiger *P.t. sumatrae* 600 - 650; and Indo-Chinese tiger *P.t. corbetti* 1050 - 1750 (Anon., 1994b). The primary threat to wild tigers at present is poaching to meet the demand for their bones and other parts for use in TCM (Mills & Jackson, 1994).

## B. Use of Target Species in Traditional Chinese Medicine

The practice of traditional Chinese medicine, ingrained in Chinese history and culture for over 4000 years, is based on the fundamental Chinese belief in the importance of maintaining balance and harmony in all aspects of life, including physical and mental health (Gaski & Johnson, 1994). This concept of balance is represented by the symbol of the *yin/yang* and underpins the philosophy of Chinese medicine. The balancing of the *yin* and *yang* within the body is the key to maintaining health according to the Chinese culture. When the *yin* and *yang* are not balanced

sickness and disease result. Also relevant are the *Five Elements* (Wood, Fire, Earth, Metal, Water) - each vital organ belongs to one of these elements - and the vital energy or life force of a person, known as *Qi*. Problems in the interplay between the Five Elements and blockages in the circulation of *Qi* are also factors in causing sickness and disease (Parry-Jones & Mills, in prep.).

TCM is mainly used to treat diseases, rectify the hyperactivity or hypoactivity of *yin* or *yang* and help the body restore its normal physiological functions (Zhang, 1990b). If the yang is more active it causes heat syndrome (*yang* syndrome) (Zhang, 1990b), which is characterised by symptoms such as, a dry throat, red face, red eyes, dry stools, rapid pulse, fever, headache, thirst and profuse perspiration (Mills & Servheen, 1991). Heat syndromes are treated by drugs which are believed to have "cold" or "cool" properties (Zhang, 1990b), such as drugs containing rhino, bear and saiga (Zhang, 1990a; Gaski & Johnson, 1994). Hyperactivity of the *yin* results in cold syndrome (*yin* syndrome) (Zhang, 1990b) which is characterised by symptoms such as weakness of the bones and muscles, joint stiffness, general body pains and paralysis (Zhang, 1990a). Cold syndromes are treated by drugs with "hot" or "warm" properties such as drugs containing tiger, leopard and musk (Zhang, 1990a;b).

In addition to being classified by property, TCM are also classified according to their flavours, actions of lifting, lowering, floating and sinking and channel tropism. Classifying drugs by the actions of lifting, lowering, floating and sinking refers to the upward, downward, outward or inward ways in which the drug tends to act on the body. The classification by flavour refers to the taste of the drug - i.e. pungent, sweet, sour, bitter and salty. Flavours do not necessarily refer to the actual taste of the drug, but more to the drug's actions, meaning that drugs of the same flavour usually have similar effects and compositions. However, it is possible for drugs to have the same property and different flavours or different properties and the same flavour which means that the property and flavour of a drug must not be treated separately but as an integrated whole. (Zhang, 1990b)

A drug's actions are closely related to its properties and flavours. Most drugs which are pungent or sweet in flavour and warm or hot in property have lifting and floating actions, where as most drugs which are bitter, sour or salty in flavour and cold or cool in property have lowering and sinking actions (Zhang, 1990b).

TCMs are also classified according to their channel tropism, which refers to a drug's selective therapeutic effects on a specific part of the body. For example, among the heat-clearing drugs, some only clear the heat in either the lung channel or the liver channel (Zhang, 1990b). Tiger medicines, for example, affect the liver and kidney channels (Zhang, 1990a).

Specific properties according to TCM of the target species of this study are outlined below.

**BEAR** - Drugs containing bear gall bladder are bitter in taste and cold in nature. Their therapeutic action is related to channels of the liver, gall bladder and heart. These drugs are used to remove heat from the liver to relieve convulsions, treat infantile convulsions, epilepsy, hyper-spasmia and eclampsia gravidarum caused by strong liver wind and extreme heat, improve acuity of vision, remove nebula, treat conjunctival congestion, swelling pain of the eyes, sores, haemorrhoids and sore throats. (Zhang, 1990a)

**LEOPARD** - Used as a weaker substitute for tiger bone (Gaski & Johnson, 1994). See tiger for more specific therapeutic properties.

**MUSK** - Drugs containing musk are acrid in taste and warm in nature. Their therapeutic action is related to the heart and spleen. Uses include inducing resuscitation, restoring consciousness, treating coma and spasm in consciousness-loss syndromes of excessive types, promoting blood circulation to relieve swelling, treating traumatic injury and general pains, restoring menstrual flow and treating retention of dead foetus or placenta. (Zhang, 1990a)

**RHINO** - Rhino horn is bitter and salty in taste. It is a cold medicine that affects the heart, liver and stomach channels. It is used to clear heat and heart-fire, remove toxins and relieve feverish rashes. It treats associated symptoms such as loss of consciousness, delirium, bleeding, high fever and convulsion. (Zhang, 1990b)

**SAIGA** - Saiga antelope horn is salty in taste and cold in nature. Its therapeutic action is related to channels of the liver and heart. Drugs containing saiga are used to check the hyperactivity of liver *yang*, relieve convulsion, treat epilepsy, cure continuous high fever, improve vision and to treat unconsciousness, delirium and mania. (Zhang, 1990a)

**TIGER** - Tiger bone is pungent in taste and warm in nature. Its therapeutic action is related to the channels of the liver and the kidney. Medicines containing tiger are mainly used for relieving pain (especially rheumatism), strengthening muscles and bones and treating weakness of the lower limbs due to deficiency of the liver and kidneys. (Zhang, 1990a)

The fundamental beliefs of TCM also form the basis of traditional medicine practiced by the Korean and Japanese. Indeed, the terms for traditional medicine in the Korean and Japanese languages have a literal translation of "Chinese medicine" (Parry-Jones & Mills, in prep.).

TCM appear to be used by many Asian communities in conjunction with Western medicine, with TCM more generally used to treat chronic sickness and Western medicine to treat acute illnesses (Alchin, 1994; Parry-Jones & Mills, in prep.).

In countries such as Australia and New Zealand, the use of TCM containing endangered species such as rhino or tiger tends to be dismissed as almost some form of backward folk medicine, with no legitimate clinical basis. While it appears that some minor use of animal parts, such as the use of tiger penis to improve sexual performance, may have a basis primarily folkloric rather than clinical (Parry-Jones & Mills, in prep.), use of many (currently) endangered species in medicine has a long history in the treatment of serious illnesses. It is easy for Westerners to dismiss TCM as some form of 'quackery', however, while such medicines may not be proven in the Western sense, they have been successfully used for centuries to meet the medical needs of millions and millions of people. Trivialising their use is not only culturally insensitive and wrong, it also runs the risk of jeopardising legitimate attempts to educate users about the non-medical, but globally environmental important, side-effects of continued demand for ingredients for TCM which are derived from endangered species.

---

## C. National and International Initiatives Aimed at Stopping Illegal Trade to Consumer Countries

### 1. CITES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora aims to ensure the rational and sustainable use of plants and animals through regulating international trade in wildlife and wildlife products. It does this through the implementation of a permit

system for international trade in wildlife and wildlife products by its over 120 member countries. Species subject to regulation under the Convention are listed in one of three appendices to the Convention.

*Appendix I* includes species, subspecies or populations threatened with extinction that are, or may be, affected by trade. International commercial trade in wild-caught or collected specimens of taxa or populations listed in Appendix I is prohibited. Trade is permitted under exceptional circumstances - for example for scientific or conservation purposes - but requires appropriate import and export permits to be issued by the correct government authority in the exporting and importing country.

*Appendix II* includes species, subspecies or populations which may become threatened if trade in them is not controlled and monitored. It can also include other "look-alike" species, which although not necessarily threatened, must be subject to regulation in order that trade in other Appendix II species may be brought under effective control. Only an export permit, issued by the correct government agency in the country of origin, is required to trade internationally in Appendix II specimens. If the species is exported from a country other than where it originated, a re-export permit is necessary. Permits should only be issued once it has been determined that the specimen of the species concerned was legally obtained and export will not be detrimental to the survival of that species.

*Appendix III* contains species subject to regulation within individual countries and for which the cooperation of other CITES Parties is sought in order to control that trade. Therefore, Appendix III listing is specific to exports of certain taxa from given countries.

Table 1 lists CITES-listed animal species more frequently encountered in TCM and details their CITES status. (It should be noted that saiga antelope was only listed on Appendix II with effect from February 1995 and that this listing had not become legally binding in either Australia or New Zealand at the time the surveys were conducted.)

At a Conference of the Parties to CITES, Parties are able to pass resolutions which, while not legally binding, provide strong advice and recommendations on additional matters relating to the operation of the Convention and the conservation of species covered by its provisions. Resolutions of primary relevance to this report are detailed below.

*Res. Conf. 9.4 'Annual Reports & Monitoring of Trade'* - This urges all CITES Parties to submit their annual reports in accordance with the "Guidelines for the Preparation and Submission of CITES Annual Reports". Paragraphs 2h) and 3g) of these guidelines indicate that seized and confiscated specimens should be included and identified in annual reports. Trade in manufactured products such as medicines may be summarised in the report (paragraphs 2a) and 2g)). New Zealand includes data on seized specimens in their CITES annual reports, Australia in most instances does not.

*Res. Conf. 9.6 'Trade in Readily Recognizable Parts and Derivatives'* - This resolution agrees that the term 'readily recognizable part or derivative' "...shall be interpreted to include any specimen which appears from an accompanying document, the packaging or a mark 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 such part or derivative is specifically exempted from the provisions of the Convention". In other words, if a medicine includes a CITES-listed species as an ingredient on its packaging, then it should be treated as containing that species for CITES purposes.

Of Tiger Treatments and Rhino Remedies...

Common name	Scientific name	Appendix	Notes
Sun Bear; Sloth Bear; Spectacled Bear; Asiatic Black Bear	<i>Helarctos malayanus</i> ; <i>Melursus ursinus</i> ; <i>Tremarctos ornatus</i> ; <i>Ursus (=Selenarctos) thibetanus</i>	I	
Himalayan Brown Bear	<i>Ursus arctos isabellinus</i>	I	
Brown Bear	<i>U. arctos</i>	I	Populations of Bhutan, China, Mexico and Mongolia
		II	All other populations
American Black Bear	<i>U. americanus</i>	II	
Polar Bear	<i>U. maritimus</i>	II	
Elephant	<i>Elephas maximus</i> ; <i>Loxodonta africana</i>	I	
Leopard	<i>Panthera pardus</i>	I	
Clouded Leopard	<i>Neofelis nebulosa</i>	I	
Monkey	Primates spp.	I & II	All apes and monkeys are covered by CITES
Musk Deer	<i>Moschus</i> spp.	I	Populations of Afghanistan, Bhutan, India, Myanmar, Nepal, Pakistan
		II	All other populations
Pangolin	<i>Manis</i> spp.	II	Three African pangolin species – <i>M. gigantea</i> , <i>M. tetradactyla</i> & <i>M. tricuspis</i> were only listed on 16/2/95; <i>M. temminckii</i> transferred from I to II on 16/2/95
Rhinos	Rhinocerotidae spp.	I	Excludes <i>Ceratotherium simum simum</i> population given below
Southern White Rhino	<i>Ceratotherium simum simum</i>	II	Population of South Africa, for trade in live animals to appropriate and acceptable destinations and hunting trophies only – effective 16/2/95
Saiga Antelope	<i>Saiga tartarica</i>	II	Included on 16/2/95
Guadalupe Fur Seal; Monk Seals	<i>Arctocephalus townsendi</i> ; <i>Monachus</i> spp.	I	
Fur Seals; Southern Elephant Seal	<i>Arctocephalus</i> spp.; <i>Mirounga leonina</i>	II	All other seals and sealions are not covered by CITES
Tiger	<i>Panthera tigris</i>	I	
Asiatic Cobra; King Cobra; Oriental Rat Snake	<i>Naja naja</i> ; <i>Ophiophagus hannah</i> ; <i>Ptyas mucosus</i>	II	
Crocodile	Crocodylia spp.	I & II	All crocodylians are covered by CITES

Table 1: Status in the CITES appendices of certain animal species used as ingredients in traditional Chinese medicine.

*Res. Conf. 9.13 'Conservation of and Trade in Tigers'* - There are a number of provisions in this resolution of relevance to Australia and New Zealand, as tiger consumer States, including:

“URGES

- a) those Parties..., especially tiger range and consumer States, which currently lack legislation to properly control illegal killing of tigers and/or the trade in tigers and tiger parts and derivatives, to adopt such measures as a matter of urgency...;
- c) all Parties seeking to improve their legislation controlling the trade in tigers and tiger parts and derivatives, or to adopt such legislation, to consider introducing national measures... such as voluntarily prohibiting internal trade in tigers and tiger parts and derivatives and prohibiting the sale of illegally traded tiger parts and derivatives;
- d) all Parties to treat any product claiming to contain tiger specimens as a readily recognizable tiger derivative and therefore subject to Appendix-I provisions...;
- e) those Parties... in whose countries stocks of tiger parts and derivatives exist to consolidate and ensure adequate control of such stocks;...

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;...and
- c) 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;...”.

*Res. Conf. 9.14 'Conservation of Rhinoceros in Asia and Africa'* - Provisions include urging: Parties with legal rhino horn stocks to mark, register, identify and secure all stocks; Parties to implement adequate legislation to reduce illegal trade in rhino products, including introduction of internal trade restrictions; and consumer countries to work with traditional medicine users and manufacturers to develop plans for eliminating use and consumption of rhino parts and derivatives. This study indicates that Australia, at least, is a rhino consumer country, making the provisions of this resolution of relevance.

In addition, CITES has a number of committees, which carry out various functions between meetings of the Conference of the Parties. The most senior of these is the Standing Committee. It has a variety of functions defined in its terms of reference, including the provision of general policy and operational direction to the Convention's Secretariat on matters relating to implementation of CITES (Res. Conf. 9.1, Annex 1).

One of the issues tackled by the CITES Standing Committee has been illegal trade in rhino and tiger products. In their ongoing review of the situation since 1993, the Standing Committee has: called for reports on measures being taken to stop the illegal trade in key consumer areas such as China, Taiwan and Yemen; urged Parties to consider implementing stricter domestic measures up to implementation of wildlife trade bans with China and Taiwan (following determinations that these countries were not doing enough to control illegal trade); established minimum criteria for consumer countries to adopt to help them protect rhino and tiger; and sent

technical and high-level delegations to China, Taiwan and South Korea to discuss tiger and rhino conservation (Nash, 1994). The Standing Committee is continuing to review this issue and is likely to make further recommendations on measures to be taken by Parties to counter illegal trade in rhino and tiger and their derivatives.

## 2. Other Relevant Initiatives

Over recent years, a number of the countries which have been the primary users of endangered species in TCM, have introduced stronger domestic controls over the possession and sale of parts and derivatives from certain species. These efforts have largely focused on tiger and rhino. Places where stricter domestic trade controls have been introduced in recent years include China, Hong Kong, South Korea and Taiwan, all important consumer countries for tiger and rhino medicines.

Some non-Asian countries are also beginning to initiate actions to tackle illegal importation of TCM containing CITES-listed species into their own countries. For example, in February 1995, authorities in the United Kingdom, acting on the basis of information provided by a covert survey done by TRAFFIC, carried out a series of raids on oriental pharmacies and supermarkets in three cities (WWF UK Press Release, 7 February 1995). Other European Community countries are also beginning to look at this issue more closely, including Belgium, where authorities intercepted a large shipment of TCM containing CITES-listed species at around the same time as the UK raids.

The United States has used powers under the Pelly Amendment of the *Fishermen's Protective Act* 1967 to try and assist global efforts to save rhino and tiger. The Pelly Amendment allows the USA to introduce sanctions on trade in wildlife products from countries which are judged to be carrying out activities which are undermining the effectiveness of an international conservation agreement such as CITES. In September 1993 the USA signalled possible trade sanctions under the Pelly Amendment against China and Taiwan for their continuing use and importation of tiger and rhino. On 4 April 1994 the US President announced his intention to restrict imports of wildlife from Taiwan only, worth around US\$22 million in 1993 (Anon., 1994c).

## III. THE SURVEYS

### A. Method

Surveys were carried out over a several week period in February 1995 in three major cities in Australia - Brisbane, Melbourne and Sydney - and two in New Zealand - Auckland and Wellington. Australian survey cities were selected on the basis of examination of census data to determine major population centres of Chinese language speakers and individuals of Chinese or Hong Kong origin. The numbers of people recorded in these categories in the census data were far greater for the three surveyed cities than any other population centres within Australia. The New Zealand cities were selected on the basis of population, advice provided by law enforcement agencies and internal constraints which dictated that only two cities could be surveyed in New Zealand.

All surveys were carried out by the same individual, a Cantonese-speaking ethnic Chinese experienced at carrying out covert investigations for TCM containing CITES-listed species. An

initial list of TCM practitioners, herbalists and herbal shops was identified from the telephone book. The consultant found that the most effective method of finding premises was to travel to areas known to have higher Chinese, Korean and Vietnamese populations. In these areas as many traditional Chinese herbal shops, Asian groceries and supermarkets and other relevant premises were visited as possible. Details recorded by the consultant included, wherever possible, the name and location of the premises, products observed containing species of interest and their price.

A commonly used approach in covert surveys of this type is to concentrate on a particular product or species and ask for treatment for an ailment for which that species, or a product containing it, is often prescribed. The primary target species in this survey was tiger. However, due to the consultant's experience, identification of a number of other products which claimed to contain CITES-listed species was possible. Other ingredients identified as of particular interest included rhino, bear, musk and saiga.

It should be noted that this survey method, while giving a good indication of the variety of medicines obtainable, is unlikely to reveal the full extent of the availability of medicines containing CITES-listed species. For example, products held out of easy view of customers would be missed unless the consultant was able to get the retailer to reveal them. It also concentrates on packaged products and will not reveal the availability of raw product except that which is on open display or whose existence is otherwise revealed to the consultant.

## **B. Results**

### **1. Australia - Manufactured Products**

A total of 119 premises were surveyed in Australia - 49 in Sydney, 45 in Melbourne and 25 in Brisbane. The number and percentage of shops where target products were identified are given in Table 2. Note that these figures were calculated by giving a score of 1 to a shop that was selling products containing a given target species, irrespective of the number of different types of product containing that species available in that shop. Therefore, any single premises could score 1 for a number of different species, but no more than 1 for any individual species.

Over two-thirds of premises surveyed in Australia were selling derivatives claimed to contain target CITES-listed species (Table 2). Half of the shops examined were selling musk products; the next most frequently found products were leopard (21.8%), tiger (14.3%), bear (5.0%) and rhino (2.5%). Items containing saiga antelope were also observed in half the premises surveyed. While this species was only listed in the CITES appendices with effect from February 1995, and is yet to be controlled under Australia's CITES implementing legislation<sup>2</sup>, its high level of availability is of interest for future enforcement of CITES provisions in Australia.

---

<sup>2</sup> Listings in the CITES appendices do not become effective in Australia or New Zealand until the necessary amendments have been made to domestic CITES-implementing legislation.

	Bear		Leopard		Musk		Rhino		Saiga		Tiger		None		Number shops surveyed
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Brisbane	1	4.0	0	0.0	5	20.0	1	4.0	8	32.0	3	12.0	12	48.0	25
Melbourne	0	0.0	17	37.8	25	55.6	0 <sup>@</sup>	0.0 <sup>@</sup>	17	37.8	8	17.8	13	28.9	45
Sydney	5*	10.2*	9	18.4	29	59.2	1	2.0	34	69.4	6	12.2	12	24.5	49
TOTAL	6*	5.0*	26	21.8	59	49.6	2 <sup>@</sup>	2.5 <sup>@</sup>	59	49.6	17	14.3	37	31.1	119

Table 2: Number and percentage of premises surveyed in Australia in February 1995 which were selling one or more products claiming to contain, or be, target CITES-listed species. (# = number; % = percentage)

\* includes three shops selling Urusa Gold (see text for explanation)

@ does not include shop that was displaying sign indicating that they had rhino horn for sale (see text)

Differences between species is evident between the three cities, particularly for leopard, musk and saiga<sup>3</sup>. Melbourne had more leopard and tiger and Sydney more bear and saiga. Brisbane had a lower percentage of most species and a lower overall availability, perhaps reflecting its smaller Asian population. Differences in products such as bear could be due to population demographics, as bear products are particularly favoured by Korean communities. Without a more detailed examination of relevant variables such as population demographics, products found, premises surveyed and so on, it is difficult to say much more about these apparent differences between the three cities.

Tables 3 and 4 show the different manufactured products observed during the survey. In Australia, a total of 29 manufactured medicine products were observed which listed species potentially<sup>4</sup> or actually covered by CITES. Fifteen of these products listed musk as an ingredient, 11 included tiger, seven saiga<sup>5</sup>, four leopard, two rhino, two bear<sup>6</sup>, one pangolin and one seal.

The most commonly found target product was Minshan Brand Yinchiao tablets, which are believed to contain saiga antelope. Forty-six of the 119 premises surveyed in Australia were selling this product (38.7%). Three different types of medical plasters were the next most commonly found products. Two were musk plaster (although old stock of one of these products, none of which was found in Australia, listed tiger bone as an ingredient) and the third was a

3 Consideration was given to statistical testing of differences in product availability between cities and other relevant data parameters. However, examination of the data indicated that a combination of small sample sizes and numerous uncontrollable variables in sampling technique meant that statistical testing was not recommended (Hayes, L., pers. comm.).

4 This number includes: seal, where only some seal species are covered by CITES; pangolin, where all species are covered by CITES but some have not yet been included in Australia's CITES-implementing legislation; and saiga, which is covered by CITES but which has not yet been included in Australia's CITES-implementing legislation.

5 Although sometimes saiga is specifically identified as an ingredient in TCM, more often the ingredient is given simply as antelope. However, in TCM, antelope horn refers to horn of the saiga antelope, which is the preferred and most widely used antelope horn ingredient in such medicines (Consultant, *in litt.*). Consequently, for the purposes of this survey, general references to antelope were treated as a reference to saiga.

6 The product "Urusa Gold" (see Table 4) was not positively identified as listing bear as an ingredient. However, it had a picture of a bear on the cover, listed gall bladder as an ingredient and was highly priced. These and other factors suggested that the product may indeed contain bear gall and it was treated as such for the purposes of this report.

Of Tiger Treatments and Rhino Remedies...

NAME OF PRODUCT	Ingredient present					No. of shops	
	T	L	R	M	S	AU	NZ
Yinchiao Tablet (Yinchiao Chiehtupien), Minshan Brand*					•	46	2
Musk Rheumatic Plaster, Yuan Tian Brand				•		33	2
Musk Bone-strengthening Plaster / Musk and Tiger Bone Plaster, Emeishan Brand**	•			•		19	2
Zhi Tong Gao: Tianwangshexiang (Musk and Tianwang Analgesic) Plasters / Musk and Tiger Bone Analgesic Plaster, Guo Guang Brand***	•	•		•		19	0
Niu Huang China Hsin Wan Pills, Li Shih Chen Brand				•	•	17	1
Jian Bu Hu Qian Wan / Jian Bu Bao Qian Wan Pills, Minshan Brand†	•	•				6	3
Musk Rheumatic Oil, Yang Cheng Brand				•		5	3
Shexiang Baoxin Wan Pills				•		3	3
Musk Rheumatic Relaxes and Activates Plaster, Kweifeng Brand				•		0	4
Ta Huo Lo Tan Pills, Li Shih Chun Brand				•		3	1
Zixue Dan Powder, Yang Cheng Brand				•	•	3	1
Musk and Tiger Bone Plaster, Changzhen (Long March) Brand	•	•		•		3	0
Musk Medicated Plaster, J M (Ji Min) Brand				•		0	3
Pilulae Corticis Eucommiae et Ossid Tigris Pills, Li Shih Brand	•					2	1
To Chung Fu Quat Pills	•					1	2
Shaolinfengshidiedagao Plaster, Yu Le Brand				•		0	2
Specially Make Niu Huang Ching Hsin Wan Pills				•	•	2	0
Beijing Tsu Hsueh Powder, Li Shih Chen Brand			•	•	•	1	0
"Double Dragon" Pills	•					1	0
Hu Ku Wan Pills, Forest Brand	•					1	0
Jing Zhi Shaolin Fengshidiedagao Plasters, Shaolinsi Brand				•		0	1
Lingqiaojedupian Pills, Shan Hua (Mountain Flower) Brand					•	1	0
Musk and Dogskin Plaster, River Deer Brand				•		0	1
Musk and Strong Bone Plaster, Fei Yao Brand				•		0	1
Musk Chilli Plaster, Xi Hu Brand				•		1	0
Musk Rheumatic Plaster, Ren Zi Brand				•		1	0

NAME OF PRODUCT	Ingredient present					No. of shops	
	T	L	R	M	S	AU	NZ
Niu Huang Ching Hsin Wan Balls, Hui Sheng Brand			•	•	•	1	0
Pearl Hou Tsao Powder**				•		0	1
Shexiang Guanjie Zhitonggao Plasters				•		0	1
Shexiang Hugugao Plasters, Yan Wu Brand	•	•		•		0	1
Shexiang Jie Tong Gao Plasters, Huangpu Brand				•		0	1
Shexiang Zhichuanggao Ointment, Ma Ying Long Brand				•		0	1
Special Strong Tian Ma Hu Gu Wan Pills	•					1	0
Tianma Huguwan Pills, Chuan Bao Brand***	•	•				1	0
Tiger Bone Ginseng-Pilose Antler Liquor, Bao Hu Lu Brand	•					1	0
Top Quality of Calculus Bovis 'Hua Tuo' Anti-Contusion Rheumatism Plaster, Hai Shan Brand				•		1	0
<b>TOTALS</b>	<b>12</b>	<b>5</b>	<b>2</b>	<b>26</b>	<b>7</b>	<b>173</b>	<b>38</b>

Table 3: List of manufactured products found during surveys in Australia and New Zealand, February 1995, which listed tiger, leopard, rhino, musk and/or saiga antelope as an ingredient, showing number of shops where the product was observed and presence of target ingredients. (T = tiger; L = leopard; R = rhino; M = musk deer; S = saiga antelope)

- \* This brand is the only one of this type of medicine which claims to contain 'antelope'.
- \*\* Formally known as 'Musk and Tiger-Bone Plaster', with tiger bone listed as an ingredient. This old stock was only found in one grocery store, in Wellington. The official approval code has not been changed.
- \*\*\* This product was previously known as 'Musk and Tiger Bone Analgesic Plaster', with a picture of a tiger on the pack. This old product was only found in one shop, in Melbourne. New product now has leopard substituted for tiger in the ingredients and the picture on the pack changed to a lion. The official approval code has not been changed.
- # New products are now produced under the name 'Jian Bu Bao Qian Wan' and claim to contain leopard bones instead of tiger bones.
- ## This product also contains bezoar (gall stone) of the Rhesus Macaque *Macaca mulatta*.
- ### This product appears recently manufactured and contains wording on the internal packaging guaranteeing that the product contains pure tiger bone.

musk and leopard bone plaster. (This was also a product where tiger bone was formerly listed as an ingredient; old stock was only found in one shop in Australia.) Leopard bone was also replacing tiger bone as a listed ingredient in the sixth most popular product, Minshan Brand Jian Bu Hu/Bao Qian Wan tonic pills.

Of the products listed in Table 3, four were manufactured in Hong Kong (To Chung Fu Quat Pills, "Double Dragon" Pills, Pearl Hou Tsao Powder, Special Strong Tian Ma Hu Gu Wan Pills) and the remainder in China. For Table 4 products, Urusa Gold listed USA as the place of manufacture, the seal and elephant products were made in Hong Kong and the remainder in China.

NAME OF PRODUCT	Ingredient present				No. of shops	
	P	B	E	S	AU	NZ
Leung Chi See Sea Dog Pills				•	2	3
Fargelin for Piles Pills, Yang Cheng Brand*		•			-	4
Urusa Gold <sup>#</sup>		•			3	0
Hsiung Tan Tieh Ta Wan Pills, Yang Cheng Brand		•			2	0
Armadillo Antipyretic Pills, San He (Three Cranes) Brand	•				1	0
Koo Lou San Pei Lan Hsuan Siu Lam Temple Plaster			•		0	1
TOTALS	1	5	1	1	8	8

Table 4: List of manufactured products found during surveys in Australia and New Zealand, February 1995, which listed pangolin, bear, elephant and/or seal as an ingredient, showing number of shops where the product was observed and presence of target ingredients. (P = pangolin; B = bear; E = elephant; S = seal)

\* This product was not searched for in Australia. New stocks no longer list bear as an ingredient; old stock is still common and was present in all shops selling this product.

# See text for explanation relating to this product.

## 2. New Zealand - Manufactured Products

A total of 30 premises were surveyed in New Zealand - 23 in Auckland and 7 in Wellington. The number and percentage of shops where target products were identified are given in Table 5. These figures were calculated in the same manner as described above for Australia.

Table 5 shows that slightly under 50% of premises surveyed in New Zealand were selling derivatives claimed to contain target CITES-listed species. Forty percent of premises surveyed were selling musk products; the next most frequently found products were tiger (20.0%), bear (16.7%), leopard (13.3%) and saiga (6.7%).

Given the small number of premises surveyed in Wellington, comparison of products found with Auckland is probably pointless. Contrasting New Zealand totals with Australia shows that the main differences are: a greater proportion of shops selling bear products in New Zealand

(16.7% vs 5.0%); vastly fewer shops selling saiga (6.7% vs 49.6%); and a lower overall availability of products in New Zealand (46.7% vs 68.9%). Differences in other target species between the two countries were that New Zealand had: less leopard (13.3% vs 21.8%); less musk (40.0% vs 49.6%); less rhino (0.0% vs 2.5%); and more tiger (20.0% vs 14.3%). With these comparisons, however, it needs to be remembered that the sample size in Australia was around four times larger than for New Zealand.

	Bear		Leopard		Musk		Saiga		Tiger		None		Number shops surveyed
	#	%	#	%	#	%	#	%	#	%	#	%	
Auckland	3	13.0	3	13.0	7	30.4	1	4.3	4	17.4	14	60.9	23
Wellington	2	28.6	1	14.3	5	71.4	1	14.3	2	28.6	2	28.6	7
TOTAL	5	16.7	4	13.3	12	40.0	2	6.7	6	20.0	16	53.3	30

Table 5: Number and percentage of premises surveyed in New Zealand in February 1995 which were selling one or more products claiming to contain, or be, target CITES-listed species. (# = number; % = percentage)

Tables 3 and 4 show that a total of 25 manufactured products containing species of interest were found in New Zealand. Eighteen of these products listed musk as an ingredient, five included tiger, three saiga, two leopard, one bear, one seal and one elephant. Only 12 of the manufactured products listed in Tables 3 and 4 were found in both Australia and New Zealand; Australia had 17 medicines which were not found in New Zealand, which likewise had 13 items not observed in Australia.

New Zealand did not have the same pattern of a few products which were far more commonly found than the rest, as was observed in Australia. In fact no single brand of manufactured medicine was found in any more than four shops. Two products were found four times: a musk plaster, Kweifeng Brand Musk Rheumatic Relaxes and Activates Plaster; and bear pills, Yang Cheng Brand Fargelin for Piles.

### 3. Raw Products

During the survey the consultant was, on occasion, able to observe 'raw' products of target species for sale. However, unless these products were fairly obviously displayed, determining the availability of raw products was generally difficult.

Six shops in Sydney and three in New Zealand were selling dried gall bladders, said to come from wild pigs *Sus scrofa*. These were around half to a quarter the size of 'normal' bear gall bladders and cheaper (A\$20-45 per bladder). One shop in New Zealand was selling larger gall bladders, however wildlife law enforcement agents believed that these were also from pig. One shop in Australia and one in New Zealand were selling bear bile powder for A\$100 per tube and NZ\$450 for four tubes, respectively. The powder was sourced from bear farms in Jilin Province, China (Consultant, *in litt.*). All these items were found in Korean shops.

Saiga horns were observed in two shops in Australia, one of which also had saiga horn filament. One of these premises had the horn marked for sale at A\$25 for 3.75 grams of horn. The

consultant considered it likely that stocks of saiga horn would be fairly widely held in Australian TCM dispensaries.

The only evidence of tiger raw product found was an item which the consultant was told was a tiger penis, for sale in a Korean souvenir shop in Australia. The penis was dried with testis attached and was being sold for A\$350. The consultant thought it likely that the item was counterfeit due to its exaggerated appearance.

One Australian shop had Chinese characters on medicine cabinets suggesting that it had raw musk and rhino horn for sale. When the consultant asked about the rhino horn the shopkeeper nervously denied its availability. Similarly labelled cabinets are standard throughout East Asia, however, and therefore may not necessarily indicate availability of these products (Mills, *in litt.*).

A butchers shop in Sydney's Chinatown was advertising crocodile meat for sale and on two occasions the consultant heard herbalists recommending crocodile meat to patients. Crocodile meat has long been used by Chinese as an asthma cure (Consultant, *in litt.*). It is quite legal to sell crocodile meat in New South Wales and many other parts of Australia.

The dried bladder of an Asiatic cobra *Naja naja* was observed in a single shop.

### C. Additional Information Derived Outside the Survey

TRAFFIC Oceania is aware of an additional type of tiger bone plaster available in Australia which was not observed during the survey. This product was purchased by a member of the public in August 1994 and subsequently passed on to TRAFFIC. The ingredients list is given in English and includes musk and tiger-bone paste; the name and brand of the product are only given in Chinese characters.

A particularly interesting case arose in Australia in September 1993 when TRAFFIC was alerted by a concerned member of the Sydney TCM community of an attempt to sell two rhino horns in Australia. The horns were, the vendor claimed, a pre-CITES hunting trophy of an unspecified African rhino species, which was legally imported into Australia in the 1970s. The horns, with an estimated combined weight of 3 kilograms, were being offered for sale to TCM practitioners for a non-negotiable price of US\$50,000. Enforcement agencies were notified but were unable to take action as domestic sale of legally imported rhino horn did not, apparently, breach any legislation<sup>7</sup>. It is not known whether a buyer was ever found for the horns.

In New Zealand, one of the shops surveyed had, a few weeks previously, been observed selling the bear product Fargelin for Piles (Golder, B. *in litt.*), which was not detected in this shop at the time of the survey. About one year previously, another of the surveyed shops was observed to be selling Li Shih Brand Pilulae Corticis Eucommiae et Ossis Tigris pills and Emeishan Brand Musk & Tiger-Bone Plasters, neither of which were seen in this shop during the survey.

There is also a small amount of information available from overseas countries which adds to what is known of the role of Australia and New Zealand in the international trade in endangered species medicines. According to China's CITES annual reports, China exported 50 'containers'

---

<sup>7</sup> See section IV for a more detailed discussion of the relevant legislation in Australia.

(boxes, cartons or bags) of tiger products to Australia in 1991 and a further 53 containers in 1992 (Mulliken & Haywood, 1994). For rhino, China reported exporting four units of rhino derivatives to Australia in 1992 (Mulliken & Haywood, 1994). New Zealand does not feature as an export destination for either of these species in China's CITES annual reports.

Other countries have also intercepted tiger products either coming from, or going to, Australia. CITES annual reports of the United States of America indicate that they have seized tiger and rhino products originating from Australia, but only in very low quantities - 11 units of tiger and 1 of rhino in 1990 and 4 of tiger in 1991 (Mulliken & Haywood, 1994). Authorities in the United Kingdom intercepted 20 packets of tiger bone plasters en route to what is probably a private address in Australia. Curiously, the package originated in Africa.

Additional information on the extent of trade into these two countries of TCM containing CITES-listed species can also be gleaned from government seizure data. This is discussed in section IV below.

#### IV. LEGISLATIVE AND ADMINISTRATIVE CONTROLS AND ACTIONS

##### A. Australia

##### 1. Legislation

Legislative control over the importation, possession and sale of TCM containing endangered species occurs, to some degree, at both the Commonwealth and State/Territory level in Australia. A number of different pieces of legislation are relevant in different ways and to different degrees. This summary of the principal relevant legislation and its applicability is mostly based on advice provided by the legal firm Allen, Allen & Hemsley (Maloney, D.A.W. *in litt.* to Callister, D., 11 April 1995).

At the Commonwealth level, there are two pieces of legislation of primary relevance - *Wildlife Protection (Regulation of Exports & Imports) Act 1982* (WP Act) and *Therapeutic Goods Act 1989* (TG Act). The government departments with chief carriage for the implementation and enforcement of these Acts are the Australian Customs Service, Australian Nature Conservation Agency and Therapeutic Goods Administration of the Commonwealth Department of Human Services and Health.

The WP Act is Australia's CITES-implementing legislation. It prohibits the importation of specimens of CITES-listed species except with a permit or authority. In other words, it is an offence to import TCM containing CITES-listed species (e.g. bear, leopard, musk deer, rhino, tiger) without a permit or authority. Furthermore, section 53 of the WP Act makes it an offence to possess specimens imported in contravention of the Act. However, there is a defence available if a person can show that they did not know, or had reasonable grounds for not knowing or suspecting, that the specimen in their possession was illegally imported. Appropriately placed publicity on the provisions of the WP Act as they related to TCM, for example advertisements in Chinese language newspapers, would make it difficult for people to rely on the defence provided in section 53. Maximum penalties for illegal importation of CITES-listed specimens are, for individuals, a \$100,000 fine and/or 10 years' imprisonment; for breaches of section 53, the maximum penalty is a \$100,000 fine or 5 years' imprisonment.

It should be noted that, at the time of writing (April 1995), while saiga antelope had been listed in CITES Appendix II, the appropriate amendments had not yet been made to the WP Act to make this law in Australia. Until these amendments are made, saiga products will continue to fall outside the jurisdiction of the WP Act.

The TG Act controls the import and manufacture of therapeutic goods and applies to goods manufactured both inside and outside Australia, which are destined for supply in Australia. Therapeutic goods as defined in the legislation includes goods which are used as ingredients in the manufacture of therapeutic goods. Basically, it provides that therapeutic goods must be registered or listed under the TG Act to be legally imported, manufactured or supplied. None of the medicines of interest in this study are known to be registered or listed under the TG Act. "Supply" is defined to include retail sale, although the legislation is somewhat unclear on this matter. The penalty for importing or manufacturing unlisted or unregistered goods is \$24,000, and \$12,000 for supplying (i.e. selling) unregistered or unlisted products.

The power of the TG Act to control the sale of TCM is seriously diminished, however, in that its provisions apply to corporations, but sole traders and unincorporated associations are only regulated if trading inter-State. Some of these shortcomings are picked up in State laws, however only New South Wales and Victoria have passed comparable legislation.

Products which have been imported legally under the WP Act, but which constitute unregistered or unlisted goods under the provisions of the TG Act, still breach the TG Act. The converse is also true.

Other Commonwealth legislation such as the *Customs Act 1901* and *Quarantine Act 1908* are also relevant or potentially relevant. However, the two Acts described in detail above are of principal bearing and no further elaboration of incidental legislation will be given.

Relevant State and Territory legislation includes: *Therapeutic Goods & Cosmetics Act 1972* (New South Wales); *Health Act 1958* (Victoria); and State and Territory Fair Trading legislation (excluding the Northern Territory).

TCM would constitute a 'therapeutic substance' under New South Wales' *Therapeutic Goods & Cosmetics Act*. The Act prohibits the manufacture and wholesale sale of therapeutic substances but does not regulate retail sale.

Victoria's *Health Act* prohibits the sale, including retail sale, of unregistered 'proprietary medicines'. TCM would meet the definition of a 'proprietary medicine'. This legislation also prohibits the sale of a drug, article or substance which is falsely described. The listing of false ingredients on packaging would contravene this section.

Also of relevance is Fair Trading legislation in place in all States and Territories apart from the Northern Territory. Such Acts provide penalties for making false representations and allow for the making of injunctions in the case of misleading and deceptive conduct. These provisions are relevant in the context of labelling of TCM, particularly false listing of contents on packaging.

In summary, Commonwealth legislation clearly controls the import of TCM containing CITES-listed species. It allows for the seizure of illegally imported specimens but ignorance of the law can be a valid defence against prosecution. Retail sale is only controlled for corporations and

for inter-State trade. Only New South Wales and Victoria have legislation which complements Commonwealth 'medicine-related' legislation. Of these, only Victoria's legislation controls retail sale; New South Wales' legislation only covers manufacture and sale at the wholesale level. Therefore, only Victoria has adequate legislation to fully control the importation, manufacture, and wholesale and retail sale of traditional Chinese medicine containing CITES-listed species.

## 2. Enforcement Action

Details of the range and number of TCM products claiming to contain bear, leopard, musk, rhino and tiger, which have been seized in Australia between July 1991 and March 1995, are shown in Table 6. This table was compiled using seizure data provided by the Australian Nature Conservation Agency (ANCA), Australia's Management and Scientific Authority for CITES. There was no consistent use of units in the raw data, but items were consolidated where possible. Tiger balm products were kept separate as it is possible that they represent ordinary tiger balm products not containing any tiger derivatives. The list of seized items was also compared with products listed in Gaski & Johnson (1994), for those products where the specific brand name was given. Where this reference indicated that a listed product contained additional ingredients to those given in the seizure record, this product was listed in Table 6 with the additional ingredients.

Product	Unit	Species present					Quantity seized by year				
		B	L	M	R	T	1991*	1992	1993	1994	1995*
Bear gall bladder	number	•					0	0	4	0	0
Bear medicine <sup>1</sup>	bottles <sup>A</sup>	•					2	0	2	20	10
	packets	•					0	0	0	14	0
Bear & musk medicine <sup>2</sup>	misc. <sup>B</sup>	•		•			3	0	26	18	0
Bear & musk pills	packets	•		•			3	2	0	0	0
Bear, musk, rhino pills	packets	•		•	•		8	0	125	17	0
	misc. <sup>C</sup>	•		•	•		0	0	0	3	0
Leopard bone	bottles		•				0	0	0	11	0
	packets		•				0	0	0	8	94
Leopard medicine <sup>3</sup>	packets		•				0	0	0	40	0
	unknown		•				0	0	0	4	0
Leopard pills	bottles		•				5	0	0	0	0
Leopard plasters	packets		•				0	0	0	97	0
	misc. <sup>D</sup>		•				0	0	0	0	2
Leopard & musk pills	boxes		•	•			0	0	1	0	0
Leopard & tiger plaster	packets		•			•	0	210	20	2	0
Leopard, musk & tiger bone balm	unknown		•	•		•	0	0	2	2	0
Leopard, musk & tiger plaster	packets <sup>E</sup>		•	•		•	10	115	5	2	0

Of Tiger Treatments and Rhino Remedies...

Product	Unit	Species present					Quantity seized by year				
		B	L	M	R	T	1991*	1992	1993	1994	1995 <sup>†</sup>
Musk medicine <sup>4</sup>	bottles			•			6	24	0	16	0
	boxes			•			1	30	17	189	10
	kilograms			•			0	0	0	0	0.08
	packets			•			16	217	6255	211	3
	misc. <sup>F</sup>			•			1	12	138	437	7
Musk pills	boxes			•			13	3	78	24	0
	packets			•			24	4	18	19	7
	pills			•			96	108	6078	1512	655
	misc. <sup>G</sup>			•			6	5	20	197	0
Musk plasters	boxes			•			0	14	20	17	2
	packets			•			157	167	306	339	61
	pieces			•			0	0	0	2	0
	plasters			•			138	126	443	223	22
Musk & rhino medicine	packets			•	•		0	30	18	0	0
	misc. <sup>H</sup>			•	•		500	36	0	72	0
Musk & rhino pills	boxes			•	•		0	1	0	0	0
	pills			•	•		22	48	0	0	0
Musk & tiger bone	packets			•		•	18	35	112	8	39
	misc. <sup>I</sup>			•		•	135	36	57	6	0
Musk & tiger bone balm	unknown			•		•	0	2	0	0	0
Musk & tiger medicine <sup>5</sup>	misc. <sup>J</sup>			•		•	32	40	1	2	0
Musk & tiger pills	misc. <sup>K</sup>			•		•	1	30	21	30	0
Musk & tiger plasters	boxes <sup>L</sup>			•		•	29	42	43	51	0
	packets			•		•	1252	3009	2843	1032	130
	pieces			•		•	164	48	0	48	0
	plasters			•		•	737	885	1796	522	93
Musk & tiger balm plasters	misc. <sup>M</sup>			•		•	0	1	63	0	0
Musk, rhino & tiger medicine	misc. <sup>N</sup>			•	•	•	0	21	8	6	0
Musk, rhino & tiger pills	misc. <sup>N</sup>			•	•	•	7	20	0	0	0
Musk, rhino & tiger plasters	boxes			•	•	•	0	0	12	0	0
Rhino medicine <sup>6</sup>	boxes				•		23	0	8	6	0
	misc. <sup>P</sup>				•		0	5	15	0	0
Rhino pills	misc. <sup>Q</sup>				•		192	0	4	0	0
Rhino & tiger medicine	packets				•	•	1	0	0	0	0
Rhino & tiger pills	pills				•	•	31	44	96	0	0
Tiger bone	bottles					•	3	0	2	26	12
	boxes <sup>R</sup>					•	14	0	20	16	0
	packets					•	35	103	75	135	4
	misc. <sup>S</sup>					•	8	51	7	19	11
Tiger bone balm	packets					•	0	2	0	9	60
	misc. <sup>T</sup>					•	0	1	1	0	0
Tiger balm elixir	bottles					•	0	0	0	6	0

Of Tiger Treatments and Rhino Remedies...

Product	Unit	Species present					Quantity seized by year				
		B	L	M	R	T	1991*	1992	1993	1994	1995 <sup>#</sup>
Tiger medicine <sup>7</sup>	bottles <sup>U</sup>					•	0	12	1	14	0
	packets					•	4	16	12	33	4
	misc. <sup>V</sup>					•	6	2	2	23	4
Tiger penis	bottles					•	0	0	2	0	0
Tiger pills	bottles <sup>W</sup>					•	12	15	0	24	0
	boxes					•	0	116	10	3	0
	packets					•	7	5	21	4	14
	pills					•	231	1656	798	0	190
Tiger bone plasters	boxes					•	11	151	29	15	0
	packets					•	202	460	696	455	77
	plasters					•	344	1070	606	486	132
	misc. <sup>X</sup>					•	101	0	19	35	100
Tiger balm plaster	packets					•	0	0	4	14	0
	unknown					•	0	44	5	0	0
							4611	9074	20965	6524	1743

Table 6: Australian government seizures of traditional Chinese medicine containing bear, leopard, musk, rhino and tiger under the *Wildlife Protection (Regulation of Exports & Imports) Act 1982*, July 1991 – March 1995. (B = bear; L = leopard; M = musk; R = rhino; T = tiger; misc. = miscellaneous units) Note that plasters includes sheets, sachets and satchels. Source: Australian Nature Conservation Agency data collated by TRAFFIC Oceania

- \* six months 1 July to 31 December only
- # three months 1 January to 31 March only
- 1 includes bile oil, bile powder, gall wine
- 2 includes ointment
- 3 includes "leopard rocks ripper"
- 4 includes throat lozenges, medicine balls, spray, powder, musk monkey pad powder, musk snake gall, musk pangolin plaster, musk dog skin plaster, musk bone unidentified product
- 5 includes oil, paste, powder
- 6 includes powder
- 7 includes powder, bandages, wine, paste, glue, analgesic block, wax balls, eleven tigers bar
- A includes vials (5 in 1994)
- B includes bags, bottles, packets, tubes
- C includes cartons, unknown units
- D includes boxes, tins
- E includes plasters (10 in 1991)
- F includes balls, bone (no units), containers, pieces, sheets, solutions, tins, tubes, vials, unknown units
- G includes bags, containers, vials (196-1994)
- H includes bottles (40-1994), boxes (2-1994), unknown units
- I includes bottles, boxes, sheets, unknown units
- J includes bottles (2-1994), boxes, packets, unknown units
- K includes bottles, boxes (6-1993), packets (15-1993), pills
- L includes cartons (1-1992)
- M includes boxes (1992), unknown units (1993)
- N includes packets, unknown units (18-1992)
- O includes boxes (2-1991), pills
- P includes bottles (10-1993), packets, unknown units (4-1993)
- Q includes bottles (2-1993), boxes (1-1993), pills (192-1991), tins (1-1993)
- R includes cartons (6-1994)
- S includes bone (no units), loose/pieces, pads (6-1994), tins (2-1994)
- T includes jars (1-1992), unknown units
- U includes 750 ml in 1994, included as 1 bottle
- V includes bags (1-1994), balls (10-1994), boxes, pieces (4-1995), unknown units
- W includes jars (1-1991), tins (2-1992)
- X includes bundles of packets, containers, pieces

## Of Tiger Treatments and Rhino Remedies...

Of these five CITES-listed taxa alone, nearly 43,000 units have been seized in Australia in the past 3 years and 9 months. The actual number of individual packaged medicines represented by this figure may be even higher for two reasons. Firstly, some seizures were listed as items such as boxes, which may represent more than one item. On the other hand, some seizures were listed in units such as pills, with it being unclear whether one unit represented a single pill or a packaged container of pills. Secondly, the data appears to have been extracted by searching the seizure database for "bear", "leopard", "musk", "rhino" and "tiger". Goods listed on the database as "os tigris" (tiger), "fel ursi" (bear) or "moschus" (musk) would not appear in Table 6 unless the product also contained one of the five ingredients searched for. For example, a product listed as "os tigris and musk pills" would have been detected among the musk products, but "os tigris and moschus pills" would have been missed in the data search.

Of the 42,917 seized products, 33,030 had ingredients listed as musk (78.3%), 22,006 tiger (52.2%), 1379 rhino (3.3%), 536 leopard (1.3%) and 257 bear (0.6%). The most commonly seized products were musk and tiger plasters, musk medicine, musk pills and tiger plasters. Examination of the dates of seizure indicates that seizures of specimens of these five species occurred basically on two days out of every three during the past three years and nine months (1991 - 128 days, 69.6%; 1992 - 228 days, 62.3%; 1993 - 236 days, 64.7%; 1995 - 50 days, 55.6%; Total for 3 years and 9 months - 871 days, 63.6%).

The country of export/origin for these seizures was not provided to TRAFFIC for the purpose of this analysis, however this data should be held by the authorities in their seizure records. Examination of principal source countries would be a useful exercise which would, hopefully, assist in directing law enforcement effort towards the appropriate source countries.

Despite seizures of such magnitude and frequency, ANCA has initiated no systematic action to try and reduce the level of illegal imports, and the Australian Customs Service very little. These seizures are not included in Australia's CITES Annual Reports and the analysis presented here is probably the first detailed examination of Australia's seizure data for TCM containing CITES-listed species. No doubt these are factors in the lack of action on this issue by enforcement agencies - they simply may not have been aware of the magnitude of the problem.

In January 1994, the Australian Customs Service carried out activities specifically aimed at the CITES-listed TCM issue. Following identification of tiger bone plasters for sale in Sydney, Customs officers visited premises throughout Chinatown informing retailers about legislative provisions relating to the importation of TCM. At the same time the ACS issued a press release and had a related article printed in a leading Chinese-language newspaper. The principal objective seems to have been to educate potential traders of illegally imported TCM, rather than any major enforcement crackdown aimed at seizure and prosecution.

Interestingly, the consultant found only a single shop in Sydney's Chinatown region where tiger products were available and felt that there was a high level of knowledge in the area that shops should not be selling tiger products. It is quite likely, therefore, that the Customs actions detailed above had a positive impact. An added factor is also likely to be media interest in the availability of tiger medicines in Australia, which has tended to focus on retailers in Sydney's Chinatown.

## B. New Zealand

### 1. Legislation

New Zealand legislation is less complicated than Australia's, without the distinction between Commonwealth and State/Territory legislation. Interpretation of the legislation given here is based in part on legal advice provided to WWF New Zealand by Buddle Findlay Barristers and Solicitors (Matangi, A. *in litt.* to B. Golder, 7 March 1995).

In New Zealand, CITES is implemented through the *Trade in Endangered Species Act 1989* (TIES Act). Like the equivalent Australian legislation, at the time surveys were conducted it had not been amended to recognise the most recent changes to the CITES Appendices such as the Appendix II listing of saiga antelope. Under the TIES Act, Appendix I species are classified as 'endangered' and Appendix II species as 'threatened'.

The TIES Act prohibits "trade" in endangered and threatened species without a permit; the definition of "trade" does not include domestic sale. It also prohibits the possession of illegally imported specimens of endangered and threatened species. However, once the product is at a retail/wholesale outlet, this provision is only enforceable if the authorities can prove that the person knew that the specimen was imported otherwise than in accordance with the Act. This proof includes providing details of date and place of importation and the person or company responsible for the importation (Hitchcock, C. *in litt.*). Under section 39, Power of Seizure, any officer with reasonable cause to believe that specimens of CITES-listed species have been imported to New Zealand otherwise than in accordance with the TIES Act can seize that specimen. However, this does not necessarily assist when the product is beyond the point of importation, as in this case goods must be returned unless charges are laid and proven.

The *Medicines Act 1981* has some relevance but appears primarily geared at controlling importation and sale of prescription medicines and the like. TCM, however, would appear to fall under the definition of "medicines" under this Act<sup>8</sup>. A license is required under the Act to manufacture, sell by wholesale, or pack or label any medicine. It is also an offence for an importer or manufacturer to sell or advertise medicine, other than a herbal remedy, unless it has been quality tested.

Other relevant legislation in New Zealand includes the *Biosecurity Act*, *Customs Act 1966* and the *Fair Trading Act 1986*. The latter prohibits misleading and deceptive conduct in trade, and false representations that goods are of a particular composition. Like in Australia, these provisions are relevant where TCM are claimed by vendors not to contain endangered species, despite being listed as an ingredient on packaging, and vice versa.

### 2. Enforcement Action

In October 1994 the New Zealand Interdepartmental Fauna and Flora Task Force (otherwise known as the CITES Task Force), commenced an operation specifically targeting imports of TCM containing CITES-listed species. Because of the difficulties with the TIES Act outlined above, enforcement and seizure effort has concentrated at the point of importation. Numerous

---

<sup>8</sup> The definition of medicine under the Medicines Act does exclude "Any animal remedy" but it is assumed that this means a remedy for treating animals rather than one made from them.

shipments have been inspected and medicines containing CITES-listed species seized. The operation has involved enforcement officers liaising with importers and retailers of TCM and advising them of the legislation regarding any of these which contain CITES-listed species.

Because this is an ongoing operation, and details of seizures to date under the operation have been provided to TRAFFIC Oceania in confidence, details are not included here. However, because New Zealand includes seized imports in their CITES annual report, details of the quantity of seizures and the species involved will become publicly available at a later date. Examination of New Zealand's CITES annual reports indicates only low levels of seizures of TCM containing CITES-listed species prior to the initiation of this operation by the CITES Task Force.

## V. DISCUSSION

It is clear from an analysis of the results of TRAFFIC Oceania's undercover survey, coupled with seizure data, that there is a continuing demand in Australia and New Zealand for TCM containing derivatives of CITES-listed species. At present, this demand is being met by illegal importation of primarily manufactured medicines, but also small amounts of raw product. The greatest amount of trade appears to be in medicines containing musk, followed by tiger or leopard. Medicines or raw product containing bear, rhino and various other CITES-listed species were also found, but in quite low quantities.

It is difficult to place the results outlined in this report in an international context, as comparable data from other Western countries are largely unavailable. Clearly, use of CITES-listed species in TCM in Australia and New Zealand is not of the same scale as in East Asian countries such as China, South Korea or Japan. The level of demand (and consequently, product availability and the volume of seizures) appears to be higher in Australia than in New Zealand. This is most likely attributable to the relative size of their populations of East Asian ethnic origin. Indeed, even within Australia, there was an apparent trend of greater product availability in those cities with the biggest Asian populations. Given this, where other parameters are equal (such as laws, enforcement effort and public education), it would seem reasonable to expect that the scale of use of CITES-listed species in TCM in Australia and New Zealand, compared to other Western countries, would loosely correlate with the size of their respective East Asian populations.

Some interesting observations relating to changing practices at the manufacturing level in China are evident from the products found in this survey. Two of the most commonly found items were medical plasters which formerly listed tiger as an ingredient. While the product approval codes remained unchanged, tiger had been removed from the list of ingredients and product name. Interestingly, one of these plasters had substituted leopard bone for tiger as an ingredient; leopard, while not as endangered globally as tiger, is also included in Appendix I of CITES. This tiger/leopard substitution was also found with the most commonly observed brand of tiger pills. Presumably this reflects changing legislation in China, the country of manufacture, where production of medicines containing tiger was ordered to cease in 1993 (Mills & Jackson, 1994). Whether the new products still contain tiger bone (if indeed they ever did) is impossible to determine without forensic tests or verification at the point of manufacture.

Changes in ingredient labelling were also observed for the bear product 'Fargelin for Piles', with bear removed from the ingredient list in new stock. Again, it was not possible to determine

whether such changes reflect an actual change in ingredients, or were motivated by attempts to subvert legislative controls.

Two of the tiger products observed by the consultant appeared to be quite old - for example, packaging was faded, contents mouldy, or the date on packaging very dated. These could well be products that have been in Australia for a considerable time. Another possibility is that, as countries in the Far East crack down on sale of tiger medicines, stocks are being shipped to markets in other countries where laws and law enforcement are not so strict. The obvious way to counteract such possibilities is to ensure that legislative effort towards tiger medicines occurs globally, across all existing markets. Otherwise there is the risk that continuing demand in some countries, coupled with lax laws and poor enforcement, could lessen the effectiveness of efforts of countries such as China to stop the use and manufacture of tiger bone medicines. Coordination of law enforcement effort across all tiger consumer markets is an important component of the resolution relating to tigers passed at the most recent CITES meeting.

Another interesting observation made during the survey was the relatively widespread availability of wild boar gall bladder. This appears to be used by the Korean community in Australia and New Zealand as a substitute for bear gall bladder. These findings could have application in other countries where continuing demand for wild bear gall bladders is having a deleterious impact on wild populations. Promoting wild boar as an appropriate substitute may help to ease this pressure. Care will need to be taken with this approach, however, to ensure that wild boar gall bladders are not sourced from wild stocks which may be of conservation concern, but rather from regions where they are abundant.

One issue that frequently comes up in discussion of the endangered species/TCM issue, is whether indeed the products actually contain the species included in the list of ingredients. It is claimed, for example, that many manufactured medicines which list tiger bone as an ingredient may not in fact contain it and that, consequently, the risk posed to tigers from these medicines is not as great as is often supposed. (Interestingly, one of the products found in this survey responded to this issue by including wording on the packaging guaranteeing that it did in fact contain genuine tiger bone.) In terms of conservation impact, the 'false labelling' issue is to some extent a red herring. Tiger products, for example, are frequently labelled with tiger prominently displayed as an ingredient. Presumably then, purchasers buy these products because they think it contains tiger and would therefore prefer the genuine article to a fake. Consequently, products which list tiger as an ingredient, whether genuine or fake, perpetuate a demand for real tiger bone and products containing it. In addition, with tiger populations in such a critical state in the wild, if only one product in one hundred contains real tiger bone, then that is still more than the wild population can sustain.

For some CITES-listed species, forensic tests exist which can detect the presence of derivatives in manufactured medicines, although this is not the case for all species or derivatives. However, these forensic tests are not widely available and may require sending samples for testing to specialist laboratories such as the United States National Fish and Wildlife Forensics Laboratory. Sometimes this inability to definitely identify CITES-listed species as ingredients could hamper enforcement efforts. For example, if legislation is unclear on its definition of what constitutes a specimen subject to its control and when a person holding a specimen denies that it contains what is listed in the ingredients. However, if CITES-implementing legislation follows the terms of CITES Res. Conf. 9.6 on 'Trade in Readily Recognizable Parts and Derivatives', then this should no longer be an issue. This resolution deems that any medicine which lists a CITES-listed species as an ingredient on its packaging, should be treated as containing that species.

One interesting component of this study was documentation of Australia's seizure data for musk, tiger, rhino, bear and leopard. This was interesting for a number of reasons including: the volume and frequency of seizures; the non-inclusion of this data in Australia's CITES annual reports; the apparent lack of analysis of this data by the Australian authorities; and their consequent failure to capitalise on this considerable body of data for targeted law enforcement purposes. Analysis of this data was made more difficult by the lack of use of any form of standardised units to record the seizure data. While on the one hand, caution needs to be exercised to ensure that data recorded is still meaningful when using standardised units, on the other, there were obvious areas where consistent use of units could be introduced. It would also be helpful to carry out further analysis of existing data to determine information such as source countries, port of import and whether most seizures represent personal or commercial imports. Such analysis would assist in developing profiles for future law enforcement and education effort. Interchange of information from seizures with law enforcement agencies in the country of import should also be encouraged.

Both Australian and New Zealand authorities have carried out some enforcement and/or education activity aimed at lowering the level of illegal importation of TCM containing CITES-listed species. New Zealand has initiated a targeted law enforcement operation in this area, which is to be commended. Their efforts are hampered, however, by shortcomings in their CITES-implementing legislation. One suggestion for dealing with weaknesses in the *Trade in Endangered Species Act 1989*, would be to make the possession of any specimen of endangered species illegal regardless of whether or not the person had knowledge that it was imported illegally. Omitting the requirement of knowledge would make the enforcement of this Act much more effective. This revision should be complimented by strict enforcement by the relevant government departments.

From 1992 to 1994, New Zealand served as the Chairman of the CITES Standing Committee. This coincided with the period when this committee took a variety of measures aimed at stopping illegal trade in rhino horn and tiger bone. New Zealand took a strong position in calling for tough measures to stop this illegal trade. Given that this survey indicates that it too is party to this trade, at least for tiger products, it would behove New Zealand to support their international actions by taking strong measures to counter the illegal trade into their own country. Conservation benefits aside, failure to do so could easily leave them open to charges of hypocrisy.

Australia has been less active in the law enforcement arena than New Zealand in terms of specific operations, however, seizures of TCM containing CITES-listed species are ongoing at the border. What has not occurred is much detailed enforcement activity past the point of importation, or any prosecutions of illegal importers. Having said this, however, it should be recognised that Australia too suffers from uncertainties in application of its legislation. It has both CITES-implementing legislation and health legislation which is of relevance, increasing the number of agencies involved and complicating jurisdictional issues between them. The health legislation is further complicated in that there is both Commonwealth and State laws, leading to more agencies, more confusion and more differences and inconsistencies.

In summary, the legislation of both countries adequately controls importation of TCM containing CITES-listed species. Both have problems with prosecuting and seizing products at retail outlets as lack of knowledge that goods were illegally imported acts as a defence under CITES legislation. There is medicine-related and fair trading legislation in both countries which is also of relevance. The former has only partial application to retail and wholesale sale and is gener-

ally not sufficiently comprehensive to prohibit retail sale of CITES-listed TCM which has been illegally imported. The only instance where retail sale of such products is illegal is in the State of Victoria in Australia. Under fair trading legislation, false labelling of ingredients on TCM would be an offence. Overall, the laws in either country do not fully implement relevant CITES resolutions on tiger, rhino and derivatives of CITES species (Res. Confs. 9.13, 9.14 and 9.6, respectively). Amendments will need to be made if the laws of Australia and New Zealand are to adequately control the importation and sale of medicines containing endangered species, such as tiger and rhino.

Important in the development of the required legislative amendments will be close cooperation between the different government agencies involved in policing the importation, sale and manufacture of TCM. This is critical to ensure the development of clear, comprehensive legislation and a good understanding of the relative roles of the different agencies in implementing and enforcing this legislation. Another critical factor will be involving the TCM community in the development of legislative changes. Such an approach should help ensure a better awareness and understanding of the legislation and its requirements. Cooperative development will also, hopefully, result in a greater sense of 'ownership' among the TCM community of any laws and therefore a greater willingness to adhere to their provisions.

Specific details of the nature of legislative amendments needed have not been spelled out in this report, rather the general type of amendments required have been identified. Determination of precise legislative changes will require detailed legal analysis of relevant legislation and should take into account issues such as: provisions in the Constitutions of the two countries which may be of relevance; whether different legal provisions are needed for Appendix I and Appendix II species; jurisdictional issues between different government departments; and inter-relationships between the different pieces of relevant legislation.

One interesting finding of the survey was the high availability of products containing saiga antelope in Australia. At the time of the survey, this species was not covered by CITES legislation in either Australia or New Zealand, but will become so once the appropriate legislative amendments have occurred, presumably some time in 1995. Once Australia (and New Zealand) has amended its CITES-implementing legislation to include saiga, importation of saiga medicines will be illegal without a CITES permit. Because of Australia's strict legislation, permits will only be granted if the horn is from animals sourced from specially approved management programs and the likelihood of this occurring is probably remote. On the other hand, importation of medicines containing saiga have always been controlled under the provisions of Australia's *Therapeutic Goods Act 1989* and must, therefore, be registered or listed under this Act in order to be legally imported. It is not known whether any saiga products are currently approved for importation under this legislation. If they are, they will shortly become illegal under a different piece of legislation. If not, they will become even more illegal but seizure and prosecution procedures for stocks detected on shelves in the future will no doubt be complicated by the issue of whether they are pre-CITES or post-CITES stocks.

This example, confusing as it is, perhaps ideally illustrates how Australian legislation is simply not geared to deal with the issue of controlling importation and sale of medicines containing endangered species. It also highlights how it is not adequately designed to deal with changing circumstances in the international protection of species, when this protection relates to controlling trade in manufactured medicines containing derivatives of these species.

A necessity in any program to tackle the illegal importation of TCM containing endangered species is engaging the TCM-using community in identifying and implementing solutions. It is this community which is creating the demand, consequently, any attempt to effect solutions must involve them. During the survey the consultant encountered varying degrees of awareness of laws controlling importation and sale of TCM containing CITES-listed species and differing reactions to these laws. Quite a number of premises seemed aware of bans on the importation of tiger products, while others appeared to not know or not care. Among those that were aware of the ban, some seemed happy to tell the buyer what they felt they wished to hear in relation to these products. For example, the consultant was told by one vendor, who was aware of the tiger bone importation ban, that manufactured products still contained tiger, it just was no longer on the list of ingredients. The level of knowledge about import restrictions on other CITES-listed species, particularly musk, seemed virtually non-existent. Either that or vendors simply ignored the law, perhaps motivated by the popularity and wide use of TCM containing ingredients such as musk.

One of the early components of any education campaign should be activities aimed at improving the understanding of the TCM community on the theoretical foundations and practical mechanics of CITES. In other words, why CITES exists and how it is implemented in Australia and New Zealand. In parts of the Far East, TRAFFIC has been involved in facilitating seminars for the TCM community on this topic; a similar approach in Australia and New Zealand may be the best way to proceed.

Some media articles regarding the use of endangered species in TCM in Australia, the laws controlling importation and the conservation status of target species such as the tiger, have been published in Chinese language newspapers in recent years. However, whether this media is sending the right messages to the right people is difficult to gauge. Activities such as placing of media stories have also been, to a large extent, somewhat random and have not formed a part of any long-term education campaign on the use of endangered species in TCM.

A final important point to remember in the development of education campaigns is that maximum impact is likely to result from well thought out, carefully researched and developed efforts. As with any other endeavour aimed at influencing the purchasing patterns of consumers, careful preparatory market research will help ensure that the right message is sent via the right medium to the target buyers. A rushed, ill-considered campaign may have no other major effect apart from making the 'Western' government or conservation agency initiating the campaign feel better about having done 'something to help', while the attitudes of the people they were trying to influence remain essentially unchanged.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Conclusions

Undercover market surveys of traditional Chinese medicine retail outlets in Australia and New Zealand, conducted during February 1995, indicated a healthy market for illegally imported medicines containing CITES-listed species such as bear, leopard, musk, rhino and tiger. These results were supported by information on recent government seizures of such products. Seizure data for Australia were particularly interesting, indicating that TCM with CITES species as ingredients were confiscated at the border on average two days out of every three, over the 45

months to March 1995. A minimum of 42,917 items containing bear, leopard, musk, rhino and/or tiger were seized entering Australia during this period. Over half of these items claimed to contain tiger as an ingredient. TRAFFIC's retail survey indicated that many products are eluding seizure and making it to the retail shelves.

Most of the products detected were manufactured medicines, the majority produced in China. Few raw products were observed, however it is likely that raw product is available in Australia and New Zealand, but probably only in small quantities.

There is inadequate enforcement effort directed towards stopping illegal imports of TCM containing endangered species, particularly in Australia. New Zealand has recently begun a targeted law enforcement operation on TCM, which is to be commended. Enforcement efforts are hampered by confusing and non-comprehensive legislation. While legislation in both countries prohibits importation of medicines containing CITES-listed species without the appropriate permits, it does not necessarily adequately control possession and sale of such items once inside the country. Amendments to existing legislation, increased law enforcement effort and greater cooperation between relevant government agencies are all needed if Australia and New Zealand are to fully implement their international obligations as CITES parties and stop illegal importation of products such as tiger bone medicines.

Very little has been done in either country to educate the TCM community on the provisions of CITES, the conservation impact of the use of endangered species in TCM, and the availability of effective substitutes. However, New Zealand is again more actively engaged in this area than is Australia. Collaboration with and education of the TCM community will be a critical component of any effort to curb the demand for endangered species medicines in Australia and New Zealand. Relying on enforcement effort alone is unlikely to be successful as long as a demand persists. Therefore, working to decrease demand and increase compliance to laws, through cooperative education campaigns, will be a key factor in the success or failure of efforts to stop illegal imports of medicines containing CITES-listed species.

In summary, the use and availability of CITES-listed species in TCM in Australia and New Zealand is not of the same scale as in many Asian countries, but it is still widespread enough to be of concern. Amendments to legislation, increased enforcement and greater consultation with and education of the TCM community are all essential if the Australian and New Zealand markets for illegally imported medicines containing endangered species are to be controlled. Such measures will also assist these countries to: meet their international obligations as CITES Parties; ensure that neither Australia nor New Zealand becomes a destination for stocks of endangered species medicine now illegal in East Asian countries; and, most importantly, contribute to the international conservation effort to save species such as tiger and rhinos from extinction.

## B. Recommendations

A number of the recommendations below are consistent with, and would serve to implement, CITES resolutions including Res. Conf. 9.4, Res. Conf. 9.6, Res. Conf. 9.13 and Res. Conf. 9.14.

- Relevant government agencies in Australia and New Zealand should develop a national public awareness campaign, in collaboration with the TCM using and trading/dispensing community and conservation groups, which aims to, *inter alia*, educate Asian communities regarding:

## Of Tiger Treatments and Rhino Remedies...

- the laws covering the importation, possession and sale of TCM and penalties for the violation of such laws;
- the conservation impact on endangered species from their use in medicines;
- why survival in the wild of the endangered species used in medicine is important; and
- how they can switch to other non-Western medicines which do not contain endangered or illegally imported species and still meet their medical needs.

This education campaign should be preceded by appropriate market research to ensure that messages are communicated to the correct audience, in the most appropriate manner, through the best medium. It should include collecting information on existing knowledge bases, to ensure that education leads to a common understanding of all relevant concepts and issues and does not assume a prior knowledge base which may not in fact exist.

- Law enforcement agencies, especially in Australia, should increase their enforcement effort directed towards stopping illegal imports of medicines containing CITES-listed species. This should include increased liaison with government agencies and TRAFFIC in exporting countries, in an attempt to stem illegal exports to Australia and New Zealand at source.
- Law enforcement agencies in Australia and New Zealand should carry out an analysis of data provided to them by TRAFFIC Oceania from these covert surveys, and existing seizure data, to develop better enforcement profiles and initiate follow-up enforcement action accordingly.
- Both Australia and New Zealand should amend their legislation so that it clearly and comprehensively allows for:
  - making possession of specimens of, or products containing, CITES-listed species which were illegally imported an offence, whether or not the holder knew they were illegally imported (i.e. reversal of the onus of proof as it currently stands);
  - making it an offence to sell (including retail sale), or advertise for sale, medicines or raw product used for medicinal purposes which have been illegally imported, with the onus of proof of legal import lying with the seller or advertiser;
  - making it an offence to sell specimens or products of CITES Appendix I species for therapeutic purposes, irrespective of whether or not the product or specimen was legally imported; and
  - any product or specimen which appears from accompanying documentation, labelling or packaging to be a part or derivative of a CITES-listed species to be treated as containing that species.

Legislation relating to use, possession and sale of tiger parts and products introduced by Hong Kong would serve as a useful model for some of these measures (Mills & Jackson, 1994). Amended legislation should be developed and introduced in full consultation with the TCM community.

- Consideration should be given to the initiation of a stock registration/surrender/consolidation scheme in the lead-up to the introduction of the legislative amendments described above. Development of such a scheme is particularly relevant where species used in TCM become newly-listed on the CITES appendices - e.g. saiga antelope.
- Australia should include data on seizures of medicines containing CITES-listed species in its CITES annual report. Both countries should examine ways to standardise units used to record and report on such data.

## VII. REFERENCES

- Alchin, V. (1994). *Application of Social and Market Research Techniques to Wildlife Medicinal Trade Investigations*. TRAFFIC Southeast Asia Special Report, Kuala Lumpur.
- Anon. (1994a). Proposal to include *Saiga tatarica* in Appendix II and the Mongolian population of *Saiga tatarica* in Appendix I. Supporting documentation prepared for the Ninth Meeting of the Conference of the Parties to CITES, Other Proposals - Mammalia, pages 237-240.
- Anon. (1994b). Hopes of rediscovering the Javan Tiger fade. *Cat News*, 21:12-14.
- Anon. (1994c). United States imposed limited trade sanctions on Taiwan for continued trade in endangered species. *Endangered Species Technical Bulletin*, XIX(3):1 & 10.
- Corbet, G.B. & Hill, J.E. (1980). *A World List of Mammalian Species*. British Museum (Natural History), London & Cornell University Press, Ithaca.
- Cumming, D.H.M., Du Toit, R.F. & Stuart, S.N. (1990). *African Elephants and Rhinos: Status Survey and Conservation Action Plan*. IUCN, Gland.
- Gaski, A.L. & Johnson, K.A. (1994). *Prescription for Extinction: Endangered Species and Patented Oriental Medicines in Trade*. TRAFFIC USA, Washington & TRAFFIC International, Cambridge.
- Groombridge, B. (ed) (1993). *1994 IUCN Red List of Threatened Animals*. IUCN, Gland.
- Jackson, P. & Kemf, E. (1994). *Wanted Alive: Tigers in the Wild*. WWF International, Gland.
- Kempf, E. & Jackson, P. (1994). *Wanted Alive: Rhinos in the Wild*. WWF International, Gland.
- Khan, M.K.b.M. (1989). *Asian Rhinos: An Action Plan for their Conservation*. IUCN, Gland.

- Leader-Williams, N. (1992). *The World Trade in Rhino Horn: A Review*. TRAFFIC International, Cambridge.
- McCracken, C., Rose, D.A. & Johnson, K.A. (1995). *Status, Management, and Commercialization of the American Black Bear (Ursus americanus)*. TRAFFIC USA, Washington.
- Mills, J.A. & Jackson, P. (1994). *Killed for a Cure: A Review of the Worldwide Trade in Tiger Bone*. TRAFFIC International, Cambridge.
- Mills, J.A. & Servheen, C. (1991). *The Asian Trade in Bears and Bear Parts*. TRAFFIC USA, Washington.
- Milner-Gulland, E.J. (1994). Sustainable management of the saiga antelope. *Oryx*, 28(4):257-262.
- Mulliken, T. & Haywood, M. (1994). Recent data on trade in rhino and Tiger products, 1988-1992. *TRAFFIC Bulletin*, 14(3):99-106.
- Nash, S. (1994). *Making CITES Work*. WWF UK, Godalming.
- Parry-Jones, R. & Mills, J.A. (in prep.). *Feasibility of Using Public Awareness in Asian Communities to Dissuade the Use of Rhino Horn, Tiger Bone and Other Endangered Species' Parts as Medicine: Phase I*. Draft unpublished report.
- Zhang, E. (1990a). *Rare Chinese Materia Medica*. Publishing House of Shanghai College of Traditional Chinese Medicine, Shanghai.
- Zhang, E. (1990b). *The Chinese Materia Medica*. Publishing House of Shanghai College of Traditional Chinese Medicine, Shanghai.
- Zhang, H. & Zhang, Z. (eds) (1994). *Chinese Medicine Resources*. Science Press, Beijing. (translation from Chinese provided by consultant).



**IUCN**  
The World Conservation Union

The TRAFFIC Network is the world's largest wildlife trade monitoring programme with offices covering most parts of the world. TRAFFIC is a programme of WWF (World Wide Fund for Nature) and IUCN (the World Conservation Union) established to monitor trade in wild plants and animals. It works in close co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

For further information contact:  
The Director  
TRAFFIC Oceania  
PO Box R594  
Royal Exchange  
Sydney NSW 2000  
Australia  
Telephone: 61 2 2478133  
Facsimile: 61 2 2474579  
email: [traffico@peg.pegasus.oz.au](mailto:traffico@peg.pegasus.oz.au)