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TRAFFIC
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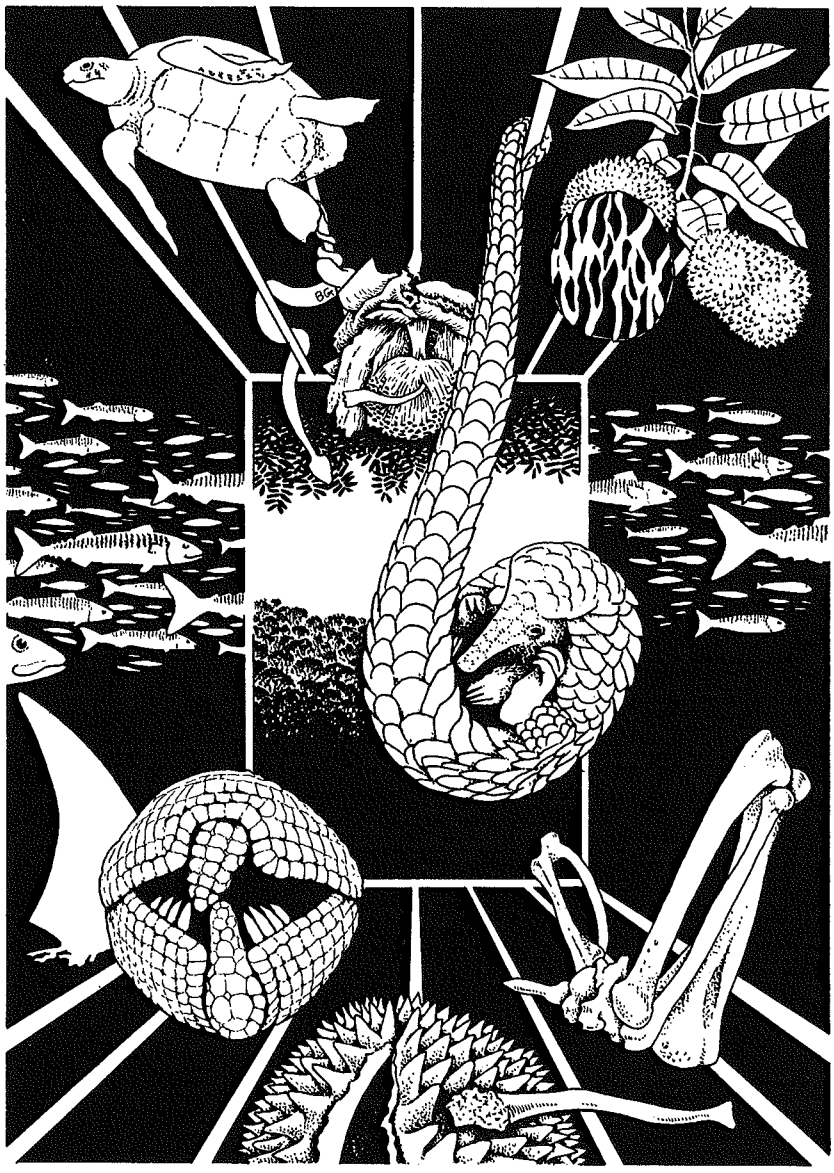

The Journal of the TRAFFIC Network disseminates information on the trade in wild animal and plant resources

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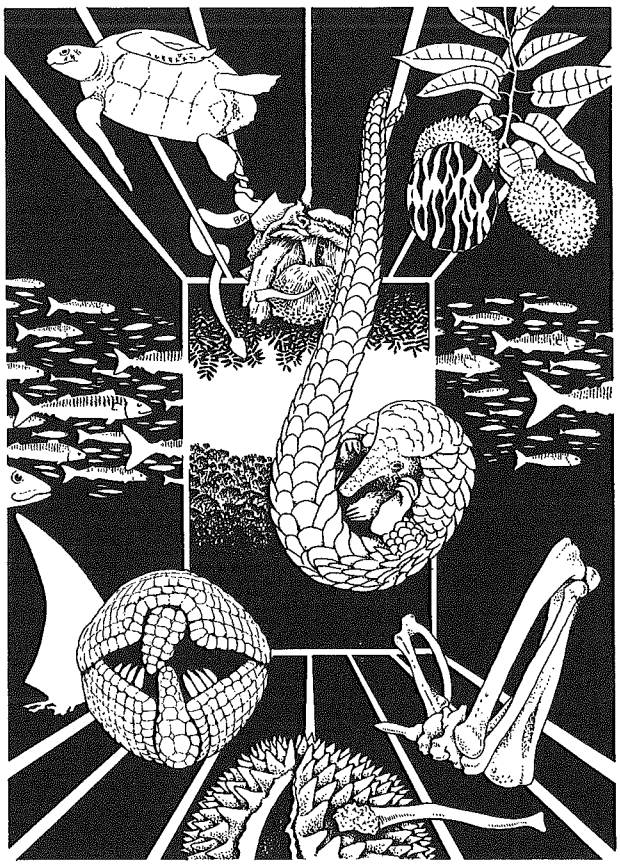

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MAY 1994

Hong Kong Bans Tiger Medicine

A three-month period to allow for the disposal of medicines containing or claiming to contain Tiger *Panthera tigris* products, expired in Hong Kong on 28 April 1994. Possession and sale of such medicines are now prohibited. The ban became effective following amendments to the *Animals and Plants (Protection of Endangered Species) Ordinance* in January (see *TRAFFIC Bulletin* 14(2):42).

Agriculture and Fisheries Department, Hong Kong

South Korea Bans on Tiger Products Impending

The Ministry of Environment has announced that the sale of Tiger bone will be prohibited with effect from November 1994; a prohibition on the sale of Tiger bone derivatives, including drugs and other products, will be effected in March 1995. These decisions were taken at a meeting of the Ministry's Global Environment Division on 11 April 1994, at which the status of domestic Tiger bone trade was reviewed and assessed.

The Director of the Global Environment Division, Deok-Gil Rhee (*in litt.*, 31 May 1994), has stated that all Tiger bone stocks in the country had been identified and registered by March 1994 and that, in May, all such items were marked and photographed. Those in possession of these goods were now required to record all movement of such stocks. He further stated that enforcement of regulations regarding the trade of endangered wildlife had been significantly reinforced. Between 15 March and 15 May, the public prosecutor's office had conducted special investigations to uncover illegal trade in endangered species.

D.G. Rhee, Director, Global Environment Division, Ministry of Environment, Republic of Korea, in litt., *31 May 1994*

TRAFFIC East Asia

A TRAFFIC office will shortly be established in Hong Kong. TRAFFIC East Asia's area of responsibility will initially focus on Hong Kong and neighbouring China, Japan, Macao, South Korea and Taiwan. The address and contact numbers of this office will be published in the next issue of the *TRAFFIC Bulletin*.

A new Project Officer, Lu Dau-Jye, has been appointed to assist operations at the TRAFFIC office in Taipei.

Taiwan to Strengthen Trade Controls . . .

Taiwan has announced that it is taking stronger action to control illegal wildlife trade, in particular of Tigers and rhinos Rhinocerotidae.

On 6 January 1994, the Council of Agriculture (COA) established the Wildlife Protection Unit (WPU), which is responsible for establishing and maintaining exchange of information with international wildlife protection authorities, conservation organizations and non-governmental organizations, on matters relating to wildlife smuggling.

Draft amendments to strengthen the *Wildlife Conservation Law* have been submitted to the Legislative Yuan for consideration and approval; the amendments would greatly increase penalties for violation of the Act, and penalize those failing to register stocks of Tiger bone or rhino horn.

At a meeting on 20 April, Government departments concerned with wildlife conservation resolved to reduce the time allowed to achieve the goals specified in the "Wildlife Conservation Proposal", from six to three years. These goals include the identification and marking of Tiger bone and rhino horn on the island, an increase in conservation education and specialist training, and the appointment of 130 conservation officers. In order to fulfil these ambitions, the COA intends to spend NT$200 m (US$7.5 m) in the first year and NT$400 m in each of the following years.

S. Ling, Vice Chairman, Council of Agriculture, Executive Yuan, in litt., *18 May 1994; The China News (Taiwan), 21 April 1994; TRAFFIC International*

. . . but US Sanctions Imminent

On 11 April 1994, US President William Clinton announced that punitive measures would be taken against Taiwan for failing to take sufficient action to eliminate the illegal trade in endangered species in the province, in particular of rhinos and Tigers. Whilst recognizing that some progress had been made on the island to address the problem, he stated that, until adequate legislation was enacted and enforcement action improved, importation of wildlife specimens and products from the province would be prohibited. The precise nature of the restrictions and their date of implementation was to be announced in June, following a public comment period.

The US President also declared that similar considerations by the US Government to impose import prohibitions on China had been deemed not warranted at this time, as it was believed that China had made good progress in curbing illegal wildlife trade; the situation will be reviewed in December 1994.

US Federal Register, Vol. 59(81), 28 April 1994; William J. Clinton, The White House, Washington, in litt. *to The Honorable Thomas S. Foley, Speaker of the House of Representatives, 11 April 1994*

Tiger 'Think Tank'

Eleven of the 14 Tiger *Panthera tigris* range states came together in March to find ways to help in the recovery of the world's dwindling Tiger populations. The Global Tiger Forum, convened in New Delhi by the Indian Minister of Environment, brought together representatives from Bangladesh, Bhutan, Cambodia, Indonesia, India, Malaysia, Myanmar, Nepal, the Russian Federation, Thailand and Viet Nam. Amongst the aims of the forum is the elimination of the use of Tiger bone and other derivatives in medicines, the promotion of a comprehensive legal framework and the provision of financial and infrastructural capabilities for effective conservation of the Tiger.

Delegates reviewed the trade problems within their countries. An important factor contributing to the poaching in and increased trade from the Russian Far East was the liberalisation of travel and trade in that region, while Tiger products apparently were found easily in Cambodia, where the lack of legislation allows traders to operate openly. A recent survey in the country suggested that 100 to 200 Tigers were sold each year at US$150 to US$1200 for skins and US$100 a kg for bones; live Tigers were said to be sold to Thailand. In neighbouring Viet Nam, the demand for Tiger bone balm, considered there to be one of the most valuable traditional medicines, and the fragmented Tiger habitat, placed the Tiger population in that country close to extinction, with an estimated 300 Tigers remaining.

More optimistically, it was reported that new legislation had been introduced in Myanmar to protect Tigers, which were still "reasonably abundant" in the country. Anti-poaching programmes were established in Bangladesh where the remaining estimated population of 460 Tigers is virtually confined to the Sunderbans mangrove forests.

At the meeting, support was called for from all areas, including governments, inter-governmental and non-governmental organizations, as well as bilateral co-operation between range states.

Range states that were not represented at the Forum were China, Lao People's Democratic Republic and North Korea.

Cat News No. 20, April 1994; TRAFFIC International

Rhinos and Tigers Remain a Priority

The focus of the CITES Standing Committee was again on rhinoceroses Rhinocerotidae and Tigers *Panthera tigris* at its 31st meeting, held on 21 to 25 March 1994, in Geneva, Switzerland. Notably, the findings of the two CITES delegations - the Technical Assistance Delegation and the subsequent High Level Delegation - to China, Taiwan, and the Republic of Korea, were assessed, in conjunction with reports submitted by consumer countries themselves and by TRAFFIC.

The Committee observed that the minimum requirements for determining adequate implementation of protection measures for rhinos and Tigers in consumer countries, as established at the 30th meeting of the Standing Committee (see *TRAFFIC Bulletin* 14(2):41), should remain in effect. At the same time, the Committee accepted that progress had been made by authorities in these countries towards improving domestic control of the illegal trade in these species and informing consumers of the risk to the survival of rhinos and Tigers if this control is not achieved. It was recognized that headway was slowed by the long-standing tradition of the use of rhino horn and Tiger bone in these same areas.

In particular, the Committee also noted:

- that some progress had been made in the Republic of Korea and China towards meeting the requirements specified at the 30th meeting of the Standing Committee, but noted that further action was necessary, proof of which it hoped could be announced by the next meeting of the Conference of the Parties to CITES;

- with approval that Viet Nam had acceded to the Convention and begun efforts towards its implementation;

- with concern that Taiwan had up to this time failed to take sufficient measures to implement the Committee's minimum requirements towards protecting rhinos and Tigers, and recommended that Taiwan demonstrate clear progress in this regard at the next meeting of the Conference of the Parties to CITES;

Further, it was agreed that:

- the Chairman of the Standing Committee should write to the relevant authorities in the UK, expressing the need to maintain strict control of trade in rhino and Tiger products in Hong Kong and satisfaction with actions so far taken;

- the Chairman should keep communication channels open with the Governments of Viet Nam, Zambia, and the Lao People's Democratic Republic, on matters discussed at the 30th Standing Committee meeting, and to press for further action in support of the conservation of rhinos and Tigers in those three countries;

- the Chairman should write to the authorities in Oman, the United Arab Emirates and Yemen, expressing concern about reported trade in rhino products and call upon those countries to accept a visit from a High Level Emissary or Delegation, to explore means of its control.

The Standing Committee urged all CITES Parties and interested organizations to assist in improving conservation measures and law enforcement potential, in both range and consumer states of rhinos and Tigers. Parties were asked to note the findings of the *Global Tiger Forum* (2 to 4 March 1994, New Delhi, India) in particular (see above). A need was recognized for a full discussion of all aspects concerning the conservation and trade of rhinos and Tigers at the ninth meeting of the Conference of the Parties to CITES.

Extracted from a *Statement of the CITES Standing Committee, 25 May 1994*

No Respite for Asian Rhinos

The most recent population estimates for Asian rhinos indicate that the average population of the three species combined (2445) is lower than the latest population estimates for the rarer of the African species, the Black Rhino *Diceros bicornis* (2545).

The latest population estimates for Asian rhinos in the wild are:

Indian Rhino	*Rhinoceros unicornis*	1735-2025
Javan Rhino	*Rhinoceros sondaicus*	< 100
Sumatran Rhino	*Dicerorhinus sumatrensis*	390-540

The figure for Indian Rhinos comprises an estimated 1320 to 1585 specimens in India and 415 to 440 in Nepal. Over the past 10 years, the population of the Sumatran Rhino *Dicerorhinus sumatrensis* is reported to have declined by 50%.

The total for all three species combined is estimated to range between 2225 and 2665.

SSC Asian Rhino Specialist Group, in litt., *2 June 1994; TRAFFIC International*

There is growing concern for the survival of the rhino population in Manas Tiger Reserve, which is situated on the border of Bhutan, in north-east India, and covers an area of 39 100 ha. A source quoting official figures of the Government of Assam has provided the following poaching figures of Indian Rhinos *Rhinoceros unicornis* and Asian Elephants *Elephas maximus* at the reserve.

Year	Rhinos	Elephants
1989	5	2
1990	2	2
1991	3	2
1992	11	4
1993	22	3

The poaching figures for the first half of 1994 are not yet available but, in the case of rhinos, are believed to be so high that unconfirmed reports suggest that the population may have been reduced to four specimens or fewer. The difficult terrain of Manas and the heavy rains that have advanced into north-east India have combined to obstruct ground verification of the population for the time being.

Reliable estimates of Tigers killed in the reserve during 1993 and 1994 are not available, but there are fears that this number could be high.

TRAFFIC India

CITES Action in Southeast Asia

Viet Nam, having acceded to CITES in January 1994, made a purposeful start to its efforts to ensure proper implementation of the Convention by convening a meeting between over 30 participants from relevant government departments, scientific bodies and trading companies on 10 to 11 March 1994. The "National Scientific Exchange on CITES" was chaired jointly by representatives of the new CITES Management Authority - the Ministry of Forestry - and what are likely to become the two CITES Scientific Authorities - the Centre for Natural Resources Management and Environmental Studies (CRES) of the University of Hanoi and the Institute of Ecology and Biological Resources. Presentations on CITES and regional wildlife trade issues were made by representatives of TRAFFIC Southeast Asia, which provided financial support to the meeting, and the CITES Secretariat. Contributions by Vietnamese participants covered national wildlife legislation and enforcement and the results of three recent joint CRES/TRAFFIC wildlife trade investigations in the country. After a productive discussion session, the Ministry of Forestry announced its intention to develop an action plan for the implementation of the Convention, and called for co-operation from neighbouring countries to assist Viet Nam's efforts to enforce border controls. Viet Nam is also looking for support for the organization of national administration/enforcement training workshops.

On 22 April 1994, Thailand hosted the first of what it hopes will become a series of meetings to discuss control of cross-border wildlife trade with its neighbouring countries. Organized by the Royal Forest Department, and held at Ton Nga Chang Wildlife Sanctuary, the meeting brought together representatives of the CITES Management Authorities and regional enforcement officers of Thailand and Malaysia. The morning session allowed exchange of information regarding wildlife protection and trade controls and related to administrative and enforcement measures in each country. After further presentations on trade trends in the region and a detailed discussion about common enforcement problems, the government representatives developed a list of proposed actions, which will be used to guide improvement of border controls. The Royal Forest Department plans to hold a similar meeting with representatives of the Government of Lao People's Democratic Republic in the near future.

TRAFFIC Southeast Asia

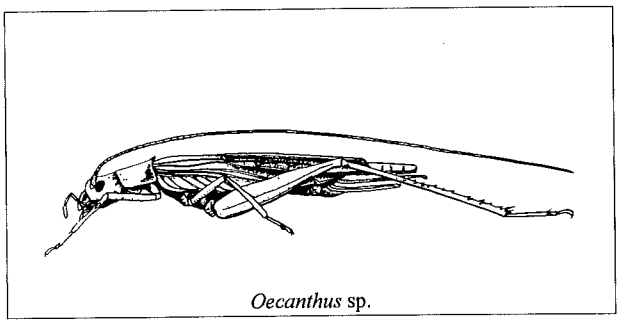
The Sport of Crickets

In parts of China, singing insects make popular pets and staging cricket fights is a common pursuit. Jin Xing-Bao, a scientist at the Shanghai Institute of Entomology visited a number of markets where a selection of species were seen. The largest outlet is located at the Shanghai Plants, Birds, Fish and Insects Market in Jiang-Yin Road, where more than 10 vendors can be found selling singing insects every day. All insects seen were katydids and crickets, the most popular being the tiny yellowish Sword-tail Cricket *Anaxipha pallidula,* whose Chinese name "Little Yellow Bell", aptly describes its song. This insect may be kept in its owner's pocket in a small box containing a breathing hole which also serves to amplify the song. Other species seen included *Anaxipha* sp., (Large Yellow Bell), *Homoeoxiphia lycoides* (Bamboo Bell), *Oecanthus rufescens* (Horse Bell), *Homoeogryllus japonicus* (Golden Bells) and *Truljalia* sp. (Stone Bell), all of which range in colour from light green to black. Katydids observed included *Gampsocleis gratiosa, G. inflata,* and the noisy *Mecopoda elongata* (Weaving Lady).

Most of the singing crickets are collected by farmers in the Yellow Mountain region in Anhui Province, 400 km southwest of Shanghai. This collection often provides a better income than does farming. After visiting the area, Jin and a colleague were told by a local guide that a number of the new houses in the area had been built largely with the income from the sale of these insects. A Large Yellow Bell cricket can be sold for one Yuan (US$0.20) to a local insect dealer who then sells the creatures to vendors in the Shanghai markets. During the peak season, from the end of summer to the middle of autumn, 40 or more crickets may be collected daily. In order to maximize their catch, the farmers cut down bushes and tall grass, forcing the insects to jump onto a sheet which is spread on the ground; they are then transferred to containers. Farmers have noted that Yellow Bell crickets are retreating into the hills as collection has increased.

Another market visited by Jin specialized in the sale of fighting crickets *Velarifictorus.* A small number of people use these insects to gamble for money and might pay as much as 2500 Yuan (US$500) for a "fighter". Most of the insects originate in Shangdong Province, in particular Ningjin county which is known as "cricket county" owing to the large number of farmers in the region who are involved in the trade. Many crickets and katydids are now successfully bred in captivity but they are more expensive than those that are wild-collected.

Metaleptea 14(2), February 1993



Oecanthus sp.

Bear Necessities?

Developments in keeping bears in captivity in China have led Vice-Minister Shen Maocheng of the Forestry Department to announce publicly that bear farming is sufficiently successful to prevent wild bears from being killed. The Vice-Minister, who is in charge of the Government's wildlife division, referred to the experimentation in housing and breeding bears in captivity, which has now led to Government approval for bear farms in China. Most farm stock is of later generations of captive-reared bears.

The motivation to farm bears derives from the demand for bear bile for use in traditional Chinese medicine at a time when commercial trade in bears is restricted (see *TRAFFIC Bulletin* 14(2): 59). Successful techniques are said to have been developed over the past decade whereby bears' gall bladders can be drained of bile without affecting the bears' growth, nor their ability to reproduce. The amount of bile collected from one bear in a year is equal to that obtained by killing 44 wild bears, and one animal can usually be used in this way for five successive years.

Since it is claimed that the number of captive bears is now sufficient to supply the bile trade, the Chinese Government will not licence any more farms for the time being. Farms are required to meet certain conditions of technology and care, as in the Licence Regulation on Domestication and Breeding of Animals.

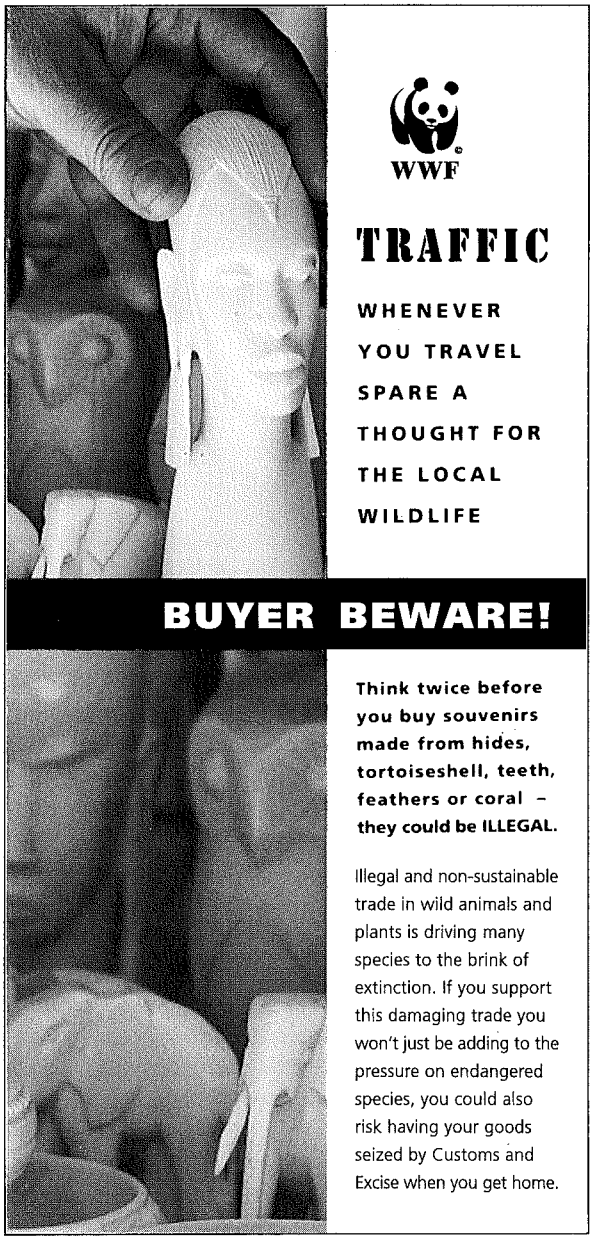
The animal welfare organization *World Society for the Protection of Animals* is co-ordinating protests against bear-farming in China, based, among other considerations, on the belief that cages for housing the bears restrict movement and that removal of bile inhibits digestion.

Beijing Review, 7-13 March 1994; Libearty News, 7, March 1994

Merchants in Ivory

In Spain and north Africa during the Middle Ages, ivory formed the basis of a huge industry in ivory-inlaid furniture and implements, a craft that continued to be practised in Paris, London and Cologne from the late 13th and 14th centuries. The ivory used in this way was thought to have derived from elephant tusks. Recent excavations by British archaeologists in Mali, in the ancient city of Gao on the River Niger, however, have unearthed a hoard of 50 Hippopotamus *Hippopotamus amphibius* teeth weighing a total of at least 45 kg, each tooth measuring up to 2ft (0.6096 m) long and, to the naked eye, almost identical to elephant ivory. In medieval times, Gao was an important trading centre and other items that would have been traded at that time - high-quality pottery and glass, and bronze jewellery - were found buried above the tusks. The ivory findings suggest that at least some of the world's ivory trade during the Middle Ages may have been based on the teeth of the Hippopotamus.

The Independent (UK), 22 February 1994



A Cautionary Campaign - Buyer Beware!

A major educational campaign entitled "Buyer Beware!" was launched in the UK at Gatwick Airport on 27 April 1994 by WWF-UK, TRAFFIC International and H.M. Customs and Excise. Buyer Beware! aims to inform travellers about wildlife souvenirs that they may find whilst on trips overseas and offers advice on which items should not be brought home. Endangered species of animals and plants, and souvenirs made from them, can be purchased in many popular holiday destinations. However, the majority of travellers do not realise that it may be illegal to take them out of that country and bring them home. Posters, leaflets and video footage were used to promote the message - "if in doubt, don't buy". Animals, plants, and manufactured items that had been seized by UK Customs were also on display as examples of wildlife souvenirs that should be avoided. The campaign also emphasized that live CITES-listed species and souvenirs manufactured from them may be purchased but require import permits issued in the UK before the journey is undertaken and export permits from the country of origin. Live mammals and birds additionally require health certificates.

TV personality, Lynn Faulds Wood, who formerly presented a BBC television consumer awareness programme, was in attendance to launch the campaign with the Customs Minister, Sir John Cope. The event was successful and a good deal of publicity helped to promote the aims of the campaign. WWF is negotiating with several airlines so that the video will be used in-flight as well as in airport departure lounges. The leaflets, posters and displays will also be seen at many airports in Britain. The Body Shop has agreed to promote the campaign at their outlets at the major UK airports. Other nations have demonstrated interest in the campaign, with a view to promoting similar campaigns at their own airports.

Crawford Allan, Enforcement Assistance Officer, TRAFFIC International

Wildlife Trade Education Kit

The Wildlife Trade Education Kit, produced by WWF-US, has been updated (3rd edition) and will be available in June. The kit comprises 80 colour slides, a revised slide-show script, in addition to factsheets, quiz games, a glossary and bibliography. It is aimed at a general audience of secondary education level and above, but may also be modified to a younger audience. The kit focuses on the USA, but also provides international coverage.

The price of the kit is US$45 plus shipping and handling costs and can be ordered from WWF Publications, PO Box 4866, Hampden Post Office, Baltimore, Maryland 21211, USA. Orders should be accompanied by a cheque drawn from a US bank, made out in US currency. MasterCard and Visa are acceptable. Tel. 410/516 6951; Fax. 410/516 6998.

Tortoiseshell Substitute

Japanese scientists are in the process of developing a substitute for tortoiseshell. By dissolving sheets of silk in a concentrate of calcium chloride and forming the substance into 0.1 mm-0.2 mm thick sheets, they can manufacture a material that resembles tortoiseshell; the sheets can then be laminated to the thickness required for items such as hair combs and spectacle frames. It is estimated that in two years' time the product will be ready for use, a fact that should be welcomed by the Japanese tortoiseshell industry which was dealt a blow following a ban on the importation of Hawksbill Turtle *Eretmochelys imbricata* shell in December 1992.

FFA News Digest No. 4/93

History of Whaling Rewritten

Information critical to the evaluation of the conservation status of whales has become available, since the release of records previously stored secretly by the former Soviet Union. The documents in question were made public on 12 November 1993, at the tenth biennial conference of the Society of Marine Mammology in the USA. Actual Soviet catch data for the 1960s, recorded by factory ships operating in the southern hemisphere after the Second World War, have been disclosed.

The new data will force reassessment of the impact of whaling activities on those species taken in quantities hitherto unknown, by the Soviet fleet. In the case of some species, the true catch figures are many times greater than had been reported. Numbers of Humpback Whales *Megaptera novaeanglia*, and Blue Whales *Balaenoptera musculus* taken during the sixties decade, 7202 and 1433, respectively, compare with 152 for Humpback Whales and 156 for Blue Whales, as reported to the International Whaling Commission (IWC) at the time. Hunting of right whales *Eubalaena* has been prohibited since the 1930s, according to IWC regulations and some earlier agreements, yet it is now known that 717 were taken by the Soviet Union during the 1960s.

The new catch information provides evidence of illegal whaling by the Soviet Union in the past, well-substantiated rumours of which have long been well known. Such is the scale of discrepancy between previous catch figures and the true data, however, that the basis for assessing the impact of whaling on certain species will have to be redetermined. The fact that Humpback Whales in the vicinity of Australia and New Zealand had been exterminated by 1966, that the Sei Whale *Balaenoptera borealis* herd in the Indian Ocean had been destroyed by 1972, and that Sperm Whales *Physeter macrocephalus* north of Hawaii were utterly depleted, may now be explained in different terms by the unveiling of Soviet data. "We knew there was a black-hole in our calculations which did not make sense", said Dr Ray Gambell, Secretary of the IWC. Recovery rates and potential population sizes for whales which were presumed protected were in fact being derived from species subject to systematic hunting in the Soviets' well regulated operation, spanning 40 years.

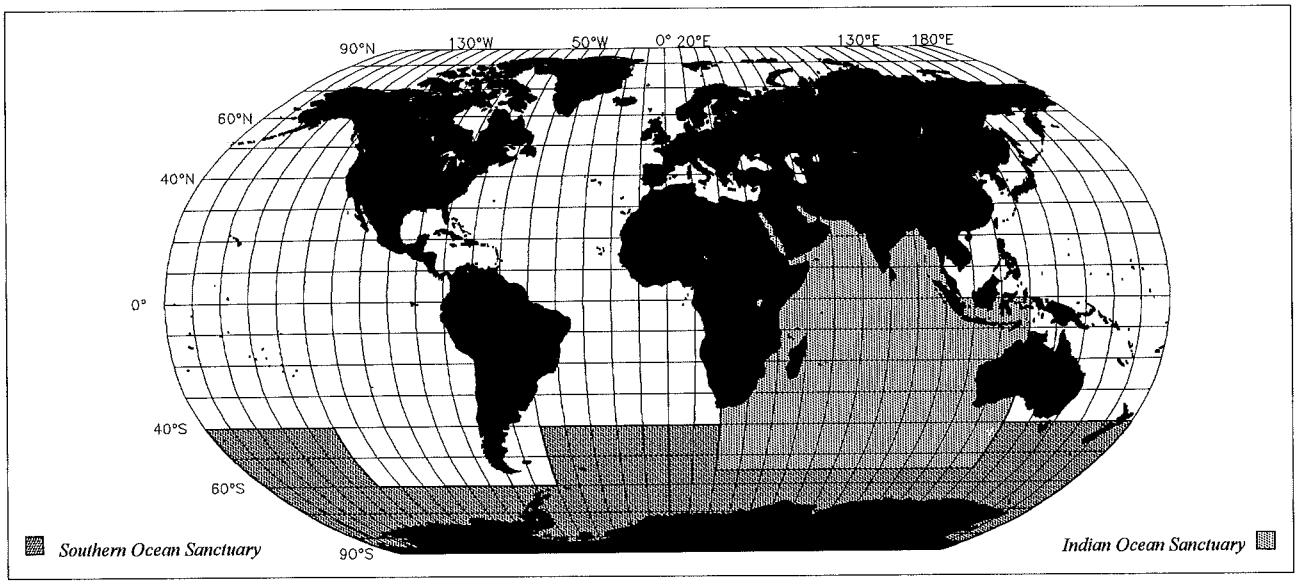
Although commercial whaling has largely ceased since the IWC's moratorium of 1982 took effect, there are allegations that information continues to be falsified. Much of the whale meat taken by the Soviet Union in previous decades was sold to the Japanese in return for hard currency and the IWC is now investigating whether whales recently caught legally by Russians for aboriginal use have been sold illegally to Japan.

The Guardian (UK), 12 February 1994; Nature, 13 January 1994

Whales Get the Vote

A proposal to create a sanctuary for whales in the waters of the Southern Ocean has been approved at the 46th annual meeting of the International Whaling Commission, in Puerto Vallarta, Mexico. The votes exceeded the required three-quarters majority, with 23 in favour, six abstentions, and Japan, which had hoped to hunt Minke Whales *Balaenoptera acutorostrata* in the region this year, the only country to vote against the proposal. Norway, which recently resumed commercial whaling in the north Atlantic, was absent from the meeting.

The concept of creating a sanctuary for whales in the Southern Ocean was first proposed to the IWC by France in 1992. The original boundaries put forward - south of latitude 40°S to the edge of the Antarctic ice - were redrawn at the latest meeting to take into account Chile's concerns of infringement of its sovereignty; notwithstanding this, whaling has already been banned in Chilean waters. The boundary now extends below Chile and Argentina between the 40th and 60th southern parallels and merges with the existing Indian Ocean sanctuary. All commercial whaling, whether pelagic or from land stations, is prohibited in the region for an indefinite period.



▷ Reacting to reports of illegal whaling activities by non-member governments, the Commission adopted a resolution (Resolution 61) which called upon members to comply with the moratorium on commercial whaling and to observe earlier resolutions prohibiting the import of any whale or whale product taken or processed under the jurisdiction of any non-IWC member country. Because whale products obtained from research whaling or fisheries bycatch makes illegal commerce more difficult to detect, and undermines the effectiveness of the IWC's conservation programme, the Commission considers that the meat and products from such activities should be utilized entirely for domestic consumption. Parties were invited to report any trade in whale meat or related products to the Infractions Sub-Committee at the annual meetings.

WWF-UK Press Release, 27 May 1994; The Guardian (UK), 28 May 1994; TRAFFIC International

Tuna Test the Water

While next season's catch quotas for Southern Bluefin Tuna *Thunnus maccoyii* are in the process of being set by the recently ratified Convention for the Conservation of Southern Bluefin Tuna (CCSBT) (see *TRAFFIC Bulletin* 14(1):8; 14(2):51), a first attempt to breed the species in captivity is underway in Port Lincoln, Australia. Northern Bluefin Tuna have already spawned successfully for two consecutive years on tuna farms in Japan and the operation in Port Lincoln is being overseen by Japanese specialists.

Australian Fisheries, November 1993

Yen for Yellowfin

Japanese liking for Yellowfin Tuna *Thunnus albacares* has apparently been increasing over the past several years. An especially large increase in imports of frozen Yellowfin Tuna from Taiwan during 1993 boosted overall imports of tunas to Japan, while Taiwanese Yellowfin exports by June 1993 had exceeded double the total exports of the fish from Taiwan in 1992.

Japanese interest in both species of bluefin tuna remains strong and imports of Northern Bluefin Tuna *Thunnus thynnus* from a number of Mediterranean coastal countries increased in 1993.

In France, vacuum-packed *steak de thon* (83% Yellowfin Tuna) may now be selected from supermarkets or from restaurant menus. The product has been launched by the company, La Bayon, a subsidiary of Peche et Froid, a seafood processing group.

Forum Fisheries Agency News Digest, 4 and 5/93

A Chance to Put the Crab Before the Net

Scallops *Pectinidae* and Orange Roughy *Hoplostethus atlanticus* fisheries have waxed and waned with the availability of those species, before suitable plans for their sustainable management could be put in place in the waters of Bass Strait between Tasmania and Australia. Recently, while sailing over deeper waters than usual in search of rock lobster *Jasus edwardsii*, fishermen in this region found they had been bringing an increasing number of Giant Crabs *Pseudocarcinas gigas* to the surface, at first unintentionally, then as a saleable commodity. Fisheries authorities are now confronted with the challenge of devising a management plan for this species before stocks are over-harvested.

Although interim arrangements exist to rein the fishing effort for these crabs - by limiting legal access to local holders of rock lobster licences - little is known of this striking red-and-white crustacean. As fisheries authorities work to establish a scientifically based limit for the minimum size of crab that may legally be taken, catches meanwhile have been soaring, from a few kilogrammes in 1990 to nearly 200 t in 1992. Once management plans are in place, the allowable catch of Giant Crabs could be halved.

The crabs, like rock lobster, can be kept alive during export, by a gradual lowering of their metabolism, allowing them to arrive in peak condition for certain lucrative Asian markets. An Australian fisherman may expect to receive up to AU$200 (US$145) for a single large specimen.

The Age (Australia), 18 September 1993

New Angle on Fishing in New South Wales and Queensland

New fishing restrictions in New South Wales, announced in *TRAFFIC Bulletin* last year (13(3):88), have come into force. Stocks of several species of fish in the State have been in decline, prompting the revised laws, which took effect from mid-June 1993. A complete ban on the capture of Trout Cod *Maccullochella macquariensis*, Eastern Freshwater Cod *Maccullochella spp.*, Australian Grayling *Prototroctes maraena* and Macquarie Perch *Macquaria australasica*, has been imposed, and new size and bag limits have been applied to a number of other native species. Live fin-fish and frogs may no longer be used as bait. Shrimp and yabby traps used must be in accordance with new regulations. The new regulations apply mainly to the 1.75 million recreational anglers in New South Wales, though the commercial fishing industry is also affected.

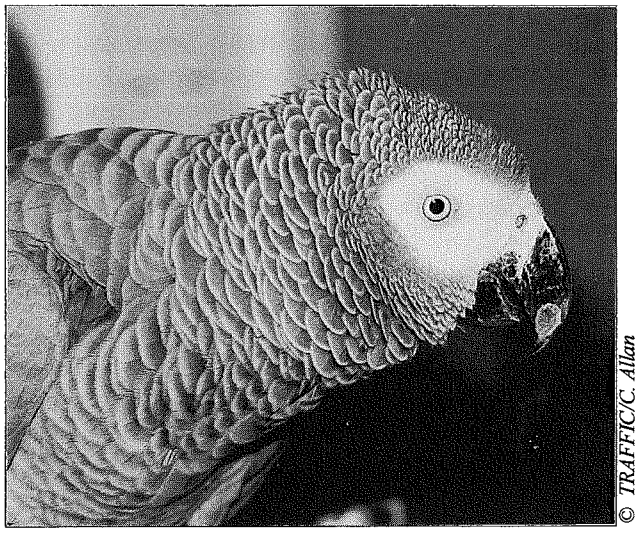
Perceived depletion of some fish stocks in Queensland has led to the introduction, on 1 July 1993, of revised bag and size limits for all species included in a prescribed list. For most listed species a limit of 10 fish is imposed, while no more than 30 listed fish are allowed to each angler at any one time.

Pastoral Times (Australia), 9 July 1993; The Narrandera Argus (Australia), 16 June 1993; Chronicle (Australia), 2 July 1993

QUOTAS

CAMEROON and GUINEA

Following a recommendation from the CITES Animals Committee, the Management Authorities of Cameroon and Guinea have informed the CITES Secretariat that they have set annual quotas for the export of African Grey Parrots *Psittacus erithacus*: 12 000 specimens in the case of Cameroon and 450 specimens for Guinea. All CITES Parties are requested to consult the Secretariat before accepting any permit authorizing export or re-export of African Greys from Guinea, in order to ensure that the quota is not exceeded. The CITES Standing Committee's recommendation to Parties that they should suspend imports of African Greys from these two countries (see *TRAFFIC Bulletin* 14(2):52) is now withdrawn.



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African Grey Parrot ***Psittacus erithacus***

GHANA

Quotas set by the Management Authority of Ghana for annual export of Royal Pythons *Python regius* have been announced as 7000 for wild-taken snakes and 10 000 for those bred in captivity. The recommendation from the CITES Standing Committee to suspend imports of this species from Ghana is now withdrawn.

NICARAGUA

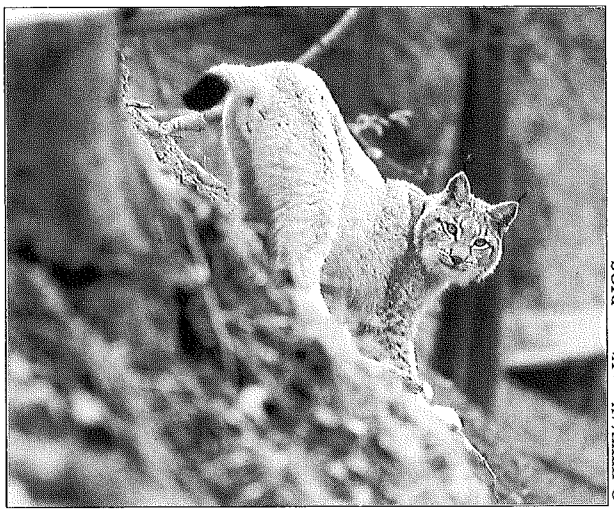
The following 1994 quotas have been announced by Nicaragua for Appendix II species:

Birds	
White-fronted Amazon	
Amazona albifrons	500
Yellow-headed Amazon	
A. auropalliata	800
Red-lored Amazon	
A. autumnalis	500
Mealy Amazon	
A. farinosa	800
Orange-fronted Conure	
Aratinga canicularis	3000
Crimson-fronted Parakeet	
A. finschi	1800
Green Parakeet	
A. holochlora	2400
Olive-throated Parakeet	
A. nana astec	900
Orange-chinned Parakeet	
Brotogeris jugularis	3000
White-capped Parrot	
Pionus senilis	500
Brown-hooded Parrot	
Pionopsitta haematotis	600
Keel-billed Toucan	
Ramphastos sulfuratus	600
Reptiles (skins)	
Spectacled Caiman	
Caiman crocodilus chiapasius	10 000
Amphibians (live animals)	
Green Poison-arrow Frog	
Dendrobates auratus	3000
Strawberry Poison-arrow Frog	
D. pumilio	3000

RUSSIAN FEDERATION

The Russian Federation has reduced its national quota for the export of specimens of Lynx *Felis lynx* from 2800 (in 1993) to 2500 animals for 1994 (see *TRAFFIC Bulletin* 14(1):11).

CITES Secretariat, Notifications to the Parties Nos. 794, 796, 797, 798, 799 and 800, 21 April 1994



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Lynx ***Felis lynx***

ARGENTINA

Until further notice, CITES Parties have been urged by the CITES Secretariat not to authorize the export of dolphins to Argentina, following information received from Argentina's Management Authority that the import of all dolphin species to that country has been suspended until a regulation has been adopted regarding dolphinaria.

CITES Secretariat Notification to the Parties No. 780, 10 March 1994

HONG KONG

The possession and sale of medicines containing or claiming to contain Tiger products has been prohibited. This follows a three-month period to allow for the disposal of such items, by 28 April 1994. The ban became effective following amendments to the *Animals and Plants (Protection of Endangered Species) Ordinance* in January (see *TRAFFIC Bulletin* 14(2):42).

First offenders could be liable to a fine of up to HK$25 000 (US$3260), rising to HK$50 000 plus six months' imprisonment on subsequent convictions.

Agriculture and Fisheries Department, Hong Kong

INDONESIA

Indications of a decline in Indonesia of wild populations of the Long-tailed Macaque *Macaca fascicularis* and Pigtail Macaque *M. nemestrina* have prompted the Indonesian Minister of Forestry to enact an export ban on these species. With effect from 20 January 1994, those in possession of these species were allowed until 31 March to export specimens. Thereafter, only captive-breeding facilities that have been allocated export quotas for these species are permitted to export specimens. Quotas will be determined on the basis of the success of the breeding programmes.

Asian Primates, 3 (3/4), December 1993/March 1994, IUCN/SSC Primate Sepcialist Group

PHILIPPINES

On 5 April 1994, the Management Authority of the Philippines informed the CITES Secretariat that the collection of CITES-listed species of birds and the export of wild-caught birds was prohibited from 15 February 1994 and that this was strictly enforced.

CITES Secretariat

SOUTH KOREA

On 11 April 1994, the Ministry of Environment announced that the sale of Tiger *Panthera tigris* bone will be prohibited with effect from November 1994; the sale of Tiger derivatives, including drugs and other products, will be banned in March 1995.

All Tiger bone stocks in the country have been identified and were registered in March 1994. These items were also marked and photographed. Those in possession of these goods are now required to record all movement of such stocks.

D.G. Rhee, Director, Global Environment Division, Ministry of Environment, Republic of Korea, in litt., *31 May 1994.*

EU CITES TRADE BANS

Following a meeting of the CITES Committee of the European Union on 3 May, imports into the EU of the following species, from those countries listed, have been banned:

China: Francois Monkey *Presbytis francoisi* (import of this species from all range states is now banned).

Madagascar: Abbott's Day Gecko *Phelsuma abbotti; P. barbouri; P. befotakensis P. chekei; P. dubia; P. modesta; P. mutabilis; P. seippi* and *P. trilineata*

Viet Nam: Blossom-headed Parakeet *Psittacula roseata*

Zambia: A ban has been introduced by Zambia on the export of the Nyasa Lovebird *Agapornis lilianae.*

CITES Newsletter of the UK Department of the Environment, No. 9, May 1994

A Validation of Draft CITES Criteria Against Selected Plant Taxa

CRITERIA →	BIOLOGICAL CRITERIA										TRADE CRITERIA			RESULT
	POPULATION		DISTRIBUTION					DECLINE		F	Known in trade	Probably in trade	Likely to enter trade	Number qualifying for AI
	A	B	C	D	and *two* of below			E - either of						
TAXON ↓	< 250	<2500 & both i decline ii frag./no. of indiv.	Dist. < 100km²	Dist. < 500km²	i frag. /conc.	ii decline	iii flucn.	i Obs.	ii Infr'd	Maint. Status				
Cactaceae - no. taxa scoring in each category/subcat.	4	21	47	51	38	36	0	10	15	0	12	21	18	**48**
Result - no. taxa scoring in category	4	21	47	24				19		0	12	21	18	
Paphiopedilum - no. taxa scoring in each category/subcat.	1	7	18	57	41	69	0	40	57	0	76	0	0	**63**
Result - no. taxa scoring in category	1	7	18	33				61		0	76	0	0	

Table 1. Summary of test results for each group.

Total number of taxa tested - Cactaceae = 60
- *Paphiopedilum* spp. = 76

Key: Infr'd = Inferred; no. of indiv. = No. of individuals; frag. = Fragmented; conc. = Extreme concentration; flucn. = Fluctuation; obs. = Observed; Maint. status = Maintain status

NB. All numerical values treated as guidelines only.

A Validation of Draft CITES Criteria Against Selected Plant Taxa

M. S. Sandison and H. N. McGough

At the eighth meeting of the Conference of the Parties to CITES, held in Kyoto, Japan, in March 1992, member countries adopted Resolution Conf. 8.20 on the development of new criteria for amendment of CITES Appendices I and II. The impetus for a review arose from a debate at the meeting where dissatisfaction with the existing Berne Criteria was expressed. Following the meeting, a process was established to prepare suggestions for the modification of the criteria with the aim of producing new criteria for consideration at the ninth meeting of the Conference of the Parties, in November 1994. In the following paper the authors present the results of a validation exercise to determine whether the first formal draft criteria arising from this process, circulated to the Parties for comment in October 1993, would be workable for plant species. The criteria for Appendix I were tested against the Appendix I-listed genus of Asiatic slipper orchids Paphiopedilum *and a range of the Appendix I cacti. These groups were chosen as they offer wide variation in available data and ecological preference, while being of high trade interest. The results of the present validation show that the criteria drafted in October can be applied to plants using a range of different types and quality of data.*

In March 1994, amended draft criteria were presented to the CITES Standing Committee. The results of deliberations arising from further revisions are not available at the time of going to press.

Background

The wording of the preamble to Resolution Conf. 8.20 adopted at the eighth meeting of the Conference of the Parties to CITES captures member states' dissatisfaction with the criteria for the listing of species in the CITES Appendices which were adopted at the first meeting of the Conference of the Parties (Berne, 1976) (Resolutions Conf. 1.1 and Conf. 1.2). It noted:

- that the Appendices to the Convention include a very large number of species, many of which may not be threatened by commercial trade;
- that certain species may not be appropriately listed in the Appendices;
- the failure of mechanisms approved by the Conference of the Parties to delete from the Appendices or to transfer between Appendices inappropriately listed species.

Conscious of the growing feeling amongst many Parties that the present composition of the Appendices may not be enhancing conservation of some wild fauna and flora, the Conference believed that, to some extent, the difficulties arose from a lack of appropriate criteria to define the term "threatened with extinction" in Article II, and recognized that trade in wildlife products could be beneficial to the conservation of wild fauna and flora.

Based on this Resolution (Conf. 8.20), the CITES Standing Committee established a process "to provide simple, pragmatic, scientific and objective criteria to determine in which Appendix, if any, it would be appropriate to list species".

In March 1993, IUCN-The World Conservation Union, which had been contracted to carry out this task, produced draft criteria and recommendations for the CITES Standing Committee. In September 1993, a closed meeting of the Plants, Animals and Standing Committees met to consider the draft criteria and to amend them as appropriate. On the basis of these amendments, in October the Chairman of the CITES Standing Committee circulated, through the CITES Secretariat, a draft Resolution for consideration by Parties at the ninth meeting of the Conference of the Parties (Anon., 1993). Included in this Resolution, known as the Brussels draft, were revised criteria for Appendices I and II, a suite of precautionary measures, recommendations for the use of split and higher taxon listings, definitions of the terms used and a proposal format.

Although the draft criteria have been further reviewed and revised subsequently (see below), the fundamental structure of the criteria remains intact. Of particular note is that, for Appendix I listings, a single set of detailed biological criteria are employed to judge the status of all taxa, whether they be plants or animals, terrestrial mammals or marine fish. This ambitious attempt to apply a single scale to the assessment of taxa with widely differing reproductive strategies was an aim set by the Standing Committee from the beginnning of the process. The present paper examines whether the criteria, albeit in draft form, appear to be able to achieve this goal.

The Brussels Draft

The Convention states that to qualify for inclusion in Appendix I, taxa must be "threatened with extinction" and that they "are or may be affected by trade". The proposed criteria set out to define these statements, by means of both biological and trade criteria, respectively. To interpret the test data, it is necessary to give a brief outline of the pertinent elements of the draft criteria and to outline definitions of the main terms used; these are set out below.

Biological criteria for Qualification for Appendix I

A species is considered to be threatened with extinction if it meets ***at least one*** of the following criteria*-

A. Estimated size of the wild population is so small[1] that there is a high risk of extinction.

B. The wild population, though more abundant[2] than in criterion A, is characterized by:

i) an observed, inferred or projected continuing decline in the number of mature individuals or the area and quality of habitat; ***and***

ii) ***either:***
a. severe fragmentation, with each sub-population meeting criterion A; ***or***
b. a majority of individuals being concentrated in one sub-population.

C. Area of distribution of the species is so small[3] that there is a high risk of extinction.

D. The wild population has a restricted area of distribution[4] and is characterized by ***any two*** of the following:

i) severe fragmentation or extreme concentration;
ii) an observed, inferred or projected continuing decline in
a. the area of distribution; ***or***
b. the number of sub-populations; ***or***
c. the number of mature individuals; ***or***
d. the area, extent or quality of habitat;
iii) extreme and rapid fluctuations in the area of distribution or the number of sub-populations.

E. A marked continuing decline in the number[5] of mature individuals in the wild, which has been ***either:***

i) observed as ongoing or as having occurred in the recent past (but with a high potential to resume); ***or***
ii) inferred or projected on the basis of:
a. a continuing decline in area or quality of habitat; ***or***
b. levels of exploitation (provided there are not other explanations for the change); ***or***
c. threats such as the effects of introduced species, pathogens, competitors, parasites, hybridization and the effects of pollutants.

F. The status of the species is such that the species is likely to satisfy one or more of the above criteria within the period between two meetings of the Conference of the Parties ***if***:

a. current levels of protection and/or management are severely reduced; ***or***
b. exploitation begins or increases.

Trade criteria for Appendix I

A species 'is or may be affected by trade' if it satisfies ***at least one*** of the following and is:

T i) known to be in trade; ***or***
T ii) probably in trade, but conclusive evidence is lacking; ***or***
T iii) likely to enter trade in the near future.

*The vulnerability of a species to threats of extinction depends on its biological characteristics, and the following numerical values, relating to notes in the above criteria, are only presented as ***examples*** that have been found to be appropriate to many species.

[1]fewer than 250 mature individuals [2]250-2500 mature individuals
[3]less than 100km^2 [4]less than 500km^2
[5]a decrease by more than 50% in total within five years or two generations.

Abbreviated definitions of main terms

Continuing decline - a clear downward trend measured over at least five years or one generation, whichever is the shorter, and not simply part of a normal fluctuation.

Marked decline - a clear downward trend in the number of mature individuals in a population, excluding normal fluctuations, that could lead to the extinction of the species.

Distribution area - the total area occupied by a species. For example, if the population of a species consists of three sub-populations each occupying 150 km^2, its distribution would equal 450 km^2.

Extreme concentration - no more than two sub-populations occur in a limited area, as envisaged in criterion D(i) of the biological criteria for Appendix I.

Mature individuals - individuals in the wild that are physiologically capable of reproduction.

Population - the total number of mature individuals in the species.

Severe fragmentation - exists when most mature individuals are found in small and relatively isolated sub-populations.

Sub-populations - separate groups of mature individuals in a population between which there is little exchange.

Application of the criteria

The criteria were applied to over 70 taxa of the Appendix I genus of tropical Asiatic slipper orchids *Paphiopedilum* and 60 taxa of the Appendix I Cactaceae using the most up to date information on distribution, conservation and trade status. A full list of the Cactaceae tested is given in Table 2.

Each taxon was tested against the "biological" and "trade criteria" and Table 1 summarizes the results of this process for each group. The criteria were applied using available published and unpublished information and by consultation with two leading experts on the plants concerned. The use of experts with a wide knowledge of the species concerned is especially important for plants, where there is a dearth of published data. The "best guess" of an experienced field botanist is often the most accurate source of information available.

It is impossible to give a detailed breakdown of the application of the criteria to the 136 taxa concerned, and space does not permit the inclusion of the full definitions of terms or of recommendations within the Resolution, but they have been taken into account in the application of the criteria. Higher taxon listings and listing on the 'look-alike' basis have not been considered here in order to increase the transparency of the application of the 'biological' and 'trade' criteria. This in no way diminishes their importance. Table 3, however, gives the full results obtained for a sample of the taxa tested. These results are discussed below to

illustrate the application and competence of the draft criteria, and do not represent recommendations for amendment of the Appendices.

Validation Exercise - Sample Taxa

Criterion A

Ariocarpus bravoanus is a small spineless cactus discovered recently in northern Mexico (Anderson *et al.*, 1994). Known to occur at only one site approximately 1 km² (N.P. Taylor, pers. comm., 1994), it has a population of around 230 mature individuals (Hernández and Anderson, 1992). This species is a good example of a cactus that qualifies under criterion A. It is highly collectable and, although not known in trade at present, is likely to enter trade (Tiii) if its precise whereabouts should become known. *Also qualifies under: C,E. Result - AI qualification.*

The only species of the genus *Paphiopedilum* to qualify under criterion A is *P. druryi,* with a population of around 250 (P. Cribb, pers. comm., 1994). *Also qualifies under B,D,E. Result - AI qualification.*

Key Points. The availability of good quality information on the status of the various cacti made it much easier to categorize these taxa under this criterion than the slipper orchids. Table 1 shows that relatively few species in either group qualify under criterion A, which, although reflecting that few known species have such low population levels, also highlights the lack of population information for plants.

Criterion B

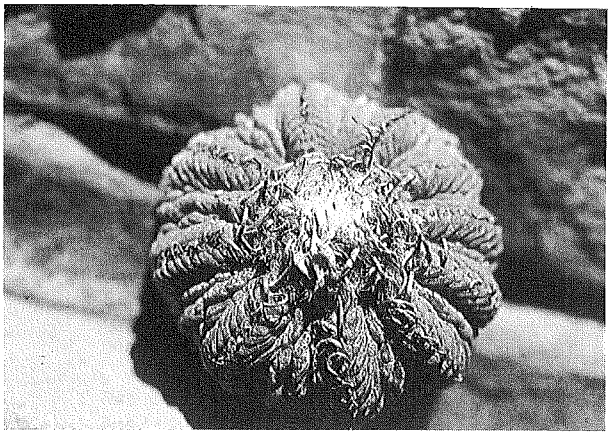
Astrophytum asterias is a spineless cactus found in Mexico and Texas. It is very rare in its natural habitat (Anderson *et al.*, 1994) and the number of mature individuals in its only two known locations amount to fewer than 2500 (N.P. Taylor, pers. comm., 1994). This species qualifies under criterion B because of its population size, and the fragmentation of its population, (Bii) in decline as a result of agricultural development and collecting pressure (Bi). *Also qualifies under C,D,E. Result - AI qualification.*

Similarly, a number of *Paphiopedilum* species, such as *P. bougainvilleanum,* qualify under criterion B. The single locality (Biib) of *P. bougainvilleanum* (Cribb, 1987) probably contains fewer than 2500 mature individuals (P. Cribb, pers. comm., 1994), and a decline in the number of mature individuals is likely as a result of overcollection (Bi). *Also qualifies under C,D. Result - AI qualification.*

Key Points. The application of criterion B to these taxa highlights similar problems, with respect to a lack of information, to those encountered with A.

Criterion C

Aztekium ritteri, one of the most unusual of the Mexican cacti, and prized by cacti hobbyists, has been estimated to have a population numbering in the millions (Anderson *et al.,* 1994). This obviously excludes the species from qualification under criterion A or B. However, this single population is located in an isolated valley in Mexico in an area covering only about 50 km² (Anderson *et al.*, 1994), allowing *A. ritteri* to qualify under criterion C. This is the only criterion under which this taxon qualifies. The species has been subject to heavy collecting for trade: it was thought for many years, quite wrongly, that the cactus was difficult to raise from seed and most of the mature plants in trade until relatively recently were probably field collected. *Result - AI qualification.*



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Aztekium ritteri

Paphiopedilum dayanum, numbers of which do not exceed 2500 mature individuals, is found in only two localities (P. Cribb, pers. comm., 1994) on Mount Kinabalu in northern Borneo (Cribb, 1987). The distribution of the plant on the steep slopes of the mountain does not exceed 100 km² and so the species qualifies under criterion C. *Also qualifies under D,E. Result - AI qualification.*

Key Points. Criterion C has been found useful for plants, which although sometimes present in large numbers, have very restricted distributions and are therefore potentially vulnerable.

Criterion D

Ariocarpus trigonus, highly popular in the cactus trade, has a population of over 2500 and a distribution of over 100 km², and so does not qualify under criterion A, B or C. However, with a distribution of less than 500 km² (N.P. Taylor, pers. comm., 1994), a fragmented population (Di) and a decline in numbers (as specified in Dii) as a result of agricultural development and collecting, this plant qualifies under D. *Also qualifies under E. Result - AI qualification.*

Ariocarpus bravoanus qualifies under criterion C and might also be expected to qualify under criterion D, but in fact does not. Although the plant has a distribution less than 500 km² and the population is extremely concentrated (Di), it has only recently been discovered and it is therefore too early to determine whether it is in decline (Dii) or fluctuating (Diii) (N.P. Taylor, pers. comm., 1994). Certainly there is little threat to its habitat as it is not suitable for agriculture and is some distance from habitation (Anderson *et al.*, 1994).

Ariocarpus	***Discocactus*** (cont)	*Obregonia denegrii*	***Turbinicarpus*** (cont)
A.agavoides	*D.placentiformis*	*Pachycereus militaris*	*T.schmiedickeanus*
A.bravoanus	*D.pseudoinsignis*	*Pelecyphora strobiliformis*	var. *gracilis*
A.fissuratus	*D.zehntneri*	*P.aselliformis*	var. *klinkerianus*
A.fissuratus var. *hintonii*	*Disocactus macdougallii*	*Sclerocactus brevihamatus*	var. *macrochele*
A.kotschoubeyanus	***Echinocereus***	*Strombocactus disciformis*	var. *schmiedickeanus*
A.retusus	*E.ferreirianus* var. *lindsayi*	***Turbinicarpus***	var. *schwarzii*
A.scaphirostris	*E.schmollii*	*T.gautii*	*T.subterraneus*
A.trigonus	*Leuchtenbergia principis*	*T.gielsdorfianus*	var. *zaragosae*
Astrophytum asterias	***Mammillaria***	*T.hoferi*	*T.swobodae*
Aztekiumritteri	*M.pectinifera*	*T.horripilus*	*T.valdezianus*
Coryphantha	*M.plumosa*	*T.laui*	*T. viereckii*
C.minima	*M.solisioides*	*T.lophophoroides*	***Uebelmannia***
C.sneedii	***Melocactus***	*T.mandragora*	*U.buiningii*
C.werdermannii	*M.conoideus*	*T.pseudomacrochele*	*U.gummifera*
Discocactus	*M.deinacanthus*	*T.pseudopectinatus*	*U.pectinifera*
D.bahiensis	*M.glaucescens*	*T.saueri*	
D.heptacanthus	*M.paucispinus*		
D.horstii			

Table 2: List of Cactaceae tested

Paphiopedilum stonei is found in the limestone cliffs and hills of western Sarawak. Qualifying under criterion D, the species has a fragmented (Di) distribution of less than 500 km² and is in decline (Diia,b,c,d) as a result of limestone quarrying and mining. *Also qualifies under C,E. Result - AI qualification.*

Key Points. Criterion D is very similar to criterion B, with distribution information replacing population information. None of the taxa tested fulfilled D(iii) and it seems unlikely that this subcriterion will be used for plant taxa.

Criterion E

Ariocarpus kotschobeyanus, another spineless cactus found in Mexico, has long been popular in the trade and with collectors because of its unusual shape, size and free flowering habit (Anderson *et al.*, 1994). Recent studies indicate that population numbers are in the thousands (Anderson *et al.*, 1994). Anderson *et al.* (1994) have determined that serious threats exist to some populations due to agricultural development and urban expansion. Under criterion E, a decline as stipulated has recently occurred (E-i), and a continuing decline may be inferred as a result of habitat destruction (E-iia). *Result - AI qualification.*

In India, the continued collection of *Paphiopedilum fairrieanum*, has brought it to the verge of extinction (Jain and Sastry, 1980) and could do so again (E-i, iib). It is also potentially at risk from habitat destruction (E-iia) as a result of forest fires, and from grazing (E-iic) (Nayar and Sastry, 1987). *Result - AI qualification.*

Paphiopedilum delenatii was recently rediscovered in Viet Nam, and found in illegal trade. The qualification of this species results from a projected decline in the number of mature individuals through collection. *Result - AI qualification.*

Key Points. Much greater use was made of criterion E for the *Paphiopedilum* species than for species of cacti (see Table 1), with 80% of the orchids qualifying under this criterion, as opposed to just over 30% of the cacti tested. While this criterion may seem to rely on conjecture, given that in many instances the information required in other categories is incomplete, the opportunity to make use of the "educated guess" based on the experience of acknowledged experts is vital when considering plants.

Criterion F

None of the taxa tested qualified under this criterion.

Does not qualify. *Leuchtenbergia principis* resembles the *Agave* plants beside which it often grows. This wide-ranging species, found in the Chihuahuan Desert of Mexico, usually occurs singly and must be considered as being extremely rare throughout its extensive range (Anderson *et al.*, 1994). It is not threatened with extinction, although some habitat destruction and collection has taken place. However, this plant is easy to propagate, and obtaining cultivated specimens is a much easier option to collection from the wild (Anderson et al., 1994). As a result of these factors and little or no potential for international trade in wild-collected specimens, this cactus does not qualify for Appendix I under these criteria.

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Paphiopedilum delenatii

A Validation of Draft CITES Criteria Against Selected Plant Taxa

CRITERIA →	BIOLOGICAL CRITERIA										TRADE CRITERIA			RESULT
	POPULATION		DISTRIBUTION					DECLINE						
	A	B	C	D		and *two* of below		E - either of		F	Known in trade	Probably in trade	Likely to enter trade	
TAXON ↓	< 250	<2500 & both i decline ii frag./no. of indiv.	Dist. <100km²	Dist. <500km²	i frag. /conc.	ii decline	iii flucn.	i Obs.	ii Infr'd	Maint. Status				
Cactaceae														
Ariocarpus bravoanus	*	< 2500 + iia	*	*	*	-	-	-	-	-	-	-	*	Q AC
Astrophytum asterias	-	* < 2500,i + iia	*	*	*	*c,d	-	*	*a,b	-	-	*	-	Q BCDE
Aztekium ritteri	-	i	*	*	-	*c	-	-	-	-	*	-	-	Q C
Ariocarpus agavoides	-	i + iia	*	*	*	*c,d	-	-	*a	-	-	*	-	Q CDE
A. trigonus	-	i + iia,b	-	*	*	*a,b,c,d	-	-	*a,c	-	-	*	-	Q DE
A. kotschoubeyanus	-	-	-	-	*	*a,d	-	*	*a	-	*	-	-	Q E
Leuchtenbergia principis	-	-	-	-	-	-	-	-	-	-	n	n	n	N
Paphiopedilum														
Paphiopedilum druryi	*	* < 2500,i + iia	*	*	*	*a,b,c,d	-	*	*b	-	*	-	-	Q ABCDE
P. bougainvilleanum	-	* <2500, i + iib	-	*	*	*a,b,c	-	*	*b	-	*	-	-	Q BDE
P. dayanum	-	* <2500, i + iia,b	*	*	*	*a,b,c	-	*	*b	-	*	-	-	Q BCDE
P. stonei	-	iia	*	*	*	*a,b,c,d	-	*	*a	-	*	-	-	Q CDE
P. fairrieanum	-	i + iia	*	*	*	*a,b,c,d	-	*	*a,b,c	-	*	-	-	Q CDE
P. delenatii	-	i	-	*	-	*a,b,c	-	*	*b	-	*	-	-	Q E

Table 3. Test results for taxa used as specific examples.

Key: * = Satisfies criterion; annotations, eg. i + iia, specify subcriterion; Q = Qualifies for Appendix I; annotations, eg. CDE, specify biological criteria; - = Does not satisfy criteria; n = Not known in trade; N = Does not qualify; Infr'd = Inferred; no. of indiv. = No. of individuals; frag. = Fragmented; conc. = Extreme concentration; flucn. = Fluctuation; obs. = Observed; Maint. status = Maintain status
NB. All numerical values treated as guidelines only.

Conclusions

The results of the present validation represent one stage in the evolution of new criteria. They show that such criteria can be applied to plants even if detailed information is lacking, and that numerical guidelines are useful if they are treated as such. Criteria A and B rely heavily on good population data. The availability of such data for cacti made scoring in Criteria A and B much easier than for *Paphiopedilum* species. 'Distribution criteria' C and D, and criterion E were more important for scoring of *Paphiopedilum* species since specific information on the number of mature individuals is not required. Although no plants scored in criterion F, the authors consider it potentially useful for species recovering slowly from the threat of extinction. It was felt that no species genuinely warranting inclusion in Appendix I failed to qualify. The validation process highlighted a lack of comprehensive information for plants. Of the 12 cacti that did not qualify, nine were rejected on account of there being insufficient information on which to base the decision on whether or not Appendix I-listing was appropriate. Thirteen *Paphiopedilum* species were in a similar position. In such cases the precautionary principle should be applied. This is a perennial problem for plants, so while it is desirable to have clear and unambiguous criteria, it is also important that they contain a degree of flexibility.

It was not the purpose of this paper to carry out a critique of the draft criteria, rather to carry out an objective validation on a selected group of plants and make the information widely available. However in using the criteria it became clear that the terms "continuing decline" and "marked decline" need to be merged into one single simple definition. There has been considerable debate about the use of numerical guidelines in the population status assessment of the wide range of taxa covered or potentially covered by CITES. During the validation process it was found that the numbers were workable for the group concerned, but whether they can be applied across a wide spectrum of biota remains debatable.

The validation process clearly emphasized the urgent need for field studies of Appendix I plants - even in the high profile groups of the Appendix I cacti, and the slipper orchids. The WWF-funded work carried out on cacti and succulents in Mexico and Chile (Sanchez-Mejorada *et al.*, 1987 and Anderson *et al.*, 1990) shows the way forward with population studies of threatened plant taxa combined with *in situ* training programmes. Population studies on slipper orchids of the genus *Phragmipedium* have also been funded by WWF-US.

A recent CITES project in Madagascar has carried out similar work surveying native succulent plants which have a high potential for trade from the wild. The Appendix I orchids need a similar approach. It is unfortunately the case that there are few more population data now on many of the species than were available at the time of their original listing. Such Appendix I groups should be targetted for field research. Research seems ideally suited to co-operative projects between institutions in the Range States and the consumer countries, with the latter identifying funding sources.

The Next Step

In March 1994, the 31st meeting of the CITES Standing Committee considered an amended draft of the criteria. Unable to agree on the numerical values included as guidelines in the footnote to Appendix I, the Standing Committee charged the Chairs of the Plants and Animals Committees to discuss this topic further with IUCN-The World Conservation Union, and their committees. The Standing Committee also asked for validation of the criteria to be carried out. The results of the discussion with IUCN-The World Conservation Union were put to the meetings of the Plants and Animals Committees in Mexico and China, respectively, in late May 1994. The final results of the deliberations are not yet available but an amended Resolution will go forward at the ninth meeting of the Conference of the Parties, in November 1994, as will a validation document.

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Recent Data on Trade in Rhino and Tiger Products, 1988-1992

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Heightened concern about the depletion of populations of wild rhinoceroses Rhinocerotidae and Tiger Panthera tigris *has led to increased awareness of poaching and illegal trade in these species. A major motivation for these activities - demand for products containing rhino and Tiger derivatives by prescribers and users of traditional Chinese medicine - has yet to be controlled, however. An indication of the strength of the demand for these products is provided in CITES annual report data. Unfortunately, these data reflect only a fraction of a much larger international trade in these and other CITES-listed species used for medicinal purposes. The data are insufficient to give more than a sense of the scale of the trade, and cannot be used to determine how much rhino horn or tiger bone is being imported or exported. Annual reporting by CITES Parties nonetheless testifies to widespread international trade in medicinal products containing or purporting to contain extracts from rhinos and Tigers: from 1990 to 1992 alone, a minimum of 27 million items containing Tiger derivatives and some 100 000 items of rhino products were recorded in trade, virtually all of which were reported by and exported from China. TRAFFIC International analysed CITES data relating to trade in rhino and Tiger derivatives with a view to assisting efforts to prevent further declines in the world's wild rhino and Tiger populations resulting from trade.*

Introduction

Research undertaken for this study suggests that there is demand for rhino and Tiger medicines wherever there is a community of people of east Asian descent; that is, in most countries of the world. It further suggests that this demand is being met, at least to some extent, and that enforcement of the Appendix I status of Rhinocerotidae (1978) and Tigers (1987) has not been implemented effectively in consumer or range countries. Moreover, whereas certain key markets for rhino and Tiger medicines are subject to increasing domestic regulation, others remain relatively unchanged. A total of 30 countries and territories were identified in CITES annual report data as export destinations for goods containing rhino and/or Tiger derivatives during 1988-1992. The following is a synopsis of control measures in force in the main consumer areas.

- The Government of China ceased issuing export permits for Tiger and rhino products on 1 December 1992 (J. Xu, pers. comm., 18 May 1994; X. Lu, pers. comm., 18 May 1994). On 29 May 1993, it announced that the import, export and preparation of rhino horn and Tiger bone for pharmaceutical use was to be prohibited with immediate effect, and that medicines already manufactured which contained or purported to contain these substances would be banned from 1 December 1993 (Anon., 1993a). Sale of medicines purported to contain Tiger and rhino was actively discouraged during the six-month period from May to November (J. Xu, pers. comm., 18 May 1994; X. Lu, pers. comm., 18 May 1994). The 29 May announcement reinforced previous bans on rhino horn imports (1981) and on exports of medicines containing rhino horn (September 1992), and strengthened internal and international trade controls for Tiger established under the *Law of Wild Animal Protection of the People's Republic of China, 1988.*

- Taiwan banned imports of rhino horn and Tiger derivatives in 1985, and internal trade in such items in 1989. Registration of privately held rhino horn stocks was required in November 1990, and the ban on domestic sale of rhino horn was reiterated in November 1992. Those in possession of Tiger bone were required to register their stocks between 18 November 1993 and 17 February 1994. However, there are no penalties for failure to register either rhino horn or Tiger bone.

- In Hong Kong, internal sale of rhino horn and items purporting to contain it has been banned since 1989. Imports were banned in 1979, and exports in 1986.

  Import, export, sale and possession of manufactured products containing or labelled as containing Tiger were legal until 27 January 1994, when the *Animals and Plants (Protection of Endangered Species) Ordinance* was amended, giving shopkeepers until 27 April 1994 to sell, otherwise dispose of or register stocks. According to the amendment, medicines labelled as containing Tiger products will be treated in the same way as those known to contain them.

- As a Chinese territory under Portuguese administration, Macao was included in Portugal's ratification of CITES in 1981. The Convention was not implemented until 1986, however. Rhino horn imports were banned that year and internal sale in 1988.

- In the Republic of Korea, importation and use of rhino horn by manufacturers of patented medicine has been prohibited since 1983 (Milliken *et. al.*, 1993). Tiger bone imports were banned in October 1993, in conjunction with the effective date of the Republic of Korea's accession to CITES. According to Government sources, stocks were registered by the Government in March 1994 and marked and photographed as a means of distinguishing them from any illegally held Tiger bone. A ban on the sale of Tiger bone will come into force in November 1994 and the sale of Tiger derivatives, including drugs and other products, will be prohibited with effect from March 1995 (D.G. Rhee, *in litt.*, 31 May 1994).

- Sale and possession of Tiger bone goods remains legal in Japan, a key consumer of such exports from China. Possession and sale of pre-Convention rhino horn is also legal.

- European Union (EU) legislation prohibits the import, export, display for commercial purposes and sale of Tiger and rhino products. National legislation required to implement EU requirements is inadequate in some Member States, however.

- In the USA, import, export and interstate commerce in products made from Tiger and rhino is banned under the *Endangered Species Act*, with further trade restrictions imposed by the *Lacey Act*. However, possession and intrastate trading of rhino and Tiger derivatives is not similarly prohibited under national legislation, unless it can be proven that such derivatives were acquired in violation of CITES and/or foreign or State laws. Approximately two-thirds of all US States have additional regulation for the protection of Tigers (TRAFFIC USA, *in litt.*, 16 March 1994; J. Smith, pers. comm., 18 May 1994).

All of the countries and territories listed above figure prominently in the CITES data on the medicinal trade in rhino and Tiger derivatives for the years 1988 to 1992, which are analysed below.

Limitations of Cites Data

Several points should be kept in mind when interpreting CITES annual report data with respect to trade in derivatives of rhino and Tiger.

1. **Few CITES Parties report trade in rhino and Tiger derivatives, whether of shipments that have been imported openly under existing national legislation (e.g., imports of specimens declared as pre-Convention), or items that have been seized.**

A purpose code, "I", to denote confiscated or seized items, was specifically included in the "Guidelines for the Preparation of CITES Annual Reports" provided to all Parties in 1982 (Anon., 1982). The USA is exceptional in reporting the annual interception (seizure, refusal, confiscation) of thousands of rhino and Tiger derivatives from 1988 to 1991, the last year for which US data are available. Similar information has not been provided by a number of European countries, where it is known that such seizures, involving thousands of packaged medicines, have taken place.

Parties also fail to report trade in medicinals labelled or marked as containing rhino or Tiger. The non-reporting of such trade may reflect an unwillingness to implement CITES controls, owing to a belief that the medicines do not actually contain rhino or Tiger (S. Broad, pers. comm., 14 March 1994). Such an approach would appear to be in violation of CITES Resolution Conf. 5.9 which stipulates that specimens labelled or marked as parts or derivatives of CITES-listed species should be regulated under the Convention, i.e. controlled and reported in trade. Among east Asian CITES Parties, only Japan and China reported a significant amount of international trade in rhino and/or Tiger derivatives during the period 1988 to 1992. However, not all such trade is recorded: China, for example, apparently exported Tiger bone to the Republic of Korea, as recorded in the latter country's Customs import statistics (Table 5), but not in China's own data.

The only other countries to report trade in excess of 100 items over the five-year period were New Zealand and the USA, both of which indicated that these items were confiscated.

2. **Those Parties that do report trade in rhino and Tiger derivatives do so in a manner that renders impossible any attempt at quantitative analysis of the amount of derivative involved.**

No specific term to be used for reporting trade in medicinal products was stipulated in the Guidelines produced in 1982, and it is therefore unclear how such trade was to be reported prior to the Secretariat's provision in 1989 of a list of standard terminology for reporting trade in parts and derivatives (Anon., 1989). The term "derivatives" was most often applied to medicinal products using rhino and Tiger, but "bone products" and "horn products" were also descriptions used. Although Parties were required to report the actual amount of rhino or Tiger in trade (e.g., the weight or volume) (Resolution Conf. 3.10; Anon., 1982), Parties generally reported the number of items traded (e.g., boxes, bottles, cartons, pills), giving no indication of the size of such items, nor of the actual amount of rhino horn, Tiger bone or other substance incorporated within them. For example, China records significant exports described as "Chinese medicine" and "wine", expressed in terms of numbers of "cartons" and "bottles" or capsules/grains/pills traded with no indication of the total weight or dimensions of containers used, nor of the percentage by weight of components apparently included in traded products. The largest single record of Chinese medicine exported relates to a permit issued for 14.4 million "capsules", where no quantitative information regarding the medicine's ingredients was provided. Similarly, US annual report data describe US interception (primarily seizures) of rhino and Tiger derivatives in terms of numbers of goods.

New annual reporting guidelines were provided to the Parties in March 1994 (Anon., 1994). The term "medicine" has been included in the new guidelines in the list of acceptable terms for reporting, for which the preferred unit of measure is kilogrammes. This reiterates the obligation on Parties trading such medicines to identify the amount of bone, horn or other derivative contained within them.

3. **Some of the medicines in trade reported to contain rhino and/or Tiger derivatives may not do so.**

The Government of China acknowledges that medicines said to contain Tiger derivatives may only be "named after the Tiger or Tiger bone", that other products are made of Tiger bone substitutes, and still others are "false". Since 1990, the Government of China has stipulated that permits must be acquired for all imports or exports of products with a brand name that contains the words "Tiger" or "Tiger bone", or which are labelled as containing Tiger bone, regardless of the accuracy of such labelling (PRC Endangered

Species of Wild Fauna and Flora Import and Export Administrative Office, *in litt.*, 25 February 1994). It is therefore impossible to draw any conclusions with respect to the actual amount of Tiger bone in trade, for example, or the number of Tigers the reported trade might represent. The same is true for rhinos.

4. **A number of Parties have not been timely in their CITES annual reporting, inhibiting efforts to assess recent trade levels.**

5. **Many of those countries commonly thought of as primary consumers of Chinese medicine are not CITES Parties or have only recently become so.**

The Democratic Republic of Korea is not a Party to CITES and the Republic of Korea and Viet Nam have only recently become so. CITES annual report data for Taiwan are not available as Taiwan is not a CITES Party. Trade between Taiwan and other CITES Parties has been documented in the reports of the latter.

6. **Non-independent territories.**

Two other important consumers, Hong Kong and Macao, are non-independent territories. Responsibility for CITES implementation in Hong Kong and Macao rests with the Governments of the UK and Portugal, respectively. Separate CITES annual reports for Hong Kong have been provided by the UK Government, although these do not report any trade in either rhino or Tiger goods. The same have not been produced by the Government of Portugal, nor has Macao's CITES trade been reported as part of Portugal's CITES annual report for at least several years (T. De Meulenaer, pers. comm., 11 March 1994).

Available CITES Data on the Trade in Rhino and Tiger Derivatives

Trade data for 1988 and 1989 are limited primarily to those provided by the USA. Data for 1990-1992, inclusive, are dominated by information provided in China's annual report, with additional data provided by Japan (1990) and the USA (1990, 1991).

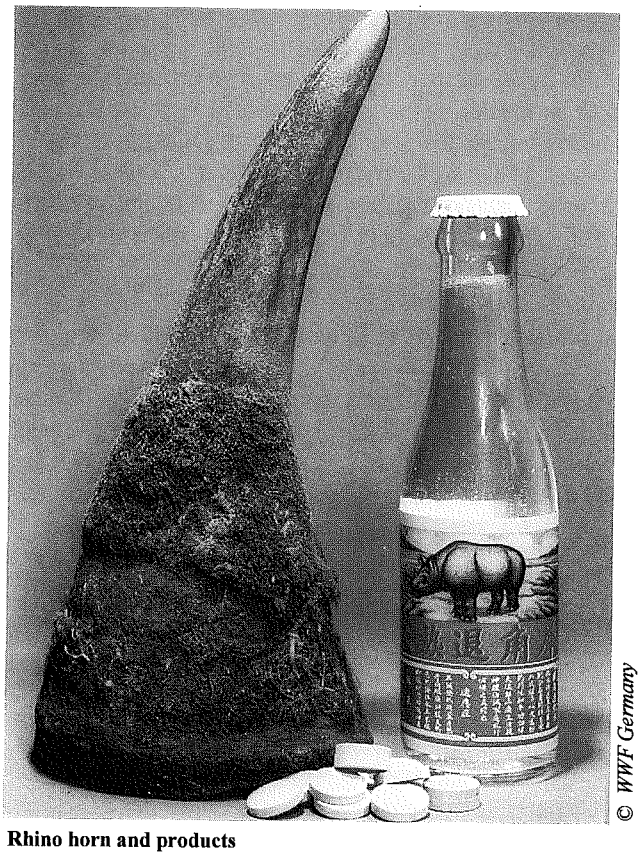
Annual reports for China

The Government of China has documented all permits issued for exports of rhino and Tiger derivatives in their annual reports since 1990[1], regardless of whether the permits were used (J. Xu, pers comm., 18 May 1994; X. Lu, pers. comm., 1994). China's Endangered Species of Wild Fauna and Flora Import and Export Administrative Office (*in litt.*, 25 February 1994) explained that the lack of earlier data on Tiger trade reflected the fact that CITES required only trade in "readily recognizable" parts or derivatives to be reported, and the fact that the Siberian Tiger *Panthera tigris altaica* was listed in Appendix II until "1989". Such explanations are unsatisfactory: the Siberian Tiger was transferred to Appendix I in 1987, not 1989, the Appendix II-listing of all Tiger subspecies since 1975 would have required reporting of any international trade in the same, and finally, as noted above, CITES Resolution Conf. 5.9 stipulates that trade in specimens labelled as parts or derivatives of listed species should be reported as trade in such species. Presumably many of the patented medicines exported from China in the years prior to 1990 were labelled as containing rhino and/or Tiger and, therefore, were "readily recognizable".

China's annual reports for 1990 to 1992 are useful indicators of the scale of the export trade. Unfortunately, China's 1990 and 1991 annual reports contain no information with respect to the country of origin or the source (i.e. whether wild-caught, pre-Convention or captive-bred) of items in trade. This information was provided in 1992, however.

Annual reports for Japan

Japan's annual reports for 1991 and 1992 had not been submitted to the CITES Secretariat at the time of this study. Japan's annual reports for 1988 and 1989 do not show any trade in rhino or Tiger, while that for 1990 shows the import of a large quantity of Tiger derivatives, some of which were reported by weight, and the rest in terms of the number of flasks or cartons involved.



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Rhino horn and products

[1]Many of China's reported exports of Tiger products refer to *Panthera tigris "longipilis"*, not a commonly referenced subspecies; a few refer to *Felis tigris*, interpreted in CITES data compiled by the World Conservation Monitoring Centre (WCMC) as referring to *Panthera tigris*.

Annual reports for USA

At the time of this study, US annual reports were available for the years 1988 to 1991. These reports document the number of "items" identified as arriving at US ports, the majority of which are reported as having been seized, abandoned, etc. The term "items" is not further defined to indicate whether these represent containers, pills/tablets, etc.

General Patterns of Reported Trade

Virtually all CITES-reported exports of rhino and Tiger derivatives were exported from China, reflecting this country's role as the primary manufacturer of patented Chinese medicines and as the only Party to document exports of Chinese medicine in their annual reports. China reported exporting rhino and/or Tiger medicines to 29 countries/territories during the years 1990 to 1992. Sixteen of these countries/territories were reported as destinations for an average of 100 or more items per year during this period, and all but the Democratic Republic of Korea, Myanmar and Taiwan were CITES Parties during the year(s) for which the exports were reported to have taken place.

Hong Kong and Japan appear in China's data as the primary destinations for exports of rhino and Tiger derivatives from China. Hong Kong's own annual reports show no imports (or exports) of such products. However, US annual report data identify Hong Kong as the primary exporter of both Tiger and rhino medicines intercepted at US ports of entry, some of which are reported as originating in China (Tables 2 and 4). Information available regarding the illegal trade in Chinese medicines to Europe also indicates that Hong Kong serves as a trans-shipment point for medicines exported from China (T. De Meulenaer, pers. comm., 11 March 1994).

Japan is identified as the primary destination for Tiger derivative exports from China, but a much less significant destination for medicines containing rhino derivatives. Japan's 1990 annual report data correlate loosely with those of China for trade in Tiger derivatives, indicating that such trade has in fact taken place, rather than that export permits had been issued but not used.

Other destination countries/territories identified in China's annual report data include several whose potential role in the international trade in rhino and Tiger products has been given no or relatively little attention in recent years. These include Belgium, Macao, Malaysia, Singapore, the former Soviet Union, Thailand and the USA.

Information available from US annual reports indicates that countries/territories other than China and Hong Kong have served as locations from which to export/re-export rhino and Tiger derivatives. US data for 1988 to 1991 show the interception of 50 or more items of derivatives exported from the following countries: Canada, Japan, the Republic of Korea, Taiwan, Thailand and the UK.

More detailed information on the reported trade in rhino and Tiger derivatives is provided below. Except where noted, all items (e.g. cartons, boxes, undesignated) are treated equally regardless of the unit of measure assigned in the original CITES data.

Reported Trade in Rhino Derivatives

CITES annual report data for 1988 to 1992 show the international trade of over 100 000 items containing rhino derivatives. Total annual reported trade volumes ranged from approximately 7000 items in 1991 - virtually all reported as exports from China - to approximately 30 000 items in 1990, reflecting a combination of China's reported exports (Table 1) and interceptions reported by the USA[2] (Table 2).

As shown in Table 1, China's annual reports for 1990 to 1992 show the export of over 51 000 items of Chinese medicine containing rhino derivatives. Reported exports fell by over 75% from 1990 to 1991, but increased to 1990 levels the following year. Of those items reported as exported in 1992, approximately 22 000 were reported as being of pre-Convention origin and 400 as being of wild origin. The majority of trade during all three years was reported as being commercial in nature. By far the greatest proportion of China's reported exports were destined for Hong Kong (41%) and Macao (42%), with smaller numbers of items reported as exported to other countries in Asia, Southeast Asia and North America.

	1990	1991	1992	Total
Australia			4	4
Bulgaria		5		5
Canada		80	106	186
Gabon			2	2
Hong Kong	17 699	1 749	1 725	21 173
Japan	512			512
D.P.R. of Korea	2 000			2 000
Republic of Korea		100		100
Macao	659	1 078	20 110	21 847
Malaysia	289	1 154	398	1 841
Mauritius			6	6
Philippines	70	200		270
Singapore	597	480	260	1 337
Thailand	152	1 650	90	1 892
USA		250		250
Total	21 978	6 746	22 701	51 425

Table 1. China's reported exports of rhino derivatives by destination country, 1990-1992.
Source: CITES annual report data compiled by WCMC and TRAFFIC International

[2]The vast majority of US-reported trade in rhino and Tiger derivatives involved shipments that were intercepted by US Government personnel at ports of entry, and either seized, confiscated, refused or abandoned.

Country of export	1988	1989	1990	1991	Total
Australia			1		1
American Samoa		80			80
Canada	154	10	6	70	240
China	35	4 068	17	262	4 382
Germany				2	2
Hong Kong	21 155	13 053	6 096	38	40 342
Japan	97	10			107
Republic of Korea	1 003	81	1 166		2 250
Philippines		1	3		4
Saudi Arabia	1				1
South Africa	1				1
Taiwan			47		47
Viet Nam				1	1
UK			82	1	83
Unknown	2 875	145	110		3 130
Total	25 321	17 448	7 528	374	50 671

Table 2. Reported number of items containing rhino derivatives intercepted in the USA, 1988-1991. The vast majority of trade reported above represents items that were seized, confiscated, refused or abandoned.
Source: CITES annual report data compiled by WCMC and TRAFFIC International

US annual reports show the interdiction of over 50 000 items during the years 1988 to 1991 (Table 2), a figure approaching the total number of rhino horn items reported as exported from China from 1990 to 1992 (Table 1). These data reflect the efforts by US authorities to prevent the illegal importation of Chinese medicines, while also suggesting significant demand for such commodities in the USA during the late 1980s. The number of items intercepted declined sharply during the four years for which US data were available, falling to 374 items in 1991. It is not possible to assess whether this represents a decline in trade volumes, a decline in effective enforcement of trade controls, or a combination of the two.

US data demonstrate the importance of Hong Kong in the illegal trade in rhino horn derivatives to the USA. Over 40 000 items intercepted at US ports of entry (80% of all items intercepted) were reported as having been exported from Hong Kong between 1988 and 1991, compared to 4382 items (10%) from China and 2250 (4%) from the Republic of Korea. Only 10% of rhino derivatives exported from Hong Kong were identified as having originated in China, with the balance from unknown countries. It seems likely, however, that a much larger proportion of the trade from Hong Kong in fact involved medicines manufactured in China.

Japan and Canada are the only other countries reported by the USA as countries exporting/re-exporting 100 or more items of rhino derivatives. Canada was also reported by China as a destination for its exports of rhino derivatives during 1990 and 1992, which could suggest that trade in at least small amounts of items is routed through Canada to US markets.

Reported Trade in Tiger Derivatives

As with trade in rhino, most information available on reported trade in Tiger products derives from China's annual reports for the years 1990 to 1992 and US annual reports for the years 1988 to 1991.

China reported exports of Tiger derivatives in two ways: "CM" (Chinese medicine) and "wine". Trade volumes were expressed as numbers of bottles, cartons, pills, etc., or in terms of total shipment weights for which permits were issued (presumably the weight of the whole shipment, not the Tiger derivative component thereof, although this is not clear). Approximately 460 000 of China's reported exports of Tiger products in 1992 were reported as being from pre-Convention stocks, 865 as originating from captive-bred Tigers, and 6200 as deriving from wild Tigers; reported exports of Tiger products from China in 1990 and 1991 do not include such details.

CITES data indicate that the trade in Chinese medicines containing Tiger derivatives (27 million items) far exceeds that in medicines containing rhino derivatives (100 000 items). Even discounting the 12 million Tiger "grains" (1990), 14.4 million "capsules" (1991) and quarter of a million "pills" (1992) reported as exported from China, the international trade in Tiger derivatives accounted for close to 400 000 items from 1990 to 1992. These included 247 000 containers (cartons, boxes), 57 000 bottles and 71 000 kg of "Chinese medicine". An additional 17 000 cartons of wine were also reported as exported during this period. The total number of items containing Tiger appearing in China's export data increased markedly from 1990 to 1992, regardless of whether or not pills, capsules and grains are included.

Destination	1990	1991	1992	Total
Australia		50 con.	53 con.	103 con.
Belgium		5 con.	5 con.	10 con.
			250 000 pills	250 000 pills
Bulgaria		5 con.		5 con.
Canada	346 con.	247 con.	600 con.	1 193 con.
Cuba		104 cw		104 cw
		6 con.		6 con.
			1 440 bot.	1 440 bot.
Denmark	1 con.		1 con.	2 con.
France		200 cw		200 cw
	50 con.			50 con.
Ghana			3 600 con.	3 600 con.
Hong Kong	4 198 cw	5 373 cw	50 cw	9 621 cw
	14 270 con.	6 966 con.	157 635 con.	178 871 con.
Indonesia		175 con.	50 con.	225 con.
Italy		40 con.	7 con.	47 con.
Japan		492 cw		492 cw
	7 014 kg	40 900 kg	23 100 kg	71 014 kg
	1 377 con.	3 022 con.	2 031 con.	6 430 con.
			40 000 bot.	40 000 bot.
	12 000 000 grains		14 400 000 caps.	26 400 000 grains/ caps.
Macao	50 cw	50 cw		100 cw
	814 con.	2 351 con.	11 221 con.	14 386 con.
Malaysia	1 700 cw	935 cw	370 cw	3 005 cw
	556 con.	650 con.	1 280 con.	2 486 con.
		200 bot.		200 bot.
Mauritius		5 con.	16 con.	21 con.
			5 cw	5 cw
Netherlands			10 cw	10 cw
Panama			1 con.	1 con.
Philippines	80 cw	230 cw		310 cw
	190 con.	244 con.		434 con.
Singapore	400 cw	1 110 cw	100 cw	1 610 cw
	21 720 con.	2 078 con.	780 con.	24 578 con.
Soviet Union			15 144 bot.	15 144 bot.
			18 bw	18 bw
Sweden		10 con.		10 con.
Togo	100 con.		1 200 con.	1 300 con.
Thailand	150 cw	640 cw		790 cw
	500 con.	140 con.	260 con.	900 con.
Taiwan		5 cw		5 cw
		120 con.		120 con.
	360 bot.		24 bot.	384 bot.
UAE			1 con.	1 con.
USA		500 cw		500 cw
		12 100 con.	200 con.	12 300 con.

Table 3. Destinations reported by China for Tiger products exported, 1990-1992.
cw = cartons of wine; con. = containers (boxes, cartons, bags); kg = kilogrammes; bot. = bottles; bw = bottles of wine; caps. = capsules
Source: CITES annual report data compiled by WCMC and TRAFFIC International

US annual report data record most shipments of Tiger derivatives in terms of the number of items seized.

Destinations of Tiger derivatives from China

The trade in Tiger derivatives exported from China not only involves more items than does the trade in rhino derivatives, but also more countries/territories. China's export data report 18 countries/territories as export destinations for 100 items or more containing Tiger derivatives (Table 3), compared with 11 for rhino derivatives. Eight additional countries/territories were reported as destinations for smaller amounts of Tiger derivatives exported from China.

Japan

China's annual report data indicate that Japan is the primary destination for Tiger derivative exports, a suggestion which would appear to be substantiated in part by Japan's CITES annual report for 1990. During that year China reported the export to Japan of 12 million "grains", 7014 kg and 1377 cartons of Chinese medicine containing Tiger, while Japan's data for that year show the importation of 13 000 kg, 20 000 "flasks"[3] and 368 cartons of Tiger derivatives. Japan reported all of these items as containing pre-Convention Tiger products, and the bottles and approximately half of the kilogrammes imported as including derivatives of Siberian Tiger.

The trade to Japan continued in 1991, according to China's annual reports, when 40 900 kg and 3514 cartons of Tiger derivatives were reported as exported to Japan, and in 1992 when a further 23 100 kg, 40 000 bottles, 2031 cartons and some 4.4 million capsules were exported (Table 3). The Government of Japan reportedly had established an import quota for eight million Chinese medicine tablets containing pre-Convention Tiger derivatives for 1991. Unfortunately, Japan's CITES annual reports for 1991 and 1992 were not available at the time this study was conducted and therefore further comparison with China's export data was impossible. The 1993 Japanese import quota for Tiger derivatives was reportedly set at 21.6 million capsules containing Tiger derivatives from pre-Convention stock.

Belgium

According to China's annual report, Belgium was reported as the export destination for the second-largest number of Tiger derivatives. Export permits were issued for 250 000 pills and five containers of Chinese medicine containing Tiger to be exported to that country in 1992. Belgium is not known to have a significant east Asian population, and it is therefore unclear why such a large quantity would be exported there, unless it was for subsequent distribution to other European Union (EU) countries: shipments of Chinese medicine containing or labelled as containing Tiger have been confiscated in a number of EU Member States, including Germany, Italy and the UK. Belgian Government officials report that they have confiscated over 10 000 such medicines since 1989. The majority of the items seized have been manufactured in China, and most appear to have been shipped to the EU via Hong Kong (T. De Meulenaer, pers. comm., 11 March 1994). Unfortunately, such seizures are not regularly reported in CITES annual reports provided by EU Member States.

Country of export	1988	1989	1990	1991	Total
Australia			11	4	15
Canada	17	56	58		131
China	13	131	4 814	9 085	14 043
Hong Kong	4 720	1 117	10 752	1 385	17 974
Japan		10	92	525	627
Republic of Korea		4	361	39	404
Laos				20	20
Myanmar		8			8
Philippines				20	20
Singapore			24	1	25
Switzerland			3		3
Taiwan	3	10	110	40	163
Thailand	7		76	42	125
Unknown	6	1 795	2 541	757	5 099
Total	4 766	3 131	18 842	11 918	38 697

Table 4. Number of Tiger derivatives intercepted by USA, 1988-1991.
Source: CITES annual report data compiled by WCMC and TRAFFIC International

Hong Kong

Hong Kong's appearance in China's annual report data as a major destination for medicinal products is perhaps less surprising than that of Belgium. The increase in reported

Country of export	1988	1989	1990	1991	1992	1993	Total
China				600	252	1 563	2 415
Indonesia	560	190	170	250	55		1 225
Madagascar			100				100
Malaysia					100	220	320
Taiwan		50					50
Thailand	20	50					70
Others	40	50	400			100	590
Total	620	340	670	850	407	1 883	4 770

Table 5. Tiger bone imports into the Republic of Korea (kg).
Sources: Statistical Yearbook of Foreign Trade, Department of Customs Administration, Republic of Korea, Volume 12, as reported in Mills, (1993); Anon., (1993b)

[3]Counted as bottles in this analysis.

exports to Hong Kong between 1991 and 1992, however, is remarkable: the number of containers in the former year was 6966, contrasting with 157 635 in 1992. Although this could reflect a difference in the terms used for reporting, this apparent 20-fold increase is of concern.

Republic of Korea

CITES data provide only a very small part of the picture of the Republic of Korea's trade in Tiger derivatives. According to their own Customs data, the Republic of Korea imported over 4500 kg of Tiger bone from various countries during the years 1988 to 1993 (Table 5). All but 50 kg (reported as exported by Taiwan) were reported as imported[4] from CITES Parties. Customs data indicate that Indonesia was the main and most regular supplier of Tiger bone to the Republic of Korea up until the end of 1992 (see Postscript).

Other countries/territories

Singapore, Macao, the USA and the former Soviet Union also figured prominently as reported destinations for Tiger derivatives exported by China, the former Soviet Union appearing in China's export data for Tigers for the first time in 1992. As shown in Table 3, a number of other countries were reported by China as export destinations for smaller amounts of Tiger derivatives during one or more of the years for which data are available.

Seizures of Tiger products reported by the USA rose from 1988 to 1990 and declined in 1991 (Table 4). According to US annual reports, Hong Kong is the most significant exporter of such items to the USA: close to 18 000 Tiger products from Hong Kong were reported as intercepted by US authorities between 1988 and 1991. Canada, Japan, Taiwan and Thailand appeared as exporters of 100 or more Tiger derivatives to the USA during the same period. For the vast majority of shipments reported in US trade data, the country of origin was unknown.

Summary

Even with the paucity of data on trade in rhino and Tiger derivatives, it is clear that hundreds of thousands, and perhaps millions of items said to contain these materials were traded annually at least as recently as 1992. China appears, through its own admission, as the primary exporter of manufactured products. Transparency of the trade with respect to imports is far poorer, with Japan and the USA serving as the only exceptions to a general failure to identify and/or report on what is obviously a thriving market in patented medicines containing, or alleged to contain, rhino and Tiger.

As noted previously, much of what can be said about these markets must be inferred from those data that are available. Although some of the countries/territories highlighted in this study would appear to be the most important participants in the international trade in traditional Chinese medicine containing rhino and Tiger, they are certainly not the only ones; these medicines can be found in shops worldwide, even in countries/territories with import, export and sales bans on such goods. Conservation and law enforcement officials should be applauded for their efforts to date to control the trade, but this should not obscure the fact that these efforts have been inadequate not just in the East, but also in the West. Much more needs to be done to strengthen and enforce trade controls in all producer and consumer markets if the demand for and illegal trade in rhinos, Tigers and other endangered species used in the traditional Chinese medicine industry are to be addressed effectively.

[4]It is unclear whether countries reported in Customs data are countries of export or countries of origin.

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Teresa Mulliken, Programme Officer, and Mandy Haywood, Administrative Officer, TRAFFIC International.

Postscript

In 1993, Republic of Korea Customs data showed the import of over 1500 kg of Tiger bone from China, several hundred kilogrammes more than the entire amount reported as imported from Indonesia during the previous four years (Table 5). Customs records show that most of this Tiger bone was imported *after* May 1993, calling into question the effectiveness of China's proclaimed export ban on rhino and Tiger.

Total reported Tiger bone imports to the Republic of Korea in 1993 approached 2000 kg, representing 40% of total imports during the five-year period and a 100% increase over any previous year. Over 800 kg of Tiger bone were reported as imported from China in September 1993, almost immediately prior to CITES coming into force in the Republic of Korea on 7 October 1993. These imports could be interpreted as an attempt to stockpile Tiger bone in South Korea prior to CITES trade restrictions becoming effective. They could also reflect an attempt to move Tiger bone out of China in advance of implementation of registration requirements in that country.

Observations of Wildlife Trade in Mergui Tavoy District, Kawthoolei

Glen Hill

Introduction

The Mergui Tavoy District in the state of Kawthoolei lies within Myanmar, bordering Thailand, directly west of Bangkok. Kawthoolei, also known as the Karen Free State, is under the administration of the Karen National Union, which has been fighting an independence war with Myanmar since 1949, and which controls the territory along the Thai border from Ranong Province, in the south, to beyond Maehongson Province, in the north. The Mergui Tavoy District borders the Thai provinces of Ratchburi and Kanjanaburi, and contains many unpaved roads which cross over the mountainous frontier.

A Thai ban on logging in 1988 led to increased logging activity in Kawthoolei. However, given that it is only recently that logging in Kawthoolei has become significant, much of the area close to the Thai border is still forested and contains many wildlife species which are now rare or extinct in Thailand. Several Thai logging companies are at work in the Mergui Tavoy District, resulting in associated road construction, deforestation, and wildlife trade opportunities.

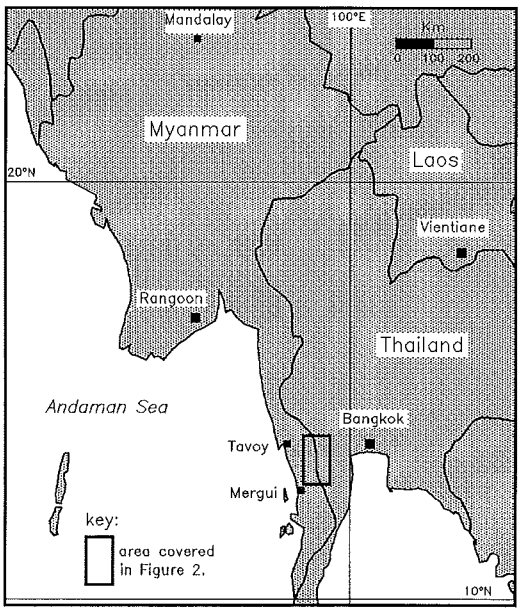


Figure 1. Map of Myanmar and Kawthoolei.

As wildlife trade in the Mergui Tavoy District is likely to be representative of much of the trade occurring along the border of Myanmar/Kawthoolei with Thailand, TRAFFIC Southeast Asia, in co-operation with Wildlife Fund Thailand, supported an investigation by the author into the trade in wildlife and wildlife products in the District. This report summarizes the findings of the investigation, which was carried out between November 1992 and April 1993.

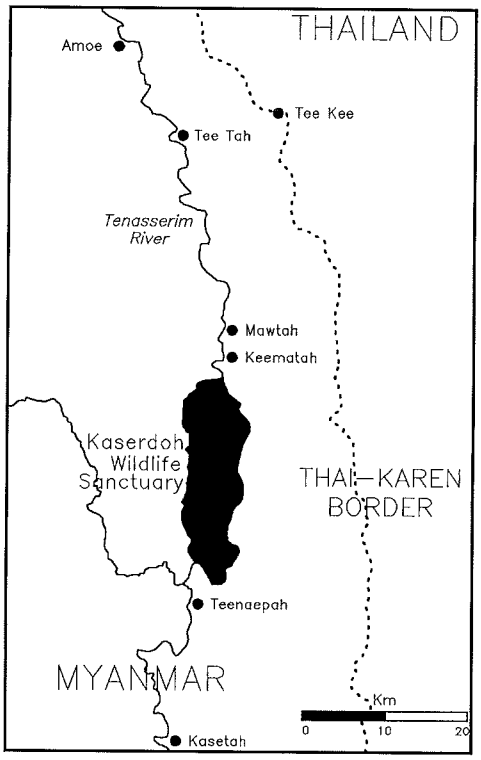


Figure 2. Detail of study area, Mergui Tavoy District, Kawthoolei.

The Nature of Wildlife Trade in Mergui Tavoy District

The investigation found that wildlife trade in the Mergui Tavoy District fell broadly into four main categories:

- General, opportunistic trade between Karen villagers and workers employed by the Thai logging companies, involving a wide variety of species. The loggers provide an easy outlet for wildlife species caught by Karen villagers. The loggers also hunt and catch wildlife themselves, as was evident in every logging camp the author visited and from reports by local forestry officials.

- Trade in elephants *Elephas maximus*, which appears to be very active. With permission from the District Government, Karen villagers catch wild elephants for use in agricultural work (mainly clearing fields). Thai businessmen fund the hunt in exchange for a few elephants.

- Trade conducted by independent, small-scale operators, who specifically come to the Mergui Tavoy District to catch wild animals. These operators have been arriving in increasing numbers, despite many having been turned away by the Kawthoolei Forestry Department.

- Trade involving rhinos, possibly of both the Sumatran Rhino *Dicerorhinus sumatrensis* and the Javan Rhino *Rhinoceros sondaicus*.

General wildlife trade, linked to logging

In the dry season (November to April) of 1992/1993, nine Thai logging companies received concessions from the Kawthoolei Forestry Department to work in the Mergui Tavoy District, but by March 1993 only five still retained their contracts. The logging companies are usually run by powerful Thai businessmen who have much influence in the Thai border regions. Logging trucks and other company vehicles cross back and forth over the border at various points on a daily basis, and usually these are allowed to pass both the Karen and Thai checkpoints with very little scrutiny. The author observed that every truck in each logging camp visited contained a variety of wild animal and orchid species, and that loggers encountered were invariably engaging in wildlife trade. Over the course of the six-month dry season, this would amount to a significant volume of wildlife specimens. Reports to the author and personal observations included the following.

- River terrapins (possibly *Batagur baska*), caught in the Tenasserim River at Mawta village, sometimes three or four at a time. A total of six were seen here by the author. Some were eaten but others were kept alive for transport to markets. A first-hand report told of a large terrapin taken at Tee Tah village, and three more were seen by the author at the Thai logging camp below Kawtaka township headquarters, on the Tenasserim River.

- An Asian Golden Cat *Felis temmincki*, shot by logging company workers, was seen by the author at the logging camp below Kawtaka township headquarters. The workers said they were going to eat the meat, and stretch the skin to dry. They said that they would have to "pay a tax" in Bangkok in order to keep the skin. The workers maintained that they needed to hunt for food. It is not against Karen law to shoot wild cats.

- Gibbons *Hylobates* spp., Spectacled Langurs *Presbytis obscura*, mouse deer *Tragulus* sp., civets, and a giant flying squirrel *Ratufa* sp., in a logging camp at Bergase Swamp in the Kaserdoh Wildlife Sanctuary, roasting over fires. Also observed in the camp were many clusters of orchids packed for transport, and bundles of incense wood (Agarwood *Aquilaria malaccensis*), packed for sale.

- Asiatic Black Bears *Selenarctos thibethanus*, Malayan Sun Bears *Helarctos malayanus* and young Malayan Tapirs *Tapirus indicus*, which are sometimes traded in the logging camps. Forestry officials say that these will fetch about 20 000 Baht (US$800) in Thailand. One bear was seen by the author in Tee Tah village and was traded between Karen villagers for 2000 Baht (US$80). It was later sold for 2500 Baht (US$100) and exported to Thailand aboard a logging company vehicle. A Karen forestry official who has worked at a local border checkpoint for the past three years estimated that about five live bears (both Asiatic Black and Malayan Sun Bears) went through that checkpoint each year.

- Loggers from a camp located west of Amoe village were reported to have caught a live Grey Peacock-Pheasant *Polyplectron bicalcaratum*, and had kept it tied up, planning to sell it in Thailand. The bird died four days later.

- Nestling parrots *Psittacula* sp. were seen in a logging camp 2km west of Klakanwa village (located halfway between Kawtaka township headquarters and Teenaepah village). Workers had bought the birds from Karen villagers for 20 Baht (US$0.80) each.

The Karen elephant trade

The Karen have a long history of working with elephants caught from the wild. In the past, pit-fall traps were common but have since been outlawed and now the Karen round up elephants once a year, building large corrals in the jungle and chasing the elephants for many days until they enter the enclosure. This requires an initial investment of 20 000 to 40 000 Baht (US$800-US$1600), which is supplied by a Thai elephant dealer. The catch is then usually divided four ways: the Thai dealer takes first choice of two elephants, the second choice falling to the hunter who gave final chase to drive the elephants into the corral, while the scout who found the elephant herd and started the round-up receives first choice of a further two elephants, and the remainder are taken by others who helped with the round-up. Alternatively, the Thai dealer may take several elephants and pay the Karen in cash.

One Township Forestry Officer declared that 138 elephants were caught in his area last year, of which 42 were sold to Thais, eight were released injured (an elephant which is unusable will be either sold or released quickly), and the rest were kept by the Karen. Elephants sold to Thailand range in price from 30 000 to 80 000 Baht (US$1200-US$3200), depending on their size and age. Catching elephants under permit is allowed by the Karen as a way of controlling the number of elephants which are said to be destroying villagers' crops, increasingly every year.

Between January and March 1993, the Karen were holding 24 elephants captive in one township and 12 in a corral. However, the elephants in the latter stampeded the gate, killing the gatekeeper, and escaped. An official told the author that 17 elephants had been poached in the Kaserdoh Wildlife Sanctuary since 1989, and that seven were shot in that year alone.

Trade conducted by independent wildlife traders

Thai villagers and some Thai Government officials often visit the Karen territory to take wildlife. Some of these villagers intend to collect animals or plants as a source of income for their families, while others hunt for sport. At times, Karen villagers collect and bring to market what they can. The following are some examples known to the author, or observed, of villagers' involvement in wildlife trade.

• Between November and mid-February each year, Thai villagers arrive with large nets to capture White-breasted Waterhens *Amaurornis phoenicurus*. The Kawthoolei Forestry Department has officially turned such villagers away on at least one occasion to the author's knowledge, but the border has many crossing points and the villagers eventually get in.

• Spectacled Langurs are regularly hunted for their meat and are also sold to Thailand for 100 to 300 Baht (US$4 to US$12) per animal (more if the meat is properly smoked). Langurs for sale were seen in Kawsawwah village (north of Amoe village); in Seepyet village (about 10 km south of Teenaepah village); south of Klakanwah village; and in Tee Kee village (on the Thai border).

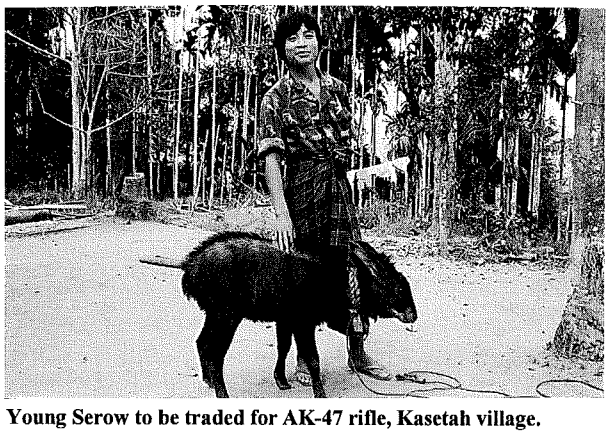
• In Kawsawwah village, villagers commented that the wildlife most commonly sold to Thailand were Butterfly Lizards *Leiolepis belliana* and the meat of Wild Boar *Sus scrofa*, Sambar *Cervus unicolor*, Muntjac *Muntiacus muntjak*, and monitor lizards *Varanus* spp. The meat of these animals generally sells for 30 Baht (US$1) a kg, if sold in the village and about 60 Baht a kg (US$2.5) if sold to a Thai middleman.

• In Tee Kee village, the District Forestry Officer bought two Sambars (a young male and a yearling female) from a Karen forestry officer who had been planning to sell them in Thailand. The forestry officer paid 18 000 Baht (US$720) for the pair.

• A man in Tee Tah village was keeping a young Sambar, which had cost 2000 Baht (US$80) two-and-a-half years previously. Some officials quote prices for live deer as reaching up to 10 000 Baht (US$400) per animal.

• The headman in Seepyet-weytori village bought an undressed, freshly killed Muntjac for 300 Baht (US$12).

• Butterfly Lizards are actively sought in the dry season (especially between January and April in burned areas between the Thai border and the Tenasserim River). The lizards are caught with noose traps set over their burrows and sell for 50 to 80 Baht (US$2 to US$3) a kg (about 10 to 12 lizards). Villagers stated that four people could catch numbers amounting to 100 kg in up to four days.



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Young Serow to be traded for AK-47 rifle, Kasetah village.

• The author was offered the skin of a Marbled Cat *Felis marmorata*, shot by a Karen in Klakanwa village. The price of the skin was 300 Baht (US$12). A forestry official accompanying the author commented that the skin would soon be purchased by a logging camp worker or other visitor.

• In Kasetah village, dogs were used to corner a female Serow *Capricornis sumatraensis* and her young. The adult Serow was shot and eaten by the hunter's family, and his eldest son captured the young Serow; he planned to trade the animal for an AK-47 automatic rifle, which he estimated to be worth about 5500 Baht (US$220).

• In Amoe, a teacher displayed drying Serow hooves and tongue. The Serow had been shot by a local hunter and eaten in the village, while the dried hooves and tongue would be powdered and/or kept in oil or alcohol, to be used as a tonic for muscle aches, amongst other complaints.

• Two young gibbons were observed for sale in Tee Tah village for 500 Baht each (US$20). Both were bought by local Karen villagers.

• A Leopard *Panthera pardus* skin observed in Amoe village was obtained from an animal shot by local hunters far to the west of the village. The author was told the selling price was approximately 1000 Baht (US$40).

• The author heard that a villager caught a large forest tortoise (probably *Manouria emys*) and sold it to the Thai-owned store in Tee Tah for 300 Baht (US$12). The estimated weight of the animal was 35 kg, and the length of the carapace was approximately 60 cm.

• Caged Hill Mynas *Gracula religiosa* are very common in the Karen area and in Thai border villages (observed in Kawtaka, Mawta, Amoe, Tee Tah and Tee Kee villages).

• Villagers from Mawtah reported that they used to see many songbirds, monitor lizards, and soft-shelled turtles coming through the market and destined for Thailand, but that there appeared to be fewer of these than previously.

The trade in rhino parts and derivatives

Since 1970, no rhinos have been hunted legally. Interviews with two elder hunters suggested that between 17 and 22 rhinos were shot in the Tenasserim River valley and in the region of Kaserdoh Mountain before this time, allegedly by a group of renowned rhino hunters. Prior to 1970, both the Javan and the Sumatran Rhino were said to have been present in these areas, the latter species being more common; the Javan Rhino has not been positively sighted since that time. One man is said to have shot eight rhinos in total, and another confirmed that he shot three rhinos (and 69 elephants) while it was still legal to do so. A Karen guide assisting the author said that both he and his father had each shot one rhino. Another man showed the author a rhino nail, and said he had in the past shot one rhino, three elephants and over 60 deer.

When a rhino is shot, the skin is dried, the blood is poured into the small intestine and dried, and the horn(s), penis, nails, and sometimes other parts taken. A bundle of rhino products weighing approximately 80 kg could be sold to a Chinese buyer in Ratchburi for about 40 000 to 60 000 Baht (US$1600 to US$2400). One villager showed the author a rhino nail he had kept for 22 years, which he said he could sell for 2000 Baht (US$80).

Karen villagers had recently reported that two rhinos were on Waybobee Mountain across the border from Huhin District, in Prachuabkirikan Province, in Thailand. In addition, some logging surveyors reported seeing rhino tracks north of Kaserdoh Mountain. On the other side of the border from Tongpapum District, Kanjanaburi Province (Thailand), Karen officials reported that some Mon hunters shot a rhino in January 1993. Locals in the Teenaepah village area still maintain that there may be three or four rhinos near Kaserdoh Mountain, about six or seven days' walk from the village. The author was told by a Karen official that a Chinese medicine dealer in Ratchburi claims to have bought at least two rhinos each year, for many years, and is still being supplied today.

Trade Routes

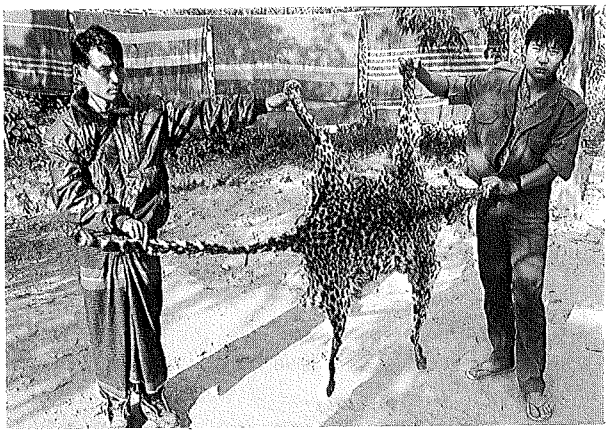
The main trade route in the northern part of Mergui Tavoi District leads from Amoe to Pong Dee, Siayok District in Kanjanaburi Province. A central, more minor route is from Tee Kee to Ban Khao, while the main southern route seems to be from Mawtah and Kaemata to Suan Phung District in Ratchburi Province.

Kawthoolei Legislation Governing Wildlife Trade

The Kawthoolei Government passed legislation in 1970 which prohibited the hunting of elephants (without a permit), gibbons, all hornbill species Bucerotidae, Malayan Tapirs *Tapirus indicus*, rhinos, and Green Peafowl *Pavo muticus*. The Government also has a law prohibiting all sale or transport of any wildlife or wildlife parts from Kawthoolei. (These laws are in the Karen language only, and English translations are not yet available). The Kawthoolei Government has separate forestry regulations, which forbid the use of any poison in taking wildlife; catching birds with nets; catching wildlife with pit-fall traps; hunting within 100 m of any religious grounds; hunting out of season; hunting from a tree-stand or using a spotlight, unless hunting predators (and only then if that predator is endangering humans or their livestock), or unless permission has been granted by the Forestry Department. Hunting of the following species is allowed:

- Gaur *Bos gaurus*, Banteng *Bos javanicus*, and Thamin Deer *Cervus eldi* (hunters must have an appropriate licence for these species and may take male deer only).

- Goral *Naemorhedus goral* and Serow (both male and females may be hunted, with a licence).



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Skin of Leopard shot by villager, Amoe village.

- Sambar, Hog Deer *Cervus porcinus* and Muntjac (allowed from 15 June to 30 September, except in protected areas).

- Kalij Pheasant *Lophura leucomelana*, Jungle Fowl *Gallus gallus*, and wild ducks (allowed from 15 March to 30 September, except in protected areas).

Penalties for infractions of the laws mentioned above include 20 years in gaol and a 100 000 Baht (US$4000) fine for killing an elephant, and 10 years in gaol and a 50 000 Baht (US$2000) fine for killing a rhino. For a first offence of killing a hornbill or gibbon, a 1000 Baht (US$40) warning fine is given, the penalty for a second offence being six months in gaol. The penalty for starting a forest fire, which is used sometimes as an aid to hunting, is also six months in gaol.

Conclusions

Although the information contained in this report is incomplete, preliminary findings suggest that wildlife trade in the Mergui Tavoi District is widespread. However, the volume of wildlife trade in the district could not be estimated from this investigation.

Problems in controlling the trade include the difficulty of patrolling numerous, remote border crossings coupled with the lack of enforcement or interest from the Karen or Thai border officials, insufficient management of wild resources, and the poor economic status of the Karen. An underlying cause of these problems is the political situation as the Karen are at war with the State Law and Order Restoration Council (SLORC) Government of Myanmar. The Karen are in the position of having to sell their natural resources to support their resistance efforts (despite the trade being often in direct violation of Karen laws).

Glen Hill was a consultant to TRAFFIC Southeast Asia between November 1992 and April 1993.

PNG Invests in Swiss Account

The Government of Papua New Guinea has engaged an independent Swiss company, Société General Surveillance, to monitor all exports of timber from its borders. The Prime Minister of Papua New Guinea declared the aim of the contract was to ensure that all dues are paid on logs going abroad and that the country was receiving fair prices for its timber. The monitoring programme will cost in the region of US$2 million.

Pacific Islands Monthly, December 1993

Plant Exports from India - an update

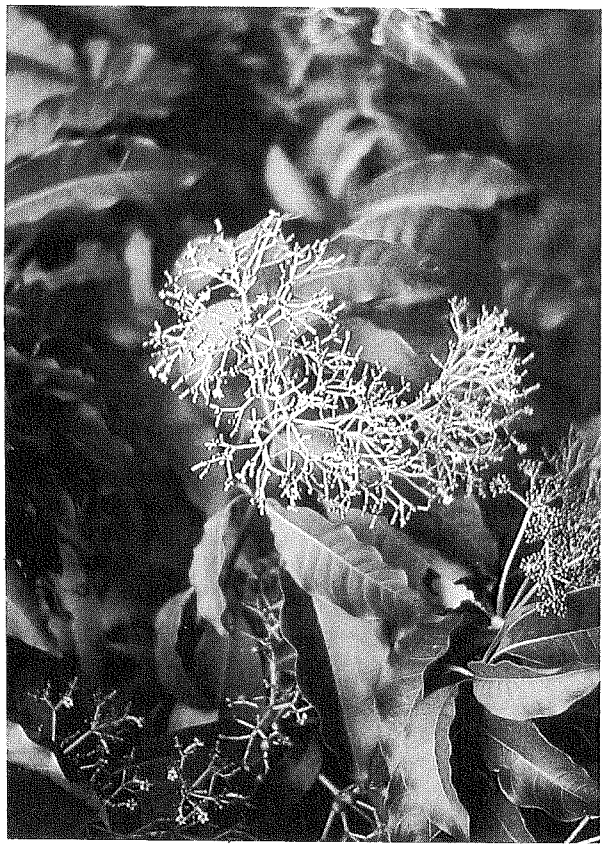
Although from 1 April 1993 export of "all forms of wildlife including their parts and products" from India was prohibited, there remained some ambiguity as to whether and how much flora there was included in the definition of "wildlife". Subsequently, a Public Notice was issued by the Ministry of Commerce providing clarification of the regulations and restrictions covering plant exports. From 23 July 1993, all plants, plant portions and derivatives obtained from the wild could only be exported with a "no objection certificate" and only through India's five major ports: Bombay, Calcutta, Cochin, Delhi or Madras. The "no objection certificate" has to be issued by the Regional Deputy Director, Wildlife Preservation, Ministry of Environment and Forests, the Chief Conservator of Forests or the Divisional Forests Officer of the state from where the plants were procured. The responsibility for verifying the legal procurement of the plants is therefore with the wildlife authorities and in theory this presents a relatively strong conservation control.

Further controls were introduced on 31 March 1994, when it was announced that the export of 46 species, and portions and derivatives thereof, was prohibited. Most of these plant species are medicinal and include *Atropa* spp., *Gloriosa superba*, *Berberis aristata*, *Podophyllum hexandrum*, *Swertia chirata*, Yew *Taxus baccata*, *Rauvolfia* spp., *Ephedra* spp., *Nardostachys* spp., *Coptis* spp., *Gentiana kurroo* and *Dioscorea deltoidea*. Many of these have been exported in sizeable quantities in recent years, either in raw form or in processsed and semi-processed form. This list is largely similar to that of a pre-1992 list of restricted export items, although there are some welcome additions in recognition of exploitation trends. *Taxus baccata* is one of these; over the last few years Yew trees in the Himalayan region have been hit by the enormous increase in demand for the raw material from which to process "taxol", a drug increasingly recognized as efficacious in the treatment of some forms of cancer (see also *TRAFFIC Bulletin* 13(1):33; 13(3)107). Although in theory it is mainly the needles from which the relevant alkaloid is extracted, and one reads of "sustainable harvesting", in practice, trees are being decimated across the Himalaya as whole branches and even full trees are lopped as an easier method by which to collect the needles. In one state alone, over 5000 tonnes have been removed since April 1993. However, several companies in India now process taxol and, although banning exports of *Taxus baccata* may be a necessary conservation move, as with most other species listed in the Public Notice, it is not a sufficient measure to protect them.

Doubtless all the species listed are rare/threatened at some level but to what degree exploitation for export is a significant factor is a debatable point. For at least one-third of those listed there appears to be no record of the species leaving the country. Also, for a few species there has been limited cultivation for exports, e.g. Deadly Nightshade *Atropa belladonna* (not a native Indian species), *Gloriosa superba*, and Kuth *Saussurea costus (= lappa)*. The export ban on the 46 species does not distinguish between wild-collected or cultivated plants. However, Kuth is also regulated according to its CITES Appendix I-listed status, and its inclusion on this list is not intended to override the CITES regulations presently governing its export. It remains to be seen what effect in practice the ban will have on other cultivated species.

The list raises questions of omission and addition but it is a welcome sign that the Ministry of Environment may now be aiming its sights more specifically on the flora of the sub-continent and especially on medicinal plant species, which are under increasing pressure. A major handicap is the lack of information, nowhere more gaping than in domestic and export data on the country's medicinal plant trade. TRAFFIC India is currently working on a project which will hopefully go some way towards filling a part of this gap.

Joanna Van Gruisen, Consultant, Medicinal Plant Project, TRAFFIC India



© WWF

Rauwolfia vomitoria

Logs 'Logged'

Timber from sustainably managed forests may now be tracked for the duration of its journey to the sawmill.

Bill Miller of Forest Log, in Oxfordshire, UK, has developed an electronic scheme that assigns a unique bar code affixed to a log by a plastic tag. Although the tags are lost when the timber is processed, the volume of timber that arrives at the sawmill may be compared with the output. A hand-held computer reads the bar code, and the volume, species and quality of each log can be recorded by forestry workers who may then transmit the data by satellite to a central computer. This information is also recorded on a steel-housed microchip which travels with the wood to its destination, secured under the steel straps around the shipment.

"This is an important step towards giving timber buyers the guarantees of good forest management they are asking for," says Miller. "It is one thing to certify a forest as being sustainably managed, but quite another to follow the timber from that forest through a complex trading network and remain certain of its origin", he says. Miller hopes that his system will become the standard means of labelling and tracing internationally traded timber.

New Scientist, 25 December 1993/1 January 1994

"Bulbmark" Scheme Labelled Lacking

The three-year-old agreement whereby Dutch exporters undertake to provide information on the origin and identity of plant bulbs exported to the USA (see *TRAFFIC Bulletin* 11(4): 63) has been monitored jointly by TRAFFIC USA and the Natural Resources Defense Council (NRDC) of the USA. In the latter part of 1993, a survey carried out by these two organizations noted inconsistencies and failings in the application of the labelling scheme.

The survey focused on retail garden centres in northern Virginia, where it was discovered that some packets of bulbs did not indicate the origin of the contents or were ambiguously labelled. Examples included unlabelled crates of hundreds of loose crocus *Crocus* spp. bulbs, unlabelled *Allium giganteum* and *Narcissus* miniatures and cultivars, and the absence of labels stating "bulbs grown from cultivated stock", where possibly applicable.

There was also positive news: one exporter, O. van den Berg, which shipped solely unlabelled bulbs in 1991, was found to have labelled all bags of bulbs seen during the survey in 1993 as "Bulbs grown from cultivated stock".

TRAFFIC USA and the NRDC have written to the Dutch Bulb Exporters' Association in the Netherlands to urge an investigation of the causes of unlabelled and mis-labelled produce. Meanwhile, their monitoring operation will continue this year.

TRAFFIC USA and NRDC, in litt., *9 February 1994*

USA and Gabon Sign Plant Agreement

The National Centre for Scientific Research and Technology of Gabon and the US National Cancer Institute have signed an agreement setting out terms for the sharing of benefits in the event of the development of a commercial drug from plants collected by US botanists in Gabon.

The signing took place on 8 November 1993, when the Gabonese institution became the sixth of its kind in Africa to sign such an accord with the US National Cancer Institute. Scientists from the Missouri Botanical Garden have been collecting plants in Gabon over the past few years, for testing by the National Cancer Institute, which not only examines plants for their potential as cancer cures, but also for their effectiveness against the human immunodeficiency virus (HIV).

African Wildlife Update, November-December 1993.

UK Timber Companies 'Log-out'

Two major UK paper companies have cancelled their pulp contracts with one of Canada's large timber companies, MacMillan Bloedel, following protests by environmental groups at the "clear-cut" logging practices in Clayoquot Sound, British Columbia. The UK subsidiary of Kimberly-Clarke has pulled out of a US$2 m deal with MacMillan Bloedel and Scott Paper has already cancelled a US$5M contract with that company.

The British Columbia Government has tried to address the complaints of environmentalists who call for a total ban on logging in the area, and the forestry companies who maintain that the trees are essential to the survival of nearby mills.

Clayoquot Sound, an area covering 271 575 ha, contains one of the largest remaining old-growth forests[1] in North America. The rate of logging of British Columbia's forests has increased dramatically in recent years. According to Dudley (1992), some 260 000 ha of forest are felled every year, and the rate continues to increase, faster than anywhere else in the temperate world and exceeding that in all the national forests in the USA combined. At least 60% of the province's most productive ancient forests have been cut in huge swathes along 800 km of the coast: about 90% of the logging is by "clear-cutting".

[1]old-growth forest generally refers to forest that is either wholly natural or has remained undisturbed by humans for several hundred years, thereby often providing a unique association of plant and animal species (Dudley, 1992).

Financial Times (UK), 19/20 March 1994

Dudley, N. (1992). *Forests in Trouble: A Review of the Status of Temperate Forest Worldwide.* Earth Resources Research and World Wide Fund for Nature. 260 pp.

Assistance with investigations was provided to authorities by TRAFFIC staff in many of the cases reported below that occurred in regions covered by a TRAFFIC office or representative.

EUROPE

BELGIUM

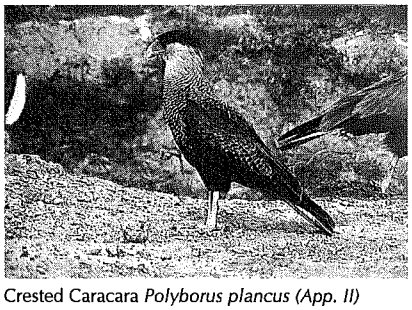
There have been over 11 incidents since the beginning of 1994 where Customs authorities at Zaventem airport have seized worked pieces of ivory of African Elephant *Loxodonta africana* (App. I); the amount totals over 22 kg; some of the items were being exported but most had arrived from Zaire. Other seizures during the same period include bags and bracelets crafted from the skins of African Rock Python *Python sebae* (App. II); 6 whole skins of this species were also illegally imported, as well as 1 skin each of Anaconda *Eunectes murinus* and Boa Constrictor *Boa constrictor* (both App. II).

In early May, 4 Crested Caracaras *Polyborus plancus* (App. II) and 8 Ferruginous Pygmy-Owls *Glaucidium brasilianum* (App. II) were seized at Zaventem airport. The shipment of live birds had arrived from Peru and was bound for a dealer in the Netherlands. Although covered by a valid export permit, their import was illegal because both species are listed in Annex C1 of EC Regulation 3626/82 and thereby treated as if in CITES Appendix I. The birds are being cared for at Antwerp Zoo.

On 5 May 1994, Customs officers at Zaventem airport seized 20 small tortoises (5 cm diameter) from a German passenger travelling from Brazil to Germany. The man immediately abandoned the animals, claiming that he did not know that paperwork was required for their passage. The tortoises were transferred to Antwerp Zoo where they were identified as Red-footed Tortoises *Geochelone carbonaria* (App. II).

An investigator, with good knowledge of the illegal tortoise trade, states that it has long been suspected that couriers travel to Brazil during the hatching season in order to collect juveniles of this species, which is much sought after in Europe.

TRAFFIC Europe



© WWF/H. Torres

Crested Caracara *Polyborus plancus (App. II)*

CZECH REPUBLIC

The Czech Inspection for the Environment has been investigating several cases involving the smuggling of birds.

On 17 May 1993, at Prague airport, Customs officers seized 48 parrots (4 Blue-and-yellow Macaws *Ara ararauna* (App. II), 7 Cuban Parrots *Amazona leucocephala* (App. I), and 37 Orange-winged Parrots *A. amazonica* (App. II)). The birds were stored in 4 boxes and had been illegally imported from Cracow, Poland, bound for Kuwait via Prague. Because of their poor condition, the birds were taken to Prague Zoo.

On 24 June 1993, at Breclav check-point, on the border with Austria, Customs officers searched the vehicle of a Czech passenger where they discovered 2 Hyacinth Macaws *Anodorhynchus hyacinthinus* (App. I) and 7 Blue-headed Macaws *Ara couloni* (App. II). The parrots, all of which were seized, had been delivered to Bratislava airport via Moscow by a Uruguayan citizen. The Czech was the owner of another shipment of parrots, seized in Germany, some months earlier (see Germany).

IUCN Czech Project Co-ordination Unit

FRANCE

© TRAFFIC Europe (France)

Gorilla skulls seized in France

In January 1994, 10 Gorilla *Gorilla gorilla* skulls, which had originated in northern Congo, were seized by the Office National de la Chasse (National Hunting Office). The skulls had been advertised in a mail-order magazine bearing the endorsement "rare trophy, badly sought by collectors". The Office National de la Chasse has referred the case to the Crown Court of Charleville Mezières for investigation.

In March 1994, at St Gaudens Crown Court in the Haute Garonne, Pierre Cadeac was given a suspended prison sentence of six months and fined Ffr.10 000 (US$1745). Cadeac, manager of Animal Vision, a company that specializes in providing wild animals for entertainment shows, had used false documents for importing 1 Chimpanzee *Pan troglodytes* (App. I) into the EU (see *TRAFFIC Bulletin* 13(2):75). In addition, Mr Cadeac has not been able to provide the compulsory official authorisation required for conducting his business. Cadeac has previous convictions for wildlife offences carried out in 1986 and 1992 (see *TRAFFIC Bulletin* 13(2):75). His accomplice, Ahmed Belkhassi, fraudulently imported two Barbary Macaques *Macaca sylvanus* (App. II) from Morocco and has been fined Ffr2000.

TRAFFIC Europe

GERMANY

In March 1993, a shipment of parrots was seized by Customs authorities at Zinnwald, on the border with the Czech Republic. Included in the consignment were 10 Cuban Parrots *Amazona leucocephala*, 8 Red-spectacled Parrots *A. pretrei*, 2 Red-tailed Parrots *A. brasiliensis*, 1 Blue-cheeked Parrot *A. dufresniana* (all App. I) and 2 Burrowing Parakeets *Cyanoliseus patagonus* and 1 Sulphur-crested Cockatoo *Cacatua galerita* App. II). Because the birds were owned by a Czech national, the Czech Inspection for the Environment carried out investigations which revealed that the birds had been obtained from dealers in the former Yugoslavia and were bound for Denmark. The Czech was also responsible for a shipment that was seized some months later at Breclav, in the Czech Republic (see Czech Republic).

On 19 January 1994, Customs officers in Dortmund seized a number of exhibits displayed at an exhibition of weapons, traps, and hunting trophies. Nineteen exhibitors were charged and 80 items that were not covered by the requisite CITES permits were confiscated. These included claws of birds of prey and of bears that had been worked into jewellery, elephant feet and the furs of Lion *Panthera leo* (App. II), zebra and bear. The cases are under investigation.

IUCN Czech Project Co-ordination Unit; TRAFFIC Europe

ITALY

On 16 February 1994, in Brindisi, the owner of a circus was given a suspended sentence of one month's imprisonment and 7 Chimpanzees *Pan troglodytes* were confiscated from his possession. The circus had been inspected in Brindisi harbour on arrival from Greece, in October 1991; false Italian and Spanish CITES certificates accompanied the shipment. The animals were placed in rescue centres (see *TRAFFIC Bulletin* 12(3):33).

On 2 April 1994, Forest Corps and Customs officers apprehended the crew of a Russian ship arriving at La Spezia harbour in Liguria from the Ivory Coast and bound for Genoa airport. In the crew's possession, and without the relevant documentation, were 30 African Grey Parrots *Psittachus erithacus* (App. II) which were to be sent by air to Leningrad. The crew have been charged with violating CITES and the case is under judicial review. The parrots are being cared for at a rescue centre.

On 11 April 1994, at Tarvisio, on the border with Austria, the Finance Guard carried out a routine search of a vehicle arriving from Yugoslavia via Hungary and Austria, apparently bound for France. He alerted officers of the Forest Corps and Customs on discovering two crates which were found to contain 2 Hyacinth Macaws *Anodorynchus hyacinthinus*, 4 Red-

ITALY ctd.

vented Cockatoos *Cacatua haematuropygia*, 7 Red-fronted Macaws *Ara rubrogenys* and 19 Tucuman Amazons *Amazona tucumana* (all App. I). False CITES documents accompanied the shipment. A rescue centre is now caring for the birds and the case is under investigation.

The Customs anti-fraud unit (SVAD) has apprised the Italian representative of TRAFFIC Europe of the seizures undertaken, in collaboration with the Forest Corps, at Fiumicino airport, Rome, during 1993. A total of 160 CITES violations were detected and are under judicial review. The following items were seized: 185 kg worked ivory, 42 sea turtle shells, 10 stuffed crocodilians, 8 felid skins, 629 reptile leather items, 256 live parrots, 1 live monkey, 83 mounted butterflies and 62 kg of corals. The new Italian CITES legislation and improved communication between Customs and the Forest Corps are allowing for more rigorous controls at the border checkpoints.

TRAFFIC Europe; Forest Corps CITES Service; CITES Management Authority, Rome; SVAD, Fiumicino Airport.

NETHERLANDS

On 3 May 1994, at Amsterdam Crown Court, Kenny Dekker and Jan van der Gulik, both Dutch nationals, were charged with the smuggling of wild-collected eggs of Black Cockatoos *Calyptorhynchus* (App. II) from Australia to the Netherlands.

The outcome of the court case follows more than a year of investigation by the Dutch CITES enforcement team into the appearance of Black Cockatoos on the Dutch market; Black Cockatoos, of which there are five species, are not well established in aviculture and their export from Australia is banned. It was soon learned that an organized network was operating between Australia and the Netherlands: eggs were being collected in the wild and transported by couriers to the Netherlands; the eggs were incubated by contacts of Dekker and van der Gulik, and the young birds then distributed by the pair to bird keepers and dealers in that country. Enquiries by the Dutch authorities were also undertaken with officials in Australia and witnesses and couriers interviewed; one courier turned witness to avoid prosecution and confessed to smuggling eggs to the Netherlands on Dekker's behalf.

In April 1993, 86 Black Cockatoos were seized from bird dealers in the Netherlands and both Dekker and van der Gulik were arrested and kept in custody for two months whilst the investigation continued.

When the case came to trial in January 1994 it was dismissed owing to lack of evidence. However, the Dutch authorities appealed to a higher court and, on 3 May, Dekker was sentenced to 18 months' in prison and van der Gulik received a 12 months' (six months definitive) prison sentence; the latter was also ordered to pay Dfl.400 000 (US$212 000) which was based on the estimated profit made from the sale of the birds; 22 Black Cockatoos in van der Gulik's possession were also confiscated. The wife of van der Gulik, and a number of others who had allegedly assisted in raising the young cockatoos, were acquitted.

In 1988, van der Gulik and a colleague were fined for the illegal possession of Hyacinth Macaws *Anodorhynchus hyacinthinus*; the fines were reduced following an appeal.

General Inspection Service, The Netherlands

AFRICA

SOUTH AFRICA

On 26 January 1994, at Johannesburg Regional Court, Derrick Hanekom, of Hurleyvale, pleaded guilty to charges of illegal possession of rhino horn. Hanekom, owner of a hairdressing salon that had run into financial difficulties, had reportedly acquired the horn from a client who had obtained the item in the former Rhodesia. If Hanekom succeeded in selling the horn, the client had offered him half the amount received from the sale. Although approached by someone interested in buying the horn, Hanekom was arrested before any sale went through.

Hanekom was sentenced to a fine of R7000 (US$2000) or three years' imprisonment.

TRAFFIC East/Southern Africa (South Africa); The Citizen (South Africa), 27 January 1994

TANZANIA

In March 1994, the Tanzanian Wildlife Department confiscated 5 juvenile Chimpanzees *Pan troglodytes* (App. I) and 66 African Grey Parrots *Psittachus erithacus* (App. II). The animals had been illegally imported from Zaire. Two suspects await trial and the animals are being cared for at a lodge in Kigoma.

International Primate Protection League News, Vol. 21(1), April 1994

ZAMBIA

A case involving the seizure of 81 elephant tusks in Kaoma came up for trial on 9 February but took a dramatic turn when five of the six sureties for the accused were detained following the disappearance of the suspects.

On 15 November 1993 the three Kaoma residents were arrested while they were making preparations to smuggle the tusks out of the country. The tusks were of various sizes, some standing as tall as an average man, indicating that they were removed from elephants over ten years ago when elephant tusks were more commonly such a size. The contraband had been deposited in a pick-up van ready for transportation to a make-shift airstrip in Kafue National Park from where it was to be smuggled out of the country by air to an unknown destination.

The suspects were charged with unlawful possession of proscribed Government trophies contrary to Sections 133 and 177 of the *National Parks and Wildlife Act*, No. 10, 1991. They were later released on bail by the Kaoma Magistrates' Court and ordered to appear in court for trial on 9 February. When two of the accused failed to appear in court on that date, the Senior Resident Magistrate effected a detention order for the sureties of the escaped suspects. The sureties pleaded with the court to allow them to search for the escapees. They were freed but when the seven days they were allocated to carry out their search did not disclose the whereabouts of the accused, the court adjourned the case until 14 April to allow them more time.

On 14 April the case was withdrawn under Section 88 (n) of the Criminal Procedure Code because the two main suspects could not be traced. The State felt it would be unreasonable to try the third person on his own and he, as well as the five sureties, were released. The Species Protection Department of the Anti-Corruption Commission will continue to seek the offenders.

In February 1994, four armed poachers were arrested by wildlife police officers in Muobezi-Sichifulo Game Management Area. The group was preparing to transport 10 pairs of elephant tusks and bundles of buffalo meat, together with arms and ammunition, to a hideout.

The Species-Watch Newsletter, Vol. 1, Nos, 9/10, December 1993/January 1994; February/March 1994; M. Nyau in litt., *10 May 1994.*

ASIA

INDIA

On 28 January 1994, Customs officials in north Delhi seized a record amount of wool of the Tibetan Antelope or Chiru *Pantholops hodgsoni* (App. I), known as shahtoosh wool and used in the manufacture of shawls. Some 400 kg of shahtoosh and 3000 kg of wool from the domesticated Pashmina goat were seized from a small hut. Four persons were apprehended for interrogation but no arrests have been made. Preliminary investigations reveal that the wool had been smuggled into the country from Nepal to where it had probably been brought from Tibet, where this species occurs.

Forensic tests carried out by the US Fish & Wildlife Service on a consignment of wool thought to be Chiru and seized at Delhi airport in June 1993 confirm that the wool is indeed from that species (see *TRAFFIC Bulletin* 14(1):38.

On 28 January 1994, skins of a Tiger *Panthera tigris* and 2 Leopards *Panthera pardus* (both App. I) were seized following lengthy investigations by Delhi police, assisted by TRAFFIC India, into the trade in these items in Delhi. Six persons were detained for questioning and the case is under judicial

review. Two others, who are believed to be holding much larger stocks, absconded but arrests and further seizures are expected.

Following a tip-off, police in Gokulpuri, Delhi, seized 2 Leopard *Panthera pardus* skins from a trader who, following his arrest, admitted that he was the mediator between poachers based in Uttar Pradesh and purchasers in Delhi. He revealed the names of the traders to the police and said that the skins were generally exported to the Gulf, indicating that this incident was not unique.

In March 1994, an Indian Customs officer at Attari station in north-west India discovered 3 Sloth Bears cubs *Melursus ursinus* (App. I) encased in a carton; the animals were bound for Pakistan, en route from Delhi. The person accompanying the shipment had fled by the time the carton was opened.

Live bears are used for entertainment purposes in Pakistan (see *TRAFFIC Bulletin* 14(2):48).

The Government of India is investigating the case; by the time it was informed of the affair, two of the three cubs had died as a result of sedatives and inadequate care.

On 31 March 1994, in Dudhwa National Park, staff of TRAFFIC India assisted in the apprehension of a wildlife trader from whom an adult Leopard *Panthera pardus* skin was seized. The animal had been leg-trapped and shot. The names and addresses of a number of poachers were divulged by the trader in a subsequent interview. The case is pending.

On 1 May 1994, a consultant to TRAFFIC India, acting on information received from an informer, assisted in the arrest of two persons at a location close to Kanha National Park in Madhya Pradesh and the seizure of one fresh Tiger *Panthera tigris* skin; the animal had been recently killed by poison. Following interrogation of the two suspects, the person who poisoned the Tiger was also arrested. Investigations are continuing.

TRAFFIC India has received further leads on the poaching of Tigers in Madhya Pradesh, the largest State in India which also contains the greatest number of Tigers of all the States in India. In February this year, in Itarsi, 30 kg of Tiger bones, 40 kg Leopard bones, 4 Leopard skins and 146 skins of jackal *Canis* and fox were seized. Four persons have been arrested.

On 4 May 1994, 3 dead Slow Lorises *Nycticebus coucang* (App. II) were found abandoned in the passenger check-in area of Indira Gandhi International airport, New Delhi. It is thought that the animals died in the process of being brought to the airport or at the airport itself. The airport authorities were not able to find out the name of the passenger associated with the animals, nor the flight on which the animals were intended to be shipped out.

This incident, coupled with the seizure of 1300 live birds at the same airport on 6 April 1994, has led to a request by TRAFFIC India to the Collector of Customs to increase vigilance at the airport.

On 19 May, a major seizure of animal skins took place in the State of Jammu and Kashmir. Some 2133 skins were seized by wildlife officials from the railway parcel depot at Jammu, close to the Punjab border. The skins, from various destinations in the State of Uttar Pradesh, comprised 1000 Jungle Cats *Felis chaus* (App.II), 391 foxes, 587 jackals *Canis*, 145 civets, 8 Fishing Cats *Felis viverrina* (App. II) and 2 spotted deer.

This is the first seizure of this size in the State. Jammu and Kashmir has enacted its own wildlife legislation which is less strict than that which is applied in other States. As a consequence, illegally obtained wildlife skins can be made into garments and may be lawfully sold in the State. India's Minister for Environment and Forests has taken up the matter of discrepancy in the legislation between States, with the Jammu and Kashmir Government.

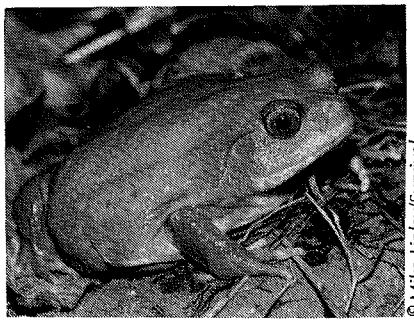
TRAFFIC India; The Pioneer (India), 3/4 February 1994; Hindustan Times (India), 24 March 1994

JAPAN

There have been a number of seizures of Asian Bonytongues *Scleropages formosus* (App. I), domestic trade in which contravenes the Law for the Conservation of Endangered Species of Wild Flora and Fauna (LCES) unless the specimens have been registered with the authorities.

On 8 November 1993, Shigeru Matsubara of Mito, Ibaragi prefecture, was arrested for offering for sale 100 Asian Bonytongues that he had not registered. He was arrested in 1991 for a similar offence.

On 25 November 1993, a pet shop owner in Fukuoka prefecture was arrested after trading



© Mike Linley/Survival

Tomato Frog *Dyscophus antongillii* (App. I)

illegally in Asian Bonytongues. He confessed to police officers that he had illegally imported red arowanas from Malaysia which he had declared as green arowanas; both red and green arowanas are varieties of Asian Bonytongue, the latter being more commonly available. He was convicted and fined Y100 000 (US$1000).

On 1 February 1994, Kiyoshi Yamato of Osaka was arrested for selling Asian Bonytongues which he had offered to customers over the telephone. He was convicted and fined Y200 000-Y300 000 (US$2000-US$4000). Some years previously, Yamato was arrested in Singapore when found to be smuggling Asian Bonytongues from Thailand in his luggage.

On 13 January 1994, a pet shop owner in Osaka was arrested for offering for sale 25 Tomato Frogs *Dyscophus antongilii* (App. I). The amphibians had not been registered with the Environmental Agency, as required (see above). It was discovered that the specimens had been included in a shipment of *Dyscophus insularis* that had been legally declared. The consignment had been imported from Switzerland. The Tomato Frog is a rare amphibian restricted to north-east Madagascar. The frogs were on sale for Y9000 (US$90) each.

© WWF/M. Kavanagh

Slow Loris *Nycticebus cougang* (App. II)

JAPAN ctd.

On 4 February 1994, 24 kg of Hawksbill Turtle *Eretmochelys imbricata* shells were seized from two dealers at Narita airport, Tokyo. The shells had been purchased in the Dominican Republic for Y5000 (US$50) a kg.

Despite having a reservation with respect to this species, Japan entered a zero quota in July 1993, at which time the country stated its intention to drop its reservation on the species in July 1994.

TRAFFIC Japan

TAIWAN

On 18 March 1994, Dekiy Wangchuk, of Bhutan, was sentenced to 10 months' imprisonment for smuggling rhino horns. Wangchuk, a member of the Bhutanese royal family, was caught at Chiang Kai-shek International airport with 22 Indian Rhino *Rhinoceros unicornis* horns and 9 bear gall bladders in September 1993 (see *TRAFFIC Bulletin* 14(2):77).

On 21 April 1994, police seized over 2 kg of Tiger bones from a Chinese medicine store in Taipei. The owner of the shop in Hsulin township told police that he had bought the bones two years previously from another medicine shop in Taipei. He faces a gaol term of up to one year and a maximum fine of NT$10 000 (US$370 000). A further two pharmacists operating in Wanhua and Tatung districts were recently caught selling Tiger parts by Taipei police.

On 23 May 1994, police seized semi-worked ivory products from an artefacts shop in the southern port city of Kaohsiung. The shop owner had not registered the stock with the Council of Agriculture as required under the *Wildlife Conservation Law*. Eight large boxes were needed to remove the seized ivory products, which came in various forms. The police discovered the ivory following information provided by suspects in an earlier smuggling case.

TRAFFIC Taipei; The China Post (Taiwan), 22 April 1994/24 May 1994; The China News (Taiwan), 22 April 1994

OCEANIA

AUSTRALIA

On 13 April 1994, at East Perth Court of Petty Sessions, Matthew Eric Schram, a US citizen, was charged under the *Wildlife Protection Act* and *Crimes Act* relating to the illegal export of native fauna. Schram had been arrested by Customs authorities in Western Australia in connection with the discovery by Customs officers of 23 Oblong Turtles *Chelonda oblonga* contained in crates declared as "artefacts all made in Australia". The feet of the reptiles were bound with tape and placed inside sealed individual calico bags which had been hidden under a false bottom in each of two crates and covered with shredded paper containing some pottery artefacts. It is alleged that the Turtles were caught at Lake Joondalup and were bound for Malaysia.

Schram was not required to plead and was remanded to appear in the Central Law Courts on 22 April. Bail conditions were set at a recognizance of A$20 000 (US$14 500) and A$20 000 security. He was ordered not to go within 1 km of Perth International Airport, to surrender his passport and to report daily to Subiaco police.

The discovery of the Turtles was prompted by information received from Frontline, a co-operative venture between the Australian Customs Service and industry groups involved with international trade and transport, to combat illicit drug trafficking and other offences.

Under the *Wildlife Act* export of these Turtles without a licence is prohibited.

Australian Customs Service News Release, 13 April 1994

AMERICAS

USA

On 28 April 1994, at the US District Court in Austin, Texas, Jesus Natividad Maldonado, of Sandia, Texas, was charged with violations of the *Federal Smuggling Statute*, the *Endangered Species Act* and the *Lacey Act*, with respect to the illegal possession, transportation and attempted sale of a number of parrots. He was sentenced to 5 years' imprisonment, 3 years of supervised release and fined US$10 000.

In February 1992, Maldonado was apprehended at a road junction by police in Austin, who found 70 juvenile Yellow-naped Amazons *Amazona auropalliata* (App. II) concealed in the rear of his vehicle. The defendant, and his cousin Teodora Maldonado Garcia, the driver, claimed the parrots had been bred in captivity at Maldonado's aviary. During the trial, Garcia testified that Maldonado had never bred any of these birds and used his aviary only as a front to mislead agents; expert witnesses at the trial further testified to the difficulty in breeding this bird. Garcia pleaded guilty to a charge of possession of smuggled parrots in July, 1993. Investigations by US Fish and Wildlife Service (USFWS) and Customs agents found that Maldonado had been involved in the large-scale smuggling of parrots from Mexico into the USA.

Maldonado faces further charges, along with 11 other individuals, involving parrot smuggling.

On 8 February 1994, at Los Angeles District Court, Richard Furzer was sentenced on five felony charges relating to the conspiracy to smuggle birds into the country illegally, charges to which he had pleaded guilty in August 1993 (see *TRAFFIC Bulletin* 14(1):38). During the period 1988 to 1990, Furzer had imported some 2400 African Grey Parrots *Psittacus erithacus* (App. II) from Zaire into Senegal, where CITES re-export permits were obtained using fraudulent information for the subsequent shipment of the birds to the USA.

He was sentenced to 18 months in prison on each count, to be served concurrently; 3 years of supervised release; restitution of US$75 000 to the USFWS (US$25 000 at the time of sentencing and US$50 000 to be paid during the period of supervised release); and, forfeiture to the USFWS of 76 African Grey Parrots and 24 Eclectus Parrots *Eclectus roratus* (App. II). He was also ordered to pay a US$250 special assessment fee.

On 9 March 1994, in US District Court, Southern District of New York, Ebbe Tony Lofqvist, a Swedish national, was convicted of charges related to the illegal import of 6 tusks of African Elephant *Loxodonta africana*. Lofqvist had been apprehended by USFWS and US Customs Service agents on 27 September 1993 after smuggling the tusks from Sweden by ship, to Port Newark, New Jersey. Unwittingly, he arranged to sell the goods, described on Customs documents as engine parts, to an undercover US Customs agent for US$180 000. According to receipts shown to the agent, the ivory apparently originated in Zambia and had been imported to Germany in 1973. Following his arrest, Lofqvist pleaded guilty to smuggling charges and remained in custody until his trial, when he was sentenced to 10 months in gaol and fined US$2050.

Investigations by the USFWS and Customs authorities revealed that Lofqvist had bribed sea captains and freight carriers to ship an unknown number of tusks from Germany to Sweden and then onto the USA, laundering his earnings through a friend in Sweden. He allegedly tried to sell ivory carvings, uncut ivory, and the hands and feet of unspecified numbers of Gorilla *Gorilla gorilla*; he also disclosed to an undercover agent that he had access to 10 t of uncarved ivory stored in a German warehouse.

On 14 April 1994, at the US District Court of Puerto Rico, 12 nationals were charged with violations of the *Endangered Species Act*, the *Lacey Act*, conspiracy, and aiding and abetting the commission of a crime relating to the take, possession, transportation and sale of Hawksbill Turtles *Eretmochelys imbricata* and Green Turtles *Chelonia mydas* (both App. I). The accused are being held in San Juan awaiting trial.

US Fish and Wildlife Service, Division of Law Enforcement, Washington Office; Department of Interior, USFWS Press Releases, 22 February/19 March/14 April 1994; Department of Justice, 28 April 1994; Star Ledger (USA), 19 March 1994

The Importance of Sport-hunted African Elephants to CAMPFIRE in Zimbabwe

Ivan Bond

Introduction

CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) was developed in Zimbabwe to give rural communities direct responsibility for managing their natural resources. This arose from the belief that wildlife utilisation as a form of land use will only be endorsed by rural communities when individual members receive direct benefit (Murphree, 1991). Under CAMPFIRE principles, at least 50% of any revenue earned from wildlife resources should accrue to local communities. The programme is established in 12 districts which have "appropriate authority" to manage and benefit from wildlife according to the programme's guidelines. These districts comprise 84 wards with a human population of over 400 000 in an area of 30 000 km^2 (Bond, in prep.).

The management of wildlife resources under CAMPFIRE includes wildlife-centred tourism as a source of income for several districts. Elsewhere, the terrain is often unsuitable for this purpose and the low densities of wildlife mean that sport-hunting is usually preferred to tourism as a means of wildlife utilisation. In fact, sport-hunting constitutes the main source of income to most districts implementing CAMPFIRE. African Elephants *Loxodonta africana* in Zimbabwe are responsible for most of the crop losses caused by large mammals on communal lands (Hoare and Mackie, 1993). Thus, in the case of elephants in particular, it is necessary that any financial returns from sport-hunted animals not only compete favourably at a household level with those from traditional farming practices, but also compensate for the costs of associated damage to crops.

CAMPFIRE and Sport-Hunting

The establishment of CAMPFIRE has taken place against a background of a growth in sport-hunting in Zimbabwe. *The Parks and Wildlife Act, 1975* promoted the sustainable utilisation of wildlife in Zimbabwe and between 1985 and 1990 there was a 42% increase in the number of days of sport-hunting; this represented an increase in revenue of 117% (Table 1).

Year	Hunting days	Income (US$)	Income (Z$)
1985	7 966	4 313 343	7 079 177
1990	11 338	9 368 171	24 718 129
% change	42%	117%	249%

Table 1. Growth in sport-hunting in Zimbabwe, 1985 to 1990 inclusive.

Source: Price Waterhouse and Environmental Resources Limited, 1992.

Safari operators lease hunting concessions from district councils by paying dues, in the form of either trophy fees, a percentage of gross revenue, or a lump sum payment. Between 1989 and 1992, the 12 districts in Zimbabwe operating the CAMPFIRE scheme earned more than Z$11.5 million from wildlife-based activities, of which over Z$10 million (90%) was derived from sport-hunting. Of the total revenue generated in these districts between 1989 and 1992, approximately Z$5.4 million (47%) has been returned to the resident communities and a further Z$2.5 million (22%) has been reinvested in wildlife management (Table 2).

Category	Zimbabwe (Z$)	% of total income
Total Income	**11 508 538**	**100%**
Sport hunting	10 307 342	90%
Tourism	163 677	1%
PAC[1] hides and ivory	243 614	2%
Other	739 905	7%
Allocation		
District Councils	1 339 302	12%
Wildlife management	2 532 843	22%
Ward/village/house	5 459 554	47%
Other	297 588	3%
Unallocated	1 771 892	15%

Table 2. Sources of income and allocation of revenue for the 12 districts operating CAMPFIRE, 1989 to 1992, inclusive.

Source: Bond, in prep.

[1]PAC = problem animal control: the sale of ivory and hides from animals that have been destroyed as crop raiders.

Exchange rates: US$1: 1985 Z$1.64; 1986 Z$1.68; 1987 Z$1.66; 1988 Z$1.94; 1989 Z$2.27; 1990 Z$2.64; 1991 Z$5.05; 1992 Z$5.48. *Source: Anon., (1992a).*

The Sport-hunting of Elephants

To investigate the importance of sport-hunted elephants to CAMPFIRE, the value of African Elephant trophy fees was compared with total trophy fees for the 1992 hunting season. Only eight of the 12 districts operating CAMPFIRE were included in this study because:

- no data for Chiredzi district were available;
- in Binga and Beitbridge districts concessions were awarded to operators in return for a single payment instead of trophy fees, thus making the breakdown to species level impossible; and
- the sport-hunting quota in Hwange district was not sold.

In the remaining eight districts, the concessionaire paid trophy fees for the animals shot to the district councils, enabling calculation of the contribution of individual species to gross trophy fees (Table 4). The 56 elephants shot in the eight districts represents 67% of the total available trophy elephant quota in the communal areas for 1992. An additional five elephants were shot on problem animal control (PAC), as wet season trophies. This is an experimental policy aimed at generating revenue through sport-hunting from animals which would otherwise have been destroyed as crop raiders.

Overall, elephant trophy fees comprised 64% of all trophy fees received by the eight districts (Table 4). Assuming an average trophy fee of Z$35 650, the total value of the 1992 communal lands sport-hunted quota of 89 elephants is over Z$3 million.

It was noted that the contribution of elephant trophy fees to total hunting income varies considerably between districts (Table 3). In districts with greater and more diverse wildlife resources, the proportion of elephant trophy fees is smaller, whereas where wildlife resources are sparse, the revenue from elephants tends to constitute a greater share of the total income.

District	Elephant (Z$)	Total (Z$)	Total (US$)	%
Bulalima Mangwe	195 000	195 000	35 583	100%
Gazaland	200 000	220 600	40 255	91%
Gokwe	200 000	344 400	62 846	58%
Guruve*	145 000	512 413	93 506	28%
Hurungwe*	364 520	622 946	113 676	59%
Muzarabani	50 000	50 000	9 124	100%
Nyaminyami*	161 880	574 146	104 771	28%
Tsholotsho	680 000	694 541	126 741	98%

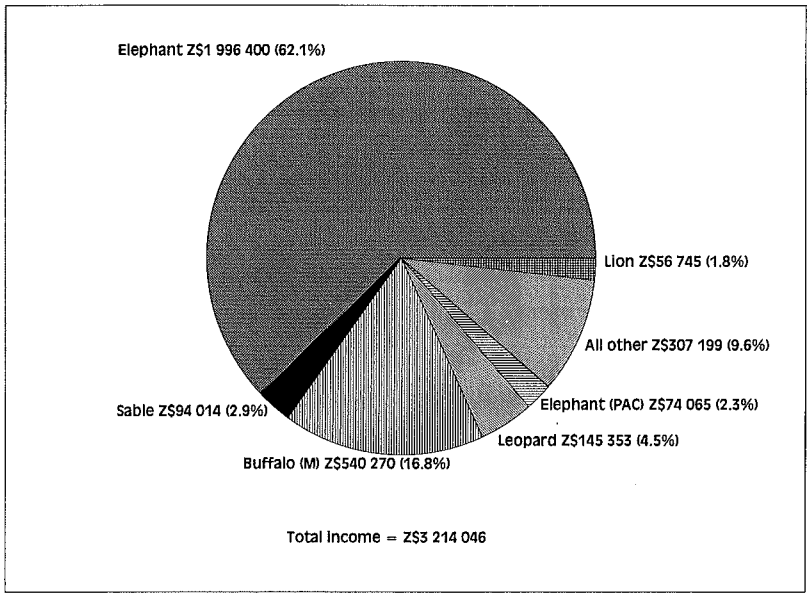
Table 3. The income from elephant trophy fees relative to total trophy fees in eight districts, 1992.
* includes sport-hunted "problem animals"

For most of the districts surveyed, income generated by elephant trophy fees formed the major part of total revenue from trophy fees, and in some cases, elephants were the only species for which fees were levied.

Information on the nationality of those hunting elephants was also available from safari operators. Discussions revealed that between 60% and 80% of all elephant trophies from Zimbabwe were taken by US nationals. Detailed information was obtained from one district, Nyaminyami, where all 13 trophy elephants in one year were shot by hunters from the USA or the European Union, though it should be realized that the nationality of sport-hunters in this one district may be a reflection of deliberate marketing strategies of the three safari operators with concessions in Nyaminyami.

Species	Total shot	Average price(Z$)	Total(Z$) income	Total (US$) income	% of total income
Elephant *Loxodonta africana*	56	35 650	1 996 400	364 306	62%
Elephant[1]	5	14 813	74 065	13 515	2%
Zebra *Equus burchelli*	24	1 094	26 256	4 791	1%
Hippopotamus *Hippopotamus amphibius*	11	2 482	27 302	4 982	1%
Buffalo (m) *Syncerus caffer*	230	2 349	540 270	98 589	17%
Buffalo (f)	36	952	34 272	6 254	1%
Waterbuck *Kobus ellipsiprymnus*	34	1 285	43 690	7 972	1%
Bushbuck *Tragelaphus scriptus*	65	528	34 320	6 262	1%
Greater Kudu *T. strepsiceros*	31	899	27 869	5 085	1%
Common Eland *Taurotragus oryx*	11	1 773	19 503	3 355	0.5%
Sable Antelope *Hippotragus niger*	27	3 482	94 014	17 155	3%
Impala *Aepyceros melampus*	153	119	18 207	3 322	0.5%
Lion (m) *Panthera leo*	15	3 783	56 745	10 354	2%
Leopard *P. pardus*	39	3 727	145 353	26 524	4.5%
Nile Crocodile *Crocodylus niloticus*	12	2 306	27 672	5 049	1%
Other species	-	-	48 108	8 778	1.5%

Table 4. The contribution by species to total trophy fees levied in 1992 for eight districts operating CAMPFIRE.
[1]PAC



The value (Z$) of elephants to CAMPFIRE in eight districts, Zimbabwe, 1992.

Discussion

Given the apparent importance of elephants to CAMPFIRE's sport-hunting revenue, there is a clear need to ensure the sustainability of the populations of those animals hunted. The current elephant population of Zimbabwe is estimated to be approximately 76 000 animals, of which about 7300 occur on communal lands (Anon., 1992b). Sport-hunting quotas for communal lands are set by the Department of National Parks and Wildlife Land Management, which maintains sport-hunting levels for elephants at not more than 0.75% of the total elephant population within each concession area (Martin and Thomas, 1991). The maintenance of trophy quality over the last seven years suggests that this strategy is sustainable (Craig and Gibson, 1993).

It would also seem to be the case that most clients wishing to hunt elephants are foreign nationals and, this being so, CAMPFIRE's future success will also be dependent on continued interest from abroad. A moratorium, such as that proposed in 1992 by the US Fish and Wildlife Service (USFWS, undated) to ban or restrict elephant sport hunting, is a threat to the economic viability of wildlife utilisation in Zimbabwe (Price Waterhouse and Environmental Resources Limited, 1992). It is estimated that the 1989 CITES ban on the commercial trade in elephant products has cost rural communities in Zimbabwe about Z$4 million over four years (Child, in prep.), although the ban does not affect the international transit of personal elephant trophies.

Conclusion

The lease of sport hunting concessions forms the basis of income for most CAMPFIRE communities. The data presented shows that current income is heavily dependent on elephant hunting. The loss of this revenue would significantly reduce the economic incentives for sustainable wildlife utilisation in the communal lands of Zimbabwe.

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Furs in Kathmandu, *Reprise*

Vivek Menon

Introduction

Kathmandu, in Nepal, has long been noted as a centre for trade in mammalian furs. In 1988/1989, Barnes (1989) recorded the sale of furs of seven cat species and other animals and observed that the trade there "represents the lives of thousands of wild cats and wolves". In February 1992, on behalf of TRAFFIC India, Van Gruisen and Sinclair (1992) carried out a survey of shops selling furs in Kathmandu. They noted 36 shops selling 328 fur garments; later, in the same year, Heinen and Leisure (1993) noted 76 shops selling 1225 fur items. In view of the fact that the merchandise included furs from CITES-listed animals, an official from the CITES Secretariat travelled to Nepal early in 1993 to meet senior officials from the wildlife and tourism departments in order to apprise them of the importance of the surveys' findings. The Nepalese officials agreed to take action to investigate any irregularities.

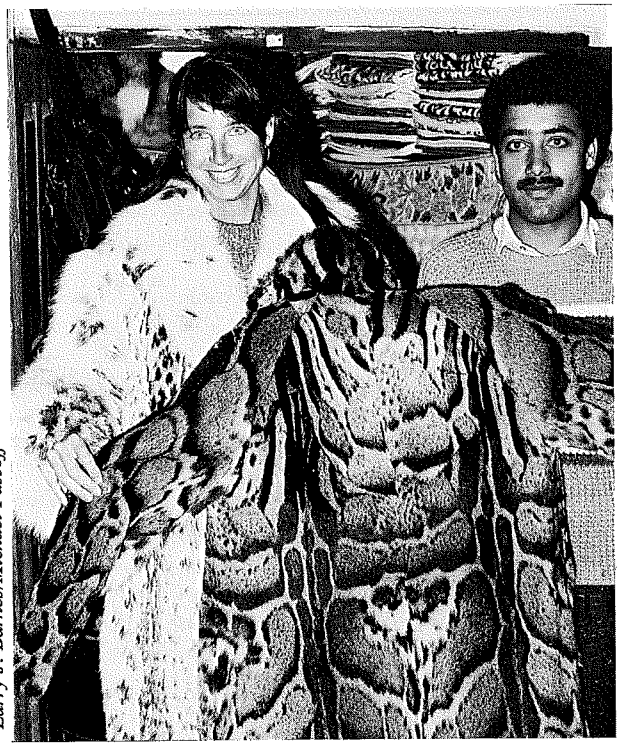
Following the CITES Secretariat's visit, and as a follow-up to Van Gruisen and Sinclair's survey, the author visited Kathmandu in September 1993. Little effect of any enforcement by the Nepalese authorities was detectable. The author discovered that 35 of the 36 shops visited the previous year continued to sell a similar range of furs, many of them displayed prominently. (The 36th shop was not visited as part of this survey.)

The species recorded in Table 1 occur in Nepal, with the exception of the Desert Cat *Felis silvestris* which occurs in India where it is a protected species. All species are listed in the CITES Appendices and/or on either Schedule 1 or 2 of legal acts governing wildlife in Nepal and India which effectively prohibits the hunting of these species in those countries. As in 1992, two shops each displayed a long coat made from fur of the Clouded Leopard *Neofelis nebulosa* (Appendix I), while nine shops between them stocked a score or more of both long coats and jackets made from fur of Wolf *Canis lupus* (Appendix I). Nine shops were selling a total of at least a dozen garments of Leopard Cat *Felis bengalensis* (Indian population in Appendix I), an amount similar to that noted the previous year, while two Leopard *Panthera pardus* items were seen in two separate shops. According to Van Gruisen and Sinclair, the number of skins used to make a full-length coat will vary from between seven for a large animal like a Leopard, to between 40 and 50 for a small cat.

Species		CITES Appendix	1992[1]	1993[2]
Leopard	*Panthera pardus*[4]	I	29	2
Clouded Leopard	*Neofelis nebulosa*[3/4]	I	2	2
Fishing Cat	*Felis viverrina*[4]	II	3	4
Leopard Cat	*F. bengalensis*[3/4]	I/II	16	>12
Jungle Cat	*F. chaus*	II	46	>27
Desert Cat	*F. silvestris ornata*[4]	II	74	>40
Grey Wolf	*Canis lupus*[3/4]	I	38	ca. 20
Golden Jackal	*C. aureus*[4]	III (India)	7	3
Red Fox	*Vulpes vulpes*[4]	III (India)	102	>60

Table 1. Comparison of items of CITES-listed/nationally protected species seen for sale in Kathmandu, 1992/1993.
[1]*survey by Van Gruisen & Sinclair;* [2]*survey by Menon;*
[3] *hunting of this species is prohibited in Nepal;*
[4] *hunting of this species is prohibited in India.*

Other species more commonly noted were Desert Cat *Felis silvestris ornata* (about 50 items in 22 shops), Jungle Cat *F. chaus* (over 27 garments in 11 shops), and Red Fox *Vulpes vulpes* (over 60 in 21 shops).



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Snow Leopard and Clouded Leopard garments, Kathmandu, 1989.

Conclusion

The number of furs observed of listed species has declined (see Table 1). As each investigation depends on the furs available on that particular day, the decline is not necessarily an indication of a decline in fur sales. It is clear, however, that a large number of furs continue to be displayed openly in contravention of national legislation and CITES-listed furs are on offer to tourists. According to Van Gruisen and Sinclair (1992), given the preponderance of Kashmiri traders selling these items, it does not seem unreasonable to conclude that many skins may have originated in India where these species also occur, and have entered Nepal in violation of CITES.

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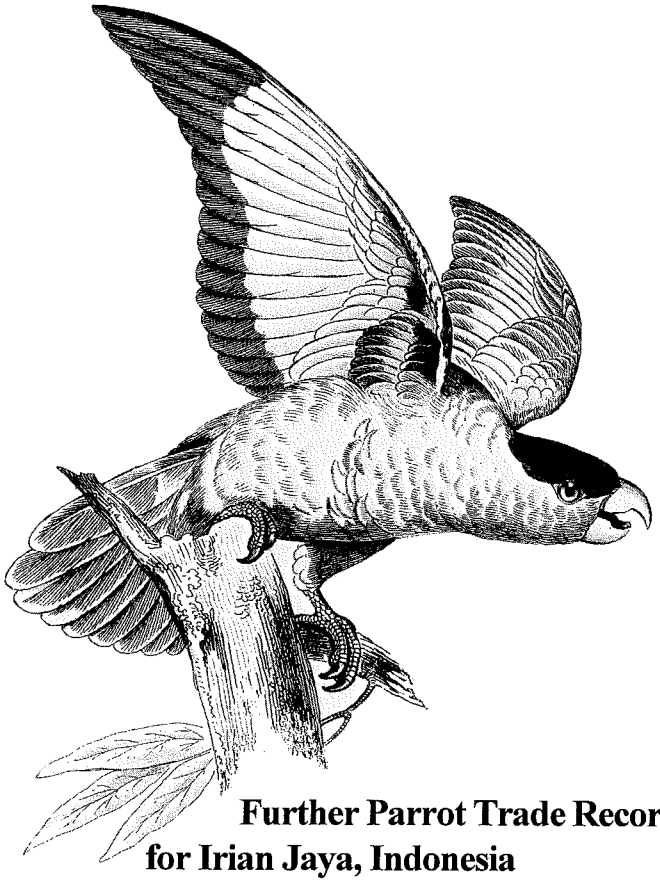

Further Parrot Trade Records for Irian Jaya, Indonesia

Stephen V. Nash

Introduction

Irian Jaya is Indonesia's easternmost province, encompassing the western half of the island of New Guinea and the adjacent islands of Waigeo, Misool, Batanta, Salawati, Kofiau, Supiori, Yapen, and Biak. Of the 76 species of parrots known to occur in Indonesia, 44 are found in Irian Jaya. At least 40 of the 44 species are known to be in international or local trade, including five parrot species occurring in the province which are protected in Indonesia: Sulphur-crested Cockatoo *Cacatua galerita*, Eclectus Parrot *Eclectus roratus*, Black-capped Lory *Lorius lory*, Palm Cockatoo *Probosciger aterrimus*, and Pesquet's Parrot *Psittrichas fulgidus*. All parrots occurring in Irian Jaya are listed in Appendix II of CITES, with the exception of the Appendix I-listed Palm Cockatoo. The Government of Indonesia regulates trade in parrots (and other wildlife) with a system based on an annual capture quota, capture permits, domestic transport permits, and CITES export permits. Quota and provincial permit records for the years 1985 to 1990 were presented in Nash (1992). This article provides data on the capture, transport, and export of parrots from Irian Jaya in 1991 and 1992, and on the availability of these species in Southeast Asian bird markets during 1992. Species in trade for which Irian Jaya is a marginal area of distribution, and which are more likely to be obtained from outside the province (such as Great-billed Parrot *Tanygnathus megalorhynchos* and Violet-necked Lory *Eos squamata*), are not included in the tables.

The Regulatory System

The quota system in Indonesia is the principal mechanism for the regulation of wildlife trade in the country. National capture quotas are set annually by the Directorate General of Forest Protection and Nature Conservation (PHPA, which is also the CITES Management Authority), usually in co-operation with traders, and with some input from the Centre for Biological Research and Development of the Indonesian Institute of Sciences Research (LIPI, which is also the CITES Scientific Authority). There is some dispute over the intention and application of the quotas: PHPA maintains that species not listed in the quota decree may be captured without limit, whereas LIPI maintains that species for which no capture quota is issued may not be captured. Existing written procedures do allow for the capture of species without quotas, if prior approval is obtained from LIPI.

Permits to capture wildlife are issued by the Management Authority (or its representative regional and sub-regional offices, or by a Regional Forestry Office). Traders require a transport permit, obtained from the same sources as the capture permits, to allow transport of specimens across provincial boundaries. Legal exports require presentation of appropriate capture and transport permit documentation before a CITES export permit may be issued.

While this system in theory allows for adequate regulation and extensive documentation of the trade, in practice this system falls short of its purpose. It is unclear whether non-quota species may be legally caught and traded, and species allocated a quota are often harvested in excess of the quota. Species are transported in greater numbers than are accounted for in capture permits, and export permits are issued for specimens lacking both capture and transport documentation.

1991 and 1992 Permit Data

Quota, capture permit, transport permit, and export data for 1991 and 1992 are presented in Table 1.

In 1991, 28 parrot species from Irian Jaya were officially recorded in trade. Of these, 20 were subject to a quota, while capture permits were issued for 23 species, transport permits for 22 species, and CITES export permits issued for 26 parrot species from Irian Jaya. Capture permits were issued for four species not listed in the quota. Transport permits were issued for two species for numbers in excess of those allowed for capture. CITES export permits were issued for five species for which there were no capture and transport permits. CITES permits were also issued for four species for numbers in excess of the quota, for 16 species for numbers in excess of those listed on capture permits, and for 21 species for numbers in excess of those listed on transport permits.

In 1992, only nine Irian Jaya parrot species were subject to a capture quota. Capture permits were issued for 26 species originating from Irian Jaya, transport permits were issued for 21 species, while CITES export permits were granted for at least 22 species. Capture permits were issued for two out of the nine species listed for numbers in excess of the quota.

Species		1991 Annual Quota	1991 Capture Permit	1991 Transport Permit	1991 CITES Report	1992 Annual Quota	1992 Capture Permit	1992 Transport Permit	1992 CITES Permits
Moluccan King-Parrot[1]	*Alisterus amboinensis*	700	484	195	1952	1000	375	121774	
Papuan King-Parrot	*Alisterus chloropterus*	1450	746	347	1001	500	1050	443	562
Red-winged Parrot	*Aprosmictus erythropterus*	1000	260	286	500	1000	400	267	83
Little Corella	*Cacatua sanguinea*	500	450	52	229	-	200	96	85
Black Lory	*Chalcopsitta atra*	1000	339	264	405	-	350	149	722
Brown Lory	*Chalcopsitta duivenbodei*	750	750	494	1041	-	775	178	740
Yellow-streaked Lory	*Chalcopsitta sintillata*	700	92	37	403	-	350	10970	
Josephine's Lorikeet	*Charmosyna josefinae*	750	300	195	225	-	450	50	-
Striated Lorikeet	*Charmosyna multistriata*	-	-	-	395	-	75	-	-
Papuan Lorikeet	*Charmosyna papou*	1500	1050	808	1228	-	725	238	690
Red-flanked Lorikeet[1]	*Charmosyna placentis*	650	43	43	671	250	200	135130	
Fairy Lorikeet	*Charmosyna pulchella*	500	500	375	434	250	250	55	160
Red-fronted Lorikeet	*Charmosyna rubronotata*	-	-	-	151	-	-	-	-
Pygmy Lorikeet	*Charmosyna wilhelminae*	-	-	-	-	-	175	-	-
Double-eyed Fig-Parrot	*Cyclopsitta diophthalma*	-	240	75	353	50	50	-15	
Orange-breasted Fig-Parrot	*Cyclopsitta gulielmitertii*	-	-	-	88	-	-	-15	
Black-winged Lory	*Eos cyanogenia*	1000	-	-	209	-	-	-	-
Red-cheeked Parrot	*Geoffroyus geoffroyi*	100	36	40	120	200	250	151	-
Blue-collared Parrot	*Geoffroyus simplex*	-	-	-	-	-	50	43	-
Orange-fronted Hanging-Parrot	*Loriculus aurantiifrons*	-	232	164	-	1000	-	--	
Black-capped Lory	*Lorius lory*	protected	-	-	-	protected	-	-	2
Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*	1000	655	388	451	-	950	427-	
Orange-billed Lorikeet	*Neopsittacus pullicauda*	-	-	-	200	-	300	135500	
Plum-faced Lorikeet	*Oreopsittacus arfaki*	-	200	136	640	-	650	150	750
Dusky Lory	*Pseudeos fuscata*	1750	1206	663	1240	-	850	318	460
Brehm's Tiger-Parrot	*Psittacella brehmii*	-	175	-	-	-	425	95	-
Painted Tiger-Parrot	*Psittacella picta*	-	-	-	-	-	75	-	-
Desmarest's Fig-Parrot	*Psittaculirostris desmarestii*	1500	375	269	1028	-	725	237490	
Edward's Fig-Parrot	*Psittaculirostris edwardsii*	1000	573	528	826	-	675	308	777
Salvadori's Fig-Parrot	*Psittaculirostris salvadorii*	450	210	173	365	-	-	-250	
Goldie's Lorikeet	*Trichoglossus goldiei*	1000	498	248	376	-	625	347	260
Rainbow Lorikeet[1]	*Trichoglossus haematodus*	2900	2186	1417	9903	2500	763	301	4051

Table 1. Quota, capture permit, transport permit, and reported exports of Irian Jaya parrots for 1991 and 1992.

[1]Some specimens in CITES export permits may have originated from elsewhere in Indonesia.

Species		Indonesian Capture Quota	Indonesian Domestic Permits[1]	Indonesian Retail Trade[2]	Indonesian Export Data[3]	Singapore Local Trade[4]	Thailand Local Trade[5]
Moluccan King-Parrot	*Alisterus amboinensis*	yes	yes	yes	yes	yes	yes
Papuan King-Parrot	*Alisterus chloropterus*	yes	yes	yes	yes	yes	yes
Red-winged Parrot	*Aprosmictus erythropterus*	yes	yes	yes	yes	yes	yes
Sulphur-crested Cockatoo	*Cacatua galerita triton*	protected	-	yes	-	yes	yes
Little Corella	*Cacatua sanguinea*	-	yes	yes	yes	yes	-
Black Lory	*Chalcopsitta atra*	-	yes	yes	yes	yes	-
Brown Lory	*Chalcopsitta duivenbodei*	-	yes	-	yes	yes	-
Yellow-streaked Lory	*Chalcopsitta sintillata*	-	yes	yes	yes	-	-
Josephine's Lorikeet	*Charmosyna josefinae*	-	yes	-	-	yes	-
Striated Lorikeet	*Charmosyna multistriata*	-	yes	-	-	-	-
Papuan Lorikeet	*Charmosyna papou*	-	yes	yes	yes	yes	-
Red-flanked Lorikeet	*Charmosyna placentis*	yes	yes	yes	yes	yes	-
Fairy Lorikeet	*Charmosyna pulchella*	yes	yes	-	yes	-	-
Red-fronted Lorikeet	*Charmosyna rubronotata*	-	-	-	-	yes	-
Pygmy Lorikeet	*Charmosyna wilhelminae*	-	yes	-	-	-	-
Double-eyed Fig-Parrot	*Cyclopsitta diophthalma*	yes	yes	yes	yes	yes	-
Orange-breasted Fig-Parrot	*Cyclopsitta gulielmitertii*	-	-	-	yes	yes	-
Eclectus Parrot	*Eclectus roratus*	protected	-	yes	-	yes	yes
Black-winged Lory	*Eos cyanogenia*	-	-	yes	-	yes	-
Red-cheeked Parrot	*Geoffroyus geoffroyi*	yes	yes	-	-	-	-
Blue-collared Parrot	*Geoffroyus simplex*	-	yes	-	-	-	-
Orange-fronted Hanging-Parrot	*Loriculus aurantiifrons*	yes	-	-	-	-	-
Black-capped Lory	*Lorius lory*	protected	-	yes	yes	yes	yes
Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*	-	yes	-	-	-	-
Orange-billed Lorikeet	*Neopsittacus pullicauda*	-	yes	-	yes	-	-
Plum-faced Lorikeet	*Oreopsittacus arfaki*	-	yes	-	yes	yes	-
Palm Cockatoo	*Probosciger aterrimus*	protected	-	yes	-	yes	yes
Dusky Lory	*Pseudeos fuscata*	-	yes	yes	yes	yes	yes
Brehm's Tiger-Parrot	*Psittacella brehmii*	-	yes	-	-	-	-
Painted Tiger-Parrot	*Psittacella picta*	-	yes	-	-	-	-
Desmarest's Fig-Parrot	*Psittaculirostris desmarestii*	-	yes	yes	yes	yes	yes
Edward's Fig-Parrot	*Psittaculirostris edwardsii*	-	yes	yes	yes	yes	yes
Salvadori's Fig-Parrot	*Psittaculirostris salvadorii*	-	-	-	yes	yes	yes
Pesquet's Parrot	*Psittrichas fulgidus*	protected	-	yes	-	yes	yes
Goldie's Lorikeet	*Trichoglossus goldiei*	-	yes	-	yes	-	-
Rainbow Lorikeet	*Trichoglossus haematodus*	yes	yes	yes	yes	yes	yes

Table 2. Evidence of wild Irian Jaya psittacines in trade in 1992.

[1]Appears on 1992 Irian Jaya capture and/or domestic transport permits; [2]Appears in data from 23 surveys conducted in 9 Indonesian wildlife markets over 15 survey-days in 1992; [3]Appears on CITES permits issued between May and December 1992; [4]Appears in data from 69 surveys conducted in 26 Singapore shops over 14 survey-days in 1992. [5]Appears in data from 12 surveys conducted in 4 wildlife markets and shops in Thailand over 8 survey-days in 1992.

Export permits were granted for six species for numbers in excess of those listed on capture permits, and for 12 species for numbers in excess of those listed on transport permits. In addition, export permits were granted for four species for which no transport permits were issued.

Availability of Irianese Parrots Outside Irian Jaya

The 1992 provincial and CITES permit data can be compared with the availability of Irianese parrots in Indonesian bird markets and in retail shops in Singapore and Thailand. Table 2 summarizes the evidence of Irianese parrots in trade in 1992. At least 19 species of parrots from Irian Jaya were observed for sale in Indonesian markets, including all five protected species. Some 24 species of Irianese parrots were observed in trade in Singapore in 1992, and 12 in Thailand; in both countries all five protected parrot species were routinely observed for sale. None of the birds seen are believed to be from captive-bred sources.

Summary

It is unclear whether the regulatory mechanisms in place have any impact on the parrot trade in Irian Jaya. While the status of 'non-quota' species remains open to interpretation, CITES export permits are still issued for numbers in excess of the quotas for some species. The quantities authorized for export in some species continue to be in excess also of those authorized for capture and/or inter-provincial transport. Moreover, CITES export permits are issued for species which have not been authorized for capture. In addition, species for which capture and/or transport permits are lacking are routinely found in both local and international trade, including those species that are protected under Indonesian regulations.

Reference

Nash, S. V., (1992). Parrot trade records for Irian Jaya, Indonesia, 1985-1990. *TRAFFIC Bulletin*, Vol. 13 No. 1:42-45.

Stephen V. Nash, Assistant Director, TRAFFIC International

The TRAFFIC Network has published the following reports in the SPECIES IN DANGER series:

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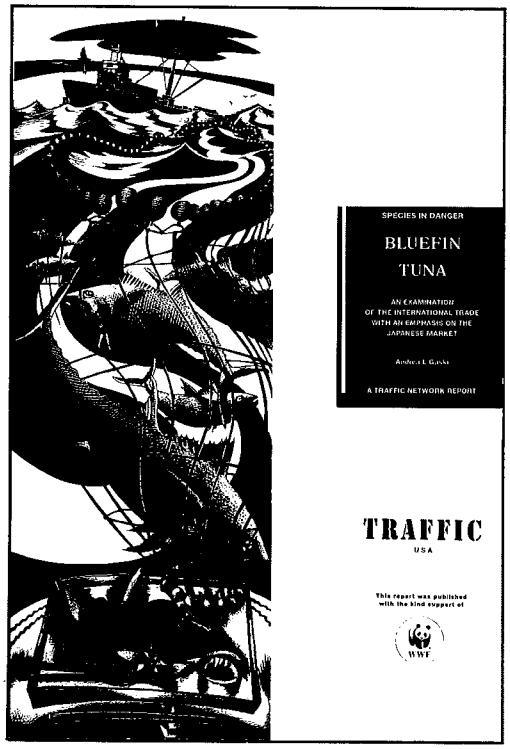

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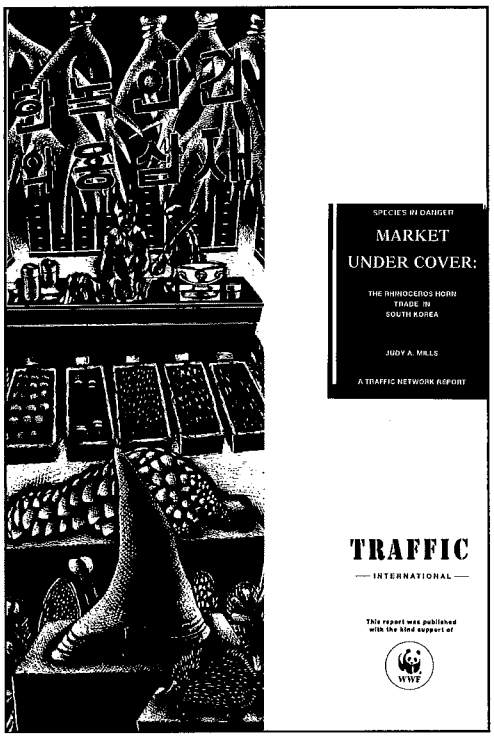

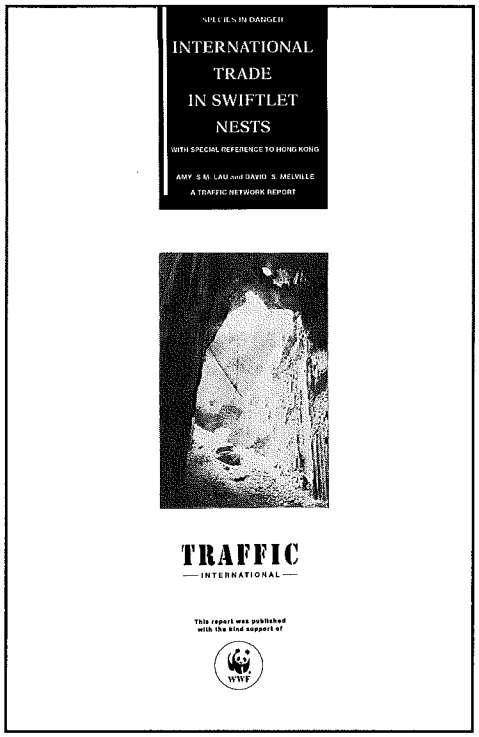

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TRAFFIC's special mission is to help ensure that wildlife trade is sustainable and in accordance with domestic and international laws and agreements, through the investigation, monitoring and reporting of such trade, particularly that which is detrimental to the survival of flora and fauna and that which is illegal. TRAFFIC's reports and advice shall provide a technical basis for the establishment of effective conservation policies and programmes for wildlife in trade.

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