

WILDLIFE TRADE

A HANDBOOK FOR ENFORCEMENT STAFF



TRAFFICINDIA



WILDLIFE TRADE

A Handbook For Enforcement Staff

Project Team

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TRAFFICINDIA



About WWF-India

The World Wide Fund for Nature - India (WWF-India), formerly known as the World Wildlife Fund - India, was established in 1969 as a Charitable Trust under the Bombay Public Trusts Act of 1950. Today, WWF-India is the country's premier conservation NGO with a network of State and Divisional offices spread across the country. Its Secretariat is in New Delhi. The organisation is part of the WWF family worldwide, with 28 other independently registered and autonomously functioning WWF National Organisations. A coordinating International Secretariat, the WWF International, is located in Switzerland.

WWF-India started life as a modest wildlife conservation organisation with a focus on protecting particular species of wild fauna. Over the years, the perspective broadened to encompass conservation of habitats, ecosystems and support to the management of the country's protected areas network. In 1989, WWF-India articulated its Mission as follows, to suit India's specific ecological and socio-cultural circumstances:

"The promotion of nature conservation and environmental protection as the basis for sustainable and equitable development."

In essence, the central goal is the conservation of India's biological diversity through a multi-pronged strategy which stresses community based approaches. Most WWF-India programmes are oriented to this.

WWF-India completes in 1994, twenty-five years of service to the cause of promoting harmony between humankind and nature.

Published in August 1994.

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FOREWORD

Trade in wildlife and its derivatives, worth more than US\$ 20 billion annually is a global phenomenon with serious ramifications for the conservation of biodiversity in all its beauty, variety and utility. India, being a source country and an entrepot for transiting goods, has always been an important centre on the trade map. In order to deal with this challenge, the Government of India has, over the past two decades, taken several initiatives aimed at conserving the biodiversity of the country. The NGOs in the country have also played a significant role in this process. The Government of India has banned hunting of wild animals and trade in their parts. Despite this, commercial activity continues in a covert and illegal manner. Tigers are poached for skins and bones, rhinos for their horn and elephants for their ivory. Wild orchids and medicinal plants, butterflies and corals, all form part of the trade, making India a focal point in more ways than one.

With a burgeoning population increasing pressure on forest and other bio-rich lands in the country, wildlife trade is proving disastrous for many of our endangered species. Hence, the enforcement staff has a very challenging and onerous responsibility and must cut across departmental lines to join hands with the NGOs to stamp out the illegal trade and carry out effective monitoring of all aspects of trade in wildlife.

This handbook is meant to introduce the enforcement staff to the entire range of wildlife threatened by the trade, and the laws, regulations and treaties that protect it. The handbook has been prepared by TRAFFIC-India, the wildlife trade monitoring division of WWF-India, as a sequel to the *Indian Identification Manual*, which is a scientific manual for identifying the species in trade. It is hoped that it will prove useful and handy as well as make an important contribution towards preserving the country's biodiversity, which is vital for human survival.

1st August, 1994
New Delhi

Samar Singh
Secretary General
WWF-India

PREFACE

When TRAFFIC-India was established on 1st January, 1992, wildlife trade was not being monitored by any one single agency. The Directorate of Wildlife Preservation, Government of India did have this as a brief but had to depend on the state wildlife machinery, the customs, the police and various paramilitary agencies to conduct their monitoring. One of TRAFFIC-India's first tasks was therefore to bring about a co-ordination among the various agencies and to help maintain a central database..

It was seen that wildlife agencies were up-to date on species identification and knowledge of species in the trade, while enforcement techniques and drafting of plaints were a weak point. Similarly non-wildlife enforcement agencies were even unaware of many of the products being traded in internationally and were at a loss to identify them. The twin publications of the *Wildlife Trade: A handbook for enforcement staff* and the *Indian Identification Manual* seeks to address this problem. This handbook, it is hoped, will be used by wildlife and non-wildlife agencies alike to train fresh recruits, for re-orientation and as a practical guide to wildlife trade monitoring.

25th July 1994
New Delhi

Ashok Kumar
Director
TRAFFIC-India

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The CITES Secretariat (especially Mr. Jaques Bernae) who permitted the adaptation and usage of training material for the CITES pages are also gratefully acknowledged.



VIREK MENON

Alexandrine parakeet chicks at Hathibagan bird market, Calcutta

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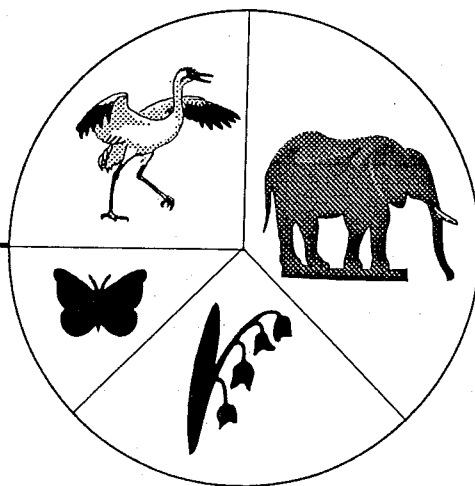
WILDLIFE TRADE - GLOBAL PERCEPTION

EXAMPLES OF MAJOR SOURCE COUNTRIES/EXPORTERS OF WILDLIFE

Argentina	Peru
Bolivia	Philippines
Brazil	Senegal
Central African Republic	South Africa
China	South Korea
Congo	Sudan
Guyana	Taiwan
Honduras	Tanzania
India	Thailand
Indonesia	Turkey
Mexico	United States
Myanmar	Former USSR
Paraguay	Zaire

EXAMPLES OF MAJOR CONSUMERS/IMPORTERS OF WILDLIFE

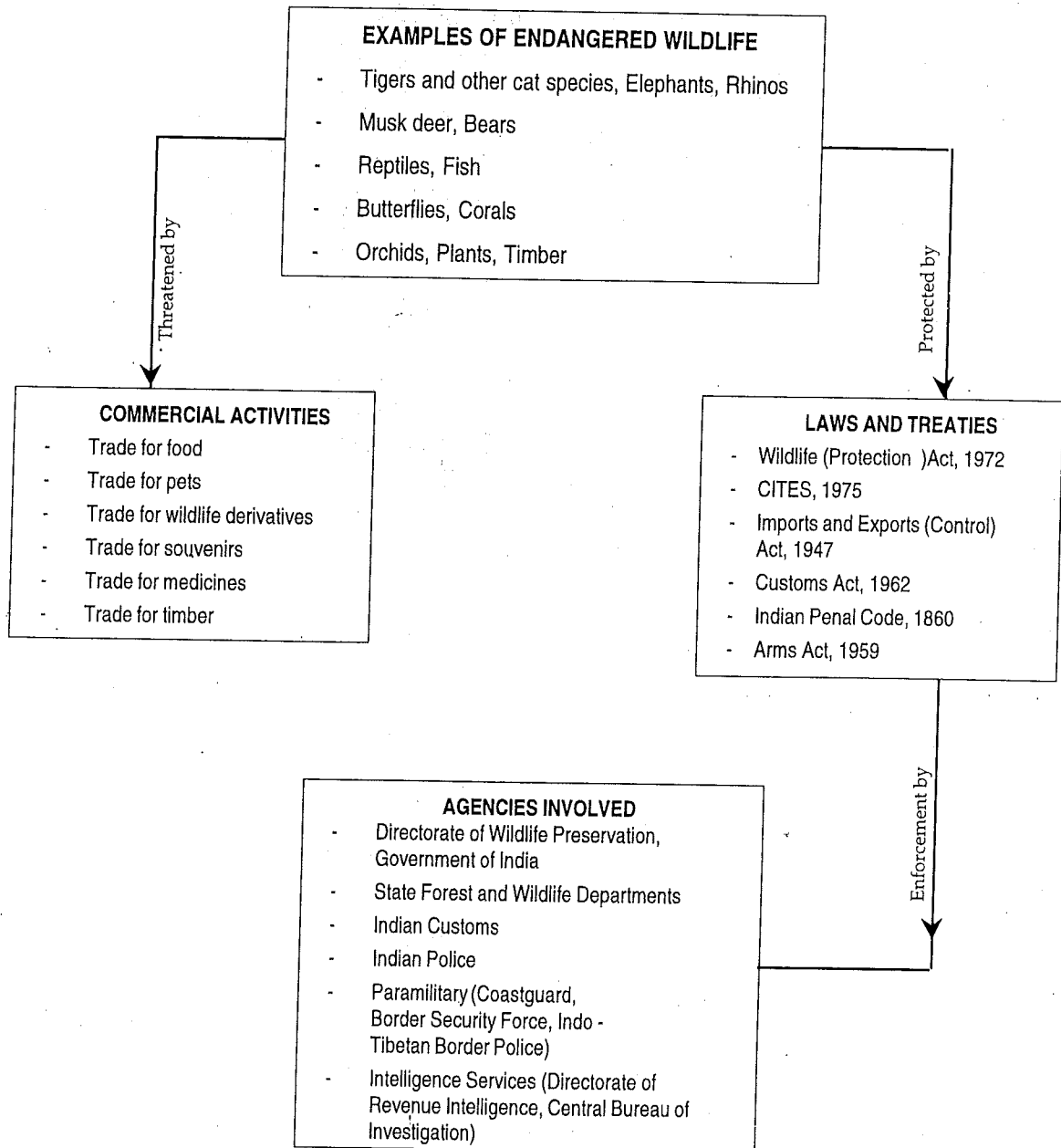
Canada
China
European Union
Hong Kong
Japan
Singapore
Taiwan
United States



GLOBAL TRADE REALITIES

- Global trade in wildlife is estimated to be worth 20 billion US \$ annually³.
- According to Interpol statistics at least 30% of this is illegal³.
- Illegal wildlife trade is second in value only to narcotics among illegal businesses.
- In India, export of all wild animals and derivatives (except shed peacock feathers and antlers) is prohibited.
- Global trade includes at least 40,000 primates, ivory from at least 90,000 African elephants, 1 million orchids, 4 million live birds, 10 million reptile skins, 15 million furs and over 350 million tropical fish¹.
- Musk from musk deer can fetch up to four times the price of gold, Asian rhino horn in Taiwan can sell upwards of 13000 US \$ a pound, clouded leopard coats can fetch 124,000 US \$ in Japan and rare butterflies fetch 3,000 US \$ a piece¹.

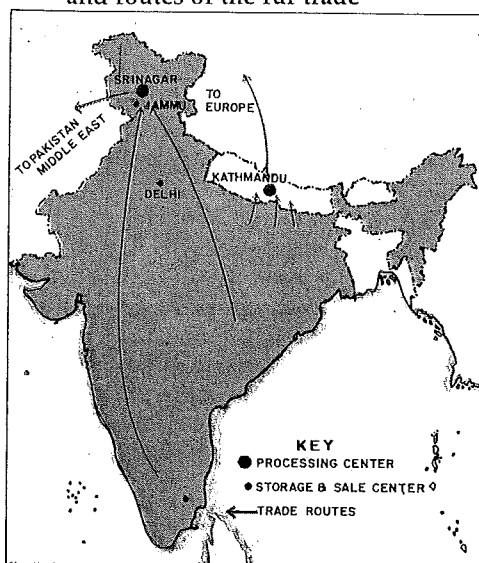
WILDLIFE TRADE - THE INDIAN SCENARIO





FURS AND MAMMALIAN SKINS

- ▶ The wild caught fur trade in India deals with at least 20 species.
- ▶ Of these, 18 species are endangered or vulnerable.
- ❑ Curing and processing centres of furs in India and routes of the fur trade



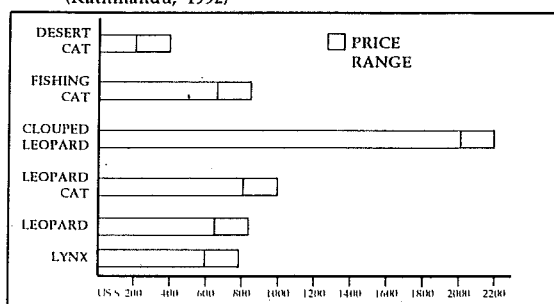
TOBY SINCLAIR

Fur coats on display in Kathmandu

- ❑ Legal status

SPECIES	CITES APPENDIX	WILDLIFE PROTECTION ACT SCHEDULE	IUCN RED LIST
Snow Leopard	I	I	E
Common Leopard	I	I	E
Clouded Leopard	I	I	V
Lynx	II	I	E
Fishing Cat	II	I	K
Leopard Cat	I	I	-
Desert Cat	II	I	-
Rusty Spotted Cat	I	I	K
Palm Civet	III	II	V
Grey Wolf	II	I	V
Indian Fox	III	II	I
Red Fox	III	II	-
Jungle Cat	II	II	-
Small Clawed Otter	II	I	K
Common Otter	I	II	-
Smooth Coated Otter	II	II	K
Jackal	III	II	-

- ❑ Prices (per long coat) of different furs, (Kathmandu, 1992)⁷



- ❑ Identification tips⁸



Look at the pattern on the fur

Feel the fur

Look at the hair base for signs of dyeing

Look for shear marks or cutting of hair



FURS AND MAMMALIAN SKINS

IDENTIFICATION AID TO CARNIVORE FUR SKINS⁵

Carnivore fur skins are, with some experience, readily recognizable as such, although they show an enormous variation in size, fur quality, colour and pattern. The guard hairs are always straight, not undulated as in moles, deer and some bovids, they form in most species a continuous layer which hides the underfur completely. Underfur is always present, but its length and density is subject to specific and climatic variation. A tail is present in all species, and it is always furred. Additional characteristics, which often miss in commercial skins, are the naked nose pad and the presence of 4 to 5 claws on each foot.

The identification of carnivore families and genera is also relatively easy, but problems may arise at the species level.

The following main types of commercial carnivore fur skins can be distinguished:

FELIDAE

1 Striped cat type: e.g. *Felis s. silvestris*, *Panthera tigris*. Transverse stripes on each side of the back and on the legs, tail evenly thick or slightly tapered, with transverse rings.

2 Spotted cat type: e.g. *Felis bengalensis*, *Panthera pardus*. Spots or rosettes arranged more or less in longitudinal rows, tail evenly thick or slightly tapered, with transverse rings or with spots.

3 Lynx type: e.g. *Felis lynx*. Upper side spotted or plain, belly with distinct spots, tail short.

VIVERRIDAE

4 Banded civet type: e.g. *Hemigalus derbyanus*, (non-Indian). Rather broad transverse bands from one flank to the other, tail very long, bushy, ringed, distal part black.

5 Genet type: e.g. *Genetta* spp., (non-Indian) upper side spotted, belly unspotted, tail extremely long and clearly or less clearly tapered.

6 Civet type: e.g. *Viverra* spp. Lyre pattern on the neck, tail medium, clearly tapered, lower parts of the body and/or legs darker than the sides, dorsal crest.

MUSTELIDAE

7 Skunk type: e.g. *Mephitis* spp., *Conepatus* spp. (non-Indian). White pattern on black or dark brown ground, hair rather long, tail bushy, completely or at least at the tip white.

8 Otter type: e.g. *Aonyx* spp., *Lutra* spp. Upper parts uniformly brown with a metallic sheen, tail clearly (*Aonyx*, *Lutra*) or less clearly tapered.

9 Mink type: e.g. *Mustela* spp. Skins usually not cut open on the belly, guard hairs rather distant from each other, underfur clearly visible, tail relatively short. Martens (*Martes* spp.) are similar but have a longer and bushier tail.

11 Badger type: e.g. *Mellivora capensis*. Upper parts grizzled, lower parts black, tail short.

CANIDAE

10 Wolf / fox type: e.g. *Canis* spp., *Vulpes* spp. Hair long, except in some tropical species, tail bushy with a dorsal scent gland, more or less distinct shoulder cross in most species.

11 Raccoon dog type: e.g., some breeds of *Vulpes vulpes*. Similar to 10, but under parts darker than upper parts.

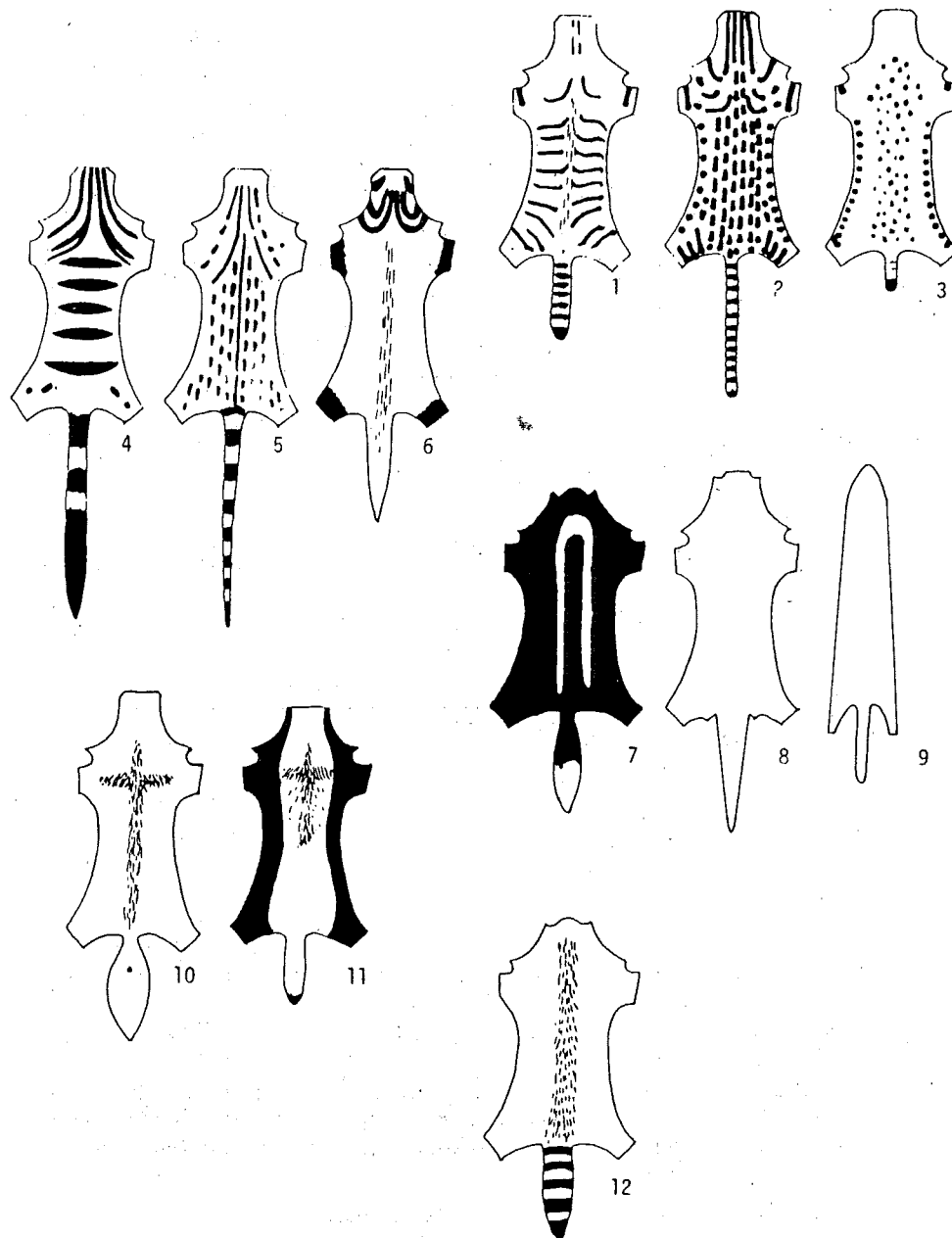
PROCYONIDAE

12 Raccoon type: e.g. *Ailurus* spp. Body without distinct pattern, tail ringed, bushy, face with a dark mask Lesser panda (*Ailurus fulgens*) with darker under parts, as in 11, without dark face mask.



FURS AND MAMMALIAN SKINS

IDENTIFICATION AID TO CARNIVORE FUR SKINS⁵



Adapted from Peter Dollinger (CITES Manual)



MUSK AND BEAR BILE

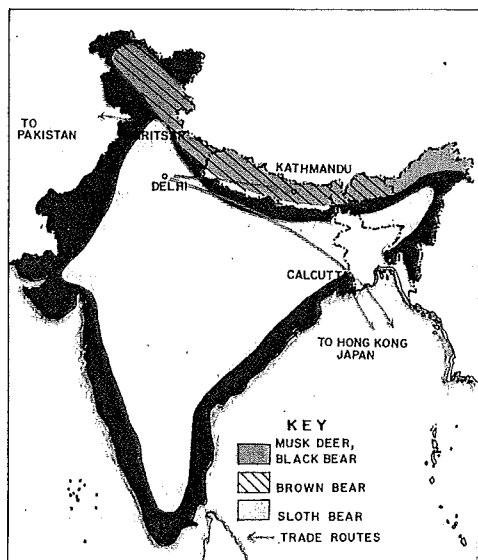
- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Common name | <input type="checkbox"/> Scientific name |
| ▸ Musk deer | ▸ <i>Moschus chrysogaster</i> |
| ▸ Black bear | ▸ <i>Selenarctos thibetanus</i> |
| ▸ Brown bear | ▸ <i>Ursus arctos</i> |
| ▸ Sloth bear | ▸ <i>Melursus ursinus</i> |

- ☐ Forms musk and bear bile are traded in
- As whole musk pods and bear gall bladders
 - As musk and bear bile extracts
 - As ingredients in perfumes etc.

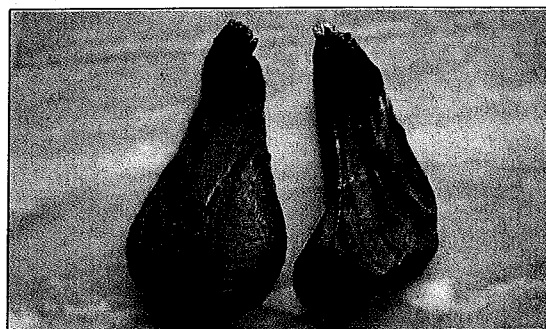
- ☐ Legal status

Species	CITES Appendix	Wildlife Protection Act Schedule	IUCN Red List
Musk Deer	II	I	E
Black Bear	I	II	V
Brown Bear	II	I	-
Sloth Bear	I	II	V

- ☐ Conservation status
- The musk deer, black bear and brown bear are highly endangered and within India have a distribution limited to the Himalayas.
 - With musk being priced at 50,000 US\$/kg in Japan and bear bile at Rs. 22-25,000 per kg⁴, the mammals are under severe threat.
- ☐ Distribution of musk deer and bears in India and trade routes



Musk pod with bottle containing extract.



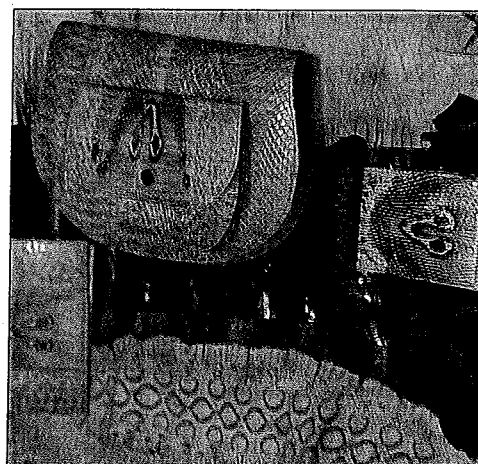
Bear gall bladders

- ☐ Identification tips
- A musk pod is oval to circular and slightly flattened, with thickish brown hairs that are hollow. If pressed back, these hairs do not spring back like other hairs, but remain in the direction they are pressed⁶.
 - Check the pod for syringe marks or cuts at the base, which will indicate that the musk has been extracted⁴.
 - To determine whether musk is genuine, rub *hing* or asafoetida on a cloth and then rub musk on the cloth. Genuine musk can overpower the smell of *hing*. Nothing else can mask the strong smell of *hing*⁶.
 - Bear gall bladders cannot be easily identified in the field and should not be confused with cow or sheep gall bladders. Detailed laboratory tests are required to determine exact origin⁶.
 - Bear bile is traded internationally in a frozen powdered form (sometimes sulphur yellow because of freezing), and this would possibly be the form in which it is smuggled out of the country².



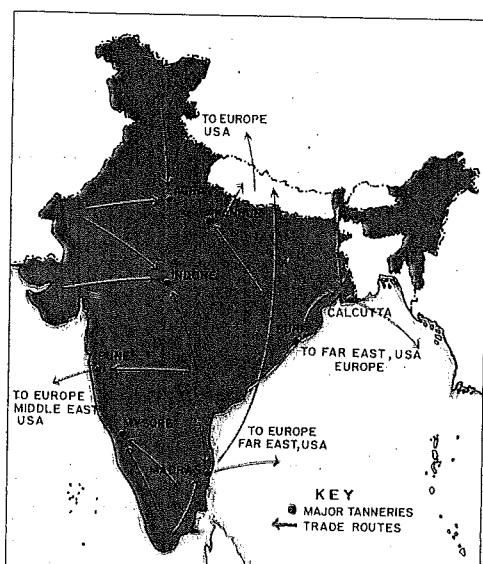
REPTILE SKINS

- ❑ Facts about the reptile skin trade
 - ▶ It is estimated that India used to export US \$ 60 million worth of reptile skins annually when the trade was legal¹. Today there is no overt trade but illegal trade continues covertly.
 - ▶ Reptile skins are used for manufacturing wallets, belts, shoes, and other leather accessories.
 - ▶ The world wide trade in monitor lizard skins is today approximately one million skins per year¹. In 1977, India officially used to export approximately 1 million lizard skins annually².
 - ▶ 1.5 to 2 million crocodile skins enter the trade annually¹.
 - ▶ In 1977, when the trade was legal in India, approximately 4 million cobra and rat snake skins and approximately 10,000 python skins were exported every year².



Reptile skins and derivatives

- ❑ Curing and processing centres of reptile skins in India and routes of the trade



Monitor Lizards: Abdominal Scale Counts

Species	Scales
<i>Varanus benghalensis</i>	90-110
<i>Varanus flavescens</i>	65-75
<i>Varanus salvator</i>	80-95

After Smith M.A.

- ❑ Legal status

SPECIES	CITES APPENDIX	WILDLIFE PROTECTION ACT SCHEDULE	IUCN RED LIST
Marsh Crocodile	I	I	V
Salt Water Crocodile	I	I	V
Common Monitor	I	II	-
Water Monitor	II	II	-
Yellow Monitor	I	I	I
Rock Python	I	I	V
Cobra	II	II	-
Rat Snake	II	II	-
Russel's Viper	III	II	-
Checkered Keelback	III	II	-

Snakes: Scale Counts

Species	Neck	Body	Ventral	Caudal
<i>Vipera russeli</i>	27-33	21-23	153-180	41-64
<i>Xenochropis piscator</i>	19	19	140-154	63-76
<i>Ptyas mucosus</i>	17-19	16-17	190-213	100-146
<i>Naja naja naja</i>	25-35	21-25	176-200	48-75
<i>Naja naja kaouthia</i>	25-31	19-21	164-196	43-58
<i>Naja naja oxiana</i>	23-27	21-23	186-213	62-75
<i>Ophiophagus hannah</i>	17-19	15	240-254	84-104
<i>Python molurus</i>	60-75	60-75	245-270	58-73

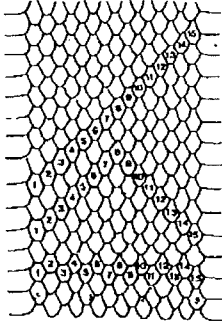
After Smith M.A.



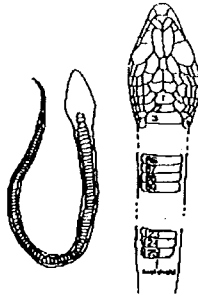
REPTILE SKINS

Methods of Scale Counting

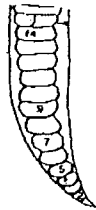
- Midbody scale rows:** scale count of dorsals across the largest part of the body i.e. in the middle between neck and cloacal opening. The figure (on right side) illustrates how to count. The ventral shield is not counted. Scale counts across neck (same methods) often give higher numbers, while those near to the tail often give lower numbers of dorsals.



- Ventrals:** counting of ventrals from the first enlarged shields under the head up to the cloacal opening. Since the head is normally cut off, counting starts on the first visible ventral. The actual number might be slightly higher.

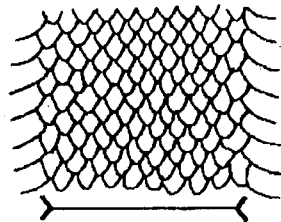


- Subcaudals:** counting of subcaudals from tip of tail to the cloacal opening. If the subcaudals are paired, count one side only.

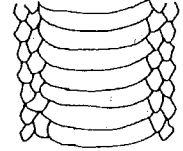


Types of Scales

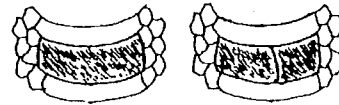
- Dorsals (dorsal scales):** scales covering back and sides of the snake from the head shields to the tail tip.



- Ventrals (ventral shields):** mostly large shields. Covering the belly of the snake from the throat to the cloacal opening.

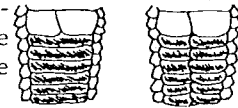


- Anal shield:** shield covering the cloacal



opening. Can be either single or divided.

- Subcaudals (subcaudal shields):** shields covering the underside of the tail. Can be either single or paired.



Scale Attachment

- Juxtaposed:** the scales are fully attached to the underlayer, not overlapping each other.



- Imbricate:** the back portion of one scale overlaps the front of the following scale, like shingles. They are not fully attached to the underlayer. This condition can be changed through processing. However, while stroking the imbricate skin from the tail towards head, it normally feels very rough. This could also be slightly imbricate or subimbricate.





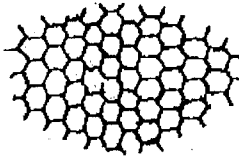
REPTILE SKINS

□ Scale forms

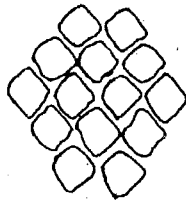
- ▶ **Granular:** very small roundish scales, covering the whole body including head and belly.



- ▶ **Hexagonal:** scales with six corners (honeycombs). The corners are slightly rounded.



- ▶ **Quadrangular:** scales with four corners. The corners are slightly rounded.

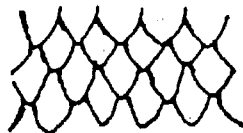


- ▶ **Pointed:** scales ending in a sharp tip pointing backwards (direction towards tail).



□ Scale Structure

- ▶ **Smooth:** the scale surface is smooth.

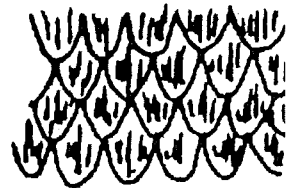


- ▶ **Keeled:** longitudinal ridge either through the entire scale or in the middle of the scale.

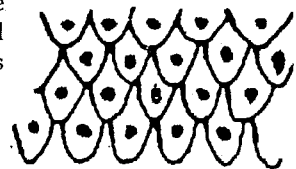


Depending on the processing discernible crest or lineation.

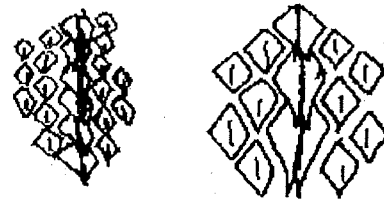
- ▶ **Striated:** several fine longitudinal lines on each scale.



- ▶ **Tubercle:** one or more small roundish mounds on the scale.

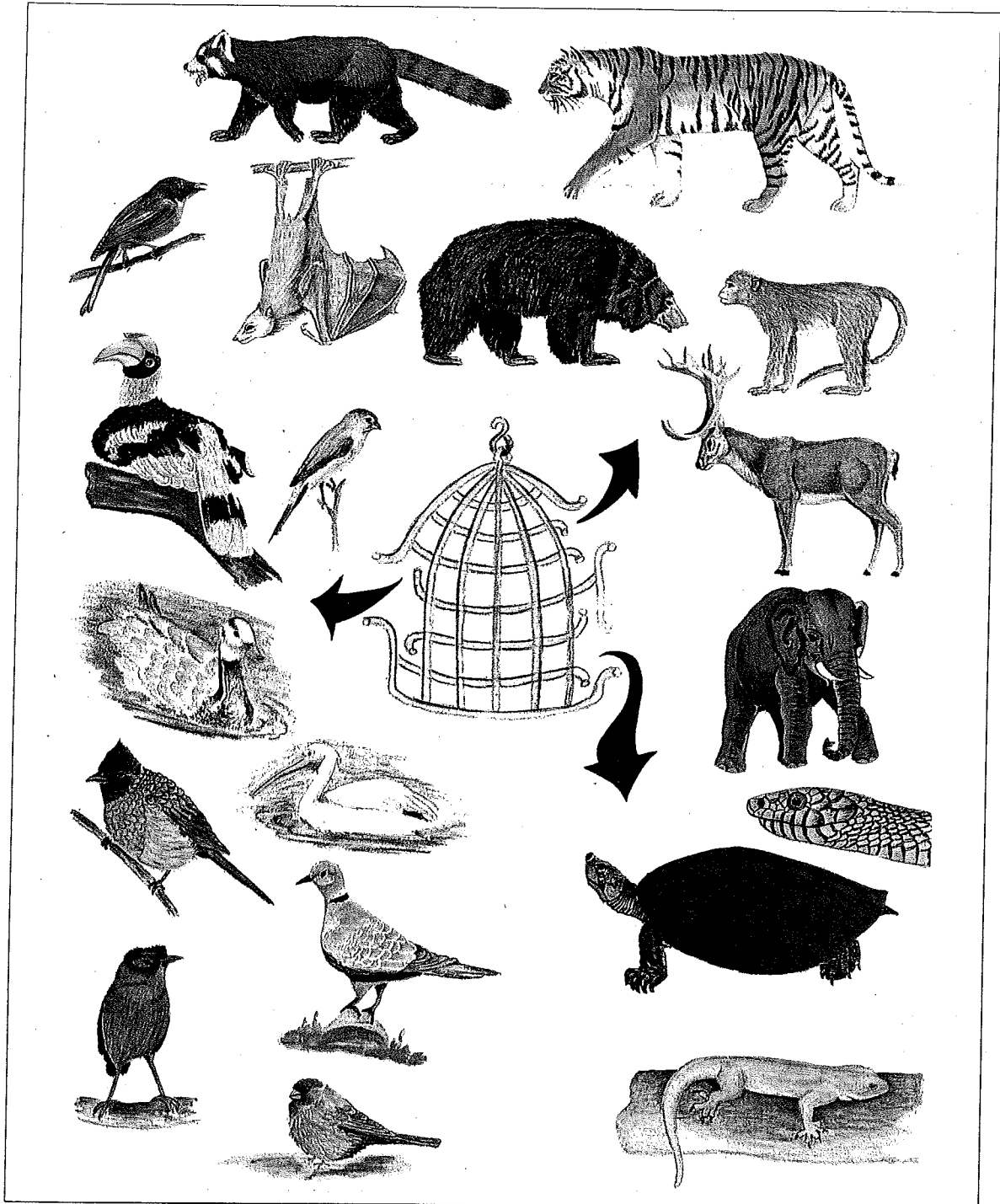


- ▶ **Divided ventrals:** small ventral scales which are completely divided longitudinally. Both



halves are overlapping, they end in a serrate tip.

LIVE ANIMAL TRADE - AN OVERVIEW

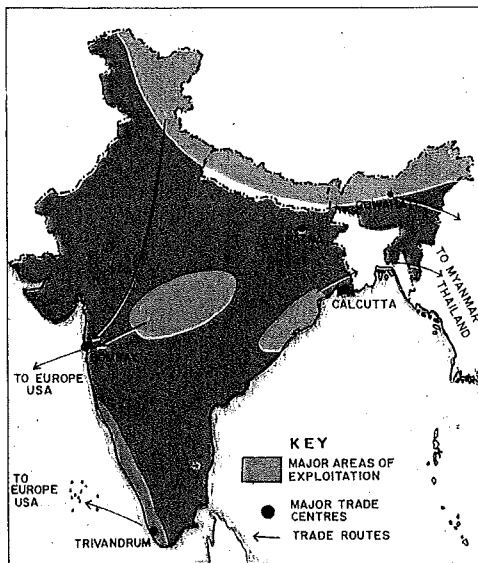




LIVE MAMMALS AND REPTILES

- ❑ Facts about trade in live mammals and reptiles
 - ▶ Live animals, the world over, are exported for use in zoos, circuses, private collections or breeding programmes.
 - ▶ Globally, as many as 80-90% of the primates used in medical research come from the wild¹.
 - ▶ USA, the largest primate market in the world imports 13,000 - 17,000 live animals per year¹.
 - ▶ Nearly 50,000 live Indian pythons were imported by the USA between 1977 and 1983. The pythons would sell for US \$ 500 in USA and for as much as US \$ 2000 in Europe and Japan¹.
 - ▶ A pair of Papua New Guinea frilled lizards commanded a price of 683,500 US\$ - a record price¹.
 - ▶ Although all legal trade of live animals and reptiles is banned from India, illegal smuggling continues particularly through the Bangladesh and Myanmar land borders and through in sea routes.
 - ▶ In 1992, two hundred Indian star tortoises worth nearly 80,000 US\$ were seized in the Netherlands bound for USA¹⁰.

❑ Live animal trade routes



Rhesus monkey being transported

❑ Legal status of commonly traded species

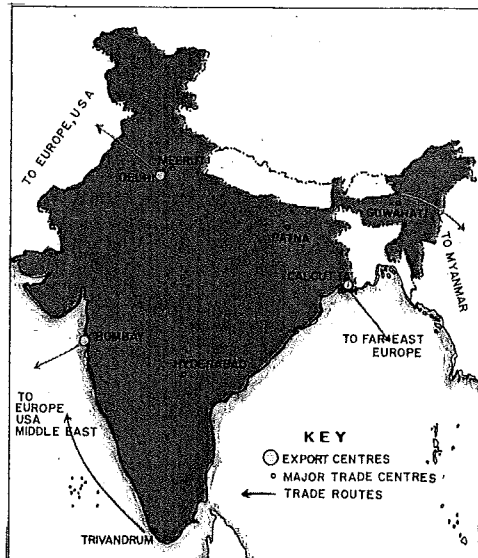
SPECIES	CITES APPENDIX	WILDLIFE PROTECTION ACT SCHEDULE	IUCN RED LIST
Rhesus Macaque (<i>Macaca mulatta</i>)	II	II	-
Bonnet Macaque (<i>Macaca radiata</i>)	II	II	-
Pig tailed Macaque (<i>Macaca nemestrina</i>)	II	II	CT
Crab eating Macaque (<i>Macaca fascicularis</i>)	II	I	-
Hoolock Gibbon (<i>Hylobates hoolock</i>)	I	I	E
Slow Loris (<i>Nycticebus coucang</i>)	II	I	-
Giant Squirrel (<i>Ratufa indica</i>)	II	II	E
Clouded Leopard (<i>Neofelis nebulosa</i>)	I	I	V
Asian Elephant (<i>Elephas maximus</i>)	I	I	E
Rock Python (<i>Python molurus</i>)	I	I	V
Indian Starred Tortoise (<i>Geochelone elegans</i>)	II	IV	-
Indian Roofed Turtle (<i>Kachuga tecta</i>)	-	I	I
Indian Pond Turtle (<i>Melanochelys trijuga</i>)	-	-	-



LIVE BIRDS

- ❑ Facts about trade in live birds
 - › The earliest record of trade in Indian birds is of 400 B.C. when a Greek physician took a bird from India to teach it Greek¹.
 - › The minimum declared value of the world bird trade is 44 million US \$¹.
 - › About 3.5 to 5 million wild birds are documented in international trade annually. Given mortality estimates, at least 14 to 20 million birds are captured from the wild annually¹⁰.
 - › On a global basis, 1 out of 3 birds caught from the wild survives on an average; 1 dies during capture and 1 during transportation³.
 - › As many as 500,000 live parrots and parakeets enter the global trade annually¹.
 - › Peregrine falcons in Dubai can cost between 7,000 - 10,000 US \$⁴.
 - › Between 1970 and 1976 India exported nearly 13 million live birds at an average of 1.85 million birds annually¹¹.
 - › In April 1994, 1,320 birds including 150 Alexandrine parakeets, 50 hill mynas and 1000 munias were seized at the New Delhi airport en route to Pakistan⁴.

❑ Routes of the live bird trade



Munias dyed for the trade being transported

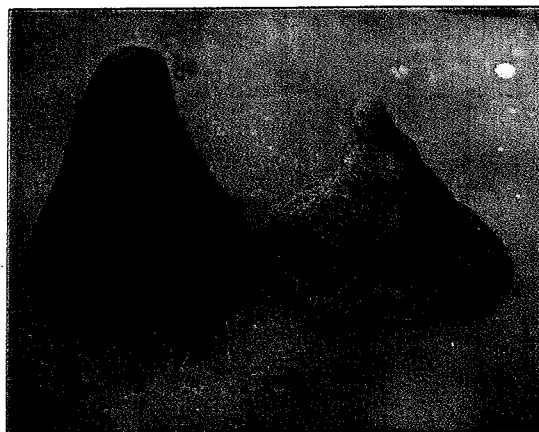
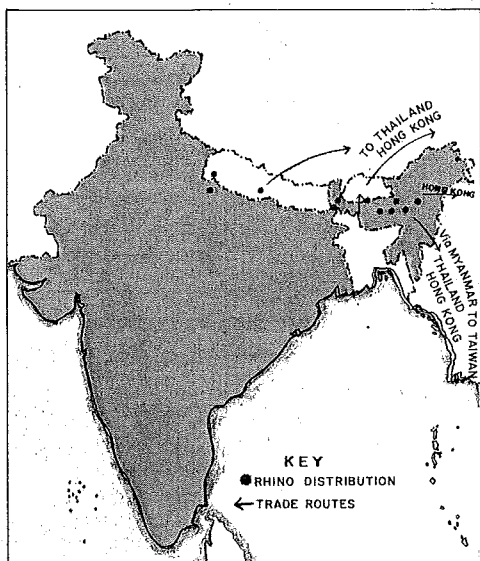
❑ Legal status of commonly traded live species

SPECIES	CITES APPENDIX	WILDLIFE PROTECTION ACT SCHEDULE	IUCN RED LIST
Peregrine Falcon (<i>Falco peregrinus</i>)	I	I	-
Laggar Falcon (<i>Falco jugger</i>)	I	I	-
Saker Falcon (<i>Falco cherrug</i>)	II	IV	-
Red Breasted Parakeet (<i>Psittacula alexandri</i>)	II	IV	-
Rose Ringed Parakeet (<i>Psittacula krameri</i>)	III	IV	-
Alexandrine Parakeet (<i>Psittacula eupatria</i>)	II	IV	-
Barheaded Goose (<i>Anser indicus</i>)	-	IV	-
Great Horned Owl (<i>Bubo bubo</i>)	II	IV	-
Sarus Crane (<i>Grus antigone</i>)	II	IV	-
Great Indian Hornbill (<i>Buceros bicornis</i>)	I	I	-
Wreathed Hornbill (<i>Aceros undulatus</i>)	II	I	-
Grey Hornbill (<i>Tockus griseus</i>)	-	I	-
Blossom headed Parakeet (<i>Psittacula cyanocephala</i>)	II	IV	-
Hill Mynah (<i>Gracula religiosa</i>)	III	IV	-
White throated Munia (<i>Lonchura malabarica</i>)	III	IV	-
Red Munia (<i>Estrilda amandava</i>)	-	IV	-



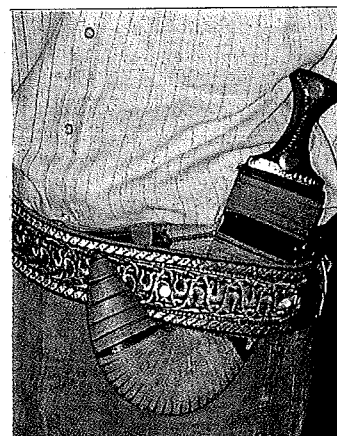
RHINO HORN

- ❑ **Common name**
 - ▶ One-horned rhinoceros
- ❑ **Scientific name**
 - ▶ *Rhinoceros unicornis*
- ❑ **Uses of rhino horn**
 - ▶ Traditional medicines — in China, Taiwan, Japan and South Korea, rhino horn is used in medicines as an anti pyretic, for treating paralysis, high blood pressure and body pain.
 - ▶ Dagger handles - in Yemen and Oman, daggers called 'jambias' and 'khanjars' have carved rhino horn handles.
 - ▶ Used in rings as a lucky stone and as an aphrodisiac (mistakenly) in India.
 - ▶ Used in Tibetan medicines.
- ❑ **Legal status**
 - ▶ Wildlife Protection Act - Schedule I
 - ▶ CITES - Appendix I
 - ▶ IUCN Red List - E
- ❑ **Distribution of one-horned rhino in India and routes of rhino horn trade**



Real horn (r) and fake horn made out of buffalo horn (l)

- ❑ **Conservation status**
 - ▶ There are about 1900 one horned rhinos in the world.
 - ▶ Of these, about 1485 are in India and are endangered.
- ❑ **Facts about the rhino horn trade**
 - ▶ Due to the trade in rhino horns, all 5 species of rhino (3 in Asia, 2 in Africa) are endangered³.
 - ▶ Mean weight of Asian rhino horn is 800 gms - 1 kg⁴.
 - ▶ Each horn is worth about Rs 2-3 lakhs in India and much more outside country⁴.
 - ▶ Asian rhino horn or "Fire horn" costs 5-10 times African horn or "Water horn" in Taiwan and China³.



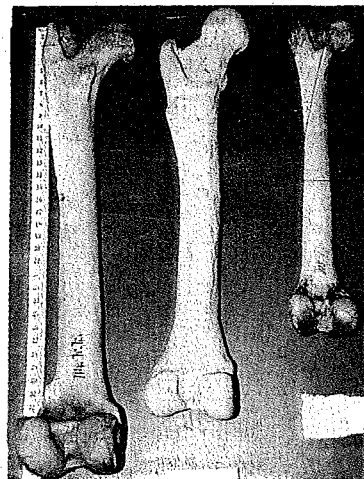
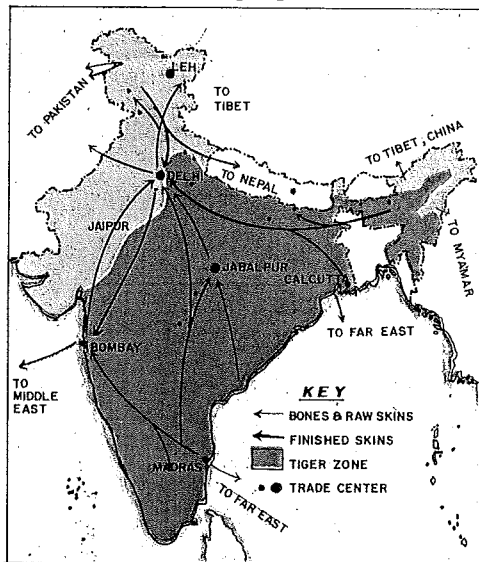
Yemeni 'Jambia' dagger

VIVEK MENON



TIGER PRODUCTS

- **Common name**
 - Royal Bengal tiger
- **Scientific name**
 - *Panthera tigris tigris*
- **Products and utilization**
 - Tiger skins and heads are used as trophies.
 - Tiger claws are used as talismans.
 - Tiger bones and skulls are used in traditional oriental medicines.
 - Tiger fat is used in balms and potions.
 - Tiger penis is used as an aphrodisiac.
 - Tiger whiskers are thought to cure toothaches.
- **Legal status**
 - Wildlife Protection Act - Schedule I
 - CITES - Appendix I
 - IUCN Red List - E
- **Conservation status**
 - There are approximately 6,500-7,500 tigers world wide.
 - Of these, about 60% (ie 3,500-4,700) are in India⁴.
- **Distribution of tigers in India and routes of tiger product trade**



KRISTIN NOWELL

Femurs of adult Tiger, Leopard and Bear

- **Identification tips**
 - Tiger skins can be identified by their distinctive colour and pattern. Some tips to make out artificial or fake skin from real ones include checking if the colour of hair is uniform till the root. If dyed, the roots may not have imbibed the colour. If artificially dyed, the back of skin may be coloured as well. Look for cutting or shear marks or other signs of tampering with the skin^{2,6}.
 - Tiger bone - The leg bones of all cats can be made out from other animals with a little experience. The humerus of all felids has a conspicuous foramen or opening near the distal end. Cattle bones are much larger, thicker and heavier than tiger bones. Bone of a pig and bear are more greasy. Limb bones of a leopard are much smaller (22.5 - 25.5cm) in comparison to that of a tiger (30 - 35cm)¹²
- **Facts about the tiger product trade**
 - There has been a 95% decline in tiger numbers in the 20th century⁴
 - In 1993 alone, 475 kgs of tiger bone and 13 tiger skins were seized⁴.
 - An estimated 47 tigers must have been killed to account for these seizures alone⁴.
 - Tiger skins have a ready market and sell at Rs 5,000 - 10,000 each in India and can fetch upto 20,000 US \$ abroad⁴.



IVORY

- ❑ Common name
 - ▶ Asian elephant

- ❑ Scientific name
 - ▶ *Elephas maximus*

- ❑ Forms of ivory

Elephant ivory is traded in two forms

- ▶ Raw or unworked ivory in the form of whole tusks or cut into 2 or 3 large pieces.
- ▶ Worked ivory in the form of bangles, bracelets, statues, carved tusks, chessboards etc.

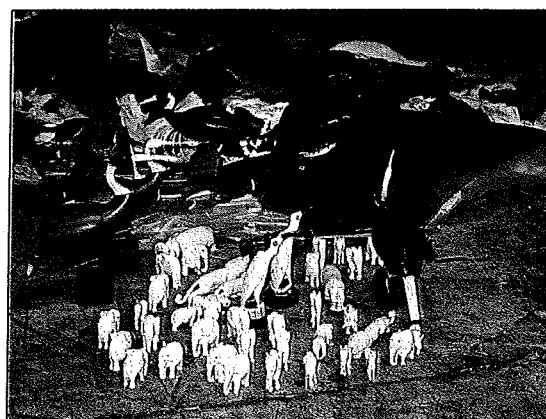
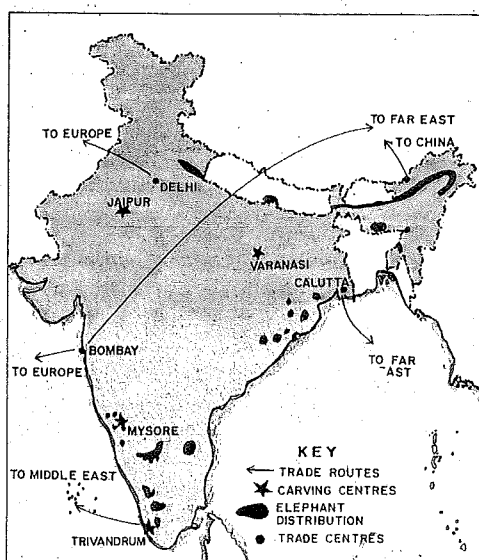
- ❑ Legal status

- ▶ Wildlife Protection Act - Schedule I
- ▶ CITES - Appendix I
- ▶ IUCN Red List - E

- ❑ Conservation status

Only 40,000 Asian elephants remain in the world. About half this number (ie 20,000) are in India and are endangered.

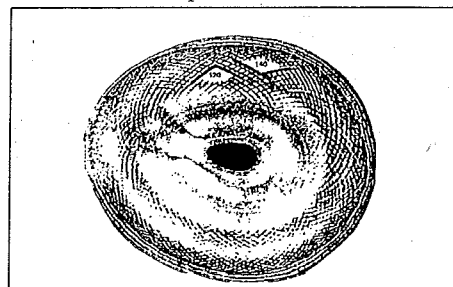
- ❑ Distribution of Asian elephants in India and routes of the ivory trade



Ivory statues being smuggled to Europe

- ❑ Facts about the ivory trade

- ▶ From 1977-86 about 190 pairs of tusks were lost to the ivory trade from Kerala, Karnataka and Tamil Nadu¹³.
- ▶ In 1981-82, 64.4% of the elephant mortality rate in South India was due to poaching¹³. After a lull in poaching, the last 2 years has seen a spurt once again¹.
- ▶ Only male Asian elephants have tusks.
- ▶ The mean weight of a poached tusk is approximately 9.5kg.
- ▶ The price of raw ivory is around Rs 3000 a kilo in India¹³.
- ▶ Apart from elephant ivory, ivory from hippopotami, narwhal and plant sources (nuts) are also known in the trade¹⁴.
- ▶ An examination of the carved ivory object by a trained scientist is the only sure method of obtaining a positive identification of the species source, especially between ivory from Asian and African elephant.



Cross section of elephant ivory

ADAPTED FROM ESPINOZA AND MANN



AQUARIUM FISH

□ Facts about trade in aquarium fish

- ▶ As many as 340-500 million fish are kept as pets in USA alone—more than three times the number of dogs and cats combined¹.
- ▶ Over 2000 species are present in the Japanese trade in aquarium fish¹.
- ▶ One specimen of Asian bonytongue fish was sold for over 8000 US \$¹.
- ▶ One study indicates that, only 300 non food fish of the 1000 taken from the sea survive on an average¹.
- ▶ The total annual world market for aquarium fish is 600 million US \$ and is growing by 10-15% per year¹.



BUTTERFLIES

□ Facts about the butterfly trade

- ▶ Trade in butterflies is estimated to be worth 100 million US \$ per year¹.
- ▶ Taiwan exports upto 500 million butterflies per year, many of them collected from all over Asia¹.

□ Legal status of common Indian species in trade

SPECIES	CITES APPENDIX	WILDLIFE PROTECTION ACT SCHEDULE	IUCN RED LIST
<i>Troides diores</i>	II	-	-
<i>Teinopalpus imperialis</i>	-	II	R
<i>Meandrusa gyas</i>	-	II	-
<i>Papilio polyctor</i>	-	-	-
<i>Bhutanitis lidderdalii</i>	II	II	-



Butterflies seized in Netherland

- ▶ In India, butterflies are collected largely from the western Himalayas (Ladakh), Lahaul and Spiti and the north-east (Sikkim and Meghalaya) although collection is prevalent throughout the country¹.
- ▶ In August 1994, 13 to 14,000 butterflies were seized in New Delhi from two German nationals. This was the first such seizure in the country.
- ▶ As indicators of the health of an eco-system, butterflies have been considered to be as important as mega-species, such as the tiger.



CORAL

□ What is coral?

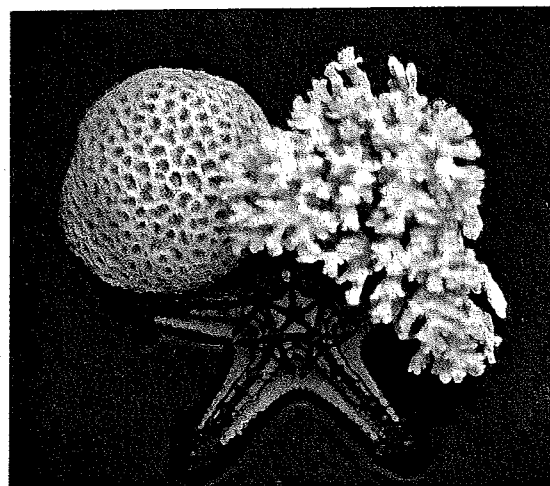
- › Coral is a rocklike underwater formation made of the skeletal secretions of millions of small, permanently anchored sea animals called polyps.
- › Coral grows in large colonies called reefs. As the animals die, new ones form on top of their skeletons and thus the reef slowly enlarges.
- › The polyps reproduce by laying eggs or by budding; a process in which they grow "branches" off the sides of their bodies. This speeds up the rate at which the colony grows, but it still takes thousands of years to form a reef.
- › Coral reefs grow in several shapes, such as barrier reefs, fringing reefs and atolls.

□ The ecological importance of coral

- › Corals are as important to the marine world as tropical rainforests are for mammals. Coral reefs provide excellent spawning and feeding grounds for fish and other marine species.
- › Coral reef ecosystems are rich in organic matter as well as oxygen-producing algae, sponges, sea urchins, fish, sea anemones etc.
- › Coral reefs are especially a favourite habitat for small fish because their intricate structure acts as protection against predators.
- › Offshore reefs create physical barriers that shield beaches and coastal lands from destructive wave action.
- › The destruction or depletion of a coral reef means divesting thousands of marine species of their natural habitat.

□ Commercial uses of coral

- › Corals are valued due to their unusual shapes and attractive colours for collecting as souvenirs.
- › Corals are used to make necklaces, statuettes, vases, bracelets and earrings. They are also sold in



Corals and starfish used as souvenirs

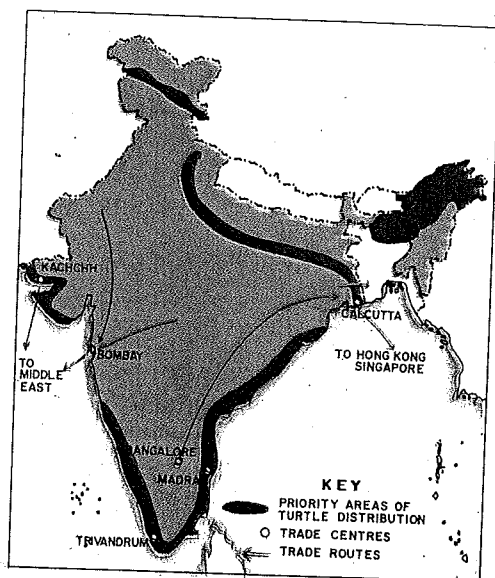
parts as decoration pieces.

- › In Asia and the Middle East, black corals have traditionally been made into amulets which are worn to ward off evil spirits and disease.
- › Corals, especially sea fans (*Gorgonidae*) constitute the only known source of Prostaglandins and Terpenoids which are bio-active substances with wide application in the pharmaceutical industry².
- › **Facts about the trade in coral**
- › In India, coral reefs around the Lakshwadeep islands and parts of the Tamil Nadu and Gujarat coasts are commercially exploited⁴.
- › USA, the world's single largest importer of raw coral, imported over 1400 tons in 1988 alone¹.
- › Coral consignments are often mixed with or labelled as 'shells' to avoid detection by the authorities. Moreover, because of the immense variety (coral colonies of the same species often grow differently), it is difficult - and sometimes impossible to identify a particular species¹.
- › One kilogramme of sea fans in India costs only Rs 300, but 1 gramme of Prostaglandins in the refined form costs over US \$ 800².



TURTLE PRODUCTS

- Utilization of turtles
 - ▶ Food - turtle meat, fat and eggs.
 - ▶ Pet trade - live animals.
 - ▶ Traditional medicines - shells, blood, meat and gall bladders as cures for stomach & skin disorders, and for treating tuberculosis.
 - ▶ Research - live animals.
 - ▶ Others - shells, stuffed carapaces, leather etc.
- Distribution of turtles in India, and routes of the turtle trade



- Conservation status
 - ▶ In India, there are 16 species of fresh-water and semi-aquatic turtles, 6 species of softshell turtles, 4 species of land tortoises and 5 species of marine turtles.
 - ▶ With the exception of the Indian flapshell turtle, no freshwater turtle, land tortoise or marine turtle in India can be described as 'abundant'.
 - ▶ Of the 26 species of freshwater turtles in India, 22 are exploited to varying degrees.
 - ▶ 3 of the 5 endangered marine turtles are commonly in the trade.



Turtles being taken to the market for sale

- ▶ Domestic trade in turtles is particularly prevalent in the states of West Bengal, Orissa, North East, Uttar Pradesh and Bihar.
- ▶ Although international trade is banned, there are reports of smuggling of turtles from India to Bangladesh through the land border.

□ Legal status of commonly traded species

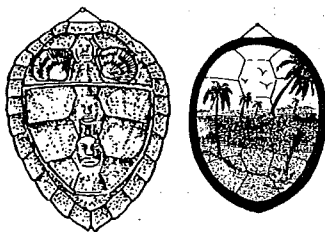
Species	CITES Appendix	Wildlife Protection Act Schedule	IUCN Red List
Indian Softshell Turtle (<i>Aspideretes gangeticus</i>)	I	I	-
Indian Pond Turtle (<i>Melanochelys trijuga</i>)	-	-	-
Indian Flapshell Turtle (<i>Lissemys punctata</i>)	I	I	-
Indian Starred Tortoise (<i>Geochelone elegans</i>)	II	IV	-
Indian Roofed Turtle (<i>Kachuga tecta</i>)	I	-	I
Indian Peacock Softshell Turtle (<i>Aspideretes hurum</i>)	I	I	-
Hawksbill Turtle (<i>Eretmochelys imbricata</i>)	I	I	E
Green Turtle (<i>Chelonia mydas</i>)	I	I	E
Olive Ridley (<i>Lepidochelys olivacea</i>)	I	I	E



TURTLE PRODUCTS

Tortoise Souvenirs

Objects made of cleaned-out or stuffed carapaces and plastrons of either land tortoises, aquatic turtles or marine turtles, sometimes incorporating leather, wool, horn, bone, rubber, plastics, metal and wood.



Sometimes the horny shields are painted or dyed, making identification by the typical colour pattern impossible. In such cases the geographic origin of the goods can assist further.

Traditionally tortoise-carapaces (entire shells) were used as sounding-boards for traditional music instruments.

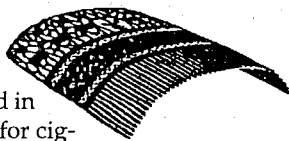


Tortoiseshell

The usually translucent shields of the hawksbill turtle, *Eretmochelys imbricata*, characterized by yellow marbling on a rich dark-brown background is known as tortoiseshell. When heated, these shields can be worked and subsequently polished. The word carey is widely used for both the tortoiseshell and for the hawksbill turtle. Adult sized specimens of *Eretmochelys imbricata* yield between three to five kilos of tortoiseshell.



A large variety of luxury items and trinkets are manufactured from tortoiseshell. The export and especially the tourist trade is interested in spectacle-frames, boxes for cigarettes or tobacco, and cosmetics, partly including mother-of-pearl or nacre, and/or enamel.



Identification of Tortoiseshell

Items made of *Eretmochelys imbricata* are usually heavier, because of the thicker laminae, than those manufactured from *Chelonia mydas*. In colours they range from a wide ranging palette of amber and yellow-brown to reddish tones, sometimes even dark brown to olive.



Under microscopic examination, the dark areas in true tortoiseshell are comprised of small dots of pigments, whereas in plastic substitutes the dark areas are formed from continuous swathes of pigment.

Substitutes and imitations

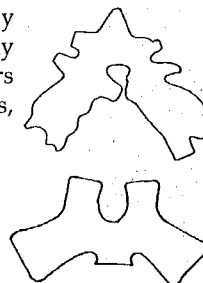
True tortoiseshell has a specific gravity of 1.29 and a refractive index of 1.55. Imitations made from substitute materials have different specific gravity and refractive

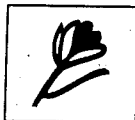
indices: casein 1.32 - 1.34/1.53 - 1.54; celloid 1.26/1.48; rhodoid 1.28/1.48; celluloid 1.38 - 1.42/1.49 - 1.50. Another test is based on the application of heat: chips of tortoiseshell fuse to a black mass smelling of burning hair, whereas casein plastics char and smell of burnt milk. A number of substitutes for genuine tortoiseshell have been used at various times. Most modern substitutes involve plastics.



Turtle skin

The turtle skin most commonly used in leather work is the scaly area that covers the front flippers of marine turtles. In these species, the front flippers have a flattened shape. The tanned product, called the "set", starts with the skin of both flippers linked by the skin of the throat. The set is often dyed, making identification by specific colour variation impossible. Rather, it is by the shape and arrangement of the scales themselves that the species are identified.

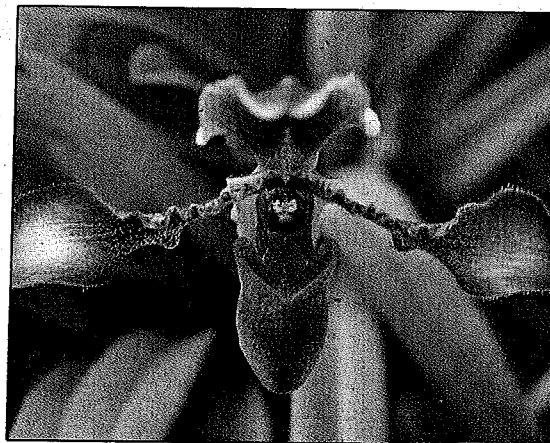
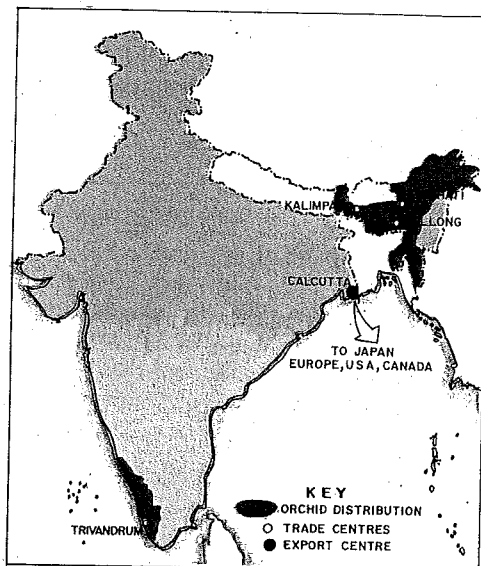




ORNAMENTAL PLANTS

- Facts about the trade in ornamental plants
 - It is estimated that 1 in 10 recorded wild plant species is either rare or endangered¹.
 - The world market for wild plants for decorating houses and gardens, as well as the trade among collectors add to the peril of species that are rare and difficult to cultivate.
 - To guard against loss of wild stocks, some of the more popular horticultural plants including all the orchids and cacti; several aloes, palms and cycads; and a few insectivorous plants are listed under CITES and protected by national laws.
 - It is estimated that over 10 million cactus plants and 3 million orchids enter the world trade each year. Of these, 30,000 cacti and 1.5 million orchids are obtained from the wild¹.
 - Orchids are the plants that are most in demand in the world trade due to their spectacular beauty and exotic aura. Orchids like *Paphiopedilum rothschildianum* (the most spectacular and rare of slipper orchids) can fetch as much as US \$ 5,000 a piece¹.

□ Distribution of orchids in India and trade routes



VINCENT VAN ROSS

Ladies slipper orchids

- Ladies slipper orchids (*Paphiopedilum* spp and *Cypripedium* spp.) and the red and blue vandas are highly prized among Indian orchids⁴.
- Orchid trade centres in India include Kalimpong, Shillong and Trivandrum⁴.
- Wild orchids are often smuggled out of the country with cut flowers by misdeclaring them as lilies or other exotic flowers⁴.
- Artificial propagation of orchids is a complex and time-consuming affair and there is thus an ever present demand for wild orchids.
- Pressures due to overcollecting have been disastrous for plants like cycads as well, with 50 of the 130 species being declared vulnerable or endangered by the IUCN¹.
- Carnivorous plants such as the sundew, pitcher plant, bladderwort and venus fly trap are also traded, with over a million plants sold every year in Europe alone. There are artificially propagated specimens in the trade although wild collection does go on.
- Rare cycads (*Cycas beddomei*) are also in the plant trade, many of which come from wild sources².



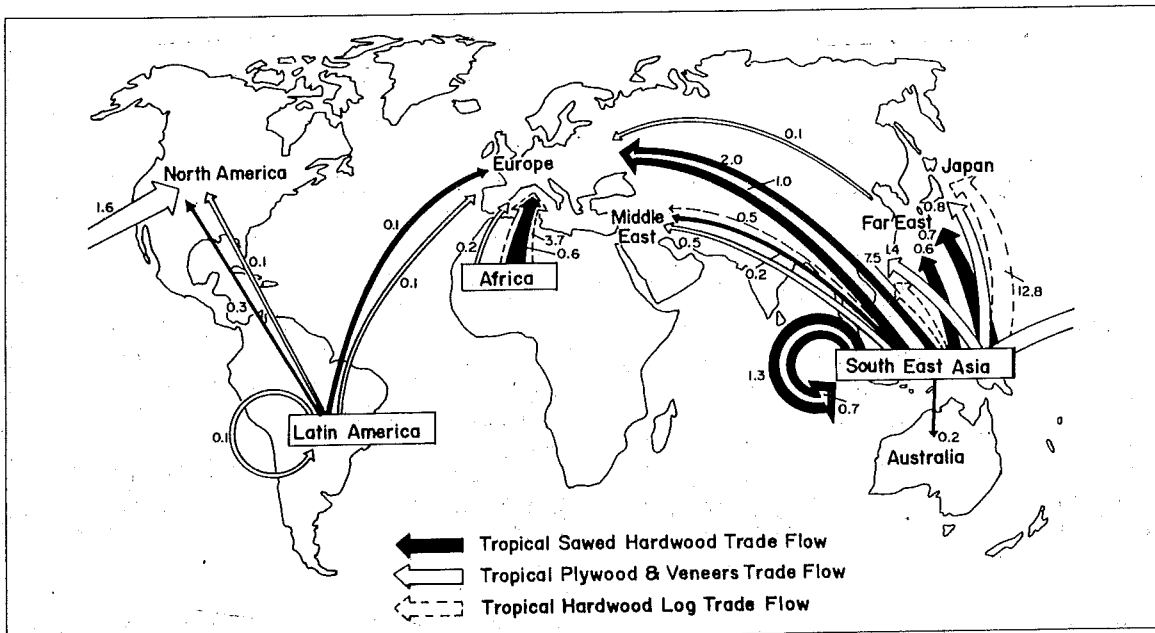
TIMBER

- ❑ Facts about the timber trade
 - ▶ The world loses 27 to 37 million acres of tropical forest due to logging each year¹.
 - ▶ This is equivalent to 76,000 acres a day or 54 acres a minute¹.
 - ▶ At this rate, all the remaining tropical forests, save those in legally protected areas, will be lost over the next 30-80 years¹.
 - ▶ According to WWF sources, Africa's forests are the most depleted while Asia's forests are currently depleted very rapidly⁴.
 - ▶ In India, the north-east and the western Himalayas are some of the more fragile ecosystems affected by logging⁴.
- ▶ According to the United Nations Food and Agriculture Organisation, 41 species of tropical timber are endangered due to commercial overexploitation.
- ▶ Two international agreements monitor timber trade; CITES is used to monitor trade volumes and control exploitation of depleted species; while the International Tropical Timber Agreement has 41 member countries who account for 95% of the world trade¹.
- ▶ All timber in logs, barks, chips, powder, flakes dust, pulp or charcoal is banned for export from India.



VIVEK MENON

Timber logs being transported in Meghalaya



Global Timber Trade Flows, (1986)

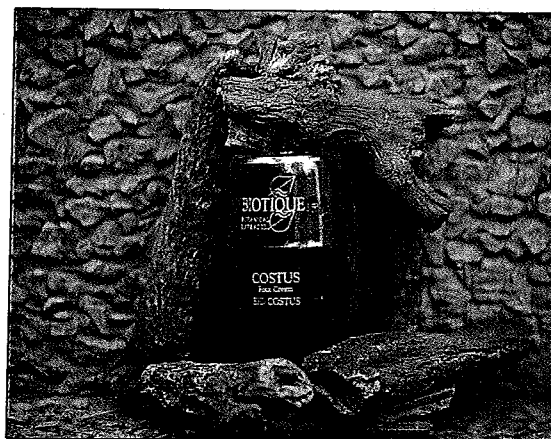
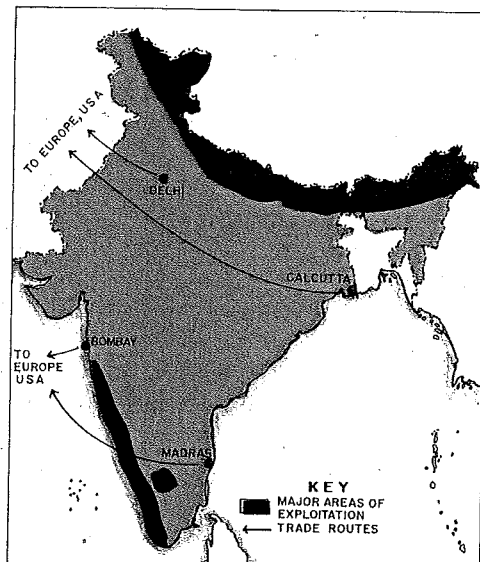


MEDICINAL PLANTS

□ Facts about the trade in medicinal plants

- ▶ According to the World Health Organisation, more than 4 billion people rely on herbal medicines to some extent.
- ▶ It is estimated that today, 25% of prescription drugs are based on plant-derived chemicals⁴.
- ▶ The World Health Organisation has listed 21,000 plants that have reported medical uses around the world.
- ▶ 80% of the people in developing countries rely on traditional medicines.
- ▶ In industrialised countries alone, the market for plant-based medicines was valued at US \$ 43 billion⁴.
- ▶ The term 'medicinal' as applied to a plant indicates that it contains a substance or substances which modulate beneficially the physiology of

□ Areas of exploitation of medicinal plants in India



Costus roots and herbal derivative

- sick mammals; and has been used by man for this purpose.
- ▶ India and Brazil are the largest exporters of medicinal plants.
- ▶ In India, the collection of medicinal plants continues unabated especially in the north-east, the western Himalayas and the western ghats.
- ▶ India has a rich medicinal plant flora of some 2,500 species. Of these, 2,000 to 2,300 species are used in traditional medicines while at least 150 species are used commercially on a fairly large scale⁴.
- ▶ The notion that a plant collected from the wild is more efficacious than a cultivated one poses problems for plant conservation.
- ▶ A plant collected from the wild may fetch three-times as much as a cultivated variety.
- ▶ An export ban exists on all plants obtained from the wild except with a no-objection certificate and that too only through Bombay, Delhi, Calcutta, Madras and Cochin. Apart from this 46 species of plants are totally banned for export⁴.



MEDICINAL PLANTS

Partial List of Species of Trade Significance¹

Species	Distribution	Uses
Rosy Periwinkle (<i>Catharanthus roseus</i>)	Naturalized, exotic plant cultivated all over India	The derivative compound, vinblastine, is used as an anti-tumor agent.
Foxglove (<i>Digitalis spp.</i>)	Cultivated in the Nilgiri Hills, Darjeeling, Kashmir valley, Himachal Pradesh and hills of Uttar Pradesh.	Derivative compounds include acetyldigitoxin, digitalin, deslanoside; all of which are used in cardiotonics.
Quinine (<i>Cinchona ledgeriana</i>)	Not found naturally; introduced into India in 1860.	Derivative compound is quinidine / quinine, which is an antiarrhythmic, antipyretic and antimalarial agent.
Costus or Kuth (<i>Sassaurea costus</i>)	Found in Kashmir and parts of Himachal Pradesh; cultivated in Lahaul and Spiti.	Useful for treating asthma, bronchitis and ailments of the feet.
Rauvolfia Root <i>Rauvolfia serpentina</i>	Grows in moist deciduous forests upto 1200 mts, in all parts of the country.	Dried roots are used in treatment of nervous disorders such as epilepsy, schizophrenia and insomnia. Root extracts are valued for traditional remedies in treating ulcers, worms and snakebites.
Himalayan Yew (<i>Taxus wallichiana</i>)	Grows in small numbers, from the north western Himalayas to Arunachal Pradesh.	It is the source of the anti-carcinogenic drug Taxol.
Yam (<i>Dioscorea deltoidea</i>)	Found at altitudes of 900-3300 mts; from the north western Himalayas to Sikkim.	Contains raw materials such as Saponin; used in the manufacture of steroidal drugs.
Belladonna (<i>Atropa belladonna</i>) (<i>Atropa acuminata</i>)	Exotic, cultivated in India. Grows in Jammu and Kashmir, Himachal Pradesh and north western Himalayas.	Derivative compound is atropine, used as an anticholinergic and in eye medicines to dilate the pupil of the eyes.
Himalayan Mayapple (<i>Podophyllum hexandrum</i>)	Grows at altitudes of 2500 - 4500 mts; from Kashmir to Sikkim.	Used in remedies for skin cancer. Also the source of the resin podophyllin which is used in tonics.
Spikenard, Indian nard (<i>Nardostachys grandiflora</i>)	Grows in region from Himachal Pradesh to Sikkim at altitudes of 3000 - 4800 mts.	Used mainly in traditional medicines to treat leprosy, epilepsy, heart palpitations, blood diseases and fever.



FROG LEG

- Facts about trade in frog leg
 - ▶ Frog leg, considered a luxury food across Europe and the United States, usually come from the Indian Bullfrog (*Rana tigerina*), which is found in India, Bangladesh and Indonesia.
 - ▶ Total world imports of FFL or Frozen Frog Leg are upwards of 200 million Asian wild frogs per year¹.
 - ▶ India exported the legs of about 70 million frogs in 1983, netting about US \$ 8.7 million¹.
 - ▶ Due to the trade in frog leg and the resultant lack of healthy frogs to feed on insects, there were rapid increases in the populations of crop eating pests and malarial mosquitoes.
 - ▶ India was having to spend more on toxic chemical pesticides than it earned from the exports of frog leg; therefore the export of frog leg was banned in March 1987.
 - ▶ The illegal trade in frog leg, however, continues in India, with frog leg being smuggled to Bangladesh over the eastern border. Moreover, the frog leg are often mixed with or declared as "chicken legs" or "sea food" to avoid detection⁴.



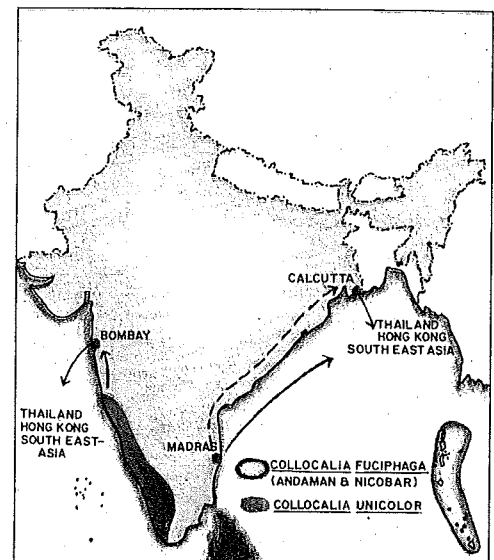
Frog's legs packed for export



SWIFTLET'S NESTS

- Facts about the trade in swiftlet's nests
 - ▶ Swiftlet's nests are made of mucilaginous secretions from a pair of glands in the mouth (of some species of swiftlets) that enlarge during the breeding season.
 - ▶ The nests of four species of swiftlets are harvested for consumption as food, tonics and medicines; of these, two species are found in India.
 - ▶ Swifts and swallows are the only birds not protected by Indian law.
 - ▶ The world trade in swiftlet's nests is estimated to be 19.9 million nests per year; excluding the nests consumed in the country of origin³.
 - ▶ A kilogram of top quality 'white nests' can fetch as much as Rs 36,000 in Hong Kong³.
 - ▶ Collection of edible swiftlet's nests has been reported from Andaman and Nicobar islands.

□ Distribution of swiftlets and trade routes

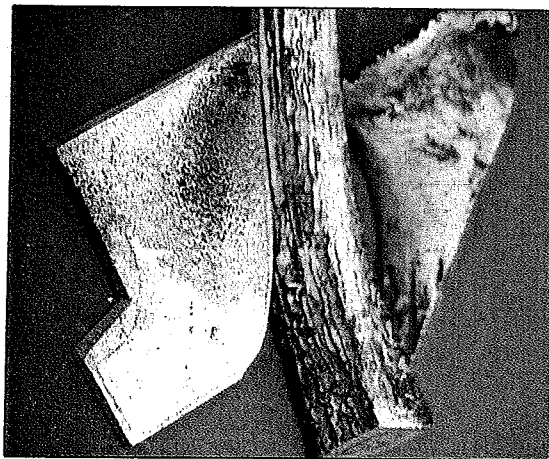




ANTLERS

□ Facts about trade in antlers

- ▶ Antlers are characteristic of deer while antelopes have horns.
- ▶ Antlers are branched, solid and are usually shed every year unlike horns, which are hollow, unbranched and permanent.
- ▶ The antlers of deer such as chital (*Axis axis*), sambar (*Cervus unicolor*) and swamp deer (*Cervus duvauceli*) are found in the trade.
- ▶ The main export of antlers from India is to the Europe and east Asia.
- ▶ India allows a ceiling of 270 metric tonnes of semi-processed material for cutlery handles, coat buttons etc².
- ▶ In 1993 India exported antlers worth more than US \$ 100,000 to Taiwan alone¹.
- ▶ Antlers are used in cutlery handles, pistol butts, traditional medicines, buttons etc.



VIVEK MENON

Whole and cut antler with pistol butt made of antler



HAIR, BRISTLES AND WOOL

□ Facts about trade in hair, bristles and wool

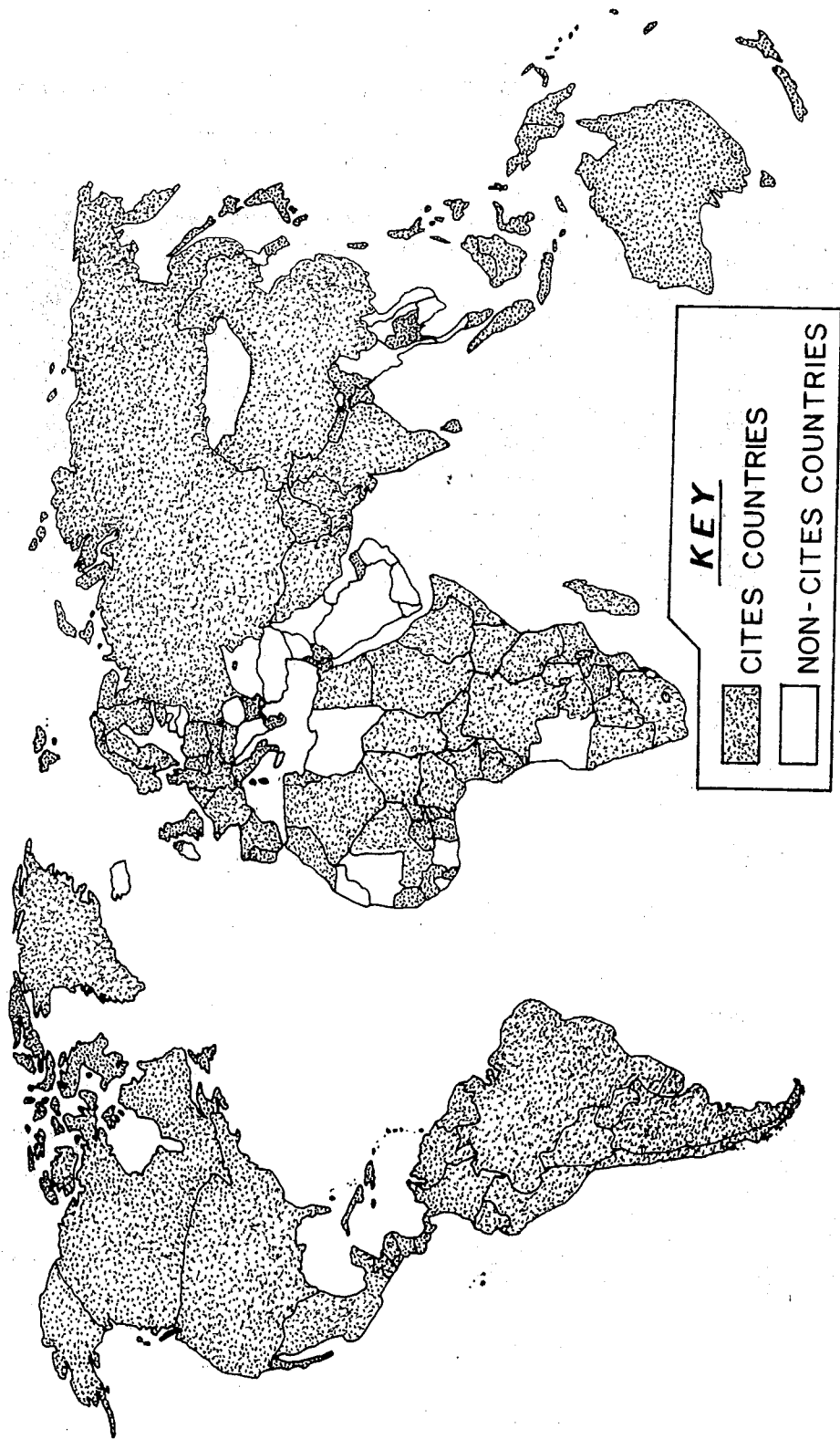
- ▶ Bristles of hogs, pigs and mongoose are used in paintbrushes, shaving brushes etc.
- ▶ In 1992, the United Kingdom alone imported nearly 10,000 kilos of bristles from India⁴.
- ▶ Bristles can cost upto 7,500 Rs / kilo in the international market⁴.
- ▶ While Kanpur and Jabalpur are the main trade centres for bristles, Bombay is the main shipping port⁴.
- ▶ Wool from endangered species like the Tibetan antelope or chiru is used in making shawls, marketed as Shahtoosh or king's wool. Shahtoosh shawls can cost upwards of Rs 50,000 each⁴.
- ▶ Shahtoosh is collected from Tibet and woven into shawls in Kashmir.
- ▶ Chiru is protected under the Wildlife (Protection) Act, Schedule I and under CITES, Appendix I. Hence trade in its wool is banned.



VIVEK MENON

Consignment of hair and wool being exported

CITES: ACROSS THE GLOBE

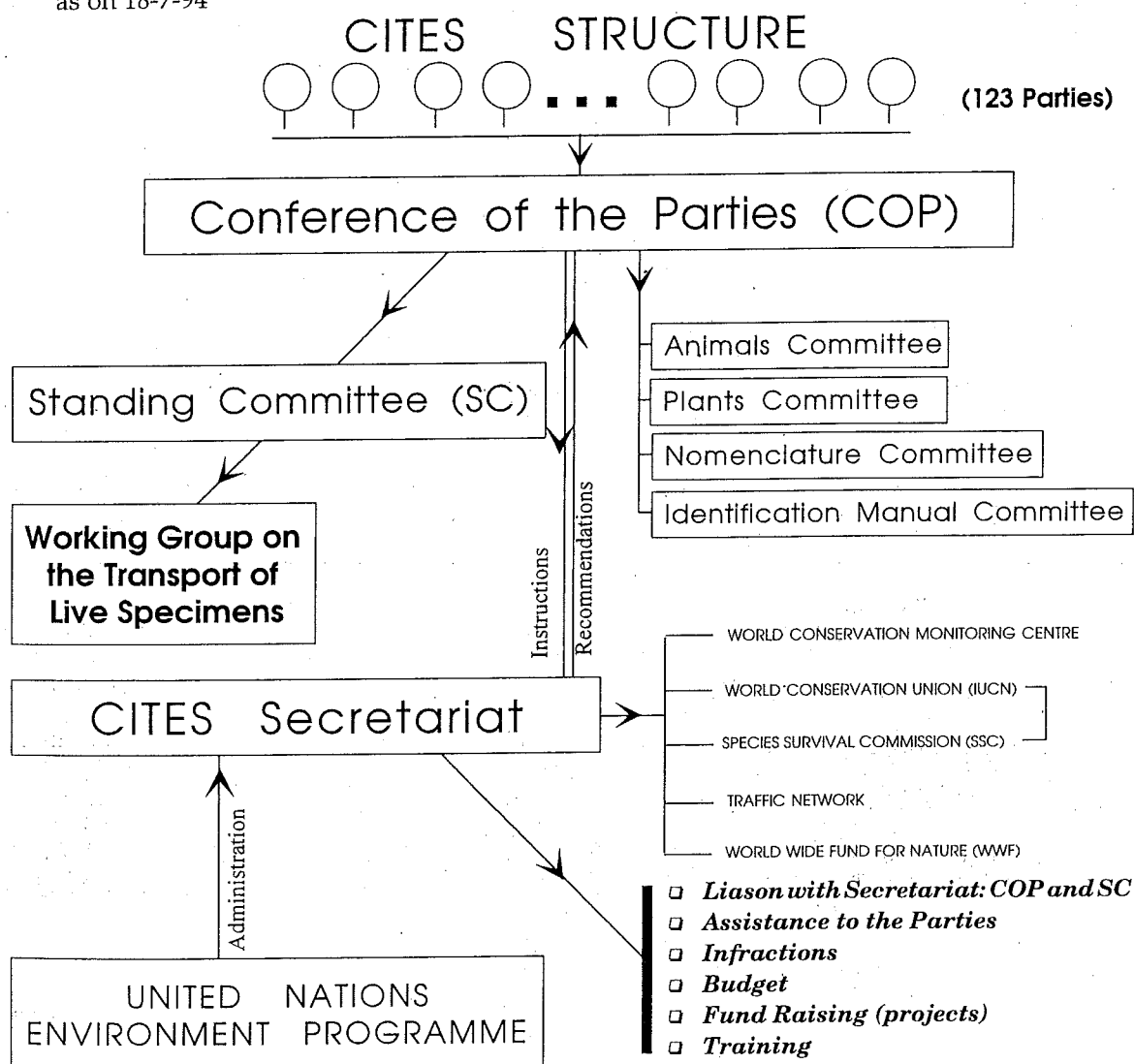


CITES - AN OVERVIEW

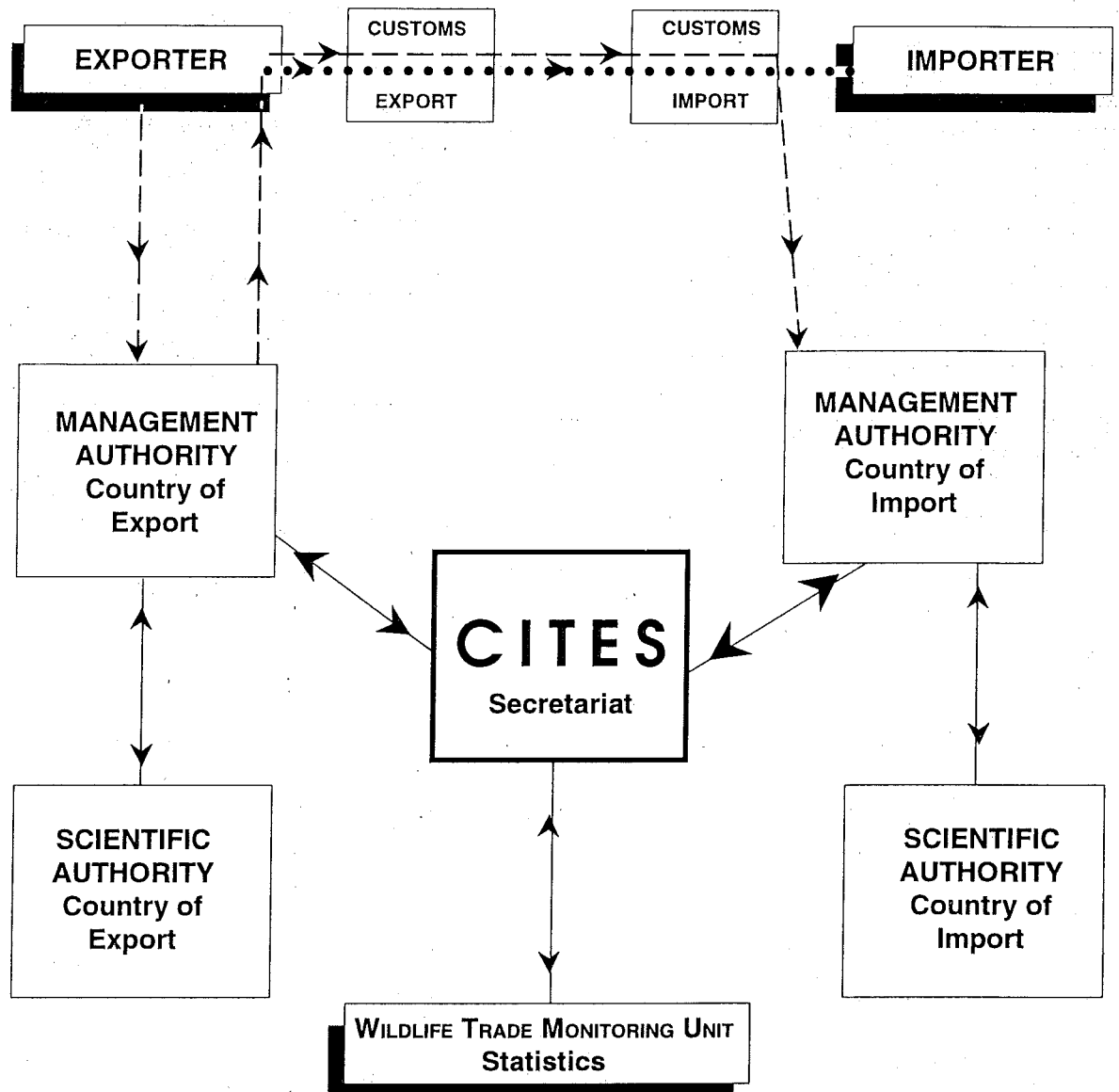


Convention of International Trade in Endangered Species of wild flora and fauna⁵

- Date and place of signing: 3 March 1973 in Washington (USA)
- Entered into force: 1 July 1975
- Date of accession of India: 18 October 1976
- Number of Parties : 123
as on 18-7-94



HOW CITES WORKS⁵



KEY

---	EXPORT PERMIT
.....	CITES MERCHANDISE

CITES: SOME IMPORTANT DEFINITIONS⁵

- A specimen is an animal or plant, alive or dead or any readily recognizable parts or derivatives of plant or animal species.

For Appendix II species, some parts or derivatives may be excluded or only some of them may be included.

- The term species means:

Any species.

Any sub species.

Any geographically separate population.

- Parties mean any nation or country that have signed and ratified the CITES treaty.

Implications of a CITES Appendix Listing

- **APPENDIX I:** This includes species that are clubbed as being in danger of extinction and are, or may be affected by trade. These cannot be traded commercially and export licenses are granted only under exceptional circumstances, for example for scientific and educational purposes.

There are some 507 named taxa in Appendix I which covers thousands of species, including all lemurs and apes, the giant panda, many South American monkeys, the whale, the cheetah, leopards, the Asian elephant, rhinoceros, many birds of prey, cranes, pheasants and parrots, all sea turtles, some crocodiles and lizards, giant salamanders and some mussels.

- **APPENDIX II:** This lists species that could become endangered unless their trade is controlled and monitored. Export permits are issued after approval by the relevant scientific and management authorities. The former advises when exports of a particular species should be limited, usually by setting an annual quota for the same, whereas the latter has to look into the legal aspects, at the same time ensuring that transportation is proper, and under safe and hygienic conditions.

Under this there are 259 named taxa, but many tens of thousands of species, including all cacti and orchids, primates, cats, otters, dolphins, porpoises, birds of prey, tortoises and crocodiles not mentioned in Appendix I. In addition, Appendix II includes fur seals, bird wing butterflies and black corals.

- **APPENDIX III:** This is meant for species listed by certain parties who would like cooperation from the other countries for regulating trade in these. For example, India has listed four species of snakes in Appendix III for international help in controlling smuggling of reptile skins.

CITES EXPORT PERMIT CHECK⁵

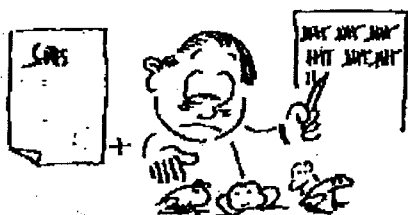
**CHECK THAT THE INFORMATION ON THE DOCUMENT
ACCURATELY DESCRIBES THE SHIPMENT**



**THE SPECIES NAMED ON THE DOCUMENT
MUST BE THE SPECIES OF THE SPECIMEN
IMPORTED**



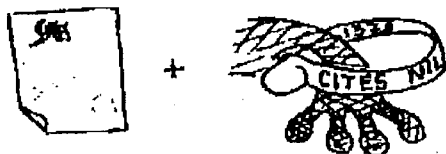
**THE DESCRIPTION OF THE SPECIMEN ON
THE DOCUMENT MUST CORRESPOND TO
THE SPECIMEN IMPORTED**



**THE QUANTITY OF SPECIMENS IMPORT-
ED MUST BE IN ACCORDANCE WITH THE
QUANTITY INDICATED ON THE DOCUMENT
(IT CAN BE LESS BUT NOT MORE)**



**THE SOURCE (IF IT IS POSSIBLE TO CHECK,
E.G. FOR PLANTS) MUST CORRESPOND TO
THE SOURCE INDICATED ON THE DOCU-
MENT**



**IF MARKS (OR TAGS) ARE REFERRED TO
ON THE DOCUMENT, THE TYPE AND THE
NUMBERS OF THESE MARKS OR TAGS
MUST CORRESPOND TO THOSE ON THE
DOCUMENT**

CITES EXPORT PERMIT CHECK⁵

□ A valid CITES export document is mandatory, and must:

- 1 be original and the authentic form
- 2 contain no modification/alteration (Rubbing out, scratching out etc.) unless it has been authenticated by the stamp and the signature of the authority issuing the document.
- 3 be presented in accordance with the date of validity.

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CITES

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FORESTS

EXPORT PERMIT

1219/7

17th May, 199

Export through Delhi Airport

Ungla Fowl (Callinix bitorquatus)

one pair

Country of Origin: India

Country of Destination: India

Management Authority

Signature

Stamp

18.11.92

110001

4. final destination of the shipment mentioned on the export document must be in accordance with the transport documents (refer to the Air Waybill or the Bill of Lading).
5. contain the original signature and official stamp of the Management Authority.
6. the permit must have a CITES security stamp on it.

CITES: DEFINITIONS AND REQUIREMENTS⁵

— Re-export and commercial purposes —

□ Re-export of species

► Requirements:

- 1 The country of origin, the original export permit number and the date of its issuance.
 - 2 If the specimen has been previously re-exported, the country of last re-export, the last re-export certificate number and the date of its issuance; or
 - 3 If the above information is missing, justification for its omission.
- Before issuing a re-export certificate. The Management Authority should be satisfied that:
- 1 To the extent possible, the goods re-exported are the same (or correspond) as those which were imported (species, type of specimen).
 - 2 The total quantity of specimens re-exported does not exceed the quantity imported.

► Special Cases

- 1 **Goods imported are split in several shipments and then re-exported**

Produce and maintain a table showing the number of the original export permit (and the country) when the first re-export is requested. Then enter the quantities re-exported with each transaction. After each operation, indicate the balance remaining from the original export permit.

- 2 **Goods which are received as parts and re-exported as products**

Establish as accurately as possible the quantity of processed articles which can be produced by one unit of the imported specimens.

Enter quantities re-exported with each transaction, keeping in mind an acceptable percentage for waste.

- 3 **Specimen has previously been re-exported from another country**

Pay close attention to:

The country of origin (country where the animal

or plant originated)

The country of previous re-export (country from which the last re-export took place)

The box "country of origin" must relate to the country of origin and not the country of previous re-export.

In every case, check that the export permit of the country of origin was valid!

4. **Re-export of Appendix I specimens:** When importing the specimen, an import permit must be presented and this import permit may be issued only if the purpose of the import is **non-commercial**
5. **Re-export of live specimens included in Appendix I.** An import permit must be issued before the re-export certificate is issued.

□ Primarily commercial purposes

- 1 Trade in Appendix I species must be authorized only in **exceptional** circumstances.
- 2 An activity can be described as "commercial" if its purpose is to obtain economic benefit (in cash or in kind) and is directed towards **re-sale, exchange, provision of a service or other forms of economic use or benefit**.
- 3 Any utilization which is not totally "**non-commercial**" will be regarded as "**commercial**".
- 4 Any transaction which is not clearly non-commercial has to be regarded as commercial.
- 5 The situation must be examined case by case.
- 6 It is the purpose of the import which has to be considered, not the import-export transaction which can be of a commercial nature.

CITES: DEFINITIONS AND REQUIREMENTS⁵

— Captive Breeding —

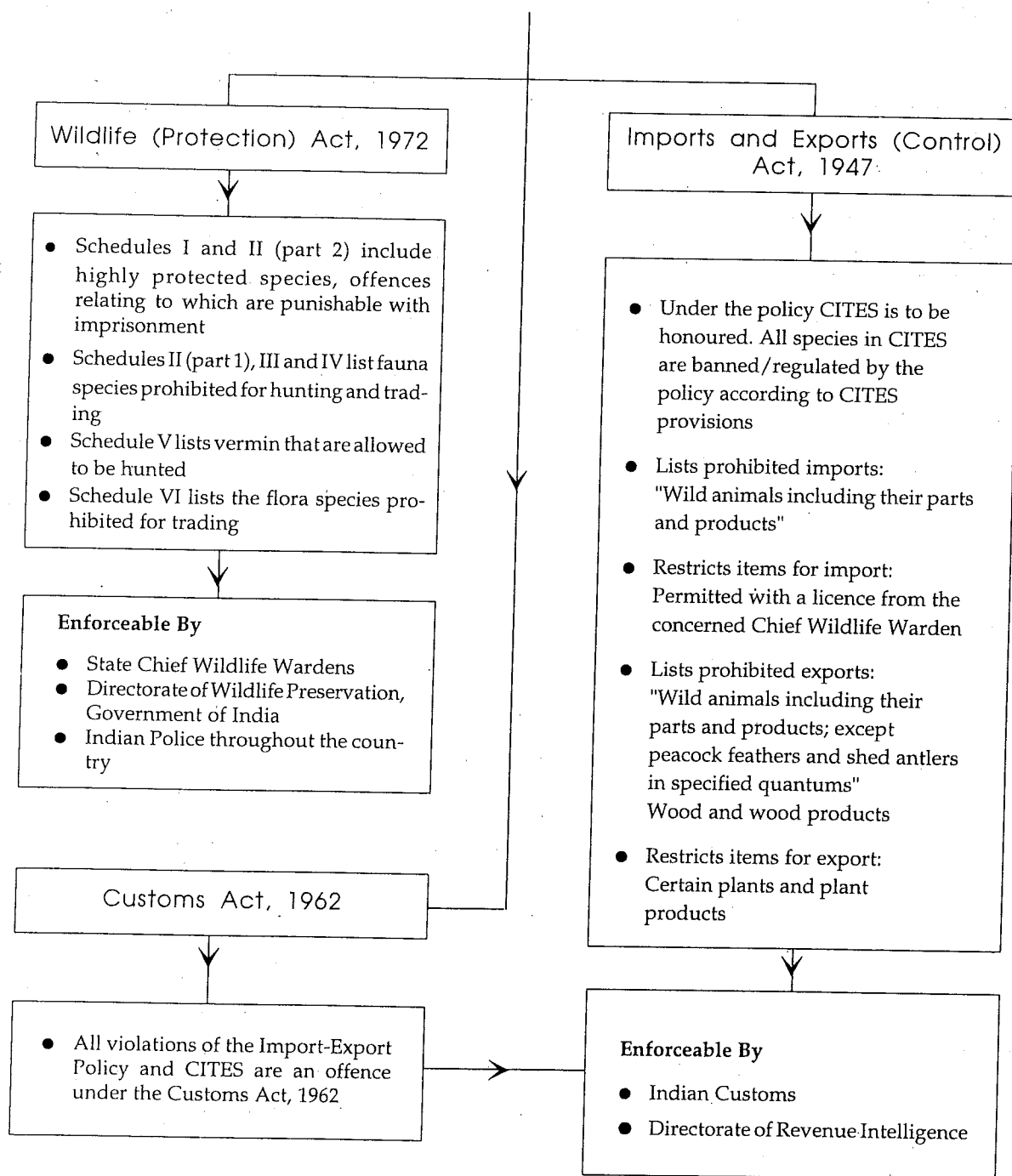
- To allow a species to be exported or imported as having been captive bred, the specimen should:
 - Be born in a controlled environment. (The mating should have taken place in a controlled environment).
 - The parental breeding stock must fulfil three conditions.
 - 1 It must have been established in a manner not detrimental to the survival of the species in the wild.
 - 2 It must be maintained without addition of animals from the wild [However, occasional addition of animals might be acceptable in order to prevent inbreeding].
 - 3 It must be managed in a manner which has been demonstrated to be capable of reliably producing second generation offspring (F2) in a controlled environment.
 - For species on Appendices II and III, only the declaration of a specimen as "bred in captivity" can justify its export from a country where the species does not occur in the wild; or its re-export when the species does not occur in the declared country of origin.
 - It is the applicants responsibility to prove that the specimen corresponds to above definitions of "bred in captivity". However, it is the Management Authority's responsibility to decide whether the evidence is sufficient after consulting the Scientific Authority.
 - The Management Authorities must inspect the breeding operations to ascertain:
 - 1 That a breeding stock comprising at least one adult male and one adult female exists.
 - 2 The origin of the breeding stock.
 3. Whether the facilities are adequate to allow breeding.
 4. The birth records.
 5. That the breeding technique used allows for regular production of F2 specimens.
 6. For specimens of species listed in Appendix I, it is necessary to determine whether the breeding operation is
 - A). For commercial purposes
 - B). Non commercial purposes.
 7. In case A:

The species remains under Appendix I but procedures for Appendix II are applied, with the following conditions:

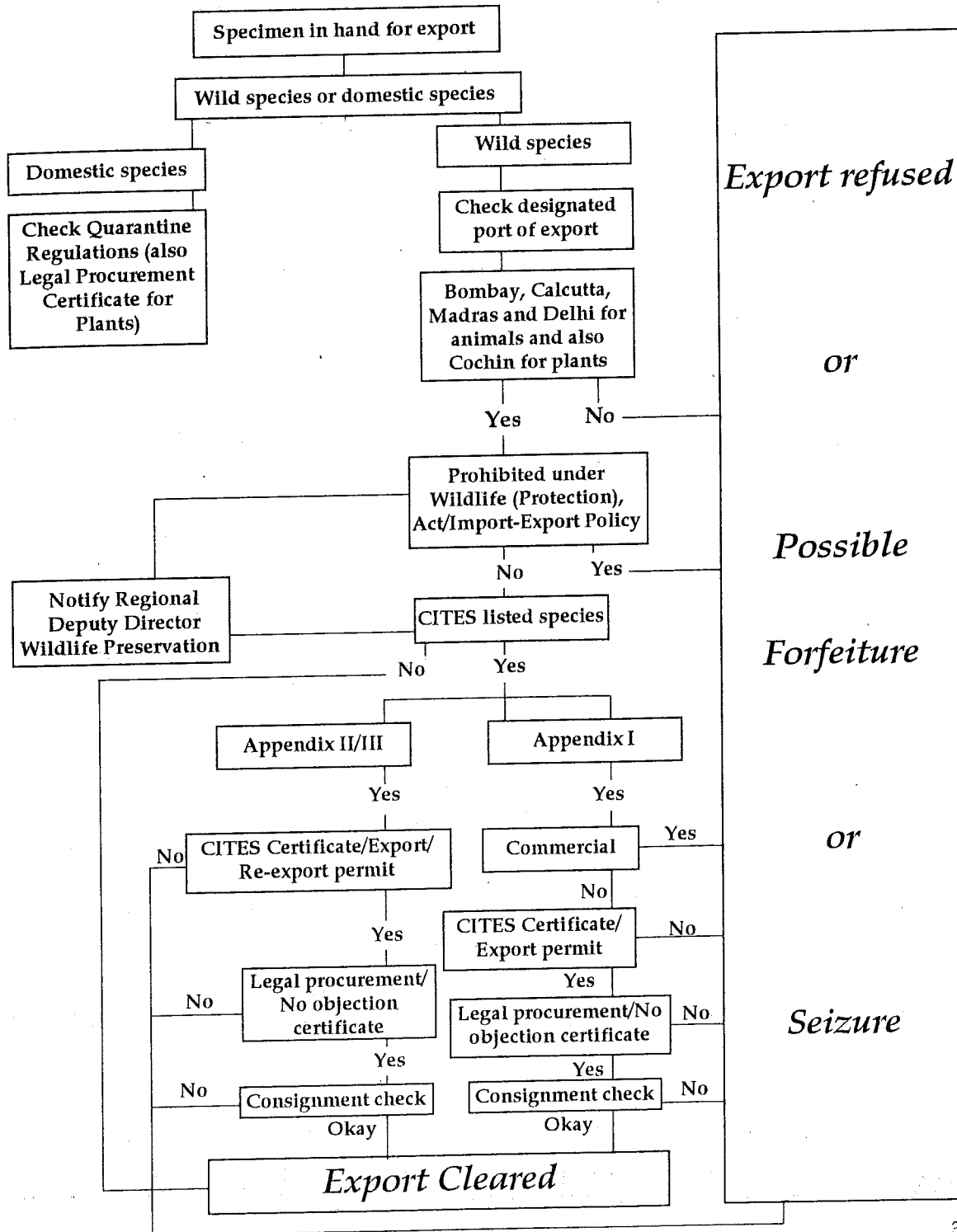
 - The operation must be registered by the Secretariat and the registration number must be indicated on the permit.
 - The specimens must be marked.
 - The numbers of the marks must be included in the export permit.
 - The letter 'D' must be indicated in the "source" box on the export permit.
 - 8 In case B:
 - The specimens are exempted from the provisions of Article III of the convention but must be accompanied by a certificate.
 - In practice, the letter 'C' is indicated in the "source" box of the permit or certificate by most parties.

FALSE DECLARATIONS OF THE TYPE "BRED IN CAPTIVITY" CONSTITUTE THE SECOND-MOST COMMON TYPE OF FRAUD

DOMESTIC LEGISLATION: AN OVERVIEW



EXPORT CHECK FLOWCHART



SAMPLE COPY OF A LEGAL PROCUREMENT CERTIFICATE

LEGAL PROCUREMENT CERTIFICATE (FAUNA/FLORA/DERIVATIVES)

SPECIES OF WILD FAUNA AND FLORA.

2

CERTIFICATE NO. 26

VALID UPTO : 31st Aug. 1983


Details of earlier LPC (s) Cancelled :

(No. and date, issued by _____)

1. This Certificate is hereby issued in favour of M/S.Chandeok Overseas Pvt. Ltd.Eagle Nest, 17/6 Delhi Road, Gurgaon (M.S) holder of Licence No. 01 for Manufacturing & detailing in trophies/uncured trophies in terms of Wild Life (Protection) Act, 1972, for the ~~export~~ ^{local}

~~Trade~~ of parts/derivatives from Fauna and Flora as detailed below.

2. I hereby certify that the parts/derivatives from fauna/flora as detailed below of which ~~export~~ ^{local Trade} is permitted was procured in the Wild.

Description of Item. (also state the scientific name)	Common Name.	Quantity/ No. of Packages.	Weight		Identification Mark, on the packages.
			NETT. Kgs.	GROSS Kgs.	
1	2	3	4	5	
Scrap Shed Antler of Sambhar/Chital. (Cervus Unicälor.)	Sambhar	30 Bags. (Thirty Bags.)	2250.000 Kgs.	2310.000 Kgs.	

Date of Issue _____

Signature/Designation
of the Sealing Officer.

M. Shree
DIVISIONAL INSPECTOR
WILD LIFE
Sold to: *11/7/83*

16/7/93
Chief Conservator of Forests(WL)
cum-Chief Wild Life Warden, Hr.
Panchkula, (Distt. Ambala)

M/S.Shree Baidyanath Ayurved
Bhawan Ltd. Great Nag Road,
NAGPUR-440009.

COMMON TRADE MALPRACTICES

Concealment: Smuggling live wildlife or products by concealment is the most obvious and common trade malpractice. False-bottomed crates to smuggle out live animals and reptiles, aluminium cannisters packed into a suitcase to smuggle out live birds and other such devices have turned an unsophisticated trade into a well-oiled smuggling business. Tortoises inside a man's garments, bear bile in cheese tins and rare birds' eggs strapped to the abdomen of the courier are examples of concealment that have been detected. Unique methods to keep live animals quiet during such transportation are used, such as anaesthetising them with an onion based pack, to drugging them with narcotics.



Tortoise smuggled inside a sock

Misdeclaration: Misdeclaring the species or the quantity is another very common trade malpractice. If India, for example, allows export of rose-ringed parakeet but not blossom-headed parakeets, large numbers of the latter would be smuggled out with the former by misdeclaring them to non-wildlife trained customs officers. This is why normally all identical or similar species are put under one law even if only one of them is endangered. Similarly if 100 metric tonnes of antler are allowed for export, consignments of 150 or 200 metric tonnes could go out unless each package is weighed and cross-checked.

Forgery of Permit: This is usually not carried out in the country of exports. At time of import, however, false certificates from the exporting country are often presented. The security seal in the CITES permit is therefore a very important means for checking the validity of a CITES permit.

False captive-bred/cultivated claim: Many animals are allowed to be traded if captive bred and plants if they are cultivated. The LPC (Legal Procurement Certificate) for such animals and plants are often faked. For points 3 and 4 cross-verification with the Management Authority of the country of export is the only fool-proof way to check fraud.

Re-export laundering: Items like snake-skin, ivory etc. were allowed to be imported at one time from other countries, worked upon by Indian craftsmen and re-exported to earn foreign exchange. Often Indian stocks were added to these and import certificates were also forged.



Aluminium cannisters for concealing live birds

Laundering under legal stocks: This is common when a certain quantity of legal stock exists in the country (such as fur of Jammu and Kashmir furriers). Illegally obtained stock can be added to legal stock while no sale is shown in the books.

Using safe transit countries: Countries such as Dubai, Macao etc. may be used to "store" a consignment before forwarding to the desired destination till suspicion wears off. Also in most countries transit shipments are rarely checked and this allows it to lie low for the desired time period.

Trade adulteration/faking: Commodities like musk and bear bile are often adulterated with bees-wax, jelly etc.; while forgeries of rhino horn in buffalo horn or stone; and fur by painting over domestic cat pelt are common in the trade. Identification and laboratory testing of items is therefore recommended in many cases.

HOW TO GO TO COURT

□ What is a complaint

A complaint is any allegation made orally or in writing to a Magistrate, with a view to his taking action under the code of criminal procedures, that some person, whether known or unknown has committed an offence.

□ Who can file a complaint under the Wildlife (Protection) Act

A complaint against an accused charged with having committed an offence under the Wildlife (Protection) Act (hereinafter referred to as WPA) can be filed by the following three categories of people:-

(a) The Director of Wildlife Preservation or any other officer authorised on his behalf by the Central Government; or (b) The Chief Wildlife Warden or any other officer authorised on his behalf by the state government; or (c) Any person who has given notice of not less than 60 days, in the manner prescribed of the alleged offence and of his intention to make complaint to the Central Government or the State government or to the aforesaid officers.

It is imperative that the officer other than the Director, Wildlife Preservation or the Chief Wildlife Wardens, filing the complaint ensures that the necessary authorisation in writing authorising him to institute the complaint is obtained. A copy of such authorisation should normally be filed along with the complaint, in order to avoid any controversy regarding the very maintainability of the complaint.

□ Contents of the complaint

The law has not prescribed any particular format for the drafting of a complaint, but it is necessary to allege that an offence has been committed. It is also expected that the complainant must state, all the ingredients constituting the alleged offence.

The complaint must be well drafted. Once drafted, like an FIR, it cannot be changed. Thus all offences committed must be carefully detailed in the complaint.

There should be sufficient and strong evidence to support the charges.

The offence committed must be spelt out clearly with a detailed description of events, the source of the information; the enquiries made along with names of persons, places and details of the evidence collected, the instrument/weapon used. The complaint must state under which schedule and section the animal falls in. For this it is mandatory to attach a zoologist's certificate of identification.

□ Arrest, Search and Seizure

The WPA does not lay down any procedure for arrest and search. Section 50 (4) of WPA simply stipulates that any person detained or things seized shall forthwith be taken before a Magistrate to be dealt with in accordance with law.

Hence, whenever an officer arrests a person, the officer should forthwith communicate to such persons the full particulars of the offence as well as the grounds for such an arrest. This mandate is contained in Section 50 of the Criminal Procedure Code.

Immediately after the arrest the arresting officer should search the person and place in safe custody all articles including the articles seized other than wearing apparel found upon him. A receipt of such said articles has to be prepared by the officer and copy thereof should be given to such person. It is of utmost importance that the arrest, delivery of the grounds of arrest and the receipt of the articles is prepared, and handed over to the person in the presence of two or more independent witnesses, and whose signatures should be obtained. If the person arrested consents, his signatures may also be appended.

The arresting officer immediately after the arrest must produce the arrested person and the articles seized, in any case within 24 hours, before the concerned Magistrate. The above procedure is mandatory and any breach thereof would make the arrest as well as the search illegal, if not doubtful.

□ Arrest By Private Persons

Section 50 WPA authorises the Director, or the Chief Wildlife Warden or any officer authorised by them or any forest officer or any police officer not below the rank of sub-inspector to arrest any person without warrant and detain him, if the arresting officer has reasonable grounds for believing that such person has committed an offence against the WPA.

HOW TO GO TO COURT

Section 51 (1) WPA stipulates "that any person who contravenes any provision of the Act or any rule or order made thereunder.... shall be guilty of an offence against this Act and shall, on conviction be punishable with imprisonment for a term which may extend to three years".

Part II of Schedule I of Code of Criminal Procedure (Cr. P.C.) deals with "classification of offences against other laws" and declares that any offence punishable with imprisonment for 3 years and upwards shall be cognizable (power to arrest without a warrant) and non-bailable.

Section 43 Cr. P.C. confers the power on every private person to arrest or cause to be arrested any person who has committed a non-bailable and cognizable offence. The only condition precedent is that such offence should have been committed in the presence of the arresting person. Hence, every person, other than those specified in Section 50 WPA have also the power to arrest subject to the following conditions namely first, the offence should be a non-bailable and cognizable offence; secondly, the offence should have been committed in his presence and lastly, the person so arrested, without unnecessary delays, should be handed over to a Police Officer, or in the absence of the Police Officer, take such person or cause him to be taken in custody to the nearest Police Station. The Police Officer shall re-arrest such person in accordance with Section 41 Cr. P.C. Thus, even persons other than the persons specified in Section 50 W.P.A can legally arrest, if the above said three conditions are adhered to.

❑ Non-bailable offence

A non-bailable offence is that offence which is cognizable and punishable with imprisonment for 3 years or upwards. Offences which are non-cognizable and punishable with imprisonment for less than 3 years are normally bailable offences.

The distinction between bailable and non-bailable offence is that in the case of a bailable offence the person arrested has a right to be released on bail subject to such conditions as the Court/Investigating Officer may impose. And in the case of a non-bailable offence the person arrested has no right to be released on bail but that does not mean he is not to be granted bail. Such a person arrested for a non-bailable offence can be released on bail by Court in the exercise of its judicial discretion and subject to such conditions as the Court may impose. In other words the distinction between the two is that in a bailable offence bail is a right while in a non-bailable offence bail is not a right but is granted by the Court in its discretion. Bail is normally granted by the Courts except in cases where the person is charged with an offence punishable with imprisonment for life or death or is a previous convict.

❑ Conditional grant of bail

Sub-clause (3) (b) of section 437 (3) code of Criminal Procedure authorises the Court to impose such conditions on the accused, at the time of granting bail, in order to ensure that such person shall not commit an offence similar to the offence which he is accused of. It would be in the interest of the wild life department as well as for the protection of wild life, if such a condition is got imposed at the time of grant of bail, as it would effectively prove to be a deterrent for the accused person to further commit such offences and would expedite the cancellation of bail already granted in case the accused commits another offence under the WPA.

❑ Receiving and Recording Evidence

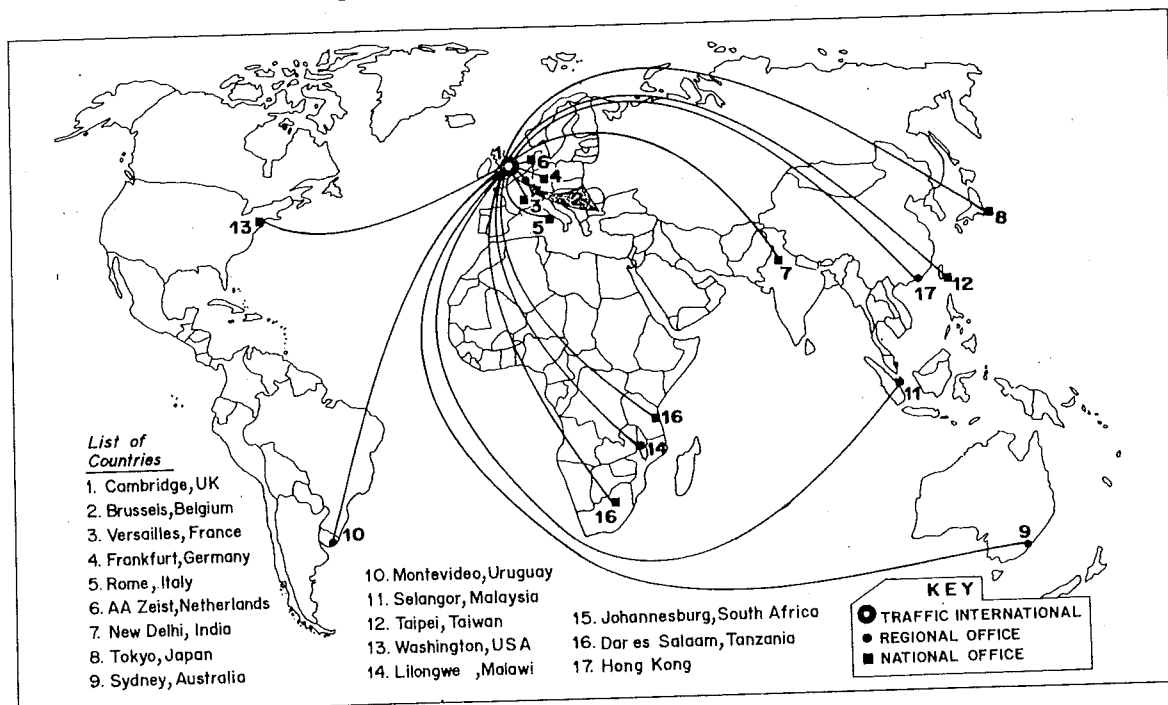
Sub-clause (8) of Section 50 gives the authority to any officer not below the rank of an Assistant Director of Wildlife Preservation or the Wildlife Warden to receive and record evidence in the presence of the accused person. Sub-Clause (9) of Section 50 permits the use of such evidence at the time of trial provided it is recorded in the presence of the accused. This section is a boon for the officers in combating the rampant infringement of the WPA. It should be used more frequently before the witnesses are prevailed upon by the accused person or the time taken by a full trial conveniently erodes their capacity to recollect the chain of events, which manifests quite often during cross-examination.

Any person apprehended for committing an offence under the WPA can be prosecuted only by filing a complaint under section 55 of the said act. The said complaint has to be filed in a Court of Magistrate of the first class if the offence is punishable with imprisonment for 3 years and upwards but not more than 7 years. In case of offences punishable with imprisonment for less than 3 years, it has to be filed before the Court of any Magistrate within whose jurisdiction the offence has been committed.

NOTES

1. *International Wildlife Trade: Whose Business is it?* Sarah Fitzgerald (1989) WWF-USA.
2. P. Kannan, Regional Deputy Director, Wildlife Preservation in. litt. and pers. comm.
3. This includes data from many TRAFFIC offices (excluding TRAFFIC-India data) in. litt. received by TRAFFIC-India
4. TRAFFIC-India data from ongoing field investigations and unpublished work.
5. These sheets have been adapted from training material prepared by the CITES Secretariat, Gland.
6. V.G. Gogate, Scientist C, National Museum of Natural History, New Delhi, pers. comm.
7. *Fur Trade in Kathmandu* - Joanna Van Gruisen and Toby Sinclair (1992), TRAFFIC-India, WWF-India.
8. Please note that these are tips for identification and not conclusive proof. Expert scientific opinion may be taken for this purpose (see list of addresses).
9. *Turtle Trade in India, A study of Turtles and Freshwater Turtles* B.C. Chowdhury and S. Bhupathy (1993), TRAFFIC-India, WWF-India.
10. *The Wild Bird Trade* Wildlife Conservation International (1992).
11. *International Trade in Wildlife* Tim Inskipp (1979).
12. *Tiger Bone in Taipei* Kristin Nowell (1993). TRAFFIC Bulletin.
13. *The Asian Elephant*, R. Sukumar (1989), Cambridge University Press.
14. *Identification of Ivory*, Espinoza and Mann, (1989) CITES Secretariat.

TRAFFIC NETWORK



WHOM TO CONTACT

Often, the most crucial information required by enforcement staff when confronted with a wildlife trade offence is whom to contact. Wildlife trade in India is primarily the jurisdiction of the Directorate of Wildlife Preservation, Government of India. Any offences detected, information received etc. must be conveyed to their officers at the earliest. Any offence can also be brought to the notice of the local Chief Wildlife Warden (if the offence is that of the Wildlife [Protection] Act) or the Customs officer (if the violation is of the Customs Act or Import Export Policy). The local police, paramilitary etc. can be of assistance in special cases.

For identification, there are three Scientific Authorities to the CITES apart from which a few specialised institutions could also help. Given below are few of the addresses which could be of help to enforcement staff.

Directorate of Wildlife Preservation and CITES, Management Authority

Director, Wildlife Preservation
Ministry of Environment and Forest
Paryavaran Bhawan, CGO Complex
Lodhi Road, New Delhi - 110 003. Tel : 4362785

Regional Deputy Director, Wildlife Preservation
Eastern Region
234/4, A.J.C. Bose Road, 2nd M.S.U. Bldg., 6th Floor,
Nizam Palace, Calcutta - 700 020.
Tel : 033-2478698, Fax : 033-378387

Regional Deputy Director, Wildlife Preservation
Northern Region
Bikaner House, Barracks No. 5,
Shahjahan Road, New Delhi - 11. Tel : 384556

Regional Deputy Director, Wildlife Preservation
Southern Region
C-5, Brownstone Apartments
Mahalingapuram, Madras. Tel : 8253977

Regional Deputy Director, Wildlife Preservation
Western Region
11, Air Cargo Complex, Sahar
Bombay - 400 099. Tel : 8328529

State Chief Wildlife Wardens
Chief Wildlife Warden (Mizoram)
Directorate of Forests, Aizwal
Mizoram - 796 001. Tel : 03832-22130.

Chief Wildlife Warden (Manipur)
Sanjenthong
P.O. Imphal - 795001. Tel : 220854

Chief Wildlife Warden (West Bengal)
Bikash Bhawan, North Block
3rd Floor, Salt Lake City
Calcutta - 700091. Tel : 033-346900

Chief Wildlife Warden (Sikkim)
Beorali, Gangtok - 737102
Tel : 0359-2330

Chief Wildlife Warden (Madhya Pradesh)
Tulsi Nagar, Bhopal - 462003
Tel : 0755-557371

Chief Wildlife Warden
(Andaman and Nicobar Islands)
P.O. Chethem, Port Blair - 44102
Tel : 03192-21549, 20816

Chief Wildlife Warden (Delhi)
Room No. 149, 1st Floor
Western Wing, Tis Hazari
New Delhi. Tel : 011-231007

Chief Wildlife Warden (Punjab)
SCD. 2463-64, Sector-22-C
Chandigarh, Tel : 0172-22828

Chief Wildlife Warden (Goa, Daman and Diu)
Janta House, 3rd Floor
Panaji, Goa - 403 001. Tel : 0832-44747

Chief Wildlife Warden (Karnataka)
Araha Bhawan, 18th Cross
Malleshwaram, Bangalore - 560 003
Tel : 080-3341993

Administrator (Lakshadweep)
Kavaratti, via Calicut - 682555

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

TRAFFIC-International which co-ordinates the network is located at Cambridge, United Kingdom. TRAFFIC-India is a division of WWF-India and is based at the WWF-India Secretariat at New Delhi.

*For further
information contact:*

Director
TRAFFIC-INDIA
WWF India Secretariat
172-B, Lodhi Estate
New Delhi 110003
Tel : 461 1258, 469 3744
Fax : 462 6837

