

VOL. 18 NO. 3

3

# TRAFFIC

BULLETIN



**INSECT TRADE IN EUROPE**

**CAMBODIA'S TRADE IN HOMALOPSINE WATERSNAKES**

**REPORT OF ELEVENTH CITES MEETING**

**TRADITIONAL MEDICINE USE IN KENYA**

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

DECEMBER 2000



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Cover photograph: *Parnassius mnemosyne* on  
*Filipendula*, coast of Uppland Province, Sweden  
(Credit: WWF/Kjell-Arne Larsson)

Illustrations this page, from top:  
*Rosalia alpinus* (Credit: WWF/A. Österle);  
Flags representing CITES Parties  
(Credit: C. Raymakers/TRAFFIC);  
Bocourt's Watersnake *Enhydria bocourti*  
(Credit: Peter Paul van Dijk/TRAFFIC)



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# TRAFFIC

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## Macedonia Joins CITES

Macedonia has become the 152nd Party to CITES, acceding to the Convention on 4 July, with entry into force on 2 October 2000.

*CITES Secretariat, 27 July 2000*

## USA and Australia Vote for Sharks

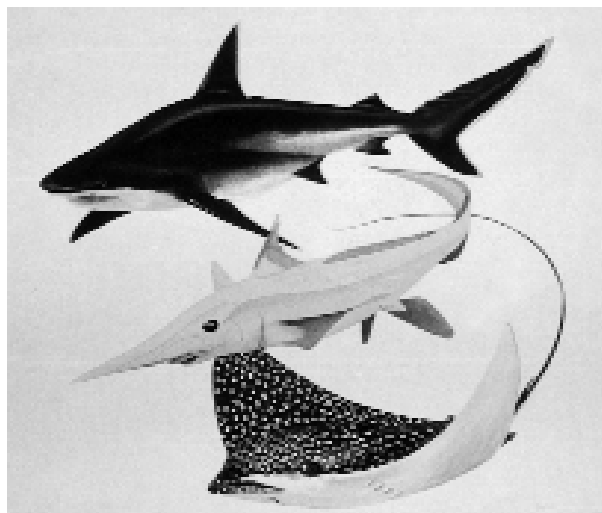
On 7 December 2000, the US Senate passed legislation to ban the finning of sharks in all US waters. The US House of Representatives passed the same legislation in November and the bill will now be sent to the President to be signed into law.

Finning has been outlawed in US waters of the Atlantic, Gulf of Mexico and Caribbean Sea since 1993 and the new legislation will extend the prohibition to US waters in the Pacific Ocean. If the legislation in question is adopted, not only the landing of shark fins will be banned from all federal waters, but also the possession of detached fins without the corresponding carcass. As most fishermen lack the storage space to take entire sharks to land, the law should effectively end most finning in the USA.

Since 1993, tuna long-liners from Hawaii have been responsible for the great majority of shark finning occurring in US waters. Sharks were not the intended target of these fishers, but the increase in finning for shipment from Hawaii has been explosive. Since the US Government banned finning along the Atlantic, Gulf and Caribbean coasts, the percentage of shark catch finned has risen from 3% in 1991, to 61% by 1998. On 22 June 2000, a bill seeking to address this escalation in shark finning was signed by the Governor of Hawaii. The bill prohibits the harvest and landing in Hawaiian territory of any shark fins unless accompanied by their entire carcass, a prohibition which will put an end to the annual transit through Hawaii of "thousands of pounds" of dried fins en route to Asian markets.

According to Rose (1998), much of the US shark fin production since the late 1980s has consisted of Spiny Dogfish *Squalus acanthias* fins. Although the USA in recent years has played a significant role in the world shark fin trade as a supplier, importer, consumer and transshipment point, it does not report production or export of shark fins. However, Hong Kong reported imports of shark fins from the USA averaging 366 t annually during 1988-94, increasing from 261 t in 1988, to a peak of 479 t in 1992, then declining to 418 t in 1994. After 1993, the implementation of landing quotas and other restrictions for the Atlantic coast and the decline of the Atlantic Spiny Dogfish fishery reduced the volume of supply available from the USA.

**STOP PRESS:** the US bill banning shark finning in US waters was signed into law on 27 December 2000.



Silver-tip Shark *Carcharhinus albamarginatus*; Spotted Eagle Ray *Aetobatus narinari* and Spear-nosed Chimaera *Rhinochimaera atlantica*.

*R. Williams, courtesy of IUCN/SSC Shark Specialist Group*

Following growing political pressure in Australia and elsewhere, a temporary ban has been placed on shark finning in Australia's tuna fisheries. The ban would require tuna fishermen, who catch sharks as a by-product of long-line tuna fishing, to land whole sharks at a port before the fins can be removed. The ban is intended to cut down the number of sharks killed under existing by-catch limits imposed on long-line fisheries and would allow the Government to study shark population sustainability on a fishery-by-fishery basis. It would not affect operators for whom sharks are the target species.

*Center for Marine Conservation, 7 December 2000; Russell Dunn, Ocean Wildlife Campaign, in litt., 19/20 October 2000; CNN News Release, 7 June 2000; Environment News Service, 7 June 2000; ABC News Release, 23 June 2000; Environment News Network Release, 22 June 2000; Ocean Wildlife Campaign Press Release, 29 June 2000; Rose, Debra A. (1998). Shark Fisheries and Trade in the Americas I: North America. TRAFFIC North America, Washington, DC., USA; Reuters News Service, 6 October 2000; Environment New Service, 27 December 2000*



Shark fins drying after being processed, Hong Kong.

*R. Parry-Jones/TRAFFIC*

On 1 September 2000, TRAFFIC established a presence in Mexico with the appointment of Adrian Reuter as the Networks National Representative for that country. TRAFFIC North America-Mexico will be based at the WWF Mexico Programme Office in Mexico City. Adrian most recently worked at the National University of Mexico, where he has been a lecturer in the research, management and conservation of birds of prey.

## bulletin board

Craig Kirkpatrick has been appointed as the new Director of TRAFFIC East Asia. Craig joins TRAFFIC with 14 years wildlife conservation experience in China, most recently as biodiversity specialist for The Nature Conservancy working on the Yunnan Great Rivers Project. He will take up his post in Hong Kong in February 2001.

Nina Marshall, former Deputy Director of TRAFFIC East/Southern Africa has taken up the position of Assistant Director at TRAFFIC Europe, based at the regional office in Brussels.

Julie Thomson, formerly National Representative of TRAFFIC North America-Canada, has been appointed National Representative of the TRAFFIC Southeast Asia-Vietnam office and took up her position at the end of July. Former incumbent at the Canada office - Nathalie Chalifour - has resumed her position on a temporary basis.

Elizabeth Scoggins has been appointed Funding Development Officer for TRAFFIC, and succeeds Celia Denton who left TRAFFIC in September. Liz, who has a strong background in trust and foundation fundraising in the UK, is based at TRAFFIC International.

Miriam van Gool has taken over responsibility from Jikkie Jonkman as National Representative of TRAFFIC in the Netherlands. Miriam will combine her TRAFFIC responsibilities with co-ordination of the WWF Netherlands species team, with particular emphasis on CITES.

### traffic websites

<http://www.traffic.org>  
<http://www.twics.com/~traffij>  
<http://www.deol.ru/nature/protect>  
<http://www.wow.org.tw>

Text of this issue of the *TRAFFIC Bulletin* is available on <http://www.traffic.org>

## Jammu and Kashmir to Ban Shahtoosh Manufacture and Sale

Jammu and Kashmir's trade in shahtoosh, the precious wool of the Tibetan Antelope *Pantholops hodgsoni*, is to be closed down, according to an announcement on 29 June 2000 by the State's Chief Minister, Dr Farooq Abdullah. Necessary changes to the State's *Wildlife (Protection) Act, 1978* are expected to be made in the near future.

The ruling follows a sustained campaign by TRAFFIC and others against purchasing shahtoosh. At a meeting of government ministers and shahtoosh traders, on 22 August, an amnesty period of one year was requested in order to dispose of stocks and traders were called upon henceforth to substitute pashmina (wool of a domesticated goat) in the manufacture of all items.

The Governments of China, India and Nepal already provide full legal protection to the species, which is listed in CITES Appendix I. The administration of Jammu and Kashmir, afforded special status under India's constitution, has previously resisted the pressure to ban shahtoosh trade. It claimed that the animal origin of the wool was unclear and that tens of thousands of Kashmiri weavers earned their livelihood, at least in part, through manufacture of finished products from shahtoosh.

The importance of the announcement of a ban is great, since Jammu and Kashmir has been the paramount destination for shahtoosh smugglers. With this outlet closed, the incentive to poach the endangered antelope is expected to be reduced.

Reuters news story, 10 May 2000; *The Indian Express*, 29 June 2000; Statement from the Wildlife Protection Society of India, 30 June 2000; Mills, J. (1999). Fashion Statement Spells Death for Tibetan Antelope. *TRAFFIC East Asia and TRAFFIC India*

## South Korea and Indonesia Join Tuna Treaty

Plans for the long-term sustainable management and conservation of the world's Southern Bluefin Tuna *Thunnus maccoyii* stocks have received a significant boost following the agreement of the Republic of Korea (South Korea) and Indonesia to become Parties to the Convention for the Conservation of Southern Bluefin Tuna (CCSBT). South Korea and Indonesia will join Australia, Japan and New Zealand as members of the Convention, established in 1994 as a co-operative management body to ensure the conservation and responsible harvesting of Southern Bluefin Tuna.

Mr Kim Hung Nam, Director General for International Co-operation in the Korean Ministry for Maritime Affairs and Fisheries, announcing South Korea's intention to join the Convention at a special session of the Commission for the Conservation of Southern Bluefin Tuna in Canberra, stated that South Korea was keen to participate in the work of CCSBT and that the necessary domestic procedures to formalize its accession to the Convention were under way. South Korea has indicated that it will accept a national allocation of Southern Bluefin Tuna significantly below its current catch level, a concession agreed to by other member countries in the past.

Indonesia's decision to join CCSBT was announced by the country's Minister for Sea Exploration and Fisheries, Ir Sarwono Kusumaatmadja, on 8 December 2000. He said Indonesia was keen to participate in the activities of the CCSBT and play its part in managing the world's Southern Bluefin Tuna stocks.

Indonesia's decision to join the Convention is significant, not only because its fishers catch Southern Bluefin Tuna, but because this species is known to spawn in Indonesian waters off Java.

Honorable Warren Truss MP, Minister for Agriculture, Fisheries and Forestry (Australia), Media Releases, 17 November/8 December 2000; *TRAFFIC Oceania*

## Major New Fisheries Convention for the Western and Central Pacific

### Introduction

On 5 September 2000, an important new regional fisheries agreement was opened for signature. The *Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific* is important for two reasons. First, it is the first to be negotiated under the 1995 *United Nations Fish Stocks Agreement*<sup>1</sup>, which establishes obligations on States to conserve and manage highly migratory and straddling fish stocks. Secondly, the new Convention establishes the framework for the management of the world's largest tuna fishery.

### The Western and Central Pacific Fishery

The Western and Central Pacific (WCP) tuna fishery is the largest and one of the most productive fisheries in the world. The fishery is based on Skipjack Tuna *Katsuwonis pelamis*, Yellowfin Tuna *Thunnus albacares*, Big-eye Tuna *Thunnus obesus* and South Pacific Albacore *Thunnus alalunga*. Annual yields of these four tuna species from the WCP are close to two million tonnes, representing around one third of all tuna landed world-

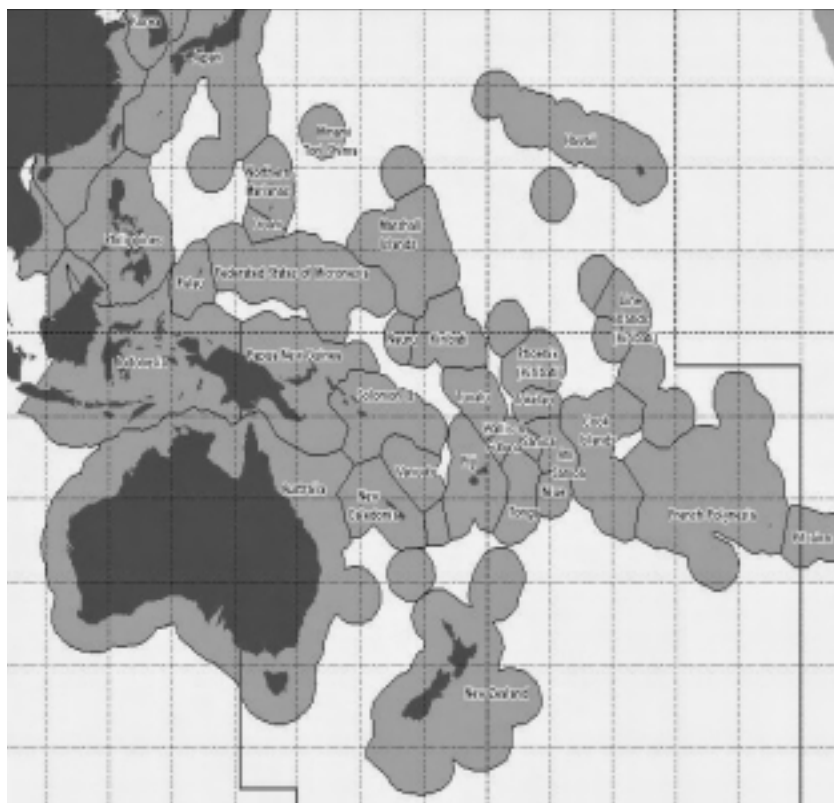
wide. The annual landed value of the catch from the fishery is in excess of USD1.7 billion (Hampton *et al.*, 2000). The exclusive economic zones (EEZ) of the Pacific island countries comprise close to 75% of the productive equatorial belt situated 10 degrees either side of the equator and from which 90% of the catch of tuna in the WCP is taken (Cartwright and Willock, 1999).

As well as being the world's largest tuna fishery by volume, the WCP fishery is also characterized by its political complexity and vast geographic area. Around 30 States, territories and entities are involved in the fishery, either as coastal States or because vessels flying their flag fish for the tuna and other species. The fishery itself operates over 30 million km<sup>2</sup> of ocean.

The tuna resource is of central importance to Pacific island nations, with many being economically dependent on foreign revenue raised through access arrangements with fishing States. Access fees for Pacific island countries combined are estimated at USD66 million per annum and can represent up to 45% of total government revenue for individual countries (Gillett, 1997). The fishery also provides one third of all annual exports from the region and employment for an estimated 30 000-40 000 Pacific islanders (Gillett, 1997).

### The Development of the New Convention

Negotiations towards establishing the new Convention began in December 1994 and were progressed through what became known as the 'Multilateral High Level Conference' (MHLC) process. The impetus for the negotiations came from a number of sources. There were significant developments in international law in the early 1990s: the *United Nations Convention on the Law of the Sea* (UNCLOS) had just entered into force, and with it the obligation under Article 64 for coastal States and States fishing highly migratory fish stocks to co-operate through appropriate international organizations in their conservation and management. Negotiations had also been under way for two years towards the *United Nations Fish Stocks Agreement*, in which the obligations stated in Article 64 were to be amplified. There was also an increasing awareness among the countries of the South Pacific Forum<sup>2</sup> of the need for a broader co-operative approach to the management of the tuna resources, with the communiqué issued at the conclusion of the 1994 South Pacific Forum meeting calling for the strengthening of 'multilateral approaches'.



Map showing the western and central Pacific. Shaded areas represent the exclusive economic zones of countries in the western and central Pacific region.

— = boundaries of the new Convention

Source: Oceanic Fisheries Programme, Secretariat of the Pacific Community

Over the seven meetings of the MHLC since 1994, 29 Parties participated in the negotiations including all members of the South Pacific Forum, Canada, China, France (on behalf of its Pacific territories), Indonesia, Japan, South Korea, Philippines, USA and Taiwan (referred to as Chinese Taipei in the MHLC discussions). The diverse interests of the participating Parties were highlighted in a number of key areas, including decision-making procedures, compliance and enforcement, powers of the Convention's Commission over waters under national jurisdiction, and future allocation of fishing rights. There is what might be termed 'creative ambiguity' in the wording in the final Convention text in relation to a number of these issues, which may make practical implementation of measures difficult and therefore significantly influence the ability of the Convention to achieve its objective under Article 2 of '...ensuring the long-term conservation and sustainable use of highly migratory fish stocks...' in the WCP.

In relation to the adoption of the final text of the Convention on 5 September 2000, only 19 of the 24 eligible Parties present voted in its favour. Japan and South Korea voted against the adoption of the final text on the basis that it did not reflect a balance of interests between coastal States and fishing States, particularly Asian fishing States. France abstained from the vote because the final text did not provide for sufficient participation by its Pacific territories in the work of the Convention's Commission, while China abstained because Chinese Taipei was provided with membership status in the Commission. Tonga abstained in protest against the decision-making procedures contained in the final text.

The new Convention will enter into force 30 days after ratification by three States situated north of 20° parallel of north latitude and seven States situated south of 20° parallel of north latitude. This latitudinal line conveniently reflects the geographical split between coastal and fishing States. There is however a 'sunset' provision, whereby if three northern States have not ratified the Convention by 5 September 2003, it will enter into force after ratification by 13 States in total.

A Preparatory Conference was established at the conclusion of the September 2000 meeting and is scheduled to meet for the first time in April 2001. While expected to deal mostly with procedural and administrative issues, the Preparatory Conference also has a mandate to formulate recommendations for consideration by the Commission on issues such as scientific research on stocks, data and information collection, and a near-real time satellite monitoring system for vessels fishing on the high seas. Significantly, the Preparatory Conference may also recommend specific conservation and management measures, such as provisional harvest levels, prior to the entry into force of the Convention. While any such measures would be adopted on a voluntary basis, the inclusion of this mandate within the Preparatory Conference at least provides an overt cooperative mechanism through which Parties can respond to conservation issues in the years prior to the Convention entering into force.

## Conclusion

The new Convention represents a significant step towards conservation and management of highly migratory fish stocks. Being the first Convention to be finalized under the *United Nations Fish Stocks Agreement* it will provide a template for both the review of existing fishery Conventions as well as the establishment of new regimes.

In the Pacific context, the new Convention is extremely ambitious, given the vast geopolitical landscape it covers and the divergent interests of its likely parties. However, the fact that the key tuna resources are not generally considered to be over-fished at this time<sup>3</sup> offers a unique opportunity to put in place measures that will meet the Convention's objective of long-term sustainable use of the resources.

Two factors will be likely to prove key to the success of the Convention. First, the positive participation of the Asian fishing States in the Commission will be critical given the extent of their combined fishing activity in the region. Of particular importance will be the co-operation of Japan, the largest catcher in the region historically and a long-standing bilateral partner of many Pacific island countries. Secondly, the extent to which Pacific island countries can continue to co-ordinate the conservation and management policies for activities within their EEZs will substantially influence the measures adopted by the Commission for the high seas.

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Anna Willock, Senior Fisheries Advisor, TRAFFIC Oceania

<sup>1</sup>The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks was adopted on 4 August 1995. The Agreement requires 30 ratifications to enter into force, with 28 ratifications as at 1 December 2000.

<sup>2</sup>The South Pacific Forum includes all 14 independent Pacific island countries (Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu), plus Australia and New Zealand.

<sup>3</sup>Bigeye Tuna is the possible exception to this, with some stock assessment scenarios suggesting it is fully exploited or over-exploited.





### Medicinal uses of certain "priority species":

#### *Boscia salicifolia*

The leaves and bark of this tree species are used to treat backache and cattle diseases. The tree is widely harvested and becoming scarce.

#### *Harrisonia abyssinica*

A widely harvested shrub or tree, the roots and bark of which are taken to treat diarrhoea and sexually transmitted diseases.

#### *Prunus africana*

The bark of African Stinkwood is used to treat prostate problems. The species is extensively harvested for international trade.

#### *Warburgia ugandensis*

Stomach ache, chest pains, malaria, toothache and coughs are treated with the bark and root of this tree. This slow-growing species is also valued as timber for construction and furniture.

#### *Zanha africana*

This widely harvested tree species is depleted in Kitui and Machakos Districts. The bark and roots are taken to ease childbirth and to treat constipation and fits.

Source: Marshall, N.T. (1998).

## Traditional Medical Practitioners in Kenya: *Putting Theory into Practice*

Traditional medicine derived from wild-collected plants and animals is responsible for maintaining the health of millions of people in the east and southern Africa region. It is estimated that over 80% of people in the region rely on traditional medicine for their health. Such reliance is mainly due to the high cost of conventional medicine and the inaccessibility of modern healthcare facilities, but also because traditional medicine is often deemed a more appropriate method of treatment. In Mozambique, for example, the ratio of western doctors to patients is in the region of one doctor to every 50 000 patients, in contrast to Traditional Medical Practitioners (TMPs) where the ratio is one to every 200 patients.

As human populations increase and standards of living decline the demand for affordable and available traditional medicine is on the rise. In many areas such demand is exceeding supply and as human populations grow and habitat diminishes it can be expected that pressure on medicinal resources will increase. In addition to the conservation implications of a dwindling supply of medicinal resources, the health of millions of people living in the region is also affected.

In response to this vital health and environmental concern, TRAFFIC East/Southern Africa carried out a survey of plants and animals used for medicine in the east and southern Africa region. The survey aimed to identify in 17 countries those species in need of conservation and management attention, and to develop strategies to address conservation needs for selected species and issues. Research results and recommendations were documented in Marshall (1998).

In December 1998, TRAFFIC held a workshop in Nairobi with participants with a diversity of expertise ranging from commercial game management, economics, traditional medical practice, commercial herbal medicine production, biodiversity and conservation. These experts reviewed the results of the TRAFFIC survey, deliberated on the problem of declining wildlife medicines and developed strategies on how to address the issue. One of the key recommendations deriving from TRAFFIC's survey and workshop deliberations was that government and private action should be stimulated to propagate, breed, and sustainably harvest plant and animal species from the wild. The fact that traditional medicine is crucial to the region's healthcare and is the dominant medical system also indicated that TMP Associations represented promising fora for education and awareness, and for discussing and developing strategies to address the issue of declining medicinal resources. In order to implement this key recommendation, TRAFFIC, with financial assistance from The Rufford Foundation, initiated a 12-month project in September 1999.

The project "Developing Appropriate Awareness Materials For Traditional Medical Practitioners in Kenya" aims to collect information from TMPs on their current state of knowledge with regard to conservation of medicinal resources, and to develop appropriate initiatives to increase awareness and skills necessary to counteract the decline in species.

Initially a national questionnaire mailing was conducted to collate and document baseline data on the dynamics of traditional medicine use, species used, and conservation knowledge held by TMPs. In a bid to contact a wider audience of TMPs, the questionnaire was distributed to community groups involved in natural resource management. These communities cover a large proportion of the different cultures and lifestyles represented in Kenya. In addition, questionnaires were sent to TMP Associations throughout Kenya, and field research trips undertaken to Embu and Machakos Districts to conduct questionnaire-based field research in conjunction with District TMP

Associations and community groups. These two Districts were chosen because of their high human population and habitat clearing which has led to greater declines in medicinal resources. The TMPs in these areas were therefore more aware of problems with unsustainability of the industry. The results of the field research and questionnaire mailings were largely positive, with many groups providing highly detailed answers as to which species were considered under threat and how they felt they could best deal with the problems faced.

Outreach to TMPs confirmed that promoting propagation and undertaking education and awareness activities are required if demand for wild-collected medicinal resources is to be alleviated. A literature search on propagation techniques for plant species identified during the study as being under threat and classified as "priority species" in the propagation programme (see Table 1), resulted in some information that was augmented through consultation with forestry experts at Kenya Forestry Research Institute (KEFRI) and the International Center for Research in Agroforestry (ICRAF). However, this approach provided information for only one third of the 37 identified priority species. In order to fill the information void for the remaining priority species, a collaborative initiative was entered into with the IUCN East African Regional Office and the Peter Greensmith Nursery - one of the leading nurseries in Kenya. As a consequence, experimental germination of seeds for all remaining priority species has been undertaken and detailed propagation techniques determined by the nursery's professional horticulturists.

Information on propagation techniques derived from literature search, consultation with experts, and experimental propagation at the Peter Greensmith Nursery has been collated and documented in the *Kenya Medicinal Plant Propagation Manual*. The manual contains easy-to-read and straightforward instructions on how to propagate the priority species using simple and readily available materials. In an effort to stimulate production, propagation kits have been developed that include a copy of the manual, seedling pots, UV plastic, and seeds of priority species. The kits are economical at under USD1.00 to produce, are lightweight, and can be posted throughout Kenya for under USD0.30. Through the distribution of an awareness brochure on the project's objectives and activities, considerable interest for the kits has been shown by TMP Associations, community groups, Peace Corps/Voluntary Service Overseas volunteers and other individuals. The Peter Greensmith Nursery is responsible for producing and distributing these kits. In addition, the nursery maintains a seed bank of all priority species and has established the first medicinal plant nursery in Nairobi, selling over 30 priority medicinal species to members of the public.

Following analysis of questionnaire/field research baseline data, compilation of priority species, and development of the manual and kit, a conservation and management strategy was developed for implementation in the District of Machakos. The project aims to provide an example of successful activities that have increased the awareness and skills of TMPs and reduced the decline in medicinal resources. It is hoped that this case study will provide lessons that can be disseminated elsewhere in Kenya. The project's implementing partner is the Machakos TMP Association. Through this Association, TMP meetings throughout the District have been held to increase awareness among TMPs, refine the list of priority species, and, importantly, to obtain the views and experience of TMPs in order to develop planned activities more fully. As a result of these fora, an education and propagation programme has been implemented in four District schools. An education syllabus comprising six lecture modules on such topics as the importance of traditional medicine and conservation and development issues has been developed and incorporated into the *Kenya Medicinal Plant Propagation Manual*. Lectures have been given, for example, by the Chairman of Machakos TMP Association, guest TMPs, and horticulturists from the Peter Greensmith Nursery, at a rate of one per month at each school over six months. In conjunction with the education syllabus, all the schools have established medicinal nurseries using the propagation kits, and use these nurseries to train school children.

Activities have also centred around developing necessary mechanisms within the Association to increase the sustainability of the TMP industry in Machakos District. Feedback from TMPs confirmed that many species had declined, leading TMPs to harvest unsustainably what little medicinal resources remained, with journeys often in excess of 200 km being necessary to collect the medicinals required. In the context of such declining medicinal resources, it was found that the original mandate of the Association - to safeguard the integrity of the TMP industry in the District and ensure



The Chairman of the Machakos TMP in his office with > jars of traditional medicines on display.

Photograph: R. Barnett/TRAFFIC

LOCAL NAME (KAMBA)	BOTANICAL NAME	LOCAL NAME (KAMBA)	BOTANICAL NAME
Mukusywi*	<i>Acacia brevispica</i>	Mutumukuu*	<i>Juniperus procera</i>
Muthiia	<i>Acacia mellifera</i>	Muasi*	<i>Lannea schweinfurthii</i>
Musemei	<i>Acacia nilotica</i>	Uthunga*	<i>Launaea cornuta</i>
Musewa	<i>Acacia seyal</i>	Kyulu*	<i>Lippia javanica</i>
Kilaa	<i>Acacia tortilis</i>	Mukalati	<i>Macaranga kilimandscharica</i>
Mwooa*	<i>Albizia anthelmintica</i>	Kiembe	<i>Mangifera indica</i>
Kiluma	<i>Aloe secundiflora</i>	Muthunthi	<i>Maytenus putterlickioides</i>
Mwaluvaini	<i>Azadirachta indica</i>	Mukau*	<i>Melia volkensii</i>
Mulului	<i>Balanites aegyptiaca</i>	Mukuutu/Muvatha*	<i>Microglossa pyritolia</i>
Mwenzenze*	<i>Boscia salicifolia</i>	Yenye	<i>Ocimum kilimandscharicum</i>
Kitandambo*	<i>Capparis tomentos</i>	Mukandu*	<i>Ocimum suave</i>
Mukawa*	<i>Carissa edulis</i>	Muthata*	<i>Olea africana europaea</i>
Mukengeta	<i>Cassia spectabilis</i>	Muthingii*	<i>Ormocarpum trichocarpum</i>
Muumba*	<i>Clerodendrum eriophyllum</i>	Kiva*	<i>Pappea capensis</i>
Muvweia	<i>Clerodendrum myricoides</i>	Musaa*	<i>Pistacia aethiopica</i>
Kiuanzuki (Mung'ata)	<i>Combretum apiculatum</i>	Maia	<i>Plectranthus barbatus</i>
Ititiu	<i>Combretum collinum</i>	Kiyo*	<i>Plectranthus cylindraceus</i>
Kitungu/Mutungu	<i>Comiphora africana</i>	Mutimailu*	<i>Prunus africana</i>
Kitungati	<i>Comiphora eminii</i>	Mutaa	<i>Psydrax livida</i>
Muthinia	<i>Croton dichogamus</i>	Muketa*	<i>Rapanea rhododendroides</i>
Muthulu	<i>Croton megalocarpus</i>	Mutheu	<i>Rhus natalensis</i>
Muvingo*	<i>Dalbergia melanoxylon</i>	Wala	<i>Rubia cordifolia</i>
Munoamathoka	<i>Dichrostachys cinerea</i>	Kitumbuu	<i>Scutia myrtina</i>
Mukambua	<i>Dovyalis caffra</i>	Mukayau	<i>Salvadora persica</i>
Mwaitha*	<i>Entada leptostachys</i>	Muuw'a*	<i>Sclerocarya birrea</i>
Kivuti*	<i>Erythrina abyssinica</i>	Mukuluu	<i>Securinea virosa</i>
Mukinyai	<i>Euclea divinorum</i>	Luta	<i>Sesamum angustifolium</i>
Kithui*	<i>Euphorbia bussei</i>	Mukondu/Kikundu	<i>Solanum incanum</i>
Ndau	<i>Euphorbia gossypina</i>	Mutata	<i>Spilanthes mauritania</i>
Muvindavindi*	<i>Fagaropsis heldebrandtii</i>	Kivuavui*	<i>Steganotaenia araliacea</i>
Kikelenzu	<i>Ficus ingens</i>	Muteta*	<i>Strychnos spinosa</i>
Mukuyu*	<i>Ficus sycomorus</i>	Muuku	<i>Terminalia brownii</i>
Kiumo	<i>Ficus thoningii</i>	Mukukuma*	<i>Tarenna graveolens</i>
Mumbu (Kyumbu)	<i>Ficus walkefeldii</i>	Muthika*	<i>Warburgia ugandensis</i>
Kalaku	<i>Fuerstia africana</i>	Mutula*	<i>Ximenia americana</i>
Mutuva	<i>Grewia tembensis/similis</i>	Mukolekya*	<i>Zanha africana</i>
Mumbaaume*	<i>Haplocoelum</i> sp.	Mukenea*	<i>Zanthoxylum chalybeum</i>
Mukilyulu*	<i>Harrisonia abyssinica</i>	Muae*	<i>Ziziphus abyssinica</i>

**Table 1. List of plant species typically used in traditional medicines in Kenya, including the 37 (marked with an asterisk\*) identified during the study as "priority species".**

its sustainable growth - was not being achieved. Prior to the project, the Association issued Registration Certificates as required by law to all TMPs wanting to sell traditional medicines. Problems arose, however, in that many unqualified TMPs were registered including those that dabbled in the illegal practice of witchcraft. Registration fees amounting to over USD2600 (USD13 per annum for TMPs numbering over 200) were unaccounted for and not expended on activities to promote the Association.

Through assistance to the Association, the project has instigated a transparent accounting system. Registration fees are now deposited into a bank account and a committee meets once a month to audit income and approve expenditures. Funds generated are now being directed towards improving benefits of registering with the Association. Registration criteria are being developed that will lead to qualified TMPs only being certified. The Association has established an office with a demonstration nursery, and has initiated a number of activities that will increase the benefits to members and the overall sustainability of the industry. These include maintaining a store of all medicinal plant products that have been harvested sustainably that will be available to all members. The creation of a small laboratory capable of testing for the more common ailments such as malaria, amoebas and typhoid will be available at half the market price to patients of member TMPs. Through the provision of simple grinding equipment, TMP members will no longer need to use the wasteful and time-consuming

method of pestle and mortar to produce powders, and encapsulating equipment will enable user-friendly and efficient medicine doses to be administered. Awareness meetings held with over 150 TMPs have shown that the added benefits of being a member has resulted in a greater willingness to abide by the Association's "Rules of Conduct". Such rules include the requirement to harvest sustainably and to be associated with the propagation of priority species. All members have shown a willingness to pay an additional USD15 per annum over and above their registration fees of USD13 with the consequence that the Association has the potential to be self-financing, with a possible annual turnover of USD5600 from registration and membership fees alone.

By assisting the Machakos TMP Association in setting up the required management framework, the project has achieved considerable success in its propagation, awareness and education programme, and in increasing the overall sustainability of the TMP industry. Through implementation of these activities, considerable support and assistance has been provided by the Machakos District Education Office, Forestry Department, Ministry of Health, Kenya Wildlife Service and the District Development Officer, and the successes of the project have in part been due to this cross-sectoral co-operation and collaboration.

*Rob Barnett, Programme Officer, TRAFFIC East/Southern Africa*

*Reference: Marshall, N.T. (1998). Searching for a Cure: Conservation of Medicinal Wildlife Resources in East and Southern Africa. TRAFFIC International.*

## CITES Plants Enforcement Seminar in Taiwan

TRAFFIC East Asia-Taipei hosted a training workshop in September 2000 in Taipei, Taiwan, which aimed to strengthen awareness among enforcement officials of the international plant trade, in which Taiwan plays a major role. More than 50 delegates from various government authorities participated, including the Board of Foreign Trade, Council of Agriculture (COA), Customs, the Quarantine Bureau, and plant research institutes. Representatives from TRAFFIC International, the Royal Botanic Gardens, Kew, UK, and UK Customs provided training on licensing and trade controls, plant identification, trade trends and countering illegal trade, and set practical exercises to test delegates' skills and knowledge.

Taiwan ranked fifth in the world in imports of medicinal and aromatic plants during 1992 to 1997 (after Hong Kong, Japan, USA and Germany). During a recent TRAFFIC study (Barden *et al.*, 2000), it emerged that Taiwan is a major market for agarwood *Aquilaria*, a tree of high economic value that is fast disappearing in parts of its range owing to excessive felling; most of the agarwood imported into Taiwan is used for medicinal purposes and the manufacture of incense. Taiwan is also an important exporter of plants such as artificially propagated orchids with export volumes rivalling those of Thailand, the world's leading orchid exporter.

The workshop was the fifth in a series of international CITES workshops held in Taiwan since 1995 and addressed an important component of Taiwan's overall CITES implementation. Feedback was positive, with Customs stating its intention to incorporate plant trade control issues in future training for Customs officers and the COA announced plans to hold a similar workshop next year that will focus on CITES-listed fauna.

TRAFFIC East Asia; Barden, A., Awang Anak, N., Mulliken, T. and Song, M. (2000). Heart of the Matter: Agarwood Use and Trade and CITES Implementation for *Aquilaria malaccensis*. TRAFFIC International.



TRAFFIC International

## Shrinking Supplies in South Africa of Time-honoured Cure

A plant used for centuries by bushmen to cure wounds and intestinal disorders is under threat from over-collection in South Africa. Buchu *Agathosma betulina*, a member of the citrus family, is in strong demand from Europe and the USA. Used as a stimulant in cases of hangovers, colds and rheumatism and also as a flavour enhancer in processed foods, plant material from the species commands high prices. According to one source, the market for buchu is currently worth ZAR10-12 million (USD1.3-1.6 m) a year. In the wild, the plants grow on south-facing mountain slopes in the Cape, but poachers undeterred by the difficult terrain uproot the plants, often under cover of darkness. Cultivation of buchu in South Africa has led to hybridization among plants growing outside their natural territory, which compounds the problems surrounding conservation of this valuable plant, as hybrids are infertile.

World Wire News Release, 4 September 2000

## UK Government Buys Green

The UK Government has set in motion its undertaking to purchase timber only from legal and sustainable sources. In July 2000, the UK pledged, along with other G8 nations, to improve efforts to "combat illegal logging, including export and procurement practices".

All UK Government departments and agencies have been directed to follow set environmental policy when procuring timber. This means that timber from sustainable and legal origins - such as that certified under schemes like the Forest Stewardship Council - must actively be sought. Government departments will be required to report annually on their timber purchases and demonstrate that they have made thorough efforts to vet the operating standards of suppliers. An inter-departmental group will assist departments in choosing reputable timber suppliers as well as setting environmental targets and monitoring progress towards these.

The UK Environment Minister, Michael Meacher, stated that the aim of the government was to "give confidence to those obeying their country's laws and managing their forests responsibly that they will find a welcome market in the UK and will not be undercut by unscrupulous and illegal competitors". However, the new programme stops short of banning the purchase of timber which cannot be shown to be sustainably or legally produced. There are not yet sufficient reliable certification schemes in place around the world to meet UK demand for timber.

Department of the Environment, Transport and the Regions (UK), News Release, 28 July 2000



Some of the world's most threatened insects are openly being offered for sale in many parts of Europe. A significant proportion are of exotic species, among them Queen Alexandra's Birdwing *Ornithoptera alexandrae*, Sri Lankan Rose *Atrophaneura jophon* and the Cape stag beetle *Colophon primosi*, all of which are considered to be endangered in the wild. A number of European insects are also under threat from commercial collecting and trade but receive no protection from European Union (EU) regulations.

Many of these threatened species were among some 10 000 to 80 000 insects on sale at each of 12 insect trade fairs surveyed during a study by TRAFFIC Europe on butterflies (Lepidoptera) and, to a lesser degree, beetles (Coleoptera). The findings of the study, which was carried out between September 1996 and November 1997 are documented in *Flügel hinter Glas: Der Insektenhandel in Deutschland unter besonderer Berücksichtigung der Schmetterlinge (Lepidoptera)*<sup>1</sup>. Nine trade fairs were visited in Germany and one each in France, Switzerland and the Czech Republic; in addition, international trade data were examined, and journals specializing in entomology were consulted for offers of threatened insects. The primary aim of the project was to identify the butterfly and beetle species on offer, and to document prices, origin, quantity, the purpose of trade and the form in which specimens were presented. The study also aimed to highlight threatened and/or protected species on offer and put forward possible solutions to overcome any conservation problems encountered.

### Findings

About 81% of all CITES-listed butterflies traded worldwide were found to be imported for commercial purposes; more than half of these came from ranching or

*continued...*

In 1994 the market for beetles Coleoptera was reported to be growing rapidly and was probably as large, or larger, than that for butterflies Lepidoptera (Anon., 1994a).

Cape stag beetles *Colophon* are among the most highly-priced stag beetles on the market. The genus *Colophon* is endemic to isolated mountaintops of the south-western Cape Province in South Africa. Population estimates are likely to be very low. Based on their behaviour, and what is known of other lucanid beetles, it is presumed that *Colophon* species have an extremely low reproductive rate (Anon., 1994a).

All *Colophon* species were listed as endangered wild animals under the Cape Province's *Ordinance No. 19 1974* on 19 March 1992, with the effect of limiting legal collection, internal trade, and export from the province, except under permit (Anon., 1994b).

In 1994, the 14 species in the genus were proposed for inclusion in CITES Appendix I by the Netherlands at the ninth meeting of the Conference of the Parties to CITES. The proposal was withdrawn and South Africa agreed to include the species in Appendix III. This listing took effect on 13 September 2000 (Anon., 2000).

farming programmes, and about 11% were wild-caught. Most of the CITES-listed butterflies originated in Papua New Guinea, Indonesia, Malaysia and Australia. The legal and illegal commercial trade in insects was found to be very active in the four European countries surveyed and the sale of non-CITES butterfly species of Eastern Europe, Russia and Central Asia was found to be on the increase.

According to trade data, Germany is the fourth-largest importer of CITES-listed butterflies, after Japan, USA, and the UK. Germany also ranked second, after Canada, among countries re-exporting CITES-listed butterflies (followed by Singapore, USA, Switzerland and the UK). Most of the species in trade during the period of the study were not protected by any national or international law or regulations and therefore did not require trade permits. Nevertheless, a fairly large proportion of the species on offer were subject to domestic legislation prohibiting capture and trade without prior official permission. This applies to the Corsican Swallowtail *Papilio hospiton*, endemic to Sardinia and Corsica and protected in France, and the Papilionid butterfly *Atrophaneura lucti*, which is protected in Indonesia. The species are classified as Endangered and Vulnerable, respectively, by IUCN (Hilton-Taylor, 2000).

Some 250 butterfly species seen on sale fall under the protection of the German Federal *Species Conservation Act*, including species native to Germany which are considered to be under threat from trade, and 21 out of 37 protected beetle species were illegally offered for sale. A total of 21 out of 31 CITES-listed butterfly species (among them Apollo Butterfly *Parnassius apollo* and *Ornithoptera alexandrae*) that were recorded during the study period were banned from trade and sale according to EU regulations. In addition, as many as 14 of 55 beetle species and 39 out of 238 butterfly species that are included in the IUCN Red List were offered in the markets surveyed, including *Atrophaneura jophon* (Critically Endangered) and *Ornithoptera alexandrae* (Endangered).

Butterfly prices ranged from DM0.2 (USD0.1) for the more common species, to DM7000 (USD3400) for a pair of birdwings *Ornithoptera meridionalis* (classified as Endangered by IUCN). Exotic species far outnumbered the palaeartic (Eurasian) species for sale.

The beetle species recorded during the survey included South Africa's Cape stag beetles *Colophon* spp., of which *C. primosi* is listed as Critically Endangered by IUCN, *C. whitei* as Endangered and four others - *C. cameroni*, *C. neli*, *C. stokoei* and *C. westwoodi* - as Vulnerable, respectively. Specimens of Cerambyx Longicorns *Cerambyx cerdo* and Rosalia Longicorns *Rosalia alpina* from Europe, listed by IUCN as Vulnerable and protected in Germany, and the Ceram-

## categories



### Critically Endangered

A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.

### Endangered

A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.

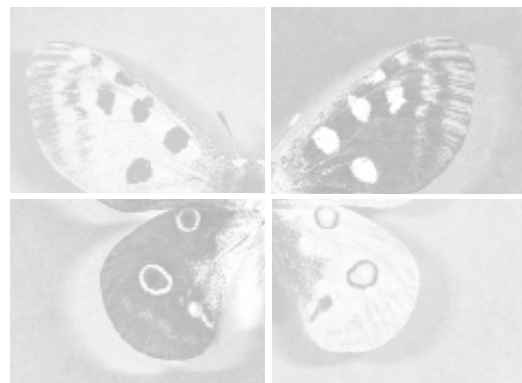
### Vulnerable

A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future.

Source: Hilton-Taylor (2000)

Photograph above: *Cerambyx cerdo* (WWF/A. sterile)

According to Van Swaay and Warren (1999), butterfly collecting in Europe is reported to have a very minor or local conservation impact with species suffering far more seriously from problems such as habitat loss or changing habitat management. However, there are some important exceptions of species which are possibly quite seriously threatened by collecting,



the Apollo Butterfly *Parnassius apollo* (above), among them. This species is still widespread in the higher mountains of Europe and mostly not threatened, but it has disappeared from many lowland localities. As a result of this overall decline, the Apollo Butterfly is considered by IUCN to be Vulnerable in Europe.

WWF/A. sterile

Butterfly species	Family	IUCN
<i>Boloria aquilonaris</i>	Nymphalidae	Not listed
<i>Boloria eunomia</i>		
<i>Boloria thore</i>		
<i>Coenonympha hero</i>	Satyridae	
<i>Colias myrmidone</i>	Pieridae	
<i>Colias palaeno</i>		
<i>Hipparchia fagi</i>	Satyridae	
<i>Limnitis reducta</i>	Nymphalidae	
<i>Lycaena dispar</i>	Lycaenidae	Lower Risk: near threatened
<i>Lycaena helle</i>		Not listed
<i>Maculinea rebelli</i>		
<i>Minois dryas</i>	Satyridae	
<i>Parnassius mnemosyne</i>	Papilionidae	

#### Beetle species

<i>Carabus olympiae</i>	Carabidae	VU
<i>Cerambyx cerdo</i>	Cerambycidae	
<i>Morimus funereus</i>		
<i>Osmoderma eremita</i>	Scarabaeidae	
<i>Rosalia alpina</i>	Cerambycidae	

Table 1. European species threatened by commercial trade, where trade controls should be considered by the EU Commission's Scientific Review Group. Source: Kudrna, 1986.

Butterfly species	Family	IUCN	Range
<i>Atrophaneura jophon</i>	Papilionidae	CR	Sri Lanka
<i>Graphium sandawanum</i>		EN	Philippines
<i>Papilio aristophontes</i>			Comores
<i>Atrophaneura lucthi</i>		VU	Indonesia
<i>Eurytides marcellinus</i>			Jamaica
<i>Graphium stresemanni</i>			Indonesia
<i>Idea electra</i>	Nymphalidae		Philippines
<i>Papilio carolinensis</i>	Papilionidae		
<i>Papilio esperanza</i>			Mexico
<i>Papilio jordani</i>			Indonesia
<i>Papilio leucotaenia</i>			Burundi
			Rwanda
			Uganda
<i>Parides ascanius</i>			Brazil
<i>Parnassius autocrator</i>			Afghanistan
			Tajikistan
<b>Beetle species</b>			
<i>Colophon primosi*</i>	Lucanidae	CR	South Africa
<i>Colophon whitei*</i>		EN	
<i>Colophon cameroni*</i>		VU	
<i>Colophon neli*</i>			
<i>Colophon stokoei*</i>			
<i>Colophon westwoodi*</i>			
<i>Macrodonia cervicornis</i>	Cerambycidae		Brazil, Peru

Table 2. Non-European species threatened by commercial trade, where listing in CITES Appendix I or II should be considered by the Parties.

EN = Endangered; CR = Critically Endangered; VU = Vulnerable

\*listed in Appendix III by South Africa, effective 13 September 2000.

bycid Beetle *Macrodonia cervicornis* (IUCN Vulnerable) from Brazil and Peru, and protected in Peru, were also seen on sale.

The status of certain non-migrant, resident insect species with low population densities and restricted ranges (e.g. *Atrophaneura jophon* and several *Colophon* beetles) seems to remain under threat by commercial collecting and trade.

## Conclusions and Recommendations

The study showed a lack of statistics available on the trade in insect species. Legal restrictions were not observed at most of the insect trade fairs surveyed and inspections by enforcement authorities and by the insect fair hosts were found to be carried out sporadically and were of inadequate quality. The report urges that all butterfly and beetle species threatened by trade (see Tables 1 and 2) should be considered for listing under the EU Wildlife Trade Regulation (see Table 1) and possibly also CITES, respectively (see Table 2). Furthermore, the report calls upon entomological associations to explore the possibilities of self-regulation and co-operation in trade-related activities. Recommendations are currently being considered for action by the European Union's Scientific Review Group, the advisory board on wildlife trade issues to the EU Commission.

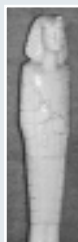
<sup>1</sup>*Flügel hinter Glas: Der Insektenhandel in Deutschland unter besonderer Berücksichtigung der Schmetterlinge (Lepidoptera)* by Peter Schütz (in German, with an English summary) is available from TRAFFIC Europe-Germany (contact details on the back page).

Roland Melisch, National Representative, TRAFFIC Europe-Germany and Peter Schütz, Consultant, TRAFFIC Europe

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## The Ivory Markets of Africa



Esmond Martin  
and  
Daniel Stiles

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In 1989, in the build-up to the seventh meeting of the Conference of the Parties to CITES, the event which ushered in a decade-long ban on international trade in elephant products, an unprecedented volume of research on the ivory trade was generated. The voluminous Ivory Trade Review Group (ITRG) report, among others, contained chapters of information on Africa. That year, the thriving ivory markets of Cameroon, Congo, Côte d'Ivoire, Gabon, Nigeria, South Africa, Zaire (now the Democratic Republic of the Congo) and Zimbabwe were all researched and documented in detail.

While the CITES decision to place all African Elephant populations in Appendix I effectively halted legal commercial international trade in ivory, it did not directly prevent trade in Africa's domestic markets. Continued scrutiny of these markets should have been a major focus for conservationists in the post-CITES ban era, but for the most part, there have only been sporadic reports over the last decade. The WWF and the IUCN/TRAFFIC studies on the impact of the CITES trade ban in selected African countries in 1992 and 1995 respectively, the US-based Wildlife Conservation Society's detailed survey during 1994-95 of the market in Brazzaville, Congo, and occasional published observations by Esmond Martin on ivory markets in Ethiopia, Sudan and Egypt stand as noteworthy efforts in this trickle of insight.

In the meantime, elephant politics have generally ignored the dynamics of these 'back door' ivory outlets and kept the spotlight squarely on CITES developments, particularly each attempt to remove any elephant population from Appendix I to allow export to East Asia. Throughout the 1990s, certain southern African countries and their prospective trading partner in Asia - Japan - have received continuous microscopic treatment as they pursued their aspiration for a legal, CITES-approved ivory trade. In sharp contrast, many African countries opposing such trade, some of which harbour unfettered and ever-leaking ivory markets, have essentially enjoyed a 'free ride' in terms of global attention and pressure for accountability. There was a time when many of those opposed to trade conveniently attributed all cases of ivory poaching to the signals and messages associated with a resumption of controlled legal trade from southern Africa, rather than to the ongoing, unregulated local ivory markets within Africa itself. A decade later, elephant politics no longer embraces such simple notions. Southern African aspirations are increasingly being judged by a different, more reasonable standard.

As the results of the eleventh meeting of the Conference of the Parties to CITES clearly indicate, the issue is no longer about where particular elephant populations lie in the CITES Appendices, or even trade in non-ivory elephant products. The contentious debate has been distilled down to the mechanics of a future trade in ivory. Simply put, how can a sustainable offtake of ivory from relatively healthy, well-managed elephant populations in one part of Africa be conducted without jeopardizing the status of the species elsewhere in its range? This puts the CITES emphasis squarely on the crafting of a strict trading regime on the one hand, and credibly monitoring its impact throughout the range of elephants on the other.

In this context, the report by Esmond Martin and Daniel Stiles, *The Ivory Markets of Africa*, is a particularly timely and welcomed contribution. Not since the ITRG study has so much information on Africa's internal ivory trade been compiled in a single volume of work. More importantly, this work puts a much-needed contemporary focus back on the 'forgotten' ivory trade within Africa. Martin and Stiles highlight in a substantive and comprehensive manner the unassailable fact that Africa's ivory markets are, with little exception, unregulated by local authorities, have a very considerable international trading dimension, and stand behind serious poaching of elephants throughout Africa.

Funded by the group Save the Elephants, in 1999 the authors visited 17 cities in 13 African countries to assess local ivory markets, specifically those in the Democratic Republic of the Congo, Gabon, Central African Republic, Cameroon, Nigeria, Côte d'Ivoire, Senegal, Chad, Djibouti, Ethiopia, Zimbabwe, South Africa and Mozambique. To complete the picture, data from Martin's previous visits to Egypt and Sudan in 1997 and 1998 were included in the report. Collectively, Martin and Stiles document nearly 110 000 ivory items for sale in some 650 retail outlets across the continent. They also catalogue 600 ivory carvers in more than 70 separate locations within Africa. Still, they have only covered part of the continent's ivory trade picture. Angola, Congo, Ghana, Malawi, Togo and others could all be added to the roll call of Africa's ivory markets.

The good news is that, in general, ivory trade volumes, prices, the number of outlets and the number of carvers have declined in most countries surveyed when compared to the situation a decade ago. In itself, this is not a surprising development. The late 1980s was a 'heady' period, with the highest ivory prices ever recorded just prior to the CITES ban. External export markets are always more lucrative and, when they become difficult to access, local demand can only pick up the slack up to a point. Political instability, civil unrest and war have further impacted many markets, including the Democratic Republic of the Congo, Central African Republic and Ethiopia where the lack of foreign tourists is cited as the principal reason for the downturn.



Still, the authors believe that ivory sales have actually increased in recent years in other selected locations such as Lagos, Nigeria, Abidjan, Côte d'Ivoire, and Cairo, Egypt. The fact is that even currently depressed markets have the resilience to rebound if and when the buyers return. The report's ivory price data give valuable insight into current trade dynamics. Interestingly, the further one moves away from key ivory source countries such as the Democratic Republic of the Congo and Central African Republic, prices increase, reaching their peak in Dakar, Senegal and Cairo, the markets furthest away.

How significant is this trade? In the first place, the authors clearly identify the main buyers as foreign tourists, diplomats, aid workers and military personnel. At some point, these consumers return to their home countries - predominantly in Europe or Asia - with their ivory treasures, and therein lies a CITES violation at both ends of the trade. Data in the CITES monitoring system - the Elephant Trade Information System (ETIS) - indicate that some of these personal effects end up as confiscations, but the vast majority are likely to evade existing trade controls successfully.

Of equal concern, many of the major African markets fall in countries which cannot possibly support their internal trades with ivory from their own diminished elephant populations. Nigeria, Côte d'Ivoire, Senegal and Ethiopia all depend upon an ivory supply from neighbouring countries to support the major ivory curio trades in Lagos, Abidjan, Dakar and Addis Ababa. And Egypt is not even an elephant range State. There is little doubt that these markets depend upon an illicit, and probably unsustainable, flow of ivory from cross-border sources.

The almost total lack of regulation and law enforcement is a common theme in country after country. The one good example is Zimbabwe. There, the authors point out, "not only do the government authorities have thorough regulations on the internal ivory trade, but the government actually rigorously enforces them". And South Africa gets high marks too, but elsewhere "officials rarely intercept illegal consignments of raw ivory because they do not have adequate manpower, resources or commitment". In the face of "a large movement of illicit ivory, especially from Central Africa, to neighbouring countries", this status quo is a very worrying state of affairs. Anyone interested in elephant conservation should be actively agitating for regulation and accountability in these markets.

Designed as a broad trawl through the continent, the Martin and Stiles study is unable to assess turnover on the basis of quantitative data, hence their very sensible call for an ongoing monitoring effort. But consider the earlier work of two Congolese students, Yves Constant Madzou and Antoine Moukassa, in the mid-1990s for the Wildlife Conservation Society. Based upon year-long observations of only three desk-top sized outlets selling ivory curios in Brazzaville, Congo's main tourist market, they documented the sale of 821 kg of worked ivory products, a volume certainly representing over a tonne of raw ivory from something like 80-100 elephants. Such data may not be representative of all African ivory markets today, but it certainly raises the spectre that collectively such commerce consumes tonnes and tonnes of ivory and hundreds and hundreds of elephants throughout the continent on an annual basis.

Dealers in Addis Ababa, for example, in the past and yet again in this report, continually cite Kenya as one of the principle sources of the nearly 10 000 ivory items found for sale in Ethiopia's capital in June 1999. Yet, a few months later at the eleventh meeting of the Conference of the Parties to CITES, Kenya attributed recent elephant losses in their country exclusively to the one-off ivory sale to Japan from three southern African countries. Martin and Stiles' report serves as a reminder that Kenya's real problem is probably just a border-crossing away.

Martin and Stiles are certainly at their best with detailed descriptions of the markets they visited. The report falters, however, when the authors try to assess and interpret the perceptions of selected vendors and craftsmen about their impressions of recent events under CITES. Their work in this regard is largely *ad hoc*, insufficiently rigorous and ultimately inconclusive, falling far short of the kind of attitudinal survey that would satisfy the social scientist. To their credit, the authors have far too much integrity to blame southern Africa's CITES-approved, one-off ivory sale to Japan for the ills of the markets they describe. These markets existed long before ivory trade was regulated under CITES, and their continued existence is dependent upon many variables that remain independent of the CITES context.

In the end, the Martin and Stiles report stands as a much needed wake-up call on Africa's domestic ivory markets. No one can doubt that they represent clear-cut international and regional trade dynamics which defy CITES restrictions, and that they seriously undermine elephant conservation efforts throughout the continent. With this report perhaps the far-reaching negative impact of most African ivory markets will finally be appreciated and garner strong remedial action. In the meantime, the call for continued monitoring is right on target.

Tom Milliken, Director, TRAFFIC East/Southern Africa



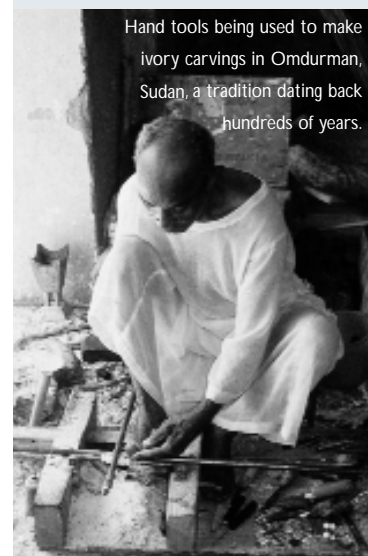
Photographs from top:

Ivory figurines of pharaohs and their queens, carved in Cairo, Egypt.

Ivory on sale in Maputo, Mozambique, where the internal trade in worked ivory items is legal.

Far left, bottom: ivory items from Ethiopia and Somalia, on sale in Djibouti.

Photographs: Esmond Martin



Hand tools being used to make ivory carvings in Omdurman, Sudan, a tradition dating back hundreds of years.

## Policy Matters

TRAFFIC has been involved in the organization of two recent events which aimed to shed light on important wildlife trade policy issues.

The first, a workshop on "the Precautionary Principle in Wildlife Conservation", was organized by the Africa Resources Trust, the IUCN/SSC Wildlife Trade Programme, the IUCN Environmental Law Centre, and TRAFFIC International. It was held on 6-7 July 2000 at the Lauterpacht Research Centre for International Law of the University of Cambridge, with about 25 participants with expertise in environmental law, policy formulation, conservation science and conservation practice. Participants discussed the importance, formulation, role and problems of implementing the Precautionary Principle in wildlife conservation. Case studies of good and bad practice were discussed and five guidelines for application of the Precautionary Principle received wide support.

i) The potential risks of alternative courses of conservation action should be assessed when applying the Precautionary Principle: situations should not be seen as a dichotomy between action and inaction;

(ii) Outcomes of the decision should be closely monitored, with this information being fed into frequent reviews of the decision;

(iii) Scientific evidence should be closely monitored, and the decision should be frequently reviewed in this light;

(iv) Justifications of applications should be as explicit as possible: this can avert conflict through making decisions transparent, and also allow challenge on specific elements of the decision;

(v) As decisions are affected by a complex and uncertain variety of factors, emphasis should be placed on making the process leading to the decision as democratic and transparent as possible.

A summary report is available on [www.traffic.org](http://www.traffic.org).

The second event was a workshop on "CITES and WTO Trade Rules", held at Hughes Hall, Cambridge, on 29 September 2000. Sponsored by TRAFFIC International, Africa Resources Trust, the UK Department of Environment, Transport and the Regions, the European Commission, the Lauterpacht Research Centre for International Law and Hughes Hall, this event drew about 40 participants from a wide variety of organizations, including representatives of the World Trade Organisation, the CITES Secretariat, the UK Government and the European Commission. Discussion focused on the utility and equity of the use of trade

restrictions to address wildlife trade-related conservation problems, the likelihood of conflict between WTO and multilateral environmental agreements (particularly CITES) and the range of strategies that might be employed to resolve any such conflicts. A summary of the workshop presentations and discussions is also available on [www.traffic.org](http://www.traffic.org).

TRAFFIC plans to collaborate with the Africa Resources Trust, the IUCN/SSC Wildlife Trade Programme and others in organizing further policy discussion fora in 2001.

*Steven Broad, Executive Director,  
TRAFFIC International*

## French-Polish Co-operation

On 30 May 2000 the Direction Générale des Douanes et des Droits Indirects (DGDDI) organized a reception in Paris with officials from Poland's central Customs office in an exercise of co-operation aimed at improving enforcement of EU regulations. During the event, some 80 specimens of CITES-listed species destined for a public awareness exhibition in Poland, were placed on display. The items had been seized throughout France since 1992 and included turtle shells, ostrich eggs, carved ivory, finished leather goods made of reptile skins and articles derived from Tigers and Tibetan Antelopes. The pieces are to be exhibited in Warsaw in an effort to draw the public's attention to wildlife trade regulations and to assist Poland in its efforts to enforce EU CITES regulations.

*TRAFFIC Europe*

## Hong Kong Improves CITES Controls

From 16 November 2000, the importation, export and possession of specimens of artificially propagated CITES-listed plant species and medicines containing highly endangered animal species is subject to control in Hong Kong, following an amendment to the *Animals & Plants (Protection of Endangered Species) Ordinance, Cap. 187*. Exemptions to these controls include artificially propagated CITES-listed plants accompanied by valid export permits, the possession for commercial purposes of artificially propagated CITES-listed plants subject to permission of the authorities, and the importation, export and possession of personal effects of artificially propagated plant species.

*Agriculture, Fisheries & Conservation Department (Hong Kong) Press Release, 10 November 2000*



## The 11th Meeting of the Conference of the Parties to CITES

The 11th meeting of the Conference of the Parties to CITES took place at UNEP headquarters in Gigiri, Kenya, from 10 to 20 April 2000. The approximately 1400 participants from Parties, non-Party States, inter-governmental organisations and non-government organizations faced an extremely full agenda. The meeting considered 61 proposals to amend Appendices I and II of the Convention, the principal lists of animal and plant species subject to CITES trade controls. The meeting also discussed 59 other documents on a wide range of topics, including a new strategic plan for the future of the Convention.

Overall, the Conference made significant headway on most agenda topics. Perhaps among the greatest achievements were a hard-won compromise on trade in African Elephant products, the detailed examination of persistent illegal trade in Tiger products, greater engagement with resources security issues such as bush meat and medicinal plant trades, and the adoption of the new strategic plan. Two major disappointments stand out: the complete lack of progress in clarifying the niche of CITES in addressing unsustainable trade from marine fisheries; and the failure of the Parties to match their ever more ambitious conservation goals under the Convention with a significant increase in their commitment of financial resources to the CITES budget.

The tone of the meeting was set by the opening comments made by CITES Secretary-General, Willem Wijnstekers, CITES Standing Committee Chair, Robert Hepworth and UNEP Executive Director, Klaus Topfer. Each stressed the considerable achievements of CITES since the mid-1970s and its continuing relevance among other multilateral environment agreements and wider sustainable development efforts today. Kenyan President, Daniel arap Moi, also addressed the Conference, welcoming delegates to Kenya and stressing his country's dedication to the implementation of CITES. Bagher Asadi took the Chair of the Conference.

### Reports of Committees

The outgoing Chair of the Standing Committee presented a comprehensive report on a very busy inter-sessional period. He stressed the immense effort

dedicated to the follow-up to the decisions on elephant trade taken at the 10th meeting of the Conference of the Parties, including the adoption of formal monitoring systems to track illegal elephant hunting and trade. Other major issues addressed by the Committee had been Tiger conservation and trade, compliance problems in some Parties and the development of the strategic plan. The Animals Committee Chair, Robert Jenkins, drew particular attention to work on swiftlet and shark trade and underlined the continuing importance of the significant trade process. His counterpart, the Chair of the Plant Committee, Margarita Clemente, stressed the need to continue review of CITES plant listings and the importance of identification materials to assist enforcement efforts.

### Evolution of the Convention

This item was opened with a report prepared by the Secretariat presenting substantial progress with implementation of 34 Decisions of the 10th meeting of the Conference of the Parties derived from the Action Plan to improve the effectiveness of the Convention (itself rooted in an external review completed prior to the 10th meeting). Next, the Secretariat introduced the results of an intensive strategic planning process carried out since the 10th meeting: first a Strategic Vision through 2005 (including a strategic plan); and the other an Action Plan to meet the challenges of the strategic plan. Adopted by consensus, despite some concerns about resource implications, the strategic plan and its associated Action Plan (**Doc 11.12.2**) addresses seven goals: 1. enhance the ability of each Party to implement the Convention; 2. strengthen the scientific basis of the decision-making process; 3. contribute to the reduction and ultimate elimination of illegal trade in wild fauna and flora; 4. promote greater understanding of the Convention; 5. increase co-operation and conclude strategic alliances with international stakeholders; 6. progress towards full global membership; 7. provide the Convention with an improved and secure financial and administrative basis. Finally, under this same agenda item, the Parties noted two further documents. The first presented an update from the Secretariat on its efforts to ensure co-operation

and synergy with the Convention on Biological Diversity (CBD) and other biodiversity-related conventions (**Doc. 11.12.3**). The other, presented by France, argued that financing for implementation of the Convention, specifically for implementation of the provisions contained in Article IV, paragraph 3, concerning the monitoring of populations of species listed in Appendix II, is insufficient even with additional voluntary contributions from the Parties and assistance provided by donors (**Doc. 11.12.4**). After debate, it was agreed that the Standing Committee would form a working group to review funding mechanisms.

The Budget Committee sessions concentrated on the CITES Secretariat's **Budget Proposals for the Period 2001-2002 and 2001-2005 (Doc. 11.10)**. The greatest concern expressed by Parties was the steep increase (over 50% for the triennium) in Party contributions requested by the Secretariat to fund its recruitment of three staff additional to the seven approved by the Standing Committee. The Parties were reluctant to countenance the increase requested, and, by rejecting funding of these three posts (**Doc. 11.10.3 (Rev. 1)**) plus three posts previously approved, a 20% reduction of selected administrative budget lines and the reduction of the Trust Fund to a base of CHF1 million, the increase was limited to just over 6% for 2001. The Committee approved five new posts previously approved by the Standing Committee at its 40th and 42nd meetings and agreed that, during the biennium 2001-2002, funding required for two of these posts will be drawn from the available balance in the CITES Trust Fund, and one of these posts may be funded from the biennium budget from cost savings, if available. The modified budget was approved by the Committee and subsequently by Plenary.

The Conference of the Parties has yet to adopt guidance on the interpretation and application of **Introduction from the sea (Doc. 11.18)** (the transportation into a State of specimens which were taken in the marine environment not under the jurisdiction of any State), despite this issue having implications for listing proposals involving currently listed marine species, transfer of any whale populations to Appendix II, and any future listing of commercially important fishes. In **Doc. 11.18** and its annexes, Australia proposed a draft resolution to aid interpretation of the term 'introduction from the sea', implementation of the provisions of Articles III and IV that relate to it, the effect of Article XIV, consistency with previous resolutions, and international co-operation. The draft resolution also presented a definition for 'marine environment not under the jurisdiction of any State', based on definitions within UNCLOS (United Nations Convention on the Law of the Sea).

To refine the proposed resolution, Committee II established a working group chaired by Australia, and included Brazil, Canada, Cuba, Japan, Mexico, Norway, Portugal (EU), USA, and several NGOs including TRAFFIC. Unfortunately no consensus

was reached after the first meeting and the chairman requested more precise instructions from the Chair of Committee II on the terms of reference and the mandate of the group. After a second meeting, the chairman presented a revised draft resolution (Com. 11.17) and draft decisions (Com. 11.18) to the Committee. The draft resolution was supported by several Parties, but was opposed by Antigua and Barbuda, Belize, China, Iceland, Japan, Norway, Saint Lucia, Tunisia, Uruguay and Venezuela. At the request of Antigua and Barbuda and Japan a vote by secret ballot was held. The proposed resolution was rejected in a vote of 36 in favour, 50 against and 11 abstentions. Unfortunately, the Chair of Committee II included the draft decisions of Com. 11.18 within the vote, though this was not made clear when the vote on Com. 11.17 was taken. This meant that the decisions directed to the Secretariat and the Standing Committee that would have *inter alia* helped clarify conformity of CITES requirements with fisheries management documentary requirements and examine implementation issues relating to introduction from the sea prior to the 12th meeting of the Conference of the Parties, were not discussed.

The **Report on national reports required under Article VIII, para 7(a) of the Convention (Doc. 11.19)** was introduced by the Secretariat. Annex 2 of the document contained a detailed synopsis of annual reporting by the Parties since the 10th meeting of the Conference of the Parties. The Secretariat specifically attempted to address the problem of late submission and the poor quality of the reports and the practice of exceeding export quotas, problems that seriously undermine the effectiveness of the Convention. It was noted that no real improvement had been made in remedying these problems over time. The discussions focused on the draft decisions proposed in Annex 1 of the document, which impose CITES trade embargoes on Parties that fail, on three consecutive years, to submit adequate reports on time. Interventions were made by 12 Parties and two observers. Some Parties expressed their need for help in producing annual reports. The majority of Parties were in favour of the decisions proposed. Some concerns were raised that those Parties most in need of assistance to meet their CITES obliga-



Members of the TRAFFIC Network attending the 11th meeting of the Conference of the Parties to CITES

C-Allan/TRAFFIC

tions were the ones that would be severely penalized. The Secretariat explained that support was offered to help those Parties submit reports, even to the extent of submitting all permits to the World Conservation Monitoring Centre for compilation of the data. It would be the responsibility of the Standing Committee to determine whether a country had failed to meet their reporting obligations, and whether to impose penalties. These explanations were satisfactory and the draft decisions were approved. Most Parties realised the significance of this problem, and were willing to accept the potential penalties that could be imposed in future.

The agenda items on CITES enforcement began in Committee II with **the Review of alleged infractions and other problems of implementation of the Convention (Doc. 11.20.1)**. The Secretariat introduced a brief summary of the main issues relating to illegal trade, enforcement actions, specific infractions cases and permit confirmation matters that have arisen since the 10th meeting of the Conference of the Parties. The Annex to the document contained guidelines on issuance and acceptance of permits in a form similar to a checklist. The style, content and format of the report were very different from infractions reports of recent years, to take into account the concerns of the Parties over the sensitivities of the issue. The discussion focused on the guidelines, which were acknowledged for their usefulness and garnered support, with some recommendations for their further development. TRAFFIC suggested that in future the report could be developed into a strategic tool for determining areas of focus for applying remedial measures and resources. The Secretariat agreed to circulate the Guidelines as a Notification to the Parties and the comments from TRAFFIC would be taken into account for the future.

**Doc. 11.20.2**, introduced by the Secretariat on the **Implementation of Resolutions**, again emphasized the poor performance of Parties in meeting the needs of the Convention. In November 1999, all Parties were asked to inform the Secretariat of their implementation of Resolutions still in effect to enable the Secretariat to report to the 11th meeting of the Conference of the Parties. By the time of the 11th meeting, only one Party (later revealed to be Malta), had responded to this request. The Annex to the document detailed a proposed decision to enable the process to be taken further in light of the poor response. The Secretariat proposed that it should assess all information from the Parties concerning their problems in implementation of Resolutions in effect. The findings would be produced for the Standing Committee in 2001 and would outline potential solutions where appropriate. The decision was adopted after some discussion on problems with certain Resolutions.

A document attempting to consolidate five resolutions relating to cetaceans had been prepared by the Secretariat for the 10th meeting of the Conference of the Parties, as part of the overall resolution consolidation

process, which aims to rationalize previous Conference agreements. However, there was considerable disagreement between the Parties and consideration of the document was deferred until the 11th meeting. After some debate over the cetacean section, **Doc. 11.17 Consolidation of Valid Resolutions - Annex 1: Conservation of cetaceans, trade in cetacean specimens, and relationship with the IWC** was adopted in plenary (Resolution Conf. 11.4). Resolutions on cetaceans included in the consolidation included: Resolution Conf. 2.7 (Rev.) Relationship with the IWC; Resolution Conf. 2.8 Introduction from the Sea; Resolution Conf. 2.9 Trade in Certain Species and Stocks Protected by the IWC from Commercial Whaling; Resolution Conf. 3.13 Trade in Whale Products; and, Resolution Conf. 9.12 Illegal Trade in Whale Meat.

The intent of a draft resolution **Relationship with the IWC (Doc. 11.15.1)** submitted by Japan and Norway was to highlight that CITES has its own criteria for determining species listings and that CITES decisions on the trade in Great Whales should not be linked automatically to decisions taken at the IWC. As at the 10th meeting of the Conference of the Parties, the proponents' position was that the existing IWC moratorium on commercial whaling was not supported on scientific grounds and, in turn, should not be used to support the CITES Appendix I-listing of certain cetacean species. In contrast, another draft resolution **Reaffirmation of the Synergy between CITES and the IWC (Doc. 11.15.2)** submitted by the USA restated the relationship between the IWC and CITES and urges the Parties to continue existing co-operation. The draft resolutions were introduced consecutively and extensive debate followed. Numerous Parties made interventions as did the current Chairman of the IWC who recognized the importance of existing co-operation between the two treaties and asked that CITES continue to support the IWC. The Committee II Chairman deferred further consideration of the drafts until later in the meeting at which time **Doc. 11.15.1** was rejected in a vote by secret ballot with 31 votes in favour, 49 against. At that point, the USA withdrew **Doc. 11.15.2** from consideration.

On the theme of **National laws for implementation of the Convention**, the Secretariat outlined its overview of **the National Legislation Project (Doc. 11.21.1)**, started in 1992 and which to date included three phases in documenting and assessing the progress of Parties in establishing national legislation to implement CITES. Parties are categorized (1, 2 or 3) by the level of appropriate legislation in place which, in the past, some Parties have interpreted as implying criticism. The Secretariat explained the difficulties for the Parties in developing legislation and the tremendous workload of reviewing it for the project. A new strategy was proposed to focus on supporting the Parties in developing legislation rather than emphasis on reviewing their status. A legal capacity-building strategy was proposed in three 'building blocks': development of technical

documents, organization of regional workshops and support to law-makers and enforcement bodies. The Secretariat put forward a draft decision in Annex 3 of the document that outlined the future steps to be taken with the new strategy. The Parties expressed overwhelming support for the document proposed. Many Parties requested assistance with the development of their national legislation. A productive discussion emerged on the best practices for reviewing and developing legislation and several Parties offered assistance to the process. The document and decision were agreed with minor amendment.

The National Legislation Project had identified Parties that did not have adequate CITES implementing legislation and were subject to significant amounts of CITES trade. Despite repeated offers of assistance and reminders by the Secretariat, certain Parties were identified as being negligent in attempting to develop or improve their legislation in a document on **Measures to be taken with regard to Parties without adequate legislation (Doc. 11.21.2)**. The document provided some background to the history of the particular problems and explained that of seven Parties that had been identified in Phase 2 of the National Legislation Project, four had a sound justification, or had made resounding efforts to improve. Some Parties had not done so and were singled out for attention and threatened with punitive measures. Following this attention, Egypt managed to meet the requirements by establishing adequate legislation in time for the deadline set by the Standing Committee. Guyana had had punitive measures imposed for missing the deadline, but had rapidly brought adequate legislation into effect and the direction for Parties to refuse import from and export of CITES specimens to Guyana was lifted. Unfortunately, Senegal had been unable to effect adequate legislation and punitive measures were imposed on 30 October 1999. The draft decision proposed measures to deal with the four Parties that were subject to assessment under Phase 3 of the National Legislation Project and did not have adequate legislation. A deadline was set by which time the Parties should have adopted adequate legislation, and support was offered by the Secretariat to bring this about. The penalties to be imposed were laid out, should Parties fail to meet the 31 October 2001 deadline. Other Parties that needed to adopt adequate legislation by the 12th meeting of the Conference of the Parties were also identified. Some discussion ensued on the wording of the decision and the deadlines imposed for these other Parties. An informal group was formed that made amendments to the draft decision and imposed tighter deadlines. The revised decision was adopted as amended.

Switzerland presented document **Doc. 11.24** concerning a draft resolution relating to the **Use of Annotations in the Appendices** on behalf of the Standing Committee, and in response to Decision 10.70 of the 10th meeting of the Conference of the Parties, which called for a clarification of the use of annotations. The draft resolution

proposed to divide existing and future annotations into two categories: “reference annotations” that contain only information (asterisks \*/\*\*; p.e. “possibly extinct”; nomenclature synonyms) and “substantive annotations” which are part of the species listing (inclusion or exclusion of populations, (sub-) species, or groups of species, with or without quota; specified specimens, with or without quota). The main practical difference lies in the way these can be modified, and in the follow up review when a species is transferred from Appendix I to Appendix II subject to substantive annotations. The draft resolution proposed that reference annotations can be amended or deleted by the Conference of the Parties or the Secretariat as required. Substantive annotations relating to species listed in Appendix I and II could only be introduced, deleted or modified by the Conference of the Parties. In the case of a transfer of a species from Appendix I to Appendix II subject to a substantive annotation, the Secretariat is directed to collect any credible information on illegal trade or poaching of such species for at least four years, and to report to the Standing Committee. Specimens that are not specifically included in such a transfer annotation would be regulated as if they were of a species included in Appendix I. TRAFFIC supported the general approach provided in the draft resolution and suggested that Parties consider harmonizing the language and terminology used in annotations. The draft resolution, with minor text amendments put forward by Switzerland, was approved by consensus (Conf. 11.21).

Delegates reviewed a report on **Conservation of and trade in Tigers (Doc. 11.30)** presenting the results of the Standing Committee review of Tiger trade issues carried out in compliance with the objectives of Resolution Conf. 9.13 (Rev.) and the reports of the Technical and Political Missions to selected range and consumer States. On directions from the Chair of Committee I, a working group chaired by the USA reviewed the report of the political missions, and suggested amendments to some of its recommendations. Among the decisions taken and later adopted by the Conference was a key amendment to Resolution Conf 9.13, calling for all Parties and non-Parties, especially Tiger range and consumer States, to adopt comprehensive legislation and enforcement controls as a matter of urgency, with the aim of eliminating trade in Tiger parts and derivatives, in order to demonstrably reduce the illegal trade in Tiger parts and derivatives by the 12th meeting of the Conference of the Parties. The recommendations of the Mission reports, as amended, were adopted as formal decisions and a Tiger Enforcement Task Force (TETF) was established, with the objective of combating illicit trade in Tiger parts and Tiger derivatives, the first time such a task force has been established by a meeting of the Conference of the Parties.

A report on **Conservation of and trade in rhinoceroses (Doc. 11.32)** addressed progress made by rhino range States and other Parties on recommendations and

requests contained within Resolution Conf. 9.14. It further expressed the Secretariat's concerns that Resolution Conf. 9.14 was particularly hard to evaluate as no reporting mechanisms were included and no role had been allocated to the Secretariat. The Secretariat recommended repeal of this Resolution. It was noted that since Resolution Conf. 9.14 had been written, commendable efforts in some range States and consuming States has led to rising rhino populations. Indeed, three of the five species have continued to increase in number over the last five years. While the situation for these particular species had become less urgent, some Parties agreed that the Resolution was still very relevant since four species were still threatened with extinction. After a working group discussion, a revised Resolution was proposed and adopted, containing many of the previous directives to Parties and the Standing Committee regarding horn stocks, legislation, law enforcement, consumer States and continued development of standardized indicators of success. It also recognized user groups other than traditional-medicine communities. The new Resolution (Conf. 9.14 (Rev.)) also included a reporting mechanism in which Parties are required to submit information on the status of rhino populations, illegal activities, legislation, conservation action plans, law enforcement and horn stocks. The Secretariat will collate the reports and present them to each meeting of the Conference of the Parties.

**Doc. 11.34** on the **Conservation of and control of trade in Tibetan Antelope** was submitted by China - the main range State for *Pantholops hodgsoni* - and was based upon a draft resolution discussed by government representatives, the CITES Secretariat and NGOs at the International Workshop on the Conservation of and Control of Trade in Tibetan Antelope, held in Xining, China, 12-14 October 1999. The purpose of the original document received widespread support from the Parties at the meeting although attention was drawn to the need for more focused wording.

The revised document included recommendations to the Parties to adopt comprehensive legislation to eliminate trade; to treat products claiming to be 'shahtoosh' or claiming to contain Tibetan Antelope specimens as readily recognizable derivatives of the Tibetan Antelope, as provided for in Resolution Conf. 9.6; and to increase public awareness activities. Parties and non-Parties were also recommended to adopt a registration system to prevent stocks of Tibetan Antelope parts and raw materials from re-entering trade. The purpose of such a registration system, however, remains unclear as the registration system does not include shahtoosh shawls. Parties were also urged to establish a network for the exchange of information regarding, amongst other things, smuggling routes and methods, and techniques for the identification of Tibetan Antelope parts and derivatives.

The Secretariat, with assistance from interested bodies, was directed to provide funding and technical assistance to range States to improve anti-poaching efforts, to carry out population censuses and to formulate

a conservation strategy. This directive is an important initiative and should provide concrete steps to enhance conservation strategies for the Tibetan Antelope.

The Resolution (Conf. 11.8) was adopted by consensus and provides an important framework to guide conservation initiatives by the Parties, inter-governmental organizations and NGOs.

The report on **Trade in fresh water turtles and tortoises to and in South-east Asia (Doc. 11.35)** provides a description of the trade and problems of monitoring, control and enforcement within South-east Asia. However, this report did not have the benefit of information, deliberations and results of a workshop on the Trade of Freshwater Turtles and Tortoises organized by Wildlife Conservation Society, TRAFFIC and WWF that was held in Phnom Penh, Cambodia, in December 1999. There was a move from the floor to develop a resolution to highlight the issues identified in **Doc. 11.35**, and push for action from CITES. Many of the recommendations from the Phnom Penh workshop were felt to be important and as they were the results of consensus of NGOs, governments and experts from the region, should be adopted and included in the resolution. A working group convened to draft a resolution felt that while the emphasis of the document and workshop was on Asian species, CITES should expand the scope of the resolution to cover species from other regions. All the Parties were fully supportive of the actions proposed which included the need for greater enforcement efforts, biological research, review of national legislation, greater public awareness, and sustainability. The Parties also called on the Secretariat to convene a technical workshop possibly with funding from industry, and to encourage NGOs to work at increasing the capacity of the government agencies, and work towards enhancing awareness, and for the Animals Committee to carry out a significant trade review of species already listed in CITES (Resolution Conf. 11.9).

**Doc. 11.36** on the **trade in seahorses and other members of the family Syngnathidae** submitted by the USA and Australia was discussed and further developed in a working group. A draft decision directed to the CITES Secretariat and to the Animals Committee was adopted (Com. 11.6). Parties agreed that activities for the conservation of seahorses should include: the organization of a technical workshop to review the biological status, the catch/bycatch and trade in seahorses and other syngnathids; gathering information provided by Parties on domestic measures for their conservation; to encourage scientific research; and, exploring ways to enhance the participation of fishers, traders and consumers in conservation and sustainable use actions. The Animals Committee, with the assistance of experts, was assigned the task to prepare a discussion paper, for consideration at the 12th meeting of the Conference of the Parties, on the outcomes of the workshop and guidance for the conservation and sustainable use of these species.

The CITES Secretariat presented a document that describes how Resolution Conf. 8.9 has been implemented since the 10th meeting and comprises a new list of Appendix II species to be considered for the **significant trade review of sturgeon (Doc. 11.41.1) (Com. 11.4)** of wild-caught individuals. The Russian Federation proposed a decision for the inclusion of sturgeon in the list of species proposed by the Secretariat. Following informal consultations between the Russian Federation and other important sturgeon range States, another decision was submitted several days later to the Chairman of Committee I (Com. 11.4). Additional aspects related to Resolution Conf. 10.12 Conservation of Sturgeon, had been added to the text, particularly concerning the establishment of annual export quotas for sturgeon specimens and their submission to the CITES Secretariat prior to 31 December of the preceding year. The USA, supported by Canada, reopened the debate at the plenary session proposing a few amendments among which were the inclusion of the words "where appropriate" regarding the export and catch quotas for sturgeon specimens to be established per basin, or biogeographical region. Further, Parties engaged in trade in sturgeon and paddlefish specimens should report progress made on the implementation of Resolution Conf. 10.12 to the Secretariat prior to the 18th meeting of the Animals Committee. The Secretariat has been assigned the duty to prepare a report on Parties' progress with recommendations to be submitted to the Animals Committee at its 19th meeting. The Animals Committee should decide upon actions to be taken by Parties on the implementation of CITES and regional management strategies for sturgeon and paddlefish, and report back to the 12th meeting of the Conference of the Parties.

**Progress in the conservation of *Swietenia macrophylla* (Big-leafed Mahogany) (Doc. 11.38.2)** was a summary report on the first meeting of the Mahogany Working Group (MWG) established at the 10th meeting of the Conference of the Parties to examine the status, policies and management, as well as trade and co-operation in relation to the species. The first meeting of the MWG was held in Brasilia in June 1998, under the framework of ACT (Amazonian Co-operation Treaty), and established a series of recommendations and steps to improve species management, information, and international trade co-operation. The document submitted by Brazil requested Parties to take the appropriate steps to co-operate in the implementation of the recommendations adopted by the MWG. This document was presented and discussed during the CITES Regional Meeting for Central, South America and the Caribbean, held in Quito in February-March 1999, and during the 11th meeting of the Conference of the Parties.

The main concern in regional and plenary discussions was that the summary report was not a consensus document and did not reflect the situation of the species and the needs of all range States and consumer countries, nor did it present the achievements or

concrete actions for the conservation of the species that have been taken since the 10th meeting of the Conference of the Parties. There were no clear priorities or targets under the MWG auspices. Discussions also indicated that Appendix III is not being well implemented, in part owing to the fact that few countries included the species in Appendix III, causing confusion between range States, consumer countries and re-exporters regarding the documentation required for trade. It was requested that other range States include their mahogany populations in Appendix III.

These concerns led to the establishment of a new MWG, involving the participation of all range States, principal importing countries, and a representative to be designated by the CITES Plants Committee. The new MWG will take into account regional initiatives, progress made by countries that have listed the species in Appendix III, and the need to share information, make inventories and joint initiatives. Among the goals of this group are the review of current and potential Appendix III listings, trade analysis, review studies of the status of the species, encouraging exchange of information and presenting a report of its findings at the 12th meeting of the Conference of the Parties. The group will meet within one year of the 11th meeting with relevant technical organizations and experts such as International Tropical Timber Organisation, Intergovernmental Forum on Forests, the United Nations Forum on Forests, Food and Agriculture Organization of the United Nations, TRAFFIC, IUCN, among others. The fulfilment of these activities will depend on the availability of funds.

A report on **Assistance to Scientific Authorities for making non-detriment findings (Doc. 11.40)** was prepared by the Secretariat and described measures undertaken since the 10th meeting in response to Resolution Conf. 10.3 which encourages "the Parties, the Secretariat and interested non-governmental organisations to develop and support workshops/seminars specifically to improve the implementation of CITES by Scientific Authorities." The principal focus of the document was two workshops organized by IUCN in Hong Kong (1998) and Cambridge (1999) and a resulting manual for distribution to Scientific Authorities. The Secretariat proposed that six workshops be held in different regions from 2000-2003. Numerous Parties expressed their support for the regional workshops as well as their interest in participating. **Doc. 11.40** was approved in Plenary with the provision that the Budget Committee address the necessary financial issues.

The agenda items **significant trade in Appendix-II species: Implementation of Resolution Conf. 8.9 (Doc. 11.41.1) and significant trade in Appendix-II species: Revision of Resolution Conf. 8.9 (Doc. 11.41.2)** were both introduced by the Secretariat, these being discussed separately in different Committees at the meeting. **Doc. 11.41.1** was an information document whereby the Secretariat, in consultation with the Animals Committee and the Standing Committee,



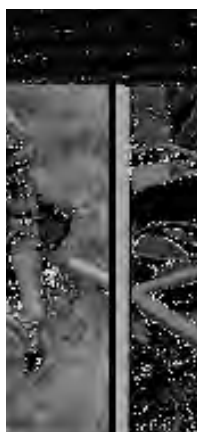
reported its findings and recommendations on the implementation of Res. Conf. 8.9 as it does to each meeting of the Conference of the Parties. One of the most important discussions surrounding this document was initiated by Portugal, who, on behalf of the EU, recommended the inclusion of Acipenseriformes (sturgeon and paddlefish) into the significant trade review process. This move was supported by several other Parties including the Russian Federation who submitted a draft decision relating to the implementation of the Acipenseriformes listing. This included a direction to the Animals Committee to include Acipenseriformes in the significant trade review process and report the findings back to the 12th meeting of the Conference of the Parties.

Subsequent to a Decision made at the 10th meeting, and on behalf of the Animals and Plants Committees, the Secretariat presented **Doc. 11.41.2**. This consisted of a draft resolution and associated draft decision to replace Resolution Conf. 8.9 which forms the basis for the significant trade review process for animals. The new Resolution (Conf. 8.9 (Rev.)) is an important development that allows the same process used for reviews of animal species, to be applied to plants - a significant step in ensuring the sustainable trade in all Appendix-II plant and animal species. The revised resolution also addresses some of the problems with the current review process, for example by providing mechanisms to engage range States more fully in the entire process. Additionally, the Secretariat will no longer be required to report back to the meeting of the Conference of the Parties on the implementation of Resolution Conf. 8.9, but will instead report its findings to the relevant Committee. Both the draft resolution and the associated decision were approved after some linguistic issues had been addressed.

The Parties addressed the issue of **Bush meat as a trade and wildlife management issue** by considering and approving a document (**Doc. 11.44**) submitted by the UK Government that consisted of a discussion paper and draft decision that proposed the establishment of a CITES Intersessional Bush Meat Working Group. The delegation of the UK introduced the discussion paper and draft decision and stated that the establishment of a working group would begin the process of bringing

cross-border bush meat trade into the context of a sustainable and legal process. At a meeting held to discuss the terms of reference for establishing the working group, discussions centred on the practical role that an international wildlife trade convention could play on a trade issue that is fundamentally domestic and affected by such social issues as food security. After some debate it was generally agreed that by focusing on increasing the regulation of regional cross-border trade in CITES-listed species in West and Central Africa where it constitutes a greater dynamic, the working group could build national capacity to deal with the principal domestic bush meat issues affecting CITES-listed and non-listed species. Additionally, the working group would promote increased dialogue, awareness and networking among national and international natural resource and community development institutions that could stimulate the creation of additional bush meat working groups in other regions with a greater domestic trade emphasis. It was agreed that the working group will take Cameroon, Central African Republic, Congo, Equatorial Guinea and Gabon as the case study area for underpinning the scope of work and possible solutions. The working group will meet in the case study region on a rotational basis two to three times a year, and the coordinator, in conjunction with the CITES Secretariat, will present progress reports to the Standing Committee and the African Dialogue Meetings, and a final progress report to the next meeting of the Conference of the Parties. Through additional periodic workshops, a Dissemination Group containing Parties not in the case study area will contribute their experience, and take back possible solutions relevant to their own national circumstances. Parties showing an interest to be included in the Dissemination Group included the Democratic Republic of the Congo, Ghana, Republic of Guinea, Kenya, Liberia, Niger, Sierra Leone, Togo, and Zambia. NGOs such as TRAFFIC, WWF-International and Fauna and Flora International were invited to participate in the working group by bringing relevant experience and the ability to facilitate the implementation process through technical assistance, capacity building, training and project support.

Amendment of Resolution Conf. 9.6 on Trade in Readily Recognizable Parts and Derivatives was proposed in two documents. Germany, Switzerland and the UK put forward **Concerning diagnostic samples, samples for identification, research and taxonomic purposes and cell cultures and serum for biomedical research (Doc. 11.45.1)**. Germany and Switzerland also proposed **Doc. 11.45.2, Concerning final cosmetic products containing caviar**. Both documents stemmed from the belief by these Parties that there was an excessive administrative burden in dealing with CITES permitting for such specimens, which they felt were not readily recognizable parts or derivatives under CITES. The proposals aimed to make the specimens, as defined in the documents, exempt from CITES control, through amendment of the Resolution.



<< Sturgeon sampling,  
River Danube, Romania.

\* Caroline Raymakers/  
TRAFFIC

< Common Eland  
*Taurotragus oryx*.  
A CITES intersessional  
working group will  
begin the process of  
bringing cross-border  
bush meat trade into  
the context of a  
sustainable and legal  
trade.

\* WWF/Fritz P Iking

**Doc. 11.45.1** proposed that certain samples such as extracted and purified DNA, samples of blood, hair or feather, other tissues (fresh or preserved, not including live gametes and embryos) be exempt from CITES controls. These samples would only be exempt if they were for the purposes of identification, research or veterinary diagnosis. An amendment to the Resolution was proposed to this effect in the Annex to the document. The Secretariat commented that these samples may be readily recognizable and therefore the text amendment should simply state that they are exempt. It is usually the case that such samples are labelled and documented as to their origins and therefore are normally recognizable. The response to this proposal was surprising and it proved to be quite controversial. Eighteen Parties and seven observers were permitted to speak on the matter. Many Parties were concerned over the potential abuse of the amendment, in terms of exploitation of valuable natural resources for commercial purposes. The security, ownership and intellectual property rights of each nation's genetic and biological resources were of great concern to many Parties, particularly those whose countries had a high degree of biodiversity. The termination of CITES controls would remove an extra layer of protection afforded to these resources. The difficulties of implementation and enforcement and synergy with other treaties such as the Convention on Biological Diversity were also noted. The proponents stressed that the exemptions were vital for veterinary samples that had significant time limitations and for the purposes of law enforcement. The immediate diagnosis of disease, cause of death etc., was essential, particularly for populations of endangered species in the wild. A working group was formed to discuss these matters and seek some solution. The working group recognized the great difficulties presented and the proponents withdrew the document in favour of the creation of an intersessional working group. The terms of reference for that group were established. A draft decision was adopted that outlined the administration and procedures of the intersessional working group, under the auspices of the Animals and Standing Committees. The funding implications of the working group were of concern and it was noted that it might be necessary to obtain external funding for its operational costs.

**Doc. 11.45.2** was concerned with exempting from CITES controls particular types of cosmetic products which claim to contain a small percentage (e.g. 0.05%) of caviar, from sturgeon (*Acipenseriformes*) species. All sturgeon species are listed in CITES Appendix II. The cosmetic products are commercially traded internationally in bulk, both as unpackaged products and in their packaged state, for retail sale. Once purchased by the retail consumer, the packaged products are included under the personal effects exemption for caviar of up to 250 g per person. Therefore, the amendment proposed would refer to these bulk transactions of product (either

packaged or not) between commercial businesses. The Secretariat noted its concerns that trade in these exempt products might in future be used as a loophole if they consisted entirely of caviar. The proponents revised the amendment to ensure that it was only with respect to products containing less than 0.05 g of caviar in every kilogramme of product. China noted similarities between this issue and that of trade in traditional Chinese medicine products, and that this could infer that in future they could also be exempt. It was noted that the cosmetic products list caviar as an ingredient on the packaging which therefore does make them readily recognizable and therefore subject to control under CITES. The USA stated their concerns about setting a dangerous precedent for exemptions under the definition of "readily recognizable", especially with commercial trade as in this case. A working group was formed outside the session but a consensus could not be reached and the proponents therefore called for a vote. The original roll call vote was invalid, as Committee II did not have a quorum. The Chair of Committee II took the unusual step of asking the security guards to ensure that no delegates left the Committee room while attempts were made to find more delegates to raise a quorum. A quorum was reached and the voting results were 34 votes in favour and 26 votes against, with 20 abstentions. Therefore, the proposal was rejected.

As part of Resolution Conf. 10.12, a draft Resolution on **a universal labelling system for the identification of caviar (Doc. 11.53)** was prepared by the CITES Secretariat based on a document developed by a working group of the Animals Committee. The text was discussed and redrafted in a working group at the 11th meeting of the Conference of the Parties. Switzerland and Germany supported the idea that only caviar-exporting countries must label their containers, while Iran and the Russian Federation insisted that caviar labelling must be performed by both exporting and re-exporting Parties. In the consensus document Parties decided on the latter and for a non-reusable label to be affixed to any primary caviar container of more than 249 g and to secondary containers of less than 250 g. The information mentioned on this label should include, as a minimum: the grade of the caviar (e.g. "Beluga"), the standard species code as provided in Annex 1 of the resolution (e.g. "HUS"), the ISO code for the country of origin (e.g. "RU"), the year of harvest (e.g. "2000"), a number for the processing plant and the identification number for the caviar lot that refers to the sturgeon female from where the caviar was extracted. The Resolution (Conf. 11.13) was adopted. The proposal by the Russian Federation to direct the development of a molecular markers system to the CITES Secretariat was reassigned to the Animals Committee assisted by experts in forensic techniques, owing to the lack of means and expertise available at the Secretariat.

Parties considered **Doc. 11.25: Procedure for the Review of Criteria for Amendment of Appendices I and II**, which was presented on behalf of the Plants Committee and the Animals Committee. This document set forth a process through which the CITES listing criteria would be reviewed during the interval before the 12th meeting. A timetable was proposed, as was the composition of the working group that would review the criteria. The document was adopted, and therefore the Parties approved that the working group would comprise representatives from each region, and that the working group would be able to consult experts, such as the Food and Agriculture Organization of the United Nations and the International Tropical Timber Organisation, largely owing to the difficult taxa, such as fish and tree species, that would have to be reviewed. Dr Jenkins, Chairman of the Animals Committee, was nominated to chair the group, and this was approved by the Parties.

## PROPOSALS FOR AMENDMENT OF APPENDICES I and II

### Medicinal Plants

A total of five Appendix II-listing proposals for plants used for medicinal purposes were considered by the Parties. In addition, the Parties considered a proposal to harmonize medicinal plant annotations in the text of the Appendices. This was the first medicinal plant proposal to be considered, and its intention was to combine the existing annotations #2 and #8, in order to simplify interpretation of the Convention. Several delegations noted that the current annotations are complex, and require better definition. Terms such as “chemical derivatives”, for example, are interpreted to refer to different products in different countries. During discussion it was recommended that further definition of such terms was needed, and that this task be referred to the Plants Committee. The proposal to harmonize the annotations was accepted, despite the observation that it was likely to reduce controls for Himalayan Yew *Taxus wallichiana*. It was also agreed to give the Plants Committee the mandate to clarify the definitions used in medicinal product annotations.

This discussion was followed by consideration of the inclusion of Asian Ginseng *Panax ginseng* in Appendix II. While the proposal had originally intended the entire species to be included in the Appendix, concern from some Parties about the effect that a listing would have on the enormous trade in artificially propagated material, coupled with assertions from some range States that wild populations no longer existed in their countries, led to the proposal being amended. The delegation of the Russian Federation introduced the proposal and noted that it had been amended to cover the population of the Russian Federation only, and that it would be annotated to have the same annotation, #3, as American Ginseng *Panax quinquefolius*. This proposal was accepted.

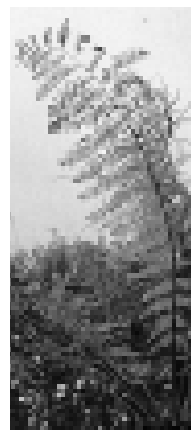
The first of two proposals from China - to include the Happy Tree *Camptotheca acuminata* in Appendix II -

False Hellebore >>  
*Adonis vernalis*, a plant long used in the treatment of heart disease. Dried specimens in trade are now subject to CITES regulations.

\* *Saxifraga*  
Foundation/ECNC

The listing of >  
Dicksoniaceae spp. has been changed to  
*Dicksonia* spp.  
(originating in the Americas only) and  
*Cibotium barometz*.

\* S. Pendry/TRAFFIC



was withdrawn before being considered. The proposal to include in Appendix II *Cistanche deserticola*, which occurs in China and Mongolia, was accepted with annotation #3, “designates whole and sliced roots and parts of roots, excluding manufactured parts or derivatives such as powders, pills, extracts, tonics, teas and confectionery”.

Devil’s Claw *Harpagophytum procumbens* and *Harpagophytum zeyheri*, two plants that occur in Southern Africa, were also up for consideration. However, the proposal to list these species in Appendix II was withdrawn by the proponent, Germany, after consultation with range States, and a decision *Regarding the Biological and Trade Status of Harpagophytum*, was adopted. This decision directs range and importing States to submit information on trade, management, regulatory measures and biological status of *Harpagophytum* spp. to the CITES Secretariat, and directs the Plants Committee to review and summarize the information, and to prepare a report on the biological and trade status at least six months prior to the 12th meeting of the Conference of the Parties, for submission at that meeting.

The last proposal to be considered was the False Hellebore *Adonis vernalis*. The proposal was accepted for inclusion in Appendix II following discussion on what parts of the plant should be regulated. It was decided that the annotation should be “only to include dried plants, either whole or in parts”. It was suggested that the wording could be refined for clarity, and that the delegation of Germany should confer with the Secretariat to come up with precise wording.

The Parties also considered a document on the South-east Asian tree genus *Aquilaria* and adopted a decision which directs the Plants Committee to continue its review of the genus, and specifically to resolve how species in the genus can be distinguished from each other, to identify measures other than improved identification to improve the accuracy of reporting on trade, and to determine whether additional species should be included in the Appendices (because they qualify or because of similarity of appearance). If it is determined that additional species should be included in Appendix II then the Plants Committee should recommend which ones should be included under Article II.2.a and which under Article II.2.b.

## Asian pangolins

India, Nepal, Sri Lanka and the USA submitted a proposal to transfer all Asian pangolins - *Manis crassicaudata*, *M. pentadactyla* and *M. javanica* - from Appendix II to Appendix I.

IUCN classifies all Asian pangolins as "Lower Risk: near threatened" throughout their respective ranges. CITES annual reports show a shift in the country of origin for pangolins in international trade, possibly as populations have become depleted. Illegal and unreported trade dwarfs that recorded in CITES annual reports and increasing prices further indicate the high level of demand and suggest declining populations.

Parties expressed support for increased protection of Asian pangolins although not all were in favour of transferring populations to Appendix I. The main reason for such opposition was that these species were currently subject to review by the Animals Committee as part of the significant trade review process and recommendations had yet to be formulated. Transfer of populations to Appendix I would undermine this process.

In response to these concerns, the USA called for a small working group with the Chair of the Animals Committee and range States. The proposal was subsequently amended to retain the three species in Appendix II with an annotation of zero quota for specimens taken from the wild and traded for primarily commercial purposes, and was adopted by consensus.

Annotation °612 includes all readily recognizable parts and derivatives of the three pangolin species concerned as well as all live or dead specimens. Trade in pangolins and their parts may only be resumed upon submission and adoption of a proposal to remove or amend the annotation at another meeting of the Parties.

## Whales

Four proposals to transfer whale stocks from Appendix I to Appendix II were considered at the meeting: Gray Whale *Eschrichtius robustus* (Eastern North Pacific stock); Minke Whale *Balaenoptera acutorostrata* (Southern Hemisphere stock); Minke Whale *Balaenoptera acutorostrata* (Okhotsk Sea-West Pacific stock); Minke Whale *Balaenoptera acutorostrata* (North-east Atlantic and North Atlantic stock). As with discussions at the 10th meeting, there was lengthy debate over the relationship between CITES and the IWC. Japan, Norway, and a number of other countries stressed the need for CITES to act independently of the IWC and to base decisions on the listing criteria in Resolution Conf. 9.24. Many other countries stated their opposition to transferring the proposed stocks until the IWC's Revised Management Scheme (RMS) is in place and the IWC's current moratorium on commercial whaling lifted. The RMS, which includes inspection and reporting elements, would help to meet the precautionary criteria under Resolution Conf. 9.24. During the course of the debate, a number of CITES Parties and the

CITES Secretariat urged the IWC to move forward with adoption of the RMS.

All votes on the four whale proposals were conducted as secret ballots. The delegation of Japan stated, as an undertaking, the intention of the Japanese Government to apply all normal CITES procedures for the issuance of permits if their proposals were accepted, despite Article XIV.4 which exempts members of pre-existing treaties from certain CITES procedures applicable to marine species listed in CITES Appendix II. In addition, Japan amended its proposals to transfer the Southern Hemisphere stock of Minke Whale from Appendix I to II and the Okhotsk Sea-West Pacific stock from Appendix I to II to include an annotation limiting trade in whale products to only those Parties with a DNA identification method in place.

The results were as follows: the transfer of the Eastern North Pacific stock of Gray Whales from Appendix I to Appendix II (Japan): 40 in favour, 63 against; the transfer of Southern Hemisphere stock of Minke Whale from Appendix I to Appendix II (Japan): 46 in favour, 69 against; the transfer of Okhotsk Sea-West Pacific Stock of Minke Whale from Appendix I to Appendix II (Japan): 49 in favour, 67 against; and the transfer of North-east Atlantic and North Atlantic Central Stocks of Minke Whale from Appendix I to Appendix II (Norway): 52 in favour, 57 against.

During consideration of the proposal to transfer the Southern Hemisphere stock of Minke Whale to App. II, Suriname introduced an amendment to Japan's proposal under the terms of which the transfer to Appendix II would be accompanied by a zero quota to be maintained until the 12th meeting of the Conference of the Parties by which time it was assumed that the IWC would have taken a decision on its RMS. Suriname's proposal was voted on by secret ballot and received 47 votes in favour, 66 against. Norway reintroduced its proposal to transfer the Northeast Atlantic stock and the North Atlantic Central stock from Appendix I to II in plenary session with further amendments limiting trade to specimens taken within Norwegian waters and with countries with DNA-based identification systems in place. The revised proposal received a simple majority, 53 in favour and 52 against, but was not carried.

Japan and Norway were critical of the IUCN/TRAFFIC Analyses of the whale transfer proposals, particularly in regard to the biological criteria, as well as the CITES Secretariat's recommendations not to support the transfers. However, IUCN and TRAFFIC confirmed that they stood by the Analyses presented and noted that many of the points raised by Japan and Norway were related to matters of interpretation. In fact, for three of the four proposals, the IUCN/TRAFFIC Analyses stated that the populations concerned did not appear to meet the biological criteria for inclusion in Appendix I. For the remaining proposal, the Okhotsk Sea-West Pacific stock of Minke Whale, the situation was unclear because of uncertainties related to stock structures.

The main concerns expressed in the IUCN/TRAFFIC Analyses and the TRAFFIC Recommendations were related to the precautionary criteria under Resolution Conf. 9.24. The proposals claimed that the precautionary measures were fulfilled through national conservation and management measures and the establishment of trade control systems based on DNA analysis techniques. However, the proposals did not take into full account that, in CITES terms, acceptance of one or more of the Minke Whale proposals could open access to the stocks on the high seas to all CITES Parties, not just the proponents.

The Nomenclature Committee adopted new nomenclature to reflect the recent and widely accepted change in taxonomy and nomenclature of Minke Whales, which shows that northern and southern subspecies formerly all considered to belong to *Balaenoptera acutorostrata* actually belong to two distinct species: *B. acutorostrata* and *B. bonaerensis*.

### **African Elephant *Loxodonta africana***

Following the CITES-approved, one-off experimental sale of nearly 50 t of ivory from Botswana, Namibia and Zimbabwe to Japan in April 1999, not surprisingly African Elephant issues once again loomed large on the CITES agenda. Proposals from Botswana, Namibia and Zimbabwe, whose elephant populations were transferred to Appendix II in 1997, sought to establish annual ivory export quotas, amounting to 12 t, 2 t and 10 t respectively. Botswana and Namibia also proposed amendments to annotation <sup>9</sup>604 to allow trade in elephant hide and leather (which was previously accepted at the 10th meeting only for Zimbabwe). In addition, South Africa proposed to have its elephant population transferred from Appendix I to Appendix II to allow the sale of "an experimental quota" of 30 t of ivory originating solely from Kruger National Park, along with trade in live animals, elephant hides and leather products, and sport hunting trophies. Generally speaking, South Africa's proposal established a series of conditions not unlike those previously accepted for the three elephant proposals approved at the 10th meeting (see *TRAFFIC Bulletin* 17(1)). At the other end of the spectrum, a joint proposal from Kenya and India called for all elephant populations to be transferred back to Appendix I. This set the stage for head-on confrontation.

Just prior to the 11th meeting of the Conference of the Parties, on 6-7 April 2000, the fourth African Elephant Range States Dialogue meeting was convened in Gigiri, Kenya, allowing African countries an advance opportunity to deliberate on all CITES agenda items pertaining to elephants. Facilitated by the CITES Secretariat and IUCN, chaired by Dr Yaa Ntiamao-Baidu (WWF's Director of the Africa and Madagascar Programme) and attended by 31 of the 37 range States, the meeting concluded with general consensus on a number of points, provided that disagreements over the possibility and timing of any future legal ivory trade could be resolved. The conditional consensus, described

in the meeting's communiqué, would provide for the elephant populations of Botswana, Namibia and Zimbabwe to remain in Appendix II with trade in non-ivory products; the population of South Africa to be transferred to Appendix II with trade in non-ivory products; and for Kenya and India to withdraw their proposal to transfer all elephant populations back to Appendix I. The meeting also strongly endorsed the CITES monitoring systems MIKE (Monitoring Illegal Killing of Elephants) and ETIS (Elephant Trade Information System).

Discussions within the African Regional meetings and other informal sessions framed the elephant debate during the first week of the 11th meeting. Formal deliberations on agenda item **Conservation of and trade in elephants (Doc. 11.31)** commenced during the beginning of the second week with the Secretariat's presentation of **Doc. 11.31.1 Experimental trade in raw ivory of populations in Appendix II**. This information document described the procedures and events which took place pursuant to Decision 10.1 (Conditions for the resumption of trade in African Elephant ivory from populations transferred to Appendix II at the 10th meeting of the Conference of the Parties). While much of the document reiterated information or decisions taken at previous Standing Committee meetings, Annex 4 *Report of the Standing Committee pursuant to Decision 10.1, Part B* provoked considerable controversy. This document was the Standing Committee's evaluation of legal and illegal trade in elephant products following the 10th meeting and assessment of the impacts of the conditional one-off resumption of trade in ivory. As such, it presented the few data received from a handful of elephant range States through the interim monitoring mechanisms represented by the "Incident report form for illegal killing of elephants" and the "National reporting form on illegal killing of elephants", and described the Secretariat's missions to investigate reports of serious poaching in Kenya and Zimbabwe. The report concluded, "notwithstanding limitations in the data available", that the evidence "does not substantiate claims from a limited number of sources that the trade has promoted a significant increase in illegal killing of elephants at the continental level or in terms of the national populations affected". Interventions from a number of Parties and the NGO community seriously questioned the report's conclusion, but there was widespread recognition that the range States themselves needed to engage in the process and provide better data. For its part, the Secretariat expressed dismay that some Parties were only now producing elephant poaching statistics when the Secretariat's repeated attempts for information had failed to produce any results prior to the meeting.

**Doc. 11.31.2 Monitoring of illegal trade and illegal killing** was concurrently presented by the Secretariat. This report outlined the steps that have been taken to implement the mandate from the 10th meeting regarding the establishment of the CITES monitoring systems, MIKE and ETIS. In the comments that followed, some concern was expressed that MIKE was

not yet in place, and that the ETIS data were not up-to-date. Regardless, there was general support for the further development of both systems. The European Commission announced that they were considering a request to support the monitoring systems with four million Euros (approximately USD4 million), and Belgium, the UK, Japan and the USA also pledged additional support. As this document did not require formal approval, further discussion of the monitoring systems continued in the context of **Doc. 11.31.3 Revision of Resolution Conf. 10.10** which followed.

At this point in the discussion, Cameroon, which headed a core group of range States initially convened at the fourth African Elephant Range States Dialogue meeting, presented the African consensus which had emerged from the African Regional meetings. Cameroon announced that Kenya, with the concurrence of India, would withdraw their proposal to transfer all elephant populations back to Appendix I, while Botswana, Namibia and Zimbabwe would withdraw their proposals for annual ivory export quotas but their populations would remain in Appendix II. At the same time, South Africa's elephant population would be transferred to Appendix II and trade in non-ivory elephant products allowed. Finally, Cameroon announced that Kenya would resubmit an amended version of Resolution Conf. 10.10. This compromise called for the CITES monitoring systems to become operational and deliver analytical results on the status of elephant poaching and illegal trade in ivory before sanctioning an ongoing trade in elephant ivory. It also embodied the recognition that the status of elephants is different throughout Africa and that a split-listing allowing trade in non-ivory elephant products is a reasonable solution. The African compromise was widely praised as a positive and forward-looking development.

**Doc. 11.31.3**, the revision of Resolution Conf. 10.10, proved to be contentious. Kenya's original proposal called for the complete elimination of the provisions in the Resolution which mandated the establishment of the elephant monitoring systems MIKE and ETIS. As an alternative, Kenya initially proposed a more subjective method for assessing the impact of CITES policy developments on elephant populations. In Kenya's view, individual range States would simply determine whether or not poaching was increasing nationally, the reasons for such developments and make reports to the CITES Secretariat, but not be compelled to provide data and analysis to substantiate such views. Kenya's revision of Resolution Conf. 10.10 also sought to make the Secretariat a major fundraiser for national elephant protection and law enforcement activities, restrict trade in live elephants, and eliminate certain restrictions governing the non-commercial disposal of ivory stocks pursuant to the process agreed at the 10th meeting (see discussion of Doc. 11.31.4 below). Earlier, during the African Elephant Range States Dialogue meeting, MIKE and ETIS were widely supported by the range States who agreed that the only fundamental change to Resolution Conf. 10.10 that was necessary concerned

the need to clarify that the monitoring systems would seek to identify 'correlations' between the illegal killing of elephants and various other factors, rather than establish 'causal' relationships. (It was recognized that 'causality' could not be proven, and that the intent of the Parties at the 10th meeting had really been to establish correlations). The Dialogue participants had agreed that the CITES Secretariat, through the depository government (Switzerland), would present the revised wording to amend Annex II of Resolution Conf. 10.10. During formal deliberations at the 11th meeting, the revision of this Resolution was assigned to a working group, which continued to be chaired by Cameroon and included many African Elephant range States, India, Japan, the USA, Switzerland and the EU. In the end, the revised Resolution Conf. 10.10, which was approved as a consensus document emanating from the group, updated and strengthened the CITES commitment to the development and implementation of MIKE and ETIS. The approved revision fully addressed the so-called 'causality' problem identified at the Range States Dialogue meeting, updated various other provisions, and made a number of minor editorial changes, but it did not incorporate any of the substantive issues proposed in Kenya's initial submission.

**Doc. 11.31.4 Non-commercial disposal of ivory stockpiles**, submitted by Kenya, proposed to revise Decision 10.2 (Conditions for the disposal of ivory stocks and generating resources for conservation in African Elephant range States) which had been agreed at the 10th meeting. One of the conditions of Decision 10.2 required that all revenues derived from any non-commercial ivory stock buyout be placed in a conservation trust fund and used exclusively for elephant conservation or community-based conservation initiatives. Believing that this requirement imposed a cumbersome impediment to engagement with potential donors, Kenya proposed its elimination. However, other Parties, particularly potential donors, felt such a condition provided for accountability in a transparent manner and did not support Kenya's view. It was further noted that the Kenyan revision would also introduce ambiguous language concerning which ivory stocks were eligible for consideration under the formula outlined in Decision 10.2, a situation that could potentially lead to the laundering of ivory. These issues were addressed during the ensuing discussion and, in the end, Kenya withdrew its proposal.

In the final analysis, collectively, these decisions have cautiously reaffirmed the far-reaching developments which emanated from the 10th meeting. The Parties were reluctant to accept further ivory trade until such time that MIKE and ETIS are firmly in place and yielding solid analytical results. By the same token, the Parties were also reluctant to embrace the regimen of strict protection that characterized elephant conservation under CITES throughout most of the 1990s. The onus is now on the CITES monitoring systems to deliver credible results by the next meeting of the Conference of the Parties.

### Vicuña *Vicugna vicugna*

Bolivia submitted two proposals to amend the Appendix listings for Vicuña: the first proposed transferring the Bolivian population currently listed in Appendix I to Appendix II with the sole objective of exporting wool derived from sheared live animals; the second aimed to lift the zero quota for the three vicuña populations that had been included in Appendix II at the 10th meeting.

Based on the work of a consultant hired for this purpose, TRAFFIC supported these proposals based on the assessment of the potential low risk that the acceptance of these proposals would have on the species. On the contrary, it would probably reduce poaching, as local support for the conservation of the species would certainly increase.

During the Latin American CITES Regional meeting held in Ecuador just before the 11th meeting of the Conference of the Parties, there was a general feeling that the Parties to the Vicuña Convention had reached a consensus on supporting the first proposal. In Nairobi, however, all the other range States withdrew their support, arguing that it was too soon for such a listing.

Bolivia withdrew its proposal, but not without stating its resentment on how the issue had evolved. The second proposal was approved without resistance. Bolivia now has to establish a quota for fibre before the approved proposal enters into force.

A Resolution on the export of vicuña wool and fibre was approved (Conf. 11.6). During the discussions all range States called on TRAFFIC to help assess the existence and amounts of vicuña wool and fibre outside these countries.



Fundación Vida Silvestre Argentina

### Musk deer *Moschus* spp.

All musk deer are currently listed in CITES Appendix II with the exception of populations of Afghanistan, Myanmar, Pakistan, Nepal, India and Bhutan, which are listed in Appendix I. Musk is obtained from the male musk deer and is highly valued for use in traditional medicine systems and, to a much lesser extent, for production of high-quality perfumes.

At the meeting, the USA, India and Nepal submitted a proposal to include all populations of *Moschus* spp. in Appendix I. The proposal was put forward owing to concern over declining populations of musk deer throughout their range. The loss of suitable habitat is a significant factor threatening musk deer, but the main threat to musk deer populations is poaching for the musk pod. Illegal international trade of musk pods remains of serious concern. Although only male musk deer produce musk, indiscriminate hunting methods result in females and juveniles, as well as other non-target species, also being killed. After discussion with other range States, the proposal was withdrawn and a Resolution (Conf.

11.7) and decision were submitted by the Russian Federation, both of which were adopted by consensus.

The main focus of **Resolution Conf. 11.7 Conservation of and Trade in Musk Deer**, is to urge Parties, particularly range, transit and consumer States, to improve enforcement efforts to reduce illegal harvest of and trade in musk. The development of identification guides and clear labelling systems for manufactured products containing musk are encouraged - and supported - by the recommendation to develop and disseminate forensic methods to detect natural musk. In order to alleviate pressure on wild populations, Parties are urged to develop alternatives for raw musk and to explore effective techniques for collecting musk from live musk deer. Range States are also urged to develop bilateral and regional agreements for improving musk deer conservation and management, with a reminder to Parties, aid agencies, IGOs and NGOs of the necessity for technical and financial assistance for related activities, such as musk deer population surveys.

The Decision serves to reinforce the intent of the Resolution by laying out a series of actions to be undertaken by the Standing Committee, Animals Committee, Secretariat and the Parties. The Standing Committee is directed to review actions taken by key musk deer range, transit and consumer States to improve trade controls and to protect musk deer populations. The Animals Committee is directed, at its next meeting, to examine international trade in musk and its products within the context of the significant trade review. Findings for remedial actions are required to be presented to the Standing Committee prior to the 12th meeting of the Conference of the Parties. The Secretariat is directed to analyse the worldwide use of musk in Asian medicine and perfumes and report back to the 12th meeting on trends in demand. Parties are also directed to consider reducing export quotas until the Animals Committee has completed its significant trade review.

### Asian Box Turtles *Cuora* spp.

The dramatic increase in trade in live turtles, primarily to supply the demand for turtles as food and medicine in East Asia, was considered at the meeting both in the form of a species proposal and a resolution. A proposal to list all nine species of Asian box turtles *Cuora* spp. in Appendix II was put forward by Germany and the USA. The proposal received wide support, especially from Asian range States, and was adopted by consensus. Also, a resolution recognizing that an increasing number of turtle and tortoise species are threatened by trade, especially in Asia, and calling on all Parties to increase efforts to work co-operatively to control illegal trade and take steps to ensure that trade becomes sustainable was approved. The Resolution (Conf. 11.9) also calls on the CITES Secretariat to host a workshop to explore further the threats posed by trade in freshwater turtles and tortoises and work towards solutions that ensure the conservation of these species.

### Spotted Turtle *Clemmys guttata*

The USA put forward a proposal to list the Spotted Turtle *Clemmys guttata* in Appendix II. This species, found almost exclusively in the USA, is in demand for the pet trade. Though populations are believed to be substantially reduced from historic levels, international trade levels are low and apparently increasingly supplied by captive breeding. Much of the debate on this proposal focused on these issues, and though the proposal gained a simple majority of the Parties, it did not achieve the two-thirds vote necessary and was defeated.

### African Spurred Tortoise *Geochelone sulcata* and Pancake Tortoise *Malacochersus tornieri*

Two proposals were submitted to transfer two African tortoise species from Appendix II to I. Although these proposals concerned different species and different range States, the issues being raised showed similarities, particularly the importance of sustainable captive production and the issue of exports from non-range States. Both species have also been included in the significant trade review process. The proposal from France to transfer the African Spurred Tortoise *Geochelone sulcata* from Appendix II to I was based upon concerns that population size and range was declining whilst exports were increasing. During discussions in Committee I, a number of range States objected to the proposal on the grounds of insufficient scientific evidence regarding wild populations whilst further arguing that inclusion in Appendix I would hinder efforts being made to captive-breed African Spurred Tortoises. France subsequently amended its proposal to retain *G. sulcata* in Appendix II but with a zero quota on wild exports, which was accepted without vote.

Kenya and the USA co-proposed to transfer the Pancake Tortoise *Malacochersus tornieri* from Appendix II to I. As with the other tortoise proposal, their major concerns were exports from non-range States and declining wild populations. During previous discussions out of session between Kenya and Tanzania, an amended proposal was agreed, which would basically include a zero quota on wild exports thus restricting exports to the four Tanzanian farms which had already been inspected by the CITES Secretariat. This was, however, further amended, circulated and presented by Kenya in Committee I. Tanzania rebuffed both this amended proposal and the original proposal and on these grounds, Kenya and the USA withdrew their proposal.

### Hawksbill Turtle *Eretmochelys imbricata*

Cuba submitted two proposals seeking to downlist the foraging population in its waters of Hawksbill Turtles *Eretmochelys imbricata* to Appendix II, one of which was co-sponsored by Dominica. Cuba withdrew its co-sponsored proposal to trade in both its stockpile of nearly seven tonnes of Hawksbill Turtle shell and an

annual quota of up to 500 Hawksbill Turtles, but continued to advocate its proposal for a single shipment of its stockpile of Hawksbill shells to Japan. The proposal was subjected to a lengthy debate before being defeated, by secret ballot, by a narrow margin. The Parties reopened the debate on Cuba's proposal on the last day of the meeting, in plenary, with an amendment stating that trade would not take place until the control systems in Japan had been reviewed by the CITES Standing Committee. Various Parties opposed the proposal, noting that the Hawksbill Turtle is a migratory species and that a one-off sale could encourage other countries to stockpile shells. The amended proposal was again defeated by a narrow margin in a secret ballot.

### Sharks

Shark conservation was first discussed at the ninth meeting of the Conference of the Parties, resulting in the adoption of Resolution Conf. 9.17, which led to the preparation of a report and recommendations (**Doc. 10.51**) that were supported by the Parties. At the 10th meeting, in the context of marine species subjected to large-scale exploitation and trade, the proposal to create a Working Group on Marine Fish Species (**Doc. 10.60**) was hotly debated and rejected. In Nairobi, the three proposals for the listing of the world's largest shark species - Whale Shark *Rhincodon typus*, Great White Shark *Carcharodon carcharias* and Basking Shark *Cetorhinus maximus*, were among a series of documents on the conservation of marine species targeted by commercial fisheries and international trade. These documents covered a wide range of CITES issues, from "introduction from the sea", to small species exploitation such as the trade in seahorses. All encountered the opposition of a block of Parties, including Iceland, Japan, Norway, the Caribbean and South American fishing nations. The arguments used by the "opponents" were threefold: FAO and regional fishing agreements have already set up the framework for the management of commercial fisheries stocks; CITES is not the appropriate convention to deal with fisheries issues; and, CITES listings would impose restrictions that would interfere with ongoing efforts to improve management of fisheries resources. In this context, the three proposals were rejected: Whale Shark by 51 votes in favour, 40 against and 13 abstentions, Great White Shark by 51 votes in favour, 47 against and eight abstentions, and the Basking Shark by 62 votes in favour, 39 against and six abstentions. At the plenary session, the UK proposed an amendment to the Basking Shark document to delay the entry into force of the listing by 12 months. The proposal was still rejected: 67 votes in favour, 47 against and eight abstentions.

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*Reports from the meeting were contributed by C. Allan, R. Barnett, S. Broad, X. Buitron, S. Habel, Chen Hin Keong, C. Hoover, N. Marshall, S. Milledge, T. Milliken, M. Misra, S. Nash, D. Newton, B. Ortiz, R. Parry-Jones, M. Phipps and C. Raymakers.*



## Decisions on Amendment Proposals

The following pages summarize the proposals that were adopted, rejected and withdrawn at the eleventh meeting of the Conference of the Parties to CITES held, from 10 to 20 April 2000, at the United Nations Environment Programme (UNEP) headquarters in Nairobi, Kenya. The decisions entered into force on 19 July 2000. The countries that put forward the proposals are named in parentheses.

SPECIES	PROPOSALS (PROPONENT) [AMENDMENTS]	RESULT
<b>FLORA</b>		
Lantern Flowers <i>Ceropegia</i> spp.	Delete App. II (Switzerland)	ACCEPTED
<i>Frerea indica</i>	Delete App. II (Switzerland)	ACCEPTED
Rainbow Plant <i>Byblis</i> spp.	Delete App. II (Australia)	ACCEPTED
Macdougall's Cactus <i>Disocactus macdougallii</i>	App. I > App. II (Switzerland)	ACCEPTED
Lloyd's Mariposa Cactus <i>Sclerocactus mariposensis</i>	App. I > App. II (Switzerland)	REJECTED
Albany Pitcher-plant <i>Cephalotus follicularis</i>	Delete App. II (Australia)	ACCEPTED
Laguna Beach Dudleya <i>Dudleya stolonifera</i> Santa Barbara Island Dudleya <i>Dudleya traskiae</i>	App. I > App. II (Switzerland) [ <i>D. traskiae</i> remains in App. I]	ACCEPTED [as amended]
Tree Ferns <i>Cyatheaceae</i> spp. <i>Dicksoniaceae</i> spp.	Change listings of <i>Cyatheaceae</i> spp. to <i>Cyathea</i> spp. and change listings of <i>Dicksoniaceae</i> spp. to <i>Dicksonia</i> spp. (originating in America) and <i>Cibotium barometz</i> (Switzerland)	ACCEPTED
Short-Styled Oconee-bells <i>Shortia galacifolia</i>	Delete App. II (Switzerland)	WITHDRAWN
Heckner's Lewisia <i>Lewisia cotyledon</i> Maguire's Bitter-root <i>Lewisia maguirei</i> Saw-toothed Lewisia <i>Lewisia serrata</i>	Delete App. II (Switzerland) [ <i>L. maguirei</i> and <i>L. serrata</i> remain in App. II]	ACCEPTED [as amended]
California Pitcher-plant <i>Darlingtonia californica</i>	Delete App. II (Switzerland)	ACCEPTED
<b>REPTILIA</b>		
Nile Crocodile <i>Crocodylus niloticus</i>	Maintain population of Tanzania in App. II subject to an annual export quota of 1600 wild specimens (Tanzania)	ACCEPTED
<b>MAMMALIA</b>		
Indian Pangolin <i>Manis crassicaudata</i> Chinese Pangolin <i>Manis pentadactyla</i> Malayan Pangolin <i>Manis javanica</i>	App. II > App. I (India, Nepal, Sri Lanka, USA) [maintain in App. II with zero quota for trade in wild specimens for commercial purposes]	ACCEPTED [as amended]

SPECIES	PROPOSALS (PROPONENT) [AMENDMENTS]	RESULT
Black Sea Bottle-nosed Dolphin <i>Tursiops truncatus ponticus</i>	App. II > App. I (Georgia, USA)	WITHDRAWN
Gray Whale <i>Eschrichtius robustus</i>	App. I > App. II (Eastern North Pacific stock) (Japan)	REJECTED
Minke Whale <i>Balaenoptera acutorostrata</i>	App. I > App. II (Southern Hemisphere stock) (Japan) [trade only allowed between Parties with a DNA identification method in place-Japan amendment; amendment for zero quota until CoP12-Suriname amendment]	REJECTED [both amendments]
	App. I > App. II (Okhotsk Sea-West Pacific stock) (Japan)	REJECTED
	App. I > App. II (North-east Atlantic/North Atlantic Central stocks) (Norway) [to limit trade to animals taken within Norwegian waters and only for trade to countries with DNA-based identification system]	REJECTED [as amended]
Brown Hyaena <i>Parahyaena brunnea</i>	Delete App. II (Namibia, Switzerland)	ACCEPTED
African Elephant <i>Loxodonta africana</i>	App. I > App. II (South African population) (South Africa) [zero quota on trade in raw ivory]	ACCEPTED [as amended]
	Maintain population of Botswana in App. II (Botswana)	WITHDRAWN
	Maintain population of Namibia in App. II (Namibia)	WITHDRAWN
	Maintain population of Zimbabwe in App. II (Zimbabwe)	WITHDRAWN
	App. II > I (Botswana, Namibia and Zimbabwe populations) (India, Kenya)	WITHDRAWN
	Amend App. II annotation regarding destination of live animals (Switzerland)	ACCEPTED
Dugong <i>Dugong dugon</i>	App. II > App. I (Australian population) (Australia)	ACCEPTED
Vicuña <i>Vicugna vicugna</i>	App. I > App. II (Bolivian population in App. I) (Bolivia)	WITHDRAWN
Vicuña <i>Vicugna vicugna</i>	Delete zero quota for Bolivian populations in App. II (Bolivia)	ACCEPTED
Musk deer <i>Moschus spp.</i>	App. II > App. I (all populations in App. II) (India, Nepal, USA)	WITHDRAWN
Urial <i>Ovis vignei</i>	Include in App. I (all unlisted subspecies) (Germany) [all pops to App. II]	ACCEPTED [as amended]
<b>AVES</b>		
Lesser Rhea <i>Pterocnemia pennata pennata</i>	App. I > App. II (Argentinian population) (Argentina)	ACCEPTED
Gyrfalcon <i>Falco rusticolus</i>	App. I > App. II (North American population) (USA)	REJECTED

SPECIES	PROPOSALS (PROPONENT) [AMENDMENTS]	RESULT
Horned Parakeet <i>Eunymphicus cornutus cornutus</i>	App. II > App. I (France)	ACCEPTED
Uvea Horned Parakeet <i>Eunymphicus cornutus uvaeensis</i>	App. II > App. I (France)	ACCEPTED
Hwamei <i>Garrulax canorus</i>	Include in App. II (China)	ACCEPTED
<b>REPTILIA</b>		
Asian Box Turtles <i>Cuora</i> spp.	Include in App. II (Germany, USA)	ACCEPTED
Spotted Turtle <i>Clemmys guttata</i>	Include in App. II (USA)	REJECTED
African Spurred Tortoise <i>Geochelone sulcata</i>	App. II > App. I (France) [zero quota for exports from wild]	ACCEPTED [as amended]
Pancake Tortoise <i>Malacochersus tornieri</i>	App. II > App. I (Kenya, USA)	WITHDRAWN
Hawksbill Turtle <i>Eretmochelys imbricata</i>	App. I > App. II (Caribbean pop. inhabiting Cuban waters) (Cuba, Dominica)	WITHDRAWN
Hawksbill Turtle <i>Eretmochelys imbricata</i>	App. I > App. II (Caribbean pop. inhabiting Cuban waters) (Cuba) [no trade until Standing Committee reviews control systems in Japan]	REJECTED [as amended]
Quince Monitor <i>Varanus melinus</i>	App. II > App. I (Germany)	WITHDRAWN
Timber Rattlesnake <i>Crotalus horridus</i>	Include in App. II (USA)	WITHDRAWN
<b>AMPHIBIA</b>		
Sonoran Green Toad <i>Bufo retiformis</i>	Delete App. II (USA)	ACCEPTED
Mantella frogs <i>Mantella</i> spp.	Include in App. II (Netherlands, USA)	ACCEPTED
<b>PISCES</b>		
Whale Shark <i>Rhincodon typus</i>	Include in App. II (USA)	REJECTED
Great White Shark <i>Carcharodon carcharias</i>	Include in App. I (Australia, USA) [include in App. II]	REJECTED [as amended]
Basking Shark <i>Cetorhinus maximus</i>	Include in App. II (UK) [12-month delay in effective date for implementation]	REJECTED [as amended]
Coelacanth <i>Latimeria</i> spp.	Include in App. I (France, Germany)	ACCEPTED
Menado Coelacanth <i>Latimeria menadoensis</i>	Include in App. I (Indonesia)	WITHDRAWN

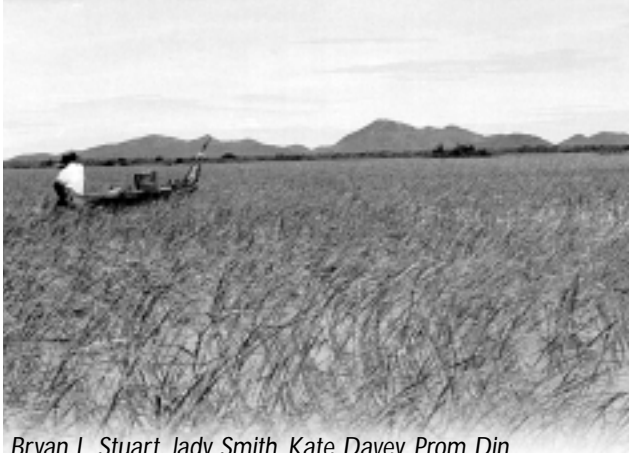
SPECIES	PROPOSALS (PROPONENT) [AMENDMENTS]	RESULT
<b>ARACHNIDA</b>		
Tarantulas <i>Poecilotheria</i> spp.	Include in App. II (Sri Lanka, USA)	REJECTED
<b>FLORA</b>		
Flora	Combine FLORA annotations #2 and #8 (Switzerland)	ACCEPTED
Asian Ginseng <i>Panax ginseng</i>	Include in App. II (Russian Federation) [only roots of Russian populations only]	ACCEPTED [as amended]
Monkey Puzzle Tree <i>Araucaria araucana</i>	App. II > App. I (Argentinian population) (Argentina)	ACCEPTED
Columnar cactus/rainsticks <i>Echinopsis</i> <i>Eulychnia</i>	Exempt up to three specimens of rainsticks per person from CITES controls (Chile)	WITHDRAWN
White-wicky <i>Kalmia cuneata</i>	Delete App. II (USA)	ACCEPTED
Happy Tree <i>Camptotheca acuminata</i>	Include in App. II (China)	WITHDRAWN
Desert-living Cistanche <i>Cistanche deserticola</i>	Include in App. II (China) [to include roots only]	ACCEPTED [as amended]
Devil's claw <i>Harpagophytum procumbens</i> <i>Harpagophytum zeyheri</i>	Include in App. II (Germany)	WITHDRAWN
False Hellebore <i>Adonis vernalis</i>	Include in App. II (Germany) [combined #2 and #8 annotations]	ACCEPTED [as amended]
Hollywood Lignum Vitae <i>Guaiacum sanctum</i>	App. II > App. I (USA)	WITHDRAWN

Some of the text relating to the amendments to the proposals is taken from the CITES Secretariat website:  
[www.cites.org/CITES/eng/cop/11/decisions.shtml](http://www.cites.org/CITES/eng/cop/11/decisions.shtml)

# HOMALOPSINE WATERSNAKES

## The Harvest and Trade from Tonle Sap, Cambodia

Bryan L. Stuart



Bryan L. Stuart, Jady Smith, Kate Davey, Prom Din, and Steven G. Platt

A reported decline in fish harvests from Tonle Sap, Cambodia, has created a new demand for an alternative inexpensive food source for people and for captive crocodiles reared commercially around the lake. Beginning intensively only about three years ago, this need has been filled by at least five species of homalopsine watersnakes. Additionally, the ova of at least one homalopsine species are sold as a human food delicacy, the skins of at least two species are exported to Thailand, and at least one species is exported live to Vietnam and China. Data gathered during 1999 and 2000 on the harvest estimated that upwards of 8500 watersnakes per day were harvested and sold during the peak of the wet season. It is probable that this represents the greatest exploitation of any single snake assemblage in the world. Of particular conservation concern is the heavy exploitation for crocodile and human food of the Tonle Sap Watersnake *Enhydryis longicauda*, which is endemic to Tonle Sap. This recent increase in the use of homalopsine watersnakes may be unsustainable, and management measures may be necessary to reduce exploitation to within sustainable levels.

Emma Jones

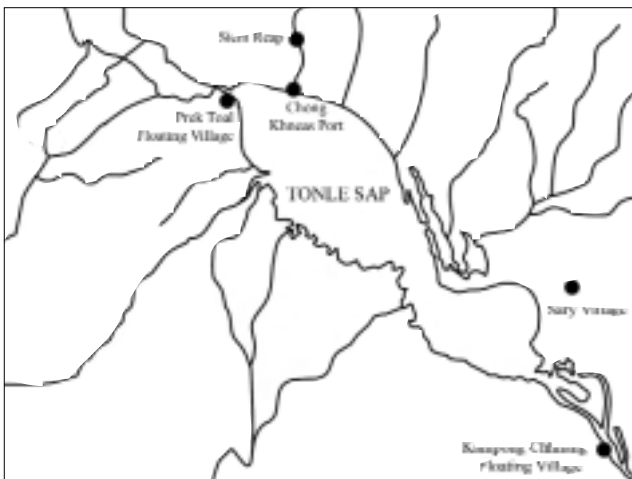


Fig. 1. Map of Tonle Sap, Cambodia, showing survey areas.

Fig. 2. (top). Fishermen on Tonle Sap near Kampong Chhnang checking a gillnet in a flooded grassy area where homalopsine watersnakes are captured, August 2000.

## INTRODUCTION

Tonle Sap, consisting of Tonle Sap Lake and Tonle Sap River, is located in central Cambodia. Tonle Sap Lake is the largest freshwater lake in South-east Asia, and exhibits an enormous seasonal change in surface area. Flooding during the annual rainy season reverses the flow of the Tonle Sap River and at least triples the surface area of the lake, inundating large areas of grassland and forest. This flooding results in a highly productive wetland ecosystem that supports one of the largest freshwater fisheries in the world. Fish is considered to be the major source of protein for most Cambodians, and the annual catch from Tonle Sap represents about 75% of the national inland fish catch (MRC, 1999). Fishing, as well as agriculture, are the two main livelihoods for the three million people who live around the lake (FAO, 1998).

A large crocodile farming industry also thrives around Tonle Sap. Although there is historical evidence of captive rearing of crocodiles in Cambodia dating back to the 10th century, the modern crocodile farming industry boomed in about 1988 with the opening of the free market economy. The crocodiles are raised for their skins, which are exported to Thailand. The majority of crocodile farms in Cambodia are small-scale family-run operations where a small number of animals are raised and sold for profit, although larger commercial farms each holding over 100 animals also exist. Most of Cambodia's crocodile farms are concentrated around Tonle Sap; in 1997 approximately 18 000 crocodiles were estimated to be held in captivity in Siem Reap and Battambang Provinces (Nao, 1998). Despite the numbers of captive animals, crocodile farmers at Prek Toal Floating Village on Tonle Sap reported in December 1999 that the industry had been at a standstill since the market for skins collapsed in 1998 following the economic recession in Thailand. Few crocodiles have been slaughtered since that time apparently, but captive stock continues to be maintained while farm owners wait for the industry to revive. The vast majority of the farmed animals are the native Siamese Crocodile *Crocodylus siamensis*, one of the world's most endangered crocodylians that today appears to be limited in the wild to very reduced and fragmented populations in Cambodia and Lao PDR (Ross, 1998; Platt and Tri, 2000). A few Estuarine Crocodiles *C. porosus* and exotic Cuban Crocodiles *C. rhombifer* were also seen in 1999 at the largest commercial farm in Siem Reap Town.

In the past, the large crocodile farming industry around Tonle Sap has depended upon the productive fisheries for a food supply. However, local people reported to the authors in 1999 that in recent years, fish catches from the lake had declined from over-harvesting and subsequently fish prices had risen. While the total fish production in the lake seems to have remained stable, evidence of over-fishing comes from a recent reduction in catch per unit effort, decline in size of commercially important species, and even the extirpation of some species (MRC, 1999). The homalopsine



Fig. 3. Head of juvenile Bocourt's Watersnake *Enhydris bocourti*.

Photograph: Peter Paul van Dijk/TRAFFIC

watersnakes that were also caught by fishermen in their gillnets and fish traps became cheaper than fish, and, as a consequence, about three years ago (1996-1997) a large market developed for these snakes as an alternative, cheaper source of food for captive crocodiles and for human consumption. Additionally, the skins of at least two species of watersnakes were exported to Thailand, and at least one species was exported alive to Vietnam and China for the food trade.

Observations made during this brief study, and supplemented with data from interviews with local people, allow for an estimated trade volume that probably represents the largest exploitation of any snake assemblage in the world.

## METHODS

Observations of the watersnake trade were made during visits to seven sites around Tonle Sap in the wet season (August 1999, June and August 2000), and to four sites for a single day in the dry season (December 1999; Table 1; Fig. 1). Observations were supplemented by interviewing fishermen, traders, and crocodile farmers during those visits.

## RESULTS

### Species Harvested

Five species of watersnakes, all members of the colubrid subfamily Homalopsinae, were found in the Tonle Sap trade: Rainbow Watersnake *Enhydris enhydri*, Tonle Sap Watersnake *Enhydris longicauda*, Bocourt's Watersnake *Enhydris bocourti* (Fig. 3), Striped Watersnake *Enhydris jagorii*, and Puff-faced Watersnake *Homalopsis buccata*. These species were previously reported from Cambodia (Saint Girons, 1972). Each has a distribution in South-east Asia that extends outside Cambodia (Murphy and Voris, 1994), except for *E. longicauda* which is endemic to Tonle Sap (Saint Girons, 1972).

*Enhydris enhydri* was the most abundant species seen in the harvest, and accounted for approximately 80% of the 3000-4000 snakes seen in total during visits to Psa Kroam Market in August 1999 and 2000, and Prek Toal Floating Village in December 1999. *Homalopsis buccata* and *Enhydris longicauda* accounted for most of the remaining catch. Only one individual of *E. jagorii* was seen during the same visits, although this species resembles *E. enhydri* and would be easily overlooked in large piles of snakes. As *E. bocourti* was selectively removed from catches and re-routed to traders seeking this particular species, only about 12 individuals of *E. bocourti* were seen in the mixed-species piles at Psa Kroam and Prek Toal during the same visits.

Other species of snakes were also caught as by-catch in gillnets by fishermen, but did not appear to be traded. Small numbers of Tentacled Watersnakes *Erpeton tentaculatum* were seen in mixed catches at Prek Toal Floating Village (December 1999) and at Kampong Chhnang Floating Village (August 2000). *Erpeton tentaculatum* was reported to have no value for leather, human food, or crocodile food, and so was usually thrown back when captured. In August 2000, fishermen loading a large catch of dead homalopsines from a boat into rice sacks at Chong Khneas Port gave the authors by-catch snakes from their harvest. These included two Red-tailed Pipe Snakes *Cylindrophis ruffus*, one Sunbeam Snake *Xenopeltis unicolor*, one juvenile Burmese Python *Python molurus bivittatus*, two Plumbeous Watersnakes *Enhydris plumbea*, and three Checkered Keelbacks *Xenochrophis piscator*. Another *X. piscator* was seen in a pile of dead snakes being chopped up and fed to juvenile crocodiles at Prek Toal (December 1999). Likewise, a request by one of the authors (JS) in September 1999 for local fishermen to bring other species of snakes caught in their gillnets produced a drowned Monocled Cobra *Naja kaouthia* (October 1999) and a live Granulated File Snake *Acrochordus granulatus* (January 2000).

UPWARDS OF 8500 WATERSNAKES WERE

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SNAKE ASSEMBLAGE IN THE WORLD

Site	Co-ordinates	Dates Visited	Description
Chong Khneas Port	13°16'21"N 103°49'22"E	22, 26 August 1999 9 December 1999 28 June 2000 8-10, 15 August 2000	Main port into Siem Reap Town from Tonle Sap Lake
Psa Kroam Market	13°20'46"N 103°50'53"E	21-22, 26, 28 August 1999 9 December 1999 28 June 2000 9-10, 15 August 2000	Fresh food market in Siem Reap Town
Psa Leu Market	13°21'27"N 103°52'29"E	28 June 2000 9, 15 August 2000	Fresh food market in Siem Reap Town
Siem Reap Snake Traders	Not available	9 December 1999 15 August 2000	Two houses of watersnake traders in Siem Reap Town
Prek Toal Floating Village	13°14'28"N 103°39'32"E	27 August 1999 9 December 1999	Floating village on Tonle Sap Lake
Sary Village	12°48'30"N 104°44'15"E	20 June 2000	Reptile trader's house in Sary Village, near Tonle Sap wetlands
Kampong Chhnang Floating Village	12°16'08"N 104°40'50"E	3-5 August 2000	Ethnic Vietnamese floating community on Tonle Sap River

**Table 1.** Sites around Tonle Sap, Cambodia, where data were collected on the watersnake harvest and trade.

## Harvest Methods

Fishermen reported that watersnakes were mostly captured with gillnets, and occasionally in bamboo fish traps. Dead snakes were frequently seen with pieces of gillnet entangled around their bodies at Psa Kroam Market and Chong Khneas Port, evidence of their method of capture. At Kampong Chhnang Floating Village, gillnets of 2.3 cm mesh-size were being used by fishermen to catch fish and watersnakes. Fishermen reported that mesh-sizes of up to 3 cm could be used for catching watersnakes, but that larger mesh sizes would only catch fish. Gillnets intended for catching watersnakes were set in flooded areas of vegetation or grass in Tonle Sap, rather than in open water (Fig. 2).

Fishermen also said that larger, more valuable snakes were speared, noosed, or caught with electro-fishing equipment; these reports of larger snakes may refer to *Enhydris bocourti* or *Homalopsis buccata*, but also to non-homalopsine snakes that have a trade value, such as cobras and pythons.

## Utilization

Homalopsines were seen being fed to crocodiles at Prek Toal Floating Village in December 1999, and dead snakes were seen in pens with crocodiles at Prek Toal during visits in August and December 1999. It appeared that crocodiles were fed mostly on dead snakes (those that had drowned in gillnets), specifically *Enhydris enhydris*, *E. longicauda*, and probably *E. jagorii*, as well as smaller, dead individuals of *E. bocourti* and *Homa-*

*lopsis buccata*. Crocodile farmers at Prek Toal estimated that they fed 1-3 kg of snakes per week to each sub-adult or adult crocodile in the wet season.

Homalopsines were also sold domestically for human consumption and the ova of *E. enhydris* were sold separately as a more expensive delicacy.

Large individuals, dead or alive, of *Enhydris bocourti* and *Homalopsis buccata* were sold domestically for their skins, which were processed in Cambodia and exported to Thailand.

Living *Enhydris bocourti* of all sizes, and living, larger individuals of *Homalopsis buccata*, were seen to be selectively removed from catches and reportedly re-routed for international export to Vietnam. These were probably destined for the food trade in Vietnam and subsequent re-export for the food trade in China. Snake traders at Chong Khneas Port told the authors that *Enhydris bocourti* and *Homalopsis buccata* were sold to middlemen who purchased only these two species and exported them to Vietnam, usually via Phnom Penh. *Enhydris bocourti* were seen traded elsewhere in Cambodia, near the Vietnam border. Several live individuals were seen at a roadside market in Neak Loeung town, Prey Veng Province, along Highway 1 en route to Vietnam. Undoubtedly these snakes were destined for export to Vietnam. At a reptile trader's house in Prassat Village in the Bassac Marshes, Kandal Province, at least 30 live *E. bocourti* were seen, and these were reportedly destined for sale to buyers at the nearby Vietnam border. *Enhydris bocourti* are known to be transported through Vietnam and exported to China for the food trade. In March 2000 the Forest Protection Department



**Fig. 4.** Homalopsine watersnakes being transferred from iceboxes to rice sacks on a middleman's boat before being taken ashore, Chong Khneas Port, August 2000.

Photographs: Bryan L. Stuart

**Fig. 5.** A trader at Chong Khneas Port preparing to weigh a rice sack containing homalopsine watersnakes unloaded from a middleman's boat, August 2000.



of Ninh Binh Province, Vietnam, seized a shipment containing 200 kg of live *E. bocourti* en route to the China border crossing at Mong Cai, Vietnam (D.B. Hendrie *in litt.*, June 2000). Since about 1997, *E. bocourti* has been seen in considerable numbers in wildlife markets at Guangzhou, China (M. Lau, pers. comm., July 2000). As *E. bocourti* is known to occur only in northern Peninsular Malaysia, southern and south-eastern Thailand, Cambodia, and southern Vietnam (Murphy and Voris, 1994), the animals in the Chinese trade must have been imported from neighbouring countries. Watersnakes originating from Tonle Sap (and probably elsewhere in Cambodia) are legally exported by KAM-FIMEX, a Cambodian Government export agency for aquatic products, by air from Phnom Penh to Hong Kong and Guangzhou, China. Watersnakes are mixed in these shipments with turtles and venomous snakes (Touch Seang Tana, Cambodian Department of Fisheries, pers. comm., 2000). Although the species composition and volume of these watersnake shipments remain uncertain, *E. bocourti* is probably involved, based on its known demand in Chinese markets.

#### Trade Value

Prices for homalopsines sold at Chong Khneas Port and Psa Kroam Market in August 1999 ranged from 500-2000 Cambodian Riel/kg (USD0.13-0.52/kg), with the usual price being around 1000 R/kg (USD0.26). At the same time, the cheapest fish species were sold for about 1200 R/kg (USD0.31). *Enhydris bocourti* commanded up to 10 times the price of other homalopsines because of its value for leather and for live export. In August 1999, a 1.5 kg live *E. bocourti* at Prek Toal was offered for sale at 17 000 R/kg (USD4.43/kg), and a 0.5 kg live *E. bocourti* at Chong Khneas was purchased by a trader for 20 000 R/kg (USD5.21/kg). Snake traders at Chong Khneas Port told the authors in August 2000 that live *E. bocourti* sold for 20 000-25 000 R/kg (USD5.21-6.51/kg), while dead *E. bocourti* sold for only 10 000 R/kg (USD2.61/kg). Live *E. bocourti* were more valuable probably because they could be exported to Vietnam and China, while dead ones spoiled quickly and had to be utilized for leather or immediate local consumption. Skins of *E. bocourti* and *Homalopsis buccata* were sold by traders from Kampong Chhnang for about 5000 R (USD1.30) each. The ova stripped from gravid *Enhydris enhydris* at Psa Kroam Market were priced at 4000-7680 R/kg (USD1.04-2.00/kg).

#### Trade Volumes

Buyers at Chong Khneas Port estimated that 1000-2000 kg of snakes per day were brought into the port during the peak of the wet season (August-September), while 200-300 kg of snakes per day were brought into the port during the dry season. Vendors at Psa Kroam Market also estimated that 1000-2000 kg of snakes per day were traded through the market during the peak of the wet season.



The average number of snakes per kilogramme was calculated by weighing 40 bags each containing 10 snakes randomly selected from a large pile of dead *Enhydris enhydris*, *E. longicauda*, and *Homalopsis buccata*. The mean was 4.27 snakes per kilogramme (SD=0.42; n=40). Using this standard of 4.27 snakes per kilogramme for mixed-species catches, 1000-2000 kg of snakes roughly equates to 4270-8540 snakes per day being traded through Chong Khneas Port and through Psa Kroam Market in the peak of the wet season.

### Harvest Seasons

The harvest and trade of homalopsine watersnakes from Tonle Sap continues year-round, based on observations from both wet (May to October) and dry seasons (November to April), and from interview data. Although most investigative efforts were carried out in the wet season, the volume of trade was found to be considerably higher during those visits. No snakes were seen at Chong Khneas Port or Psa Kroam Market during the single visit in December 1999, while both of these places were actively trading snakes in very large numbers in August 1999, and in June and August 2000. Likewise, interviewees claimed that most snakes were harvested during the months of August and September.

It remains unclear whether harvest seasons are influenced by the periods of snake activity, changes in fish prices that subsequently affect the demand for snakes, or the opening and closing of fishing seasons on Tonle Sap. Private fishing lots, which cover 80% of the lake shoreline (FAO, 1998), operate from the beginning of October through to the end of May. Thus, small-scale fishermen have limited access to the lake in the dry season, but open access in the wet season.

### Sites Visited

#### Chong Khneas Port

During visits in the wet season, boats of middlemen would usually arrive at Chong Khneas Port twice per day (dawn and late afternoon) carrying iceboxes containing mostly dead snakes. On one visit, the middlemen reported that they had purchased 3-10 kg of snakes from each of up to 20 fishermen per day over a four- to five-day period on the lake before coming into Chong Khneas. Interviewees claimed four to 10 middlemen boats arrived per day during the wet season. Upon arriving in port, snakes were sold by weight in rice sacks and baskets to buyers on the shore, and then transported, usually by motorcycle, into Siem Reap Town.

On 26 August 1999, the complete cargo of a middleman's boat was observed being unloaded from iceboxes and weighed before being sold to buyers. The boat contained 473 kg of dead homalopsines, with *Enhydris enhydris* and *Homalopsis buccata* represented in the catch. The middleman said that he had been purchasing snakes from fishermen on the lake for the previous five days. On 14 August 2000, the cargo of a middleman's

boat being unloaded and weighed contained 611 kg of dead homalopsines - all of the five traded species, as well as five by-catch species (see page 116) (Figs. 4-6). *Enhydris bocourti* and *Homalopsis buccata* were selected and bagged separately, probably for routing to different traders for the skin or live export trades. Assuming that one kilogramme equates to 4.27 individual snakes, these boats contained approximately 2020 and 2609 snakes, respectively. On 28 June 2000, roughly 400 kg (or approximately 1708 individuals) of homalopsines were observed being unloaded from a boat and onto motorcycle carts. The catch could not be thoroughly examined, but four species of homalopsines were seen: *Enhydris enhydris*, *E. bocourti*, *E. longicauda*, and *Homalopsis buccata*. The vast majority of these were *Enhydris enhydris*, with only a few individuals seen of the other three species.

#### Psa Kroam and Psa Leu Markets

Snakes at Chong Khneas Port that were not sold directly to consumers were taken by traders into Siem Reap Town and sold at Psa Kroam and Psa Leu Markets. On each of four mornings in August 1999, three snake vendors at Psa Kroam were observed to have approximately 100-200 kg of four species for sale: *Enhydris enhydris*, *E. bocourti*, *E. longicauda*, and *Homalopsis buccata*. Most of the snakes were dead, although on one morning a basket containing approximately 200 live *E. enhydris* was seen. On a visit to Psa Kroam in August 2000, a vendor was observed with about 100 dead *E. enhydris*, about 100 live *E. enhydris*, and at least one live *E. jagorii* (Fig. 11), and on a second visit one vendor was seen with about 200 dead snakes, mostly gravid *E. enhydris*. During visits in August 1999 and August 2000, a vendor at Psa Kroam was observed stripping the ova from gravid female *E. enhydris*: at the time of both visits, about 10 kg of ova (number of individual ova difficult to estimate) had been removed (Fig. 10). A visit to Psa Kroam at 0700h on 28

**Fig. 6.** The complete cargo of homalopsine watersnakes from the boat of a middleman, Chong Khneas Port, August 2000. The bags contained five species: *Enhydris enhydris*, *E. longicauda*, *E. jagorii*, *E. bocourti* and *Homalopsis buccata*.



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June 2000 found one vendor selling about 300 dead *Enhydryis enhydryis* and at least six *Homalopsis buccata*; a return visit at 0830h found the vendor had sold out of snakes. Snakes were sold by weight to a large number of customers, and the animals were taken out of the market in plastic bags; this observation suggests both a high turnover and the likelihood that brief observations during this survey recorded only a small fraction of the daily volume of snakes traded at this market in the wet season.



Fig. 7. A fisherman's boat containing watersnakes including *Enhydryis enhydryis* and *E. longicauda*, Kampong Chhnang Floating Village, August 2000.

Photographs: Bryan L. Stuart

Fig. 8. Workers at an ethnic Vietnamese skinning shop at Kampong Chhnang Floating Village skinning *Homalopsis buccata*, August 2000. One man can be seen pulling the skins onto bamboo poles in order to stretch the skins.



On a visit to Psa Leu in June 2000, one vendor was found in the process of skinning alive about 200 *Enhydryis enhydryis*, mostly large females. Several dozen writhing, skinned snakes, many with visibly developing ova, were on display for sale for human consumption. At Psa Leu in August 2000, two vendors were seen stripping ova from about 200 dead *E. enhydryis* on one visit, and one vendor was seen with about 50 dead *E. enhydryis* and at least one *E. longicauda* on a second visit.

#### Siem Reap Snake Traders

About 50 live homalopsines were seen in an outdoor vessel on a visit to a snake trader in Siem Reap town in December 1999. Most of these were *Enhydryis enhydryis*, but a few individuals of *Homalopsis buccata* and one *Enhydryis bocourti* were also seen. The dealer said that he sold the snakes for both crocodile and human food.

A visit to the house of a second snake trader in Siem Reap Town in August 2000 found about 200 kg of frozen homalopsines (at least *Enhydryis enhydryis*) in a large cement tank of ice covered by sawdust, and about 80 *Homalopsis buccata* skins stretched on bamboo poles.

#### Prek Toal Floating Village

Many residents of Prek Toal Floating Village raise *Crocodylus siamensis* in floating wooden cages next to their houses, and it was reported that on most mornings crocodile farmers could be seen purchasing snakes from fishermen to feed their captives. During a morning visit in December 1999, one crocodile farmer was observed buying one fisherman's previous night's catch of 7 kg of snakes, which contained mostly *Enhydryis enhydryis* and *Homalopsis buccata*, as well as *Enhydryis longicauda* and at least five *Erpeton tentaculatum*. On the same visit, two young girls were observed skinning a pile of several hundred dead *Enhydryis enhydryis* and *Homalopsis buccata* for sale as human food. In August 1999, a large captive *Enhydryis bocourti* was seen in a floating cage at a fisherman's house awaiting purchase from traders.

#### Sary Village

During a visit in June 2000, at least 100 live *Enhydryis bocourti* were seen at a reptile trader's house at Sary Village, Kampong Thom Province. The snakes were reported to have come from a flooded wetland near the village that forms part of Tonle Sap Lake. The trader was also dealing in turtles and rat snakes (*Ptyas* spp.).

#### Kampong Chhnang Floating Village

Fishermen reported that three ethnic Vietnamese shops at Kampong Chhnang Floating Village purchased *Enhydryis bocourti* and *Homalopsis buccata* for their skins. One of these shops was visited, where about 50 *Enhydryis bocourti* and about 150 *Homalopsis buccata* were being skinned in assembly-line fashion (Fig. 8).

One man skinned the dead snakes and stretched the skins on bamboo poles (Figs. 8-9), and the meat was later sold as human food. After stretching on bamboo poles, the skins were inflated with a bicycle-tyre pump and tied at each end with elastic bands. These skin balloons were then stored in an insulated plastic refrigerator, and reportedly were to be transported by truck to the Thailand border crossing at Poipet in Bantey Meanchey Province, Cambodia. One skin trader told the authors that Thai buyers began purchasing skins of *Enhydris bocourti* and *Homalopsis buccata* only about three years ago; at that time the price for skins increased from about 500 R/each (USD0.13/each) to about 5000 R/each (USD1.30/each). The skinners reported that only skins 80 cm or longer were purchased by the Thai buyers.

On one morning, the cargoes of eight fishing boats were examined at Kampong Chhnang Floating Village (Fig. 7) and about 2000 snakes were seen in total. These were mostly *Enhydris enhydris* and *E. longicauda*, but also *Homalopsis buccata* and *Enhydris bocourti*; one boat had 12 *Erpeton tentaculatum* in its catch.

## DISCUSSION

Little is known about the ecology of homalopsine watersnakes because of their aquatic nature and secretive behaviour (Murphy and Voris, 1994; Murphy *et al.*, 2000). The authors' observations of the harvest from Tonle Sap provide the first report of relative abundance of species in a homalopsine assemblage. Just as *Enhydris enhydris* was found to represent about 80% of the catch in Tonle Sap, other aquatic snake assemblages have also been shown to be inequitable. For example, Stuebing and Voris (1990) found that in an assemblage of 10 species of sea snakes and sea kraits incidentally captured by commercial prawn trawlers off the coast of Sabah, 77% were represented by a single species of seasnake (*Lapemis hardwickii*). Most information on marine snake assemblages has relied on capture by commercial fisheries because of the logistical difficulties inherent with studying these snakes, although it is rec-

ognized that the method can introduce several sources of error (Stuebing and Voris, 1990). The relative abundance of *Enhydris enhydris*, *E. longicauda*, and *E. jagorii* seen in trade probably reflects their natural relative abundance. However, the relative abundance of *Erpeton tentaculatum*, *Enhydris bocourti*, and *Homalopsis buccata* in trade probably does not reflect their natural relative abundance. *Erpeton tentaculatum* was not valued for skins or human food, and local people believed the species to be dangerously venomous. Crocodile farmers did not usually purchase specimens for fear of "poisoning" the crocodiles. Fishermen reported that *Erpeton tentaculatum* was usually thrown back when captured dead or alive owing to a lack of buyers. *Enhydris bocourti* and *Homalopsis buccata* seemed to be selectively removed from catches because of their value for leather and live export, and so were probably re-routed for these markets rather than offered for sale at the Siem Reap Town markets. Additional sources of error in the market assemblage included a capture bias of individuals or species small enough to escape gill nets and fish traps, or bias in the placement of gillnets and traps that reflect presently unknown microhabitat partitioning among homalopsines.

Examples of large-scale commercial exploitation of other snake populations in the world are known. Seasnakes, sea kraits, and *Acrochordus granulatus* are harvested for meat and leather in Japan (Heatwole, 1997) and the Philippines (Punay, 1975). Seasnakes are also harvested for the leather industry in Australia (Heatwole, 1997). Rattlesnakes are annually harvested and killed for their meat and skins in North America (Fitch, 1998). Probably the world's largest commercial trade in snakes centres on the traditional Chinese medicine and food trades (Klemens and Thorbjarnarson, 1995). High demands in China for snakes such as pythons, rat snakes, and cobras have reached beyond the political borders, and source countries for these snakes now include at least Cambodia, Lao PDR, Vietnam, and Myanmar (B.L. Stuart and S.G. Platt, unpublished data), and probably other countries in the region.



Once the skins had been placed on the bamboo poles they were inflated with a bicycle-tyre pump and tied at each end with elastic bands. These skin balloons were then stored in an insulated plastic refrigerator, and reportedly were to be transported by truck to the Thailand border crossing at Poipet in Bantey Meanchey Province, Cambodia.

Fig. 9. Skins of *Homalopsis buccata* on bamboo poles, Kampong Chhnang Floating Village, August 2000.

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Statistics remain scant for examples of commercial snake exploitation. Punay (1975) reported that from 1971-1973, approximately 180 000-200 000 seasnake hides were exported from the Philippines to Japan. An estimate of  $119\,571 \pm 45\,988$  seasnakes harvested as trawling by-catch in the 1991 prawn season in the Gulf of Carpentaria, Australia (Heatwole, 1997), seems to be the largest available figure for any recent, localized snake harvest. The estimate from this study that upwards of 8500 homalopsine watersnakes pass through Chong Khneas Port and Psa Kroam Market per day during the peak of the wet season suggests that the Tonle Sap harvest probably represents the largest commercial exploitation of any snake assemblage in the world. Although the Chinese traditional medicine and food trades are probably the world's largest current trades, sources for these snakes cover a much larger geographic area.

In terms of potential demand, crocodile farmers at Prek Toal estimated that they fed 1-3 kg of snakes per week to each sub-adult or adult crocodile. Nao (1998) reported approximately 6300 sub-adult and adult captive crocodiles in Siem Reap and Battambang Provinces in 1997. Assuming that all crocodiles were fed snakes and not fish, this equates to a potential demand for 6300-18 900 kg of snakes per week in Siem Reap and Battambang Provinces. Reports of 1000-2000 kg of snakes per day, or 7000-14 000 kg per week, brought into Chong Khneas Port and Psa Kroam Market during the peak of the season, falls within the range of potential demand.

Unfortunately, few data are available on the natural densities of homalopsines, so it is difficult to determine whether homalopsines could be sufficiently abundant in Tonle Sap to satiate these demands. At Lake Songkhla in southern Thailand, Murphy *et al.* (2000) estimated a density of one *Enhydris enhydris* per two metres of shoreline. In a study of the estuarine-inhabiting homalopsine *Cerberus rynchops* in Malaysia, Jayne *et al.* (1988) estimated a density of one to three subadult snakes per metre of shoreline at their study site. Based on these data, it appears that homalopsines occur naturally in very high densities. It is unclear, however, if the high abundance of homalopsines in Tonle Sap, as perceived indirectly by the high trade volume, is natural or artificial. It is possible that homalopsine populations have become inflated in Tonle Sap owing to heavy human hunting pressure on snake predators such as large fish, waterbirds, and wild crocodiles. Furthermore, the removal of large fish and other predators may have reduced pressure on small fish, frogs and tadpoles, and these have in turn provided additional food resources for homalopsines. How the recent shift of human hunting pressure onto the homalopsines affects the Tonle Sap ecosystem remains unclear.



Fig. 10. A vendor at Psa Kroam Market loading dead homalopsine watersnakes into plastic bags for sale to a buyer, August 2000. About 10 kg of ova from *Enhydris enhydris* can be seen in the foreground, and two piles of dead *E. enhydris* stripped of their ova in the centre.

Photographs: Bryan L. Stuart

Fig. 11. A basket containing live, gravid *Enhydris enhydris* at Psa Kroam Market, August 2000.



## RECOMMENDATIONS FOR FURTHER STUDY

Monitoring of the homalopsine harvest and trade is urgently needed. The Tonle Sap watersnake harvest should be viewed by managers as an economically important “fishery” because of the inverse relationship between the homalopsine and fish harvests, and because of the use of homalopsines as an alternative protein source for people and captive crocodiles. A programme that more rigorously estimates the volume of snakes brought into Chong Khneas Port (probably the largest port in the region), for example, is needed to determine if the harvest levels are unsustainable and snake catches decline over the next few years. All aspects of the homalopsine trade at other ports on Tonle Sap also warrant investigation.

Further investigation is needed on the reported export of Tonle Sap snakes by air from Phnom Penh to Hong Kong and Guangzhou, China. Verification of large-scale international export of Tonle Sap homalopsines will significantly affect the management practices required to sustain the harvest.

The harvest from Tonle Sap presents an opportunity to collect biological data from large sample sizes of homalopsines. Useful information could be obtained on fecundity and life history of the harvested species. Such studies are urgently needed to evaluate the sustainability of this harvest on wild populations; for example, a species of Australian seasnake has been noted as potentially more susceptible to harvesting because of its naturally high rates of mortality and infertility (Heatwole, 1997). The data obtained on the harvested homalopsines should be analysed with a view to instilling management practices that would ensure long-term sustainability of the harvest. Particular focus should be centred on the harvest of gravid females; perhaps modelling exercises could determine the optimum time for harvesting each species while minimizing impact on the next generation of snakes. As a precedent, Shine *et al.* (1995) measured and dissected specimens of the aquatic Elephant-trunk Snake *Acrochordus javanicus* that had been collected for the commercial skin trade in Sumatra, and used reproductive data from these specimens to make inferences on the sustainability of the harvest.

Further ecological studies on wild homalopsines are needed to assess whether the densities in Tonle Sap reflect those in other South-east Asian ecosystems. Of particular interest would be investigating whether homalopsine densities are limited by resources or by predators, and how human hunting pressure on the snakes and their larger predators affects the Tonle Sap ecosystem.

An educational campaign is recommended to encourage fishermen to release the Tonle Sap endemic *Enhydris longicauda* when captured alive. Specifically suggested is an illustrative poster that instills community pride by explaining in Khmer language that the species is found in the world only in Tonle Sap, and that the help of fishermen is needed to prevent the disappearance of the “Tonle Sap Watersnake”.

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This paper is dedicated to the memory of Sam Veasna, an exceptional field biologist who passed away during the period of the present study while pioneering conservation work in Cambodia.

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The sources of information upon which the cases below are based are cited at the end of each country section.

## EUROPE

### BELGIUM

The following seizures took place at Zaventem Airport, Brussels, by the Anti-Drug Group (GAD) Inspection Service team:

14 March 2000: 8 kg carved ivory arriving by courier from Kinshasa, Democratic Republic of the Congo.  
May: 62 live cacti, sent by post from Bogota, Colombia, without CITES papers. Included 10 Artichoke Cacti *Obregonia denegrii* (CITES I) and specimens of the following CITES II-listed species: 10 *Coryphantha* spp., 12 *Lophophora williamsii*, 10 *Mammillaria* cf. *multiceps*, 10 *Mammillaria* spp., 10 *Matucana* spp. On three separate occasions in June, in cargo shipments, without requisite papers: two python *Python* (CITES I/II) skins, 13 python belts, 21 python handbags, 18 python wallets, five monitor *Varanus* (CITES I/II) handbags, three monitor *Varanus* wallets that had arrived from Senegal, bound for Brussels; 15 wallets made of python, crocodilian and monitor skins and 74 python skin belts from Mali, destination Bucharest, Romania; and, four monitor handbags, four monitor wallets and one python wallet from Senegal, bound for Lisbon, Portugal.

On 27 April 2000, federal police conducted raids on three Asian grocery shops in Brussels and seized several TCM products that claimed to contain ingredients derived from CITES-listed species. Items seized included dried ginseng *Panax* roots and 1200 packages containing some 6000 plasters said to contain musk *Moschus* and Tiger *Panthera tigris* bone. The ginseng is being examined by the CITES Scientific Authority to establish which species was being offered. The raids were initiated following information obtained by TRAFFIC Europe during investigations conducted in December 1999.

TRAFFIC Europe

### GERMANY

In the largest-ever seizure of spiders in Germany, on 24 September 1999, Customs officers arrested a French woman after she attempted to smuggle 1221 adult tarantulas from Mexico. These included Mexican Red-kneed Tarantula *Brachypelma smithi*, Flame-knee Tarantula *B. auratum* and Guerrero Orange Legs *B. boehmei* (all EU Annex B/CITES II). The specimens, 112 of which had perished, were all female and many were carrying fertilized eggs. They had been placed in 34 boxes within 18 cardboard containers inside one suitcase. The suspect is accused of violating federal conservation law linked to Council Regulation (EC) No. 338/97.

Since July 1999, several postal packages containing the same species of spiders have been found in Saint-Priest, near Lyon, by French Customs officers.

On 10 April 2000, Customs officers in Hamburg and Frankfurt seized 264 kg of caviar and arrested three Iranian citizens. The caviar, reportedly from Russia, was contained in 250 g-cans and was seized after Customs officials set up a fictional firm which attracted the sellers. The men are accused of violating federal conservation law which is linked to Council Regulation (EC) No. 338/97.

In July 2000, Customs officers at Frankfurt Airport seized 770 live Yellow-banded Poison Frogs *Dendrobates leucomelas* (CITES II) that were hidden in three plastic containers and held in the hand luggage of a person arriving from Venezuela. The frogs have been given to Frankfurt Zoo. The case is under investigation.

Federal Ministry of Finance, Berlin; Central Customs Criminal Investigation Authority, Cologne; TRAFFIC Europe

### SPAIN

Following investigations conducted by TRAFFIC Europe in Marbella in September 1999, authorities seized nine shahtoosh shawls (made of fleece from the Tibetan Antelope *Pantholops hodgsoni* (CITES I)), from a fashion boutique in the city in December. The owner of the shop has been prosecuted and fined 2 025 000 pesetas (USD10 500).

TRAFFIC Europe

### UK

CITES-related TCM seizures by Felixstowe Customs officers during 2000 (to 25 April) included 20 kg and seven packages of Costus root *Saussurea costus* (CITES I). On 4/5 May, in two separate shipments, 30 kg of Costus roots, 14 boxes of Costus roots and tortoise or turtle shell (species not known), arriving from China. No CITES documents.

On 12 April 2000, at Horseferry Road Magistrates' Court, London, The Renaissance Corporation - retailers of Indian artefacts and woollen goods - was fined GBP1500 for illegally importing and selling shahtoosh shawls. The garments were seized in 1997 by the Metropolitan police from the company's premises in Mayfair during raids as part of Operation Charm. The Renaissance Corporation had imported 138 shawls, believed to derive from some 1000 Tibetan Antelopes *Pantholops hodgsoni* (CITES I).

On 14 April 2000, Harold Sissen, of Northallerton, was found guilty of four counts of illegally importing three Lear's Macaws *Anodorhynchus leari* (CITES I) and six Blue-headed Macaws *Ara couloni* (CITES II) in February 1997 and March 1998 (TRAFFIC Bulletin 17(2):88; 18(1):32). Further charges of selling a Palm Cockatoo *Probosciger aterrimus* and a Hyacinth Macaw *Anodorhynchus hyacinthinus* (both CITES I) contrary to the *Control of Trade in Endangered Species (Enforcement) Regulations 1985* (COTES), were dismissed owing to lack of evidence. Sissen, a bird breeder, was sentenced to two and a half years' imprisonment on each count, to be served concurrently. He was also ordered to pay costs of GBP10 000 (USD16 000) (reduced to GBP5000).

An appeal lodged by Sissen was heard at the Royal Courts of Justice in London on 8 December. All points of law raised by the defence were dismissed. The judges upheld that the EU regulations for the protection of wildlife are directly applicable in the UK; any offence committed does not end at first point of entry into the EU; and, the powers of *Customs & Excise Management Act* (CEMA) are activated and can be applied under EU regulations. Sissen was refused leave of appeal to the House of Lords. His sentence was reduced to 18 months, however.

Metropolitan Police Service News Release, 12 April 2000; TRAFFIC International

On 5 December 2000, at Snaresbrook Crown Court, Robert Sclare, of London, was sentenced to six months' imprisonment - three of them suspended. At an earlier hearing Sclare, a trader in taxidermy specimens, was charged with 59 counts relating to infringements of the *Control of Trade in Endangered Species Regulations 1997* and the *Wildlife and Countryside Act, 1981*. Items on sale illegally at his shop "Get Stuffed" in Islington, London, and seized during a police raid in 1998 included the skull of a Gorilla *Gorilla gorilla*, a Tiger *Panthera tigris* and her young litter and a Leopard *P. pardus*, as well as vultures, sparrowhawks *Accipiter* spp. (CITES II) and Snowy Owls *Nyctea scandiaca* (CITES II).

Sclare pleaded guilty to 27 counts of forgery relating to applications to obtain permits to trade in the animals and admitted 13 counts of illegally displaying the animals for a commercial purpose.

The raid took place following an investigation by TRAFFIC which was acting on information passed to the WWF-UK Eyes and Ears Campaign.

TRAFFIC International

## AFRICA

### EGYPT

In August 2000, 1525 kg of uncut ivory were seized by authorities in the southern town of Kom Ombo. One Egyptian and a Sudanese confessed to illegally entering Egypt for the purpose of selling the ivory after they were caught trying to return to Sudan, from where the ivory had been smuggled. They led authorities to the home of another Egyptian in Kom Ombo, where 29 sacks containing the uncut ivory were found. All three men were arrested and the pieces transferred to the Aswan Customs office to be kept as evidence. A court ruling has been postponed.

From September 1999 to April 2000, authorities made nine separate seizures of worked and raw ivory from traders and tourists leaving the country. The largest by far was 79 tusks (173 kg), confiscated from an Egyptian trader in Aswan, who claimed that the ivory came from "Sudan and other countries".

Sapa-Associated Press, 15 August 2000; *Pachyderm* No. 28, January-June 2000

### SOUTH AFRICA

On 20 June 2000, at Johannesburg Regional Court, Rolf Dieterich Bauer of Glenvista, Johannesburg, pleaded guilty to a charge of collecting and conveying specially protected cycads from the provincially-owned Songimvelo Game Reserve, without a permit. He was fined ZAR10 000 (USD1436) or sentenced to 12 months' imprisonment, with a further 12 months' suspended for three years. He was also ordered to forfeit his vehicle to the Mpumalanga Parks Board.

Bauer was caught on 22 March by Mpumalanga Parks Board officials while in the illegal possession of nine specially protected cycads *Ecephalartos paucidentatus*. It was later established that the accused had commissioned three men to steal the plants from Songimvelo Game Reserve. They await trial.

In 1996, Bauer, who runs a small nursery from his farm, was fined after being caught illegally dealing in specially protected plants.

Mpumalanga Parks Board News Report, 20 June 2000

Large amounts of pangolin scales have been seized in Hong Kong (see below). A survey by TRAFFIC East Asia in 1996 into the use of wildlife as medicine and food by Hong Kong Chinese showed that the Chinese Pangolin *Manis pentadactyla* (CITES II) was the third-most frequently consumed animal after snake and civet cat among those who consumed exotic animals, the flesh being regarded by consumers as a health tonic to "warm up" the body (Lee, 1998).

Pangolin scales were amongst the most frequently observed Chinese *materia medica* during surveys conducted in 1996 by the Chinese Academy of Science in six Chinese medicine markets in China. In the same year, the State Administration of Traditional Chinese Medicine (SATCM) noted that the dire shortage of pangolin scales in China was alleviated by supplies from neighbouring countries (SATCM, 1996). Should the current trends for demand continue alongside current practices for the management of wildlife resources, Guo *et al.* (1997) predict that the Chinese Pangolin will be driven to the verge of extinction (see also page 106).

*TRAFFIC East Asia; Lee, Samuel, K.H., (1998). Attitudes of Hong Kong Chinese Towards Wildlife Conservation and the Use of Wildlife as Medicines and Food. TRAFFIC East Asia; SATCM (1996). Prices for pangolin scales in the Guangxi cross-border trade increase even more. Journal of Chinese Medicinal Materials 19(4). State Administration of Traditional Chinese Medicine. Centre for Chinese Materia Medica Information. (In Chinese). Guo, Y., Zou, X., Chen, Y., Wang, D., Wang, S. (1997). Sustainability of Wildlife Use in Traditional Chinese Medicine. In Conserving China's Biodiversity. Reports of the Biodiversity Working Group. China Council for International Cooperation on Environment and Development. Liu, N. (1995). Captive breeding of and the market for pangolins. Journal on Chinese Medicine Information in China. 2(12):19. (In Chinese) (citation overleaf).*

## ASIA

### JAPAN

On 26 April 2000, Tokyo Customs seized about 500 kg (132 cut pieces) of ivory that had been concealed among 300 boxes of chopsticks shipped from Singapore to Kobe port. A British national from Hong Kong had imported the shipment and a manufacturer of ivory products - a board member of the Japan Ivory Association - went to collect the shipment after it had been transported from the port to Saitama prefecture. Both men were arrested. The ivory manufacturer was tried in a magistrates' court and fined JPY300 000 (USD2777); he later changed his statement and pleaded not guilty to the charges. This case, and the date of the trial of the British national, is pending.

*Yomiuri (Japan), 19 May 2000; TRAFFIC East Asia*

### EAST ASIA HONG KONG

Large amounts of pangolin *Manis* scales and sea turtle skin were discovered in Hong Kong in March 2000 in separate consignments en route from the Philippines and Indonesia, to Shenzhen, China.

On 15 March, Customs officials at Fanling seized 2145 kg of pangolin scales and 53 kg of sea turtle skins (species not specified) exported from Indonesia by boat in a container declared as seaweed; the shipment was bound for China. The pangolin scales were packed in 39 bags, the sea turtle skins in one bag, and all were concealed under two containers of seaweed. Customs officials estimated that the scales came from some 3900 pangolins.

On 21 March, 14 bags of pangolin scales and 14 bags of turtle Cheloniidae spp. scales were found hidden among 4000 bags of wet seaweed in two shipments from Indonesia and one shipment from the Philippines. The haul of turtle scales is thought to represent between 400 and 800 turtles and is described as the biggest such seizure in the last 10 years.

The consignee of the four shipments is the owner of a trading company who was arrested when he arrived to collect the first shipment. He was released on HKD10 000 bail. The haul is thought to have been destined for medicinal use.

The three Asian pangolin species are listed in CITES App. II; Cheloniidae species are listed in App. I.

On 18 September 2000, at Tuen Mun Court, Ruan Shuiguang and Chen Changxiang were gaoled for eight months for smuggling in animals from Taishan, in Guangdong, China.

Customs officers seized a Spotted Linsang *Prionodon pardicolor* (CITES I) and a Leopard Cat *Prionailurus bengalensis* (CITES I/II) from a shipment of 1172 animals that included rodents, hedgehogs and turtles, all of which were being unloaded by the pair at the Tuen Mun Public Cargo Working Area. The defendants claimed they were each paid 300 yuan (HKD280) to bring the animals across the border and that they had been unaware of the legal consequences.

*Ming Pao Daily (Hong Kong), 16 March 2000; South China Morning Post (Hong Kong), 17/23 March 2000; 19 September; Agriculture, Fisheries and Conservation Department, Hong Kong*

### TAIWAN

Customs officials have reported what they believe to be one of Taiwan's largest-ever hauls of smuggled ivory following the seizure at Keelung, on 5 May 2000, of 332 tusks weighing over two tonnes that were concealed in two wooden crates. The items, which consisted of whole tusks and pieces of ivory, had been shipped from Douala, Cameroon, to Kaohsiung in southern Taiwan, before being transferred to the port of Keelung in the north for Customs clearance. Some of the ivory had been stamped, indicating that it had been registered with the local authorities and was subject to regulation in Cameroon.

*China Post (Taiwan), 5 June 2000*

### SOUTH ASIA INDIA

On 23 March 2000, income tax officials in Delhi seized shahtoosh shawls from the residence of a prominent builder in the city. The seizure was made possible owing to the alertness of income tax officials during a series of raids conducted since February 2000 on all establishments belonging to the builder. The department sealed 55 shawls along with other valuables in the house and, while estimating their cost, became suspicious that some shawls were of shahtoosh (wool of the Tibetan Antelope *Pantholops hodgsoni* (CITES I)). The Wildlife Department was alerted and staff were able to confirm that seven shawls were made from shahtoosh and the remainder of pashmina (the wool of a domesticated goat).

Between April and August 2000, support by TRAFFIC India's enforcement assistance unit to enforcement agencies led to the arrest of 17 people and the seizure of 250 g of musk and 10 ivory (CITES I) pieces, as well as skins of the following animals: three Tigers *Panthera tigris*, 86 Leopards



Attempts to smuggle nearly 200 Harlequin Poison Frogs *Dendrobates histrionicus* (CITES II) and 344 Matamata Turtles *Chelus fimbriatus* from Colombia has resulted in a two-year gaol sentence after the incident was foiled by authorities at Bogotá airport.

© WWF-Canon/Kevin Schafer

Sixty-two live cacti, sent to Belgium by post from Bogotá, Colombia, were recently seized owing to lack of CITES papers.

© WWF/M. Lindhard





*P. pardus*, three Himalayan Black Bears *Ursus thibetanus*, one Snow Leopard *Uncia uncia* (all CITES I species), five Red Foxes *Pseudalopex culpaeus* and 15 Smooth-coated Otters *Lutrogale perspicillata* (both CITES II). The cases are being investigated.

TRAFFIC India

#### SOUTH-EAST ASIA INDONESIA

On April 26 2000, the Natural Resource Conservation Unit (*Unit Konservasi Sumberdaya Alam-KSDA*) raided the Jalan Bintang bird market in Medan, north Sumatra, and seized a number of species that are protected by national legislation.

released on bail and the snakes handed over to the State Wildlife and National Parks Department.

The previous week some 5000 Common Rat Snakes *Ptyas mucosus* (CITES II) were seized at Sungai Golok by members of the Territorial Army stationed at the Malaysia-Thai border. The snakes had been destined for the west coast for processing before being exported.

*The Sun (Malaysia), 12 February 2000*

#### THAILAND

On 28 April 2000, Customs officers at Don Muang Airport, Bangkok, seized 488 kg of raw ivory in the form of 112 tusk pieces. These were contained in three iron boxes arriving from Zambia and had been

The seizure of so many *Malayemys subtrijuga* presented a problem for the Turtle Conservation and Ecology Project (TCEP) in that this species is difficult to maintain in captivity for any length of time and the volume of turtles confiscated would have exceeded TCEP's holding capacity for aquatic species. The case highlights the urgent need to develop a contingency plan that would permit the project to ship southern species back to potential translocation sites within their natural range, following quarantine and rehabilitation. New regulations that will be issued by the national government in the near future are also likely to increase the numbers of turtles confiscated by authorities.

The shipment of *Malayemys* was returned to the traders but a fine was imposed for exceeding weight restrictions.

Traders predict that even if large-scale captive breeding of pangolins were possible, they would not be able to meet demand for pangolin scales in five to ten years' time if the huge demand in China and other countries continues (see box)

These included three Siamang *Hylobates synactylus* (CITES I) and the following CITES II-listed species: two Slow Lorises *Nycticebus coucang*; one Black Eagle *Ictinaetus malayensis*; 13 cockatoos - Sulphur-crested Cockatoos *Cacatua galerita* and Lesser Sulphur-crested Cockatoos *C. sulphurea* - and two Eclectus Parrots *Eclectus roratus*. All animals were given to Siantar Zoo in north Sumatra.

TRAFFIC Southeast Asia

On 2 October 2000, Sabun Yani was sentenced to 18 months' imprisonment after being found guilty of transporting and planning to sell the pelt and bones of a newly killed young Sumatran tigress *Panthera tigris*. Yani was arrested in Kerinci Seblat National Park following an undercover investigation by members of the park's Tiger Protection and Conservation Unit.

*Fauna and Flora International: Indonesia Programme*

#### MALAYSIA

On 12 February 2000, police detained a man and seized more than 1000 snakes of various species from his lorry at a road block on Tanah Merah-Jell road. The snakes, contained in 150 plastic bags, are believed to have been smuggled in from Thailand and were bound for Penang. The suspect has been

concealed under a thick layer of uncut gemstones. Documents with the shipment said the boxes contained gemstones. A citizen of Guinea was arrested when he arrived at the airport's cargo terminal to claim the goods but was later released when he agreed to sign over all the tusks to the Government. According to the law in Thailand, the owner of illegally imported goods is freed if he gives all contraband to the Government, except in certain cases, for example where illegal drugs are concerned, an offence governed by other legislation specifying harsher penalties.

*The Associated Press, 1 May 2000*

#### VIETNAM

On 14 March 2000, Ninh Binh Forest Protection Department (FPD) officials confiscated a consignment of more than 700 Malayan Snail-eating Turtles *Malayemys subtrijuga*, weighing 350 kg, and various other reptile species and birds. The turtles were contained in 100 kg burlap rice bags, together with 800 kg of Asiatic Rock Pythons *Python molurus* (CITES III). Other species included Tokay Geckos *Gekko gecko* (30 kg), Bocourt's Watersnakes *Enhydryis bocourti* (200 kg), and 56 ducks *Heliopais* sp.

The consignment, from the southern-most tip of Vietnam, was being shipped under a permit issued by the Kien Giang FPD. It was confiscated because it exceeded the weight authorized under the permit.

On 15 March 2000, Ninh Binh Forest Protection Department rangers seized a second shipment of wildlife being transported north by lorry on Highway One, travelling from Soc Trang Province in the south of the country, apparently destined for the Chinese border. The cargo comprised 83 turtles and three snakes: six Impressed Tortoises *Manouria impressa* (CITES II), 19 Elongated Tortoises *Indotestudo elongata* (CITES II) four Asian Box Turtles *Cuora amboinensis*, 18 Radiated Leaf Turtles *Cyclemys pulchristriata*, nine Giant Asian Pond Turtles *Heosemys grandis*, two Yellow-headed Temple Turtles *Hieremys annandalii*, 24 Malayan Snail-eating Turtles *Malayemys subtrijuga* and Black Marsh Turtles *Siebenrockiella crassicollis*; one Chinese Rat Snake *Ptyas korros*, one Common Rat Snake *P. mucosus* and one Copperhead Racer *Elaphe radiata*.

The trader had exceeded the weight authorized by a permit in his possession and issued by the Soc Trang Provincial FPD; most specimens were returned to him.

On 28 May 2000, Ninh Binh rangers confiscated a cargo of reptiles and birds from a public bus on Highway One in Tam Diep, Ninh Binh Province. The bus had travelled from Ca Mau Province in the south of Vietnam and was destined for the Mong Cai border crossing with China in Quang Ninh Province. Ten Asian Box Turtles *Cuora amboinensis*, 10 Yellow-headed Temple Turtles *Hieremys annandalii*, 1209

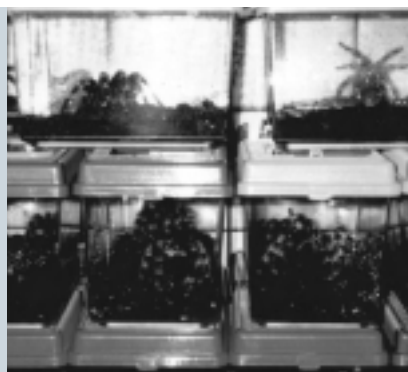


A consignment of Mexican Red-kneed Tarantulas *Brachypelma smithi*, Flame-knee Tarantulas *B. auratum* and Guerrero Orange Legs *B. boehmei* (all EU Annex B/CITES II) seized in Germany. The specimens were all female and many were carrying fertilized eggs.

© German Customs

The skin of a Snow Leopard *Uncia uncia* (CITES I) was among recent seizures in India.

© WWF-US



Malayan Snail-eating Turtles *Malayemys subtrijuga* (identification by rangers not verified), 102 Water Monitors *Varanus salvator*, 360 kg Bocourt's Water-snakes *Enhydryis bocourti*, 390 Tokay Geckos *Gekko gecko*, and 494 birds (species not given) were seized.

*Cuc Phuong Conservation Project; TRAFFIC Southeast Asia*

## OCEANIA

### AUSTRALIA

On 15 March 2000, at Perth District Court, German national Lutz Obelgoenner was sentenced to three and a half years' in gaol for the attempted illegal export of more than 80 native snakes and lizards from Western Australia on 24 December 1999. Obelgoenner had undertaken a highly organized operation and had caught the animals himself. His sentence was reduced to two and a half years' following a guilty plea and for his co-operation with the investigation. He was also fined AUD2000 (USD1180) on two cruelty charges.

Obelgoenner attempted to export six pythons, eight monitor lizards, 68 skink lizards native to the Pilbara and Murchison regions, and numerous geckos from Geraldton. A further 27 reptiles were found in a portable cooler in his vehicle. The animals are in the care of the Department of Conservation and Land Management and are to be released in the wild.

On 28 April 2000, at the Supreme Court, South Australia, German citizen Ralph Dieter Zeiler pleaded guilty to charges of attempting to export Australian wildlife without authority and was sentenced to 18 months' gaol (reduced to six months upon entering into a one-year good behaviour bond).

Zeiler had attempted to smuggle 75 native lizards from Adelaide international airport to Germany in 1999, including Spiny-tailed Geckos *Strophurus intermedius*, Beaded Geckos *Diplodactylus damaeus*, Western Stone Geckos *D. granariensis*, Barking Geckos *Nephrurus millii*, Starred Knob-tailed Geckos *N. stellatus* and the very rare Pernalty Knob-tailed Geckos *N. deleani*. The lizards had been concealed in Zeiler's hand luggage, suitcase and on his person. He claimed that he intended to establish a self-sustaining population of the lizards, and planned to swap and sell the animals to other people who shared his hobby. The reptiles were reported to be too territorial to be returned to their original environment and have been placed in Monarto Zoological Park in South Australia.

On 4 May 2000, at Hobart Magistrates' Court, Tasmania, David Campbell Strachan, from Brighton, Victoria, pleaded guilty to nine charges, including breaching two control orders imposed to keep him out of Tasmanian waters following previous convictions for illegal fishing of abalone. Strachan, who has some 95 convictions for fisheries offences dating back to 1970, was fined AUD800 000 (USD470 000), ordered to forfeit his boat and diving gear, and sentenced to 27 months in gaol.

In March 1997, Strachan became the first person in Australia gaoled for fisheries offences when he

was sentenced to six months' imprisonment and fined more than AUD10 000.

*Minister for Justice and Customs (Australia) Media Release, 16 March 2000; TRAFFIC Oceania; Marine and Rescue Unit, Tasmanian Police Service*

### NEW ZEALAND

Between August and December 1999, nine shipments of furs (predominantly alpaca rugs) from Bolivia were intercepted in Auckland on the basis of under-declared value and possible revenue offences. On inspection, however, eight rugs made of Vicuña *Vicuña vicugna* (CITES I/II) skins were found concealed amongst the fur bales. Each rug had been made up of approximately 15 skins - a total of 122 skins.

While identification of the skins was awaiting verification, the four importers - all Korean nationals - became aware of the investigation and fled the country. Consideration is being given to charging them *in absentia* so that they can be arrested should they return to New Zealand.

The Vicuña is the smallest member of the Camelid family standing 0.8-1.1 m at the shoulder, typically weighing 45-55 kg and producing extremely fine and highly sought-after wool.

*Wildlife Enforcement Group (Agriculture, Conservation, Customs), New Zealand*

### VANUATU

In July 2000, police officers seized 63 pieces of ivory. Vanuatu lacks the forensic facilities to identify the material for the evidence before the court. The Vanuatu MA is forwarding a sample to the USFWS Forensic Laboratory.

The case is under investigation.

*Environment Unit, Government of Vanuatu*

## AMERICAS

### CANADA

In July 2000, the Ontario Court of Justice in Welland, Ontario, handed down the largest fine ever imposed under federal legislation in Canada for a wildlife smuggling offence. Mike Flikkema was gaoled for three months and fined, together with his son, Harold Flikkema, a total of CAD75 000 (USD50 676) after they entered guilty pleas to criminal charges of smuggling tropical finches across international borders.

Mike Flikkema, his wife Johanne and son were arrested in February in Canada following a 17-month investigation by Environment Canada and the USFWS that involved almost 5000 birds. Johanne Flikkema was convicted and fined US\$7500 in a US court. She is currently serving a six-month sentence in that country following her conviction on two felony charges in this case. She will face similar charges in Canadian courts upon her release.

Between 1997 to 1999, the Flikkemas, through their company Flikkema Aviaries, of Fenwick, Ontario, imported 19 bird shipments containing some 12 000 finches, of which an estimated 5000 were CITES-listed species including 756 finches, 30 para-

keets and 20 Hill Mynahs *Gracula religiosa* (CITES II). The birds were then forwarded to the USA without valid export permits.

In June 1999, Johanne and Mike Flikkema, each pleaded guilty to four counts of violations relating to import violations in 1997 and 1998. These charges stemmed from two occurrences involving the illegal importation of CITES-listed birds from Europe to Canada and the later distribution of these birds. They were fined CAD8500 (USD5760).

*Environment News Service, 12 July 2000; Environment Canada, 4 February 2000; Environment Canada News Release, 7 July 2000*

### COLOMBIA

On 9 June 2000, Denis González Ayarza, of Panama, was sentenced to two years' imprisonment and fined 8 million pesos (USD13 864).

Ayarza was arrested on 11 May 2000 at El Dorado airport, Bogotá after he was caught attempting to smuggle 344 Matamata Turtles *Chelus fimbriatus* (a protected species in Colombia) and 196 Harlequin Poison Frogs *Dendrobates histrionicus* (CITES II) out of the country in his luggage.

This is reportedly the first time anyone in Colombia has been prosecuted for a wildlife smuggling offence.

*El Tiempo (Colombia), 4 September 2000*

### USA

On 6 June 2000, at the District Court in the Eastern District of New York, Eugeniusz Koczuk, of Connecticut, was sentenced to 20 months' imprisonment and fined USD25 000; he was also ordered to forfeit just under a tonne of caviar. Koczuk was found guilty in November 1999 of smuggling caviar into the USA (*TRAFFIC Bulletin* 18(2):76). Two co-defendants have yet to be sentenced.

On 21 July 2000, three members of a Maryland company pleaded guilty to charges of smuggling caviar into the country and have agreed to pay a fine of USD10.4 million, reportedly the largest ever in a wildlife prosecution.

Hossein Lolavar, president of US Caviar & Caviar, Faye Briggs, a corporate officer and the company's sales manager, and Ken Noroozi, the president of Kenfood Trading LLC, each pleaded guilty to charges including conspiracy, smuggling and making false statements in violation of the *Endangered Species Act*. If the plea agreements are accepted by the court, each defendant will receive between one and four years in gaol.

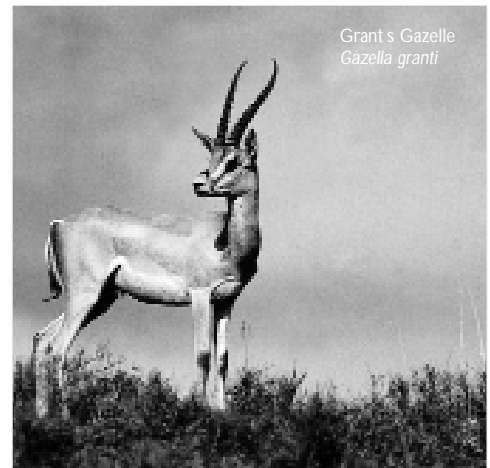
The defendants admitted smuggling black market sturgeon caviar into the USA with forged Russian caviar labels. In 1998 alone, US Caviar & Caviar purchased more than 13 600 kg of Caspian Sea sturgeon caviar, more than half of which was imported using false documents. They also admitted selling fish roe from North American Paddlefish *Polyodon spathula* and Shovelnose Sturgeon *Scaphirynchus platyrhynchus* with false documents claiming that the roe was actually caviar from Russia; both species are protected in the USA.

*TRAFFIC North America 3(2), July 2000; WWF-US Press Release, 24 July 2000*

### Food for Thought: The Utilization of Wild Meat in Eastern and Southern Africa

*TRAFFIC East/Southern Africa. 2000. 263pp.*

The use of wild animals for food is believed to be one of the greatest direct causes of the decline of wildlife populations in many parts of Africa and affects thousands of animals - from insects, rodents and birds, to buffaloes, elephants, and gazelles. However, this bush meat, as it is known, is a valuable source of protein and provides income for many human populations struggling for survival amidst poverty and famine; it is also usually cheaper than meat from domestic animals. Among recommendations to halt unsustainable use of bush meat, the report urges the transferral of wildlife ownership to land-holders and changes in land tenure systems.



Grant's Gazelle  
*Gazella granti*

WWF/M. and Y. Stoffel-Williams

### Heart of the Matter: Agarwood Use and Trade and CITES Implementation for *Aquilaria malaccensis*

*A. Barden, N. Awang Anak, T. Mulliken and M. Song August 2000. 52pp.*

Populations of eight *Aquilaria* tree species have declined to the point where they are considered threatened; of these, six are considered at risk from overexploitation for agarwood, the fragrant heartwood that is sought for its medicinal and fragrant properties. Supply is naturally restricted owing to the fact that agarwood is only found in a small percentage of *Aquilaria* trees: external signs of its presence are not always obvious and trees are often cut down indiscriminately in the search for those containing agarwood. Urgent action to reduce overharvest and illegal trade is required and further investigation should be made, including into the status and biology of those species in trade.



P.P. van Dijk/TRAFFIC

### Evaluation of the Trade of Sea Cucumber *Isostichopus fuscus* (Echinodermata: Holothuroidea) in the Galapagos Islands During 1999

*TRAFFIC South America. 2000. 19pp.*  
*In Spanish and English.*

This report documents the findings of an investigation into the sea cucumber *Isostichopus fuscus* fishery in the Galapagos Islands during 1999 when the fishery was opened for a two-month trial period following a four-year ban. The report outlines the trade controls in place during the trial fishing season, trade volumes and prices. The authors urge Ecuador to establish direct contacts with importing countries to be able to address illegal fishing practices and to introduce a tariff on the sea cucumbers harvested so that these funds can be invested in future conservation projects.



C. Altamir/TRAFFIC

**Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Phnom Penh, Cambodia, 1-4 December 1999. Chelonian Research Monographs Number 2**

*Edited by Peter Paul van Dijk, Bryan L. Stuart, and Anders G.J. Rhodin. Chelonian Research Foundation. 2000. 164pp.*

This illustrated document brings together original contributions from participants attending a workshop convened to assess the impact of trade on the conservation of Asia's freshwater turtles and tortoises. The picture described at the meeting indicates that the trade is larger and has greater impacts on turtle populations than most knew or feared. Much of the workshop was devoted to consideration of conservation actions to address the trade and contribute to the conservation of freshwater turtles and tortoises in their natural habitats.



Giant Asian Pond Turtle  
*Heosemys grandis*

Peter Paul van Dijk

**Mahogany Matters: The US Market for Big-leafed Mahogany and its Implications for the Conservation of the Species**

*Christopher S. Robbins  
TRAFFIC North America. 2000. 58pp.*

Big-leafed Mahogany *Swietenia macrophylla* has a discontinuous but wide distribution from southern Mexico to parts of Peru, Bolivia and Brazil. However the species is considered vulnerable owing to declining or unsuitable habitat and a level of exploitation that may be unsustainable. This report aims to summarize and characterize the mahogany trade within the context of the USA - the world's leading consumer of Big-leafed Mahogany - and to inform US consumers, from lumber importers to end-use consumers, about the implications for mahogany conservation of their purchasing decisions.



J. Hunt, Plywood and Lumber Sales, Inc.

**Just published . . .**

- *Regulation of Collection, Transit and Trade of Medicinal Plants and other Non Timber Forest Products in India. A Compendium.*  
A.K. Jain. TRAFFIC/WWF India. 2000. 529pp.
- *CITES Listed Medicinal Plants of India. An Identification Manual [in English and Hindi].*  
R. Dutta and P. Jain.  
TRAFFIC/WWF India. 2000. 85pp.
- *Cultivation of Medicinal Plants in India. A Reference Book.*  
Dr R.C. Uniyal, Dr M.R. Uniyal and P. Jain  
TRAFFIC/WWF India. 2000. 161pp.

**Coming soon . . .**

- *Swimming Against the Tide: A Review of the Harvest and Trade of Sea Turtles in the Northern Caribbean.*
- *Status, Management, and Commercialization of the American Black Bear (*Ursus americanus*), Second Edition.*
- *Medicinal Plants of Brazil: Legislation and Trade (Phase I) [in Spanish and Portuguese].*
- *Legislation and Extraction Controls and Trade of Mahogany (*Swietenia macrophylla*) in Bolivia, Brazil and Peru.*
- *Mahogany Markets and Trade: Obstacles and Opportunities.*
- *Sustainable Use and Trade of Medicinal Plants in Colombia. Proceedings [in Spanish] of the Workshop held in Villa de Leyva, Colombia, 18-19 September, 2000.*

*For details of availability/expected publication dates of any of the above reports, contact TRAFFIC International or the relevant TRAFFIC office.*



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