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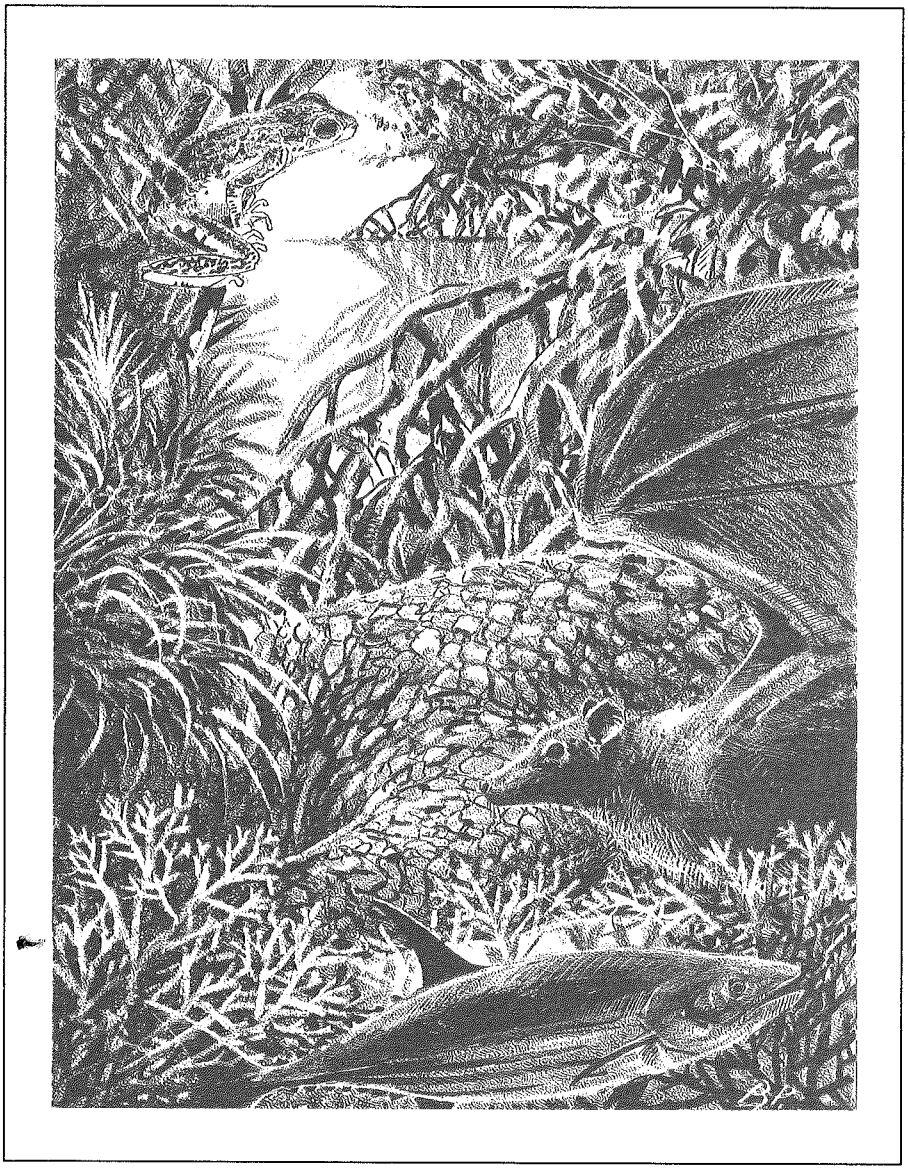

The Journal of the TRAFFIC Network disseminates information on the utilisation of wild animal and plant resources

TRAFFIC BULLETIN

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Editor and Compiler
Kim Lochen

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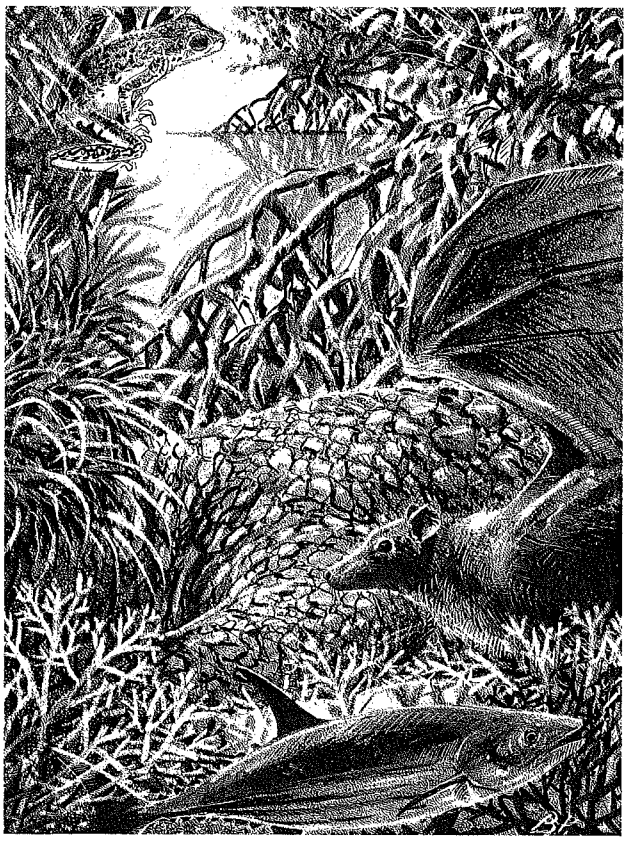

Cover illustration for Vol. 13 by Bruce Pearson

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Djibouti, Czechoslovakia and Equatorial Guinea Join CITES

Djibouti, Czechoslovakia and Equatorial Guinea have acceded to CITES. These accessions became effective on 7 February, 28 May and 8 June 1992 respectively, and bring the total number of Parties to the Convention to 115.

CITES Secretariat

CITES Lifts Trade Boycott on Thailand

On 2 April 1992, the CITES Secretariat informed Parties that the recommended ban on trade in CITES specimens with Thailand was lifted with immediate effect.

At the eighth meeting of the Conference of the Parties, the CITES Standing Committee considered efforts made by the Government of Thailand to enable enforcement of CITES regulations. Such efforts included the approval of a new wildlife law allowing full implementation of CITES with regard to wild fauna, and the drafting of similar legislation for wild flora (see page 7). Taking into consideration the commitment made by the delegation of Thailand at the meeting of the Parties to improve trade controls, the Standing Committee decided unanimously that the ban on trade in CITES specimens, recommended through Notification to the Parties No. 636 (22 April 1991), should be lifted as soon as, to the satisfaction of the CITES Secretariat, an appropriate law on wild flora was approved. Such legislation was agreed on 13 March 1992.

The Secretariat does, however, recommend that Parties are vigilant when accepting CITES documents from Thailand, as when accepting any CITES documents.

CITES Secretariat Notification to the Parties No. 673, 2 April 1992

USA Urged to Review Panda Loans

The US Fish & Wildlife Service (USFWS) has allowed the import of two male Giant Pandas *Ailuropoda melanoleuca* for short-term exhibition by the Columbus (Ohio) Zoo, in spite of opposition by international conservation organizations, including WWF and IUCN. Although efforts by WWF-US to prevent the import failed, the issue did result in an agreement by USFWS to review its current policy on short-term Panda loans. The Pandas will remain at the zoo for no more than five months.

In an attempt to pre-empt WWF-US from taking formal legal action against the import, the Columbus Zoo filed suit against WWF in April 1992 for alleged interference with the zoo's contractual agreement with the Chinese Government. The resulting litigation ended in a settlement agreement on 9 June 1992 whereby WWF-US withdrew its opposition to the Panda loan, and the zoo dropped its lawsuit against WWF-US and promised to donate an estimated 90% of its net profits from the exhibit to Panda conservation. The zoo also agreed to make an unrestricted donation of US$65 000 to WWF-US. WWF-US intends to use that donation to cover legal fees incurred from the lawsuit.

Short-term Panda loans are controversial because of the species' extremely endangered status and the enormous commercial profits made from exhibiting the animal. The species is listed in CITES Appendix I and classified as "Endangered" under the US *Endangered Species Act.* In 1988, USFWS imposed a temporary moratorium on imports of Pandas for short-term exhibition, in response to a lawsuit filed by WWF-US.

As a result of the Columbus Zoo controversy, the USFWS announced in a letter to the Secretary General of CITES that it will soon publish a notice of intent to allow public review of its current Panda policy. The letter also states that no permit applications for short-term exhibition imports of Giant Pandas are currently pending.

WWF-US News Releases, 2/9 June 1992; TRAFFIC USA

TRAFFIC Update

TRAFFIC is very sorry to announce the departure of one of the Network's longest-serving staff members.

Frank Antram, former Director of TRAFFIC Oceania, who left in April, joined TRAFFIC in February 1980, initially as a research assistant. After a brief stint with Greenpeace, Frank returned to the Network in January 1984 to set up and direct TRAFFIC Australia, in Sydney. Soon joined by assistant Debbie Callister, the office took increasing responsibility for wildlife trade monitoring in the entire Oceania region, and before long TRAFFIC Oceania was established.

A more dedicated, hard-working, and likeable person would be hard to find, and Frank will be badly missed. We wish him much success in his new position as Senior Wildlife Officer with the Australian National Parks and Wildlife Service, in Canberra. Debbie succeeds Frank as Director.

Marco Pani has taken over from Pier Lorenzo Florio as national representative of TRAFFIC Europe in Italy. However, Pier Lorenzo will continue to assist in the operations of the office.

Ute Grimm, former German representative of TRAFFIC Europe, left the Network in March to take up a position with the German CITES Scientific Authority.

We are very glad to announce, however, that, effective 1 April 1992, two TRAFFIC national representatives have been appointed in East/Southern Africa. David Newton will be responsible for establishing a TRAFFIC presence in South Africa and will be co-located with the Endangered Wildlife Trust at Johannesburg Zoological Gardens. Alison Rosser is TRAFFIC's representative in Tanzania, and is based in Dar es Salaam.

Taiwan Develops Measures to Control Internal Trade in Rhino Horn

Despite banning imports in 1985, Taiwan remains one of the world's most significant consumers of rhino horn. A recent TRAFFIC survey of Taiwan's market for medicinal products found that rhino horn is widely available in traditional pharmacies around the island. As many as 10 521 pharmacies are estimated currently to be in possession of rhino horn. However, when the Taiwan Government obliged all those in possession to register their rhino horn between August and November 1990, according to the *Wildlife Conservation Law* of 1989, only 410 individuals and companies did so. The amount of rhino horn officially registered is 1500 kg, but the TRAFFIC study indicates that up to 10 tonnes of rhino horn may be held on Taiwan. It is likely that the majority of people holding rhino horn did not register it with the Government owing to uncertainty over whether it would be legally permissible to sell off their stocks. In addition, the *Wildlife Conservation Law* does not specify a penalty for failure to register.

TRAFFIC's findings highlighted the urgency of the need to control Taiwan's internal market for rhino horn, in order to prevent more horn from being smuggled in. It appears that the rarer rhinos become, the more their horn is viewed by some Taiwanese speculators as an attractive investment. TRAFFIC Taipei, together with the National Pingtung Polytechnic Institute, approached the Council of Agriculture (the Government authority responsible for wildlife conservation) with a proposal to organize a workshop to review management options. The Council responded enthusiastically and agreed to convene the workshop as an officially-endorsed meeting, so that invited officials could represent the views of their agencies officially. Moreover, the Council took the initiative to release a set of draft regulations to control the disposal of registered stocks of rhino horn, and the workshop evolved into a public hearing on those regulations.

The workshop was held at the Council of Agriculture in Taipei on 11 to 12 February 1992. It was attended by 62 representatives of 46 Government agencies, including the Health Administration, the Bureau of Criminal Investigation, the Police Administration, and many of their local bureaux - the agencies charged with implementing conservation policy, as well as any new measures. In addition, representatives of nine prominent traditional medical societies and research centres were in attendance, as were several conservation groups. Select key speakers were invited from overseas, including the Head of the Endangered Species Protection Unit of the South African Police, who also held meetings with his Taiwanese counterparts to discuss rhino horn smuggling.

The revised draft regulations that emerged from the workshop would permit the internal sale of registered rhino horn under very strict conditions. Rhino horn could only be prescribed by a qualified traditional practitioner, and only in limited quantity for serious illnesses. Registered horn could be traded between wholesale and retail pharmacies and clinics. All transactions would have to be reported to the authorities, who would cross-check records in order to turn up discrepancies. Taiwan's proposed measures are more restrictive than those put in place in Hong Kong - the only other consumer market to take steps to control its internal market. Most importantly, under these measures, the sale of unregistered rhino horn would become illegal. It is hoped that not only will this provide a strong incentive for the medical community to register their horn and participate in the market oversight scheme, but will also provide a clear message to the local authorities that those trading in unregistered horn should be prosecuted.

The new regulations are still undergoing internal review, but it is expected that they will enter into force in 1992 and there will be a short grace period to allow more pharmacists and doctors holding rhino horn an opportunity to register. The regulations are expected to remain in effect for three years, after which time their effectiveness will be evaluated and new measures announced.

The TRAFFIC study *The Horns of a Dilemma: the market for rhino horn in Taiwan* and the proceedings of *A Workshop on a Programme to Control Taiwan's Trade in Rhino Horn* are available, the former in English and Chinese, from TRAFFIC International.

Kristin Nowell, Acting Director, TRAFFIC Taipei

Zimbabwe Begins Dehorning Rhinos

In a desperate bid to save Zimbabwe's rapidly diminishing rhino population from poachers, game wardens have embarked on a programme to dehorn up to 300 Black Rhinos *Diceros bicornis*, effectively making the animal worthless to poachers who covet the horn. According to Glenn Tatham, the chief warden of National Parks anti-poaching operations in Zimbabwe, "the situation is extremely grave and it demands that we try every possible way of curtailing the killing of rhino. Given all the unknowns - how dehorned females will protect their calves, and bulls' capabilities of fighting for dominance - it is still something that deserves a try."

The severe drought afflicting the region and economic hardship within the country has contributed to an upsurge in poaching. Zambian poaching gangs cross into Zimbabwe almost daily; already this year, poachers have killed at least 57 rhinos, bringing to about 1000 the number killed during the past seven years. In the last six months, a group of 32 Black Rhinos in an area of the Matusadona National Park, on the southern side of Lake Kariba bordering Zambia, has been reduced to 14 and the overall population in the park is now only 40 compared to 150 in 1989.

In October 1992, 59 White Rhinos *Ceratotherium simum* were dehorned; although initially three were killed by poachers, the others have been left alone.

Mike Koch, the veterinarian heading the dehorning team, said that the team could dehorn six rhinos a day. "If we don't do it, we are going to continue to lose rhinos." ▷

▷ Wildlife officials suggest that selling horns from dehorned rhinos could undercut black market dealers and produce funds for conservation. Zimbabwe has a stockpile of 2.5 tonnes of horn which is worth US$5million. US$500 000 would pay 650 game scouts for a year.

The Independent (UK), 1 June 1992

Resumption of Ivory Trade?

Representatives of Botswana, Malawi, Namibia and Zimbabwe have said in a statement that they would be making preparations to trade in ivory. Following talks between the countries, in Windhoek, Namibia, "controls and mechanisms" needed for international trade in ivory would be established.

"The four countries wish to reconfirm that every effort will be made so that controls will prevent any poached ivory being laundered through the system...notwithstanding the frustration and perplexity that CITES provided, we will recommend to our governments that the four countries continue to participate in CITES", the statement said. They stated that southern Africa would raise the issue at the Earth Summit in Rio de Janeiro, Brazil, in June 1992.

Proposals to transfer certain southern African Elephant *Loxodonta africana* populations from CITES Appendix I to Appendix II were withdrawn at the eighth meeting of the Conference of the Parties, in March 1992 (see page 17).

Reuters

India Reinforces Ivory Trade Ban

In a move intended to further protect endangered Asian Elephants *Elephas maximus*, the Government of India banned the import and domestic sale of African Elephant *Loxodonta africana* ivory as of 2 April 1992. Although India had banned commercial import of African Elephant ivory in 1990 in conjunction with the CITES Appendix I listing of this species, the Government hoped to further reduce the potential for Asian Elephant ivory to be laundered as African Elephant ivory. Ivory traders responded by challenging the ban in court, and succeeded in having it temporarily suspended.

Fearing that the suspension might continue indefinitely, as was the case in a 1987 stay order issued for trade in furs and some other wildlife products, WWF-India filed an intervention petition.

On 18 May 1992, WWF-India succeeded in having the stay dropped with immediate effect. From 23 May 1992, no imported ivory or ivory carvings may be displayed in commercial establishments, sold or transferred. Dealers have been given 30 days to obtain certificates of ownership, which will allow them to keep those articles already in their possession as personal property.

TRAFFIC India

Namibia Combats Poaching

Wildlife populations in Damaraland and Kaokoland (Kaokoveld) in Namibia have increased largely as a result of the participation of local communities in game management, reports Sandra Mbanefo in *WWF Features (March 1992)*.

In an attempt to curb the huge losses of wildlife to poachers in northern Namibia, a system was devised in 1982 whereby local communities were made responsible for appointing their own game guards. With initial funding from the Endangered Wildlife Trust, and later WWF, conservationists Elias Hambo, Garth Owen-Smith and Chris Eyre visited rural communities to initiate a project that would enable local people to participate in the monitoring of their wildlife and to report poaching incidents to conservation officials. Most of the guards chosen were ex-hunters, known for their skill in tracking animals. From 1983 to 1984, illegal hunting virtually came to a halt in all the areas where there were game guards.

Today, there are 30 community game guards in Kaokoveld; the WWF project recently expanded to East Caprivi where 15 community game guards have been appointed by local communities. Because they live in remote areas, their salary consists of both money and supplies which are distributed by Mr Hambo each month when he collects their wildlife monitoring reports.

In the last 10 years, African Elephant numbers have increased from 250 to an estimated 350, rhinos from 60 to over 100, Springbok *Antidorcas marsupialis* from 1000 to 7000, Gemsbok *Oryx gazella* from 400 to 1800, zebra *Equus* spp. from 560 to 2200 and Giraffe *Giraffa camelopardalis* from 232 to 300.

Dubai and Bolivia Dispose of Wildlife Stocks

Dubai, in the United Arab Emirates, has joined several other countries in disposing of its ivory stocks in a public burning. What is unique is that the Dubai Government has paid compensation to the owners for their financial loss.

The 10 tonnes of African Elephant ivory and two tonnes of rhino horn, seized from local traders and estimated to be worth US$2 million, were destroyed on 22 January 1992.

Authorities in Bolivia have announced that they will burn or auction 3900 seized wildlife hides. The Decentralized Technical Unit of the Center for the Development of Forestry will auction 3522 of the hides, which include Yacare Caiman *Caiman crocodilus yacare*, Collared Peccary *Tayassu tajacu* and Capybara *Hydrochaeris hydrochaeris*. Another 388 hides, which include Black Caiman *Melanosuchus niger* (CITES App. I), foxes and Brocket deer *Mazama* spp., will be incinerated.

TRAFFIC India; Crocodile Specialist Group Newsletter, 11:1, January-March 1992

PUBLICATIONS AVAILABLE

Perceptions, Conservation & Management of Wild Birds in Trade
Edited by Jørgen B. Thomsen, Stephen R. Edwards and Teresa A. Mulliken

1992. 165 pp. Published by TRAFFIC International. Limited copies available free of charge. Pre-paid (480 g) A4 envelope required.

The international bird trade is the focus of attention and criticism of many non-governmental organisations and some national governments. By and large, discussion and controversy have focused on the perceptions and opinions of various factions within consumer countries. Recognizing the imbalance in discussions of the wild bird trade, TRAFFIC, in collaboration with IUCN and supported by WWF-UK, examined trade controls and the perceptions of the trade within the key exporting countries of Argentina, Guyana, Indonesia, Senegal and Tanzania.

The results of TRAFFIC's initial research were reviewed by government personnel in each of the five countries. Further review was provided during a seminar hosted by WWF-UK in October 1991, attended by government representatives from producer and consumer countries, and various NGOs.

The final report provides a detailed description of the trade in each of the countries profiled, as well as an overview of the global trade. The economics of the trade and its relationship to animal welfare and conservation issues is explored. The report concludes by providing a management framework for controlling the trade in a sustainable manner that benefits producer countries and local communities.

UK Bird Import Statistics

The UK Ministry of Agriculture, Fisheries & Food (MAFF) reports that approximately 176 000 live exotic birds were imported into the UK in 1990 based on analysis of quarantine returns. A MAFF report *Importation of Birds; Mortality Statistics from Quarantine Returns; Year Ended 1990*, released in February 1992, summarizes UK imports and associated mortality of over 400 bird species.

The total number of birds imported in 1990 was 5% lower than that in 1988 and 1989. Psittacine imports totalled 35 000 in 1990, rising by 21%. Mortality rates declined slightly for the second year in a row. The number of birds dead on arrival fell to 2.0%, the lowest rate ever recorded. The number of birds dying during quarantine declined by 0.5% to 12.3%.

In announcing the publication, MAFF Minister John Gummer stated that the Government was "... determined that any future trade in wild birds should be conducted under proper conditions and that exporting countries, airlines and traders should all play their part...".

For further details write to: MAFF Animal Health, Animal Welfare Divisions, Government Buildings, Hook Rise South, Tolworth, Surbiton, Surrey KT6 7NF.

Economics for the Wilds
Wildlife, Wildlands, Diversity and Development
by Timothy M. Swanson and Edward B. Barbier

1992. i-xi 226 pp. Earthscan Publications Ltd. 3 Endsleigh Street, London WC1H ODD. Supported by TRAFFIC International, WWF and IUCN - the World Conservation Union. £12.95

Most of the world's wilds have always been utilised by local societies who have managed their resources sustainably, and one important guarantee for their preservation is therefore the continued participation of those communities and an adequate reward to them for their management.

The authors argue that a system of economics that properly values the resource of the wilds offers the best long-term security for their future. The first four chapters of the book look at the complexity and global nature of the issues, at the application of economics to the wilds and at the policies for their conservation and sustainable management which then result. The following five chapters examine specific forms of utilisation of wild species and habitats, both sustainable and unsustainable, including community-based development, tourism, the use of rainforest products, poaching, and the impact of conservation on wildlife use. The conclusion argues that a comprehensive utilisation strategy for wild resources is needed to ensure their continued existence and the continuing flow of benefits from them.

The Marine Curio Trade
Conservation Guidelines and Legislation

Edited by Sue Wells and Elizabeth Wood
Produced by the MCS Coral Reef Conservation Team

1991. 23pp. Published by Marine Conservation Society, 9 Gloucester Road, Ross-on-Wye, Herefordshire, HR9 5BU, UK.
£2.00. Free to UK retailers and importers.

This booklet describes briefly the main groups of animals involved in the marine curio trade (excluding live marine invertebrates) and outlines legislation. It provides general recommendations but is not a comprehensive guide to those curios that can or cannot be traded on a sustainable basis. Instead, it is designed to help importers and retailers to make informed decisions about the curios in which they trade, and will encourage them to support efforts to run the trade on a sustainable basis. It also emphasizes the urgent need for management programmes for many of the species involved. The book has been written, not to encourage trade in marine curios, but to minimise its impact by asking traders to act responsibly and follow a basic set of conservation guidelines.

Shark Fin Fishery Kills Turtles

A survey carried out to investigate reports of dead sea turtles washing ashore at Dundee Beach, Fog Bay, in Northern Territory, Australia, has concluded that the most probable cause was the activity of a single vessel fishing for sharks.

One hundred sea turtle carcasses were counted along approximately 20 km of coast; 85% were Olive Ridleys *Lepidochelys olivacea*, the remainder Flatbacks *Chelonia depressa* and Loggerheads *Caretta caretta*. The theory was supported by interviews with residents of the area, professional fishermen and even the skipper and crew of the vessel allegedly responsible. One crew member indicated that 2000 m of monofilament net with a mesh size of 42.5 cm and a drop of about 12 m had been weighted and set on the sea floor. By the crew member's estimates, this net killed approximately 300 sea turtles during the period 15 to 30 November 1991. The vessel was fishing for sharks from which only the fins were kept and the remainder of the animal thrown overboard.

The Northern Territory Government placed an immediate ban, effective in all Northern Territory waters, on all negatively-buoyant gillnets with a mesh size over 25 cm. Legal action was not taken against the skipper of the vessel, however, because he was not in violation of any conditions of his licence, and legislation relating to incidental catch was not in place.

Marine Turtle Newsletter, No. 57, April 1992

Doubts over 'Dolphin-Friendly' Tuna

The Whale and Dolphin Conservation Society (WDCS) who, in 1990, succeeded in getting agreement from most of the UK's tuna importers to buy tuna caught by methods unhazardous to dolphins, and for tins of tuna to be labelled thus, says that the scheme has proved so ineffective that the labels should be removed. In a letter to tuna importers in August 1991, WDCS said: "No-one currrently trading in tuna can be completely confident that the tuna being bought, or the canneries being dealt with, are in fact 'dolphin-friendly'." The letter demanded that tuna producers remove such labels from existing tins and cease printing the labels. So far, none of the companies has responded to the request.

As part of the agreement, companies are required to keep records of fishing methods and dates and locations of catches, and to allow representatives of the Society to inspect canneries.

Dolphins are killed in large numbers in drift nets set to catch tuna, and by boats using a technique called 'setting-on-dolphins' where nets are set on dolphins when schools of tuna are found swimming beneath them.

New Scientist, 9 May 1992

ICCAT Watch

A coalition of conservation groups has launched ICCAT Watch, a programme which will focus public attention on the International Commission for the Conservation of Atlantic Tunas (ICCAT), an organization of 21 fishing nations that is responsible for managing Atlantic tunas and other migratory fishes.

The programme was jointly created by WWF-US, the National Audubon Society and the Center for Marine Conservation, who are concerned about ICCAT's failure to conserve the Atlantic Bluefin Tuna *Thunnus thynnus*. According to ICCAT Watch, the adult Bluefin population in the western Atlantic has declined by more than 90% since 1970, while ICCAT has allowed fishing pressure to increase by more than 2200%. Japanese buyers pay more than US$25 a pound for high-quality Bluefin, and it is not uncommon for US vessels to fish for up to two weeks to land one giant Bluefin, which may sell for up to US$30 000.

An independent review group of leading fisheries scientists convened last year by the US Government concluded that unless the spawning population is allowed to recover, the Bluefin will continue to decline.

The ICCAT Working Group to Develop Technical Details for the Implementation of the ICCAT Resolution on Catches by Non-contracting Parties met from 19 to 22 May 1992 in Tokyo. Following that meeting, the three ICCAT parties with west Atlantic quotas (Canada, Japan and USA) met privately to discuss quota reductions. The USA wanted to reduce quotas by a further 10%, or by 25% of the 1990 quotas. Reportedly, it was decided that further discussions and any decisions would be deferred until the ICCAT meeting to be held in Madrid in November 1992.

ICCAT Watch Press Release, 29 April 1992; TRAFFIC USA

IWC News

Iceland has decided to withdraw from the International Whaling Commission (IWC) with effect from 30 June 1992, but has said that no decision has been made on a resumption of commercial whaling.

Norway has announced its intention to allow a catch of 382 Minke Whales *Balaenoptera acutorostrata* during the next three years for research purposes. Five whales were caught for research in 1990, but none in 1991. Norway has said that it intends to stay in the IWC but will consider alternatives if the Commission does not show greater understanding of its position. Norway's proposed catch will have to be approved by the IWC at its annual meeting to be held from 29 June to 3 July 1992 in Glasgow, Scotland.

An IWC moratorium on commercial whaling has been in effect since 1986.

ORYX, Volume 26, April 1992; TRAFFIC International

Japan and Mexico Compensate Turtleshell Traders

In preparation for the planned ban on imports of Hawksbill Turtle *Eretmochelys imbricata* shells, effective as of 1993 (see *TRAFFIC Bulletin 12(1/2):24)*, Japan has implemented two financial compensation measures for turtleshell traders: subsidies from the Ministry of Labour (MOL) to 692 craftsmen, and long-term, low-interest loans from the Ministry of International Trade and Industry (MITI) to 207 companies, mainly located at Nagasaki, Osaka and Tokyo.

Subsidies from MOL are available for up to two years from 4 October 1991 to 3 October 1993; craftsmen who have lost their jobs are eligible to receive an additional 60-90 days of unemployment insurance; craftsmen are entitled to receive vocational training at MOL expense; craftsmen, when moving to another location for the purpose of securing employment, can receive reimbursement for transportation costs, depending on mileage; an employer having laid off craftsmen can receive a subsidy equivalent of from one-half to two-thirds of wage per craftsmen in order to pay wages; a company outside the Hawksbill turtleshell industry employing laid-off craftsmen can receive a subsidy equivalent of one-fourth to two-thirds of that company's salary per employee for one year.

Loans from MITI to companies of Hawksbill Turtle shell craftsmen who wish to change their business can receive a low-interest (4% a year), long-term (repayment period three to seven years) loan of up to Y20 million (US$149 000) per employer. MITI and prefectural governments will pay the difference between the commercial and the subsidized rate.

© WWF/TRAFFIC Japan

Stuffed Hawksbill Turtle shells for sale in Japan.

Mexico has approved a US$200 000 grant to assist the fisheries co-operatives in the Pacific coast state of Oaxaca. The fishermen formerly had the exclusive right to catch sea turtles. President Salinas' decision in May 1990 to end turtle fisheries meant that the co-operative members were left without jobs and income. The Government grants will finance the purchase of small boats and fishing gear so that the fishermen can initiate alternative operations.

Marine Turtle Newsletter, Nos.56/57 1992

SeaTurtle Trade Continues in Indonesia

The population of turtles in the sea near Bali has virtually disappeared. Every morning Bajao fishermen docking at Tanjung Benoa harbour, unload hundreds of various species of turtles they have poached in Sulawesi, Ambon, Nusa Tenggara, Irian Jaya and the Banda Sea in Maluku, which is a well-known poaching area. The most popular turtle slaughterhouse in Bali is in Sesetan village outside Denpasar, but there are others in Gilimanuk, Serangan, and Tanjung Benoa. Made Rastha, a Balinese residing in Sesetan village, says the largest threat to the turtles comes not from traditional religious offerings, but from industry which relies on turtles, turtle eggs, turtle shells, turtle meat and turtle leather, and says that the operators of the businesses are not Balinese.

The owner of a slaughterhouse in Sesetan says he pays about Rp70 000 (US$35) for each turtle weighing about 40 kg on board fishing vessels; after reaching the shore the price of the animal may double. He sells the meat for Rp4000 a kg and the dried shells for about Rp10 000 a kg. He says that, because Balinese lack the machines to process the shells, traders bring the dried shells in containers to Surabaya, Yogyakarta, and Jakarta by ship or on Garuda flights. Most of the shell is crafted into ornaments, some of which are sent back to Bali souvenir stores where they can fetch high prices. A vessel with five to 12 crew members can poach between 25 and 50 turtles a trip, which might take a week. Traders also pay for the turtle leather, a new development which, says the slaughterhouse owner, is very promising as the turtles will have a higher value.

Made Rastha claims that Bali is only "the tip of an iceberg" of illegal poaching occurring in Indonesia. Turtle eggs and turtle soup are easily available in Banjarmasin, Ujungpandang, Samarinda, Belitung, and Kupang.

Marine Turtle Newsletter, No. 57, April 1992

CITES Legislation for Thailand

Thailand has approved the *Wild Animals Reservation and Protection Act (B.E. 2535)* which replaces the *Wild Animals Reservation and Protection Act 1960* (amended 1972), and provides Thai authorities with the legal means to implement CITES. The Act came into effect on 28 February 1992.

The legislation is aimed at regulating captive-breeding of protected wildlife, zoos, and wildlife imports, exports and transit shipments. Under the legislation, animal species are divided into two categories: 'Protected Species' and 'Endangered Wildlife'. 'Protected Species' include those species (excluding plants) listed in the CITES Appendices and those protected in Thailand and listed in existing legislation; 'Endangered Wildlife' includes 15 species occurring in Thailand determined to be endangered, namely White-eyed River Martin *Pseudochelidon sirintarae*, Gurney's Pitta *Pitta gurneyi*, Sarus Crane *Grus antigone*, Schomburgk's Deer *Cervus schomburgki*, Thamin *Cervus eldi*, Fea's Muntjac *Muntiacus feai*, Javan Rhino *Rhinoceros sondaicus*, Sumatran Rhino *Dicerorhinus sumatrensis*, Kouprey *Bos sauveli*, Water Buffalo *Bubalus arnee*, Serow *Capricornis sumatraensis*, Goral *Nemorhaedus goral*, Tapir *Tapirus indicus*, Marbled Cat *Felis marmorata*, and Dugong *Dugong dugon*.

Two Articles directly relating to CITES implementation are: Article 20, which states that no trade in wildlife is permissible unless the wildlife is derived from captive-breeding operations, and; Article 24, which specifically defines the inclusion of CITES Appendices (animals only) into the legislation. In addition, Articles 47-60 outline penalties of up to four years' imprisonment and/or a fine of Baht 40 000 (US$1600).

Wildlife traders, wildlife owners and zoos will be required to be licensed and to register all wildlife, including non-native species. Zoo licences will cover collections of wildlife for recreational and educational purposes, research, and breeding of rare or endangered species. Licences must be obtained within 30 days of the Law coming into effect. Wildlife not legally-owned will be covered by a 90-day amnesty and, once declared to the Government, could face confiscation. While endangered/protected wildlife cannot be sold, it may be inherited.

The *Plant Act (B.E. 2535)*, approved on 13 March 1992, is a redefinition of the *Plant Act B.E. 2518*, whereby "Conserved Plants" is redefined as plants listed in the CITES Appendices (Article 29.2). Import, export and transit of "Conserved Plants" are forbidden except under permit. Artificial propagation is allowed only from nurseries registered with the Agriculture Department (Article 29.4).

TRAFFIC Southeast Asia

New Law in Italy

At the 24th Meeting of the CITES Standing Committee, held in Lausanne, Switzerland, on 20/21 January 1992, the CITES Secretariat drew attention to the lack of legislation in Italy to implement CITES and Italy's lack of response to numerous requests by the Secretariat to remedy this.

The principal weaknesses that had come to the Secretariat's attention were the lack of national legislation to implement the Convention, particularly where penalties for infractions are concerned; insufficient or non-existent inspections at the time of import and export; and, the issuance of documents that are contrary to the provisions of the Convention and the Resolutions of the Conference of the Parties.

It was agreed that, if Italy did not make substantial progress with regard to implementation of the Convention within a period of three months, a ban on trade in CITES species might have to be recommended not only for Italy but, in order to be enforceable, for trade with all EC Member States.

In February 1992, the Italian Government approved legislation introducing penalties for CITES violations. Drafted with the assistance of TRAFFIC Europe-Italy, the legislation should enable authorities to impose fines of up to 400 million Lire (US$333 000) and impose prison sentences of up to three months for those illegally trading CITES-listed species.

The Standing Committee's assessment of progress in Italy is expected to take place at its 28th meeting, to be held from 22 to 25 June 1992.

TRAFFIC Europe-Italy; CITES Secretariat

Indonesia Registers Wildlife

Protected wildlife in Indonesia is the property of the State, and cannot be privately-owned. On 10 June 1991, it was decreed that all privately-kept protected wildlife had to be registered with the Department of Forestry by 31 May 1992. This included live and dead wildlife and any parts thereof.

Privately-kept protected wildlife that is not registered is liable to be confiscated and the offender will be subject to imprisonment and fines in accordance with the *1990 Act on Conservation of Living Resources and their Ecosystems*, which range from one year and/or US$25 000, to 10 years and/or US$100 000.

Persons in possession of registered wildlife will usually be able to keep the animals under a special permit which allows the holder to keep protected wildlife on behalf of the State.

TRAFFIC Southeast Asia

ARGENTINA - *ZERO PARROT QUOTA*

Effective 1992, and for a period of at least two years, the Argentine Government has placed a prohibition on the export of the following species, until management programmes to ensure the survival of the species have been established.

Blue-fronted Amazon	*Amazona aestiva*
Yellow-collared Macaw	*Ara auricollis*
Red and Green Macaw	*Ara chloroptera*
Peach-fronted Conure	*Aratinga aurea*
Mountain Parakeet	*Bolborhynchus aurifrons*
Sierra Parakeet	*Bolborhynchus aymara*
Canary-winged Parakeet	*Brotogeris versicolorus*
Austral Conure	*Enicognathus ferrugineus*
Blue-winged Parrotlet	*Forpus xanthopterygius*

This decision was made in the light of recent data which indicate that the above species might be traded at non-sustainable levels.

CITES Secretariat

AUSTRALIA - *LEAFY SEADRAGON*

The rare and vulnerable Leafy Seadragon is being protected under fisheries legislation in Western Australia.

Leafy Seadragons are related to seahorses *Hippocampus* spp. and are unique to the southern coastal areas of Australia. According to Western Australia Fisheries Minister, Gordon Hill, Leafy Seadragons have either disappeared or become increasingly rare in areas where they were once quite common.

"Inshore seagrass areas, which are the main natural habitat of this seadragon, are coming under increasing threat from pollution and excessive fertilizer run-off. Many of the most accessible of these areas also appear to have been denuded of seadragons by collectors and little or no recolonisation has occurred."

The fishing ban prohibits anyone taking Leafy Seadragons without a permit from the State's Executive Director of Fisheries.

Mr Hill said scientists had expressed concern that an export market for dried specimens might develop, further threatening the seadragons.

Australian Fisheries, February 1992

SHARJAH - *SEA TURTLES*

The municipality in Sharjah, in the United Arab Emirates, has issued a decree prohibiting the catching and selling of sea turtles. Violators will be fined.

Gulf News, 22 March 1992

Wildlife Regulations to be Strengthened in the EEC . . .

The European Economic Community's trade in wild fauna and flora has been regulated since 1984 by Council Regulation (EEC) No. 3626/82 which imposes stricter regulations than those required by CITES alone. The Regulation aims to provide enhanced protection to wildlife from the possible negative effects of trade, and to avoid the effects of disparate national CITES implementation on the free movement of goods within the Community.

In spite of these important measures, the Regulation has suffered from a number of technical and administrative shortcomings. Most importantly, Regulation 3626/82 did not include many of the necessary provisions to allow adequate enforcement of wildlife trade controls. Such measures were to be provided by further national legislation in individual EC Member States, but such legislation was in many cases inadequate and in others it was never enacted.

In order to strengthen present controls, the Commission of the European Communities has circulated a formal proposal for the enactment, in January 1993, of more comprehensive legislation relating to import, possession, movement and sale of wildlife within the Community.

Negotiations regarding detailed provisions of the proposed new regulation are taking place within the Community with a view to final consideration by the Council of Environment Ministers later this year.

All EC Regulations are directly binding upon all EC Member States and their citizens.

TRAFFIC International

. . . and Malawi

Tough penalties for wildlife offenders may soon be introduced in Malawi, following the approval, on 14 February 1992, of new wildlife legislation.

The *National Parks and Wildlife Bill 1992*, which consolidates all existing laws relating to the establishment of national parks, the conservation and management of wildlife, including penalties for offences relating to illegal trade, has been passed by the Malawi Parliament and is awaiting the President's signature to become law.

The Act will replace the *Game Act*, the *Wild Birds Protection Act*, the *Crocodiles Act* and the *National Parks Act*. Penalties for offences relating to import, export or re-export of specimens of protected species have been increased to a minimum fine of 10 000 Malawi Kwacha (US$3200) or not less than the value of the specimen involved, plus imprisonment for five years.

TRAFFIC East/Southern Africa

Eighth meeting of the Conference of the Parties to CITES

The eighth meeting of the Conference of the Parties to CITES was held in Kyoto, Japan, from 2 to 13 March 1992. Altogether, there were some 1590 participants including delegations from 103 Party States and observers from six non-Party States, 140 non-governmental organizations and 586 members of the press.

The following report of the meeting is a summary containing what the authors judge to be the most significant points. Some details of Resolutions and other matters have therefore been omitted. Official proceedings of the meeting will be published by the CITES Secretariat.

The meeting was opened by Mr K. Kakizawa, Parliamentary Vice-Minister for Foreign Affairs of Japan. He emphasized the economic and aesthetic value of wildlife to humans, recalled the efforts made in Japan for wildlife conservation and stressed the importance of this year, the 20th anniversary of the United Nations meeting which gave birth to CITES, and the year when the Earth Summit would take place. Further introductory speeches were made by Mr S. Nakamura, Minister of State, Director General of Japan's Environment Agency, and Mr N. Hatakeyama, Vice-Minister for International Affairs of Japan, Ministry of International Trade and Industry, who drew attention to the measures taken by Japan to improve its implementation of CITES and emphasized the need for co-operation between exporting and importing countries. Mr M.W. Matemba, Chairman of the Standing Committee of CITES, welcomed the new Parties and the new Secretary General, Ambassador I. Topkov and thanked the Secretariat for their work and dedication. The Secretary General in turn expressed thanks to the Japanese Government, the CITES Management Authority of Japan and the people of Kyoto for their hospitality and for providing the facilities for the meeting.

In addition to the official opening of the meeting, a special session of the Plenary was convened on the third day, during which the Executive Director of the United Nations Environment Programme (UNEP), Dr M. Tolba, His Royal Highness Prince Philip, and the Minister of Foreign Affairs of Japan, Mr M. Watanabe, addressed the delegations, observers and journalists. Particular reference was made to the role of CITES in promoting sustainable development in the developing world and the necessity of CITES being pushed into the mainstream of government.

On behalf of the Africa region, Malawi proposed that, because of the large number of Parties represented in the Africa region, consideration be given to increase that region's representation on the **Standing Committee.** After some discussion, it was agreed that a document addressing the membership of the Committee be prepared for consideration at the ninth meeting of the Conference of the Parties.

The following nominations for representative and alternate members of the Standing Committee were adopted by the Conference of the Parties: Senegal and Namibia (Africa region); Thailand and India (Asia region); Trinidad and Tobago, and Panama (Central and South America and Caribbean region); Sweden and Denmark (European region); Canada and Mexico (North American region; and New Zealand and Papua New Guinea (Oceania region). The Standing Committee elected the following officers: New Zealand (Chairman); Trinidad and Tobago (Vice-Chairman); and Sweden (alternate Vice-Chairman).

Recent staff changes at the CITES Secretariat had prompted the need to develop clear guidelines for the supervision and recruitment of executive staff. The document **Terms of reference for the administration of the Secretariat by UNEP**, authored by the Standing Committee, laid down certain provisions to be observed by the Executive Director of UNEP, the Standing Committee and the Secretary General of CITES with regard to personnel and financial matters. In future, the roles of UNEP and the Standing Committee will be guided by an Agreement reached by the two entities and adopted by the Conference of the Parties.

A summary of the work of the **Animals Committee** was presented to the Conference. During the four meetings since the last meeting of the Conference of the Parties, the Animals Committee had managed to address all issues assigned to its attention. The report drew particular attention to: concerns about the status and role of scientific authorities; review of the Berne Criteria; implementation of field studies; continuation of the CITES Significant Trade Review; assessment of marking techniques; and the results of the Ten Year Review project. The Parties were asked to endorse resolutions proposed by the Committee relating to the Ten Year Review, marking, and Significant Trade, and to support the continuation of the Significant Trade Project. Members elected to the Animals Committee were: Robert Jenkins, Chairman, Oceania; Nobuo Ishi, Asia; Jonathan Hutton, Africa; Rainer Blanke, Europe; and Sixta Inchaustegui Miranda, Central and South America and the Caribbean. Tragically, the person designated by Mexico to represent the North American region was in a helicopter that crashed and, although the helicopter has not been found, is believed to be dead.

The following individuals were appointed to the **Plants Committee**: Chairman - Jim Armstrong (Oceania); Vice-Chairman - Bruce MacBryde (North America); Vice-Chairman for Nomenclature - Noel McGough (Europe). Regional Representatives appointed were: Asia - Dr Sharma (India); Latin America - Maria Luisa Reyna de Aguilar (El Salvador); Africa - Christine Kabuye (Kenya).

The Secretariat introduced a comprehensive document comprising a **review of alleged infractions and other problems of enforcement of the Convention.** The review addressed the following subjects: infractions relating to submission of annual reports; designation and operation of scientific authorities and lack of national legislation; non-response by Parties to the Secretariat; irregular issuance of pre-Convention certificates and certificates of captive breeding and artificial propagation; non-application of Resolutions; invalid documents; large-scale or elaborate fraud; conditions of transport; significant prosecutions or seizures; and other implementation problems. During the debate, a large number of Parties presented apologies and explanations for their inadequate submission of annual reports. Generally there was a great deal of support for the efforts made by the Secretariat in documenting implementation problems, but some Parties expressed great concern that very little had been done by Parties in the past to implement recommendations arising from previous reviews of infractions. Although a call for the establishment of a permanent enforcement committee was again not adopted by the Parties, three Resolutions were. The first, (Resolution Conf. 8.7) relating to the **submission of annual reports**, rules that failure to submit annual reports by 31 October of the year following the year for which a report is due constitutes a major problem with implementation of the Convention. In such cases, the Secretariat should refer the matter to the Standing Committee for attention unless a justifiable written request for extension of the deadline has been received. The second Resolution (Conf. 8.16) addresses concerns regarding the movement of CITES specimens forming part of **travelling live animal exhibitions** and calls for standardised issuance of pre-Convention or bred-in-captivity certificates for individual animals held by such operations, and increased inspection and monitoring of their movements. The third Resolution (Conf. 8.4) directs the Secretariat to review **national laws for implementation of the Convention.** A number of problem areas are to be identified and dialogue initiated with Parties in order to establish measures necessary to properly enforce the provisions of the Convention. The Parties are asked to provide financial assistance to this process and urged to adopt appropriate national legislation in cases where such action has not yet been taken.

Claiming that poor implementation of CITES controls by certain EC Member States undermines the efforts of wildlife exporting countries to improve their implementation of the Convention and stem illegal trade, the delegations of Paraguay and Uruguay both presented draft resolutions on **implementation of the Convention in the European Economic Community.** The draft resolutions pointed to the lack of adequate national legislation to enforce the Convention in some EC Member States and to the planned removal in 1993 of internal border controls in the EEC as probable causes of increased illegal trade. A number of delegations from EC Member states and the observer from the Commission of the European Communities made it clear that they accepted the constructive criticism offered and noted the Community's attempts to resolve the problems identified. Subsequent working group discussions led to the adoption of Resolution Conf. 8.2 recommending that, before accepting a re-export document issued by an EC Member State covering live animals, reptile skins and parts thereof, Parties check its validity with the stated country of origin of the specimens in question or with the Secretariat. The Secretariat was asked to evaluate EEC CITES implementation and report the findings to the ninth meeting of the Conference of the Parties in the context of its review of alleged infractions. EC Member States were urged to adopt appropriate legislation where it was lacking, increase the allocation of resources to CITES enforcement, and those Member States not already party to the Convention were urged to join. The final element of the Resolution, in complete contradiction to the original drafts, requested that Parties that have not yet done so accept the so-called 'Gabarone Amendment' to Article XXI of the Convention (which would allow the accession to CITES of any regional economic integration organisation constituted by sovereign states). This change was based on the argument that allowing the EEC as a whole to join the Convention would provide individual Member States with increased incentive to improve implementation.

In an attempt to curtail illegal exports of skins of Spectacled Caiman *Caiman crocodilus* from the central region of South America, Paraguay submitted a document entitled **Illegal trade of Singapore**, claiming Singapore to be one of the main destinations of illegally-exported skins from the region. Particular reference was made to the reservation entered by Singapore with regard to the Appendix II listing of *Caiman crocodilus crocodilus* and a draft resolution urged all Parties to reject export permits or re-export certificates issued by Singapore for trade in any crocodilian products. By the time the document was tabled for discussion, Singapore had withdrawn the reservation in question and undertaken to dispose of its stock of accumulated skins in full accordance with the provisions of the Convention; the delegation of Paraguay consequently withdrew the draft resolution and thanked the delegation of Singapore for its co-operation.

Botswana, Malawi, Namibia, Zambia and Zimbabwe (Zambia subsequently withdrew its support for this proposal at the meeting) proposed that a resolution be adopted that would **recognize the benefits of trade in wildlife** and stated that debate of such a resolution was essential to the future direction of the Convention and therefore requested that such a debate take place in Plenary before other issues were tabled for discussion. After a lengthy exchange of views which touched upon the philosophical aspects of

sustainable use of wildlife as a conservation strategy, and subsequent debate in a working group established by Committee I of the Conference, Plenary adopted a Resolution (Conf. 8.3) which firmly recognizes "that commercial trade may be beneficial to the conservation of species and ecosystems and/or to the development of local people when carried out at levels that are not detrimental to the survival of the species in question".

Botswana, Malawi, Namibia, Zambia and Zimbabwe (Zambia subsequently withdrew its support for this proposal at the Conference) proposed that the definition of the term **"primarily commercial purposes"**, as outlined in Resolution Conf. 5.10, be reconsidered as, in their opinion, the paramount issue in wildlife utilisation is whether or not it is sustainable and not whether it is for primarily commercial purposes. It was argued that because of the restrictive interpretation of the Treaty's reference to primarily commercial purposes, CITES could act as an unfair constraint on countries whose domestic markets are limited and which therefore rely on export. The draft resolution on this topic was eventually withdrawn by the proponents after various speakers insisted that the text put forward was inconsistent with the provisions of the Convention.

Three draft resolutions were introduced on the subject of **significantly-traded birds.** The first, proposed by the USA, aimed to introduce specific bans on commercial trade in certain bird species; the second, submitted by Honduras, proposed strict implementation of Resolution Conf. 1.6 resulting in an indefinite cessation of all commercial trade in wild-caught CITES-listed birds; and the third, introduced by Uruguay, proposed a 'reverse-listing' mechanism for all commercial trade in CITES-listed live animals. Although there was general recognition of the concerns about sustainability of the wild bird trade which underpinned all three draft resolutions, a number of concerns were raised. In particular, a number of observers and Parties considered that the measures proposed were fundamentally punitive in nature and in danger of setting a precedent for *de facto* Appendix I listing, without conforming to the Berne Criteria or clearly establishing a process for resumption of trade. It was pointed out that the Animals Committee had discussed a similar proposal at length and that a draft resolution had been developed aimed at improving implementation of Article IV of the Convention for all Appendix II animal species. After attempts to consolidate the draft resolutions, and in light of the strong support for their intent expressed by a number of Parties, a draft resolution largely based on that developed by the USA was put to the vote and defeated.

A draft resolution relating to **trade in wild-caught animal specimens**, originally prepared by the Animals Committee, was submitted by the USA. The proponents explained that it was submitted in light of the mounting evidence accumulated by the CITES Significant Trade project indicating non-compliance by Parties with Article IV of the Convention and in recognition of the need for a process to encourage compliance with this fundamental provision of CITES. Although developed from an earlier draft of the resolution submitted by the USA relating to trade in wild-caught birds, two fundamental changes were made. Firstly, the resolution was extended to cover all wild-caught animal specimens, under the assumption that there was no justification to restrict to bird species remedial action aimed at improvement of compliance with Article IV of the Convention. Secondly, the proposed mechanism in the draft resolution was changed from an immediate imposition of import prohibitions on all species of concern, to be lifted only after certain conditions were met, to a system whereby recommendations for specific remedial measures would be made by the Animals Committee through the Secretariat to individual Parties. After protracted working group discussions a mechanism was agreed which addressed the various concerns raised during committee debate. The Resolution which was finally adopted (Resolution Conf. 8.9) allows for two classes of recommendations for remedial action to be made to Parties by the Animals Committee: the more immediate recommendations should be complied with within 90 days, while others should be addressed within 12 months. In the case of a Party's failure to comply with such recommendations, the Standing Committee is empowered to propose strict measures to resolve the situation. A mechanism is further established to enable resumption of trade when appropriate. The Resolution further establishes an immediate commencement of the process outlined above and guarantees its continuity in future.

Draft resolutions were proposed by the USA and Israel relating to **trade in live bird species subject to high mortality** which prescribed specific measures to reduce or eliminate commercial trade in bird species for which average mortality rates during international transport and/or in quarantine following import exceed a given percentage. The mortality criteria contained in the draft resolution mirrored mortality rates arbitrarily selected by the CITES Working Group on the Transport of Live Specimens (TWG) as a starting point from which to perform an analysis of available mortality data. The proposal prompted intense debate about whether available mortality data were sufficient or, in the case of quarantine mortality data, appropriate, to justify trade prohibitions. There was also discussion about mechanisms for re-opening trade if conditions could be improved, and the poor implementation of previous Resolutions which aimed to improve live animal transport conditions. Eventually a Resolution (Conf. 8.12) was adopted which did not include specific reference to species or to particular mortality rates. The Resolution calls on Parties to collect bird trade mortality data and make them available to the TWG Chairman and to take appropriate measures, including temporary trade suspension for individual species, when available data indicate significant mortality rates. The TWG is requested to make recommendations to the Parties designed to minimise mortality.

		1986	1987	1988	1989	1990	1991	1992	1993	1994
Crocodylus niloticus										
Botswana	W	-	2000	2000	2000	RII	RII	RII	RII	RII
Cameroon	W	20	100	100	100	0	0	0	I	I
Congo	W	1000	150	150	150	0	0	0	I	I
Ethiopia	W	-	-	-	-	20	20	20	RII	RII
	R	-	-	-	-	9300	8800	4500	-	-
Kenya	W	150	1000	1000	1000	0	0	0	RII	RII
	R	0	4000	4000	4000	5000	6000	8000	-	-
Madagascar	W	1000	1000	3784	1000	0	0	100	100	100
	R	0	0	0	0	0	2000	3000	4000	4300
Malawi	W	500	700	700	700	RII	RII	RII	RII	RII
	R	0	200	1000	1600	-	-	-	-	-
Mozambique	W	1000	1000	1000	1000	RII	RII	RII	RII	RII
	R	-	-	-	3000	-	-	-	-	-
Somalia	W	-	-	-	-	500	500	500	0	0
South Africa	R	-	-	-	-	-	-	1000	1000	1000
Sudan	W	5000	5000	5000	5000	5040	0	8000	I	I
Tanzania	W	1000	2000	2000	2000	1100	1100	*400	*200	*200
	R	0	0	0	0	0	4000	RII	RII	RII
Uganda	R	-	-	-	-	-	-	2500	2500	2500
Zambia	W	2000	2000	2000	2000	RII	RII	RII	RII	RII
	R	0	1350	3600	6200	-	-	-	-	-
Crocodylus cataphractus										
Congo	W	-	600	600	600	600	600	600	I	I
Osteolaemus tetraspis										
Congo	W	-	500	500	500	0	0	0	I	I
Crocodylus porosus										
Indonesia	W	2000	2000	4000	4000	3000	3000	2700	1500	1500
	R	-	-	-	-	2000	3000	7000	7000	7000

W - wild specimens; R - ranched specimens; I - population included in Appendix I
RII - population included in Appendix II under the terms of Resolution Conf. 3.15 on Ranching.
* - export quota for wild specimens as defined in ranching proposal (excluding 100 hunting trophies a year)

Table 1. Export quotas for different populations of crocodilians transferred to Appendix II under the special criteria set out in Resolutions Conf. 5.21 and Conf. 7.14.

The USA had proposed an agenda item to discuss **detrimental trade in sea turtles** but had failed to submit any background document. They noted encouraging progress from Japan in dropping all but one of its reservations on sea turtles and in agreeing to cease trade in the remaining species, Hawksbill *Eretmochelys imbricata*, in December 1992. Japan resisted calls from other delegations to hasten this process.

Trade in crocodilian products. The populations of Nile Crocodile *Crocodylus niloticus* in Congo and Cameroon and of Slender-snouted Crocodile *Crocodylus cataphractus* and West African Dwarf Crocodile *Osteolaemus tetraspis* in Congo had been transferred to Appendix II in 1987 under the quota criteria (Resolution Conf. 5.21). There has been very little reported trade in the products of any of these populations from the countries concerned and as no proposals to extend the quotas or institute ranching programmes had been submitted, the depositary government (Switzerland) had prepared proposals to transfer them all back to Appendix I. These were accepted without opposition. No proposal had been submitted to extend the quota for the *Crocodylus niloticus* population of Somalia, but as this population had only been transferred to Appendix II in 1990, it remains in Appendix II but with a zero quota after 1992.

Sudan's request for a one-off quota of 8000 skins of *C. niloticus* for 1992 to enable it to export its stockpile met with opposition because a similar request had been made in 1989. Eventually the quota was agreed with the population to be transferred back to Appendix I 120 days after the meeting, thus giving 30 days (11 June-11 July) for the export of the stockpile. All skins were to be tagged and recorded by an independent observer and a charge of US$2 a skin was to be raised for crocodile surveys in Sudan.

A quota proposal for the transfer of the Ugandan population of *C. niloticus* to Appendix II, subject to an annual quota of 2500 ranched skins, was accepted as was another from South Africa for 1000 skins a year. The latter had originally been submitted as a proposal for transfer to Appendix II but after discussion was converted to a quota proposal with the agreement that it would be resubmitted as a ranching proposal at the ninth meeting of the Conference of the Parties.

Two further proposals were originally submitted as ranching proposals but were also converted into quota proposals because it was considered that this gave greater scope for scrutiny and control by the Conference. There was serious concern that the ranching programme in Madagascar was not sufficiently well controlled to prevent the entry into trade of skins illegally taken from the wild. Quotas were therefore accepted for 100 wild-caught nuisance animals each year and 3000, 4000 and 4300 ranched skins in the three years 1992 to 1994 respectively. Continuing problems with the Saltwater Crocodile *Crocodylus porosus* ranching programme in Indonesia

were extensively discussed; however, quotas were accepted for 7000 ranched/captive-bred skins and 1500 wild skins each year, with an additional 1200 stockpiled skins in 1992. The programme was to be reviewed by the IUCN/SSC Crocodile Specialist Group prior to the ninth meeting of the Conference of the Parties so as to allow a decision at that time on whether to continue with ranching or transfer the population back to Appendix I. Resolution Conf. 7.14 specifies that quota systems should only be viewed as interim measures prior to the acceptance of a ranching programme and may not be used for more than two intervals between meetings of the Conference of the Parties. As both the Madagascan and Indonesian quotas had been in operation since 1985 it was initially considered that an amendment to Resolution Conf. 7.14 was needed to allow the continuation of export quotas. However it was eventually decided that the limit could apply from the date of adoption of the Resolution and the extension of quotas until the ninth meeting was therefore acceptable.

A different solution was found for the ranching proposal submitted by Tanzania which ran into opposition because of the request to allow exports of 1900 wild-caught skins a year. The ranching proposal was eventually accepted but Tanzania agreed to restrict exports of wild-harvested skins to 100 hunting trophies a year and a quota of nuisance animals declining from 400 in 1992 to 200 in 1993 and 1994, and 100 a year thereafter. Ranching proposals submitted by Kenya and Ethiopia were accepted, but Ethiopia's existing quota of 6000 skins for 1992 was restricted to a maximum of 4500 skins prior to the date of entry into force of the amendments (11 June 1992).

A further proposal relating to crocodilians referred to the request from the People's Republic of China to register the first captive-breeding operation for Chinese Alligator *Alligator sinensis*. The operation had been reviewed by the IUCN/SSC Crocodile Specialist Group which found it to be highly successful and to contribute substantially to the conservation of the species in the country. The proposal was therefore accepted. A proposal to register a captive-breeding operation for American Crocodile *Crocodylus acutus* in Honduras was withdrawn.

A Resolution on improving the regulation of **trade in plant specimens** was adopted (Resolution Conf. 8.17). This contains three main points: a) it clarifies the definitions of "artificially propagated" and "under controlled conditions"; b) it introduces a requirement for annotation of those plant species in Appendix I for which strict trade controls are required for artificially propagated hybrids; and c) it exempts flasked seedlings of orchid species listed in Appendix I from CITES controls. A further draft resolution on nursery registration for artificially propagated Appendix I species was discussed at length but, because of some unresolved problems, it was agreed that the Plants Committee should revise the draft resolution and registration criteria to submit to the ninth meeting of the Conference of the Parties.

A Resolution (Conf. 8.18) on plant nomenclature was adopted, in which *A world list of cycads* (D.W. Stevenson, R. Osborne and J. Hendricks, 1990, *Memoirs of the New York Botanical Garden* 57:200-206) was agreed as a guideline for referencing species names to Cycadaceae, Stangeriaceae and Zamiaceae. The Parties also agreed to use *The Plant-Book*, rev. ed. (D.J. Mabberley, 1989, Cambridge University Press) as the standard for the generic names of all CITES-listed plants, and to use *A Dictionary of Flowering Plants and Ferns*, 8th ed. (J.C. Willis, revised by H.K. Airy Shaw, 1973, Cambridge University Press) as a reference for generic synonyms not mentioned in *The Plant-Book*. It was agreed that the Nomenclature Committee should prepare a standard reference for selected Orchidaceae genera in trade, providing information on species, with synonymy and the countries of distribution of recognized taxa (Resolution Conf. 8.19).

The Chairman of the Animals Committee introduced a report (Doc. 8.30) regarding work on **significant trade in Appendix II animal species**, noting that since the last meeting of the Conference of the Parties, the status of some 150 Appendix II species had been reviewed, resulting in a number of proposals to amend the Appendices and the formulation of recommendations for remedial action by range states. There was strong support for proposals to continue and strengthen the review process and a programme of further work was agreed. In endorsing the report presented to them, the Parties stressed the need for funding for field studies and fully endorsed the efforts to make recommendations for follow-up action via the Secretariat to individual Parties.

A report on **significant trade in plants** (Doc. 8.31) had been prepared by the World Conservation Monitoring Centre. It consisted of general observations on the quantity and quality of plant trade data contained in CITES annual reports; an account of the six most important source countries: the Netherlands, Japan, Thailand, Brazil, Turkey and the Dominican Republic; and notes on the different groups of CITES-listed plants, including the ten most highly-traded genera of both Cactaceae and Orchidaceae, four other important genera of succulents, cycads and tree ferns. The report concluded with a series of recommendations. Some of these were general ones on the need for improved trade reporting and the value of analysing the trade information on a regular basis. Others were country-specific, relating to the most important source countries, but also highlighting potential problems in Taiwan, Madagascar, Mexico and South Africa. Finally there were some that were taxon-specific, e.g. recommending a field survey of *Notocactus* species, trade surveys of some orchid and cycad genera, and a review of the value of the current listings of tree ferns in Appendix II.

The report was commended and the need for better monitoring of the plant trade and the strengthening of relevant databases was emphasized.

The Netherlands introduced a draft resolution, which was adopted after some discussion and amendment, relating to **trade with states not party to the Convention** (Resolution Conf. 8.8). The Resolution aims to counteract illegal

trade by tightening the conditions applying to trade with non-Parties. The Secretariat is directed to inform non-Parties of certain requirements regarding designation of competent authorities equivalent to CITES Management and Scientific authorities. Parties are advised not to accept documentation from States which have not complied with this requirement unless they have consulted the Secretariat. The Resolution continues by extending the provisions of Resolution Conf. 3.8 (on the Acceptance of Comparable Documentation Issued by States not Party to the Convention) to require non-detriment findings by a scientific body before export and to cover transit shipments destined for, or coming from, non-Parties. The other main provisions are that Parties should allow trade with non-Parties in Appendix I specimens of wild origin only in special cases where conservation to the species or welfare benefits to individual specimens can be demonstrated. Furthermore, imports of Appendix I captive-bred or artificially propagated specimens may only be allowed after consultation with and full consideration of recommendations made by the Secretariat. The Parties discussed the possible conflicts between this Resolution and the General Agreement on Tariffs and Trade (GATT), but concluded that such problems would have to be resolved in the GATT forum.

A draft resolution was prepared by Argentina to introduce a number of measures aimed to aid control of trade in **stocks of hair and cloth of Vicuna** *Vicugna vicugna*. Certain populations of this species in Chile and Peru were transferred to Appendix II in 1987 for the exclusive purpose of trading in cloth made from wool sheared from live animals. However, trade control measures have been frustrated by the existence of and trade from stockpiles of cloth manufactured from Vicuna, as well as hair and wool, in a number of countries; those mentioned were the UK, Hong Kong and Japan. These apparently pre-Convention stocks do not appear to have been adequately inventoried and it was suggested by the proponents of the draft resolution that the stocks may be used to cover illegal trade. A Resolution was eventually passed (Resolution Conf. 8.11), after some dispute about the existence of stockpiles in Hong Kong and comment by Japan that enforcement of trade controls for Vicuna products would always be difficult owing to the low concentrations of Vicuna hair contained in textiles found in trade. It calls for improved trade control and reporting and for importing states, in consultation with the CITES Secretariat, only to allow import of cloth containing pre-Convention Vicuna fibres or bearing identification as originating from the approved shearing schemes.

Expressing great concern about possible detrimental effects of returning confiscated live animals to wild populations, the Netherlands introduced a draft resolution entitled **return to the wild of confiscated wild animals of species included in Appendices II and III.** Concerns, shared by many Parties, surrounded the lack of knowledge of the exact provenance of many specimens in trade, the resulting risk of genetic pollution and the ecological and disease risks of re-introduction. The draft resolution recommended that any Management Authorities contemplating the return of confiscated live animals of species listed in Appendix II or III consult with and obtain binding advice from their own CITES Scientific Authorities and, if possible, those of the country of origin. It further directed that the Secretariat be informed of such intentions and that a postal review be carried out by other Parties and the pertinent IUCN/SSC Specialist Group. Final decisions would be based on the best possible advice and a "very restrictive" attitude was advised. After extensive discussion it was agreed that the issue was too complex to be resolved during the current meeting of the Conference of the Parties. The draft resolution was withdrawn and it was agreed that discussion would continue in the Animals Committee with the aim of preparing a new draft resolution for consideration at the ninth meeting of the Conference of the Parties.

A draft resolution prepared by the USA relating to **export and re-export of confiscated specimens** was withdrawn without discussion. Its aim was to address the potential conflict between certain provisions of Articles III and IV of the Convention and the desire of Parties to allow the export or re-export of confiscated specimens. The draft incorporated corrected text from Resolution Conf. 4.17 (which it would have repealed), and would have further allowed exemptions to be made in the case of issuance of export permits for confiscated specimens; conditions under which export and re-export of confiscated specimens of Appendix I species could be allowed were proposed.

Recommendations from the Animals Committee and the IUCN/SSC Captive Breeding Specialist Group on the use of coded microchip implants for **marking live animals in trade** resulted in a draft resolution submitted by Australia. A great deal of debate focused on this issue, notable comments being made on the high cost of the necessary equipment, the need for funding to subsidize its use and the incompatibility of much of the available equipment. Eventually, acknowledging that the use of other marking techniques would be more suitable in some cases than others, the Parties agreed a Resolution (Conf. 8.13) recommending the use of implantable transponder microchips for the identification of live Appendix I animals subject to international trade and, when appropriate, to Appendix I and II animals used in travelling exhibitions or circuses. Among various other provisions, it was agreed to consider advice from the IUCN/SSC Captive Breeding Specialist Group regarding a standard system and implant location and it was proposed that microchip codes be recorded on permits and in CITES annual reports. Funding would be sought for the introduction of this technique and further developments would be monitored by the Animals Committee.

A document was submitted by the Secretariat regarding **standardization of CITES permits and certificates** in response to Resolution Conf. 7.3 which requested the preparation of a new standard permit model. A draft

resolution contained three sections. The first gave the list of basic information that must appear on the different types of permits and certificates covered by the Convention and the specific information for each type of document. The second recommended the use of a standard model permit/certificate form attached as an annex to the resolution and defined the information to be included with the basic aim of preventing any use of CITES documents for fraudulent purposes. The third section mandated the Secretariat to assist those Parties requiring help in preparing their CITES document forms. Failing to reach agreement, the Parties decided that it was premature to accept the new permit form prepared by the Secretariat, but an amended version of the remainder of the original resolution was adopted and Resolution Conf. 7.3 was repealed. The new Resolution (Conf. 8.5) provides a detailed guide to all information to be included on permits and certificates, including a number of important new provisions, particularly those regarding the control of export quotas and the live animal transport conditions.

A report from the UK, as Chairman of the working group on the **transport of live specimens** (TWG), summarized the results of the group's two meetings held since the seventh meeting of the Conference of the Parties. It was noted that a number of problems were still causing concern, particularly the lack of comprehensive scientific data on mortality and its causes, and the poor implementation of CITES Resolutions on the transport of live specimens. The report called for better training of personnel involved with transport of live specimens and closer collaboration with the IATA Live Animals Board was recommended. Particular disappointment was expressed about the lack of funding which had led to poor attendance by producer countries at TWG meetings. Parties were urged to improve implementation of previously agreed Resolutions aimed to improve transport conditions.

A document on the **role of the Scientific Authority**, prepared by the USA, addressed the problem that many export permits are being issued without supporting scientific findings or advice from a designated Scientific Authority. It was argued that only through proper implementation of the responsibilities of a Scientific Authority could Article IV of the Convention be implemented successfully. Following extensive debate, a Resolution (Conf. 8.6) was adopted which outlines a number of recommended functions to be implemented by the Scientific Authority. Particularly noteworthy is the recommendation that Parties consult with the Secretariat when there is reason for concern as to whether the proper Scientific Authority findings are being made prior to the issuance of export permits.

At the sixth meeting of the Conference of the Parties, IUCN had undertaken to prepare **guidelines for evaluating marine turtle ranching proposals** and had convened a workshop to this end. The results of the workshop had been prepared for the seventh meeting of the Conference of the Parties but were withdrawn because the workshop had failed to reach agreement. Subsequently, the IUCN General Assembly in Perth had passed a Resolution calling on IUCN not to support any marine turtle ranching operations and, as a result, IUCN had been unable to pursue the matter further. As several Parties expressed the need for such guidelines, the Animals Committee was given the task of developing them.

Despite withdrawal of a similar proposal at the seventh meeting of the Conference of the Parties owing to lack of support, Denmark again presented a document and draft resolution which would allow an **exemption for blood and tissue samples for DNA studies from CITES permit requirements**. Like before, the draft resolution proposed a general exemption from usual CITES licensing requirements for preserved blood samples or other tissues that can be contained in a 2ml aliquot. The purpose of such an exemption would be to enable prompt exchange of such samples for DNA studies to define the genetic character of wild populations and the origin of individuals, to analyse genetic variability in wild and captive populations, and to recognize individual animals. Although exemption from licensing requirements is already possible for trade between scientists or scientific institutions registered by their CITES Management Authorities under Article VII, paragraph 6 of the Convention, Denmark considered that this excludes the possibility of 'ordering', at short notice, comparative material from other institutions (zoos, breeding centres, pet keepers) or from individuals with access to wild populations. The maximum sample size was designed to prevent illegal trade in other derivatives under the draft resolution. Again there was little support for the draft resolution, many Parties fearing the precedent of what they saw as a contradiction of the text of the Convention; it was eventually rejected by vote.

Criteria for amendments to the appendices were recognized to be lacking already at the first meeting of the Conference of the Parties in 1976. Because of this, the so-called Berne Criteria (Resolution Conf. 1.1 and 1.2) were adopted at that time to help rationalize the Parties' decisions with regard to amendments to the Appendices.

At the current meeting, Botswana, Malawi, Namibia, Zambia and Zimbabwe (Zambia subsequently withdrew its support for this proposal at the meeting) proposed that the Berne Criteria be changed as, in their opinion, such criteria: did not allow for an objective assessment of the biological status of species; did not address the beneficial aspects of international trade to conservation; and, once a species had been listed in Appendix I, its removal was difficult, even when its conservation status had improved. The inadequate nature of the Berne Criteria was broadly recognized by the Parties and many NGOs, although many felt that in spite of the detailed background information and draft resolution provided by the proponents, more time was needed to analyse the complexities of changing the existing Criteria. A working group was established by Plenary and given a mandate to put forward a proposal for setting in motion procedures to replace the Berne Criteria.

Following additional debate, a Resolution (Conf. 8.20) was adopted which directs the Standing Committee and Secretariat to undertake a revision of the criteria for amending the Appendices, for consideration at the ninth meeting of the Conference of the Parties. The Standing Committee and Secretariat were also directed to seek the expertise of IUCN and other appropriate organizations, and arrange for the involvement of the Animals and Plants Committees through common meetings. A draft resolution shall be distributed to the Parties at least 300 days prior to the ninth meeting of the Conference of the Parties. Following the Parties' opportunity to comment, a revised draft resolution shall be distributed to the Parties at least 150 days prior to the meeting.

Support of range states for amendments to Appendices I and II. Botswana, Malawi, Namibia, Zambia and Zimbabwe (Zambia subsequently withdrew its support for this proposal at the meeting) had put forward a draft resolution that, among other things, would introduce the right to veto a proposal to amend the Appendices if range states of the taxa in question disagreed with the proposed listing. Whilst it was generally agreed that range states were not adequately consulted in the listing process, a fact agreed upon at previous meetings of the Conference of the Parties, it was felt that the proposed draft resolution was unacceptable and would undermine the proposal and voting procedures provided for under the Convention. However, many Parties concurred with the desirability to introduce a more stringent system of consultation with range states so that many disputes that otherwise would be left with the Conference of the Parties to resolve could be dealt with on bi-lateral terms. A working group was established to address the matter and a Resolution (Conf. 8.21) was subsequently adopted which provides the Parties with two options, dealing with, on one hand, the case where a proposing Party intends to consult with range states, and, on the other hand, the case where the proposing Party does not wish to consult. In the latter situation, a proposing Party is requested to submit the proposal at least 330 days in advance of the next scheduled meeting of the Conference of the Parties, so as to allow range states and other interested parties the choice to comment on the proposal.

According to Article XIV, paragraph 1(a) of the Convention, Parties are granted the right to take **stricter domestic measures** than those provided by the Treaty. Botswana, Malawi, Namibia, Zambia and Zimbabwe (Zambia subsequently withdrew its support for this proposal at the meeting), in proposing a restriction on the Parties' ability to adopt stricter domestic measures, argued that the right was being misused by some consumer states to close off markets to range states even for species which are not endangered. The proponents felt that this effectively prevented any potential conservation benefit from international trade. They asked the Conference of the Parties to take note of their concerns and then withdrew the proposed resolution.

A total of 27 taxa were subject to proposals included in Doc. 8.44 **Ten Year Review proposals.** Two of these were withdrawn at an early stage and 21 of them were agreed unanimously by Committee I and adopted without discussion in Plenary. Three plant proposals were adopted after they had been amended so that they were transfers from Appendix I to Appendix II rather than deletions from the Appendices. Only one proposal was the subject of much discussion: the transfer from Appendix I to Appendix II of an orchid, *Didiciea cunninghamii*. There had been no recorded trade in the species but the delegation of India, the only range state, wished to retain the species in Appendix I under the terms of Resolution Conf. 2.19 because of its extreme rarity. The proposal was withdrawn after India agreed to carry out a study on the species and submit the results before the next meeting of the Conference of the Parties.

Other Proposals:

Cheetah *Acinonyx jubatus*

Namibia and Zimbabwe proposed that the Cheetah populations of Botswana, Malawi, Namibia, Zambia and Zimbabwe be transferred from Appendix I to Appendix II. It was argued that in southern Africa, only an estimated 18% to 24% of the population occurs in protected areas, and that the species generally do not do well in protected areas due to interspecific competition with other large predators. On private land, Cheetah is viewed by farmers as a major threat to livestock and large numbers are killed annually in pest control. The proponents argued further that the only solution to the problem of securing the conservation of viable free-roaming Cheetah populations on farmland is to give the landowner the opportunity of receiving direct financial gain and compensation for losses incurred, thus encouraging him to tolerate or even welcome the presence of Cheetah on his land. In this regard, trophy hunting is a viable option which is proving successful in Namibia. The proponent countries amended their proposal so that rather than transferring any population to Appendix II, an Appendix-I export quota system was established, with the following quotas adopted by consensus: Botswana 5; Namibia 150; and Zimbabwe 50. The Cheetah quota system deviates from that in place for Leopard in that it not only allows the export of skins or nearly whole skins, but also allows the export of live animals under the established quota.

Black and White Rhinos *Diceros bicornis and Ceratotherium simum*

The Black and Southern White Rhinos have been listed in Appendix I since 1977; all other rhinos since 1975. Acknowledging that international trade in rhino parts continues despite the Appendix-I listing and that in particular the Black Rhino has undergone a population crash, South Africa requested that their population of White Rhino be transferred to Appendix II, and Zimbabwe requested that their populations of Black and White

Rhinos be subject to a similar transfer, as the listing of these populations in Appendix I was prohibiting more innovative management approaches to their conservation. In particular it was argued that the majority of rhinos were now found in southern Africa, as they have disappeared from many other areas due to poaching for their horn, and that horn from dehorning operations could be sold legally without harming the animals so as to generate much needed money for the protection of the remaining populations. While it was generally acknowledged that years of Appendix-I listing had not provided the desired conservation success, the Parties nevertheless rejected the proposals despite protests from the proponent countries whose rhino populations remain at stake.

African Elephant *Loxodonta africana*

There were basically two proposals to transfer populations of the African Elephant from Appendix I to Appendix II. The first, amalgamated from five similar proposals, was originally submitted by Botswana, Malawi, Namibia, Zambia and Zimbabwe but, at the outset of the meeting, Zambia withdrew as a proponent. The delegation of Botswana, on introducing the proposal on behalf of the four proponents, emphasized that at issue was not ivory trade but the need to manage African Elephant populations. The delegation of Zimbabwe stressed the importance of sustainable use of wildlife for the benefit of rural communities as an alternative to subsistence agriculture and as a means of ensuring the continued conservation of the elephants. The Panel of Experts report, prepared pursuant to Resolution Conf. 7.9, had concluded that Botswana and Zimbabwe met the criteria for a transfer of their elephant populations to Appendix II.

The proponents stated that they were seeking a resumption of trade in non-ivory products within CITES and, in the spirit of compromise, had amended the original proposal which would subject a transfer of the African Elephant to Appendix II to the following conditions: 1. a moratorium on commercial exports of raw and worked ivory as detailed in Doc. 8.58; and 2. a temporary inclusion in Appendix II, until the ninth meeting of the Conference of the Parties, of the elephant populations of Botswana, Malawi, Namibia and Zimbabwe, subject to the following conditions: i. exclusion of trade in raw ivory, other than legitimate hunting trophies; ii. exclusion of all other trade in ivory, except personal effects and tourist souvenir specimens acquired in the proponent countries, and held in those Party States on 14 March 1992; and iii. automatic inclusion of these populations in Appendix I at the date of the next scheduled meeting of the Conference of the Parties, provided that the Conference of the Parties does not adopt a proposal that is acceptable to the proponent countries to re-open trade in ivory.

A large number of delegations, many African, opposed the proposal and only the delegation of Switzerland offered its support. Many delegations recognized the efforts made towards elephant conservation in the proponent states, and few questioned the evidence that populations were locally large and well-managed. Whilst there was support for the principle of sustainable use, some of the major points causing them to reject the proposal were: it was premature because the necessary trade controls were not yet in place; elephant populations in most of Africa had declined dramatically and had not yet recovered adequately; elephants migrate across international borders and so populations which cross the boundaries between countries should be treated together; any move to transfer the species to Appendix II in part of its range, even for the trade in products other than ivory, would stimulate illegal hunting elsewhere; there is continuing illegal trade in ivory through the poponent states and international co-operation in law enforcement and training of enforcement staff is inadequate; the majority of the states within the range of the species opposed the proposal; and the transfer of the species to Appendix I was thought to have been generally effective in reducing illegal hunting.

Following these views, the delegation of Botswana, on behalf of the four proponents, expressed disappointment that, despite complying with criteria adopted in 1989, which set out procedures for transferring back to Appendix II those elephant populations which clearly did not belong in Appendix I, their efforts were not being rewarded. He called into question the objectives of CITES and stated that the proponents would have to review their future participation in the Convention. He stressed that their evaluation would be conducted objectively and analytically in the interest of elephant conservation and the long-term benefits to the people of the region. The proposal was reluctantly withdrawn.

The second proposal, also amended, was submitted by South Africa who stated that, subject to the acceptance of the proposal, and in recognition of the continued concern over the possible negative effects of the ivory trade, South Africa will continue to forbid any import or export of ivory or ivory products, other than legitimate hunting trophies, until the next meeting of the Conference of the Parties. Although it was supported by the Panel of Experts, many delegations felt that acceptance of this proposal would be premature for many of the same reasons as discussed in relation to the previous proposal. This proposal was similarly withdrawn.

Leopard *Panthera pardus*

Botswana, Malawi, Namibia, Zambia and Zimbabwe proposed the transfer of all sub-Saharan populations of Leopard from Appendix I to Appendix II. It was argued that not only have many Leopard populations recovered and therefore no longer merit inclusion in Appendix I, but in many countries populations were now of such a size that the species was regarded as a pest. However, after much discussion and various amendments to this proposal, the proponents reluctantly accepted that the Appendix-I quota system established for this species would remain in place, subject to a number of changes in the size of quotas allocated to individual countries. Namibia, as a new Party to the Convention, was included in the quota system. The following quotas were adopted by consensus

(Resolution Conf. 8.10): Botswana 100; Central African Republic 40; Ethiopia 500; Kenya 80; Malawi 50; Mozambique 60; Namibia 100; South Africa 75; Tanzania 250; Zambia 300; and Zimbabwe 500, thus potentially allowing the harvest for international trade of a total 2055 Leopards a year.

Bluefin tuna *Thunnus thynnus*

The delegation of Sweden emphasized that their main objective in proposing Western Atlantic stocks to Appendix I and Eastern Atlantic stocks to Appendix II had been to ensure that populations of Atlantic bluefin tuna were exploited at a sustainable level. A draft resolution sponsored by the delegations of Canada, Japan, Morocco and USA, who opposed Sweden's proposal to amend the Appendices, focused on the responsibility of the International Convention for the Conservation of Atlantic Tunas (ICCAT) for the management of tuna, and strongly urged ICCAT to continue its initiatives with regard to restoring and maintaining populations and reducing quotas. Prior to debate, Sweden had suggested that it would consider supporting this compromise but it eventually withdrew the proposal and the draft resolution was not discussed. Sweden stated that it reserved the country's right to continue to monitor tuna stocks. The draft resolution was also withdrawn.

Black Bear *Ursus americanus*

Although Denmark's proposal to list Black Bear in CITES Appendix II was narrowly defeated following considerable debate in Committee I, with an agreement by the delegation of the USA to list the species in Appendix III, a second vote on the matter led to a re-opening of discussion in Plenary. The proposal had been submitted because of the species' similarity of appearance with other bear species, especially those from Asia which are severely threatened by trade in their products, in particular gall bladders, and derivatives. The delegation of Canada opposed the proposal on the grounds that most of their trade was in hunting trophies to the USA and that inclusion in Appendix II would impose an unnecessary administrative burden. However, although there was general agreement that there was little problem of enforcement in the countries of origin, the view that Appendix III listing was inappropriate for look-alike species was expressed by the delegations of Austria, Brazil, Kenya, Portugal on behalf of the countries of the EC, Thailand and the UK. The proposal was eventually adopted by 46:20 votes in favour.

Timber

For the first time, the meeting considered proposals for CITES to extend its coverage to significantly traded tropical timber species.

The proposal to list **Brazilian Rosewood *Dalbergia nigra*** in Appendix I was accepted without debate. Ghana felt that the proposal to list **Afrormosia *Pericopsis elata*** in Appendix II was unnecessary but supported an Appendix III listing for their population; Cameroon raised the issue of implementation problems and the Appendix II listing was supported by Congo. The vote was passed with 53 for 4 against for Appendix II listing, with an annotation restricting regulation to logs, sawn timber and veneer.

Costa Rica withrew their proposal to list mahoganies ***Swietenia* spp.** in Appendix II, then made a statement from the floor declaring that internal political problems necessitated this action, but this in no way lessened their support for an Appendix II listing. The USA introduced their proposal by amending it so that it was restricted to logs, sawn timber and veneer, from Central American populations only. During the debate, a number of the Central American countries expressed opposition and concern that the proposal was restricted to Central America. When asked for a scientific reason for the amendment to exclude South American populations of *Swietenia*, the US did not provide a substantial answer. Brazil, a major exporter of *S. macrophylla*, spoke in support of the proposal, stating that they felt the listing would help international efforts to manage the genus and expressed Brazil's willingness to co-operate with other range states to improve long-term management of mahogany. After considerable debate (most of it negative and focused on *S. macrophylla*), the USA withdrew *S. macrophylla* from the proposal. This left *S. mahagoni*, which was listed in Appendix II after a vote of 38 for and 4 against.

A proposal to list **Quebracho *Schinopsis* spp.** in Appendix II was withdrawn by Argentina at the beginning of the meeting. Argentina announced that its national and relevant provincial governments had signed a Memorandum of Intention to establish a plan to manage the resource sustainably. It was hoped that regional management plans would also be developed with the Governments of Bolivia and Paraguay.

Proposals to list **Ramin *Gonystylus bancanus*** and **Merbau *Intsia* spp.** in Appendix II were also withdrawn before being discussed, following strong opposition to the proposals from many range states.

The representative of the ITTO Secretariat read out a statement welcoming the call for increasing co-operation between ITTO and CITES and briefly explained ITTO's goal of promoting sustainable management of tropical forests and Target 2000 (which established the year 2000 as the date by which all tropical timber in trade should come from sustainably managed areas). Statements were made by the Netherlands, Denmark and Australia, supporting the concept of listing appropriate tropical timber species in CITES and encouraging increased co-operation between CITES and ITTO. Malaysia supported this closer co-operation, but expressed reservations about other aspects of CITES listing for tropical timber species.

The ninth meeting of the Conference of the Parties will be held in the USA, in 1994.

The following four pages summarize the proposals which were adopted, rejected and withdrawn at the eighth meeting of the Conference of the Parties to CITES. The amendments become effective on 11 June 1992.

PROPOSALS ACCEPTED

FAUNA

MAMMALIA

Tamandua tetradactyla chapadensis — Mato Grosso Collared Anteater
Deletion from App. II[1]

Dusicyon thous — Crab-eating Fox
Inclusion in App. II

Ursus americanus — Black Bear
Inclusion in App. II

Ursus arctos — Brown Bear
Inclusion in App. I of populations of BT, CN and MN (Replacement of *U.a. pruinosus*)

Ursus arctos — Brown Bear
Inclusion in App. II of remaining populations

Acinonyx jubatus (BW, MW, NA, ZM, ZW pops.) — Cheetah
Annotation of App. I listing to indicate the following quotas: BW-5; NA-150; ZW-50

Felis geoffroyi — Geoffroy's Cat
Transfer from App. II-I

Felis rufa escuinapae — Mexican Bobcat
Transfer from App. I-II[1]

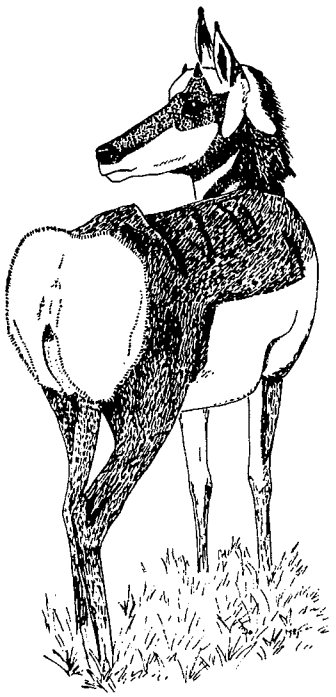
Mirounga angustirostris — Northern Elephant-seal
Deletion from App. II

Orycteropus afer — Aardvark
Deletion from App. II[2]

Antilocapra americana mexicana — Pronghorn Antelope
A. a. peninsularis — Lower Californian Pronghorn Antelope
A. a. sonoriensis — Sonoran Pronghorn Antelope
Replace with App. I listing of MX pop. of *A. americana* (=Del. US pop. of *A.a. mexicana* and *A.a. sonoriensis*)[1]

Capra falconeri falconeri (incl. cashmirensis)
Capra falconeri heptneri (incl. ognevi) — Markhor
Transfer from App. II-I

Hippotragus equinus — Roan Antelope
Deletion from App. II



Pronghorn Antelope *Antilocapra americana*

AVES

Rhea americana — Greater Rhea
Inclusion in App. II

Anas formosa — Baikal Teal
Inclusion in App. II

Cygnus columbianus jankowskii — Jankowski's Swan
Deletion from App. II[1]

Cyrtonyx montezumae mearnsi — Mexican Mearns' Montezuma Quail
C. m. montezumae — Southern Montezuma Quail
Deletion from App. II[1]

Cacatua goffini — Goffin's Cockatoo
Transfer from App. II-I

C. haematuropygia — Red-vented Cockatoo
Transfer from App. II-I

Aceros spp. (incl. *A.* =*(Berenicornis) comatus*) — Hornbills
Inclusion in App. II

Aceros nipalensis — Rufous-necked Hornbill
A. subruficollis — Plain-pouched Hornbill
Inclusion in App. I

Anorrhinus spp. — Hornbills
Anthracoceros spp. — Hornbills
Buceros spp. — Hornbills
Inclusion in App. II

Buceros bicornis — Great Indian Hornbill
Transfer from App. II-I

CITES AMENDMENT PROPOSALS - RESULTS

PROPOSALS ACCEPTED ctd

Penelopides spp. — Hornbills
Ptilolaemus spp. — Hornbills
Inclusion in App. II

Pteroglossus aracari — Toucans
P. viridis
Ramphastos sulphuratus — Toucans
R. toco
R. tucanus
R. vitellinus
Inclusion in App. II

REPTILIA
Clemmys insculpta — Wood Turtle
Inclusion in App. II

Clemmys muhlenbergi — Bog Turtle
Transfer from App. II-I

Crocodylus cataphractus (CG pop.) — Slender-snouted Crocodile
Transfer from App. II-I

Crocodylus niloticus — Nile Crocodile
(CM & CG pop.)
Transfer from App. II-I

Crocodylus niloticus — Nile Crocodile
(ET & KE pop.)
Inclusion in App. II (R)

Crocodylus niloticus (MG pop.) — Nile Crocodile
Inclusion in App. II (R). Quotas: 3000-1992;4000-1993; 4300-1994 + 100 nuisance animals/year

Crocodylus niloticus (SD pop.) — Nile Crocodile
Inclusion in App. II[3]. 1992 Quota: 8000 skins. Transfer pop. to App. I effective 30 days after entry into effect of other amendments to the Appendices

Crocodylus niloticus (TZ pop.) — Nile Crocodile
Inclusion in App. II (R). Quotas for cropped specimens (all nuisance animals): 400-1992; 200-1993; 200-1994; 100-1995 onwards; + 100 skins/year from trophy hunting

Crocodylus niloticus (UG pop.) — Nile Crocodile
Transfer from App. I-II[3]. Quota: 2500 ranched skins

Crocodylus niloticus (ZA pop.) — Nile Crocodile
Transfer from App. I-II[2]. Quota: 1000 skins/year

Crocodylus porosus (ID pop.) — Estuarine Crocodile
App. II (R)[3]. Quotas: 9700-1992; 8500-1993; 8500-1994; includes 7000 ranching and captive breeding stock; 500 from the wild and, in 1992, 1200 skins already held

Osteolaemus tetraspis (CG pop.) — West African Dwarf Crocodile
Transfer from App. II-I

Phrynosoma coronatum — San Diego Horned Lizard
Inclusion in App. II[1]

Corucia zebrata — Prehensile-tailed Skink
Inclusion in App. II

Vipera wagneri — Wagner's Viper
Inclusion in App. II

PISCES
Cynolebias constanciae — Pearlfish
C. marmoratus
C. minimus
C. opalescens
C. splendens
Deletion from App. II[1]

Polyodon spathula — Paddlefish
Inclusion in App. II

MOLLUSCA
Strombus gigas — Queen Conch
Inclusion in App. II

FLORA
Alocasia sanderiana
Transfer from App. I-II[1]

Tillandsia harrisii — Bromeliads
T. kammii
T. kautskyi
T. mauryana
T. sprengeliana
T. sucrei
T. xerographica
Inclusion in App. II

Ariocarpus spp. — Living-rock Cactus
Transfer from App. II-I

Discocactus spp.
Transfer from App. II-I

Melocactus conoideus
M. deinacanthus
M. glaucescens
M. paucispinus
Transfer from App. II-I

Turbinicarpus spp.
Transfer from App. II-I

Uebelmannia spp.
Transfer from App. II-I

Dionaea muscipula — Venus Flytrap
Inclusion in App. II

Quercus copeyensis — Copey Oak
Deletion from App. II[1]

Vantanea barbourii
Deletion from App. II[1]

Oreomunnea (=Engelhardtia) pterocarpa
Transfer from App.I-II[1]

Cynometra hemitomophylla
Deletion from App. II[1]

Dalbergia nigra — Brazilian Rosewood
Inclusion in App. I

PROPOSALS ACCEPTED ctd

Pericopsis elata — Afrormosia
Inclusion in App. II of logs, sawn timber and veneer

Platymiscium pleiostachyum
Deletion from App. II[1]

Tachigali versicolor
Deletion from App. II[1]

Swietenia mahagoni — American Mahogany
(Central America pop.)
Inclusion in App. II of logs, sawn timber and veneer

Batocarpus costaricensis
Deletion from App. II[1]

Areca ipot
Deletion from App. II[1]

Hedychium philippinense
Deletion from App. I[1]

Guaiacum officinale
Inclusion in App. II

PROPOSALS REJECTED

FAUNA
MAMMALIA

Hyaena brunnea — Brown Hyaena
Deletion from App. I[2]

Panthera pardus (sub-Saharan pop.)Leopard
Transfer from I-II[3]. App. I quotas revised; NA included as quota country: BW-100; CF-40; ET-500; KE-80; MW-50; MZ-60; NA-100; ZA-75; TZ-250; ZM-300; ZW-500

Diceros bicornis (ZW pop.) — Black Rhinoceros
Transfer from App. I- II[4]

Ceratotherium simum simum (ZA pop.) — Southern White Rhinoceros
Transfer from App. I-II[2]

PROPOSALS WITHDRAWN

FAUNA
MAMMALIA

Tarsius syrichta — Philippine Tarsier
Transfer from App. II-I

Manis temminckii — Temminck's Ground Pangolin
Deletion from App. I[2]

Conepatus spp. — Hog-nosed Skunks
Inclusion in App. II

Loxodonta africana (BW, MW, NA, ZA, ZM, ZW pops.) — African Elephant
Transfer from App. I-II

Ceratotherium simum (ZW pop.) — White Rhinoceros
Transfer from App. I-II[4]

AVES

Mycteria leucocephala — Painted Stork
Inclusion in App. II

Goura spp. — Crowned pigeons
Transfer from App. II-I

Amazona aestiva — Blue-fronted Amazon
Transfer from App. II- I

Eos reticulata — Blue-streaked Lory
Transfer from App. II-I. Proposal withdrawn on ID's agreement to establish a zero quota until the 9th meeting of the Conference of the Parties

Aceros (=*Berenicornis*) *comatus* — White-crested Hornbill
Inclusion in App. I

Aceros corrugatus — Wrinkled Hornbill
Inclusion in App. I

Anthracoceros malayanus — Black Hornbill
Inclusion in App. I

Buceros bicornis homrai — Great Indian Hornbill
Transfer from App. I-II

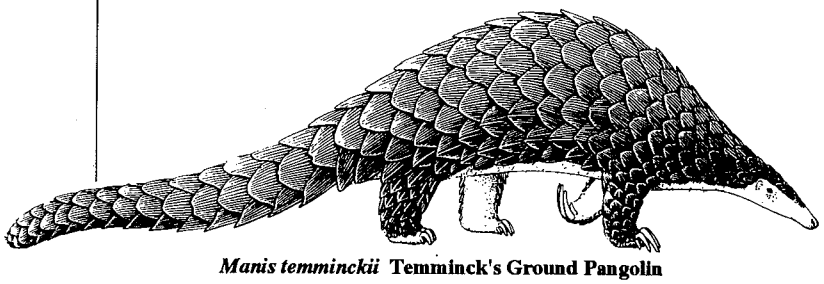
Buceros rhinoceros — Rhinoceros Hornbill
Transfer from App. II-I

Pittidae spp. — Pittas
Inclusion in App. II

AMPHIBIA

Conraua goliath — Goliath Frog
Inclusion in App. II

Asian bullfrogs
Rana arfaki
R. blythii
R. cancrivora
R. crassa
R. cyanophlyctis
R. grunniens
R. ibanorum
R. ingeri
R. kuhlii
R. limnocharis
R. macrodon (incl. *R. microtympanum)*
R. magna
R. malesiana
R. modesta
R. paramacrodon (incl. *R. kenepaiensis*)
R. rugulosa
Inclusion in App. II



***Manis temminckii* Temminck's Ground Pangolin**

PROPOSALS WITHDRAWN ctd

PISCES

Clupea harengus — Herring
Inclusion in App. I

Gymnocharacinus bergi — Naked Characin
Inclusion in App. I

Thunnus thynnus — Bluefin Tuna (Western Atlantic pop.)
Inclusion in App. I

Thunnus thynnus — Bluefin Tuna (Eastern Atlantic pop.)
Inclusion in App. II

FLORA

Schinopsis spp. — Quebracho
Inclusion in App. II

Caryocar costaricense
Deletion from App. II[1]

Intsia spp. — Merbau
Inclusion in App. II

Swietenia spp.
Inclusion in App. II

Didiciea cunninghamii
Deletion from App. I[1]

Gonystylus bancanus — Ramin
Inclusion in App. II

NOTES

[1] Ten-year review proposal
[2] Pursuant to Resolution Conf. 2.23 which states "species included in Appendix I or II during or before the first meeting of the Conference of the Parties, may be proposed for deletion from Appendix I or II or for transfer from Appendix I to Appendix II, if a careful review of all available information on the status of the species does not lead to the conclusion that the species would be eligible for retention in its present Appendix under the adopted criteria".
[3] Pursuant to Resolution Conf. 7.14, i.e. with an export quota
[4] *Or* quota for commercial trade in rhino horn and sport hunting trophies in App. I

(R) = Pursuant to Resolution Conf. 3.15 on Ranching

COUNTRY CODES

BT - Bhutan	MW - Malawi
BW - Botswana	MX - Mexico
CF - Central African Republic	MZ - Mozambique
CG - Congo	NA - Namibia
CM - Cameroon	PH - Philippines
CN - China	SD - Sudan
DE - Germany	TZ - Tanzania
ET - Ethiopia	UG - Uganda
HN - Honduras	US - United States of America
ID - Indonesia	ZA - South Africa
KE - Kenya	ZM - Zambia
MG - Madagascar	ZW - Zimbabwe
MN - Mongolia	

Proposals for Registration of Captive-breeding Operations of Appendix I Species for Commercial Purposes Pursuant to Resolution Conf. 7.10.

Species		Proponent
Alligator sinensis Accepted	Chinese Alligator	CN
Diceros bicornis (ZW pop.) Rejected	Black Rhinoceros	ZW

The following proposals were withdrawn:

Panthera tigris altaica	Siberian Tiger	CN
Crocodylus acutus	American Crocodile	HN
Polyplectron emphanum	Palawan Peacock-pheasant	PH
Caloenas nicobarica	Nicobar Pigeon	PH
Amazona leucocephala	Cuban Amazon	DE/PH
Anodorhynchus hyacinthinus	Hyacinth Macaw	PH
Ara ambigua	Buffon's Macaw	PH
Ara macao	Scarlet Macaw	PH
Ara maracana	Illiger's Macaw	PH
Ara militaris	Military Macaw	PH
Ara rubrogenys	Red-fronted Macaw	PH
Cacatua moluccensis	Salmon-crested Cockatoo	PH
Probosciger aterrimus	Palm Cockatoo	PH

Illustrations from CITES Identification Manuals:

Antilocapra americana by Peter Dollinger
Manis temminckii by Eva Weber

Report compiled by Steven Broad, Kim Lochen and Jørgen Thomsen, with contributions from Tim Inskipp and Richard Luxmoore of the World Conservation Monitoring Centre.

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The Trade and Uses of Wildlife Products in Laos

Esmond Bradley Martin

Laos is one of the poorest nations in the world, with a per capita income under US$200 a year; 85% of the population earn their living from agriculture. The inhabitants rely extensively on wild birds, fish, insects, frogs and other game meat for food. There are few exports except for hydro-electric power, timber[1] and opium.

Following the communist takeover in 1975, the Government confiscated many private businesses, closed down the principal market in the capital, Vientiane, and, in 1978, collectivized agriculture. From 1975 until June 1985, over 300 000 people fled to Thailand, including almost all skilled artisans and professionals (Stuart-Fox, 1986). The currency became very weak, falling from 15 kip to the US dollar in 1978/79, to 424 kip at the end of 1985 (Bourdet, 1989). By the mid-1980s, in an attempt to stimulate the economy, the Government initiated the New Economic Mechanism, which aimed to decentralise economic decision-making, encourage private business, liberalize the import and export trade and establish a single, unified exchange rate for the kip. By the end of 1988, the bank rate for the kip was close to its true value, and the main markets selling goods in Vientiane were flourishing (Anon., 1988; Anon., 1989 and Bourdet, 1989).

In February and March 1990, under the auspices of WWF-International and IUCN-the World Conservation Union, the author carried out a survey of the wildlife products for retail sale in and around Vientiane.

Introduction

Laos is approximately the size of the UK but has a population of only four million people. The northern region is mountainous and is inhabited by a large number of hill-tribes. Besides practising shifting cultivation of rice, maize and vegetables, the people grow opium as a cash crop, hunt and gather produce in the forest, and engage in handicrafts, including the carving of ivory. Laotians have been hunters for generations, using - in addition to guns - nets, cross-bows, snares, bird calls, traps and hunting dogs.

In the southern part of the country there is more arable farming, mainly of rice. Today in some southern provinces such as Attapeu and Sekong, there is still a lot of wildlife to be found although in other areas, in particular major urban centres, wild mammals and birds have been largely extirpated.

[1]On 28 August 1991, the Laos Government banned all logging with immediate effect, whilst a forest survey is completed and forest protection measures are strengthened (Anon., 1991).

Product		US$ per specimen
Civet	Viverridae spp.	8
Barking Deer	*Muntiacus muntjac*	5 per kg
Mouse Deer	*Tragulus napu versicolor*	4
Pangolin	*Manis javanica*	4
Pea Hen	*Pavo cristatus*	4
Snake	*Serpentes spp.*	4
Red Junglefowl	*Gallus gallus*	3.5
Hare	*Lepus siamensis*	3
Wild Boar	*Sus scrofa*	3 per kg
Lesser Tree Duck	*Oendrocygna javanica*	2
Tortoise	Testudinidae spp.	2
Squirrel	Sciuridae spp.	1
Owl	Strigidae spp.	0.80
Thick-billed Pigeon	*Trenon curvirastra*	0.70
Rat	*Rattus spp.*	0.70

Table 1. Animals commonly consumed for food which were offered for retail sale in Vientiane, February/March 1990. *Survey by the author*

Wildlife Consumed as Food

By far the largest number of animals killed in Laos are killed for food. Apart from rice and other products gathered in the forests, 80% to 90% of food consumed in the north of the country is from wild animals, according to recent surveys; the mountain peoples earn 30% to 60% of their income by supplying products from hunting and gathering to various markets in Laos (Chazée, pers. comm.).

Both modern and home-made weapons are widespread, with most families possessing a gun (Chazée, 1990). Such a proliferation of firearms, together with other weapons, has meant that a large number of animals are killed for local consumption or for trade with China, Thailand and Viet Nam. Many ethnic groups of northern

© Esmond Bradley Martin

Laotian women selling wild-caught birds, Morning Market, Vientiane.

© Esmond Bradley Martin

Saleswoman in the Evening Market, Vientiane, displaying a dead Red Junglefowl, squirrel and rat, to be purchased as food.

Laos have continued to have strong trade relations with people in southern China: on the Laotian/Chinese border there is an active commerce in deer antlers, birds' bills, elephant ivory, tiger bones, pangolin scales and a variety of other wildlife products in exchange for Chinese goods such as bicycles, saucepans, lamps and padlocks.

The main area where wild game meat is sold in Vientiane is the Evening Market. Many animals are shot or trapped around the capital and in Bolikhamsai province to the east and brought to Vientiane by truck. A Government regulation, introduced in 1989, requiring taxes to be paid on many game carcasses has led to the development of a clandestine market in which game meat is supplied directly to restaurants so as to evade the police inspections of the Evening Market. In 1988, it was common to see Indian Muntjak *Muntiacus muntjak*, pangolin *Manis* spp., palm civet, Sambar *Cervus unicolor*, Wild Boar *Sus scrofa*, Porcupine *Hystrix brachyura* and Sun Bear *Helarctos malayanus** for sale in the markets of Vientiane, but these are rarely seen on public view today (Chazée, pers. comm.). The new Government regulation was meant to discourage the illegal killing of large mammals, but enforcement has not been effective.

A combination of unregulated hunting and habitat loss has probably led to a decline of populations of a number of the species in Laos which are listed in the IUCN Red List. Species currently listed as Endangered, Vulnerable or Threatened and which occur, or probably occur, in Laos are: Pygmy Loris *Nycticebus pygmaeus**, Douc Langur *Pygathrix nemaeus**, Black Gibbon *Hylobates concolor**, Pileated Gibbon *Hylobates pileatus**, Dhole *Cuon alpinus*, Clouded Leopard *Neofelis nebulosa**, Tiger *Panthera tigris**, Asian Elephant *Elephas maximus**, Malayan Tapir *Tapirus indicus**, Javan Rhinoceros *Rhinoceros sondaicus**, Thamin *Cervus eldi**, Gaur *Bos gaurus**, Banteng *Bos javanicus*, Kouprey *Bos sauveli**, wild Water Buffalo *Bubalus arnee*, White-winged Wood Duck *Cairina scutulata**, Green Peafowl *Pavo muticus*** and Siamese Crocodile *Crocodylus siamensis** (Salter, pers. comm.; Anon., 1990).

Some animals are captured for sale as pets, but this is not as common as in Thailand, where keeping certain animals in captivity confers status on the owner. In addition, some mammals - the Slow Loris *Nycticebus coucang*,** Sun Bear and gibbon *Hylobates* spp.* - birds and snakes, are exported illicitly to Thailand (Chazée, pers. comm.).

Wildlife Products as Ornaments and Souvenirs

Products from some of the above-listed animals were seen on sale in markets, jewellery and souvenir shops; in particular, rhinoceros, elephant, tiger, Serow *Capricornis sumatraensis**, Clouded Leopard, Gaur, Sun Bear, wild Water Buffalo and Thamin were openly displayed. Articles most commonly on sale, however, were those derived from elephant ivory.

Like most countries in Asia, Laos has an ivory carving industry. During the latter part of the 1970s and until 1988, the industry was in the doldrums because of the poor state of the country's economy and the lack of wealthy

Product		US$
Water Buffalo horn attached to skull	*Bubalus bubalis*	200
Thamin antlers (pair)	*Cervus eldi*	195
Wild cats (various species) stuffed	Felidae spp.	100
Serow Deer antlers (pair) mounted	*Capricornis sumatraensis*	98
Sambar Deer antlers	*Cervus unicolor*	50
Civet skin	Viverridae spp.	40
Stuffed otter	Mustellidae spp.	39
Elephant ivory	*Elephas maximus*	
bracelet/Buddha pendant (4cm)		35/8
various antique ivory items		-
Python skin	*Python spp.*	22
Hornbill head	Bucerotidae spp.	20
Tiger nail/tooth	*Panthera tigris*	10/10
Gaur horn	*Bos gaurus*	8
Boar tooth	*Sus scrofa*	5

Table 2. Ornaments and souvenirs of animal products offered for retail sale in Vientiane, February/March 1990.

Survey by the author

*listed in CITES Appendix I ** listed in CITES Appendix II

foreign visitors. With the arrival, from mid-1988, of western tourists and many Thai businessmen, the ivory business has picked up.

Almost all ivory for the ivory carving industry comes from the Asian Elephant populations occurring in southern Laos. There are perhaps between 3000 and 5000 wild elephants and 850 domesticated elephants (Chazée, pers. comm). There is evidence that some elephants are being illegally killed for their ivory; for example, in January 1990, 12 men were caught shooting elephants in the southern province of Attapeu.

From 1988 to February 1990, the wholesale price of good quality raw ivory doubled in Vientiane to around US$200 a kg because of increased demand from foreign buyers, especially Thais. There are not many ivory craftsmen. Some 10 are based in Vientiane and a few are to be found in Luang Prabang, the former capital of Laos, 175 km north of Vientiane. Most carvers work in other substances, such as wood, because there is not enough ivory to keep them fully occupied. The Government-owned State Enterprise of Cultural Production, formerly one of the major ivory carving establishments in Vientiane, was unable to purchase raw ivory in 1989. The assistant manager claimed that before 1975, there was a brisk ivory business in the country and that, at that time, most of the raw ivory came from Laos, although a small amount was from Thailand and Myanmar.

Today, ivory carvers in Vientiane work mostly at home; the great majority of ivory tusks worked weigh less than 10 kg. This may explain why pendants and other jewellery is the carvers' main output. The most common item on sale is an ivory Buddha pendant, which is four cm long and retails for US$8. An experienced craftsman can make up to five of these in one day and receives US$4 for each. Only hand tools are used, never electrically-powered dentist drills as seen in Hong Kong, for example. Besides the ubiquitous Buddha pendant, Laos carvers make bangles, rings, bracelets and the occasional sculpture.

In early 1990, at least eight (mostly jewellery) shops in the capital and 12 in Luang Prabang offered ivory items for sale (Chazée, pers. comm.). Almost all ivory items are bought by foreigners, although, according to a long-term French resident of Laos, some wealthy Laotians display whole tusks in their houses. The quality of workmanship has declined since the revolution; it now compares with that done by Thais, but is very inferior to Chinese or Japanese carving.

After ivory products, the next most common wildlife ornaments for sale in Vientiane are the antlers from various deer; these are mounted on wooden plaques. Snake skins and cat skins can also be seen in souvenir shops, but the quality of tanning is poor, which greatly limits sales. However, a few cat skins are bought by foreign tourists and residents. The author was told that tiger skins were sometimes available but cured so poorly that the hair falls out; none was seen for sale. The Laotian hunter receives between US$150 to US$200 for a tiger skin, and the buyers are principally Thai.

Antique wildlife products for sale in Vientiane are mostly made of elephant ivory or elephant bone and it is difficult to ascertain their origin. Probably most of the elephant bone smoking pipes seen for sale were made in neighbouring Viet Nam as were some of the ivory bangles. Viet Nam has an ivory carving industry larger than the one in Laos.

Animal Products as Medicine

Compared with Chinese medicine shops in neighbouring Thailand, traditional pharmacies in Vientiane have few wildlife products for sale. In fact, there are now only two Chinese-style medicine shops in business and, in early 1990, only one of these had any wildlife products. It offered elephant hide, tiger bone, bat skeletons and Saiga Antelope *Saiga tatarica* horns (a substitute for rhino horn). Most of the people in Vientiane are too poor to buy expensive animal-based medicinal products, and most of the wealthy Chinese residents fled after the 1975 communist revolution. The Laotian markets do, however, contain numerous stalls which offer the cheaper wildlife-based medicines and remedies.

According to Dr Bounhoong Southavong, the Director of the Research Institute of Medicinal Plants, a subsidiary of the Ministry of Health, traditional Laotian medicine is used by at least 60% of the people in Laos. He pointed out that although Laotian medical practice differs from Chinese methods - Laotian doctors do not examine the pulse - the use of many wildlife products is similar. For instance, in both cultures two of the more common aphrodisiacs are sea-horses Syngnathidae and geckos Gekkonidae. Wild animal products are extensively consumed in Laos for medicines when they are available but use of herbs, owing to their easier accessibility and lower prices, is far more common.

In Vientiane more than 30 different wildlife products on sale as medicines were examined during the survey. By far the most valuable was rhino horn; the demand for it from wealthy Chinese throughout eastern Asia makes it too expensive for most Laotians, however.

In most countries in eastern Asia, rhino horn is marketed in pharmacies; in Yemen and Saudi Arabia it is sold at dagger stalls and, in common with the west, in antique shops. In Laos, however, rhino horn is sold in jewellery shops, even though it is usually purchased for medicinal use. It is likely that only these shopkeepers have sufficient capital to purchase the horn. The traditional medicine shops (both Chinese and Laotian) in Vientiane had no rhino horn at the time of the survey because, the owners said, they do not have the expertise to identify authentic rhino horn; the author also believes that they did not have the economic reserves to wait for its eventual sale.

Rhino horn has only come onto the retail market in Laos in some quantity since the latter part of 1988, when the Government implemented its new economic policies. With the upsurge of business, Thai businessmen started visiting the country. For the first time since 1975 it was therefore financially worthwhile for the owners of rhino horns to sell them to the jewellery shops because the

Product		Use/Cure	Price in US$
Tiger (bones)	*Panthera tigris*	rheumatism	370 per kg
(nose)		dog bites/sedative for madness	78 each
(claws)		sedative, especially for madness	23 each
(tooth)		dog bites/fever	14 each
Bat (skeleton)	Chiroptera	kidney stones	370 per kg
Elephant (trunk)	*Elephas maximus*	aphrodisiac/tonic	156 for end of trunk
		kidney stones/respiratory problems	
(skin)		heart disease (skin disease Chinese use)	110 per kg
Serow Deer (antlers)	*Capricornis sumatraensis*	rheumatism/swollen throat	83 per kg
(bladder, tongue and stomach)		weak heart	78 for all three
(tongue)		broken bones	78 each
(foot)		back pain	39 each
(blood)		rheumatism/tonic	4 for small bottle
Clouded Leopard (jaw)	*Neofelis nebulosa*	dog bites/sedative for madness	78 each
Asiatic Jackal (nose)	*Canis aureus*	sedative, especially for madness	55 each
Sambar Deer (antler)	*Cervus unicolor*	antiseptic	39 for 30 cm
Cat (teeth)	Felidae spp.	dog bites/sedative for madness	27 each
(nails)		sedative, especially for madness	?
Raptor (claw)	Falconiformes spp.	sedative, especially for madness	23 each
Wild Boar (tusk)	*Sus scrofa*	swollen throat	20 each
Bear (skin)	Ursidae spp.	lung disease	20 for 20 cm2 {a bottle (mixed with
(bile)		rheumatism/tonic	16 for 20 cm2 {honey) of 750 ml
Gaur (bile)	*Bos gaurus*	liver disease	16 for 750 ml bottle
(horn)		swollen throat	12 per kg
Barking Deer (foot)	*Muntiacus muntjac*	ear disease	12 each
Langur Monkey (internal organs)	*Pygathrix nemaeus*	lung/intestine diseases	3
Python (bladder)	*Python spp.*	urinary problems	2 each
Red Junglefowl (claw)	*Gallus gallus*	swollen throat	1 each
Pangolin (claw)	Manidae spp.	toothache	0.42 each
(scale)		toothache	0.07 each
Porcupine (quill)	Hystricidae spp.	swollen throat	0.04 each

Table 3. Animal products used for medicine and offered for retail sale in Vientiane, February/March 1990.
Survey by the author

money they received had some value and many consumer goods (mostly from Thailand) were now available in the shops.

Mystery and controversy surround the age of the horns now being offered for sale and the question of whether rhinos still survive in Laos. Wildlife traders in Thailand present evidence suggesting that there were rhinos in Laos in the 1960s and 1970s. They claim that during this period they purchased relatively large quantities of rhino horn which originated in Laos. The main wholesaler and retailer of rhino products in Bangkok told the author that he had purchased many horns from Laos between 1965 and 1975. However, some of these were antiques carved into the shape of a Buddha.

According to Jean Deuve, a French biologist who worked in Laos in the 1960s, Sumatran Rhinos *Dicerorhinus sumatrensis* were probably present in the country at that time; he had very little information on the presence of Javan Rhinos (Deuve, 1962). In 1983, Jeffrey Sayer of IUCN-The World Conservation Union, visited the country as a consultant to the Food and Agricultural Organisation, and concluded that "rhinos certainly occurred in Laos until the fairly recent past, and there are strong indications that they still do so". He was told of a sighting in May 1983, about 50 km north of Vientiane, and of the display of horns in many villages in Saravane and Attapeu provinces along the Vietnamese border (Sayer, 1983). More recently, the Lao/Swedish Forest Resources Conservation Project obtained information of the presence of a rhino, also about 50 km north of Vientiane, in February 1988, and of two rhinos on the border of Xiang Khouang and Bolikhamsai provinces in early 1990 (Salter, 1990a).

In late 1988, a few rhino horn pieces were seen for sale in the Morning Market in Vientiane. By early 1989, there had been an apparent increase in availability, as 75 to 100 rhino horn pieces were seen during a single visit to the same location. At the same time three rhino horn pieces were seen in jewellery shops in Pakse, the largest city in southern Laos (Salter, 1990b). In the same year Chazée viewed three rhino horns in Luang Prabang. Furthermore, the former Director of Wildlife and Fisheries (1984-1988), Pengkeo Singsourya, believes that there are still a few rhinos in Laos and that perhaps both Sumatran and Javan species are still in existence (Pengkeo Singsourya, pers. comm.). Another piece of evidence that there may still be rhinos in Laos comes from the major seller of Laotian animal products in the Morning Market in Vientiane: she claims that, in January 1990, she received US$13 for a very small quantity of rhino blood. She obtained her supply from local Chinese and sold it to Laotians suffering from respiratory problems and to women having difficulties in expelling afterbirth.

At the time of the survey, there were four jewellery shops, all in the Morning Market, selling rhino horn. The owners obtained their supplies, both antique and new,

from villagers and people in Vientiane. They paid for them in kip, Thai baht or US dollars - currencies which are freely traded in Vientiane. At least two of the pieces were antiques, one of which was carved in the shape of a Buddha with details highlighted in gold paint. It had been made either in Laos or Cambodia, where traditionally this type of craftsmanship is found.

After having examined the eight horns offered for retail sale in Vientiane, the author believes that most of them were not fresh; some of the other horns, however, may have come from recently-killed animals. The majority of the horns seen were from the Sumatran species, but two shaped like horn from the Javan Rhino were seen.

The main buyers of rhino horns in Vientiane are Chinese from Thailand who either consume them for medicinal purposes or re-sell them to Chinese pharmacies in Bangkok. A jewellery shop owner told the author that one of his customers had sent the horn he bought to Hong Kong for sale, as the price was high there. However, Bangkok is the main market for rhino horn in this part of Asia. Horns from Myanmar, Laos and Cambodia usually find their way to Bangkok where the large and wealthy Chinese community buys them to use as fever-reducing medicine. In Vientiane, in early 1990, the average retail price for horn from Asian rhinos was US$16 594 a kg. In Bangkok, at the same time, the average price for Sumatran and Indian horn was US$21 354 a kg - about 30% higher than in Vientiane. Jewellery shop proprietors in Laos are well aware that most of their horn ends up in Bangkok. Fake rhino horn carved from wood and bone can also be seen in many of the jewellery shops in Vientiane, but most of them do not look or feel like the genuine article. In Bangkok, 46% of the pharmacies surveyed in February 1990 had rhino hide for sale, but not a single shop in Vientiane offered any. In Bangkok one can, in addition, purchase rhino penises, dried blood and toenails, but, in Vientiane, the only other product aside from the horn was one nail which was being offered for the equivalent of US$1800 a kg.

A number of other wild animal products for medicinal use are also so highly priced that they are rarely consumed locally but instead are purchased for export. The major one is tiger bone. Small pieces are bought locally (US$370 a kg retail) to cure rheumatism. Other tiger products on sale include noses, teeth and claws, which can all be used for medicinal purposes, although occasionally they are bought as ornaments. In 1989, traders bought bones from Laotian hunters at an average of US$90 a kg for those from animals with a carcass dried-bone weight of 11 kg and US$60 a kg for smaller tigers which yielded six to seven kg of bone. However, at the Chinese border a poacher could receive from US$170 to US$250 a kg, depending on the size of the bone (Chazée, pers. comm.).

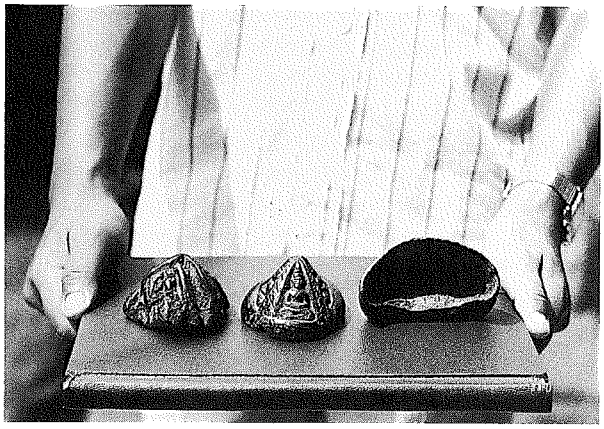
Weight	Probable origin	Species	US$/kg
42g	Laos	Javan?	23 810
70g	Laos	Javan?	17 143
75.2g	Laos	Sumatran	15 957
71g	Laos	Sumatran	15 735
99g	Laos or Cambodian (old Buddha carving)	Sumatran	15 625
26g	Laos	?	15 385
62.5g	?	Sumatran	12 500
?	Laos	?	?
Average retail price per kg			US$ 16 594

Table 4. Rhinoceros horn for retail sale in Vientiane, February/March 1990. *Survey by the author*

Conclusions

The effect of exploitation of Laotian wildlife is unknown, but several species are probably threatened with or near extinction as a result of hunting pressure, trade, and habitat loss. Those likely to be most affected by the souvenir and medicinal trade, according to available evidence, are the rhino (both Javan and Sumatran), Asian Elephant, Tiger, Clouded Leopard and, perhaps, Gaur and Banteng. Other species, such as the Siamese Crocodile and Kouprey, are certainly very rare in Laos, but little is known about their status or about the causes of their apparent population declines.

The Laotian Government recognizes the need to control trade as being one component of wildlife management. Attempts in the latter half of the 1980s to control wildlife trade and hunting by Government decrees proved ineffective as there was no enforcement mechanism and no specified penalties for violations. However, in 1989 penalties for violations of hunting and trade regulations were specified in the Penal Code (1989). In 1990, the Lao/Swedish Forest Resources Conservation Project made recommendations which are presently before the Laotian Government and which lay out a workable system of regulating wildlife resources (Madar and Salter, 1990).



◀Buddha figure carved in Laos or Cambodia from Asian rhino horn (middle); rhino horn (left) and a rhino nail (right of picture), Morning Market, Vientiane.

These include a suggestion for Laos to accede to CITES, but this would require upgrading of the enforcement and control capabilities of the Wildlife and Fisheries Conservation Division, the responsible section of the Department of Forestry and Environment.

Recommendations

To prevent the possible elimination of, or sharp decline in the numbers of certain wildlife species as a result of excessive hunting and trade, the Laotian Government should consider implementing the following three general policies. Firstly, comprehensive wildlife regulations need to be enacted with effective enforcement capabilities and with strong penalties for people who over-exploit and/or sell endangered wildlife species and their derivatives. Secondly, Forestry and Customs officials need to be trained to identify wildlife and wildlife commodities and to implement the new laws prohibiting the killing of and trading in certain species. And finally, a monitoring system needs to be set up to examine regularly the sale of wildlife products throughout Laos. If these recommendations are implemented by the Government, then there is a reasonable future for the rich and diverse wildlife of Laos.

Acknowledgements

I am most grateful to WWF-International for the financial support which enabled me to work in Laos. Laurent Chazée and Rick Salter read my manuscript and made many useful comments; they also helped me greatly in Laos, providing transport and interpreters, and shared with me their great wealth of knowledge on the country's wildlife. Other people who assisted me with my research include Pengkeo Singsourya, Somvath Soulivong and Bounhoong Southavong, whom I also thank.

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Socio-Economic Factors Influencing Conservation in South Africa

David Grossman, Tony A. Ferrar and Piet C. du Plessis

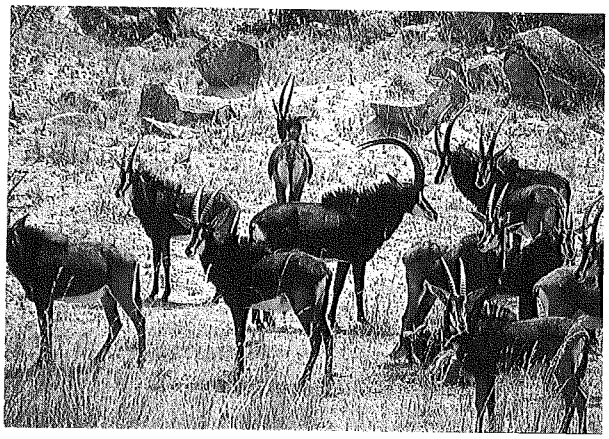
This paper reviews the relationships between wildlife abundance, the economy, and socio-political circumstances in South Africa over the last one to two hundred years. Although there is an absence of comprehensive data relating to this matter, the authors hope to contribute to an understanding of some of the socio-economic mechanisms that affect nature conservation in developing areas.

Introduction

The permanent settlement of southern Africa by Europeans in the late 1600s initiated a decline in the numbers and distribution of wildlife, principally 'game' animals. Species' populations are likely, prior to the arrival of Europeans, to have fluctuated around the limits of ecological carrying capacity (Caughley, 1976), with peaks and troughs in response to episodic events such as drought and disease. During the 18th and early 19th centuries, the decline in numbers would have been gradual, but with the human disturbance following the discovery of gold and diamonds in the late 1800s, this decline accelerated. Numbers of wildlife populations were further reduced by the rinderpest (an acute contagious viral disease of cattle and ungulates) outbreak in 1896. The drought and increased reliance on game due to the depression of the 1930s probably resulted in all-time low game numbers, followed by a slight increase during the Second World War, when men and guns were largely absent (Fig. 1). From 1800 to 1950, most of the region was gradually given over to the extensive ranching of cattle, sheep and goats to the exclusion of most large wild herbivores.

Along with the decline in faunal diversity, rangelands underwent varying degrees of transformation, ranging from complete replacement by monocultures (e.g. Maize *Zea mays*, Sugar Cane *Saccharum officinarum*), to thicket formation and 'bush encroachment' in woodland areas. Within most bioclimatic regions, rangelands have been further characterised by 'degenerative' changes in plant species' composition and accelerated rates of soil erosion.

Individual animal species responded differently to these changes. Some, such as Impala *Aepyceros melampus*, which thrive under 'degraded' conditions, actually benefited, whereas the numbers and distribution of sensitive species such as Roan Antelope *Hippotragus equinus*, Sable Antelope *Hippotragus niger* and Tsessebe *Damaliscus lunatus*, were severely reduced. Roan, for example, no longer occur naturally over their former range in the Cape Province, southern Botswana, and the Transvaal, with only remnants left in Zimbabwe. Where they do occur, they do so in small numbers with low reproductive rates (Smithers, 1983).



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Sable Antelope *Hippotragus niger*

Legally-Protected Areas

During the early part of the 20th century, concern over the loss of wildlife, coupled with the unsuitability of certain areas for livestock, led to the proclamation of 'Game Preserves', and to the affording of 'Royal Game' status to certain threatened species. Although these legally-protected areas have achieved huge success in certain endeavours, such as curbing the decline of the Southern White Rhino *Ceratotherium simum simum*, at no stage did their extent exceed about 6% of the land area of the country. Furthermore, many of these reserves have become enclaves within transformed landscapes, subject to the constraints of island biogeography.

Expedience (rather than biodiversity) and ecological or landscape processes dictated the siting of reserve boundaries. Thus, for example, roads, dams, other infrastructure and agricultural practices have disrupted processes such as migration, episodic insect eruptions, competition, predator-prey interactions and, ultimately, natural selection. The effects on hydrological processes, both in respect of surface flow and within the soil, have often been devastating.

Many protected areas suffer from socio-economic as well as biophysical shortcomings. As they are Government susidised, their persistence is subject to the taxpayers' goodwill and the health of the economy. Currently socio-political changes in South Africa have highlighted this dependency. The increasing demands of other social priorities such as health, education and housing, empha-

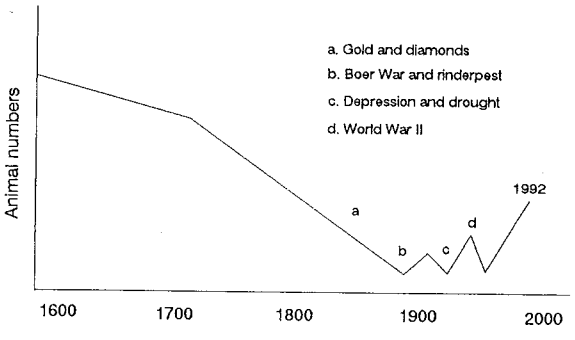

Fig. 1. Trends in game numbers: from period of European settlement to present.

size the vulnerability of State-financed reserves, never developed to be managed as paying ventures.

Most protected areas which were proclaimed and managed along 'colonial' lines, have not gained the support of the majority of South Africans, particularly those living in proximity to the protected areas in the depressed rural regions. Although it may be argued that these reserves provide employment, salaries have been very low and jobs menial. Only very recently have attempts been made to popularise these reserves in terms of making them relevant to local people.

In summary, existing legally- protected areas may be regarded as vulnerable ecological islands, subject to real and immediate socio-economic threats.

Conservation on Privately-owned Land

Some 70% of rural land in South Africa is under freehold tenure and largely used for extensive livestock ranching. The effects on wildlife, particularly larger herbivores and carnivores, have been alluded to above. During the 1960s, the developing conservation ethic, guided by the writings of Leopold, Huxley, Dasmann, Mossman, Talbot and others, resulted in a resurgence of interest in the re-establishment of wildlife on private land. Where previously populations of antelope had been utilised only by landowners, their families and friends, increasing market demand resulted in the development of a trade.

The ecologically risky and economically marginal nature of extensive livestock ranching in semi-arid regions, coupled with the land degradation referred to, further contributes to the precarious state of the extensive livestock industry. This is evident in returns on investment - generally of the order of 2%-5% (Behr and Groenewald, 1990) but consistently lower than current interest rates. Additional income derived from the economic use of game has certainly stabilised the extensive livestock ranching industry, often making the difference between bankruptcy and solvency (Grossman, 1989). Species such as Impala, Giraffe *Giraffa camelopardalis* and Greater Kudu *Tragelaphus strepsiceros*, make use of the "unused" browse in bush-encroached areas and the overall productivity of marginal livestock land is raised by incorporating these species into productive systems.

Growth and Trends in the Wildlife Market

Data on the nature and extent of game ranching in South Africa are notoriously difficult to obtain. This is largely because of the rapid development of the industry and the fragmented nature of the relevant statutory control: four provincial conservation bodies, a national parks board and two Departments of Agriculture have some measure of control and influence over the industry. A recent survey (du Plessis, in prep.) indicates that there are some 3500 registered game ranches which are exempted from most of the provisions of the Conservation Ordinances by virtue of being adequately enclosed by game-proof fencing. On these ranches, ownership of game effectively rests with the landowners, in contrast to game on unfenced land which has the legal status of *res nullius* or 'belonging to nobody'.

In the Transvaal, 63% of landowners with game on the farm gave profit as the main reason for re-introducing game (du Plessis, in prep). The recent increase in the number of registered game ranches in the Transvaal is illustrated in Fig. 2.

Nationwide, the 3500 game ranches cover an area of some 10.9 million ha, or some 10% of the total surface area, compared with the 5.5% occupied by legally-protected state-run reserves. In addition to these game ranches, various estimates indicate that game is used commercially to some degree on a further 5000 to 6000 farms nationwide.

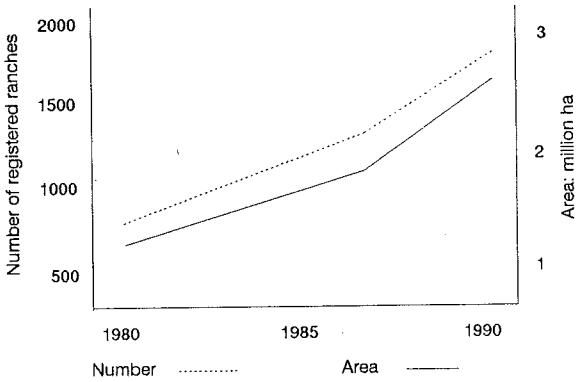

Fig. 2. Recent increase in numbers and area of game ranches, Transvaal Province.

Estimates of the numbers of animals cropped or hunted are also difficult to obtain. During the mid-1980s, some 60 000-80 000 carcasses of mainly Springbok *Antidorcas marsupialis* and Blesbok *Damaliscus dorcas* were exported annually, with a high of 100 000 (du Plessis, in prep.). Surveys have shown that some 200 000 South Africans are fairly regular sport hunters (du Plessis, in prep.) and, in 1990, 4000 foreign hunters (mainly trophy hunters), visited South Africa. Using these numbers, it is not inconceivable that some 400 000 to 500 000 head of antelope are hunted or cropped on privately-owned land in South Africa each year. In addition, an unknown number of game birds are hunted annually. The income derived from this trade, plus the economic opportunities and spin-offs to the outfitting, tourism, curio, taxidermy and service industries, is probably a minimum of some R500 million (US$170 million).

Revenue from wildlife on privately-owned land in South Africa has directly contributed to the expansion of some game populations and their redistribution into areas previously virtually denuded. Hunting and game cropping is supplemented by a booming business in capture and relocation of live animals. This activity has reached levels of technical excellence and volumes of trade that have put South Africa into a world-leadership position. The live game trade is conducted largely by public auction. By way of illustration, between 1986 and 1990, some 1100 Common Eland *Taurotragus oryx*, 1590 Greater Kudu, 5815 Impala and many other species were sold at

auction. Twenty-three scarce Roan Antelope were sold at an average price of R28 000, and 108 White Rhino were auctioned at an average price of R31 000 (Davies and Meiklejohn, 1990).

Since 1961, when the Natal Parks Board started translocating White Rhino, 1291 specimens have been relocated on some 150 privately-owned properties (Buys, 1989) with several times that number translocated to state parks and zoos in Africa and overseas. Significant numbers of people derive income from and depend on trade in wildlife and wildlife-related service industries. For example, an average of six workers, with a dependency rate of between five and ten people per worker, are employed per game ranch in the Transvaal (du Plessis, in prep.).

Along with this increase and redistribution of game goes wildlife management which benefits biodiversity and restores ecological functioning to previously degraded natural ecosystems. Of greatest significance is that this trend has been encouraged by economic incentives that are generally absent from the troubled, old-style livestock industry. Commercial wildlife management and the attendant tourism development provide a land-use option that is not only profitable and sustainable but also has the capability to heal the scars of earlier degradation; expenditure of development capital is minimal and there is no dependency on foreign aid.

It must be stated that certain aspects of this wildlife prosperity are not entirely satisfactory from a conservation perspective. For example, the widespread erection of fences to restrict game, has also restricted the mobility of wildlife populations and subjected enclosed populations to unnatural selection pressures, although the results of these constraints have not been quantified in terms of genetic shifts. The questionable profitability of smaller game ranches (Behr and Groenewald, 1990) has resulted in a recent tendency for the consolidation of smaller into larger units, with the removal of internal fences. Properties in excess of 30 000 ha are emerging, and it is conceivable, should this trend continue, that vast co-operatively managed, privately-owned natural areas will add greatly to the protected area network of the region. With the imminent redress of former political problems, the region is preparing for a growth in eco-tourism. The existing state-run parks are stretched to capacity and private sector conservation-based developments are emerging to cater for the game-viewing market. Several schemes aim at the re-establishment of the "big five" (i.e. African Elephant *Loxodonta africana*, Buffalo *Syncerus caffer*, Leopard *Panthera pardus*, Lion *Panthera leo* and rhino) and already African Elephant have been re-established on privately-owned land in both Zululand and several parts of the Transvaal.

Threats to the Conservation Effort

The emotional resistance to consumptive wildlife use is increasing in developed western countries. Lobbies campaigning for complete protection of species, without acknowledging land-use conflict with people, may pose a real threat to the continued survival of scientifically-managed populations, and often run contrary to the principles of sustainable use of wildlife resources. The denial of the economic incentive that can assist in paying for conservation efforts is a major threat to conservation in developing regions in southern Africa. In South Africa, however, revenue derived from wildlife trade does not reach the rural poor as well as it does in certain projects in neighbouring countries. This is largely the result of different histories of land tenure and the restrictions imposed by the fencing of wildlife areas. However, initiatives which pay very specific attention to benefiting local rural communities by means of employment and economic opportunities are now becoming quite commonplace in South Africa.

The conservation agencies of southern Africa recognise that they are part of a global conservation effort, and as such have certain responsibilities to operate broadly within global standards. The international conservation lobby appears often indistinguishable from the animal rights movement, which is unfortunate and potentially damaging for conservation in this developing region. The two are quite distinct but with limited areas of overlap. The one is rooted primarily in science, the other in individual human values. The conservation lobby, well-meaning as it is, must look first to its scientific principles before being seduced by emotional issues that are attractive "causes" for the raising of public contributions. It needs to be recognized and accepted that, in regions characterised by under-development and rural poverty, conservation will succeed only as long as it yields diverse and tangible benefits to the inhabitants of the region.

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ITTO Meeting, Cameroon

The Twelfth Session of the International Tropical Timber Council was held in Yaounde, Cameroon, from 6 to 14 May 1992. The following decision was passed by Council to improve co-operation between ITTO and CITES.

The International Tropical Timber Council,

Reaffirming the broad aims of Article 1 of the ITTA [International Tropical Timber Agreement] and, in particular, Articles 1(b) and 1(h);
Noting that the conservation of forest genetic resources will be an integral part of achieving sustainable forest management and hence Target 2000;
Appreciating that a number of measures are available at the national level to ITTO Members to promote the conservation and sustainable management of tropical timber species but that these can be complemented by appropriate multilateral efforts;
Recalling that the recently proposed listing of several tropical timber species in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has highlighted the need for any such listings to be based on the most comprehensive information and fullest co-operation between ITTO and CITES;
Recognizing that the ITTO and CITES are separate international entities with distinct mandates and separate membership;
Also recognizing that the roles of the two entities are potentially complementary in some areas related to internationally traded tropical timber;
Further recognizing the benefits of facilitating improved co-operation and consultation between ITTO and CITES;

Decides to:

1. Encourage Member Governments to co-ordinate their actions within ITTO and CITES;
2. Encourage Member Governments to inform the ITTO Secretariat at an early stage of any proposed listings of internationally traded tropical timber species in the Appendices of CITES and to provide relevant information;
3. Call upon the ITTO Secretariat to notify Members of any proposal to list internationally traded tropical timber species under CITES Appendices for discussion at the earliest opportunity;
4. Call upon the ITTO Secretariat, when an internationally traded tropical timber species is proposed for listing in a CITES Appendix, to provide all relevant information it has available on that species to ITTO members;
5. Request the ITTO Executive Director to liaise, as appropriate, on relevant topics with international organizations, such as CITES;
6. Invite Members to submit to ITTO relevant projects and activities to improve the information base regarding the conservation status of internationally traded tropical timber species.

Sri Lanka Offers Protection to Forests

Emergency regulations to curb the illegal felling of trees have been officially declared by Sri Lanka's President Ranasinghe Premadasa.

According to a press release from the President's Secretariat on 30 March 1992, large-scale felling of State forests had caused grave concern to the Government and existing laws were either inadequate or ineffective to prevent the mass destruction of the forest cover.

The Chairman of the Central Environmental Authority has been empowered to declare by notification any area of land, whether private or State-owned, as forest, with strict penalties for its destruction, ranging from between two to 10 years' imprisonment and a fine of R100 000 to R500 000 (US$2353-US$11 765). All officials, particularly those of the Forest Department, the Department of Wildlife Conservation, provincial and district administrations, the police and the armed forces, have been directed to ensure that the emergency regulations are enforced.

Dawn (Pakistan), 31 March 1992

Viet Nam and Laos Halt Timber Exports

Viet Nam's Prime Minister, Vo Van Kiet, has announced a ban on the export of timber and sawn wood and ordered the withdrawal of all export permits issued this year. According to an official report of the Viet Nam News Agency (VNA) dated 26 March 1992, the Trade and Tourism Ministry and the Forestry Ministry have been ordered to check the validity of permits issued to sawmills and to encourage makers of brick, lime and pottery to use coal instead of charcoal and wood. The Prime Minister cited widespread destruction of forests in central and southern Viet Nam as the reason for making the orders.

According to VNA, 1.7 million acres of virgin forest were lost when dams were built at Tri An and Dau Tieng, while an equal area of Tay Ninh province was cleared for cultivation of rubber and other crops. Shrimp-rearing, indiscriminate logging and charcoal-making in the southern districts of Kien Giang and Minh Hai are to blame for the fast disappearance of mangrove.

The ban has already blocked a number of export contracts, forcing cargo ships to turn away empty.

Laos has announced its intention to ban the export of timber by all provincial authorities and export companies with effect from May 1992, in an attempt to enforce the 1991 nationwide logging ban.

The Nation (Thailand), 27 March 1992; The Japan Times, 30 March 1992; Jakarta Post (Indonesia), 5 May 1992

Yew Bark Controversy

Although recognized as a valuable source of a drug used to assist in the treatment of cancer, the precious bark of the Californian Yew *Taxus brevifolia* is reportedly being burned as scrap and discarded to rot on the forest floor in logging operations in the US Pacific Northwest.

The bark can be processed to yield taxol, a drug found to be highly effective in the treatment of ovarian cancer and which shows promise for the treatment of breast and lung cancers. Clinical development of the drug has been limited by a shortage of Yew bark.

The waste has been attributed to a five-year federal contract that gives the pharmaceutical firm Bristol-Myers Squibb Company almost exclusive access to Yew bark in national forests. The intent was to encourage development of the drug and to bring it onto the market as quickly as possible. But critics say the contract encourages waste because Bristol Myers has no significant competition.

Most of the country's Californian Yews are found in nine national forests in Washington and Oregon. Up to 27 kg of the bark (equal to the bark from three very old Yew trees) are needed to provide enough taxol to treat one patient for about a year. Although the drug is not yet available commercially, about 1000 patients are receiving it on an experimental and emergency basis. By early 1993, Bristol-Myers expects to begin selling taxol. In the meantime, researchers are trying to develop a synthetic form of the drug.

A spokesperson for the US Forest Service, responsible for administering much of the land where Yews are found, says the species has been elevated to the most precious resource of the forest, and is now being treated as such. Mr Robertson said his agency had stepped up law enforcement efforts against Yew poachers, and ordered that no slash piles of bark (bark discarded on the ground in heaps) be burned. He estimated that there were 20 million Californian Yews left in the USA. An inventory to determine the numbers is now being carried out.

A spokesperson for Bristol-Myers Sqibb Company said the contractor hired by the drug company to collect bark had been instructed to make every effort to ensure that none of the resource is wasted.

Meanwhile, timber industry officials say environmentalists may be restricting the adequate supply of Yew. Much of the timber grows on land that is home to the Northern Spotted Owl *Strix occidentalis caurina*, a species which was recently given added protection through the enforcement of a temporary ban on logging in its habitat (see below).

Legislation currently being considered by the US Congress calls for the establishment of a Californian Yew conservation and management policy to provide for the sustainable harvest of the tree for the manufacture of taxol and to provide for the long-term conservation of the Californian Yew in the wild.

New York Times (USA), 29 January 1992; TRAFFIC USA

Logging Approved on Protected Owl Sites

The US Government has granted permission for the felling of timber in Pacific Northwest forests that are home to the Spotted Owl *Strix occidentalis caurina* which, in 1990, was listed in the US *Endangered Species Act* (ESA) as 'Threatened' (see *TRAFFIC Bulletin*, 12(3):70). Logging will be permitted on about 1700 acres of federal land in Oregon, until a final decision on the matter is taken by Congress.

The Government's Endangered Species Committee voted to override ESA requirements and allow sales of timber from 13 tracts of federal land which, in 1991, the federal Bureau of Land Management (BLM) proposed for logging. However, the Committee has denied BLM's request for an exemption covering another 31 sales and ordered the agency not to offer any new timber sales until it has developed a plan for "recovering" owl populations on land it manages.

The decision is unlikely to have any immediate impact because the BLM has been ordered not to sell timber from its land following two court decisions in Janaury and March 1992.

Washington Post (USA), 15 May 1992

Japan's Log Imports Fall

In 1990/1991, Japan's imports of logs from Southeast Asia were 8.9% less than the previous year's imports. The total of 10 114m³ was the lowest since 1966. This reduction has been mainly attributed to a curtailment in the production of plywood and lumber. Nearly 90% of log supplies came from Malaysia.

Origins	m³	Market share %
Sarawak	6468	64.0
Sabah	2577	25.5
Papua New Guinea	818	8.1
Solomons	187	1.9
Viet Nam	23	
Cambodia	21	
Myanmar	12	
Laos	3	
Philippines	2	
Total	10 114	

Japan Lumber Reports, 13 March 1992

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

EUROPE

DENMARK

Customs authorities in Esbjerg seized 23 African Grey Parrots *Psittacus erithacus*, 17 Rose-ringed Parakeets *Psittacula krameri* and 4 Senegal Parrots *Poicephalus senegalus* on 26 May 1992. The birds were discovered on a Ukrainian cargo ship, and had apparently been brought from Dakar, Senegal. Documents issued by the veterinary authority in Senegal indicate that the birds were to be shipped to Moscow. Instead, two Ukrainian sailors offered five of the African Grey Parrots for sale at an Esbjerg market. A local resident notified Customs authorities, who subsequently seized the parrots and searched the ship. The sailors will be charged with illegal import of CITES-listed species.

Two weeks earlier, Customs in Esbjerg seized 10 African Grey Parrots from sailors aboard a Russian ship.

Jyllands-Posten (Denmark), 27 May 1992

FRANCE

Specimens of protected plant species were seized from two French dealers early in 1992. Seventy cacti (including *Ariocarpus* spp., *Encephalocarpus* spp. and *Strombocactus* spp.) and other plants were seized from a shop in Paris. Approximately 500 specimens of various plants including some from Madagascar were seized from a dealer in Côte d'Azur.

On 18 January 1992, French Customs seized approximately 280 birds and two wallabies *Macropus* spp. discovered during a random vehicle inspection at the French border with Belgium. The animals were apparently being transported from the Netherlands to an animal dealer in northern France. Subsequent inspection of the dealer's home resulted in the additional seizure of 70 birds and three wallabies. A judicial inquiry into the case is underway, and both the dealer and the driver of the vehicle are likely to be charged with attempting to import undeclared CITES-listed animals.

The seized shipment contained primarily 'ornamental' birds, including Hawaiian Geese *Branta sandvicensis*, Egyptian Geese *Alopochen aegyptiacus*, Ruddy Shelducks *Tadorna ferruginea*, Crowned Cranes *Balearica pavonina* and peacocks. Many of the animals were in poor condition according to veterinarians from the Lille Zoo, where the animals were taken following the seizure. Twelve of the ducks were dead on arrival.

Customs authorities seized a shipment of 18 elephant tusks, two raw ivory pieces and 2.4 kg of worked ivory at Charles de Gaulle airport, Paris, on 5 March 1992. Weighing approximately 286 kg, the ivory formed part of a three-container shipment declared as 'personal goods' en route from Libreville to the Gabon Embassy in Seoul, South Korea. The shipment was inspected following its arrival in Paris on an Air Gabon (UTA) flight, where it was to be transferred to a Korean Airlines flight to Seoul. Also discovered were a collection of rare butterflies and a Lion *Panthera leo* skin.

The shipment was allegedly exported by M. Martin Bongo, Gabon's Foreign Affairs Minister from 1976 to 1989 and the nephew of Gabon's President, Omar Bongo. Shipping documents indicated that the intended recipient in Seoul was Mr Park Joung Sik, a former bodyguard of Gabon's President.

TRAFFIC Europe-France; TRAFFIC Europe; TRAFFIC Oceania; Agence France-Presse; Le Soir (France), 24 January 1992; La Griff (Gabon), 17 April 1992; VSD (France), April 1992

GERMANY

Three people were arrested at Frankfurt airport on 8 January 1992 when they were discovered to be carrying 350 kg of unworked elephant ivory pieces (approximately 19 tusks). The three - two Taiwan nationals with an ivory manufacturing company in Taiwan, and a Cameroon national, known to have had business relations with the Taiwanese for several years - were en route from Cameroon to Taiwan, via Frankfurt and Hong Kong. One of the Taiwanese has been released from custody. If convicted, the alleged smugglers face a maximum penalty of three years in prison and a fine of DM3.6 million (US$2.26 million).

Inspection of passports and other documents indicates that the three had smuggled approximately 600 kg of ivory during three previous trips using the same route. Investigations are continuing.

Customs officials have reported several additional seizures of ivory from tourists who, as a consequence, have each been fined more than DM3000 (US$1885).

German Customs, Frankfurt am Main; TRAFFIC Europe-Germany

ITALY

On 28 November 1991, the Italian Finance Guard in the port of Naples seized a shipment declared as 54 bales of 'pig skins', which had arrived by sea from Uruguay. Inspection of the shipment by staff of TRAFFIC Europe-Italy, at the request of the State Forestry Corps, revealed that the shipment contained skins of 3776 Yellow Anaconda *Eunectes notaeus* and 2002 Collared Peccary *Tayassu tajacu*. The bales were wrapped in the skins of 171 Capybara *Hydrochaeris hydrochaeris*. The State Forestry Corps and the Finance Guard have asked that the shipment be confiscated due to violation of contraband laws. The skins, which have an estimated value of US$164 527, remain in the custody of Italian Customs pending judicial review of the case.

On 4 March 1992, skins of 32 Ocelot *Felis pardalis*, 6 Leopard *Panthera pardus*, 1 Jaguar *Panthera onca* and 1 Lynx *Lynx lynx* were seized from a Treviso fur shop by the State Forestry Corps, following a tip-off from TRAFFIC Europe-Italy. It is unclear whether the seizure will be upheld by the judge reviewing this case, as Italy's new legislation imposing penalties for CITES violations (see page 7) was not effective until 7 March 1992. No civil or criminal penalties will be applied in any event.

Three Chimpanzees *Pan troglodytes* were seized on 7 March 1992 from a photographer working with the Moira Orfei circus, performing in Leghorn. The seizure by the State Forestry Corps coincided with increased inspection of travelling circuses, following investigations by TRAFFIC Europe staff in Italy and Greece which revealed that a number of circuses used endangered species of questionable origin. The Chimpanzees, aged between 18 months and three years, were accompanied by false Spanish CITES certificates stating that they had been legally imported.

Although the Chimpanzees were used for photographs before and during circus performances, and were housed and cared for by the circus, the circus claimed it had no connection with them. The photographer has been charged with illegal possession of endangered species. If convicted under Italy's new wildlife trade law which entered into force on the date of the seizure, the photographer could face a prison sentence of up to three months, and fines ranging from Lire 15 million to Lire 400 million (US$12 500 to US$332 900).

On 12 March 1992, officers of the State Forestry Corps seized 29 stuffed Green Turtles *Chelonia mydas* at Naples harbour. The sea turtles were in a shipment containing shells, sharks' teeth and other wildlife items imported from the Philippines by a Neapolitan dealer in marine curios. If convicted, the importer faces sentencing under Italy's new legislation.

On 8 May 1992, Customs and Finance Guard officers in Leghorn seized 66 elephant tusks, 450 pieces of worked ivory, skins of Leopard *Panthera pardus* and pythons, 95 Ostrich *Struthio camelus* eggs and several guns from a Sudanese ship arriving from Amman, Jordan. The items were packed in two shipping crates which belonged to two employees of the Italian Embassy in Khartoum. Shipping documents stated that the crates contained furniture. The two individuals, who were on leave in Italy, were arrested when they attempted to retrieve the crates in Leghorn. They were given one day in jail for breaking Italy's contraband law, and then released on bail pending trial for CITES violations.

TRAFFIC Europe-Italy

NETHERLANDS

A shipment of birds being presented for export to Yugoslavia with documents declaring them to be Budgerigars *Melopsittacus undulatus*, Cockatiels *Nymphicus hollandicus* and quail, was seized when it was discovered to consist of the following: 1 Hawk-headed Parrot *Deroptyus accipitrinus*, 1 Ducorps's Cockatoo *Cacatua ducorps*, 28 Orange-winged Amazons *Amazona amazonica*, 1 Mealy Amazon *A. farinosa*, 13 Red-bellied Macaws *Ara manilata*, 17 Chestnut-fronted Macaws *A. severa* and 9 Crested Wood Partridges *Rollulus roulroul*. The birds were subsequently returned to the exporter when he produced appropriate CITES documents for the shipment. However, he faces charges for attempting to export the birds without providing CITES permits at the time of export.

The airline, Aeroflot, faces prosecution for transporting two shipments of wild birds in violation of Dutch animal welfare legislation. A shipment of birds en route from Dar Es Salaam, Tanzania, to the Netherlands via

Moscow arrived at Schipol airport on 19 March 1992 after having been in transit for two and a half days. The shipment included 11 Crowned Cranes *Balearica pavonina* and 8 Saddle-billed Storks *Ephippiorhynchus senegalensis*. Three specimens of both species died after being transported upside down from Moscow to Schipol. Other birds in the shipment were also reported to be in poor condition.

TRAFFIC Europe-Netherlands;
General Inspection Service

UK

The convictions referred to below were carried out under the *Endangered Species (Import and Export) Act 1976* and the *Customs and Excise Management Act 1979*

On 9 March 1992, Dutch reptile dealer Fransicus Johannus Maria Verstappen was charged and found guilty of knowing evasion of Customs controls and failing to declare live animals to Customs upon import. Verstappen was apprehended at the port of Dover several days earlier when he attempted to smuggle four Sugargliders *Petaurus breviceps* into the UK. The small Australian marsupials were found in a wooden box concealed within a sleeping bag carried by Verstappen as he passed through the Customs checkpoint for foot passengers. Verstappen was fined a total of £1530 (US$2809) by Dover Magistrates Court.

On 13 May 1992, Anthony Malcolm Prior and Victor Gordon, both of Norfolk, pleaded guilty before Horsham Magistrates Court to charges of conspiring to smuggle 85 Eurasian Goldfinches *Carduelis carduelis* and 45 Northern Bullfinches *Pyrrhula pyrrhula* from Istanbul, Turkey, on 2 February 1992. Prior was fined £400 (US$730) plus court costs. Judgement for Gordon, who was considered by the Magistrates for a custodial sentence, has been deferred to 10 June 1992 pending social reports. The black-market value of the seized birds was estimated by HM Customs and Excise to be between £500 and £1000.

Prior was apprehended at London's Gatwick airport when HM Customs and Excise found the birds packed in 40 cardboard boxes in his suitcase. Thirty-five of the birds were dead on arrival. Gordon, who accompanied Prior on the flight from Istanbul to London, claimed not to know him and was not detained as no suspicious items were found in his luggage. Subsequent investigations revealed that Prior and Gordon had made joint travel reservations, and that Gordon was a dealer in live birds, including the species named above. A number of birds, primarily parrots, were discovered during a search of Gordon's home on 3 February 1992. Prior testified that he was acting as a courier for Gordon, who had organised the smuggling attempt.

Ian Wallace, owner of Entomological Livestock Supplies Ltd, in Halesowen, pleaded guilty on 14 May 1992 to charges of illegally importing 50 Mexican Red-kneed Tarantulas *Brachypelma smithi*. He and his company were fined a total of £1550 (US$2846) by Solihull Magistrates Court.

The Tarantulas were imported from Switzerland on 4 September 1991, and intentionally misdeclared as Curly-haired Spiders *B. albopilosa*. Responding to a tip-off from TRAFFIC International, HM Customs and Excise staff visited Entomological Livestock Supplies and discovered 38 Red-kneed Tarantulas which Wallace admitted had been illegally imported. He produced a copy of an apparently valid Swiss export permit for the Tarantulas, but stated that he had not produced it at the time of import and had not sought an import permit from the UK Government. According to the export documents, the Tarantulas were captive-bred in Switzerland.

HM Customs and Excise

Customs seized 28 tonnes of Alerce *Fitz-Roya cupressoides* from one of the UK's largest timber importers on 27 May 1992. Timbmet Ltd allegedly imported the timber, which is listed in CITES Appendix I, from Chile in 1990. Following the raid, the company issued a statement in which it categorically denied any involvement in the importation of illegal timber, stating that the wood was covered by an export certificate from the Chilean Ministry of Agriculture. Before making the purchase, the company had obtained evidence that the wood was already standing dead and understood this to be the prime reason for the granting of the export licence by the Chilean authorities. Although Chile has a reservation on the listing of the species in CITES Appendix I, which in effect places the country outside of the Convention with regard to this species, the commercial import of the material into the UK, as a Party to CITES, is illegal.

Alerce is a softwood unique to the temperate rainforests of the Andes of south Chile and parts of Argentina, and can live for over 4000 years.

The case is under investigation.

The Independent, 29 May 1992;
TRAFFIC International

ASIA

INDIA

A consignment of 19 tonnes of Costus (or Kuth) roots *Saussurea lappa* (CITES App. I), bound for Taiwan via Singapore, was seized by wildlife officials in New Delhi on 3 March 1992. The shipment was seized because it lacked a certificate indicating that the roots were from cultivated plants. The exporters of the shipment are being prosecuted under the *Wildlife (Protection) Act 1972*, and face penalties of up to three years in prison and a fine of up to Rs25 000 (US$883) if convicted.

Costus is native to the Himalayas. Export of plants cultivated in Himachal Pradesh is allowed if the plants are accompanied by a cultivation certificate issued by the state's Chief Wildlife Warden. The roots of wild plants are believed to be collected in Jammu and Kashmir for illegal export. They are used in the manufacture of cosmetics, perfumes and medicines, and reportedly are smoked as a substitute for opium.

Swedish national Jiri Rychlik was arrested at New Delhi airport on 21 May 1992 when inspection of his checked luggage revealed 1849 snakeskins; these included water snakes *Natrix*, rat snakes *Ptyas* and pythons *Python*. Rychlik was flying to Istanbul, where he intended to sell the skins. During interrogation he admitted to having smuggled snakeskins out of India during five previous trips to the country in the past two years, and said that he had intended to return for additional skins in June 1992. He is being held for further questioning, and will be prosecuted for alleged violation of the *Wildlife (Protection) Act 1972*.

TRAFFIC India

JAPAN

Twenty-seven elephant tusks weighing a total of 372 kg were seized by Customs officials in Kobe on 27 February 1992; this is the second largest ivory seizure in Japan's history. The tusks were concealed in a hidden compartment of a shipping crate containing 14 pieces of furniture. The ship upon which the crate was transported visited South Korea, South Africa, Hong Kong, Yokohama and Nagoya before arriving in Kobe on 18 February 1992. Customs officials became suspicious of the container because the country of origin was declared as South Korea, but the country of export was South Africa. Investigations regarding the origin, exporter and importer of the shipment are continuing in Japan.

TRAFFIC Japan;
Asahi Evening News (Japan), 3 March 1992

MALAYSIA

A number of rhinoceros and bear products were seized from a medicine shop in the State of Penang, in March 1992. Enforcement officers from the Department of Wildlife and National Parks head office in Kuala Lumpur raided the shop and found 13 rhino horns, 34 rhino hoofs, 7 kg of rhino skin, 777 bear claws and 13 bear gall bladders. The rhino products are believed to be from the Sumatran Rhinoceros *Dicerorhinus sumatrensis*. The dealer has been charged under the *Wildlife Protection Act 1972*, and is scheduled to appear in court in November 1992.

Department of Wildlife and National Parks, Peninsular Malaysia

SINGAPORE

On 6 December 1991, 10 rhino horns were seized at Changi Airport, the first such seizure since Singapore joined CITES in 1987. The horns were discovered by Customs during inspection of a consignment of nine crates of "Kemedang/Gaharu Wood" imported from Indonesia by a Singapore trading company. Officials from Singapore's CITES Management Authority, the Primary Production Department, believe the horns to be from Javan *Rhinocerus sondaicus* or Sumatran *Dicerorhinus sumatrensis* rhinos. The case continues.

The Straits Times (Singapore), 10 December 1991

THAILAND

Nine Irawaddy River Dolphins *Orcaella brevirostris* were confiscated from shrimp farms in Tambon Laem Makham, Laem Ngob District, on 28 April 1992. Local villagers said that a man claiming to be an army Major, and two Japanese men, had visited the village and stated that they had permission from the Fisheries

Department to catch the dolphins. Villagers were told that they would be paid Bhat 10 000 (US$415) for each dolphin captured. Three of the dolphins had died prior to being confiscated, and the others are to be returned to the sea after rehabilitation.

Fisheries Department Deputy Director-General Bang-orn Saisith stated that the Department would take action against those found to have poached the dolphins, which is a violation of Articles 32 and 65 of the *Fishery Law* (subsequent to a June 1990 Order issued by the Agriculture Ministry). Convicted violators face a fine of between Bhat 5000 and 10 000 and/or a prison sentence of up to one year.

Bangkok Post (Thailand), 2 May 1992

OCEANIA

AUSTRALIA

Recent convictions on charges under the Federal *Wildlife Protection (Regulation of Exports & Imports) Act 1982*

On 4 March 1992, at Melbourne County Court, John Nichols of New Zealand was convicted of attempted illegal export of 74 Australian native lizards. Nichols had been apprehended at Melbourne airport on 17 December 1991 attempting to board a flight for New Zealand. He had in his possession 68 Shingleback Lizards *Trachydosaurus rugosus*, 3 Inland Bearded Dragons *Amphibolurus vitticeps* and 3 Common Bearded Dragons *A. barbatus*. The lizards, bound with tape and covered by a blanket, were packed in a suitcase. Nichols was sentenced to 18 months' imprisonment, with an order that he be released on a recognizance of A$500 (US$383) after serving eight months.

On 13 March 1992, at Sydney District Court, three American citizens, Joseph Demaio and Matthew Pisciotta, both of New York, and Ronald Martinolich of Florida, were convicted of attempted smuggling of eggs of Australian native birds, and one live lizard. The three had been arrested on 13 September 1991 at Sydney airport as they were boarding flights back to the USA. A total of 46 eggs of Galahs *Eolophus rosecapillus* and 27 eggs of Major Mitchell's Cockatoos *Cacatua leadbeateri* were found concealed in specially-made body corsets. A Shingleback Lizard *Trachydosaurus rugosus* was found hidden in the underwear of one of the offenders. The three men admitted to taking the eggs from nests in Wyperfeld National Park, Victoria. The Australian Customs Service found incriminating photographs taken by the offenders of each other raiding the birds' nests, and these were tendered to the court.

Each was sentenced to 18 months' imprisonment. They were given a six month non-parole period and, as they had been in custody since their arrest, are expected to be released shortly.

On 20 March 1992, at Alice Springs Magistrates Court, two German citizens, Andreas Laube and Andre Kies, were convicted of attempted export of two Children's Pythons *Liasis childreni* through the mail. They were each fined A$4000 (US$3063) and given five days to pay, or six months' imprisonment.

PAPUA NEW GUINEA

On 5 February 1992 at Lae District Court, Labe Mesa of South Sea Foods Pty Limited appeared on a charge, under the *Crocodile Trade (Protection) Act 1974*, of illegal possession of four Freshwater Crocodile *Crocodylus novaeguineae* skins. He was convicted and discharged. The skins were forfeited to the State.

On 21 February 1992 at Boroko District Court, the company South Sea Foods Pty Limited of Boroko faced charges, under the *Crocodile Trade (Protection) Act 1974*, of attempting to export Freshwater Crocodile skins acquired illegally by an unlicensed buyer (Labe Mesa), and possession of 16 illegal skins, 13 of which were proven to be oversize (over 51 cm belly width). The company was fined Kina 10 (US$11) per skin and the skins were forfeited to the State. One hundred and forty-seven other skins, which had been part of the confiscated export consignment but were legally acquired, were ordered to be returned to the company. The Department of Environment & Conservation has lodged an appeal against the leniency of the sentence. The Environment & Conservation Minister, Michael Singan, has cancelled the company's licences to buy and export crocodile skins.

In March 1992, Australian authorities detained 25 Indonesian fishermen in the northern coastal port of Darwin for suspected illegal fishing inside the country's coastal waters. The Indonesians were arrested after their three wooden boats were towed into port by the Australian Navy. The three captains were to be questioned about alleged breaches of Australian fishing laws and charges might then be laid, according to a government spokesman. Fisheries officials in Darwin claimed that all three sail-powered boats had shark flesh on board.

More than 100 Indonesian boats have been caught in Australia's fishing zone since large numbers started fishing for shark and the valuable trochus *Trochus* shells in 1988.

Foreign fishermen found illegally in Australian waters risk gaol or heavy fines and are almost always deported. The boats are confiscated and burned.

Reuters (Sydney, Australia), 25 March 1992
Oceania section compiled by TRAFFIC Oceania

AFRICA

GABON

Amadou Touré of Guinea and Ketegui Touré of Côte d'Ivoire were arrested in Libreville on 11 April 1992 when they attempted to send 42 pieces of elephant ivory, weighing a total of 500 kg, to Côte d'Ivoire. Touré claimed that M. Martin Bongo (see under France) was involved in the smuggling attempt, and stated that Côte d'Ivoire had not been the final destination for the ivory.

La Griff (Gabon), 17 April 1992

MALAWI

Approximately 200 kg of ivory were seized and three people arrested in Llilongwe on 25 January 1992 when a co-operative undercover investigation by Malawi Police, the South African Police Endangered Species Protection Unit (ESPU) and TRAFFIC East/Southern Africa exposed an international ivory smuggling ring. Arrested by Malawi Police were Major Austen Kambote, an officer in the Malawi Defence Force and Mr Wakisa Mwasoka, a known smuggler who had previously travelled to South Africa to sell ivory. The arrests were the culmination of a year-long investigation into a smuggling network that conspired to move ivory from Malawi into South Africa.

A total of 78 tusks, cut into 101 pieces with a total weight of 192 kg, were confiscated. The average weight of only 2.46 kg per tusk indicates that the ivory came from very young animals. It is speculated that some of the tusks originated in Zambia and the others were from elephants poached in Malawi's Thuma Forest Reserve. Thirteen animal skins were also seized.

Kambote and Mwasoka were each sentenced to four months in prison and fined 200 Malawi Kwacha (US$74). Wildlife authorities were disappointed by the relatively light sentences and may appeal the decision of the Magistrates. Stiffer penalties for those convicted of wildlife-related crimes will be established under Malawi's new *National Parks and Wildlife Bill 1992* which has been passed by the Malawi parliament and awaits the President's signature (see page 8).

Southern African Nature Foundation; TRAFFIC East/Southern Africa; The Argus (South Africa), 27 January 1992

SWAZILAND

Six members of a rhino horn smuggling ring were arrested in April 1992 following a gun battle in a car park at Big Bend. The arrests came after a two-week undercover operation prompted by an increase in rhino poaching in the Mkayi Game Reserve. Swazi police observed the six men, armed with AK47 rifles, selling rhino horn to two white men and a woman. The gun battle broke out when Swazi police emerged from bushes to make the arrests. One suspected smuggler was killed and a second paralysed during the fight. A further 10 members of the syndicate were arrested during follow-up operations. Under the terms of a royal decree, all those arrested can be held indefinitely while investigations continue. Only 13 White Rhinos *Ceratotherium simum* remain in Swaziland's national parks, and the country's wild Black Rhino *Diceros bicornis* population has been reduced to six animals.

Sunday Times (South Africa), 26 April 1992.

ZIMBABWE

The Zimbabwean Government ordered the expulsion of North Korean diplomat Han Dae Song in January 1992. Han was accused of purchasing rhino horns and smuggling them to North Korea in diplomatic pouches, which are not subject to inspection owing to diplomatic immunity. He left the country before deportation orders could be served.

North Korean diplomat Pak Su Yong was expelled in 1990 for a similar offence. He was transferred to a post in the North Korean Embassy of neighbouring Zambia.

Neither the Zimbabwean Government nor North Korean Embassy officials would comment on the matter.

Associated Press, 8 January 1992; Reuters, 23 January 1992; United Press International, 8 January 1992

AMERICAS

USA

On 6 December 1991, Anson Wong, of Exotic Skins and Alives in Penang, Malaysia, and Tom and Penny Crutchfield, owners of Herpetofauna, Inc., in Florida, were indicted by a Florida federal grand jury for allegedly importing and selling Fiji Banded Iguanas *Brachylophus fasciatus*. The three are accused of violating the *Endangered Species Act*, the *Lacey Act* and CITES. The import and subsequent sale of the Iguanas to other locations in the USA is alleged to have occurred between May 1989 and August 1990. Fiji Banded Iguanas are included in the US *Endangered Species Act* and CITES Appendix I, and have a market value exceeding US$350 each.

Fiji Banded Iguana *Brachylophus fasciatus*

Wildlife enforcement officials in all three countries stated that the operation had cracked a major international smuggling ring. Their investigations revealed that Australian cockatoos were smuggled to New Zealand and then re-exported to the USA with documents stating that they had been 'captive-bred' in New Zealand. Fertile eggs of Australian parrots were hatched in New Zealand and then re-exported in this manner. New Zealand was also used for trans-shipping fertile parrot eggs between the USA and Australia.

The investigation led to the arrest at Los Angeles airport of New Zealander, Philip Thomas Morrison, when he arrived on a flight from New Zealand. He is alleged to have been the 'ringleader' of the smuggling operation. Additional arrests are expected following review of the evidence collected during the seizures.

Morrison was convicted in Auckland in October 1991 for attempting to trade illegally in parrot eggs (see *TRAFFIC Bulletin*, 12(3):73-74).

Floyd Lester Patterson III, charged with 27 misdemeanours involving illegal possession and transportation of animals and animal parts of species protected under the US *Endangered Species Act*, was sentenced to 180 days in goal, given three years' probation and fined US$28 200. Dawn Patterson, his wife, was ordered to perform 200 hours of community service and fined US$14 000.

The Pattersons were proprietors of California Ram Hunt, a game ranch in Lockwood, California, offering 'canned hunts' of Leopard *Panthera pardus*, Tiger *Panthera tigris*, Jaguar *Panthera onca* and Cougar *Felis concolor*. Trophy seekers were offered the chance to shoot captive animals at close range, sometimes while the animals were caged or tied to trees. One individual paid US$10 500 to shoot a Leopard, a Cougar and a Tiger, and fainted in the process.

Daniel Moody and Ronald McCloud were indicted in Texas for unlawfully conspiring to sell and transport a Leopard, which they provided to Ty Bourgeois of Louisiana for a US$3000 fee. Bourgeois was fined US$2000 for illegal trade in an endangered species.

'Canned hunts' are big business in the USA, with over 500 game ranches in Texas alone. Many of the animals shot at these ranches are captive-bred.

A three-year undercover operation investigating the illegal trade in exotic birds led to the simultaneous search of premises of dozens of bird keepers and dealers in Australia, New Zealand and the USA. Hundreds of birds were seized and large quantities of records obtained in the course of the searches, which took place 18/19 January 1992.

In New Zealand, Customs and Conservation Department officials executed seven search warrants in Auckland, the Waikato, the Bay of Plenty and Taranaki. Thirty-five exotic birds were seized, including Golden Conures *Aratinga guarouba*, Scarlet Macaws *Ara macao* and Yellow-headed Amazons *Amazona ochrocephala*. Three Keas *Nestor notabilis* were also seized. Australian Customs, National Parks and Wildlife, and State Fauna Squad Officers raided a number of premises around Australia on 18 January 1992. They seized parrots and documents, primarily from locations in the Brisbane and Sydney areas. US Fish and Wildlife Service Law Enforcement officials searched premises in California, Florida, Illinois, Louisiana and New York, seizing hundreds of parrots and many documents.

A US Fish and Wildlife Service (USFWS) undercover operation resulted in the arrest and/or filing of charges against 29 individuals for alleged 'wasteful' killing of Walrus *Odobenus rosmarus*, illegal trading of walrus heads and ivory, and distribution and conspiracy to distribute controlled substances in February 1992.

'Operation Whiteout' was launched in 1990 following a request by Native American Walrus hunters that illegal hunting and trade be investigated. USFWS special agents set up a storefront business in Anchorage and documented the illegal sale of 315 kg of Walrus ivory, 31 Walrus heads, five Polar Bear *Ursus maritimus* skins, nine Sea Otter *Enhydra lutris* skins and four seal skins, as well as marijuana and cocaine. On 12 February 1992, 120 federal and state agents across Alaska made 12 arrests, issued summonses to 17 others and executed 11 search warrants in a state-wide raid. They seized more than 100 Walrus tusks, 9 mounted Walrus heads, 5-10 kg of marijuana and over a half kg of cocaine.

The defendants have been charged with violating the *Lacey Act* and the *Marine Mammal Protection Act* as well as drug-related offences. If convicted, they face penalties of up to five years in prison and/or a US$250 000 fine for violating the *Lacey Act*, and up to one year in prison and/or a US$100 000 fine for violating the *Endangered Species Act*.

On 9 February 1992, a federal grand jury returned a four-count indictment charging live animal dealer Matthew Block with violating the *Endangered Species Act* and the *Lacey Act*. The indictments stem from Block's alleged involvement in the trafficking of six baby Orang Utans *Pongo pygmaeus* from Indonesia via Singapore and Bangkok en route to Moscow via Yugoslavia. Block was charged in Miami, Florida, where he owns World Wide Primates. He has been released on US$150 000 bond.

The Orang Utans, sealed in three wooden crates labelled "Birds", were seized at Bangkok airport on 19 February 1990. Investigation of the case by the International Primate Protection League, the US and other national governments, and TRAFFIC, revealed a number of apparent connections between Block and the shipment. Most telling were a series of faxes between Kurt Schäfer, a German animal dealer who acted as the courier for the Orang Utans, and Block. Block admits to having faxed Schäfer about shipping animals from Singapore to Moscow, but contends that the shipment referenced in the faxes was of hornbills.

If convicted on all counts, Block faces up to twelve years' imprisonment and a fine of up to US$700 000.

In a related story, Schäfer was convicted in Singapore on 24 May 1990 of violating the *Endangered Species (Import and Export) Act* for exporting the six Orang Utans as excess baggage without first obtaining a permit from the Primary Production Department. He was fined SG$2000 (US$1235) by a Singapore district court.

The US Fish & Wildlife Service (USFWS), in conjunction with the Justice Department and other Federal agencies, has succeeded in obtaining the extradition of a man charged with smuggling wildlife from South Africa. This is the first time that a subject has been extradicted to the USA on charges relating to illegal wildlife trade.

Marius Meiring, a former Major in the South African Defence Forces in Namibia, was brought before US District Court in New Haven, Connecticut, on 18 May 1992. He will be tried on charges of making false declarations for the purpose of illegally importing protected wildlife, automatic weapons and hand grenades.

Proceedings for Meiring's extradition began in 1988 when, along with his wife Patricia, he was indicted after an accomplice, John Lukman Jr., told USFWS undercover agents of the Meirings' access to firearms and rhino horns. Lukman claimed that he and Meiring, using the Major's official position, obtained the horns in Angola and transported them to Namibia using South African military vehicles; the horns were then smuggled into the USA (see *TRAFFIC Bulletin* 10(3/4):30; 11(1):15).

Lukman, a resident of Newington, Connecticut, was convicted in 1989 for smuggling and sentenced to 27 months in prison.

US Department of Justice; Audubon Magazine, January-February 1992; Cat News No. 16, March 1992; US Fish and Wildlife Service; The Dominion (New Zealand), 20 January 1992; Sydney Morning Herald (Australia), 20 January 1992; Fish and Wildlife News, Winter 1992; Associated Press; The Miami Herald (USA), 29 June 1990; Straits Times (Singapore), 25 May 1990; US Department of the Interior news release, 18 May 1992

Illustration of Fiji Banded Iguana taken from the CITES Identification Manual, which appears therein courtesy of Mr B. Twidgen and the Australian Museum

The UK Trade in *Tillandsia*

David Blakesley and Dawn Powell

Introduction

The Tillandsiodeae is one of three subfamilies of the Bromeliaceae and is the most important commercially to the horticultural industry. It comprises six genera: *Catopsis, Glomeropitcairnia, Guzmania, Vriesea, Mezobromelia* and *Tillandsia*. There are in excess of 400 species in the genus *Tillandsia*, over 200 of which are available commercially in Europe and North America. The horticultural interest in *Tillandsia* species has arisen from their ability to survive long periods of drought in artificial surroundings, their tolerance of the domestic environment and their 'novelty' value. The grey-leaved, atmospheric species, or 'air-plants' as they are commonly named, form the larger proportion of the genus, and it is these that are currently believed to be most at risk from the plant trade. Their popularisation, however, happened relatively recently, as only in the last 10 years have efforts been made to promote these species beyond the specialist collector to the general consumer (Anon., 1984). The plants occur naturally in a wide range of habitats; species available in the UK originate from such diverse habitats as cloud forest (*T. butzii*) and sand desert (*T. purpurea*).

There has been growing concern expressed privately and in the literature (Read, 1989) about the wild collection of *Tillandsia* species from Central and South America to satisfy a rapidly expanding market. The export of these plants into North America and into Europe is poorly documented. The Fauna and Flora Preservation Society has evidence of the collection of *Tillandsia* species in Paraguay, Panama, Guatemala and Mexico. An interim report from TRAFFIC (Anon., 1989b) describes the export of 122 tonnes of *Tillandsia* plants (approximately 13 million plants) from Guatemala alone, during the period January 1987 to March 1988; 50% to 70% of these were considered to be wild-collected, the remainder being offshoots produced on wild-collected material in local nurseries. It should be noted that nurseries will inevitably need replenishment of stock from the wild.

The School of Biological Sciences at the University of Bath carried out a study in late 1989/early 1990 of the UK trade in *Tillandsia* species in order to clarify their status.

The aims of the survey were:

i. to identify the *Tillandsia* species available in the UK;

ii. to assess the structure of the wholesale market in the UK horticultural trade;

iii. to identify the species and numbers of plants propagated in the UK and those which had been imported (of wild origin);

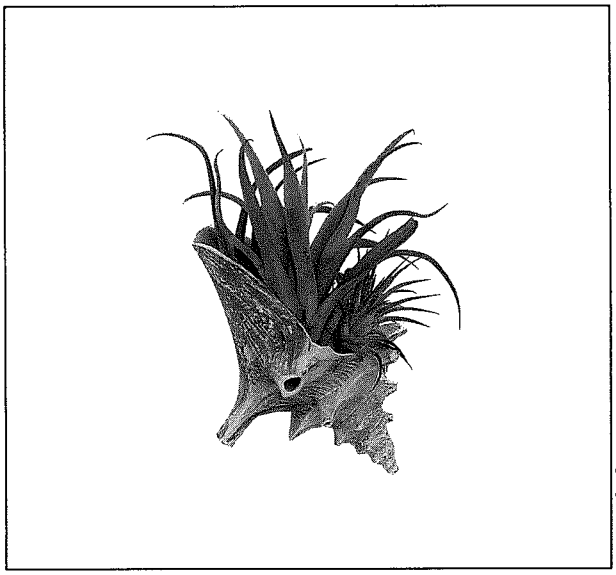
iv. to assess the retail market in the horticultural trade.

Methods

Information for the survey was collected largely by site visits to wholesale nurseries and retail outlets. Correspondence and interviews with *Tillandsia* experts were undertaken to obtain information on collectors and the availability of *Tillandsia* overseas.

Data on the retail trade in *Tillandsia* were collected in the southwest of England. This area was chosen to give a representative sample. The survey area included several major population centres: Bath, Bournemouth, Bristol, Exeter, Southampton and Taunton. All appropriate shops and larger garden centres, totalling 64 outlets in the region, were visited once. This survey aimed to produce a comprehensive list of *Tillandsia* species available, their presentation, price and quality.

All known UK specialist nurseries and UK wholesalers of *Tillandsia* plants were contacted and visited over approximately the same period. These visits aimed to discover the taxa available, numbers in the UK trade and their origins. The major wholesaler of *Tillandsia* plants was also contacted in the summer of 1991.



© P. Clarke

***Tillandsia ionantha* mounted on a tropical shell for retail sale.**

Results

Wholesale and specialist nurseries

Twelve companies were traced through interviews with retailers and consultation with 'Specialist Nurseries' (Cotton, 1989), a compilation listing UK firms which offer specialist plants in the UK. Of these, only five were actively wholesaling *Tillandsia* species, the others having ceased dealing with *Tillandsia*. Traders were generally helpful and open about their source of plant material, and the market to which those plants were aimed. One company dominated the wholesale market with a market share in excess of 90%. According to this company, wholesale 'production' of *Tillandsia* species has risen from approximately 100 000 in 1984 to 1 million in 1988.

Table 1. *Tillandsia* species available from wholesale and specialist outlets in England. *Survey by the authors*

T. achyrostachys Morren
T. acostae Mez
T. aeranthos L.B. Smith
T. albertiana Vervoorst
T. argentea Griseb.
T. atroviridipetala Matuda
T. baileyi Rose
T. balbisiana Schult.
T. balbisiana var. *longifolium*
T. bergeri Mez*
T. bergeri major
T. brachycaulos Schlect.
T. brachycaulos var. *abdita*
T. brachycaulos var. *multiflora* L.B. Smith
T. brachycaulos var. *selecta*
*T. breweri**[1]
T. bryoides Griseb.
T. bulbosa Hook.
T. butzii Mez
T. cacticola L.B. Smith
T. caerulea HBK.
T. capitata Griseb.
T. capitata var. *guzmanioides* L.B. Smith
*T. capitata roja**
T. capitata var. *rubra*
T. caput-medusae Morren
T. cauligera Mez
T. chaetophylla Mez*
T. chiapensis Gardner
T. chontalensis Baker
T. circinata Schlect.
T. concolor L.B. Smith
T. crocata Morren
T. crocata var. *tristis**
T. cyanea liden*
T. diaguitensis Cast.*
T. distichia HBK.
*T. duratii** Visiani
T. edithae Rauh
*T. elizabethae**
T. exserta Fernald
T. fasciculata Sw.
T. fasciculata 'Tricolor'
T. festucoides Brongn.
T. filifolia Schlect & Cham.
T. floribunda HBK.
T. funckiana Baker
T. gardneri Linden
T. geminiflora Brongn.
T. guatemalensis L.B. Smith
T. hondurensis Rauh
*T. houston**[1]
T. humilis Presl.
T. incarnata Humboldt, Bonpland & Kunth*
T. ionantha Planchon
T. ionantha var. *vanhyningii* M.B. Foster
T. ionantha 'Rosita'
T. ionantha var. *rubra*
T. ionantha var. *scaposa* L.B. Smith
T. ixioides Griseb.
T. ixioides x *meridionalis*
T. jacunda Poir.
T. juncea Poir.
T. kammii Rauh
T. kolbii W. Till & S. Schatzl
T. kurt-horstii Rauh
T. latifolia Meyen
T. latifolia var. *divaricata* Benth.*
T. latifolia 'Enano'*
T. latifolia 'Graffiti'*
T. latifolia var. *latifolia* Meyen*
T. latifolia var. *rubra**
T. leonamiana E. Pereira
T. lorentziana Griseb.
T. magnusiana Wittm.
T. mallemontii Glaziou
T. matudae L.B. Smith
T. melanocrater
T. melanocrater 'Tricolor' L.B. Smith
T. meridionalis Baker*
T. mitlaensis W. Weber & Ehlers
T. montana Reitz*
T. myosura Griseb. ex Baker*
T. neglecta E. Pereira*
T. oaxacana L.B. Smith
T. paleacea Presl.
T. paucifolia Baker
T. paucifolia 'Dimmitts Delight'
T. peiranoi Castell.
T. plagiotropica Rohweder
T. plumosa Baker
T. x *polita* L.B. Smith
T. polystachia L.
T. pruinosa Sw.
T. pseudobaileyi C.S. Gardner*
T. punctulata Schlectendal & Chamisso*
T. purpurea Ruiz & Pav.
T. queroensis Gilmartin
T. rectangula Baker
T. recurvata L.
T. reichenbachii Baker
T. rodrigueziana Mez
T. x *rothii*[2]
T. schiedeana Steud.
T. schiedeana var. *glabrior* Gardener*
T. schiedeana var. *major*
T. schiedeana var. *minor*
T. schatzlii Rauh
T. seideliana E. Pereira
T. seleriana Mez
T. setacea Sw.
T. sphaerocephala Baker
T. straminea HBK.
T. streptocarpa Baker
T. streptophylla Scheidw. ex Morren
T. stricta Soland.
T. stricta 'Amethyst'*
T. stricta 'Grey Leaf'*
T. stricta 'Hard Leaf'*
T. tectorum Morren
T. tenuifolia L.
T. tricholepis Baker*
T. tricolor Schlect.
T. usneoides L.
T. usneoides var. *major*
T. utriculata L.*
T. vernicosa Baker*
T. vicentina Standl.*
T. xerographica Rohw.
T. xerographica x *brachycaulos*
T. xiphioides Ker-Gawler
T. xiphioides var. *tafiensis**

Authorities are included where available. Binomials referenced from *An alphabetical list of Bromeliad binomials.* Bromeliad Society. Orlando, Florida, by H.E. Luther (1990).
[1]name given by wholesaler - not referable to known species; [2]probably *T. rotzii*; *species advertised but believed to be available from the USA

The vast majority of these are believed to have been imported from South America either directly, or via another European country. Insufficient information is available to establish whether these plants were produced as offsets in South American nurseries or wild-collected.

Sales in the UK fell by an estimated 50% in 1989. This may represent a decline in consumer demand. One hundred and four species, and a further 28 varieties were available in the UK (Table 1). However the UK market was dominated by just eight species and one variety: *Tillandsia argentea, T. baileyi, T. brachycaulos, T. butzii, T. caput-medusae, T. ionantha, T. ionantha* var. *scaposa, T. juncea and T. oaxacana.* Eighty percent of sales can be attributed to *T. ionantha.* Further, and of greater significance, approximately 50% of plants sold in 1989 were propagated in the UK from imported stock plants, the vast majority of them being *T. ionantha,* with smaller numbers of *T. argentea, T. brachycaulos, T. caput-medusae, T. juncea, T. oaxacana* and *T. ionantha* var. *scaposa.* Previously plants had only been imported. Apart from the conservation value of propagating *Tillandsia* in the UK, the quality of the plants is superior to imported wild-collected plants, and this fact is recognised by the dominant UK producer. However, in the period 1989 to 1991, an average of 261 943 *Tillandsia* plants were still imported each year by this producer; 61% of these were varieties of *T. ionantha.* This figure is expected to fall below 200 000 in 1992, which represents a decline to 20% of import levels by this producer into the UK in 1988.

For the narrow range of high volume species listed above, nursery propagation could support the trade, but would probably need replenishment of stock plants from the wild. Broadbent (pers. comm.) has reported that the majority of plants produced in South American nurseries are from offsets, including all specimens of *T. ionantha*. Concern should also be directed to the majority of species listed in Table 1, which are held by UK wholesalers and specialist nurseries in smaller numbers. It is likely that these species will continue to be wild-collected as required, and although in relatively low numbers, such collection may still threaten populations and species.

Retail

Thirty six percent of outlets visited offered *Tillandsia* species for sale. A total of 19 species and one variety were available (Table 2). However, 50% of these outlets offered only six species, *T. argentea*, *T. brachycaulos*, *T. caput-medusae*, *T. ionantha*, *T. ionantha* var. *scaposa* and *T. juncea*. All were positively identified, although *T. caput-medusae* can easily be confused with *T. pruinosa*, *T. circinata* and *T. seleriana*.

In the retail market *Tillandsia* plants are generally offered as mounted and packaged specimens, primarily aimed at the gift market. With a few exceptions, the packages do not usually carry the name of the species or its country of origin. Further, there is no indication of the method of propagation or collection. There was little awareness amongst retail managers of the possibility that *Tillandsia* plants on sale in their establishment were wild collected. Consequently, it is surmised that the consumer is also unaware of the source of these *Tillandsia* specimens.

Taxa	Availability (%)
T. argentea	46
T. baileyi	33
T. balbisiana	4
T. brachycaulos	54
T. bulbosa	25
T. butzii	29
T. caput-medusae	58
T. chiapensis	4
T. concolor	4
T. fasciculata	17
T. ionantha	92
T. ionantha var. *scaposa*	50
T. juncea	75
T. kammii	4
T. magnusiana	4
T. oaxacana	42
T. plumosa	13
T. streptophylla	8
T. tricolor	4
T. usneoides	8
Unidentified taxa	8

Table 2. *Tillandsia* species available in retail outlets in southwest England. Availability in retail outlets stocking *Tillandsia* is given.

Survey by the authors

***Tillandsia juncea* packaged for sale.**

Although outside the scope of this paper, it should be noted that the materials employed in the *Tillandsia* arrangements may also be a cause of concern. The majority of sculptures were of reasonable or good quality, employing wood, tropical shells or coral. This kind of presentation adds value to the relatively inexpensive *Tillandsia* plants, extending their appeal to consumers. Although supplies are thought to be decreasing, the use of corals is continuing. Tropical shells are imported from the Philippines, Seychelles and a number of West African countries; consumption of shells in the UK to mount *Tillandsia* plants is estimated by the authors to have exceeded half a million in 1988. The species most frequently observed in retail outlets during the survey were members of the Conidae, Cypraeidae, Strombidae (*Lambis* species) and Tridacnidae (*Hippopus hippopus*, *Tridacna squamosa*).

Discussion

The purpose of this paper is to draw attention to the current trade in *Tillandsia* species in the UK, rather than to present evidence on the status of species in the wild, and the impact of wild collection. Nevertheless it does demonstrate a large demand in the UK for *Tillandsia* plants, both in terms of species and numbers. It also describes considerable importation of plants from South America, directly or via other European countries. That plants are collected from the wild is certain. However,

insufficient information is available to quantify that collection, and to indicate whether trade of wild-collected plants could be sustainable. Professor W. Rauh is quoted (Read, 1989) as identifying several species which he believes to be endangered, including species available in the UK retail trade: *T. argentea, T. butzii, T. cacticola, T. caput-medusae, T. filifolia, T. ionantha, T. magnusiana, T. plumosa, T. pruinosa, T. streptophylla, T. tectorum* and *T. xerographica*. Clearly, with a continued demand for large numbers of *Tillandsia* plants in Europe and North America, collection from the wild, and habitat destruction in South America, urgent action is necessary.

Recommendations

Not only is there a dearth of information on the range of species and numbers in trade, there is also disagreement between experts on the threat to *Tillandsia* populations (Anon., 1989a).

1. Information is required on taxa in trade, sources of wild-collected plants, quantity in trade and level of commercial production. Further, for those species originating from nurseries in South America, information is required on the numbers propagated artificially, and the numbers wild-collected.

2. More information is required on the status of *Tillandsia* species in the wild for most parts of Central and South America.

3. In order to facilitate more accurate collection of trade data, the listing of certain species in CITES Appendix II should be considered (see Postscript).

4. Accurate labelling of the origin of *Tillandsia* species in trade, and their identity, at least by voluntary agreement, is required.

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Postscript

Proposals by Austria and Germany to list the entire genus *Tillandsia* in CITES Appendix II were considered at the eighth meeting of the Conference of the Parties to CITES in March 1992. Following suggestions made in the Plants Committee and after consultation with range states and botanical experts at the meeting, Germany modified its proposal to include only the species *Tillandsia harrisii, T. kammii, T. kautskyi, T. mauryana, T. sprengeliana, T. sucrei,* and *T. xerographica*. All of these are in international trade and potentially threatened and, with one exception, were easily distinguished from other species, the exception being the close resemblance of two of them to *T. hondurensis*. The delegation of Germany requested the Plants Committee to look into the last problem with the aim of proposing more species for inclusion in the Appendices at the next Conference of the Parties, in order to facilitate enforcement.

Austria, in defence of its proposal, recorded the dramatic increase in *Tillandsia* trade in the past five years, quoting statistics for Guatemalan exports and stating that 95% of plants offered for sale were wild-collected, artificial propagation being at present negligible. They also stressed the difficulty of distinguishing between species, particularly non-flowering specimens at point of import.

The delegations of Bolivia, Guatemala, Honduras and Mexico, all range states, spoke against the Austrian proposal, as did the delegations of the Netherlands, Switzerland and the UK. The delegation of Guatemala further commented on the lack of both adequate consultation with range states and scientific justification for the proposal. They did, however, give qualified support to the modified German proposal, as did the delegations of Bolivia and Mexico. Following this, the delegation of Austria withdrew their proposal.

Several other delegations, including those of Brazil and Costa Rica, supported the amended German proposal, which was agreed without objection. *Ed.*

Parrot Trade Records for Irian Jaya, Indonesia, 1985-1990

Stephen V. Nash

Introduction

Indonesia is a major source of wild parrots in international trade, and Irian Jaya supplies a large proportion of these, numbering tens of thousands of birds a year. While accurate data on the capture and shipping of parrots in Irian Jaya are not yet available, existing information provides a database from which to start and from which the extent of the trade can be understood. This database is composed of capture permit and domestic shipping permit records issued by local authorities. As a cautionary note, it should be stated that local records are incomplete, species are often misidentified, and the actual number of birds involved is likely to be grossly underestimated. While this database is of limited reliability, it is nonetheless the best body of data on the region's parrot trade.

Irian Jaya is Indonesia's largest and easternmost province. Of the 76 species of parrots found in Indonesia, 44 are found in Irian Jaya. Of these 44 species, 39 are known to be traded (only 21 of these are officially sanctioned at this time), and at least 29 of the 44 are found in legal and illegal international trade (Table 1). All Irian Jaya parrots are included in Appendix II of CITES, with the exception of the Palm Cockatoo *Probosciger aterrimus*, which is in Appendix I. While Indonesia has accorded total protection status to five Irian Jaya psittacines (Black-capped Lory *Lorius lory*, Eclectus Parrot *Eclectus roratus*, Pesquet's Parrot *Psittrichas fulgidus*, Palm Cockatoo, and Sulphur-crested Cockatoo *Cacatua galerita*), trade in all of these is widespread.

Trade database

The Directorate General of Forest Protection and Nature Conservation, within the Department of Forestry, is responsible for regulating and monitoring the parrot trade, and does so through a system of quotas, capture permits, and shipping permits. All existing records for the years 1985 to 1990 have been entered into a computer located in the Irian Jaya Regional Forestry Office. This system is now facilitating the management and retrieval of 1991 data, as well as acting as a record archive. This computerized database is part of a joint WWF/Forestry programme to upgrade plant and wildlife trade monitoring capabilities within Forestry offices in Irian Jaya.

■	Moluccan King-Parrot	*Alisterus amboinensis*
■	Papuan King-Parrot	*Alisterus chloropterus*
■	Red-winged Parrot	*Aprosmictus erythropterus*
*	Sulphur-crested Cockatoo	*Cacatua galerita*
■	Little Corella	*Cacatua sanguinea*
■	Black Lory	*Chalcopsitta atra*
■	Brown Lory	*Chalcopsitta duivenbodei*
■	Yellow-streaked Lory	*Chalcopsitta sintillata*
■	Josephine's Lorikeet	*Charmosyna josefinae*
-	Striated Lorikeet	*Charmosyna multistriata*
■	Papuan Lorikeet	*Charmosyna papou*
■	Red-flanked Lorikeet	*Charmosyna placentis*
■	Fairy Lorikeet	*Charmosyna pulchella*
-	Red-fronted Lorikeet	*Charmosyna rubronotata*
-	Pygmy Lorikeet	*Charmosyna wilhelminae*
-	Double-eyed Fig-Parrot	*Cyclopsitta diophthalma*
-	Orange-breasted Fig-Parrot	*Cyclopsitta gulielmitertii*
*	Eclectus Parrot	*Eclectus roratus*
■	Black-winged Lory	*Eos cyanogenia*
-	Violet-necked Lory	*Eos squamata*
■	Red-cheeked Parrot	*Geoffroyus geoffroyi*
-	Blue-collared Parrot	*Geoffroyus simplex*
^	Orange-fronted Hanging-Parrot	*Loriculus aurantiifrons*
*	Black-capped Lory	*Lorius lory*
^	Red-breasted Pygmy-Parrot	*Micropsitta bruijnii*
^	Geelvink Pygmy-Parrot	*Micropsitta geelvinkiana*
?	Yellow-capped Pygmy-Parrot	*Micropsitta keiensis*
?	Buff-faced Pygmy-Parrot	*Micropsitta pusio*
■	Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*
-	Orange-billed Lorikeet	*Neopsittacus pullicauda*
-	Plum-faced Lorikeet	*Oreopsittacus arfaki*
*	Palm Cockatoo	*Probosciger aterrimus*
■	Dusky Lory	*Pseudeos fuscata*
-	Brehm's Tiger-Parrot	*Psittacella brehmii*
-	Maderasz's Tiger-Parrot	*Psittacella maderaszi*
-	Modest Tiger-Parrot	*Psittacella modesta*
-	Painted Tiger-Parrot	*Psittacella picta*
■	Desmarest's Fig-Parrot	*Psittaculirostris desmarestii*
■	Edwards's Fig-Parrot	*Psittaculirostris edwardsii*
■	Salvadori's Fig-Parrot	*Psittaculirostris salvadorii*
*	Pesquet's Parrot	*Psittrichas fulgidus*
■	Great-billed Parrot	*Tanygnathus megalorynchos*
■	Goldie's Lorikeet	*Trichoglossus goldiei*
■	Rainbow Lorikeet	*Trichoglossus haematodus*

■ = legally traded
- = known to be traded, but is not included in the quotas
* = known to be traded, but protected under legislation
? = possibly traded, but extent of trade unknown
^ = not known to be in trade

Table 1. Parrots of Irian Jaya and their occurrence in trade.

Species		1985		1986		1987		1988	
		CITES	Ship	CITES	Ship	CITES	Ship	CITES	Ship
Moluccan King-Parrot	*Alisterus amboinensis*	452	-	342	-	597	-	1333	7
Papuan King-Parrot	*Alisterus chloropterus*	84	28	139	32	371	10	796	1275
Red-winged Parrot	*Aprosmictus erythropterus*	550	-	531	50	544	35	940	725
Sulphur-crested Cockatoo	*Cacatua galerita**	-	-	-	-	1301	-	5316	-
Little Corella	*Cacatua sanguinea*	392	-	85	44	195	-	182	35
Black Lory	*Chalcopsitta atra*	91	-	191	76	405	143	44	506
Brown Lory	*Chalcopsitta duivenbodei*	178	68	267	-	354	6	636	756
Yellow-streaked Lory	*Chalcopsitta sintillata*	116	-	140	-	103	93	597	140
Joesephine's Lorikeet	*Charmosyna josefinae*	-	-	677	-	456	58	20	379
Striated Lorikeet	*Charmosyna multistriata*	-	-	-	-	20	-	40	-
Papuan Lorikeet	*Charmosyna papou*	75	-	200	-	1018	185	1095	433
Red-flanked Lorikeet	*Charmosyna placentis*	70	-	155	142	611	237	1290	498
Fairy Lorikeet	*Charmosyna pulchella*	90	-	183	-	428	2	1318	702
Red-fronted Lorikeet	*Charmosyna rubronotata*	-	-	-	-	220	-	128	-
Pygmy Lorikeet	*Charmosyna wilhelminae*	-	-	-	-	-	-	134	-
Double-eyed Fig-Parrot	*Cyclopsitta diophthalma*	20	-	126	-	75	40	835	168
Orange-breasted Fig-Parrot	*Cyclopsitta gulielmitertii*	5	-	46	-	20	-	143	-
Eclectus Parrot	*Eclectus roratus**	8	-	-	-	11	-	-	-
Black-winged Lory	*Eos cyanogenia*	-	-	-	-	-10	301	749	270
Violet-necked Lory	*Eos squamata**	625	-	925	-	1040	-	1625	-
Red-cheeked Parrot	*Geoffroyus geoffroyi*	-	-	-	-	26	-	-	185
Blue-collared Parrot	*Geoffroyus simplex*	-	-	-	-	-	-	-	-
Orange-fronted Hanging-Parrot	*Loriculus aurantiifrons*	-	-	-	-	-	-	-	-
Black-capped Lory	*Lorius lory*	-	-	-	-	-	25	-	-
Red-breasted Pygmy-Parrot	*Micropsitta bruijnii*	-	-	-	-	-	-	-	-
Geelvink Pygmy-Parrot	*Micropsitta geelvinkiana*	-	-	-	-	-	-	-	-
Yellow-capped Pygmy-Parrot	*Micropsitta keiensis*	-	-	-	-	-	-	-	-
Buff-faced Pygmy-Parrot	*Micropsitta pusio*	-	-	-	-	-	-	-	-
Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*	-	-	712	-	630	62	260	340
Orange-billed Lorikeet	*Neopsittacus pullicauda*	-	-	-	-	4	-	30	-
Plum-faced Lorikeet	*Oreopsittacus arfaki*	-	-	-	-	-	-	-	-
Palm Cockatoo	*Probosciger aterrimus*	-	-	-	-	-	-	-	-
Dusky Lory	*Pseudeos fuscata*	380	-	554	-	972	402	1838	1127
Brehm's Tiger-Parrot	*Psittacella brehmii*	-	-	-	-	-	-	4	-
Madarasz's Tiger-Parrot	*Psittacella maderaszi*	-	-	-	-	-	-	-	-
Modest Tiger-Parrot	*Psittacella modesta*	-	-	-	-	-	-	-	-
Painted Tiger-Parrot	*Psittacella picta*	-	-	-	-	-	-	-	-
Desmarest's Fig-Parrot	*Psittaculirostris desmarestii*	135	-	390	233	612	195	1361	402
Edwards's Fig-Parrot	*Psittaculirostris edwardsii*	216	60	262	-	663	5	505	519
Salvadori's Fig-Parrot	*Psittaculirostris salvadorii*	70	-	123	-	33	-	473	186
Pesquet's Parrot	*Psittrichas fulgidus*	-	-	-	-	-	-	-	-
Great-billed Parrot	*Tanygnathus megalorynchos**	344	-	507	-	454	20	3371	72
Goldie's Lorikeet	*Trichoglossus goldiei*	243	-	278	-	570	233	440	664
Rainbow Lorikeet	*Trichoglossus haematodus**	3413	-	4393	378	5892	519	5007	1167

NOTE: Numbers for species marked with an asterisk (*) most likely include birds from outside Irian Jaya.

Table 2. A comparison of CITES data (45 recipient countries) with domestic shipping records (1985-1988).

TRADE ROUTES

Irian Jaya is one of Indonesia's least developed areas. Transportation infrastructure is mainly limited to air and sea routes, and the air and sea ports of Sorong and Jayapura are respectively the main wildlife trade collection and shipping points for the western and eastern halves of the province. Local traders operate from Sorong and Jayapura, and the towns of Manokwari, Biak, Serui, Nabire, Wamena, Timika and Merauke. While in the past most birds have been shipped to Jakarta to be exported overseas, one trader in Biak has now obtained permission to export directly from Biak, which has a connecting flight to Los Angeles, USA.

TRADE VOLUME ESTIMATES

The actual trade volume is likely to be significantly greater than the officially-reported trade. It is difficult to provide an accurate estimate of volume, as official records are incomplete, and verifiable data are limited. The best minimum estimate is that between 40 000 and 80 000

Table 3. Quota, capture permit and shipping permit data for 1985-1990 (official data).

Species		1985			1986			1987			1988			1989			1990		
		Quota	Capt	Ship	Quota	Capt	Ship	Quota	Capt	Ship	Quota	Capt	Ship	Quota	Capt	Ship	Quota	Capt	Ship
Moluccan King-Parrot	*Alisterus amboinensis*	1500	-	-	256	50	-	175	175	-	500	425	7	800	706	464	500	240	33
Papuan King-Parrot	*Alisterus chloropterus*	3000	-	28	596	1130	32	700	1344	10	2000	3704	1275	2000	1916	1210	1480	886	576
Red-winged Parrot	*Aprosmictus erythropterus*	1000	1100	-	620	508	50	700	850	35	1500	1809	725	1500	1713	435	1230	921	572
Sulphur-crested Cockatoo	*Cacatua galerita*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Little Corella	*Cacatua sanguinea*	500	2500	-	442	691	44	500	786	-	2000	976	35	1000	710	-	600	490	237
Black Lory	*Chalcopsitta atra*	750	-	-	190	100	76	200	209	143	1000	1284	506	575	483	172	900	335	241
Brown Lory	*Chalcopsitta duivenbodei*	2000	720	68	200	366	-	300	1099	6	1000	1592	756	350	744	512	550	234	167
Yellow-streaked Lory	*Chalcopsitta sintillata*	500	-	-	199	-	-	250	100	93	250	450	140	600	141	126	700	36	62
Josephine's Lorikeet	*Charmosyna josefinae*	1000	-	-	1000	1008	-	1000	1467	58	1000	1752	379	500	486	442	825	555	103
Striated Lorikeet	*Charmosyna multistriata*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papuan Lorikeet	*Charmosyna papou*	1000	450	-	50	200	-	500	605	185	1000	1542	433	1000	1198	574	1500	1000	785
Red-flanked Lorikeet	*Charmosyna placentis*	2500	-	-	50	-	142	250	350	237	758	1083	498	600	645	358	1000	748	108
Fairy Lorikeet	*Charmosyna pulchella*	2000	550	-	150	266	-	150	1200	2	500	699	702	1000	500	366	1000	794	401
Red-fronted Lorikeet	*Charmosyna rubronotata*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pygmy Lorikeet	*Charmosyna wilhelminae*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Double-eyed Fig-Parrot	*Cyclopsitta diophthalma*	-	450	-	-	485	-	-	1200	40	-	400	168	-	190	82	-	275	179
Orange-breasted Fig-Parrot	*Cyclopsitta gulielmitertii*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eclectus Parrot	*Eclectus roratus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black-winged Lory	*Eos cyanogenia*	1500	-	-	1500	-	-	500	750	301	500	736	270	1500	765	423	1100	515	80
Violet-necked Lory	*Eos squamata*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	225	-
Red-cheeked Parrot	*Geoffroyus geoffroyi*	200	-	-	200	-	-	400	400	-	500	800	185	1500	924	350	250	66	16
Blue-collared Parrot	*Geoffroyus simplex*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orange-fronted Hanging-Parrot	*Loriculus aurantiifrons*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black-capped Lory	*Lorius lory*	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-
Red-breasted Pygmy-Parrot	*Micropsitta bruijnii*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Geelvink Pygmy-Parrot	*Micropsitta geelvinkiana*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow-capped Pygmy-Parrot	*Micropsitta keiensis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buff-faced Pygmy-Parrot	*Micropsitta pusio*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*	1500	-	-	1500	1125	-	700	1236	62	1500	1884	340	750	890	551	975	375	59
Orange-billed Lorikeet	*Neopsittacus pullicauda*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plum-faced Lorikeet	*Oreopsittacus arfaki*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
Palm Cockatoo	*Probosciger aterrimus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dusky Lory	*Pseudeos fuscata*	500	710	-	472	681	-	1000	1525	402	1500	2178	1127	1500	1332	540	1500	997	718
Brehm's Tiger-Parrot	*Psittacella brehmii*	-	-	-	-	300	-	-	-	-	-	-	-	-	50	-	-	-	-
Maderasz's Tiger-Parrot	*Psittacella maderaszi*	-	-	-	-	116	-	-	-	-	-	-	-	-	-	-	-	-	-
Modest Tiger-Parrot	*Psittacella modesta*	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-
Painted Tiger-Parrot	*Psittacella picta*	-	-	-	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-
Desmarest's Fig-Parrot	*Psittaculirostris desmarestii*	2000	-	-	100	366	233	250	500	195	750	963	402	650	595	385	1000	812	541
Edwards's Fig-Parrot	*Psittaculirostris edwardsii*	-	120	60	-	799	-	-	970	5	500	649	519	650	525	345	1000	382	107
Salvadori's Fig-Parrot	*Psittaculirostris salvadorii*	1000	225	-	60	183	-	250	350	-	250	275	186	600	675	158	450	230	100
Pesquet's Parrot	*Psittrichas fulgidus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Great-billed Parrot	*Tanygnathus megalorynchos*	1000	-	-	60	-	-	60	950	20	350	370	72	150	300	94	200	149	40
Goldie's Lorikeet	*Trichoglossus goldiei*	250	-	-	240	200	-	500	960	233	1500	2101	664	1000	801	735	1000	314	525
Rainbow Lorikeet	*Trichoglossus haematodus*	-	650	-	750	1416	378	1000	2981	519	1000	1732	1167	1500	1794	902	3625	1398	1249
		23700	8120	156	8365	10340	955	9385	20067	2521	19850	27404	10556	19725	18083	9260	21485	11977	6939

parrots are shipped from the province each year, with most of these entering international trade. This would suggest that official records are at best representative of one-quarter to one-half of the actual trade. These estimates cannot yet be proven, but a wealth of circumstantial data exist to suggest that true figures are well in excess of official data.

Future trends

There are indications that trade levels in 1990 have significantly dropped from the level maintained in the previous two years. This could indicate declining parrot populations, or a decline in readily-accessible populations. Transportation costs are very high in Irian Jaya, and there may be a point where the cost to an exporter of obtaining and keeping the birds prior to shipment will surpass the value of the birds to the catcher/local trader. This may be compounded by reports of exporters claiming a higher in-country transit mortality than actually occurred, and hence paying out only a portion of the shipment's value.

Any reduction in trade at this time is likely to be temporary, as the Government of Indonesia is building roads throughout Irian Jaya. As a result of this, a great deal of parrot habitat will become cheaply accessible to catchers, and the amount of parrots (and other wildlife) entering trade will most likely increase dramatically.

Trade in protected species

While there is a small local demand for pets, there is a large and well-organized trade in protected species for export to Jakarta and further afield. Throughout Irian Jaya, Black-capped Lories, Sulphur-crested Cockatoos and Eclectus Parrots are openly for sale. Palm Cockatoos and Pesquet's Parrots are usually only obtained on special demand. Penalties for trade or possession of protected species are extremely light, if administered at all. For example, an individual convicted in March 1990 for possession of 60 live birds of paradise was fined the equivalent of US$7. These birds would be worth in excess of US$100 000 in illegal trade. [Heavier penalties can now be uncurred for unlawful possession of protected species -see page 7 *Ed.*]

Summary

At this time, trade in Irian Jaya parrots is only starting to be effectively monitored by provincial Forestry authorities, and remains largely uncontrolled in the field. While the framework of the current system to monitor and regulate the parrot trade is adequate, the system is often implemented by untrained and poorly-motivated staff. Data contained in capture and shipping permits are provided by traders, and authorities do not themselves inspect the accuracy of these data. Implementation of the regulatory and monitoring system in Irian Jaya prior to 1991 has had very little regulatory impact on the trade or the traders, but recent efforts to build a provincial monitoring capability are likely to improve the quality of data and reporting.

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TRAFFIC is supported by WWF - the World Wide Fund for Nature and IUCN - the World Conservation Union - to monitor trade in and utilisation of wild plants and animals. As the majority of the Network's funding is provided by WWF, the Network is administered by the WWF Programme Committee on behalf of WWF and IUCN.

The mission of TRAFFIC is to enhance, in accordance with the principles of the World Conservation Strategy, the conservation of biological diversity by: monitoring and reporting on trade or other forms of utilisation of animals and plants and their derivatives; identifying areas of such utilisation that may be detrimental to any species, and; assisting the Secretariat of, and Parties to, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and other appropriate bodies in facilitating the control of trade and in curtailing possible threats to species created by trade or other forms of utilisation.

The TRAFFIC Network shares its international headquarters in the United Kingdom with the World Conservation Monitoring Centre.

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