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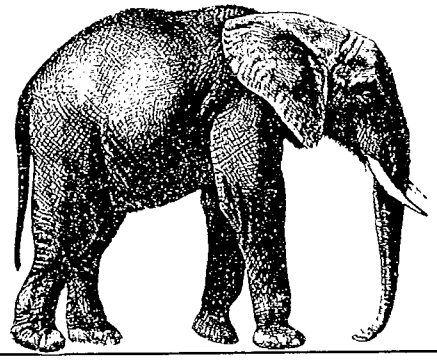

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Netherlands Ratify CITES

Netherlands has become the 87th Party to CITES, ratifying the Convention on 19 April 1984; this becomes effective on 18 July 1984.

US Refuses Gorillas . . .

Applications by three zoos to import seven Gorillas (Gorilla gorilla) into the USA from Cameroon (see Bulletin VI(1)) were denied by the US Fish and Wildlife Service (FWS) on 9 April 1984. The reasons for the denial were conveyed to Mr Richard Parsons of Meyers, Marshall and Meyers, the agent acting for the three zoos, in a four-page letter from R.K. Robinson of the FWS, the US Management Authority for CITES. In summary, Robinson said that the Service was unable to ascertain positively either that the proposed import would not be likely to jeopardize the survival of the species (as required under the US Endangered Species Act) or that the import is for purposes not detrimental to its survival (as required by CITES).

. . . Netherlands Accepts Them

All seven Gorillas arrived in Netherlands on 8 June 1984. They were bought from the Roys in Cameroon, by the Foundation Netherlands National IUCN Committee, and have been deposited on breeding loan at the Burgers Zoological Garden, Arnhem. It was under these circumstances that the CITES Management Authority for Netherlands agreed to issue the import permit, but the following conditions were also specified:

- the Gorillas will only be used for educational and breeding purposes;
- the Roys will only be paid for certain specified expenses; and
- the Gorillas will remain available for an educational project to be started in Cameroon or, if such is not possible, for a breeding programme within the framework of the international studbook.

IUCN Netherlands Committee has paid the Roys US$27 000 for the seven Gorillas (compared with $70 000 each reportedly offered by Matthew Block in the USA). However, the Roys are paying approximately half of the money in licensing fees to the Cameroon Government.

Wildlife Export Ban Enforced in Bolivia

Over 18 400 parrots and macaws and over 1500 primates were exported from Bolivia before the total ban on export of live animals came into force for one year on 1 May 1984 (see Traffic Bulletin VI(1):13 and Stop Press). It is believed that most of the birds were destined for the USA. The ban had been postponed from 1 April in order to allow traders to dispose of their stocks. However, more animals had been held in stock than was previously thought, apparently including some 6000 psittacines that had constituted an illegal shipment and were confiscated as a result of information supplied via WTMU (see Bulletin V(3/4):49).

According to Prodena Bolivia, about 900 parrots and 30 primates were left behind as a result of a dawn raid on the dealers' compound by a youth action group, and were taken for temporary housing to Santa Cruz Zoo, causing overcrowding there. A representative of Prodena Bolivia, Robin Clarke, offered to alleviate this problem by converting a garage in his back garden into a quarantine and rehabilitation centre for the four months it is expected to take before the remaining animals can be returned to the wild. 600 birds have already been released, but due to an unusual, long, cold spell, a number of the remaining parrots died. This was alleviated by the provision of better heating and there are now 72 parrots left. Neither the garage nor the Zoo is able to house the 401 larger macaws; so these have been moved to Buenavista, an estancia on the edge of Amboro, where it is hoped the 72 smaller parrots will go when weather conditions improve. A thatched shelter has been built and food, labour and guards are being provided by the owners. A complete inventory of the specimens is still to be made but there are known to be 25 Green-winged Macaws (Ara chloroptera), 20 Scarlet Macaws (A. macao), 193 Blue-and-yellow Macaws (A. ararauna), 27 Yellow-collared Macaws (A. auricollis), 97 Chestnut-fronted Macaws (A. severa), and two CITES Appendix I species - a Red-fronted Macaw (A. rubrogenys) and a Blue-throated Macaw (A. glaucogularis). The overall condition of these parrots has improved after receiving veterinary treatment, although some 11 have already died and a few others are unlikely to recover. Several birds have already been released: about 40 have since returned to the forest and a further 140 remain in trees in the vicinity of the shelter receiving regular feeding while they recover condition. It is hoped that the remaining birds will be rehabilitated within two months.

The primates are still being housed at the Zoo and also await better weather before being moved to Buenavista for release. The International Primate Protection League has provided US$500 for returning the monkeys to the wild. It is believed, but not confirmed, that these include one Golden Lion Tamarin (Leontopithecus rosalia).

The US$2000 requested to fund the psittacine rehabilitation has been granted by the New York Zoological Society (NYZS), but more funds are still urgently needed.

Forgery of Bolivian Export Permits

The CITES Secretariat has recently discovered that several forged Bolivian export/re-export permits have been issued for shipments destined for France, Netherlands and the Federal Republic of Germany.

The forged permits (which are possibly part of a series) are virtually identical to the authentic permits, a specimen copy of which was distributed with Notification No. 243 of 6 January 1983, informing Parties of the new Bolivian permits. However, it is obvious when comparing the two certificates that the forged one is of a paler green colour and the permit number placed more to the right than on the authentic one. In addition, the design on the reverse side is more visible and the design on the border at the foot of the permit is quite different on the forged one.

The Secretariat requests that extra care be taken with regard to this matter and asks that all new Bolivian permits already accepted, be examined and copied to them should any forged permits be discovered.

International Trade in Elephant Ivory

The following two articles are based on a report prepared by the Wildlife Trade Monitoring Unit as part of the 1984 work programme agreed under contract with the CITES Secretariat. Part 1 of the report addresses the recent trade of Hong Kong and Japan in raw ivory and Part 2 the international trade in worked ivory and the usefulness of the existing data.

Part 1

Recent Developments in the Raw Ivory Trade of Hong Kong and Japan

by J.R. Caldwell

INTRODUCTION

The aim of producing this report was to provide up-to-date information on the scale and pattern of the international ivory trade and to update the article published in Vol V. No.1 of the Traffic Bulletin in May 1983 entitled "The Hong Kong and Japanese Trade in Unworked Ivory 1979 - 1982". This was in order that the Technical Committee of CITES could decide on priorities for its effective control.

The complexities of the ivory trade and the difficulties in obtaining accurate and reliable data are well known. A significant proportion of the trade is composed of polished and manufactured ivory and of cut pieces of unworked ivory. The current availability and presentation of statistics relating to these aspects allow few useful analyses and the data have been excluded in order to simplify the analysis and interpretation of the results as far as possible. In this article we are concerned only with the trade in whole unworked tusks.

METHODS

Information on ivory imports to Hong Kong for 1983 was provided by the Hong Kong CITES Management Authority in a draft of part of the 1983 annual report to CITES. Data for ivory re-exported from Hong Kong to Japan were obtained from the same source. These data give both weight and number of tusks and distinguish between whole tusks, cut pieces, scraps and waste, etc.

Data for ivory imports to Japan were taken from Japanese Customs statistics on external trade in raw ivory, including waste and powder, for the period January to December 1983 issued by the Japanese Bureau of Customs. These only provide figures on the total weight of ivory; however it is known that nearly all of the imports comprise whole tusks and their number has been estimated from average tusk weights calculated from the data for re-exports from Hong Kong to Japan. Whilst this method may produce some bias, no other data were available.

The Japanese Customs import statistics show mainly the countries of origin of the raw ivory and do not distinguish between imports consigned directly from the source country and those that have been re-exported by an intermediary, such as Hong Kong. In order to reduce the possible effect of "double-counting", the import figures used in the analyses for both Hong Kong and Japan were modified to exclude the re-export trade between them. Thus the "net" imports of Hong Kong are the total reported imports less the quantity re-exported to Japan and vice versa. They are not true net figures in terms of the total trade of Japan and Hong Kong.

In the course of producing the report an error was discovered in the method used in 1983 for calculating "net" imports. The weight of ivory and mean tusk weight in Hong Kong's "net" imports were previously overestimated, and the role played by Japan underestimated.

The number of elephants that produced the ivory entering the Hong Kong and Japanese market was calculated by dividing the number of tusks by 1.88 (Parker and Martin 1982). This market has been cited by Parker and Martin (1982) as the destination of 83% of the total ivory exports from Africa between 1976 and 1980 but it is not possible at this stage to confirm that this figure is still valid, and the pattern of trade may have altered since that estimate was made.

RESULTS AND DISCUSSION

1. Trade between Japan and Hong Kong

Since Japan accepted CITES in August 1980 the pattern of the ivory trade between Japan and Hong Kong has altered dramatically. Before that time Hong Kong's imports from Japan were negligible, because the documentation provided by Japan was considered to be unacceptable by Hong Kong; since then they have increased, particularly in 1982 and 1983, and were over 132 tonnes (t) in 1983 (see Fig. 1).

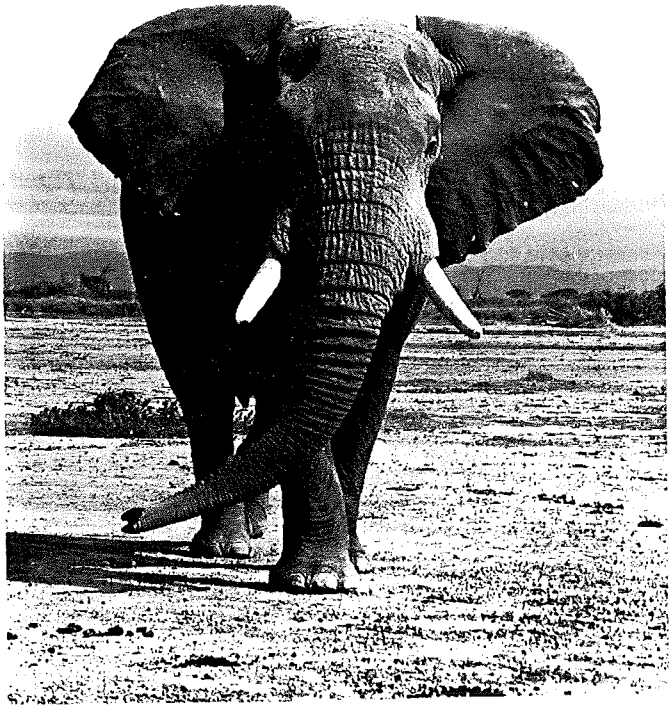

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Fig. 1
Hong Kong's gross import of raw ivory from Japan 1979-82

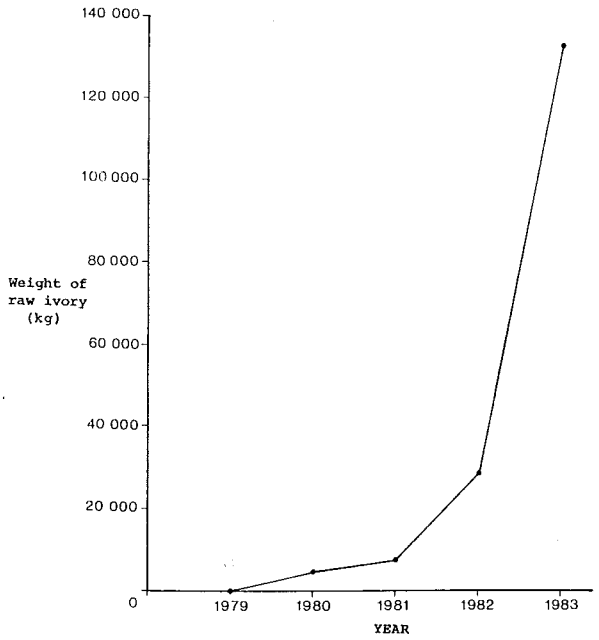
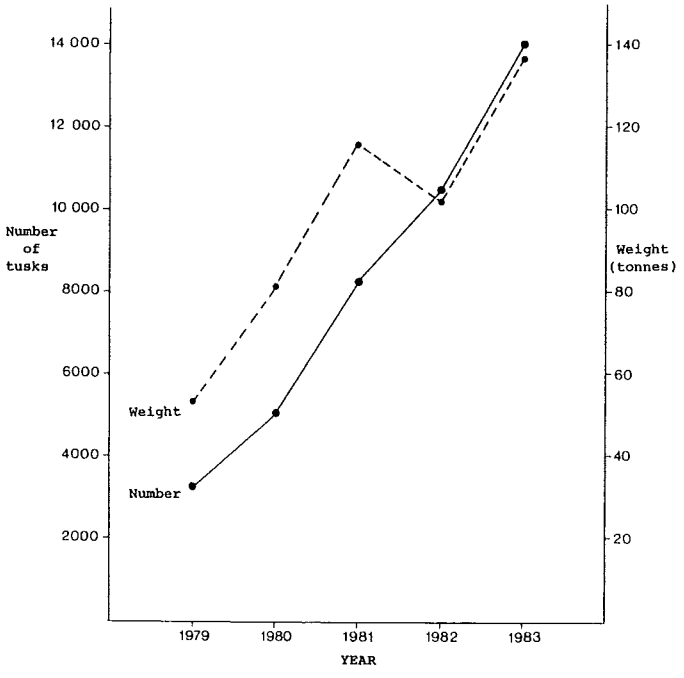


Fig. 2 shows Hong Kong's re-exports of ivory to Japan from 1979 to 1983. It demonstrates that Japan has also been importing an increasing number of tusks from Hong Kong and although the number of tusks involved has risen steadily, the weight of ivory actually fell from 116 t in 1981 to 102 t in 1982. As a result of this the average weight of the tusks fell from 14 kg to 9.7 kg, a level that was maintained in 1983 with a 34% increase in the number of tusks involved.

In 1983 over 32% of Hong Kong's "net" import of raw ivory arrived via Japan. Both the weight and the number of tusks in each shipment were recorded in Hong Kong's CITES statistics and show the mean weight of these tusks to have been 5.2 kg. 40% of Japan's "net" import of raw ivory for 1983 was composed of shipments arriving via Hong Kong and the mean weight of these tusks was 9.7 kg.

Fig. 2
Hong Kong's re-export of raw ivory to Japan 1979-83



The large difference between the mean tusk weights suggests that the shipments of tusks re-exported by Japan to Hong Kong contained little, if any, of the raw ivory re-exported by Hong Kong to Japan. This is also suggested by Fig. 3, a histogram of the total number of tusks in each mean tusk weight per shipment class traded between Japan and Hong Kong, which shows the distinction between the mean weights of Hong Kong's imported shipments and those re-exported. The average weight of the tusks in most of the shipments imported by Hong Kong was less than 8 kg and the majority of the shipments re-exported were composed of tusks whose mean weight was greater than 5 kg. Clearly there was an overlap of shipments with a mean tusk weight between 5 kg and 8 kg, but Table 1 shows that this overlap was composed of Japanese re-exports of small tusks mostly from Central African Republic (CAR) and Zaire, and re-exports by Hong Kong of tusks imported mainly from Sudan.

Table 1
The country of origin and number of tusks in shipments of raw ivory with a mean tusk weight of 5-8 kg traded between Hong Kong and Japan during 1983

Country of Origin	Hong Kong Imports	Hong Kong Re-exports
Sudan	379	8212
CAR	6460	453
Chad	-	153
South Africa	214	5
Zaire	3629	-
Congo	210	-
TOTALS	10892	8823

In 1983 Japan imported over 475 t (gross) of ivory, the largest quantity ever reported by that country and over 100 t more than the previous record of 368 t imported in 1978. It has been suggested that this action was a result of fears in the Japanese ivory carving industry that improved controls by Sudan, a major exporter, and Belgium, a major entrepôt, would make raw ivory more difficult to obtain and consequently more expensive. In 1983 Sudan announced that exports of unworked ivory would be banned from 30 December, and Belgium ratified CITES, effective from 1 January 1984.

2. Trade with Source Countries

Over the five-year period covered by this report considerable changes in the pattern of trade have also occurred with respect to the declared origin of the raw ivory.

It can be seen from Table 2, which shows Hong Kong's gross imports of raw ivory from 1979 to 1983, that in 1979 and 1980 the four main suppliers were Sudan, CAR, Burundi and Congo. Between them they were apparently the source of over 455 t in 1980 alone. After 1980 Hong Kong stopped accepting ivory from Burundi, as part of its measures to tighten CITES controls, and its imports of Congo origin, after reaching a peak of 117 t in 1981, fell to less than 1 t in 1983. In 1983 the number of major suppliers had fallen to just two, Sudan and CAR, which provided as much ivory as the four main sources in 1980.

Among the "smaller" suppliers, Chad became more important in 1982 and 1983 than previously, and Zaire too became more prominent in 1983 although all of their ivory was imported as re-exports from Japan.

Table 2

Country of origin of gross imports of raw ivory (whole tusks only) in kgs to Hong Kong 1979-83

COUNTRY	1979	1980	1981	1982	1983
Burundi	65230	85963	-	-	-
Botswana	5086	-	-	1185	342
Central African Rep.	67611	140606	75982	63096	186494
Congo	52754	68493	117882	61009	814
Cameroon	1625	4193	464	-	-
Kenya	4094	15879	824	5864	-
Mozambique	1929	-	-	-	-
Malawi	-	-	-	-	430
Namibia	-	335	-	-	-
Sudan	121704	160597	214187	219619	268677
Somalia	-	-	14000	7468	-
Chad	10677	997	8232	29411	30976
Tanzania	11365	5936	2240	5073	545
Uganda	15858	17551	26740	1957	403
South Africa	22674	4613	6578	9801	15468
Zambia	413	12101	8195	7628	9659
Zaire	16250	21077	8560	8921	40263
Zimbabwe	-	-	-	72	1465
Africa (unsp)	15301	5513	3340	25194	2318
Total	412571	543854	487224	446298	557854

Source: Hong Kong CITES reports

Table 3

Percentage of gross imports by weight from the major African sources

Declared Country of Origin	HONG KONG					JAPAN				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Burundi	15.8	15.8	-	-	-	0.5	4.0	0.8	0.2	2.2
C. African Rep.	16.4	25.9	15.6	14.1	33.4	7.8	16.7	14.6	21.0	32.9
Congo	12.8	12.6	24.2	13.7	0.1	13.3	27.7	53.4	25.6	9.1
Kenya	1.0	2.9	0.2	1.3	-	9.9	3.6	0.2	0.2	0.1
Sudan	29.5	29.5	44.0	49.2	48.2	0.6	4.2	14.1	21.2	23.5
Chad	2.6	0.2	1.7	6.6	5.6	2.4	0.4	1.6	1.6	4.5
Tanzania	2.8	1.1	0.5	1.1	0.1	7.1	10.0	0.9	0.8	0.1
Uganda	3.8	3.2	5.5	0.4	0.1	1.1	1.4	2.1	2.8	2.5
South Africa	5.5	0.9	1.4	2.2	2.8	1.7	2.6	4.3	8.4	2.5
Zaire	3.9	3.9	1.8	2.0	7.2	49.8	23.9	4.7	14.5	21.4

Source: Hong Kong CITES reports, Japanese Customs Statistics

Table 4

Raw ivory imports (whole tusks only) into Hong Kong and Japan corrected to eliminate double-counting

	1979		1980		1981		1982		1983	
	HK	JP	HK	JP	HK	JP	HK	JP	HK	JP
Weight (kg)	359263	243556	462659	242477	371336	300575	344577	256158	413658	341179
HK+JP Total	602819		705136		671911		600735		754837	
No. of tusks	43494*	18224*	90902	15108*	76865	21345*	77392	26411*	91978	35067*
HK+JP Total	61718		106010		98210		103803		127045	
Mean tusk weight (kg)	8.26	16.29	5.10	16.05	4.83	14.08	4.45	9.70	4.51	9.73
HK+JP Overall	9.8		6.7		6.8		5.8		5.9	
No. of elephants	23135	9694	48299	8036	40886	11354	41165	14048	48829	18653
HK+JP Total	32892		56335		52240		55213		67482	

*Estimated on the basis of average tusk weights, see text.

Fig. 3
Hong Kong's imports and re-exports of raw ivory from and to Japan, 1983

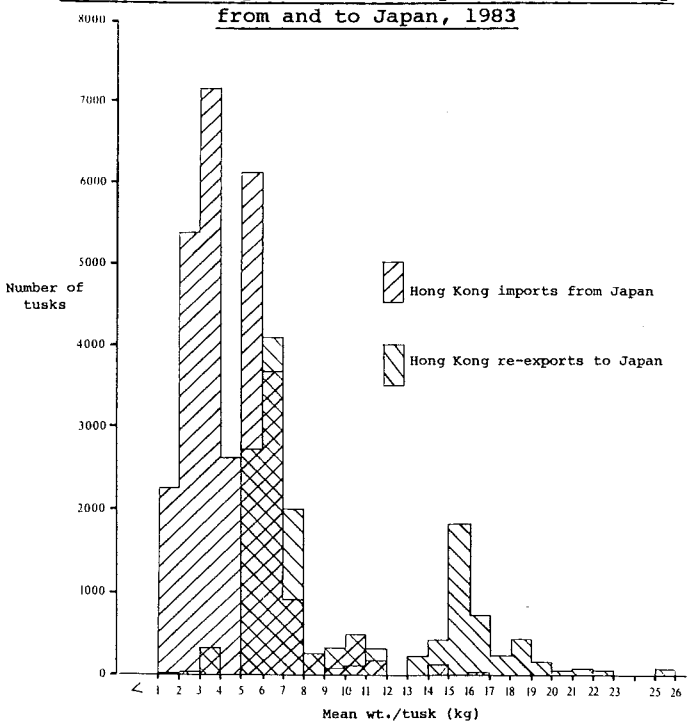


Table 3 illustrates the proportion of reported imports into both Hong Kong and Japan from the major sources of supply. From these figures it can be seen that in 1983 Sudan supplied nearly half of the Hong Kong imports, virtually the same proportion as in 1982, and that the CAR contribution had risen from 14.1% to over 33%. Japan's main imports in 1983 were also from CAR (32.9%) and Sudan (23.5%), but in addition Zaire supplied over 21%. Congo supplied 9.1% but this was a substantial decrease from 1981 when it was reported to be the source of over 53% of Japan's gross imports of raw ivory.

Table 4 is a summary of Japan and Hong Kong's "net" imports of raw ivory from 1979 to 1983. It shows the minimum weight of ivory imported into both countries, the estimated number of tusks and the estimated number of elephants involved in supplying this trade. For 1983 the number of elephants was estimated to be 67 482 and if the statement by Parker & Martin (1982) that Japan and Hong Kong import 83% of the ivory exported from Africa were still valid, the total number of elephants represented by Africa's exports of ivory in 1983 would have been 81 303.

The volume of Hong Kong and Japanese imports reached a peak in 1983 with total "net" imports of almost 755 t and represents an increase of 25% over the amount in 1979. However, the estimated number of tusks involved in the trade increased from almost 62 000 in 1979 to over 127 000 in 1983, a rise of over 100%. The average tusk weight declined overall from 9.77 kg in 1979 to 5.94 kg in 1983.

3. The Producers

Sudan

In the five-year period from 1979 to 1983 Japan and Hong Kong imported almost 1200 t "net" of ivory from Sudan. 94% of this ivory went first to Hong Kong by whom the trade has been well documented, in terms of both the weight of each shipment and the number of tusks involved, since 1980. From 1980 to 1983 Hong Kong provided 78% of Japan's "net" imports of "Sudanese" ivory; thus the data allow a reasonable estimate of the mean size of tusks from Sudan being imported by Japan.

From these data it can be estimated that about 105 600 elephants provided the ivory reported to be of "Sudanese" origin between 1980 and 1983 and that 88.6% (93 526 elephants) had tusks with an average weight of only 3.9 kg. The estimated number of elephants involved has increased each year from 20 871 in 1980 to 33 967 in 1983, but the average tusk weight of Hong Kong's "net" imports and of its re-exports to Japan have been falling since 1981. In that period the mean tusk weight in re-exports fell from 13.8 kg to 8.1 kg tusk and that in "net" imports from 4.2 kg to 3.6 kg.

Sudan banned the export of unworked ivory with effect from 30 December 1983.

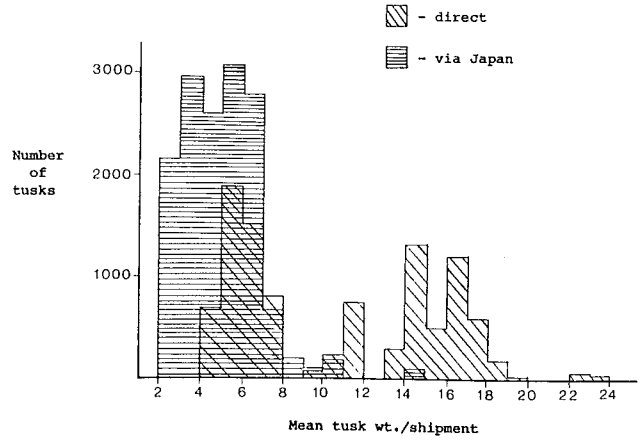
Central African Republic

From 1980 to 1983 Japan's and Hong Kong's "net" import of ivory apparently from CAR amounted to over 600 t and there has been a steady rise in Japan's gross imports, from 22 t in 1979 to 156 t in 1983. Fig. 4, a histogram of Hong Kong's 1983 gross imports of shipments of raw ivory reported to be of CAR origin, shows the number of tusks in each mean tusk weight/shipment class. The weight distribution indicates that direct imports from CAR were of two distinct types and that imports via Japan were almost entirely of small tusks. The imports direct from CAR were composed of 29 shipments, 5443 tusks, with an average tusk weight of 15 kg, and 5 shipments of smaller ivory (5020 tusks with a mean weight of 6.1 kg).

CAR legislation only allows the direct export of tusks weighing over 10 kg, but does allow re-export of smaller ivory that has been seized. In addition, CITES document Doc. 4.8.1 states that CAR has an annual hunting quota of only 200 elephants.

This situation is clearly not reflected by the import figures of Japan and Hong Kong which either suggest a considerable illegal trade or that large amounts of ivory are being transhipped through CAR. Hong Kong's import from Japan of over 70 t, reportedly of CAR origin but having an average tusk weight of less than 5 kg, suggests that some ivory may have been exported illegally and issued with valid re-export permits elsewhere. It is interesting to note Japan's changing role in the re-export of CAR ivory to Hong Kong:- from 1980 to 1982 Japan supplied less than 1% of Hong Kong's "net" import, however in 1983 the weight of Hong Kong's "net" import of CAR ivory increased to almost three times its 1982 level, Japan supplying almost 49% of it.

Fig. 4
Hong Kong's gross import of ivory from Central African Republic 1983



Congo and Zaire

A very rough estimate of Congo's elephant population reported in Elephants and Rhinos in Africa (1982) was

10 800. However between 1980 and 1983 Japan and Hong Kong imported over 500 t of ivory from Congo, an amount which may represent the tusks of 28 500 elephants. Fig. 5 shows Japan's gross imports of raw ivory from both Congo and Zaire for 1979 to 1983 inclusive and indicates that from 1979 to 1981 imports from Zaire fell from nearly 150 t to 14 t while imports from Congo increased from 39 t to 164 t. One possible explanation for this pattern may be that the effect of the ivory export ban in Zaire, which came into force on 18/8/78, was to stimulate an illegal trade in Zairean ivory across the border into Congo.

Since 1981, however, Japan's imports from Zaire have increased again, to over 100 t in 1983, while those from Congo have fallen sharply, perhaps suggesting that it may now be easier or more economical to export ivory from Zaire. There have been no legal exports of raw ivory from Congo since October 1981.

Zaire has not issued any permits allowing the export of commercial quantities of ivory since 1981 and any Zairean permit presented to an importing Party should be sent to the CITES Secretariat for verification in compliance with CITES Notification to the Parties No. 148 of 27/8/80. Hong Kong reported no direct imports of ivory from either Congo or Zaire in 1983 but did import over 40 t of Zairean ivory, with an average tusk weight of only 4.5 kg, with re-export certificates issued in Japan.

Chad

CITES Notification to the Parties No. 134, issued on 24/3/80, states that "export of tusks weighing less than 5 kg is prohibited".

In 1983 Hong Kong imported a total of 5779 tusks of Chad origin which weighed 5.4 kg on average. However 815 tusks, nearly 12 t of ivory, were re-exported to Japan; the mean weight of the remaining tusks was thus only 3.8 kg. This suggests that a considerable number of tusks were either obtained in contravention of the laws of Chad, or did not really originate there.

Hong Kong and Japan's "net" import of Chad ivory increased from less than 1 t in 1980 to almost 35 t in both 1982 and 1983.

Uganda

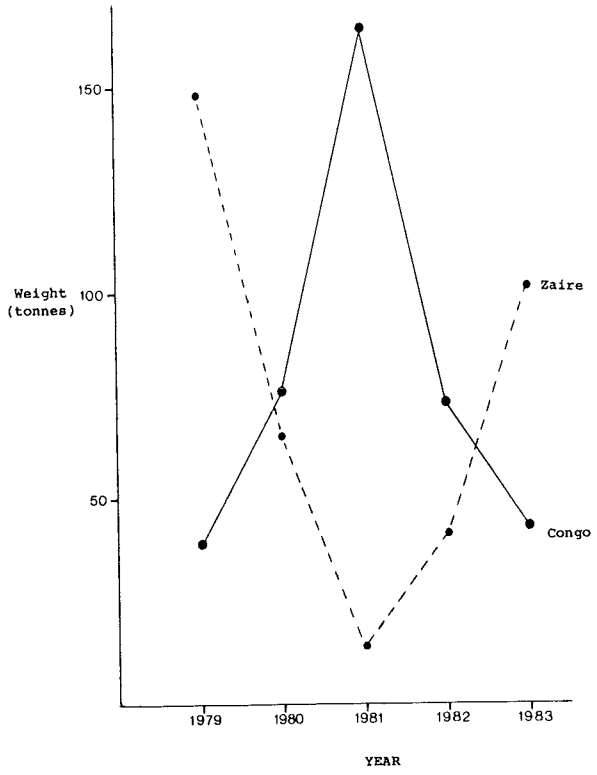
Between 1980 and 1983 Japan and Hong Kong imported almost 71 t "net" of ivory reported to be of Ugandan origin, however the data do not allow any useful analysis of tusk weights or elephant numbers. The data do indicate that the pattern of trade has changed: in 1980 and 1981 most of Hong Kong and Japan's "net" imports of Ugandan ivory went to Hong Kong but by 1982 at least 86% (7.9 t) was going directly to Japan. This increased to 97% (11.8 t) in 1983.

CITES Notification to the Parties No. 240, issued on 6/1/83, requested that any Party presented with a document purporting to be an export permit issued by the Ugandan Game Department should forward a copy to the Secretariat and not allow import of the specimens until the authenticity of the document was verified.

Burundi

Although Burundi has no wild population of elephants it has been an exporter of considerable quantities of ivory. This trade appeared to have ended in 1981 when Hong Kong stopped allowing imports from there, but Japan's Customs statistics for 1983 record the import of over 10 t of ivory from Burundi. In addition, it is believed that the Japanese statistics include, under the true countries of origin, the large quantities of ivory known to have been re-exported from Burundi in 1983 and to have passed through Belgium in transit.

Fig. 5
Gross imports of ivory from Congo and Zaire by Japan 1979-83



South Africa

In both 1982 and 1983 Japan and Hong Kong together imported almost 18 t "net" of South African ivory, but the quantity has remained fairly stable and below 20 t annually since at least 1979. In 1982 Japan imported from Hong Kong 6 t more ivory than Hong Kong's gross imports, thus Hong Kong was a net exporter of South African ivory in that year. This extra quantity was presumably from ivory stored from previous years.

The 1982 annual CITES reports of South Africa and Japan show that South African tusks imported by Japan had an average weight of about 15 kg. This is also the mean weight of tusks of South African origin re-exported from Hong Kong to Japan in both 1982 and 1983, however Hong Kong's "net" imports of South African ivory in 1983 amounted to 2424 tusks with a mean weight of only 3.6 kg.

Burma

According to Japanese Customs statistics Burma supplied 1726 kg of ivory to Japan in 1983.

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Part 2

The Worked Ivory Trade

by Jonathan Barzdo

INTRODUCTION

At the Fourth Meeting of the Conference of Parties to CITES, in April 1983, the Parties directed the Technical Committee to draw up guidelines for controlling the trade in worked ivory as quickly as possible (Conf. 4.14). As a prerequisite to the formulation of such guidelines, it is essential to know the extent and form of the trade in manufactured ivory. This category includes whole carved tusks, beads, necklaces and other items of jewellery as well as objects incorporating ivory, such as pianos with ivory keys, or boxes, tables or musical instruments inlaid with ivory. It does not include ivory waste or cut pieces of raw tusks.

The aim of producing this report was to provide an "Analysis and interpretation of CITES trade statistics for manufactured ivory". It indicates the scale, and to some extent the pattern, of the worked ivory trade, as reported by Parties, and indicates the usefulness of the available data.

Unless otherwise specified, all data used in the report were derived from the annual reports for 1981 and 1982 of Parties to CITES. Two major types of analyses were carried out using these data: A) an analysis of all worked ivory trade data, in order to obtain a picture of the total trade reported; and B) an analysis of worked ivory trade records where weight and number of pieces were specified, to obtain an indication of the number of worked ivory pieces in each weight class.

A) THE SCALE AND PATTERN OF THE WORKED IVORY TRADE

Methods

All recorded transactions in carvings of African Elephant (Loxodonta africana) ivory were processed by computer to produce tabulations, for 1981 and 1982, comparing all reported imports with all reported exports/re-exports. Close examination of the data revealed a number of cases of the trade between two countries where a reported import by one and a reported export by the other were in different units (e.g. kg and lbs) but probably referred to the same transaction. In these cases the smaller quantity was discounted. The total number of records discounted was 8 from 734 summed records for 1982 (1.1%) and 14 from 692 summed records for 1981 (2%).

The import figures of each country were then compared with reported exports to that country from each of the other states and, to obtain an estimate of the minimum volume of imports, the larger of the two figures only was taken. By summing these, each country's minimum gross imports were calculated; its minimum gross exports were calculated in a similar manner.

A comparison of each country's gross imports and exports indicated whether it was a net importer or a net exporter in the year under consideration, and the difference between the gross figures indicated the scale of its net trade.

Finally, the minimum quantity of worked ivory reported to be in international trade was calculated by summing the net imports.

All weight data were converted to kilogrammes. All data on 'pairs' were doubled and incorporated into the numbers of ivory carvings.

Table 1
Estimate of Minimum Volume of Worked Ivory in Trade

	1981	1982	increase
No. of Carvings	4812062	9677188	+ 101%
Kg	61245.837	181496.62	+ 196%
Sets	19221	13281	
Cases	2	-	
Boxes	10	-	
Shipments	5	8	

Results

(i) Total trade volume

Table 1 indicates the estimated minimum volume of worked ivory entering international trade in 1981 and 1982, and includes information from annual reports on 'sets', 'cases', 'boxes' and 'shipments'. These units are quite useless for monitoring purposes since they give no

Table 2
Net Exports of Major Net Exporters of Worked Ivory

Country	1981	1982	apparent increase
Congo	8 carvings	10 carvings	
	18722 kg	110804 kg	+ 492%
Hong Kong	4544438 carvings	7938912 carvings	+ 75%
	1150 kg	7559 kg	+ 557%
	14569 sets	13009 sets	
	3 shipments	6 shipments	
India	195134 carvings	76232 carvings	- 61%
	17572 kg	57363 kg	+ 226%
UK	9718 carvings	1376963 carvings	+ 14069%
	9725 kg	(-1766 kg)	- 118%
	337 sets	(- 21 sets)	
	1 shipment		

Table 3
Net Imports of Major Net Importers of Worked Ivory

	1981	1982	apparent increase
F.R. Germany	809267 carvings 5865 kg (-692 sets) 2 box	1594181 carvings 1446 kg (-280 sets)	+ 97% - 75%
Italy	1026331 carvings 6839 kg 81 sets 1 box	500477 carvings 6991 kg 4 sets	- 51% + 2%
Japan	810271 carvings 30513 kg 14248 sets 1 box	5920567 carvings 110817 kg 12942 sets	+ 631% + 263%
USA	2089082 carvings 7001 kg 4718 sets 5 shipments	1619149 carvings 58368 kg 44 sets 7 shipments	- 22% + 734%

indication of the weight of ivory, which might be related to the weight of tusks, nor of the number of pieces, to which a mean weight might be applied for estimating the total weight. Records containing these units are fortunately few and have been ignored for the purposes of estimating minimum trade volume.

On the basis of annual reports of CITES Parties, the estimated minimum amount of worked ivory entering international trade in 1982 was nearly 9.7 million ivory carvings plus over 181 tonnes (t). This represents an increase, from 1981, of 101% in the number of pieces recorded and of 196% in the weight of ivory recorded. However, the estimated amount by weight is probably too high by some 110 t (see below).

(ii) Major net exporters

Those states whose net exports of worked ivory, by either number of pieces or weight, is greater than 10% of the total trade volume in that unit, in any year, are designated the major net exporters. They are Hong Kong, Congo, India and UK, in that order. Their net exports are summarised in Table 2.

Between them, these countries' net exports accounted for 99% of the estimated number of ivory pieces recorded in trade in 1981 and 97% in 1982. They also accounted for 77% of the volume recorded by weight in 1981 and 96% in 1982.

Congo

Congo was not a Party to CITES until 1 May 1983 and thus submitted no report for the two years under consideration. The data on Congo's exports reflect solely the recorded imports from this country by Japan in both years. However, Congo is not known to be an important producer of worked ivory and it seems probable that either the terms or the units have been entered wrongly in the Japanese reports, perhaps as a result of clerical or typographical error.

Therefore the 18 721 kg of ivory carvings reported as an import by Japan in 1981 and the 110 804 kg reported in 1982 may actually represent weight of raw ivory or numbers of ivory carvings. In either case, the minimum estimated volume of world trade by weight will have been overestimated as a result; in 1982 the estimate would be 157% higher than it should have been.

It is probable that the worked ivory figures for Congo in fact represent raw ivory, a suggestion which is supported by Japan's Customs statistics on imports of worked ivory. These do not list Congo as a source in 1981 or 1982.

Hong Kong

Although Hong Kong has submitted reports for both 1981 and 1982 it does not consider worked ivory to be readily recognisable and thus does not license or report on trade in this commodity. Gross exports to Hong Kong amount to less than 16 000 ivory carvings and only 700 kg for the two years combined. However imports reported from Hong Kong account for the bulk (81.5%) of all ivory carvings imported, reported by number.

In 1981 the country which reported most imports from Hong Kong was the USA which accounted for 45% of Hong Kong's apparent gross exports by number. However, in 1982 72% went to Japan.

Hong Kong's apparent exports reported by weight are far less significant. If judged on these alone it would not rank as a major exporter.

India

India's net exports by number of ivory carvings apparently fell by 61% from 1981 to 1982; this is probably to a large extent attributable to the fact that no annual report has been received from India for 1982. Even so its apparent net exports by weight have increased by 226%, to over 57 tonnes in 1982.

The exports are divided among many countries but most significantly Italy in 1981 and USA in 1982. In those years they accounted for 61% and 98% of India's gross exports by weight, and equally significant proportions of her exports by number.

India's gross imports of worked ivory are insignificant.

United Kingdom

From 1981 to 1982 the UK's net exports by number apparently increased by 14 069%, undoubtedly as a result of the failure of the UK to submit a report for 1981. But in 1982 the UK was a net importer of worked ivory recorded by weight, totalling 1.8 t. However the net export of nearly 1.4 million pieces, even if they were 20 g

each (which may be an underestimate), would exceed 27 t securing the UK ranking as a major net exporter.

Ivory carvings from the UK are exported to many countries but mainly the USA in 1981 (over 99% of UK gross exports by number) and F.R. Germany in 1982 (98% of UK gross exports by number). In 1982, F.R. Germany reported imports of 2 ivory carvings from the UK (and no other units), whereas the UK reported exports to F.R. Germany of 1 460 405 ivory carvings. Thus the apparent change of destination might reflect only the absence of the UK 1981 report.

(iii) Major net importers

Those states whose net imports of worked ivory, by number of pieces or weight is greater than 10% of the total trade volume in that unit, in any year, are designated the major net importers. They are Japan, USA, F.R. Germany and Italy in that order. Their net imports are summarised in Table 3.

Between them, these countries' net imports accounted for 98% of the number of worked ivory pieces recorded in trade in 1981 and over 99% in 1982. They also accounted for 82% of the volume recorded by weight in 1981 and 98% in 1982.

F.R. Germany

From 1981 to 1982, FRG's apparent net imports by number increased by 97%, and those by weight decreased by 75%.

As indicated above the UK 1982 report includes exports to FRG of nearly 1.5 million ivory pieces, and this alone explains FRG's apparently increased imports in this category. However, FRG reported imports of 9971 kg of worked ivory from UK in 1981 and none in 1982.

Although FRG is a net importer, its exports are not insignificant. In 1981 4013 kg were exported to Argentina, forming the bulk (76%) of FRG's gross exports by weight. In 1982 the exports were fewer and more widely distributed but with large proportions to Italy and Switzerland.

Italy

While Italy's net imports by weight remained stable from 1981 to 1982, at just under 7 t, its net imports by number fell by 51%. The principal source was Hong Kong, and the second India, in both years.

Japan

Japan was the single biggest gross and net importer of worked ivory in 1982, accounting for 61% of the number of pieces in trade. Its gross exports are insignificant. Moreover, from 1981 to 1982 its net imports reported by weight increased 631% and those by number 263%.

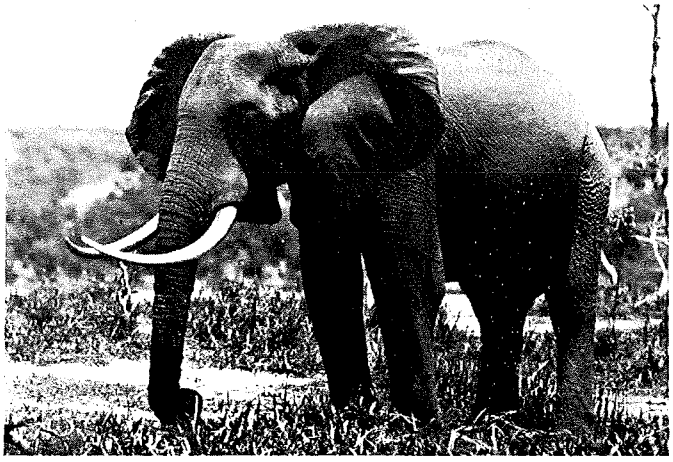
Its major sources for pieces reported by number are first Hong Kong, then Taiwan, and for those reported by weight first Congo, then (in 1981 only) Belgium and Zimbabwe. As noted above, however, the reported import from Congo is likely to be an error.

Japan's Customs statistics indicate gross imports of worked ivory of 23 795 kg in 1981 and 24 165 kg in 1982, the principal sources being Hong Kong (83% on average) and China.

USA

The net import of ivory carvings reported by number has fallen by 22% from 1981 to 1982 but in both years Hong Kong was the source of nearly all of the total (average 97%). Of the imports reported by weight, 4.9 t in 1981 (82% of gross) came from Italy, and in 1982, 56.4 t (96% of gross) came from India.

This change reflects an apparent increase in net imports, by weight, of 734%. It also secures the USA's position as the second most important net importer of worked ivory, accounting for 17% of the minimum number of pieces reported in trade and also 32% of the volume by weight.



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B) THE MEAN WEIGHT OF IVORY CARVINGS

Methods

All records of trade in ivory carvings, for 1981 and 1982, where the quantity was specified by both weight and number, were extracted from the data. This amounted to 100 records. Of these, three were of single carvings weighing more than seemed reasonable to believe (i.e. 85 kg, 210 kg and 275 kg), so were excluded from the analysis. One record was of 6 pieces weighing a total of 200 kg, giving an average weight of 33.3 kg per piece. This suggests that they were whole, carved tusks, and so the record was included.

Of the remaining 97 records from annual reports, 53 were of imports reported by Switzerland, 42 were of exports reported by South Africa and 2 were of exports reported by Cameroon. Owing to the small size of the Cameroon sample, its exports were not used in considering the distribution of weight class, as this was considered separately for each country, although they were counted in the total for obtaining average weight of pieces. For each of the 97 records, the weight of the ivory carvings was divided by the number of carvings, to give the mean weight of the carvings in each record.

The total weight of ivory in the 97 records was divided by the total number of carvings to give the mean weight of each carving.

Finally the records of Switzerland and South Africa were each assigned to one of eleven weight classes established on a scale of doubling progression, from 0 to 50 g and 50+ to 100 g up to 6400+ to 12 800 g. The weight distribution of ivory carvings was examined in three ways: in the total number of records; in the total number of ivory pieces; and in the total weight of worked ivory.

Results

a) In the 97 records examined, the total number of ivory carvings is 118 119 weighing 3199.77 kg. Thus the mean weight per carving is 0.027 kg.

Table 4
Estimated Weight of Ivory Carvings

Source	mean weight of ivory carvings
53 records of Switzerland	23 g
42 records of South Africa	2213 g
2 records of Cameroon	3500 g
mean of 97 records	27 g
Hong Kong tusk imports compared with net exports carvings	62 g

However the average weights from the records of each country are quite different: for Swiss imports, 0.023 kg; for South African exports, 2.213 kg; and for Cameroon's exports, 3.5 kg. The last of these is calculated on a particularly small sample (two records) and can be ignored.

b) Another possible way to estimate the mean weight of ivory carvings in trade utilises the importance of Hong Kong as the major exporter of worked ivory. The foregoing article in this Bulletin provides estimates of Hong Kong's import of raw ivory. For the years 1980 to 1982 this averages 392 857 kg a year. It is probable that only a part of this amount was used for manufacture and that some was stockpiled. Some will also have been wasted in the process of manufacture. It is also possible but improbable, that all the imported tusks were used, as well as an additional quantity, out of stocks held. Therefore this figure serves only as a guide to, but probably overestimates, the amount available for producing items of worked ivory.

Hong Kong may also re-export some or all of the worked ivory it imports. If the imports are subtracted from exports, leaving net exports, this is the maximum amount that could have been produced from the raw ivory imported (but we have only a minimum estimate of this). Hong Kong's net exports averaged 6 241 675 ivory carvings plus 4354.5 kg for 1981/82.

Thus the estimated mean weight/carving

$$= \frac{(392857-4354.5)}{6241675} = 0.062 \text{ kg.}$$

This figure is likely to be a maximum.

c) Table 5 indicates the distribution by weight class of the data from the reports of South Africa and Switzerland.

In calculating the weight distribution of ivory carvings on the basis of records where both total weight and number of pieces are specified, it is possible that in each record of several pieces there is a preponderance of large pieces, but a few small ones reduce the mean; or vice versa. This is an inevitable consequence of calculating weight distribution from the available data.

(i) Distribution in records

The mean weight of ivory pieces in 15 of the Swiss records (28%) falls in the 0 to 50 g weight class, and a further 37 records (70%) fall within the 50+ to 3200 g classes.

In the South African data the class containing the greatest number of records is the 800+ to 1600 g category, holding 12 records (28%). In total, 33 records (78%) fall within the classes from 400+ to 6400 g.

Overall, 95% of the records are of ivory pieces falling in the mean weight classes from 0 to 6400 g.

(ii) Distribution in number of ivory pieces

In the Swiss data nearly 96% of the ivory pieces, fall in the mean weight class 0 to 50 g, and a further 4% fall within the classes of 50+ to 800 g (see Fig. 1).

In the South African data, most pieces (60%) fall in the 50+ to 100 g class. The remaining pieces are well distributed among the higher classes, there being apparently none in the 0 to 50 g category (see Fig. 2).

Thus the biases are quite different. Overall, however, of the 118 117 pieces reported in 95 records, over 95% appear to fall in the 0 to 50 g weight class and a further 4% in the classes from 50+ to 800 g.

(iii) Distribution in total weight

In the Swiss data, the records where mean weight per ivory carving is between 0 and 50 g total 1328.37 kg, that is 49% of the total weight of the Swiss records. A further 46% of the total weight is accounted for by records of pieces in the weight classes from 50+ to 800 g. There are no carvings falling in the classes above 6400 g (see Fig. 3).

Weight class distribution of ivory carvings in total number

(figures = grammes)

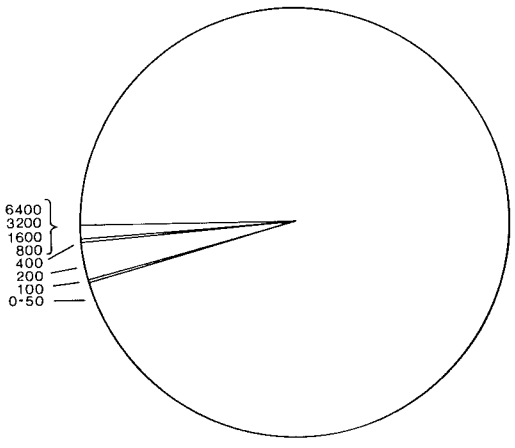


Fig. 1

Switzerland

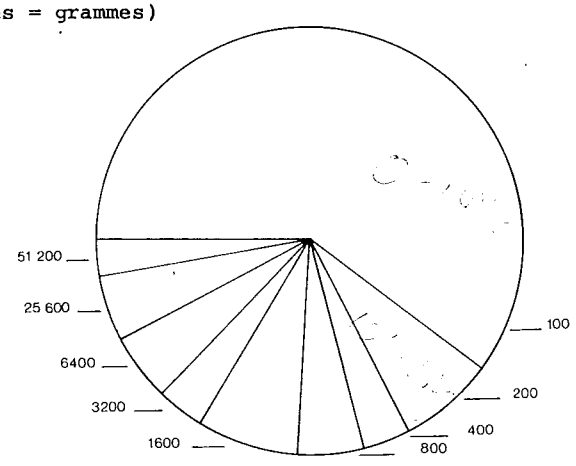


Fig. 2

South Africa

The distribution in total weight of the South African records, on the other hand, is skewed toward the top end of the scale, as a result of 17 heavy ivory carvings. They weighed a total of 375 kg (76% of the total weight of South African records), and fall within the weight classes from 12 800+ to 51 200 g (see Fig. 4).

The Swiss sample is much bigger, however, and overall, ivory carvings in the mean weight class 0 to 50 g make up 42% of the total weight of the 95 records. 81% of the weight is accounted for by carvings averaging less than 800 g.

DISCUSSION

1. There are several factors which hinder the effective use of the available CITES data. The major problem is that the data are of poor quality, for four principal reasons:

(i) some key countries have failed to provide an annual report, as required by CITES under Article VIII 7.(a). The most notable gaps among the annual reports received are the 1981 report of the UK and the 1982 report of India.

(ii) the correlation is poor, indicating poor reporting. Most notably, Hong Kong is the single greatest exporter of worked ivory, yet its annual CITES reports contain no record of trade in this commodity.

(iii) in some cases there appear to be significant errors. Japan is the single greatest importer of worked ivory, but over half its reported import by weight in 1981 and nearly all of its imports by weight in 1982 (comprising over 60% world trade by weight) appear to be the result of a clerical or typographical error.

(iv) nine different units are used in the annual reports of CITES Parties. Worked ivory trade is reported by number, pairs, kg, g, pounds, ounces, sets, boxes, cases and shipments. Numbers and pairs are comparable with each other and the units of weight can readily be converted to a common unit for comparative purposes. The other four units, however, are useless for monitoring purposes. There is a problem also with the recording of numbers (or pairs) because carvings range in size from whole carved tusks to tiny beads. A piano inlaid with ivory also counts as a single carving.

The only useful measure of worked ivory in trade is weight of ivory; this might facilitate some comparison of the volume with the number of tusks in trade.

2. However, even if we were able to determine true trade volume, there would be difficulties in utilising the result. One problem is the time-lag factor. A tusk that is taken from an elephant may not be carved for some years following its acquisition and, after entering trade as a carving, it may not appear in reports of CITES Parties for one or two years, if it ever appears at all. Thus, trade volume of worked ivory does not reflect the number of elephants killed in a year. Not knowing how much ivory is wasted in carving, on average, not knowing how much raw ivory in trade is stockpiled each year, and not knowing how much from stockpiles is released for carving, it is consequently impossible to say what is the relationship, if any, between number of elephants killed and volume of worked ivory in trade.

3. There are two purposes in controlling the trade in wildlife: the first is to prevent commercial international trade in endangered species; the second is to monitor the volume of trade in other species so that the effect on wild populations may be determined.

The following conclusions from this report are therefore important:

(i) the data do provide the basis for a rough minimum estimate of the volume of worked ivory in trade, but their current quality means this estimate may not be even of the right order of magnitude;

(ii) data on worked ivory in the CITES Parties reports as currently prepared, are useless for monitoring the effect of trade on elephant populations;

(iii) even if the quality of data in the reports were good and all records were reported by weight, they would still be useless for population monitoring purposes. However, if good data on trade in unworked ivory were available these would probably be sufficient for this purpose.

4. It is therefore clear that the controls on international trade in worked ivory of African Elephant (Loxodonta africana) do not and cannot achieve the purpose for which they were brought about.

Weight Class Distribution of Ivory Carvings in Total Weight

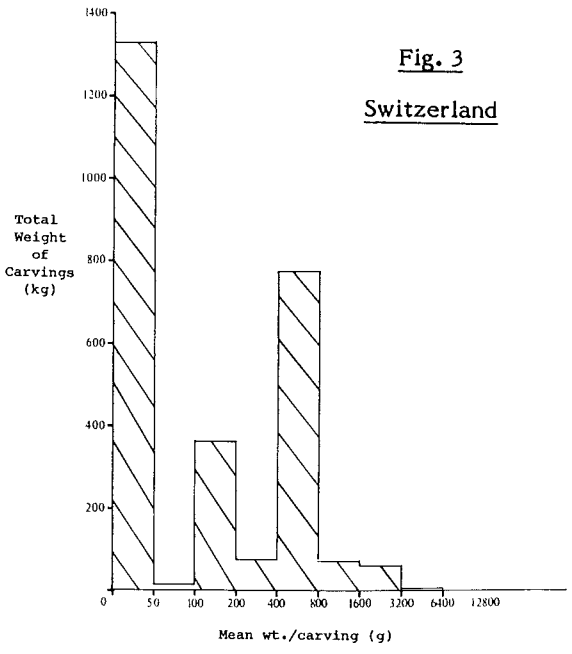


Fig. 3

Switzerland

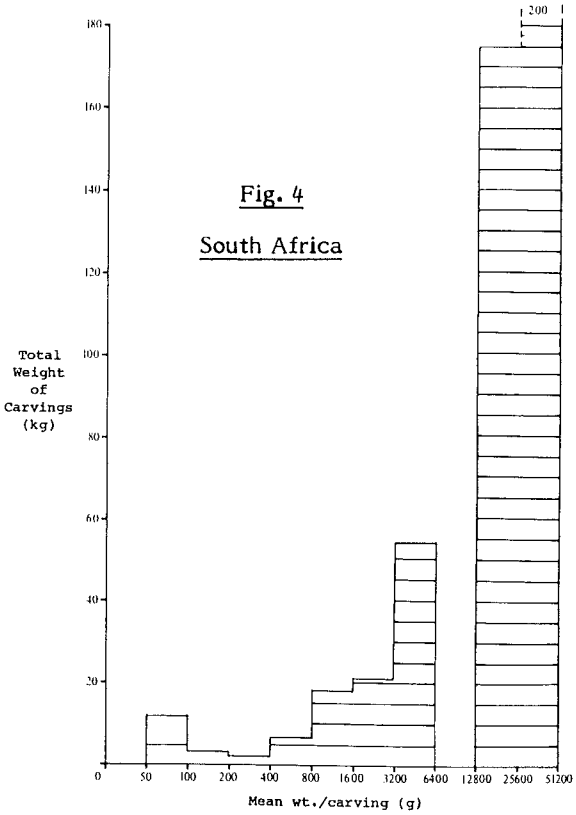


Fig. 4

South Africa

Table 5
Weight Class Distribution of Ivory Carvings
in Records of Switzerland (CH) and South Africa (ZA)

Mean Weight/Carving	Number of records			Number of Carvings			Weight of Ivory		
	CH	ZA	Total	CH	ZA	Total	CH	ZA	Total
(g)									(kg)
0-50	15	0	15	112775	0	112775	1328	0	1328
-100	4	2	6	304	134	438	17	12	29
-200	9	1	10	3365	16	3381	368	3	371
-400	5	1	6	230	8	238	76	2	78
-800	10	4	14	1127	11	1138	776	7	783
-1600	5	12	17	63	17	80	71	18	89
-3200	4	7	11	28	8	36	59	21	80
-6400	1	10	11	3	11	14	5	54	59
-12800	0	0	0	0	0	0	0	0	0
-25600	0	4	4	0	11	11	0	175	175
-51200	0	1	1	0	6	6	0	200	200
Totals	53	42	95	117895	222	118117	2700	492	3192

ADDENDUM

Since preparation of this report it has been discovered that one entry in the US 1982 annual report may have been an error. This was a shipment of worked ivory imported from India, origin Tanzania, of 99 000 lb. If this figure of nearly 45 t is subtracted from both India's exports and USA's imports, the pattern of trade will be notably different from that indicated in this article. This discovery serves to re-emphasize the points made in part 3 of the Discussion section of the report.

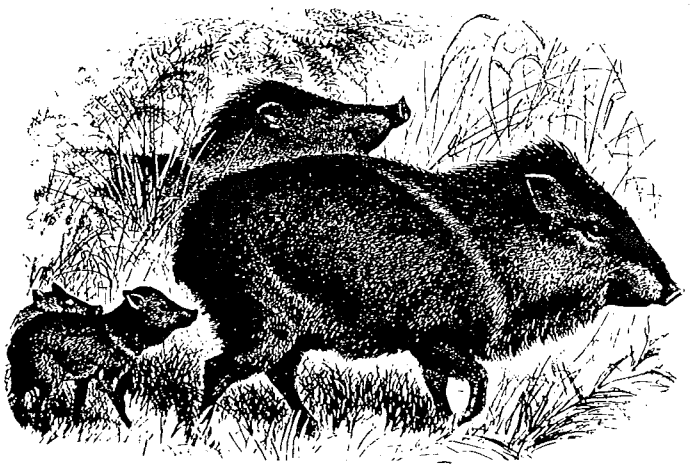
Hong Kong CITES Enforcement Officers inspecting a shipment of over 15 tons of ivory from Kenya (1980).

The Peccary Skin Trade

by Steven Broad

Distribution

Of the three known species of peccary, the Chacoan Peccary (Catagonus wagneri) is the largest and has by far the most limited range, occurring only within the Gran Chaco of South America (south-east Bolivia, western Paraguay and north-west Argentina). The White-lipped Peccary (Tayassu pecari) and the Collared Peccary (Tayassu tajacu), are both widely distributed throughout most of Central and South America. T. pecari occurs from northern Argentina to southern Mexico in large herds of up to 100 animals. T. tajacu occurs in smaller herds, of up to about 20 individuals, over a larger range from northern Argentina to the southern states of the USA.



Collared Peccaries (Tayassu tajacu)

Threats

The peccaries are widely utilised as a source of food throughout their range, and a large number of peccary skins are exported for the manufacture of gloves, shoes and bags. Catagonus wagneri is best considered separately from the two Tayassu species: it is classified as 'Vulnerable' in the IUCN Mammal Red Data Book, being threatened mainly by habitat destruction, as forest areas are cleared for cattle ranching, but also because roads are being opened into the Chaco area for military use and for oil exploration (Thornback and Jenkins, 1982). This species is also threatened to some extent by hunting for meat and skins. To what extent the skin trade contributes to hunting pressure is not clear; certainly C. wagneri is a popular source of meat in much of its range. One report states that one small, four-room hotel in the Chaco uses more than 1000 C. wagneri each year, and that military outposts regularly use these animals for food (Oliver, 1981).

Both Tayassu species, like C. wagneri, are popular food items and make up a large part of the diet of people in remote areas. A number of studies have found that the Tayassu species, together with the Brazilian Tapir (Tapirus terrestris), are by far the most important large game species in the Amazon Basin. In some districts of Surinam Tayassu species 'can account for as much as 50% of the forest-based protein diet' (Mittermeier, 1977), and they may provide 16% of all the meat eaten in the Ucayali Valley in Peru (Grimwood, 1968). Human encroachment into forest areas exerts considerable pressure on the populations of these animals, but the Tayassu species are not generally thought to be threatened because they occur over a much greater range than C. wagneri and in greater numbers.

The legal status of the Tayassu species varies from country to country. In most cases subsistence or non-commercial hunting is allowed, sometimes under licence. Commercial exports of peccary skins are banned in Brazil, Colombia, Costa Rica, Ecuador, Mexico, Panama, Paraguay, Uruguay and possibly Venezuela; however the effectiveness of such control is often poor. Most peccaries are killed in forest areas where law enforcement is often very difficult. The control of trade across borders in these inaccessible areas is also difficult to enforce. None of the peccary species is included on CITES Appendices except T. tajacu which is listed on CITES Appendix III by Guatemala.

The only protection that C. wagneri enjoys is in Paraguay where there is a blanket ban on all wildlife hunting, however this is reported to be only sporadically enforced. It also occurs in two national parks in Paraguay where its protection is reported to be effective (Myers, 1977).

Skin trade

There is little documentation of the hunting of peccaries and trade in their skins. Probably the most detailed study was that carried out in 1970 by Hvidberg-Hansen on peccary utilisation in Peru. This illustrated many of the features of the trade, supporting the various less detailed accounts from other sources and other countries. We did however manage to obtain some information through correspondence with skin dealers and merchants in May 1984. The most valuable hide is that of Tayassu tajacu, reported to be about four times as valuable as T. pecari skins in 1968 (Grimwood, 1968). The hide of C. wagneri is said to be thinner than that of the other peccaries and is the least valuable; however it is often included in batches of skins that are exported from Paraguay and that used to be exported from Brazil (Thornback and Jenkins, 1982).

An important influence on the skin trade in source countries appears to be the low prices paid by South American skin dealers for the peccary skins. It seems that generally skins are only kept if the kill was close to an exporting location, as the transport of the skins over long distances would be uneconomic. Thus any purely commercial hunting for skins that does exist is located near exporting locations (Sowls, 1981). In Peru, for example, most of the skins from the Selva zone seem to leave the country from Iquitos via the Amazon (Hvidberg-Hansen, 1970). It seems that in the majority of cases the skin trade is purely a by-product of the hunting of peccaries for meat. Certainly in the case of C. wagneri most reports state that this is true and that the majority of hides never reach the market. On the other hand it has been suggested that in Bolivia some C. wagneri are hunted exclusively for their skins (Bejarano, 1981).

Despite restrictions on their trade and their low value, a reasonably large number of peccary skins does enter international trade. However, the trade in peccary skins is not closely monitored and statistics of exports or imports are not easy to obtain. Moreover there are no CITES records of any skin trade.

The categories in Customs statistics tend to be broad; 'pigskins' for instance includes hides of other species of wild pig as well as of domestic swine. Some leather described as 'Peccary' is in fact from the Capybara (Hydrochaeris hydrochaeris), which is used as a substitute when stocks are low.

The main exporting countries seem to be Peru, Bolivia, Ecuador, Paraguay, and perhaps Uruguay and Argentina. Brazil used to export a large number of skins; between 1965 and 1967, for example, 841 017 skins of

T. tajacu and 1 091 452 skins of T. pecari were exported (Smith, 1977). The export of many wildlife products, including peccary skins, from Brazil is now banned but it is probable that they are smuggled out and that a number of skins from Brazil leave South America via other countries where there are no restrictions on their export or where restrictions are less tight.

The total volume of peccary skin exports from South and Central America is not known. Two dealers, one Japanese and the other West German, stated that they had been importing reasonably constant numbers of skins from South America over the past 25 years (Pacific Leather Inc. 1984, in litt; Paul Fehns GmbH. 1984, in litt.). The German dealer reported that there had been a small decline in German imports recently and that he expected this to continue. Peru is probably the major exporter although very few comparative data are available. Between 1969 and 1979 Peru is reported to have exported 1 492 963 T. tajacu skins and 821 895 T. pecari skins (Mack, 1982). Paraguay, despite a ban on commercial wildlife trade since 1981, is another major exporter. A Paraguayan trader estimated that as many as 96 000 Peccary skins are exported from the country every year. The bulk of these were from T. tajacu but all three species were included to some extent. Bolivia also exports significant numbers and is known to have sent large shipments to the USA in recent years (Duplaix, 1981). There are no reports of peccary skin exports from Central America.

The Federal Republic of Germany seems to be the major importing country and in 1969 accounted for 81% of T. tajacu exports and 82% of T. pecari exports from Iquitos, Peru (Hvidberg-Hansen, 1970). The Verband der Deutschen Leder-Industrie, is reported as stating that during the period 1980-81 approximately 120 000 - 150 000 peccary skins had been imported (Frädrich, 1982). Paul Fehns GmbH. reported that most peccary skins imported into the F.R. Germany were of T. tajacu, and that T. pecari probably only made up 5-10% of total imports. This dealer states (in litt.) that he imports 36 000 skins every year from Paraguay.

The other significant importing countries are Japan, Italy, France and the USA. In 1969 Japan and France accounted for 3% each of T. tajacu skin exports from Iquitos, Peru (Hvidberg-Hansen, 1970). Pacific Leather Inc. estimated that total imports of peccary skins into Japan were around 20 000 - 25 000 a year. This dealer has imported around 14 000 skins of T. tajacu every year for over 25 years. The United States imports raw peccary skins and finished peccary skin products and in 1969 accounted for 13% of exports of T. tajacu skins and 18% of T. pecari skins from Iquitos, Peru (Hvidberg-Hansen, 1970). Italy imports a number of peccary skins, and has been known to import from Bolivia and re-export finished goods to the USA.

Conclusions

It appears that, at present, the only source countries from which legal exports of peccary skins may continue are Argentina, Bolivia, Peru and possibly Venezuela. It is certain that a large number of peccary skins are traded, and it is believed that peccary populations are decreasing in some areas, especially Catagonus wagneri, which is rapidly losing its restricted habitat. However there is little evidence that the skin trade is a major contributory factor to population decline on any more than a local scale near exporting locations and human population centres. The low prices which are reported to be paid to hunters for the skins seem to be a strong restriction on the development of commercial hunting. The threat of the skin trade could be better assessed if the trade were documented more fully to provide a better picture of trends in volume and source countries.

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Rhino Horn Imports into Korea

Rhino horn imported into the Republic of Korea during 1983 was valued at US$162 000, an increase on the 1982 figure of 26 000 for a quantity of 236 kg of horn (see Traffic Bulletin VI(1):3-4). The quantity imported in 1983, however, was not available.

National Bureau of Statistics, Economic Planning Board, Republic of Korea.

Namibia Abides by Convention

South West Africa is not a Party to CITES. However, its Department of Agriculture & Nature Conservation has stated in a letter dated 20 January 1984 to the CITES Secretariat, that Namibia will abide by the decision of the Convention not to allow any commercial trade in, or export of, rhino products until such trade is again permitted.

Exceptions will be made, however, in cases where persons who are in legal possession of rhino products emigrate to other countries or in cases where animals have been bred in captivity and were hunted by trophy hunters.

The New Australian Wildlife Act

by Frank Antram, TRAFFIC (Australia)

The Wildlife Protection (Regulation of Exports and Imports) Act 1982 was finally proclaimed by the Commonwealth of Australia, after a lengthy delay, and came into operation on 1 May 1984. The Act replaces the various Regulations under the Customs Act 1901 which enabled Australia's ratification of CITES in 1976. However, permits issued under the Customs (Endangered Species) Regulations and which are still current, remain valid. The object of the new Act is to enforce the obligations of Australia under CITES and also to further the protection and conservation of the wild fauna and flora of Australia and of other countries by regulating the import and export of wildlife. There are 8 Schedules to the Act; all except Schedules 5 and 8 may be amended from time to time by the Minister of State for Home Affairs and Environment by instrument published in the Commonwealth of Australia Gazette.

Schedule 1 lists those taxa on Appendix I to CITES, except Cetacea, plus the official list of Australian endangered vertebrate fauna endorsed by the Council of Nature Conservation Ministers (CONCOM) and the bird species covered by the Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction, and their Environment.

Schedule 2 lists those taxa on Appendix II to CITES, except Cetacea.

Schedule 3 lists all species of the order Cetacea.

Schedule 4 lists native Australian species, the export of which is not controlled under the Act. These are marine fish, Barramundi (Lates calcarifer), certain specified invertebrates, seeds and spores, fruit not attached to any part of a plant, timber and articles derived from timber, and oil from a plant of the genus Eucalyptus.*

Schedule 5 lists live animals and plants, the import of which is not controlled under the Act. This Schedule refers largely to domesticated animals and animals and plants that are biological control agents of a kind approved for general release under the Quarantine Act 1908.

Schedule 6, like Schedule 5, lists live animals and plants the import of which is not controlled under the Act. This Schedule differs from the previous in that it may be altered by the Minister by instrument published in the Gazette. Currently the Schedule lists certain species of freshwater and marine fish and live plants, the introduction of which into Australia is in accordance with the Quarantine Act 1908.

Schedule 7 lists species of native Australian animals eligible to be treated as household pets. Three species of parrot, Sulphur-crested Cockatoo (Cacatua galerita), Galah (Eolophus roseicapillus) and the Budgerigar (Melopsittacus undulatus), are the only animals listed.

Schedule 8 comprises the text of CITES.

Strict import and export controls apply to taxa on Schedules 1, 2 and 3. Permits for Schedule 3 species will only be issued under exceptional circumstances. Export controls apply to all live animals and plants except those on Schedule 4. Import controls apply to all live animals and plants except those listed on Schedules 5 and 6. Permits will only be issued for Schedule 1 specimens for zoo or scientific research purposes, or if the specimen is captive-bred or artificially propagated. Permits for export of native Australian wildlife and import or export of Schedule 2 species taken from the wild, will only be issued if the specimen was taken in accordance with an approved management programme. At the time of writing, the following management programmes have been approved:-

The Macropod Conservation Programme in South Australia, Part A. (for Macropus rufus, M. fuliginosus, M. robustus).
Kangaroo Conservation and Management in Queensland (for M. rufus, M. giganteus, M. robustus, M. parryi).
Kangaroo Management in New South Wales (for M. rufus, M. giganteus, M. fuliginosus, M. robustus).
The Status and Management of Bennett's Wallaby M. rufogriseus and Rufous Wallaby Thylogale billardierii in Tasmania.
Western Australia Kangaroo Management Programmes (for M. rufus, M. fuliginosus, M. robustus.
The Status and Management of the Brush Possum Trichosurus vulpecula in Tasmania.
Management of the Short-tailed Shearwater Puffinus tenuirostris in Tasmania.
Western Australia Management of Commercial Harvesting of Protected Plants other than Gazetted Rare Plants.

The Australian National Parks and Wildlife Service (ANPWS) is responsible for administering the Act while enforcement is the responsibility of the Australian Customs Service and the Australian Federal Police. Under the Wildlife Protection (Regulation of Exports and Imports) Regulations, fees ranging from A$5 to A$50 may be charged for permits granted. Penalties, under the Act, for not having a permit include a fine of up to A$100 000 and a maximum of five years in prison. An Inspector under the Act may arrest, without warrant, any person that he suspects, on reasonable grounds, of committing or having committed an offence under the Act.

The Act allows for public scrutiny of permits by requiring particulars of applications, permits granted and refused and specimens imported and exported to be published in the Gazette. Applications for review of decisions on permits may be made to the Administrative Appeals Tribunal, under the Administrative Appeals Tribunal Act 1975, by persons whose interests are affected.

The Commonwealth of Australia is to be congratulated on producing a tough piece of legislation for the control of wildlife trade but, as with any legislation, its effectiveness will depend on how well it is administered and enforced.

* a later amendment to the Schedule included honey; faeces; and specimens, other than live animals, of seven species of Macropodidae which are the personal property of persons departing from Australia and are not for commercial purposes.

Australian Parrots Seized

Australian Customs officers seized 17 Major Mitchell's Cockatoos Cacatua leadbeateri in January 1984 at Sydney Airport. The birds were en route for Bangkok, Thailand, which would appear to be one of the major 'clearing houses' for smuggled Australian birds. The courier was fined A$3000 and there is a conspiracy prosecution pending. During February, another courier was apprehended at Sydney Airport attempting to take 15 Yellow-tailed Black Cockatoos Calyptorhynchus f. funereus out of the country and was fined A$1000. The destination was again Thailand.

TRAFFIC (Australia)

First Party for TRAFFIC

For the first time ever, as far as we know, TRAFFIC has been mentioned in a party political manifesto. On 15 May 1984, in Canberra, Australia, Mr David Connolly, Opposition Spokesman on the Environment, launched the Coalition Parties' Policy on the Environment (issued jointly by the Liberal Party of Australia and the National Party of Australia). In the section on endangered species, the policy document states: "A Coalition Government will, at the international level - continue to support the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and co-operate with TRAFFIC (Trade Records Analysis of Flora and Fauna in Commerce)..."

TRAFFIC (Australia)

Illegal Japanese Primate Trade from Thailand

by Tom Milliken, TRAFFIC (Japan)

Through continuous monitoring of several major pet stores in the Tokyo Metropolitan area, TRAFFIC (Japan) has uncovered a persistent trade in Appendix I White-handed Gibbons (Hylobates lar) and White-cheeked Gibbons (Hylobates concolor). All of the apes found for sale, at prices ranging from Y200 000-Y500 000 (US$880-$2175), have been juveniles around a year old. Pet store dealers and other sources of information have indicated that the animals are coming from Bangkok, Thailand. However, Thailand banned the commercial export of gibbons before 1974. Moreover, the Japanese government has confirmed to TRAFFIC (Japan) that no permits have been issued for the importation of gibbons from Thailand; as required under CITES.

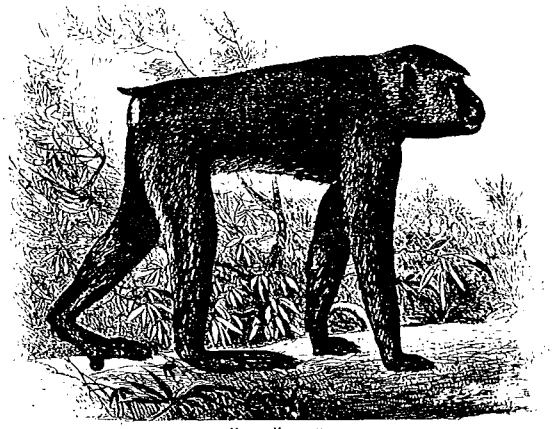
Therefore, TRAFFIC (Japan) believes that this trade is in violation of both CITES and the national laws of Thailand.

The full scale of the trade is not known but, since the summer of 1982, TRAFFIC monitors have identified the passage of at least fifteen gibbons through four pet shops. In the presence of a news reporter, the Director of TRAFFIC (Japan) openly confronted the owner of the most frequently monitored store, in February 1984, concerning the presence there of a White-handed Gibbon priced at Y500 000 (US$2175). The owner claimed that the gibbon had been purchased from an 'unknown' individual for Y200 000 (US$880) on 23 January 1984. That individual had originally brought the animal back from Thailand with the intention of donating it to a local zoo; however, no zoo would accept the ape.

The shop owner further stated emphatically that it was the first gibbon offered in his store since Japan had ratified CITES, although TRAFFIC (Japan) had identified at least six other gibbons at this pet shop since summer 1982.

Two confiscations by Japanese Customs officers in 1983 revealed at least one way in which the primate traders operate. On 7 September 1983, eleven primates were found hidden in the carry-on luggage of a Japanese national returning from Thailand. Although five animals were dead, the individual claimed that they were his pets. The remaining six specimens, one White-handed Gibbon and five Rhesus Monkeys (Macaca mulatta), were given to Japanese zoos. The gibbon died ten days later. Although the trade was in violation of CITES, the smuggler was not subjected to any further penalties beyond confiscation of the primates. Thailand's CITES Management Authorities were not notified.

On 26 September, two more primates were found in carry-on luggage belonging to another Japanese, again returning from Thailand. Again, the primates were confiscated and placed in zoos, and the offender suffered no further penalties. The primates, originally identified as a White-cheeked Gibbon and a Rhesus Monkey, were later confirmed to be a Moor Macaque (Macaca maura) and a Rhesus Monkey by the authorities at the Tobu Zoo where they were placed. The Moor Macaque is endemic to the southern part of the Indonesian island of Sulawesi and has been banned from export in that country since February 1975. The evidence would indicate that not just Thailand's native wildlife, but also illegal traffic from neighbouring countries is passing through Bangkok. In this case too, Japanese authorities failed to notify Thailand of the illegal trade.



Moor Macaque (Macaca maura)

TRAFFIC (Japan) has notified the Japanese CITES Management Authorities of this illegal trade on five occasions. Unfortunately, to our knowledge, the Government has failed to investigate the stores where gibbons have been identified. Moreover, there seems to be some question within the Government whether there is even a legal basis for such investigations to proceed, as the Investigative Division of the Customs Bureau was very reluctant to invoke Articles 110, 111 or 112 of the Customs and Tariffs Law, since there has been no precedent for doing so regarding wildlife trade violations.

Meanwhile the trade continues while the Japanese Government is evidently reluctant to investigate and take action against offenders, or to co-operate with Thai authorities to try and halt the trade.

UK Zoo Licensing Act Enforced

The UK Zoo Licensing Act 1981 finally came into force on 30 April 1984. This new legislation introduces a system of compulsory licensing and inspection for British Zoos, requiring them for the first time to achieve certain standards of wild animal husbandry and record-keeping. Existing zoos have six months from the date of enforcement to apply for licences to their local government authorities

South American Cats in Trade: The German Connection

by J.R. Caldwell

Most species of wild felids have been intensively hunted to supply the fur trade, and this pressure is one of the factors that may have caused populations of some species to become in danger of extinction. In recognition of this danger, several taxa were listed on CITES Appendix I at the inception of the Convention in 1975 and, because of the difficulties of distinguishing some of the rare species from the more common ones, the remaining taxa of Felidae were listed on CITES Appendix II in 1977.

The Federal Republic of Germany (FRG) is the world's largest consumer of the skins of wild cats. Fig. 1 shows the figures for FRG's imports of cat skins as indicated by the data contained in the annual reports of all CITES Parties and in FRG's Customs statistics for the import of whole raw skins of wild cats, for the years 1976 to 1982.

The Customs data reveal that from 1976 to 1979 FRG's imports increased from 227 000 to a peak of 373 000. Since that time the number imported has fallen steadily and was only 137 000 in 1982. The CITES statistics show the same trade pattern although in these the peak year was 1978. There is a large discrepancy between the two sets of data for 1976 and 1977 which is caused in part by some of the species involved in trade only being added to the CITES Appendices during 1977 and partly by ineffective implementation of the Convention or inadequate reporting. For 1978 the two sets of figures matched more closely but the CITES data were poorly reported, 123 000 skins from Paraguay being reported by FRG as being from "other wild cats", and in 1979 the CITES figures were again very different from the Customs data, there being a discrepancy of over 180 000 skins.

Since 1980 there has been very close correlation between the total number of raw skins imported as shown in FRG Customs statistics, and those reported by the CITES Parties. Exact correlation is not possible as the CITES annual reports do not always record the total number of skins but instead list some by weight or by

Fig. 1

Gross Import of Cat Skins by FRG (1976 - 1982)

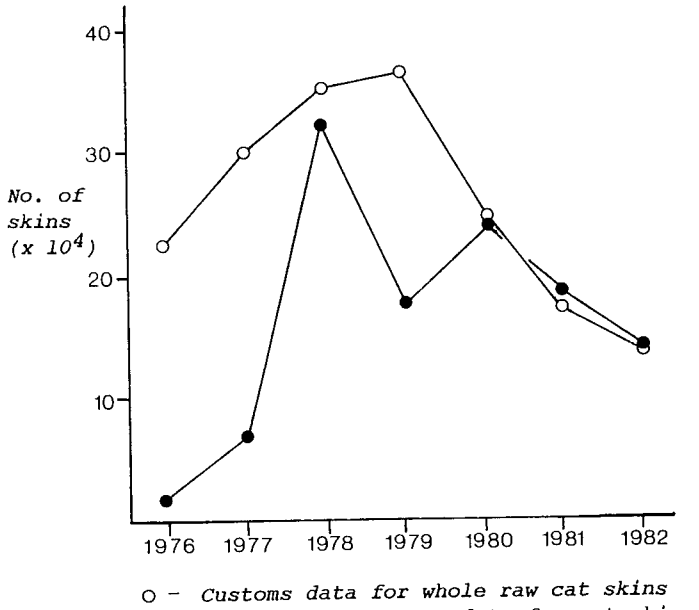
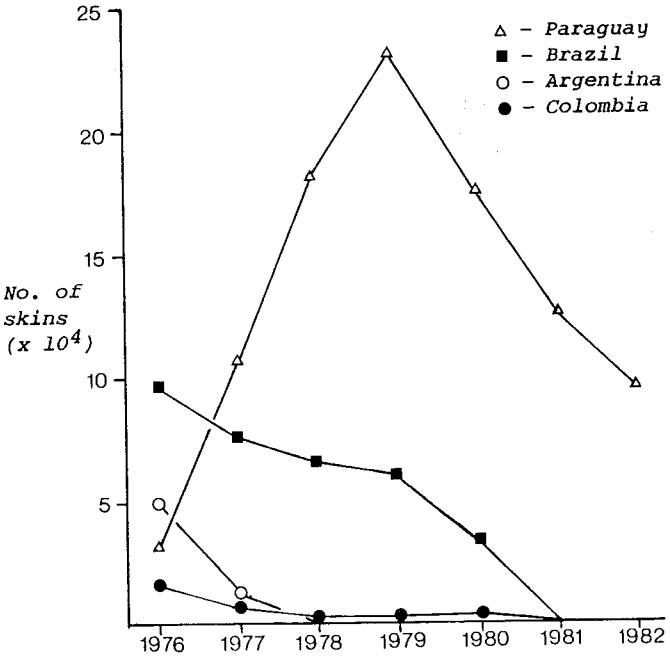


Fig. 2

Gross Import of Cat Skins by FRG from South America as shown by Customs Data (1976 - 1982)



number of shipments and also include processed or "tanned and dressed" furs which are listed under a separate category by Customs.

South America provides the majority of FRG's cat skin imports and Fig. 2 shows the main source countries as reported in FRG Customs statistics for 1976 to 1982. In 1976 Brazil was apparently the most important source, with smaller numbers of skins coming from Argentina, Paraguay and Colombia. Imports from Argentina, Brazil and Colombia decreased gradually, those from Argentina ending by 1978 and those from Brazil and Colombia by 1981; imports from Paraguay, on the other hand, dramatically increased from 29 000 skins in 1976 to over 230 000 in 1979. It is, of course, possible that the imports from Paraguay included skins originating in other South American countries but the available data do not allow determination of this. Since 1979 the number of cat skins imported from Paraguay by FRG has declined steadily, totalling 95 000 in 1982.

It should be noted that export of most products from vertebrate animals (except fish) has been banned in Brazil since 1967 and in Colombia since 1974. All species of cats except Puma (Felis concolor) are now protected in Argentina (Anon, 1982) and an export ban has been in force in Paraguay since 1981. This legislation has effectively made hunting of cats illegal and thus may have reduced the pressure on the wild populations. If the legislation is also respected by consumer nations, markets for illegally obtained skins will decrease and reduce the pressure on wild populations even further.

Closer inspection of the CITES data allows an analysis of Parties' imports from Paraguay on a species-by-species basis (see Fig. 3) and shows that four species of smaller cat have been heavily exploited. These are the Ocelot (Felis pardalis), Margay (F. wiedii), Little Spotted or Tiger Cat (F. tigrina), and Geoffroy's Cat (F. geoffroyi), the first three species being listed as Vulnerable in the Mammal Red Data Book (Thornback and Jenkins, 1982).

Analysis of the number of F. pardalis and F. wiedii skins entering world markets from Paraguay suggests a gradual decline from around 10 000 a year in 1978 to about 5000 of each in 1982, with an unexplained increase in 1980.

F. tigrina and F. geoffroyi have been much more heavily exploited, particularly since 1978 when Paraguay began to replace Brazil as the main supplier of skins to the world market. In that year Paraguay was reported to have been the source of over 14 000 skins of F. geoffroyi; the following year the number increased to 54 000 and this trend continued until a peak of almost 72 000 was reached in 1981. Around 20 000 skins of F. tigrina were reportedly imported from Paraguay in 1978 and the number has increased each year since then.

In 1982, however, a sudden change appeared in the pattern of trade. The number of F. geoffroyi skins reported as imports by CITES Parties fell dramatically to less than 9000, only 12% of the number in 1981, while the number of F. tigrina skins apparently increased to almost 51 000, 46% more than in 1981.

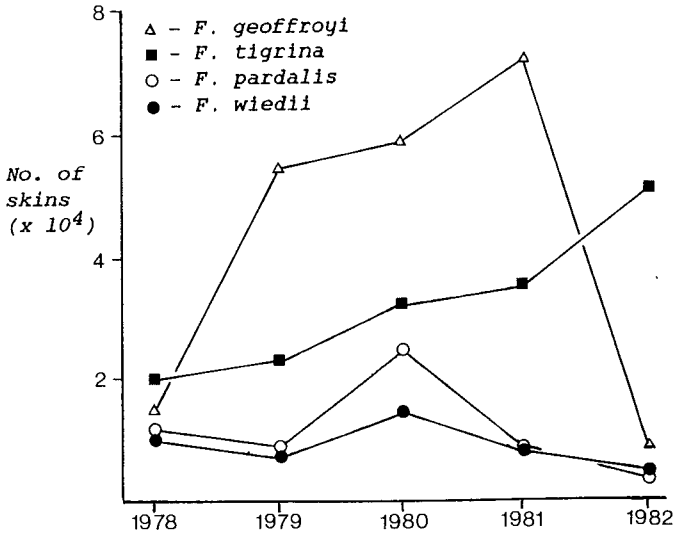
It is difficult to determine the reasons for this change and several possibilities exist. One explanation is that the species involved could have been incorrectly identified, either in 1982 or earlier.

However, inspection of the Customs statistics reveals that the value of cat skins being imported by FRG from Paraguay fell from DM 55.7 a skin in 1981 to DM 37.2 in 1982, a decrease of 33%. This may suggest that the value of skins declined or merely that the German fur buyers turned to cheaper skins, under pressure of economic recession, and that these were F. tigrina. In this case the fur dealers in Paraguay may have been left with a large number of unsold skins of F. geoffroyi at the end of the 1982 season which could be expected to appear on the market at some future date.

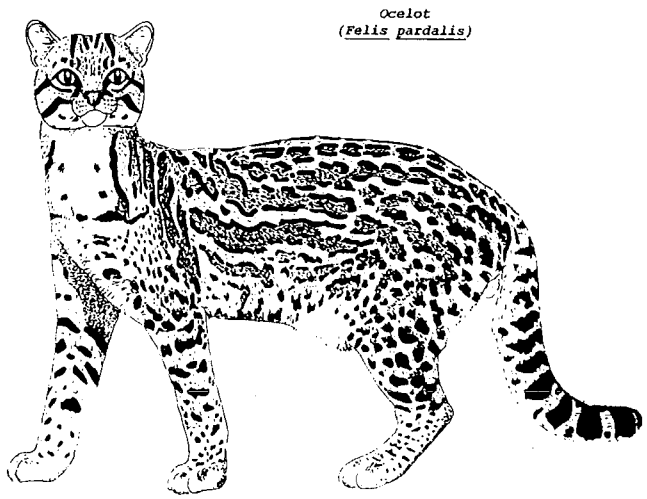
The possibility also exists that F. geoffroyi populations in the wild have been reduced to such an extent that they do not occur so frequently in traps or that trapping them is no longer economic. However, Melquist (1984) reports that this species is still common in both Paraguay and neighbouring Argentina so this explanation would seem to be rather unlikely.

Fig. 3

Paraguay's Exports of Cat Skins as reported by other CITES Parties (1978 - 1982)



A recent review of South America's cat populations by Melquist (1984) concluded that F. geoffroyi, F. pardalis and F. wiedii were probably harvestable and that F. tigrina was possibly so. Current legislation precludes killing for trade in much of South America and there has been a substantial decline in FRG's imports of cat skins. Although the observed trend has been a steady decrease in the number of skins of smaller cats entering the world market since 1980, the recent sudden decrease in F. geoffroyi and the associated rise in the number of F. tigrina skins remains unexplained. It is hoped that continued monitoring of the fur trade may help to provide an explanation.



Ocelot (Felis pardalis)

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Teak Trucked to South Africa

Hundreds of tons of 'teak' tree trunks turned up recently in Grootfontein, Namibia, before all but disappearing again, apparently in containerised trucks bound for South Africa, according to the Windhoek Observer (April 1984). The Observer reported that the trunks are "so heavy and so aged that they are not from South West Africa (Namibia)."

The species referred to is probably Zambezi Teak Baikiaea plurijuga, which has a high value due to its relative scarcity and its durability. It occurs in Zimbabwe, W. Zambia, S. Angola and the Caprivi strip.

Although the source of the wood is not known, the Observer implies that it may be Angola and notes that the Luanda Government is not known to have given any concession for exploitation of teak.

Malaysian Logging to be Curbed?

Some 3.1 million m^3 of timber and timber products, valued at US$1.2 billion were exported from Peninsular Malaysia in 1983, the Malaysian Primary Industries Minister Datuk Paul Leong announced recently. This represents an increase of 0.3% in volume and 8% in value over the 1982 figures and, according to Sahabat Alam Malaysia (SAM), maintains Malaysia's position as the world's biggest timber exporter. SAM is particularly concerned about the demands of Japan USA and Europe.

In reporting the latest figures, SAM adds that, 'In view of the alarming current average logging rate of 300 000 ha a year, the Malaysian authorities have directed that the annual logging rate be scaled down from 365 967 ha in 1978 to about 149 000 ha in 1986.'

Zimbabwe's Ivory Carving Industry

by Esmond Bradley Martin

Zimbabwe now has the largest ivory manufacturing industry in eastern or southern Africa yet it is little more than a decade old.

Nick Gahchan, an Israeli, started Zimbabwe's first ivory carving factory, the Ivory Kraal Company, as 'an experiment', in Bulawayo, in November 1973. Since the local people, the Ndebele, had experience in carving stone and wood, Mr Gahchan hired them as carvers. He obtained raw ivory from the Department of National Parks and Wildlife Management (DNP) at the equivalent of US$15 a kg in 1973, and he also purchased some from African traders, without inquiring how they obtained it. Bulawayo was the logical place for ivory manufacturing to start. It has the country's main taxidermy firms; it is geographically closer to the wildlife parks and reserves than the capital, Harare, and, until raw ivory imports were declared illegal, in 1982, dealers in Bulawayo probably imported more ivory than those in any other town in Zimbabwe.

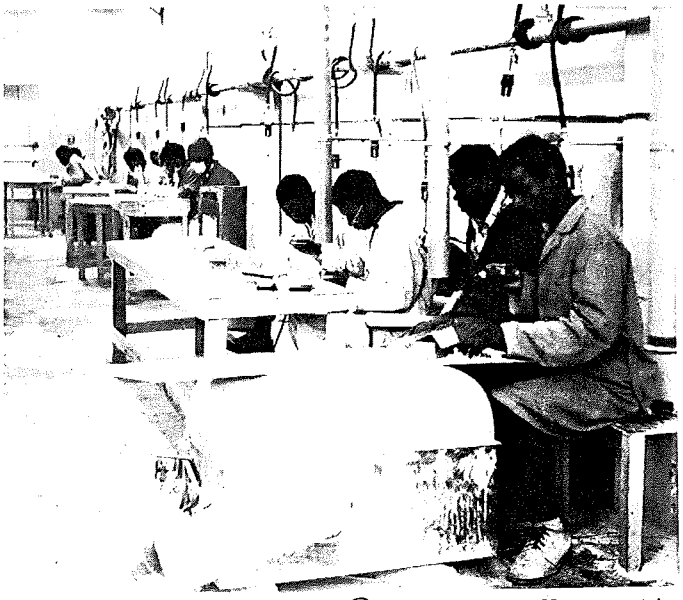
Mr Gahchan's craftsmen, all male, made ivory jewellery; although crude in comparison to that from Hong Kong, it sold well. By 1977 Mr Gahchan's workforce had expanded to 40 men, but a year later he sold his factory because he had become active in the Rhodesian Civil War and no longer had time to supervise his employees.

Soloman Gruer, another Israeli, bought the business and, with his brother, Raphael, manufactured ivory jewellery and animal carvings. In 1980 Raphael left because he 'was more interested in producing higher quality carvings from ivory', and went to Harare where he set up Rado Arts which became the most important ivory manufacturing business in the country, in spite of competition from other Harare firms.

In mid-1983 there were 182 ivory carvers and finishers officially registered by the DNP in Zimbabwe, and only 20% were in Bulawayo, compared to 75% in Harare. Based on the number of craftsmen in each company, three of the four largest ivory businesses are located in Harare. By far the largest is Rado Arts, with 53 men all working in one large room, attached to a retail shop. Two of the carvers are from Malawi, but most of the others are Shonas. In 1982 when there were three fewer craftsmen at Rado Arts, they used approximately 4.75 tonnes (t) of raw ivory, or 95 kg a worker for that year. In contrast, the Chinese ivory carvers in Hong Kong in 1982, using similar types of electrically powered dentist drills for their work, used about 270 kg each. Their much higher productivity is partly due to working longer hours and producing items which require less time to make. Nevertheless, Zimbabwe's ivory workers earn roughly the same as those in Hong Kong; that is the main reason why Hong Kong's ivory pieces have been able to compete favourably in price on southern African markets. However, to protect the new industry, Hong Kong carvings are no longer allowed into Zimbabwe.

The ivory craftsmen in Zimbabwe who work full time are usually paid weekly and earn the equivalent of US$55-200 for a five-day week, depending on the type of work they do. For instance, polishers and makers of the more simple jewellery earn US$55-80, and those who carve animals, tribal heads and whole tusks receive US$100-200. Some also receive an annual bonus. There are, in addition, carvers who are paid only for what they produce. Overall the average weekly earnings of a Zimbabwean craftsman are about US$110.

In October 1981 the DNP instigated a licensing system to register all people working in the ivory industry. The idea behind this was threefold: to find out exactly who was involved in ivory; to be in a position to control the industry; and to prevent illegal ivory from being sold to carvers. Every person working in ivory must be licensed and must either own his business premises or be employed in a factory (people are not allowed to work in city streets independently or to carve at their homes). Owners of ivory businesses pay a registration fee equivalent to US$50 every year, and ivory craftsmen US$5. Of the 182 ivory craftsmen (mostly carvers) registered in 1983, 136 worked in Harare, 36 in Bulawayo, nine in Victoria Falls and one in Mutare. However, not all carvers are registered and DNP may even be wrong in claiming that 95% are. On the basis of interviews I held, I suspect that there are at least 15, perhaps 30 self-employed carvers living in rural areas who bring their finished pieces into town for sale. They probably do not produce very much and in any case legitimate businessmen will not buy from them. Fortunately, since all that is legally required for registration is a permanent place of work, approved by the local authority, and a relatively small licensing fee, most carvers probably do not find it worthwhile to try to evade the law.



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The majority of people working legally in ivory are Shonas and Ndebele, and only one is a woman. There are a few expatriate European carvers, but probably the best known carver is a Zimbabwean of Greek ancestry, Patrick Mavros who owns a company on the outskirts of Harare with nine employees. Primarily they make high quality figures of animals but they also produce jewellery. Mavros is also the only person in the country carving ivory netsukes, the traditional Japanese-type ornaments.

There are 39 registered premises for manufacture of ivory carvings of which 26 are located in Harare, ten in Bulawayo, two in Victoria Falls and one in Mutare. The four largest are owned by the Gruer brothers, by Patrick Mavros and by one other Greek. Together, these four employ 55% of the registered ivory craftsmen.

Whole tusks, on which groups of elephants are generally carved, are the most expensive items sold. They can retail for the equivalent of as much as US$5000, depending on the size of the tusk and the amount of carving on it. Tribal heads and ivory chess sets are Zimbabwean specialities; the latter retail at US$750-2700 and the heads for US$400-1500. Animal sculptures are most popular, elephant sculptures being most in demand, but rhinos and hippos follow closely. Domestic animals or wild animals not native to Zimbabwe are very rarely subjects of sculpture here. Animal carvings vary considerably in quality and price. For example, in 1983 the price asked for a simple 2.5 cm (one-inch) elephant at Rado Arts was only US$7, and in the same shop a 3.75 cm (inch-and-a-half) rhino was US$18 (excluding sales tax).

The best animal sculptures can sell for as much as US$2000, e.g. a pair of 5 cm (two-inch) wildebeests, and the more expensive figures are signed by their carver.

The ivory left over from animal carvings is used for making jewellery; in fact, most worked ivory in Zimbabwe ends up in brooches, rings, earrings, necklaces, pendants and especially bangle bracelets. In 1983 a small brooch cost the equivalent of about US$8 while the cheapest type of bangle was US$10. Key rings ranged in price from US$4-8, and thimbles were about US$11. Occasionally, one sees tables inlaid with ivory. There are also cigarette lighters, lampstands, picture frames and cups.

It appears that, unlike Botswana or South Africa, the market for worked ivory in Zimbabwe consists largely (perhaps as high as 65%) of citizens and foreign residents; tourists buy less than half of the items produced. Moreover, the two largest ivory manufacturers have almost no direct export business. They say this is because the paperwork necessary for export is too time-consuming; however their prices seem too high to be competitive abroad, and they can sell everything they make on the local market which has been growing fast, with the supply, since 1978.

The main reason for the ivory industry's expansion is that citizens and foreign residents have been buying large quantities of ivory pieces in the hope of being able to sell them elsewhere (mainly in South Africa) for hard currency. Zimbabwe has very strict currency exchange controls, partly inherited from the Unilateral Declaration of Independence (UDI) era. For several years there have been severe restrictions on the amount of money that Zimbabweans can take out of the country with them. Currently the limit is US$250 worth of personal belongings a year. If a citizen wishes to export any item or a single consignment which is valued over US$50, he must obtain a permit from his bank and have it approved by the Customs authorities. Since 1978, many whites have emigrated from Zimbabwe, and they too have been very limited in what they may legally take with them. Only US$1000 a family was allowed in 1982, plus personal possessions (except a new car, which would not be permitted). Ivory carvings are often declared as household possessions, and in many cases this is probably a way of circumventing exchange controls. However, to move ivory out of the country an export permit is required from the DNP and an export licence from the Ministry of Trade and Commerce and/or the Reserve Bank.

In fact, purchasing ivory carvings or jewellery in Zimbabwe for investment purposes or to circumvent the harsh foreign exchange laws is not wise because Zimbabwean ivory commodities are more expensive than in many other ivory manufacturing countries. Many Zimbabwean purchasers of ivory carvings are unaware of this, yet they buy ivory pieces in order to sell them to retailers in South Africa where on average the mark-up on items bought for resale is about 100%. Thus, Zimbabweans who buy items at home, at retail price, to sell to shops in Johannesburg (the main market) are bound to lose at least 50%. Knowing the predicament of Zimbabweans who want foreign exchange, and being continually approached by such people, many retailers in South Africa are said to exploit the situation. For example, the manager of a shop in Johannesburg or Cape Town may ask a Zimbabwean when he must return home, then say that he needs time to consider the price he could pay for particular carvings and tell the Zimbabwean to come back a few hours before his departure. When the Zimbabwean returns he may be offered as little as one-third of what he paid for the carvings and there will not be enough time for him to look for a better deal. Over and over again Zimbabweans are conned by these tactics.

On recent trips to South Africa I have seen a lot of Zimbabwean ivory items; these carvings are especially predominant in the Carlton Centre Shopping Complex in Johannesburg, where they outnumber those from Zaire, Malawi, Zambia and Botswana combined. It is easy to distinguish Zimbabwean from South African carvings by style alone, but also the Zimbabweans produce certain ivory items that the South Africans do not, such as chess sets.

South Africa's ivory manufacturers are disturbed by the competition from Zimbabwean carvings often illegally exported from Zimbabwe and acquired by the retailers at huge discounts. Moreover, if they crack or are imperfect in any way the customer cannot have them replaced, and in the long run this may hurt the ivory industry in South Africa. However, it is not realistic to expect retailers to forego the opportunity of buying these pieces when they can do so at such low prices.

Since the beginning of Zimbabwe's worked ivory industry, people who buy ivory as a means of avoiding the exchange controls have been the main purchasers, and they are even more important now that tourism in Zimbabwe is in decline (the number of foreigners visiting Zimbabwe from January to May 1983 was down by one-third from the previous year). Currently the ivory industry of Zimbabwe is thriving, and sales are comparable with those of 1982, which had been the best year so far.

That Zimbabwe even has enough elephants to support an ivory industry today is remarkable. At the beginning of this century, there were only a few thousand elephants in the entire country and a human population of half a million. In 1983 there were eight million people and 50 000 elephants. These are unusual statistics for any country in Africa, and are the consequence of a superbly managed wildlife conservation policy.

There was not much demand for raw Zimbabwean ivory until fairly recently. The official statistics show that an average of just over 1 t was annually exported from 1906 until 1949. In that period the elephant population was still small.

There were four Zimbabwean ivory dealers active before World War II, all being Jewish. Two worked in Bulawayo, one in Livingstone and one, Arthur Levy, in Harare, purchased about 150 kg a year between 1930 and 1939. He told me that in those days he paid US$2.50 a kg and shipped the ivory to Hale and Sons in London and to a piano key manufacturer in Cornwall, UK, who paid him US$4 a kg. He said there were few ivory dealers in Zimbabwe fifty years ago because most Zimbabweans were uninterested in wild animal products and hardly anyone wanted to take the risk of buying ivory from the professional hunters ('who were a scruffy lot, anyway') shipping it to London and waiting many months to be paid for it. The price of ivory remained low in Zimbabwe until the 1950s, and even then no other part of the elephant was of commercial value, 'although you might sometimes find someone to pay you a shilling (US$0.25) for the hair from an elephant's tail'.

After World War II, much more ivory was exported from Zimbabwe because the elephant population had increased substantially. From 1961 to the end of 1982, the DNP sold 167 548 kg for US$4 029 773, an annual average of 7616 kg. In addition, the former African Development Fund (now District Development Fund) sold somewhat less than 5 t over this period, and the Forestry Commission sold about 3 t in total. From 1961 to May 1977 almost all the ivory sold by the various government departments in Zimbabwe was sold for export, owing to the small demand within the country.

However, when the DNP held its first ivory auction, in 1977, the domestic ivory manufacturing industry had already started, and most of the ivory went to local buyers. Before June 1983 nine more auctions took place, and a total of 44 532 kg was purchased, primarily for domestic use. While the Department wishes to encourage the fledgling Zimbabwean ivory industry, it does not want to stop earning foreign currency from its ivory. Therefore, it also holds sales by tender for hard currency only; from January 1977 to June 1983 there were six such sales in which 16 548 kg were sold. Of course, some of the auctioned raw ivory bought by local buyers (especially

the larger tusks) is eventually exported, but about 75% is officially 'embargoed' so that it remains within the country for the local carvers. Anyone who buys 'non-embargoed' ivory at auction may sell it abroad if he wishes, but must bring back to Zimbabwe the money earned from its sale.

For the past three years the DNP policy has been to sell on tender for foreign exchange roughly half of its ivory. The other half is put into local auctions which are held twice yearly in the belief that two auctions are better than one to keep the price high. The Department also sells small quantities of ivory to individual carvers who may not have enough capital to bid for an entire lot at auction. The prices such carvers pay are based on the prices achieved for equivalent weights of tusks at the last auction. From July 1982 to July 1983 close to US$12 000 worth of small consignments went to craftsmen for US$15-26 a kg for tusks of 2-3 kg in size. The money earned by the Department in this way is not included in the statistics on sales by tender or auction.

Zimbabwe's ivory manufacturers have complained bitterly to the DNP and myself that the Department is selling too much ivory by tender for foreign exchange, leaving too little available for local carvers. This is evidenced by the strong competition for ivory at auction and the high prices achieved in comparison with those which foreign buyers pay by tender. For example, in October 1982, 7 t of ivory having an average tusk weight of 3.49 kg sold by tender for export at US$37.72 a kg (approximately the world market price), while one month earlier at the Department's ninth auction, 8367 kg with an average tusk weight of 4.39 kg went for the equivalent of US$69.41 a kg, or 84% higher. More recently, in June 1983, 1021 kg with an average tusk weight of 2.97 kg fetched US$37.30 a kg in foreign exchange, slightly above the world market price. In the same month, at the Department's tenth auction, 3682 kg with an average tusk weight of 2.7 kg sold for the equivalent of US$58.99 a kg, or 58% higher than the export price; the average price then being paid by Zimbabwean buyers for a 1 kg tusk was US$25 and for a 6 kg tusk US$80 a kg. One carver bought a pair of tusks weighing 29 and 30 kg each for US$193 a kg - which would have been an exceptionally high price on the international market. The prices paid by Zimbabweans for ivory appear particularly ironic because in July 1983 the Department was holding in store, for future sales, a record amount of 12 t of ivory. Furthermore, between 4000 and 6000 elephants were scheduled for culling from August to October 1983, which might produce a further 20 t of ivory.

Why do the Zimbabweans pay such high prices? For a full understanding there are five factors to consider: (1) In September 1982 the Zimbabwe Government banned all ivory imports, including supplies from Botswana, so the only legitimate source left was the Department's auctions. (2) Since the ivory carving industry in Zimbabwe was still growing in 1982, with prospects of greater expansion in 1983, the buyers wanted more ivory than ever before and the increased competition raised the prices achieved at auction. (3) Some of the ivory manufacturers feared that because of economic problems the Government would, in the future, want a larger portion of the available ivory sold by tender for US dollars, and decided that they had better buy as much ivory as possible before that happened. (4) The buyers were not aware that there is a world surplus of raw ivory, and that soft ivory on the international market has declined in price from US$60 a kg in 1980 to US$37 in 1983 for an average 5 kg tusk. (5) There is one man who started buying at the September 1982 auction, who was willing to outbid many of the regular buyers. He exported his ivory to Hong Kong, making no profit at all on the transaction but, having received a large amount of foreign exchange from its sale, was able to obtain permission from the Zimbabwean Reserve Bank to use a percentage of that money to pay for the import of luxury items to sell locally. Since foreign-made watches, films,

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calculators and cosmetics seldom appear on the market in Zimbabwe, he has been able to make large profits from these Taiwanese and Japanese imports.

Some of the ivory sold in Zimbabwe comes from elephants which died naturally or which were hunted in safari areas, on communal lands and on a few commercial farms. There were also considerable amounts of ivory legally imported from Botswana before the import ban came into effect, and illegal ivory is available from animals poached in Zimbabwe and from suppliers who smuggle it in from neighbouring countries. Some ivory is collected from dead elephants by the DNP.

However, most of the ivory does come from culling operations by the DNP. Due to the annual increase of about five percent in Zimbabwe's elephant population since the beginning of this century, certain National Parks, safari areas, tsetse fly control areas and tribal lands have produced a surplus of elephants. Starting in the early 1960s, culling was introduced in and around Wankie National Park and the Sebungwe region. By the 1970s elephant culling had become a regular practice also in Gonarezhou, Chizarira, Matusadona and Mana Pools National Parks, in the Zambezi valley and the southeast lowveld. From 1960 to 1979, according to Dr David Cumming (Chief Ecologist, DNP), 18 216 elephants were killed in culling operations in Zimbabwe. Since the policy of the Department is to eliminate entire herds, in order to reduce habitat disturbance, the average tusk weight is small. From January 1973 to June 1983, the average tusk so obtained was just 3.31 kg. The inclusion of infant elephants in the culling operations means that an average of only 1.7 tusks per animal are obtained.

According to the figures published by the Central Statistical Office, 21 192 kg of raw ivory were imported during the three-year period from 1979 to 1981. The majority of this ivory came from Botswana. The Zimbabwean authorities stopped these imports not only because they wished to conserve their foreign exchange, but also because they were informed that some of the ivory did not originate from Botswana, as officially stated, but had come from Zaire and Zambia into Botswana where legal documents were obtained for shipment to Zimbabwe as Botswana ivory. This so-called 'laundering' was unacceptable to the Zimbabwean Government.

Since the middle 1970s, there has been an increase in the number of elephants poached in Zambia. This is due to several factors, including a decline in the economy of Zambia, a marked decrease in the efficiency and morale of the staff in the National Parks and Wildlife Service and

a sharp rise in the price of ivory from 1972 to 1978 on the world market which in turn encouraged middlemen to purchase more tusks from illegal hunters. Although Zambia still has a large elephant population, probably in excess of 100 000, many hundreds of elephants are now being poached each year, especially in the Luangwa Valley. Phil Berry, Warden of the Save the Rhino Trust's Luangwa Anti-Poaching Unit, told me that perhaps 15 t of Zambian ivory are being illegally exported every year. However, most of it does not go to Zimbabwe, but to Malawi, Burundi and South Africa. The poachers in Zambia sell the ivory to Zairean, Somali and Kenyan middlemen as well as to fellow Zambians for the equivalent of US$9-18 a kg. The Zambian ivory which does appear in Zimbabwe is said usually to have been transported in lorries with false compartments or in cars; but, as stated above, the quantity is relatively small. Neither does much ivory come into Zimbabwe from Zaire.

The entire eastern border of Zimbabwe which faces Mozambique is hardly patrolled, and there have been difficulties with Mozambique poachers, especially in Gonarezhou National Park where in 1981 and 1982 about 80 elephants (out of a population of about 6000) were poached by one gang of Mozambique men armed with SKS rifles. The ivory they obtained was sold for US$9 a kg in Zimbabwe, where they could buy essential food commodities.

It is obviously difficult to ascertain how much people will pay for illegal ivory in Zimbabwe, but in one instance in 1983 an Indian trader in Mutare (near Mozambique border), who was caught, disclosed under interrogation that he had bought some poached ivory for US$15 a kg from a native Zimbabwean who had obtained it from an ex-FRELIMO fighter.

In the late 1970s some poachers from Botswana crossed over into the south-west corner of Wankie Park and shot elephants; the ivory from these was moved into Botswana where it is said to have obtained proper documentation before being taken to Bulawayo for sale. Several people told me that dealers in Bulawayo used to buy such ivory, but that few if any do today because of the risk of being caught in possession of it. Now, poached and illegally imported ivory in Zimbabwe is believed to be purchased mainly by ivory carvers who live outside the larger towns.

The poaching of elephants and the illegal import of raw ivory constitute only a minor problem in Zimbabwe. The control over the ivory industry is much stricter than in any other country in the region. Every legal tusk is marked with a steel punch dye showing Zimbabwe (ZW) as the country of its origin, the year it was obtained, how much the tusk weighs and its individual number in official records. Each dealer who handles ivory must have a dealer's licence. At the end of every month the ivory manufacturers are required to complete a form stating the amount of ivory held at the beginning of that month, how much was used in the making of various items and how much ivory remains in stock, including the ivory dust from carving. In addition, any private person wishing to possess a piece of ivory must obtain an "Ivory Certificate of Ownership" in his own name, with the serial number and weight of the original tusk. To enforce these regulations and to combat organized poaching in general, the DNP employs a police-trained officer to head a team investigating possible irregularities in the wildlife trade, which is mainly of ivory. The team has search and seizure powers and they check all ivory-manufacturing premises.

Practically, the only major abuse in Zimbabwe's ivory trade is the illegal export of commercial quantities of ivory carvings to South Africa. This could be halted if the Government wanted to initiate more thorough checks at the ports of exit but such a halt would severely restrict the market for locally manufactured ivory pieces and would lead to a loss of employment for many carvers.

There are two ways to estimate how much ivory is annually consumed by the manufacturing industry in Zimbabwe. The first way is to determine how much is available, since the dealers do not stockpile supplies but generally consume all the ivory they can obtain. Statistics of imports and exports of ivory, as of other commodities, are not available for the period 1967 to 1978 because of Rhodesia's UDI. From 1979 to 1981, however, a yearly average of 7 t of ivory were imported, and 4.2 t were available from auctions each year. In addition, individual carvers who buy small quantities from the DNP have obtained a maximum of 1 t a year recently. Ivory from elephants poached in Zimbabwe and from illegal imports from Mozambique, Zaire and Zambia perhaps contributes another 2 t. In total, about 14-15 t have been on the market for Zimbabwean carvers each year.

The other way of ascertaining how much ivory is used is to multiply the amount of ivory used per carver by the number of craftsmen working in the industry. The 50 carvers at Rado Arts consumed an average of 95 kg each in 1982. At this rate the 200 or so carvers in Zimbabwe, working diligently, would consume a total of 19 t of ivory a year. In practice some only work part time, and some spend long periods completing works of art, thus using less ivory on average. Probably on average each craftsman consumes about 75 kg of ivory a year: thus the total for Zimbabwe would again be about 15 t.

What is the value of Zimbabwe's manufactured ivory trade? The wholesale value of its annually available raw ivory is US$975 000. In neighbouring South Africa, which has a similar type of ivory manufacturing industry, on average each craftsman working in the largest establishment produces items worth US$30 300 wholesale a year. If we apply this rate in Zimbabwe, assuming there are 150 carvers working full time, they would be making items worth US$4 545 000 wholesale. The annual retail value of these would be about US$8 000 000. Assuming there are approximately 200 carvers, the total earnings of the Zimbabwean craftsmen would be in the region of US$1 150 000 a year.

Since 1973, when the ivory industry began in Zimbabwe, it has grown every year. While it exists mainly because citizens and residents want to buy ivory carvings and jewellery as a means of obtaining hard currency abroad, the Government has not specifically ruled against this. Moreover, Zimbabwe's ivory industry provides hundreds of jobs directly and indirectly and is responsible for turning out many high quality carvings based on traditional African designs.

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It has often been pointed out that controls on the ivory trade are meaningless unless they are efficiently and honestly enforced. Zimbabwe leads tropical Africa in exemplifying how well this can be done. During ten years of rational exploitation of Zimbabwe's expanding elephant population, the Government has fostered a viable and economically productive ivory trade that has proven to be an asset both to the Department of National Parks and

Sales of Raw Ivory by the Zimbabwe National Parks and Wildlife Management Department, 1961-1983 (June)

	1961	1963	1965	1966	1968	1969(Sept)
No. of tusks	1892	1695	3105	3156	2731	910
Total weight (kg)	11150	11342	16240	13990	13573	4537
Average weight of tusk (kg)	5.89	6.69	5.23	4.43	4.97	4.99
Value ($)	47158	44341	106481	86176	54550	18732
Average price per kg ($)	4.23	3.91	6.56	6.16	4.02	4.13
Sold by	Direct tender mostly exported	Direct tender mostly exported	Direct tender mostly exported	Direct tender mostly exported	Direct tender mostly exported	Direct tender exported

	1969(Nov)	1970(Feb)	1970(Oct)	1972(May)	1972(Sept)	1972(Oct)
No. of tusks	922	927	918	1971	3016	1171
Total weight (kg)	4596	4576	4574	9114	9075	1452
Average weight of tusk (kg)	4.98	4.94	4.98	4.62	3.01	1.24
Value ($)	19834	23654	36298	91021	99450	14592
Average price per kg ($)	4.32	5.17	7.94	9.99	10.96	10.05
Sold by	Direct tender exported	Direct tender exported	Direct tender exported	Direct tender exported	Direct tender exported	Direct tender exported

	1973(Feb)	1973(March)	1977(May)	1977(Nov)	1978(March)	1978(May)
No. of tusks	c. 122	3207	c. 858	c. 1073	c. 1317	443
Total weight (kg)	417	7500	3318	2622	3339	3000
Average weight of tusk (kg)	c. 3.42	2.34	c. 3.87	c. 2.44	c. 2.54	6.77
Value ($)	6387	258988	75842	102110	102725	121153
Average price per kg ($)	15.32	34.53	22.86	38.94	30.77	40.38
Sold by	Direct tender exported	Direct tender exported	1st auction c.800 kg exported	2nd auction No export	3rd auction c.2000 kg exported	Direct tender exported

	1978(June)	1978(August)	1978(August)	1978(Oct)	1979(June)	1980(May)
No. of tusks	1290	114	c. 876	1409	1706	911
Total weight (kg)	2836	1726	3437	4779	3980	4686
Average weight of tusk (kg)	2.20	15.14	c. 3.92	3.39	2.33	5.14
Value ($)	143531	131695	237033	295188	252142	307292
Average price per kg ($)	50.61	76.30	60.97	61.77	63.35	65.58
Sold by	Direct tender exported	Direct tender exported	4th auction c.200 kg exported	5th auction c.1000 kg exported	6th auction c.1000 kg exported	7th auction c.500 kg exported

	1981(June)	1982(Sept)	1982(Oct)	1983(Jan)	1983(June)	1983(June)
No. of tusks	c. 1606	1908	2007	319	1365	344
Total weight (kg)	6322	8367	7000	1000	3682	1021
Average weight of tusk (kg)	c. 3.94	4.39	3.49	3.13	2.70	2.97
Value ($)	508605	580756	264039	39452	217183	38084
Average price per kg ($)	80.45	69.41	37.72	39.45	58.99	37.30
Sold by	8th auction c.800 kg exported	9th auction No export	Direct tender exported	Direct tender exported	10th auction No export	Direct tender exported

Totals from 1961 to 1983 (June)

No. of tusks	c.43219
Total weight (kg)	137251
Average weight of tusk (kg)	3.17
Value ($)	4324492

NB All values are given in US dollars.

Source: Unpublished reports of the Department of National Parks and Wildlife Management, by courtesy of John White.

Wildlife Management and to the community of carvers. Local sales of ivory, meat and hide from culled elephants meet a demand that otherwise might be met by poachers. Ivory has also become a source of foreign exchange for the Government through its sales by tender. Indeed, Zimbabwe has shown that proper management of elephants can turn ivory into a renewable resource of great benefit. Zimbabwe's system is to be commended, and were other African countries to follow this lead, the conservation of African elephants would be ensured.

Acknowledgements

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All photographs show ivory carvers at work in Harare

* * * *

German Campaign to Ban Turtle Imports

by Arnd Wünschmann, TRAFFIC (Germany)

For two years WWF/TRAFFIC (Germany) and other conservation organisations have been working together on a "Save the Turtles" campaign, aimed at banning the import of all marine turtle products, in particular Green Turtle Chelonia mydas meat from the Cayman Islands and turtle shell from Indonesia and some Caribbean countries. This action has received increasing public attention and nation-wide media coverage.

The turtle meat trade reached its peak in 1981, when 126 tons (equivalent to about 28 000 animals) entered the German market with 'bred in captivity' documents from the Cayman Turtle Farm. Imports of turtle shell have been permitted with 'pre-Convention' documents that make them appear legal.

In May 1983, WWF/TRAFFIC (Germany) organized an undercover investigation in Indonesia, and discovered that turtle shell is offered for export in unlimited quantitites and that 'pre-Convention' documents are readily available in exchange for a cash bribe. Inquiries are now going on in Jamaica.

Under public pressure in 1983, the German Parliament became involved in the matter as a result of questioning by the Green Party. The Parliamentary Commission for Agriculture held a hearing on the motion for a ban on imports of turtle products, in which participants included the head of WWF/TRAFFIC (Germany), a representative of the soup industry and various scientific experts. The conservation argument was greatly supported by written statements from the Sea Turtle Rescue Fund in Washington DC. After the hearing, the Commission passed a recommendation to the Parliament of F.R. Germany to approve the motion. In November 1983, the plenary session of the German Parliament unanimously voted in support of the following decision:

> The Federal Government is requested to ban immediately, at the latest on January 1, 1984, the import of marine turtles and products thereof for commercial purposes into the Federal Republic of Germany and to plead to the EEC Commission to guarantee, that after January 1, 1984, no other member state of the EEC will grant import permits for marine turtles and products thereof for commercial purposes.

However on 1 January, 1984, the EEC Regulation on CITES became effective and the Federal Minister for Agriculture, who is responsible for CITES implementation in F.R. Germany, stated that no stricter measures (as allowed under Article 15 of the Regulation*) would be taken at a national level.

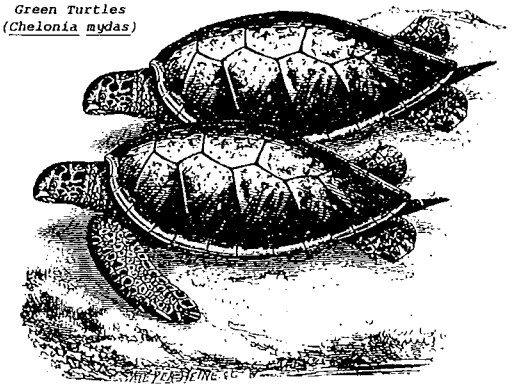
The German Federal Government has stated that it will not allow imports of turtle products from other EEC states if they have been imported into or taken from the wild in any EEC member state or its overseas departments (e.g. Réunion, Guadeloupe or French Guiana).

WWF/TRAFFIC (Germany) believes that this statement does not go far enough and, further, that it does not comply with the German Parliamentary decision requesting the Government to implement a ban on marine turtle imports. Under Article 6.1 of the EEC CITES Regulation, commercial trade in marine turtle products will still be permitted for specimens acquired 'pre-Convention' or 'pre-Regulation', and for specimens of species bred in captivity; yet these exemptions are known to have been abused.

WWF/TRAFFIC (Germany) has announced that it will continue its pressure on the German Government to introduce a national ban or work towards an EEC ban on imports of all marine turtle products.

Meanwhile, a popular German food-store chain with 2 700 branches, and the LUFTHANSA Catering Service, as well as a regional consumer centre and numerous well-known gourmet restaurants, have all publicly announced that they will boycott turtle soup and any other products involving the commercial exploitation of marine turtles.

Green Turtles (Chelonia mydas)



*Article 15 of the EEC CITES Regulation permits the adoption of stricter national measures by individual EEC states for the purposes of conserving a species or a population of a species in the country of origin.

Nile Crocodile Skin Trade (1975-1982)

by J.R. Caldwell

The Nile Crocodile (Crocodylus niloticus) is widely distributed throughout Africa south of the Sahara, with the possible exception of Djibouti, Guinea, Guinea Bissau and Equatorial Guinea (Groombridge, 1983). It is frequently regarded as a dangerous pest and many attacks on humans are reported each year. In the past, hunting for both sport and the leather industry resulted in many populations becoming reduced to critically low levels, in recognition of which the species has been listed on CITES Appendix I since the inception of the Convention (1 July 1975).

The two countries most heavily involved in the reptile-leather processing industry, France and Italy, and the producer nations, Botswana, Sudan, Zambia and Zimbabwe all entered reservations against this listing. However, the C. niloticus population of Zimbabwe was transferred to Appendix II from 29 July 1983 in recognition of the success of that country's crocodile conservation programme and of the crocodile ranching operations there.

All data used in this report were taken from the annual reports of the Parties to CITES. They were analysed by computer to calculate both gross and net imports and exports for all countries reported to be involved in the trade, thus allowing estimation of the minimum number of skins entering trade each year.

Calculation of the precise number of skins exported from Africa is difficult because most of the major producing countries have not submitted annual reports or were not party to the Convention during all or most of the period covered by this report (1975-1982). Approximate totals were therefore estimated from analysis of the 'countries of origin' of the re-exports reported by the major importing nations. This method is far from ideal, and may not accurately reflect the original export pattern, as the data may include skins stored for some years or that have passed through several intermediate countries. France, evidently the largest importer of C. niloticus skins, and Italy, one of the major countries involved in the treatment and preparation of reptile skins and leather, have both reported the origins of the skins traded between them for the years 1980-1982 in some detail. France has never reported imports of this species, however.

Table 1
Minimum World Trade in C. niloticus Skins

Year	Gross	Net
1975	516	395
1976	6221	6116
1977	1285	1258
1978	175	175
1979	7572	3706
1980	24082	22094
1981	30003	22253
1982	24287	20096

The estimated number of skins entering trade each year from 1975 to 1982 is shown in Table 1, however the data prior to 1980, when Italy became party to the Convention, are very incomplete and difficult to interpret. For 1980 to 1982 the data are more complete, and show that at least 64 443 skins, an average of almost 21 500 skins annually, entered trade during that period. The country of origin was reported for over 90% of these (58 142 skins), a breakdown of which is given in Table 2. Unfortunately the origin of the remaining 6301 skins was reported as "unknown".

Table 2
Reported Origin of C. niloticus Skins 1980 - 1982
(from CITES Annual Reports)

	1980	1981	1982	Total
Botswana	6	3	2	11
Congo	834	442	65	1341
Cameroon	174	1781	1718	3673
Egypt	-	-	2	2
Gabon	476	620	-	1096
Liberia	-	230	143	373
Madagascar	-	4	20	24
Mali1785	2781	3137	7703	
Nigeria	5868	10304	3547	19719
Sudan	7520	5015	2788	15323
Somalia	1266	847	-	2113
Togo	1806	818	1166	3790
Zimbabwe	15	689	1667	2371
Zaire	-	-	603	603
Totals	19750	23534	14858	58142

Nigeria and Sudan were reported to be the source of over 60% (35 042) of these skins. Since 1980, however, the number of skins apparently originating in Sudan have declined steadily from about 7500 to less than 3000 in 1982. Those reported to be of Nigerian origin increased from less than 6000 in 1980 to over 10 000 in 1981 and then appeared to decrease to 3547 in 1982. However it is possible that Nigeria was the source of some of the skins of unknown origin that Italy reported importing from France in 1982.

The data suggest that Gabon and Somalia no longer export crocodile skins and the number exported from Liberia and Congo, which became party to CITES in 1981 and 1983 respectively, is decreasing. Togo's exports appear to have averaged between 1000 and 2000 skins a year since at least 1979. It should be noted that neither Nigeria nor Togo have entered a reservation for this species, and thus should not be trading in the skins for commercial purposes.

Cameroon, which also became a Party in 1981, was still apparently exporting fairly high numbers of skins in 1982 and Mali appears to have increased her exports from around 1800 in 1980 to over 3100 in 1982. Zaire, party to CITES since 1976, was reported as a source country (603 skins) for the first time in 1982.

Botswana was reported to be the origin of a significant number of skins (1159) in 1979 but only 11 since that time. It is possible that all these skins were acquired by the re-exporting countries before Botswana became a Party in 1978.

Finally, the rapidly expanding export trade of Zimbabwe is now of great significance. This increased from 15 skins in 1980 to over 1600 in 1982 and will undoubtedly expand further in the wake of the transfer of that country's population of C. niloticus to Appendix II and the increasing production of the ranching operations.

References

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UK Trade in Snowdrops

by Sara Oldfield, Threatened Plants Unit

The two species of snowdrop most commonly on sale in the UK are Galanthus nivalis and Galanthus elwesii. G. nivalis, the Common Snowdrop, has a widespread distribution in Europe. Its exact origin is uncertain as the plant has been cultivated for centuries and has become widely naturalised. G. elwesii, however, has a relatively restricted distribution, occurring in the Balkans, Greece, Turkey and West USSR.

Snowdrop bulbs are not, as yet, propagated on a commercial scale. Many of the bulbs of G. nivalis offered for sale in the past were lifted from semi-naturalised stocks in old orchards and parklands. Bulbs of G. elwesii continue to be imported from Turkey where they are collected from the wild. According to a recent MAFF reference book, stocks of snowdrops 'are now becoming scarce and the value of bulbs is increasing rapidly' (Anon, 1984).

The export of G. elwesii from Turkey is causing some concern. Once common in western Anatolia and the Aegean islands, the species has greatly diminished especially in the Taurus region (Demirez and Baytop). The species is not threatened with total extinction but local populations are being depleted. Collecting also places under threat the Black Sea endemics in eastern Turkey, G. latifolius and G. rizehensis. These species are sold by specialist bulb nurseries in the UK.

References

Anon (1984):
Bulb and corm production. MAFF Reference book 62 HMSO, London.

Demirez, H. and Baytop, T.:
The Anatolian Peninsula. In: Plant Conservation in the Mediterranean Area (unpublished ms.).

Gorilla Contract

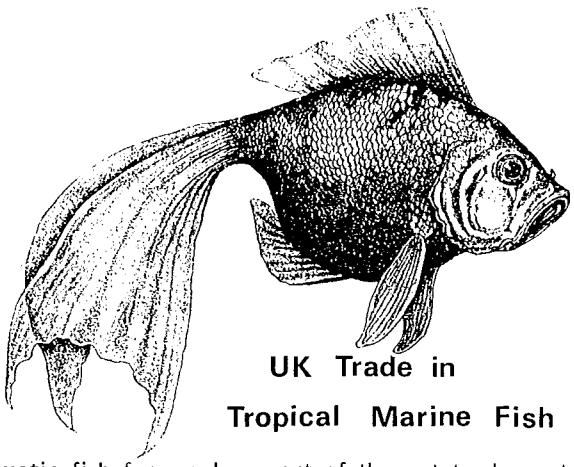
It is reported that Aritake Chojuten, an animal dealer in Japan, has been contracted by the Seoul Grand Park Zoo, South Korea, to supply three Gorillas (Gorilla gorilla). The contract is said to run out at the end of June 1984 and indications are that Aritake Chojuten is attempting to acquire the Gorillas from Cameroon.

TRAFFIC (Japan)
International Primate Protection League

Liberian Ivory Export Ban

The export of ivory is now prohibited in Liberia.

An announcement by the Liberian Development Authority in the "New Liberian" (22.5.84) states that no export permit for ivory or any parts or derivatives from the African Elephant (Loxodonta africana) will be issued.



UK Trade in Tropical Marine Fish

Exotic fish form only a part of the pet trade, and marine fish constitute only a fairly small percentage of the total fish business. Despite this, many thousands of marine fish are imported into the UK each week, and are distributed and sold without any form of regulation, other than a Pet Traders' Licence. The Marine Conservation Society decided to carry out a detailed survey of the trade and all its implications, in order to be able to pinpoint problem areas and propose measures to improve the way the trade is run. The study is being funded by World Wildlife Fund (UK) and is due to be completed later this year.

Anyone who can supply statistics or general information on any aspect of the marine fish trade is asked to contact Dr Elizabeth Wood, who is in charge of the project. Her address is:- Hollybush, Chequers Lane, Eversley, Basingstoke, Hampshire RG27 0NY, UK.

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