THE IVORY TRADE

Volume 1

June '79.

Parker.
THE IVORY TRADE

Volume 1

Commerce in Ivory

JUNE 1979
THE IVORY TRADE

(1) THE COMMERCE IN IVORY
(2) BIOLOGICAL ASPECTS
(3) DISCUSSION AND RECOMMENDATIONS
(4) TABLES

A CONSULTANCY UNDERTAKEN FOR DR. IAIN DOUGLAS-HAMILTON ON BEHALF OF THE UNITED STATES FISH & WILDLIFE SERVICE OF THE DEPARTMENT OF THE INTERIOR, AND THE INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE AND NATURAL RESOURCES, MORGE, SWITZERLAND.

June 1979

I.S.C. Parker
Wildlife Services Ltd
P.O. Box 30678
NAIROBI, Kenya.
## CONTENTS

**INTRODUCTION**  
**ACKNOWLEDGMENTS**  
**VOLUME 1**  
1. HISTORICAL PERSPECTIVES OF THE AFRICAN IVORY TRADE  
2. TUSKS - THE TRADE COMMODITY  
3. THE IVORY TRADE PRE-1914, VOLUME AND VALUE  
4. THE RAW IVORY TRADE 1915-1978, VOLUME AND VALUE  
5. THE COMMERCE IN WORKED IVORY  
6. THE IVORY TRADE IN HONG KONG, INDIA, GERMANY, MALAWI AND THE U.S.A.  
7. THE ROLE OF IVORY  
8. ATTEMPTS TO REGULATE IVORY TRADING  
9. ON THE CAUSES OF FAILURE  
10. CITES AND THE IVORY TRADE  

**VOLUME 2**  
1. IVORY - THE POPULATION INDEX  
2. IVORY - THE STANDING CROP  
3. HUNTING EFFECTS  
4. INFORMATION FROM TUSKS IN TRADE (A)  
5. INFORMATION FROM TUSKS IN TRADE (B)  
6. NATURAL MORTALITY  
7. IVORY WEIGHT  

**VOLUME 3**  
1. DISCUSSION  
2. RECOMMENDATIONS  
3. REFERENCES  

**VOLUME 4**  
TABLES
APPENDICES

1. THE CONSULTANCY'S TERMS OF REFERENCE.


3. MONETARY CONVERSIONS USED IN THIS REPORT.

4. ANNUAL CATCHES OF SPERM WHALES AND THEIR IVORY PRODUCTION.

5. NATIONAL PARK AND NATURE RESERVE AREAS USED IN COMPUTING TABLE 161.

6. MANPOWER NEEDS IN NATIONAL PARKS - MALAWI.

7. SOMALI POACHING IN KENYA.

8. PROJECT ACCOUNTS.
The ivory trade is one of men's oldest, reaching back at least to Aurignacian times. Since then it has never let up. Today it is probably larger than at any time past and encompasses by far the greater majority of the world's nations. Its turnover runs to hundreds of millions of dollars a year and the investment into billions. It was a grand delusion to assume that one man in one year with $45,000 could document it. Then grand delusion is not alien to conservation, and providing one bears this in mind - at least some of the terms of reference (Appendix 1) have been met.

In the normal course of events I would not submit what follows as a final report. I would consider it no better than a first draft - replete with error and miscalculation - which I would like at least a further year to polish, ponder and research. It has been particularly galling to have to leave out far more material than has been included. However times are not normal and the work was funded in the belief that a crisis was at hand. It is worth presenting the data in this rude, unfinished form so that the crisis can be resolved. That, at least, I think the evidence which follows should accomplish.

Trade statistics are boring and interleaved in a report break continuity. I have therefore included these in a separate Volume to be referred to as necessary. Biological data as well are tabled separately. I have presented raw data somewhat copiously, for it gives subsequent researchers the means to check my conclusions and assumptions. It also provides the wherewithall to undertake far more complete analyses than I have had time to do, and at the same time dispenses with the tedious process of re-collecting facts.

There is no 'new' data in this report: it all derives from the private/published work of others or previous personal research. Anyone could have collected it, given time, and in
many respects it is rather surprising that it hasn't been put together ere this. The only singular influence I can bring to bear upon the subject of ivory is having seen it from a variety of angles these past 24 years. It started in 1956 when, as a fledgling game warden in the Kenya Game Department my job was to arrest poachers - which I did under the leadership of the late David Sheldrick, and Bill Woodley. However I got to know the poachers too, and a more decent band of men I have yet to meet. While prosecuting them and sending them to jail - and I revelled in the analytic procedures of law - I never had a man sent down with a clear conscience. In all honesty none of us did. In time this led to the evolution of a large game management project in which it was hoped that the 'poachers' could find legitimate employment in elephant hunting. The project failed - principally because it was planned too naively, but I gained yet further insight into ivory.

Later I joined four colleagues in founding a wildlife research and management consultancy, and undertook a wide range of projects the length and breadth of Africa. They encompassed censuses and surveys, ornithological collections, analyses of records and the drafting of wildlife legislation. They also involved large-scale elephant reductions and research - the results of which have been published elsewhere. Through this I sold ivory on my own behalf.

Later still I undertook research for ivory traders for, contrary to popular opinion, there is much about the business which they too don't understand. This reached a point at which I could learn no more unless I entered the arena for myself which I did - and bought ivory on a client's behalf. Such is the stigma upon ivory traders that it is often assumed that I had to pass beyond the pale of legality to do this, which was not true. It rounded off my perspectives in ivory. I can now speak of sport-hunting, poachers, prosecuting, game cropping, 'control' work, drafting law, and trading ivory from personal experience.
This survey was planned for ten months collecting data and getting up to date, and two months analysis and writing. The aim throughout was to secure an overview and then work backwards filling in detail. My strategy was to head first to where I knew I would get information and avoid areas of complication and language problems where time would be insufficient to cover the ground with confidence. Thus I built my scaffolding on English speaking ground, and from there extrapolated what I could to the Francophone lands. It seems to have worked overall.

As a matter of ethic I have refrained from divulging the names of my informants or giving details of their businesses. The public have no more right to know this than they have to know the detail of private tax returns and bank accounts and I respect the convention.

It is disappointing not to be able to encompass all the material to hand on the subject of the ivory trade: there simply wasn't sufficient time. For the same reason I ask indulgence over the piecemeal approach to Volumes 2 and 3 - they were planned to be far bigger.

Finally I have used the term Negro herein to denote the black, non-Cushitic, non-Hamitic, non-Khoisan peoples of Africa. It has never been other than a descriptive term in my lexicon and it came as a surprise to learn that it is considered denigrating - at least in academic circles. I never meant to use in such a context and this assurance stands.

Throughout the report I have used the term tonne in its dictionary sense, i.e. 1,000 kilograms. References to money are in £ Sterling up to and including 1914, and US Dollars after this, unless otherwise stated.

The project accounts are included as Appendix 8.
ACKNOWLEDGMENTS

Though it appears under one name, this report is the work of many. I am indebted to all who helped whether or not their names appear below.

I thank His Excellency, the Life President, Dr. H. Kamuzu Banda and his Government Officers for the courtesy and co-operation I received in Malawi, and the Hon. E. Nichols M.B.E., Director of Agriculture and Fisheries and his staff for the assistance they rendered in Hong Kong.

Others deserving of particular mention are:
Peter Becker and his company - Botswana Game Industries - for unstinted support, introductions to the trade and, when funds wore thin, general financial assistance; Richard Bell for the attention of as fine a mind as has been seen in African ecology; Thom Friedlein for advice, introductions and interpreter services; Jeremy Grimsdell and Mark Stanley-Price for assistance with Volume 2; Julian Guest for his work on English ivories; John Hallagan for collecting data in the United States; Chris Huxley for confidence and assistance in Hong Kong; John Ilsley for aid is assembling austral trade; Richard Laws for discussion and yet again the use of his material; Esmond Martin for his Indian researches and proof-reading, and Terry Ryan for an introduction to economic archives.

Among others whose assistance I would like to record and whom I thank are:
I was honoured by the trust of ivory traders for access to their stocks and business records in circumstances where they had many reasons to withhold it. For this I am particularly grateful.

Invaluable help was rendered by staff in the Embassies of the United States of America in many countries and also by the U.S. Fish & Wildlife Service in Washington, D.C.

My thanks to Iain Douglas-Hamilton for favouring me with this consultancy, discussions and access to his own and IUCN Elephant Survey data.

The general and unstinted help of Miranda Bell and her unfailing good humour lightened and shortened a laborious task, and is much appreciated. Finally my deepest gratitude to Christine, my wife, who typed this report, proof-read it, corrected grammar, all in the hours after a full day's work elsewhere.
Africa is the world's largest source of ivory and may have been so for the past two millennia. Virtually all the civilised peoples of antiquity who plundered or traded with Africa sought ivory (and gold). Because the written records were made ex-Africa, there has been a wide misapprehension that the Negro peoples of the continent did not regard ivory with the same avarice as Europeans and Asians. Its modern expression is apparent in the belief that the ivory trade is largely an alien imposition upon Africa.

This is not true. African involvement in the ivory trade, now and in the past, has deep roots in indigenous values to which external economic influence is additional. Evidence in support of this is abundant in literature and applies to all parts of the continent.

Petherick (1869), the first white man to record impressions of the Zande (Niam-Niam) of what is now southern Sudan and northern Zaire wrote:

"The only use made of ivory by the Neam Nam (sic) was for ornaments, such as bracelets and necklaces; some were ingeniously cut in imitation of cowrie shells; and neatly cut flakes, like the scales of a fish, were curiously attached to a band like piece of ribbon and worn by the females round the neck. Both men and women wore their hair plaited in thick masses, covering the neck to the shoulders. This they combed out with long ivory pins, from six inches to upwards of a foot in length - one extremity pointed, the other increasing in thickness like a cone, three or four inches of which were carved into pretty patterns, and dyed black with the decoction of a root. When the hair had been arranged, two of the largest of these pins were stuck horizontally through it at the back of the head; between these smaller ones were inserted, forming a semicircle similar to a Spanish lady's comb."

Driberge (1923) recorded of Uganda's nilotic Lango:

"The only mark of aristocracy is a bracelet of ivory worn on the left wrist, or suspended from the neck over the chest an ivory ornament called ogwil (carved to contain fat for anointing the body and often delicately
stencilled in block point). These are only worn by men who are chiefs or come by descent, however remotely, from the stock of chiefs, although any man is allowed to possess the unworked tusk..."

Roscoe (1911) writing about the Bantu Baganda also illustrated indigenous ivory value:

"Before the arrival of Arab traders the value of ivory was not fully appreciated, though the people had already found a use for it. Though the trade in ivory within the country was small, it was enough to encourage the King to keep hunters and to exchange the ivory for women and cattle; there was also an important traffic in ivory ornaments which kept a number of men employed. Ivory bracelet (magemu) were worn by women and children...Small ivory discs were used as currency before the introduction of cowrie shells; the ivory-workers made them for the King, though the latter had not the monopoly of making them; any skilled workman who could obtain the ivory was allowed to make discs without let or hindrance. The King, however, retained the most skilled ivory-workers in his service, and they dared not make bracelets or other ornaments without permission. The fact that most of the ivory belonged to the King also placed a restriction upon the making of discs for other people...Most of the chiefs of the district had their huntsmen who captured elephants and paid their masters in ivory for the privilege of being allowed to hunt on their estates."

Leiris & Delange (1967) reviewing African art comment on the use of ivory in Central and West Africa. The Luba and Leya of the Zaire (Congo) basin made ivory carvings

"and among other articles reserved for the more privileged (were) lovely headrests."

The Mayombe of the lower Congo forests made sceptres - symbols of authority - of ivory. The Benin, famous for their art, also revered the medium:

"the...ivories of the Benin were produced by craftsmen grouped in guilds and working under the aegis of the sovereign."

The Bamenda in Cameroun so regarded ivory that:

"its prestige value...often outweighed its commercial value." (Chilver 1961)

and that ivory armlets were worn by men of rank. An almost
pan-African custom was that the chiefs or kings laid claim to one tusk of each elephant killed - usually that on the underside of the carcass which touched 'his' soil (among many Livingstone 1857; Powell-Cotton 1902).

The point is thus made that independently of alien influence, Africa's sub-Saharan people have seen ivory in the same light as other races. Traditionally it was precious, commonly associated with social privilege and revered as a medium for art and ornament. That this regard persists one need only look to the national emblems of Tanzania and Botswana, for both sport a tusk as a symbol of wealth. In consequence it is inevitable that ivory would have been bartered and traded between groups and tribes. This intra-African commerce was the earliest cornerstone of the African ivory trade.

The inter-continental trade in ivory from south of the Sahara is likely to have started several millennia ago; perhaps even before the Pharaoh Necho II (BC 611) dispatched the first recorded expedition to circumnavigate Africa. A gold trade developed between the Phoenicians and tropical West Africa after Hanno established settlements there in BC 570 and it is difficult to believe that they would not also have traded ivory. The Periplus of the Erythiaean Sea of 60 AD indicated that ivory was exported from the East African coast in great quantities.

By the 7th century Arabs were settled along the continent's eastern coast and, maintaining contact with their regions of origin, it is almost certain that there was movement of ivory. Davidson (1966) quotes the Arab traveller al'Masudi complaining that Chinese officials went to court in palanquins veneered and decorated with ivory:

"That is where the ivory goes, and were it not for this demand, there would be plenty of ivory in our Muslim countries."

The tone suggests that he felt Arab (i.e. African rather than Indian) ivory was being diverted from where he would have it go.
Certainly by the time of Vasco da Gama's arrival in the Indian Ocean (1497), ivory was flowing to India from a number of places on the East African coast through the hands of Arab and Indian merchants. The trade seemed to depend on Africans bringing the ivory to the coast, for there is little record of these traders venturing into the hinterland.

Ivory is bulky and heavy and in the absence of navigable waterways, wheeled transport and roads, or pack animals susceptible to tsetse fly, can only be moved by human portage. To move large quantities of ivory needs considerable manpower. In the fragmented tribal societies which prevailed widely in Africa, the organisation of large-scale portage was difficult. Thus, in all likelihood, tusks were traded in small quantities over short distances between neighbours. Ultimately they might reach the coast - but through an erratic and haphazard process. The difficulty of moving ivory - bulky, hard to conceal and immensely valuable - had, and still has, great influence on the manner of its trade.

European intervention in Africa's ivory trade can be considered under four regional headings:
A. The East African
B. The West African
C. The Sudanic sphere - covering the Nile basin and Ethiopia (Abyssinia), and
D. The Cape or Southern.

A. The East African
The East African ivory trade was dominated by two anomalies to the prevailing fragmentation of African society. In the hinterland of what is now Mozambique (and throughout this report I refer to Mozambique in the sense of its present area rather than the coastal island and port only) where the Shire river joins the Zambezi, were the Maravi people. Between them and the coast were the Yao and the Makua. Even at the time of the first Portuguese, these tribes were sufficiently organised
to permit long distance trade and portage. This was markedly developed, particularly with the Yao, from the fifteenth to mid-eighteenth century (Alpers 1975). In consequence there was a flow of ivory from deep within the continent. That this was working well before Vasco da Gama's arrival is likely, for the Arabs and Indians were actively moving ivory from Kilwa when the Portuguese entered the region.

The second similar anomaly concerned the Kamba people of what is now east-central Kenya. They too had a tradition of elephant hunting and ivory portage (Lindblom 1920). The age of the Kamba trade is not known. Suffice it that it was well developed in the 19th century and on this score alone is likely to have functioned in at least the preceding century.

The Mozambique ivory trade between the 16th and 19th centuries has been well documented by Alpers (1975) and it is from his work that I draw the following synopsis.

From early on in their tenure of the African coast, the Portuguese set out to dominate the Mozambique ivory trade. Their strength was primarily naval enabling them to control sea traffic and ports but they lacked the manpower to control large tracts of the African hinterland. Their policy was therefore to cultivate good relations with the Makua and Yao, and encourage them to bring ivory to the ports. Arabs and others were kept away or under control through naval might. This policy of friendship on land and aggression at sea worked for 100-150 years and the ivory trade grew both in quantity and in its African organisation. A Royal instruction to Governor Fróis in the late 1720s was a reiteration of what had worked successfully to that date; he must:

"not allow any European nation whatever to hold trade or commerce with the Negroes of the (East African) coast" nor permit "any of the said nations to establish themselves in the land...for which it is very necessary that no offence should be given to the Kaffirs inhabiting the said shores."
However in the 17th century Portuguese control in the Indian Ocean began to slip. Mastery of the seas was being eroded by other maritime powers, notably Britain, Holland and France. Also the Portuguese lacked business acumen and capital. For both they leant heavily on Indian merchants in Goa - the star of their Indian Ocean enterprise. Through these connections, Indians (Banyans) were able to enter and trade in the Portuguese African bases. The Banyans were soon displacing the Portuguese in the ivory trade - to the latter's intense dismay. Despite all forms of hindrance, inconvenience, licensing and harassment - short of deportation which the Portuguese Crown would have forbidden for its implications in Goa - Indian erosion of the Portuguese position in ivory continued.

As Portuguese naval power waned, so there was a resurgence of Arab influence along the East African coast to the north of Mozambique. Indians took advantage of this too, and were soon competing against the Mozambique Portuguese from ports under the umbrella of Islam, as well as from within Portugal's own domain. They encouraged the Yao to bring ivory to Kilwa just to the north of the Mozambique border.

From the middle of the eighteenth century a new influence appeared on the Mozambique coast which was to have far-reaching effect: commercial slaving. Slaves had been a feature of East African coastal life for centuries, regardless of whether under Arab or Portuguese rule (Martin & Ryan 1977). However, large-scale commercial slaving was alien. French development of the Mascarene Islands (Mauritius and Réunion) called for cheap labour - and the Mozambique coast was the nearest potential supply. Coming at a time when their fortunes in ivory were dwindling, the Portuguese were disposed to try new ventures and supply slaves. Demand for Mozambique slaves soon spread to the Caribbean and Brazil. These events were further exacerbated by British activity to close the West African slave trade, depriving the displaced slavers to seek new sources of human cargo.
By 1790 (and perhaps earlier) slaves had replaced both ivory and gold as Mozambique's major export. Between 1770 and 1794 some 69,973 people had been sold - mostly Makua and Yao. This severely disrupted ivory trading as it had been conducted up to that time. The internecine warfare integral to commercial slaving made it impossible for lightly armed caravans to make long trading journeys with precious cargo. With the disruption of Maravi, Yao and Makua society, ivory could only be moved by heavily armed bodies and called for a wholly new approach: the ivory transporters had to be able to fight their way to market. Fighting and slavery were so closely connected that the movement of ivory by slaves was inevitable.

The Arabs, with Indian capital, were quick to take advantage of the situation. He who supplied the ivory transporter with a military capacity would not only get ivory, but stood to make a profit from slavery to boot. Thus a strong Arab-Yao ivory/slaving trade grew out of the Portuguese policies in Mozambique. The human concern over slaving has tended to obscure the ivory element and it is worth pointing out that even in the decline of the Mozambique ivory trade, when slavery was taking its place, a tusk of very moderate proportions was still far more valuable than a man. Thus wrote Fr. Pinto (a cleric) in 1799:

"A tusk of ivory weighing one arroba (15 kg) to one and a half arrobas (22.7 kg) is purchased for two or three pieces of cloth and some ten hides. A slave is evaluated at a bit of cloth..."

A similar quote from a decade later:

"Colonist travellers...give for each slave they buy...five Indian sheetings and for ivory six or seven sheetings...Casambe's people understand that ivory is more valued in Tete than slaves."

Leaving Alpers (op.cit.) we can now turn to the north of Mozambique. With the onset of the 19th century, there was a consolidation of Arab influence. This culminated with the Omani - Sayyed Said bin Sultan - moving his seat from Muscat
to Zanzibar in 1831.

Financed by the omnipresent Banyans, large well armed Arab and Swahili expeditions set off for the interior. They secured ivory through trade, force and extortion, but having obtained it were faced with ivory's perennial problem - that of transport. They took slaves to carry it and sold them at the coast. It was a situation which had West African precedent but which was never so stark in its simplicity. Soon the whole of the interior of the continent around lakes Tanganyika and Malawi was in the grip of the system. Ivory was the prime product: slaves (as transport) secondary to it, with a useful re-sale value.

It is of particular note here that yet further to the north, where the Kamba retained cohesion and were able to manage the ivory flow, slaving did not develop. This is not to say that slavery didn't exist. The Kamba themselves had slaves. Indeed I can recall from my childhood a very old Kikuyu (neighbouring tribe to the Kamba) being very disapproving of the Kamba - they couldn't be trusted. The gist of what he said was that he who went alone to trade with them was a fool - for he would be sold along with his goods! If one went to trade, one went in a large, armed party. Anecdote apart, the point is that Arab-Swahili intervention and organisation was unnecessary for as long as the indigenous alternative worked.

B. The West African

Though they may have been the first of the modern white nations to cruise the West African coast, the Portuguese were unable to monopolise it as they had the eastern seaboard of Africa. Soon they had intense competition from other maritime nations. In 1530 William Hawkins of Plymouth in England sailed his 250 ton "Paule of Plimouth" for Brazil (Hatch 1969). On the way he put into the African coast of Guinea and traded with Africans. From them he bought elephants' teeth or ivory and, in this first recorded contact between a Briton and sub-Saharan
Africa, he started the British ivory trade. In the following years he sailed again for Brazil. In 1540 he sent the same "Paule" under John Landye as Master. The bills of lading from the trip provide a character picture of this original Anglo-African trade. The outward cargo included

"matchettes, combs and sarpes (handbills), copper and lead meliös (bracelets), woollen cloth and night-caps."

The "Paule" returned to Plymouth with 12 elephant tusks.

Soon French, Dutch, Spanish, Danish, Swedish and Hanseatic ships were plying the West African coast in competition. Slaving was the major trade providing labour to the New World. Nevertheless ivory was always an item of considerable importance and because of the need for portage, was inextricably entwined with slavery and was often the more profitable element. This is apparent in the following extract from Mayer (1928) for the last part of the 18th century:

"As it may be interesting to learn the nature of trade on this coast - which is commonly understood as consisting of slaves alone - I thought it well to set down the inventory I made out of the caravan's stock and its results, as the various items were intrusted (sic) to my guardianship. The body of the caravan itself consisted of seven hundred persons, principally men; while the produce was as follows:

3500 hides $1,750
19 large and prime teeth of ivory 1,600
Gold 2,500
600 pounds small ivory 320
15 tons rice 600
40 slaves 1,600
36 bullocks 360
Sheep, goats, butter, vegetables 100
900 pounds beeswax 95
Total value of the caravan's merchandise $8,885

Our profits on this speculation were very flattering, both as regards sales and acquisitions...ivory was purchased at the rate of a dollar the pound for the best, while inferior kinds were given at half that price...the slaves were delivered at the rate of one hundred "bars" each. The "bar" is valued on the coast at half a dollar; but a pound and a half of tobacco is also a bar, as well as a fathom of ordinary cotton cloth, or a pound of powder, while a common musket is
equal to twelve bars. Accordingly where slaves were purchased for one hundred and fifty pounds of tobacco, only eighteen dollars were, in reality, paid; and when one hundred pounds of powder were given, we got them for twenty dollars each. Our British muskets cost us but three dollars apiece; yet we seldom purchased negroes for this article alone."

Thus a slave costing $20 was the equivalent of a sound tusk of little over 20 lbs - and this would be a small one.

In the eighteenth century West African trade was entered vigorously by traders from the north-eastern seaboard states of the U.S.A. particularly from Salem, Boston and New York. Some of their records (as presented by Bennett & Brooks, 1965) give a clear picture of the situation. The connection between ivory and slaves was thrown into stark relief when Britain forced the cessation of West African slaving. Typical are these comments from one Samuel Swan, trader, to his principal - merchant John Tidd in Boston:

"May 16 1809...Since the destruction of the slave trade the Crew (= Kru, a West African people) Country is full of ivory"

the gist of this being that now slaves were illegal, ivory was difficult to move.

About 1816 the same Swan still obviously regretted the lack of slaves:

"They (referring to island trading posts off Bissau) are but little visited by the negroes; they find it more troublesome and expensive to transport wood, wax and ivory to them in canoes than they did the more manageable and saleable traffic of their fellow creatures."

The same situation is further emphasised by a record made by the captain of the British warship HMS Cyclops:

"but understand that the produce of the interior is conveyed to the Sea Coast by Slaves, and on arrival, the slaves themselves are disposed of by their Owners to the Slave Dealers, and their burdens generally consisting of Ivory, Copper (sic) or beeswax, to the legal traders. It is clear therefore that the Slave Trade fosters the Legal one, more especially as the
Slave and his burden, are bartered for the same kind of goods, the principal portion of which is a species of light cloth" (quoted in Bennett & Brooks, op.cit.)

This setback to the West African ivory trade came at a time when the industrialisation of Europe and the eastern U.S.A. was raising demand for ivory to unprecedented levels. Strenuous efforts were made to obtain supplies through 'legitimate' trade in West Africa but demand could not be met. The traders had to look elsewhere. Led by the American merchants of Salem, they turned their eyes to Africa's east coast and joined the Indians in Zanzibar.

C. The Sudanic Sphere

Simultaneously to the Omani/Arab penetration of central Africa from the east, came another Arab thrust from the north up the Nile. Seeking ivory to supply a voracious European demand, the traders pushed further and further southward, collected ivory, then slaves to carry it, returning home to sell both. In its wake it brought the inevitable social chaos and competition between the two Arab powers - one under the suzerainty of the Khedive of Egypt, the other under the Omani Sultan of Zanzibar.

A sub-section of the Sudanic sphere operated through Ethiopia. Ivory obtained in the south-west of that country and from what is now the southern Sudan, northern Uganda and northern Kenya moved through the highlands of Ethiopia, down to Red Sea ports, and on to the overseas markets. The onset of this ivory route is poorly documented. Suffice it that it had connections with the east coast of Africa and was probably operating early in the 1800s. It will receive later mention as it extended the 19th century mode of the ivory trade well into the 20th century.

D. The Cape or Southern

Because of its aridity and short grasslands, a substantial portion of southern Africa - the Karroo, Transvaal highveldt
grasslands and the Kalahari - was devoid of elephants or only had very small populations. The majority of those which did occur, were located along the southern coast, in the east and to the north in what is now Mozambique, Rhodesia and Botswana. From the time of the white men's arrival they hunted these elephants, pressing further and further east and north with the expansion of settlements.

The ivory trade in southern Africa differed from that elsewhere in several major aspects. Overall, relatively low human densities existed and large-scale portage by humans was difficult to arrange - either by slaves or hired help. This was aggravated by the political turmoil which pervaded the African politics of the region from the late eighteenth until well into the nineteenth century. Where people were relatively abundant, they were warlike, particularly the Nguni groups who possessed a military competence unsurpassed by indigenous Africa. Peaceful travel and portage through the lands of these warring factions was difficult, if not well nigh impossible.

Where southern Africa differed from the other ivory regions was in the absence of tsetse from extensive areas. The ivory hunters and traders were able to move their cargo by ox-wagon. Thus it was that in the tsetse-free areas elephants had all but disappeared by the turn of this century. Those which remained were in isolated pockets along the southern coast or in the tsetse areas to which the traders could not get their transport. It yet again stresses that the major constraint upon large-scale ivory trading has always been ability to move the commodity.

THE IVORY BASE FOR SLAVING

That the ivory trade was a primary stimulus to slaving in east, central and Sudanic Africa has long been recognised by historians (e.g. Northway, 1954) but ignored by the public. The evidence is clear; ivory was more valuable than men and
those sent to suppress the slave trade were well aware of this.

Livingstone commenting from the southern end of the slaving system wrote in 1863 (Fletcher 1950):

"Get possession of the ivory trade as I propose to do on the lake and you render the trade in slaves unprofitable. I tried it though unintentionally in the Makololo country. Slave merchants came from Banguella to the subject tribes east of that people and annually carry off large quantities of ivory and slaves. The ivory was purchased for hoes and Sekeletu - having many smiths under him who yield an annual tribute in hoes - I suggested he should purchase the ivory of the eastern tribes with them. He did so for the sake of the profit on the ivory and the Banguella traders ceased to go to that district. One of them told me that it was better to get slaves nearer the coast if no ivory was to be obtained for them to carry. The fact of the matter is slaves cost so much for sustenance when a long way from the coast that without ivory they are a losing speculation."

Gessi (1892) presents a similar appreciation from the Nile:

"One of the principal objects of this expedition...was the suppression of the slave-trade. The Colonel (referring to Gordon - then Governor of the Sudan) did not therefore think of treaties, but went straight to his end, cutting off the evil at the very root and prohibiting the trade in ivory. A proclamation by the Commander-in-Chief of the expedition, declared that from that day the article ivory was a Government monopoly; whoever possessed ivory must, by a certain date, deliver it up and dissolve the Company of traders. This was a blow at the very heart of the slave-trade."

Schweinfurth (1872) complements the picture:

"It is a fallacy to suppose that the pursuit of elephants is merely a secondary consideration in these enterprises of the Khartoum merchants...If it had not been for the high value of ivory, the countries about the sources of the Nile would even now been unfolded to us as the equatorial centre of the great continent: they are regions which of themselves could produce absolutely nothing to remunerate transport. The settlements (of the traders) owe their original existence to the ivory trade." (Note, in contradiction of this lucid view and in keeping with the overall picture, Schweinfurth did also hold that slaves were more profitable than ivory.)
Johnston (1903), one of the most able and erudite of the early British administrators said:

"In the forties of the last century Nubian slave-traders started in numbers to explore these regions, firstly to purchase ivory, and secondly to acquire slaves."

Once again the decline of the East African-Sudanic ivory trade came about through the British suppression of slaving. The American merchants who were dominating Zanzibar's commerce to the west in the mid-nineteenth century noted this with dismay. Charles Ward (merchant and later U.S. Consul in Zanzibar) wrote to his Principal, John Clayton, on July 3rd 1850:

"The people of the Interior of Africa use Slaves to bring Ivory to the Coast and will not sell one without the other... In consequence of the acts of Her Majesty's Ship of War Castor & the Edict of the Sultan (banning many aspects of slavery) the American trade must be very seriously affected. Zanzibar is the Depot of American trade on the East Coast of Africa. The last year it amounted to about 1,000,000 dollars." (Bennett & Brooks, op.cit.)

After a British man o'war had blown an Arab slave-ship out of the water the U.S. Consul was highly incensed and on May 11th 1861 wrote the following to his Secretary of State in Washington:

"The strong measures taken by the English Government to suppress the Slave trade are very injurious to business and as Slavery among the Arabs is merely a name, their Slaves being treated like members of their families, these proceedings seem unnecessary" (Bennett & Brooks, op.cit.)

These merchants were something of an anachronism. Being from the Puritan north-eastern U.S. they were (at least at home) abolitionists where slavery was concerned. The first U.S. Consul to Zanzibar (appointed in 1839) was Richard P. Waters - a vociferous anti-slaver in Salem. Yet in Zanzibar he typified his peers by selling cloth, guns and powder to the Arabs to enable them to obtain slaves, and the product - elephants' teeth - which made their ventures worthwhile. On the one hand they condemned the institution, yet on the other
they facilitated it and benefited from it enormously. Northway (1954) commented thus:

"The manufacture of ivory combs in Connecticut, besides the desire for highly spiced foods, helped extend a vicious system; at the same time the manufacture and trade in American firearms made it possible for the Arabs to do so (slave) on a larger scale than ever."

The value of slaves relative to ivory in Zanzibar's imports between 1861-1865 was: slaves $600,000; ivory $1,773,481 (from Bennett & Brooks table E, op.cit.) In the decade 1860-69 Zanzibar's imports of slaves reached c.20,700 per annum (Martin & Ryan, 1977).

However, the most telling evidence of the connection between the ivory trade and slaving, and how the former brought about the necessity of the latter, emerges from Baker's account of his endeavours to end slavery in the Sudan (Baker 1874). Ivory was so valuable that even though the anti-slavers recognised its role in setting up the institution they so opposed, when they came across it they had to accept it - if only on their employers' account (with Baker this was the impecunious Khedive of Egypt). They would no more think of abandoning a stock of ivory than they would a sack of gold. Even if they couldn't carry it, it would be buried or hidden for subsequent retrieval.

It was inevitable that in harassing the slavers and setting their captives free, Baker should become possessed of large quantities of ivory. He had obviously foreseen this, for on his way southward he obtained cattle to use as carriers in place of slaves. These were entrusted to local people to be recovered on his return - or so he hoped, but he hadn't reckoned with the African pastoralists' attitude toward cattle. Returning down the Nile he accumulated 3,200 tusks:

"The cattle that had been given to the native carriers for the transport of ivory to Gondokoro had only partially been returned... It was now necessary to move the ivory together with all the establishments to Gondokoro. This would require at least 6,000 cows. It was a complete fix."
And so it was, for he never did get his cattle, learning lesson one of the slavers: if tsetse didn't bar cattle transport, militant native pastoralists would! He then fell back on humans and employed porters - only they were not keen on the idea. Not being one to accept defeat, he wrote:

"It would have been the height of imprudence to have permitted the immediate departure of our carriers before I had arranged for the future, thus about eighty were secured by the soldiers, including the Sheik's (local chief) son, from a general stampede that took place...In the evening they were secured by a slight line round each man's neck and connected in gangs of five."

However in the night they bit through the lines and rushed away. Three were shot dead in the escape (Baker was sorry!) The man sent to suppress the slave trade was forced by circumstance to quite literally make slaves - in order to transport ivory.

The anti-slavers and explorers of the mid-19th century gave way to administrators as the continent was partitioned by the European powers after the Berlin Conference of 1884. By gaining complete control of the ports, by denying the institution of slavery - the only mass transport system that was workable without industrial capital - they changed the great nineteenth century ivory trade. The flow of ivory did not stop as Pax Europus now permitted the safety of unarmed portage and the introduction of roads, rail and steamers on the waterways. Once in control and governing, the colonial administrators needed funds. Among the first acts of colonial government was laying claim to the ivory of the land, not for the impediment of slavers, but for revenue.

Until 1905, ivory was Uganda's foremost commercial export (Thomas & Scott, 1935).

Nalder (1936) writing of Equatoria in the Sudan, wrote:

"Ivory was for many years the only produce of any importance...the chief deterrent (of trade) has undoubtedly been transport costs. Mongalla (on
The upper Nile) is probably as far from a port as any place in Africa and in spite of having the Nile at its doors, freight charges to the coast were such as to prohibit the carriage of everything except ivory...In this undeveloped land money, except for ivory, is not to be had for nothing."

The same theme repeated itself the length and breadth of Africa and receives further consideration in chapter 8.

THE ABYSSINIAN TRADE

In Abyssinia (Ethiopia), and the farthest reaches of the southern Sudan and northwest Kenya, the 19th century trade persisted well into our own times. Nalder (1936) provides the base for the following outline.

Abyssinian trading caravans had long had peaceable contact with the people in south-eastern Sudan. At some point early in the nineteenth century this region was entered by Swahili entrepreneurs from the eastern coast, who came up from Mbale on the western slopes of Mt. Elgon. In consequence a tsetse free trade route developed between this settlement and the Abyssinian town of Maji, traversed by donkeys and mules carrying ivory.

"This no doubt attracted the riff-raff of what is now Kenya, the Swahilis, Baluchis and the rest arriving at Maji were employed by the Abyssinians, and especially the Bank of Abyssinia (a private Bank until 1931) to hunt ivory for them at rates of interest which could never be paid off and plunged them deeper and deeper into servitude. They received a big reinforcement from a number of Darley's (Captain Darley - an explorer of the region about the turn of the century) carriers who, paid off at Addis Ababa, struggled south homewards and found themselves completely destitute by the time they reached Maji. The Swahili were apparently not, as is often assumed, free bands of brigands doing what they listed, but financially enslaved to the Abyssinians who used them not only as elephant hunters, but as the chief instrument of their raids."

In 1900 the extent of this ivory trade was substantial, routed through either Addis Ababa or Harrar. Powell-Cotton (1902) observed that the volumes for that year were c.60 and
c.43 tons respectively - an addition of c.100 tons to the annual Sudanic exports.

Long after the Sudan was under British 'control', the Abyssinian-Swahilis ventured as far as the Nile and, on occasion, crossed it and hunted its western bank.

"Ivory was what they wanted and a favourite modus operandi was to issue rifles and ammunition to the (local) chiefs on the understanding that there would be a supply of ivory ready when they returned next year. Hence they were not unpopular and were on particularly good terms with the Topotha (a local tribe) ...Investigations...revealed...that practically all the Bari (another Sudanese tribe) Chiefs had poachers' rifles" (Nalder op.cit.)

Yardley (1931) gives some idea of the vigorous British reaction; co-ordinated military operations were launched from Kenya and Uganda in the south and from the Nile in the west. In 1910, a company of the 4th Battalion King's African Rifles was formed as the Northern Uganda Patrol with the specific task of closing the Maji-Mbale trade route. The conflict was protracted and resulted in numerous military skirmishes. In 1917 the ivory hunters were 'roughly handled' at Tibitib, but certainly not defeated, for they continued ivory raiding in this area until 1929 at least, often taking reprisals on the local population. In 1929 they were actually camped on the Nile, 28 miles north of Mongalla (the seat, at the time, of the British administration of the southern Sudan) when set upon by Moysey Bey of the Sudan Defence Force (army). Eight were killed and the rest rounded up as they struggled back eastwards towards their Abyssinian bases:

"With motor roads and wireless communication it is now extremely difficult for them to get away" (Nalder 1936).

The salient feature of this Abyssinian ivory trade was that it was almost impossible to stop for as long as the raiders could retreat into Ethiopia. It had reached the point requiring military solution similar to the numerous guerilla situations that have prevailed since World War 2 in which nothing suffices
short of 'hot pursuit' over the border. More detail is given on the problem in Appendix 2. The issue was approached by the British representatives in Ethiopia:

"In 1922 Hawkins, then Consul of Maji, gave an amnesty to the original Swahili who had been financed by the Bank of Abyssinia. In 1928 Captain Holland was able to repatriate via Kapoeta (in the Sudan) a large number of men, women and children, Uganda or Kenya subjects" (whose origins were mainly at the Omani Arab/Swahili Coast) (Nalder op. cit.)

However this extension of the nineteenth century ivory trade did not disappear completely until the conquest of Abyssinia by the Italians in the 1930s.

I have quoted this Abyssinian example at some length for several reasons. It illustrates that ivory was worth 'military' action well into this century - some of those involved in the 1920s may still be alive. It has a number of parallels in modern times and provides a background against which they may be discussed later in this report.

The historical evidence is unequivocal. Other than gold, ivory was for centuries Africa's most valuable export. Unlike gold, which could be found in few places, ivory was available everywhere. Its carriage presented difficulties which triggered major political developments. As much as any other single item ivory shaped modern Africa.
To give perspective to the commercial chapters which follow, this section introduces ivory as seen from within the trade. Underlying all aspects of the business is the psychological phenomenon that we hold things valuable if made of ivory: however ivory is not valuable because things are made from it. It has little utilitarian worth and in consequence is not open to substitution. In the same way that glass may look like diamonds, brass may look like gold and cultured pearls are difficult to tell from those which are natural, the look-alike, the artificial, never detracts from the value of the genuine article. The uses to which ivory may be put are legion and have but one thing in common - they will be valuable.

Elephants' tusks exhibit great variation in size, shape and quality. They range in weight from 225 grams to over 100 kilograms; in length from 15 cms to nearly 300 cms and in circumference from 8 cms to over 60 cms. As will be seen in Volume 2 these qualities are the products of growth, age, sex and region of origin. Male tusks are larger than females' which seldom exceed 10 kg in weight. Male tusks are thicker and more conical than female tusks of the same weight. Tusks from Africa's savannahs are referred to as "soft" or "white"; those from the lowland equatorial forests are "hard" or "yellow". Soft ivory tends to be curved, hard ivory is rather straight. However while all these variations are recognised and taken into account by ivory traders (even if they are unaware of the biological causes for them) the basic measure in the business is weight.

There are many trade terms for tusks which vary from region to region. Some of the more common which are still in use or which appear in the historical literature are:
### European

<table>
<thead>
<tr>
<th>Weight Kg</th>
<th>Male Tusks</th>
<th>Female Tusks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 2.2</td>
<td>Milk teeth, small scrivelloes and hollows.</td>
<td>Milk teeth, small scrivelloes.</td>
</tr>
<tr>
<td>2.2- 4.5</td>
<td>Hollow scrivelloes.</td>
<td>Solid scrivelloes, bagatelles.</td>
</tr>
<tr>
<td>4.5- 9.0</td>
<td>Half hollow scrivelloes.</td>
<td>Solid scrivelloes, ball scrivelloes.</td>
</tr>
<tr>
<td>9.0-18.0</td>
<td>Small, medium, bangle</td>
<td>Small.</td>
</tr>
<tr>
<td>18.0-25.0</td>
<td>Medium-large or large, prime.</td>
<td>-</td>
</tr>
<tr>
<td>25.0 +</td>
<td>Extra-large, large-prime.</td>
<td>-</td>
</tr>
</tbody>
</table>

### Indian

<table>
<thead>
<tr>
<th>Weight Kg</th>
<th>Male Tusks</th>
<th>Female Tusks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 2.2</td>
<td>Dandia</td>
<td>Dandia</td>
</tr>
<tr>
<td>2.2- 4.5</td>
<td>Maksub</td>
<td>Maksub</td>
</tr>
<tr>
<td>4.5- 9.0</td>
<td>Fankda</td>
<td>Calasia</td>
</tr>
<tr>
<td>9.0-18.0</td>
<td>Cutchi</td>
<td>Calasia</td>
</tr>
<tr>
<td>18.0-25.0</td>
<td>Vilaiti</td>
<td>-</td>
</tr>
<tr>
<td>25.0 +</td>
<td>Big Vilaiti</td>
<td>-</td>
</tr>
</tbody>
</table>

A tusk is often considered of 3 parts (Fig. 1) - the hollow, the centre and the tip or point. In addition all tusks have an outer "skin", "bark" or "crust" which manufacturers have to remove before working on the ivory. Running longitudinally down the centre of a tusk is a small hole - frequently only apparent as the minutest pinprick. This is the "heart".

Tusks are of top quality when they are straight or nearly so, have short hollows - i.e. not more than one quarter of total length - and are round or nearly round in cross-section. A tusk is said to be round if the larger diameter does not exceed the smaller diameter by more than one fifth of the latter, both measurements taken where the tusk emerges from the gum.
FIG. 1 A TUSK DIAGRAMMATICALLY
Defects looked for in tusks are:

1) "Shakes": these are longitudinal surface cracks from which few tusks are free. Normally they go no deeper than the bark and are not serious flaws. However, occasionally a shake goes deeper and becomes a "Split".

2) "Splits" and "Cracks": in essence these are an advanced form of shakes. Whereas shakes are essentially confined to the outer surface of a tusk, some splits occur on the inner surface of the hollow and are invisible to exterior examination. Splits are a serious flaw.

3) "Ribs": Irregular longitudinal ridges which may run the whole length of a tusk.

4) "Seams": These are the reverse of ribs, being longitudinal furrows; both are serious defects.

5) "Rings": Transverse ridges across a tusk.

6) "Beans": Small independent bodies of dentine embedded in the matrix of a tusk - usually near the heart.

7) "Open Heart": The heart is open and a clearly definable hole rather than a virtually invisible channel. Open hearts are often associated with irregularities in the tusk grain.

8) "Coarse grain": An open as opposed to close tight graining in the cross-section, and

9) Any obvious surface blemish or damage.

As a general rule the larger the tusk, the higher its price. However this is not invariable as for each use there is an optimum tusk form. Obviously large or vilaiti tusks provide greater scope for working than scrivelloes. Thus it would be inconceivable for large vilaiti to be used in making bangles. For such work Cutchi is the more appropriate size. Large female tusks - ball scrivelloes - were used for billiard balls. Jewelry, inlay material and very small ornaments are fashioned from waste. Even the ivory dust from grinding and sawing had many uses until recently, in tempering certain steel tools, in the manufacture of some acids, as medicine for both humans and
cattle, calcined to make the basis of a fine printer's ink or paint (ivory black), in confectionery and as a fertiliser for roses.

Many historical comments on the value of ivory have been made in ignorance of the wide range of uses and prices which prevail at any one time. The error persists today. Prices are quoted without reference to the type of ivory involved. This will receive further illustration in following chapters.

Elephant tusks are obtained in many ways both legal and illegal. Sportsmen seek the largest tuskers; poachers are less discriminating. Elephants killed for crop raiding are frequently female or immature. Many tusks become available through natural mortality. In areas which are thoroughly searched, the tusks found will tend to be small - as mortality is high among immatures. In areas inefficiently searched they will be large, as smaller tusks break down and disappear faster, leaving a residue of large, weathered teeth. Thus different sources produce different types of ivory - often in irregular or small amounts. Individually they do not offer traders or manufacturers wide selection. With so variable a commodity any market which offers the buyer a wide choice of form will be at advantage.

In response, and as a generalisation, the flow of ivory in Africa is from numerous sources in small amounts towards the hands of a few people. It is a process of constriction ending in the great ivory marts which over the past two hundred years have included Zanzibar, India, London, Antwerp and Hong Kong. These points offer buyers the widest choice of tusk qualities and sizes. Once selection is made, the flow of the trade reverses and becomes an ever wider dispersal - each successive step toward a more specialised use culminating in the final retail product.
In principle the foregoing process is simple. In practice it is complex. A dealer seeking to fulfil an order for tusks of a specific weight and form may only be able to acquire them by purchasing lots which include others which he does not want. These surpluses have to be set aside, sold separately as they are, or recombined with other lots. They may even be sold back to the original seller. The trade is thus characterised by flow and counterflow and is yet further complicated by the movement of ivory between countries - purely as a vehicle for the movement of capital.
Data on the world ivory trade before 1914 may be abundant, but scattered in dribs and drabs in dusty archives and as occasional sentences through literature. In the course of this survey I have collected but few: sufficient to give only a crude outline of the trade in the past. The data are seldom contemporaneous and have to be linked with assumption and historical insight.

The evidence is assembled in Tables 1, 2 and 3 to give what I have been able to find on Africa's exports, the overseas imports and the price of ivory respectively, before 1914. The origins of the material in these three tables are also presented separately and in greater detail in Tables 4-36. From them the following picture emerges.

The data on African exports (Table 1) spans 394 years, 1520-1914. They are solely concerned with Mozambique prior to 1852. There are 5 export records for the 16th and 17th centuries combined, which give an average of 68 tonnes per annum.

The 18th century Mozambique records form a larger sample - 11 years - which give an average 129 tonnes per annum.

Five records from Mozambique between 1800 and 1850 give an average of 113 tonnes a year. Yet Peters (1852) quoted by Sikes (1971) claimed that the annual output from Mozambique was c.138 tonnes a year. In view of the inevitable lapse between collecting data and producing a published work, Peters' record is more likely to pertain to pre- rather than post-1850.

The second half of the 19th century gives wider coverage of African exports. Zanzibar has 5 years' data to give an average of 214 tonnes per annum. Khartoum Sudan has 27 years with an average of 137 tonnes, the Abyssinian outlet for Sudanese
ivory unknown but probably 50-100 tonnes p.a., and the Congo basin 12 years, averaging 230 tonnes per annum.

Between 1900 and 1914 the annual averages were Zanzibar 37 tonnes, Khartoum Sudan 107 tonnes, Abyssinian Sudan 100 tonnes and Congo basin 370 tonnes.

The data on European, American and Indian imports covers a lesser span of 126 years, 1788-1914, albeit I have one quote from Garcias ab Horto (Kunz 1916) which stated that India was importing 272 tonnes of ivory a year late in the 16th century. The British record is the longest and most detailed, covering 106 out of the 126 year span.

Late in the 18th century Britain's ivory imports averaged 87 tonnes a year. Between 1800 and 1849 these rose to 204 tonnes annually, between 1850 and 1899 they were 511 tonnes, and from 1900-1914 they ran at 472 tonnes.

Belgian records cover imports for the last years of the 19th century (1888-1899) when they averaged 175 tonnes of ivory a year, and 1900-1914 when they averaged 337 tonnes.

German imports of ivory cover a similar period, averaging 116 tonnes between 1880 and 1889; 203 tonnes between 1890 and 1899 and 313 tonnes per year from 1900-1914.

In addition to Garcias ab Horto's estimate of 272 tonnes in late 1500s the Indian data present a single record of 143 tonnes in 1848. This is followed by a lone estimate of 101 tonnes in 1863 (Bennett & Brooks 1965) and an average of 223 tonnes a year between 1874 and 1884.

The data obtained on the U.S.A. only cover the last two decades of the 19th century and the period 1900-1914. The average imports were 81 tonnes a year between 1880 and 1889; 107 tonnes annually from 1890-1899, and 242 tonnes from 1900-14.
Both sets of data in Tables 1 and 2 indicate a progressive increase in ivory exports from Africa and imports overseas through the period reviewed. In this time the price of ivory also increased from c. £0.2 per kg in 1770 to c. £1.0 per kg in 1900-1914. This is documented in Table 3 and illustrated in Figure 2. Price variations appear in Tables 21, 22, 26, 28, 32, 33 and 36.

Prior to the 19th century it is difficult to construct any picture of the development of the ivory trade other than through assumption. The 16th and 17th century Mozambique export data establish a minimum estimate of 68 tonnes a year. Yet at the same time ivory was leaving the East African coast through the Kamba trade to the north of Mozambique, and from the West African coast through the European trade. The solitary estimate of Indian imports of 272 tonnes a year from this period sets an upper ceiling and it is not outside my belief of what could have been coming out of Africa in this era. The demand for ivory in Europe had yet to become extensive, and it is likely that at least some of the West African ivory went eastwards to India to procure the spices and other commodities so desired in the west. Suffice it that the ivory leaving Africa between 1500 and 1699 may have averaged between 100 and 200 tonnes a year.

The Mozambique data indicate a substantial rise in ivory exports in the 18th century. This is also the age in which the Cape ivory trade developed as the Boers spread east and north from the southernmost point of Africa (Bryden 1903). This may have reached 100 tonnes per year at its height. At the same time the West African trade expanded with Europeans and Americans competing against one another. As the century closed, the Arabs to the north of Mozambique had regained some of the Yao-Makua ivory trade lost earlier to the Portuguese (Alpers, 1975). Taking two figures only - Mozambique's exports of 129 tonnes per annum and Britain's imports of 87 tonnes (which may have had an Indian and therefore Mozambique element,
FIG. 2 IVORY PRICES 1770 - 1914.
but were more likely to have been predominantly from West Africa, see Table 14), we can postulate that Africa's exports exceeded 200 tonnes a year, and it is likely that the excess was substantial.

The 19th century witnessed a considerable increase in ivory exports. This was already pronounced before 1850. The Arabs reached Lake Tanganyika in search of it and were well established to the south in what is now Malawi. The flow of ivory from the Sudan had also commenced. Mozambique continued to export at least c.113 tonnes a year and Zanzibar had been sending out perhaps as much as 100 tonnes a year to the U.S.A. alone. (Bennett & Brooks, 1965, show that there were two American ivory firms established in Zanzibar at this time. One of them referred to their target as between 54 and 68 tonnes a year. Increase this by half to account for a minimum from their rivals = c.100 tonnes.) The Cape trade was also flourishing and Britain was drawing an average of 204 tonnes a year from West Africa. The combined data suggest Africa's output is likely to have exceeded 400 tonnes a year in the first half of the last century.

Between 1850 and 1899 first the Arabs consolidated their grip on the African hinterlands, then, when they were dislodged, European powers took over the flow of ivory by permitting safe, long distance portage in substitution of slaves. In addition Belgium took over the Congo basin and added a new source of exports to those already established. By themselves, Zanzibar, Sudan (including Ethiopia) and the Congo basin produced an average of 681 tonnes of ivory a year. The declining outputs of West Africa, the Cape and Mozambique would almost certainly have augmented this to over 700 tonnes.

In the final years 1900-1914 the combined Zanzibar, Sudanic and Congo basin exports record a decline of nearly 100 tonnes per annum from 681 to 584 tonnes (assuming Abyssinia kept going at 100 tonnes per annum). It remains to be seen
whether these estimates tally with ivory imports to Europe, India and America.

At first glance there appear to be substantial discrepancies. The sum of British, Belgium, German, Indian and American imports average for 1880-1889 is 1076 tonnes a year. Assuming Indian imports retained their level, this will have increased to 1143 tonnes a year in 1890-1899 and to 1587 tonnes between 1900 and 1914. Fortunately imports are ascribed to countries of origin in some data from Britain, Belgium, Germany and the U.S.A. These breakdowns are not entirely contemporaneous, but stem from the same era, 1880-1914. Taking the following "mix of nearest years" - Britain 1906, Belgium 1899, Germany 1896, U.S.A. 1896 - their sum of imports direct from Africa is 565 tonnes (see Tables 20, 25, 27 and 33). Taking a later mix of nearest years - Britain 1912, Belgium 1899, Germany 1912 and U.S.A. 1911 - their sum of African imports is 667 tonnes (Tables 20, 25, 29 and 33). To both should be added a guess of India's imports - say 150 tonnes (based on Table 34). This would raise the mix of earlier years to 715 tonnes and the later mix to 817 tonnes. They do not reflect a decline in the period 1900-1914 as suggested by the African figures.

Further calculation is pointless with such incomplete data. Countries other than the 5 ivory "powers" mentioned also imported tusks direct from Africa albeit in smaller quantities. Nonetheless the evidence clearly indicates that by the end of the 19th century Africa's exports of ivory were at least 700 tonnes a year, and these rose to at least 800 tonnes before 1914.

The breakdown of imports to countries of origin also reveals an important aspect of the past ivory trade. Substantial quantities of ivory recorded as imports do not come direct from Africa, but from nations which merely trade in ivory. These countries were principally the 5 ivory "powers" of the time and the British record of 1912 - presented in Table
37 - provides a typical example of flow and counterflow between them. Fifty-two per cent of ivory imported into Britain was not new ex-Africa, but had come from Belgium, Germany, India or the U.S.A. Similarly 75% of exports was to Germany, India and the U.S.A. Only 32% of imports was retained for manufacture and use in Britain. The major activity of the business was not so much importing new ivory as trading it between industrialised countries. Evidence that this took place as a matter of course is apparent in Tables 20, 25, 27 and 28. This process was of long standing and involved all the major ivory markets. Thus even before 1886 the U.S.A. were exporting ivory to India (Holder 1886).

To conclude this chapter I have summarised the development of the African ivory trade diagrammatically in Figures 3 a-e. In four centuries the outflow of ivory increased from at least 100-200 tonnes in 1500-1699, to over 800 tonnes a year between 1900 and 1914. Prices rose from c.£0.2 per kg in 1770 to c.£1.0 per kg between 1900 and 1914. Contrary to popular belief the trade was not a simple process whereby ivory moves from producer in Africa through a merchant (or merchants) to a manufacturer, but involved complex flows and counterflows between the trading nations.
FIG. 3 a. THE IVORY TRADE PRE-1500. A GUESS.
FIG. 3 b. THE IVORY FLOW 1500 - 1699.
FIG. 3 c. THE IVORY TRADE 1700-1800
FIG. 3 d. THE IVORY TRADE LATE 19TH CENTURY.
FIG. 3 e. THE IVORY TRADE 1900 - 1914.
My brief (Appendix 1) calls for description of the component links in the ivory trade. These are too numerous to detail within the survey's time limits and I have therefore summarised general patterns into two charts: the intra-African national flow chart (Figure 4) and the overseas international flow chart (Figure 5). Both are largely self-explanatory.

The national chart encompasses intra-African movements across borders, and this is treated as a source of ivory along with crop-protection, sport-hunting, found and poached. It is difficult to ascribe proportions of the trade to the various sources as they vary from country to country. Burundi's only ivory source is trans-border. Botswana's predominant source is sport-hunting. Tanzania's is heavily weighted by control shooting, Zaire's, Uganda's and Kenya's main sources have been largely illegal in recent years.

Little ivory leaves Africa as obviously illicit. By the time it appears on the international chart, it has usually acquired appropriate documents and, by virtue of these pieces of paper, is legal. Such documentation is almost invariably acquired through bribery, and the fact that this can be done so easily the length and breadth of the continent, is a point that will be considered later.

The inter-continental carriage of ivory until 1970 was by sea, after which airfreight became widely preferred. Recently there has been a reversion to seafreight for a variety of reasons - the most important undoubtedly being cost.

Figure 5 illustrates a major aspect of the trade: that it is still very strongly influenced by colonial legacies: Anglophone Africa shipping to Anglophone entrepôts, and Francophone countries shipping to Francophone countries - predominantly Belgium.
FIG. 4 THE NATIONAL (INTRA-AFRICAN) IVORY FLOW CHART
FIG. 5 THE INTERNATIONAL IVORY FLOW CHART
This chapter is based on annual trade statistics compiled from Customs and Excise data on international trade. They are extensive and some give great detail. There is no more comprehensive a set of records wherefrom to analyse trade but they are not perfect. If they were, the export statements on the quantity of a commodity should tally with the import statements of the recipient country. This seldom happens for a wide variety of reasons.

An export made at the end of one year would be recorded as having taken place within that year by the dispatching country. However if it arrived at its destination early in the following new year, that is where it would be recorded and thereby confuse annual comparisons. It is also perfectly legitimate to re-route cargo in shipment from one destination to another. While this does happen, it is an irregular, rather than regular feature of the trade. With ivory there may be weight changes of up to 3% while in transit - for fresh or 'green' ivory has a high moisture content, which is lost with varying speed according to temperature, humidity and atmospheric pressure. Then again, there may be differences between countries in the manner of taking records, and weighing commodities. The 'rounding' of weights and values for bureaucratic convenience alone will introduce variations between two records of the same consignment. Thus, in the data presented here, some ivory was originally weighed in lbs, presented as rounded hundredweights in annual trade statistics of export, recorded in kilos of import and rounded to tonnes in the published statistics of import. Each conversion may have introduced substantial error, particularly with small shipments; e.g. 1,400 kg to the nearest tonne = 1, and the 400 kg or 28.6% of the original consignment are expunged from the record. These errors will have been further exacerbated in the conversions and roundings I have made for uniformity in this report. Similarly the values quoted have also been subjected to roundings and then by my conversions into a common currency. They have been based on a single (and where possible average) annual conversion rate, whereas there
may have been a wide range of currency ratios in any 12 month period. Monetary conversions are presented in Appendix 3.

The salient point then is that one should not expect export figures from one country to tally exactly with the corresponding import records in another. All that can be assumed is that there will be a broad agreement between them over time. Where possible I have avoided year to year comparisons, for these are where differences will be greatest. Instead, and where possible, I have favoured spans of longer than 5 years. Arbitrarily I have considered import/export differences which are less than 15% of the export figure to be of no significance.

The data reported in annual trade statistics are derived from the dispatchers' invoices. These may be subject to a variety of biases for business or political reasons. This is particularly the case with value where there are many incentives to avoid duties and taxes by underpricing commodities. Similarly, political concealment of volume - amounts going unrecorded at an official level - may have wide use: e.g. recently to remove the base for ignorant and hostile comment from the western conservation press, whose major source of fact has been published trade statistics. In almost all cases, however, the biases tend to under, rather than over estimate volumes and values. Thus the facts presented herein are more likely to be minima than maxima.

Each country for which I have data is reviewed first independently and then from an international overview.

AFRICA
1. Zanzibar
As far as is known Zanzibar has never had indigenous elephants, although its fauna indicate that at one time it must have been part of the African mainland. Its role as an ivory entrepôt has been known for centuries. With the diminishment
of the Sultan's territories in the last century the Zanzibar trade went into decline, so that by 1914 its import/export trade had dropped from over 200 tonnes a year to substantially less than 100 tonnes (Table 7). Data on the years 1914-1924 are absent, but from 1925 to 1976 are available and presented in Table 38. From these it would seem that the missing years (1915-1924) saw trade at a low ebb. In 1925 imports were at 26 tonnes and appeared to be increasing, for the following year they rose to 41 tonnes. However, with the onset of the Great Depression, they fell back to a low of 11 tonnes in 1931. From that point on they rose more or less continuously until 1962 when they reached 228 tonnes - a growth of over 750% or c.15% per annum. Thus, by the early 60s, Zanzibar had regained the level of imports that it had a century previously.

Zanzibar's exports closely followed imports and are presented in Figure 6 and Table 39. Until the outbreak of war in 1939, Britain was the island's largest market. India took over from Britain throughout the war and held dominance until 1958 when, in turn, it was replaced by Hong Kong.

Zanzibar's return to prominence in the ivory trade came about through Indian traders and their dispersal throughout British and Belgian Africa in the early years of colonisation. Their distribution is reflected in the varied and far-flung sources of its ivory: over the period reviewed, Zaire supplied 31% of ivory imports, Tanganyika 24%, Mozambique 18%, Uganda 8%, Kenya 7% and both Somalia and Zambia 5%. Many other countries produced smaller amounts (Table 38).

Having no elephants, the island had no incentive to try to 'regulate' the ivory trade, hence it was free. Anyone who wished to might trade in tusks and the business went beyond merely buying and selling raw tusks. Many were cut into their component parts, debarked and polished, making for a far more valuable (and complicated) trade.
FIG. 6 ZANZIBAR'S RE-EXPORTS OF RAW IVORY 1925-1963
The revolution in 1964 destroyed Zanzibar's ivory trade. The Indians and Arabs who managed it, fled or died. Since then there have been occasional small exports, initially of residual stock from before the troubles, and latterly from mainland Tanganyikan ivory smuggled across. After the revolution, Zanzibar united with Tanganyika to become Tanzania. Since this union, it has been difficult to separate Zanzibar's trade from the mainland's, and its very occasional exports of ivory are only apparent from Hong Kong's import data (Table 86).

2. **Tanganyika**

For the purpose of historical comparison I retain the name Tanganyika because the two elements of Tanzania (Zanzibar and Tanganyika) have had different roles in the ivory trade.

Tanganyika has had large numbers of elephants throughout the white man's knowledge of the region. It was probably the major source of Zanzibar's ivory during the last century. The Germans introduced regulations to control the killing of elephant and directed the trade in ivory into the hands of German companies and away from Zanzibar. However, they also encountered widespread rebellion from many of the tribes of Tanganyika throughout the late 1890s to c.1910. These culminated in the Maji-maji war, which laid waste half the country and caused immense loss of life. It also disrupted the ivory trade very effectively.

With the advent of British rule after the 1914-18 war, the game regulations were modelled on the prevailing British ideas. However, unlike in neighbouring Kenya, these were relatively humane, in that they permitted the local populace to hunt - elephants as well as other species.

Tanzania's ivory production is mirrored in the country's export statistics for 1929-1976 which are presented in Figure 7 and Table 40. This ivory, which was all classified as originating within Tanganyika, rose in volume from c.16 tonnes
FIG. 7 TANGANYIKA'S EXPORTS OF RAW IVORY
1929-1976
in 1929 to a peak of 251 tonnes in 1972. In 1973 exports fell back sharply and are recorded as having stayed below 40 tonnes per annum from 1974-1976.

From the onset of British administration, Tanganyika's ivory trade was dominated by Indians - many of whom were little more than forwarding agents for their kin in Zanzibar or Kenya. Between 1929 and 1948 Kenya and Zanzibar were the country's main markets, with India occasionally taking large consignments. From 1949 to 1965, Zanzibar is listed as by far the larger outlet, after which Hong Kong took over.

Tanganyika's Indians also ran a small entrepôt trade between 1929 and 1952 when it petered out. Supplies came mainly from neighbouring Zambia and Zaire (Congo in the records). In 1962 it was banned altogether, in concert with similar actions in Kenya and Uganda. Various reasons were put forward for this: "to prevent poaching in neighbouring states", and "to remove incentive for corruption for the incoming African administrators" being two I heard most frequently.

In pursuance of its socialist policies the government declared a state monopoly on ivory exports in 1969. In 1973 elephant hunting was banned to discourage poaching: the decline in exports that year being attributed directly to this.

Responsibility for managing the state ivory monopoly has passed through the hands, first of the STC (State Trading Corporation), then another parastatal body GAPEX (General Agricultural Produce Export Corporation), before becoming the responsibility of TAWICO (Tanzania Wildlife Development Corporation). In theory all ivory accruing to the state should be delivered to TAWICO for marketing overseas. In practice the situation is confused, and corrupt.

Ivory from elephants shot on control, confiscated or found outside national parks is surrendered to the nearest
administrative centre, registered, and sent to the Government Ivory Room in Dar es Salaam. Here it is sorted, graded and available for buyers to inspect. At this point its disposal should become the responsibility of TAWICO. However, TAWICO has to buy the ivory from the Ivory Room. As it has insufficient funds to do so, the pipeline is blocked in an intricate tangle. Thus between 1971 and 1976 the Customs record indicates that 552 tonnes left Tanzania while flow between Ivory Room and TAWICO or its precursors is only 168 tonnes.

Ivory from the national parks by-passes the Ivory Room and is delivered direct to TAWICO. It is unlikely, however, that the difference of what has gone from the Ivory Room and what has been exported (389 tonnes) came from the Parks. That private companies do manage to buy ivory and export it is common knowledge and evidence is presented in Figures 8 a-e. Figure 8 a is a modern Tanzanian export permit made out, as it should be, to TAWICO; 8 b is a similar permit in the name of a private company; 8 c is an obsolete form of permit issued by a game warden to a private company in 1978 and 8 d and e are Chamber of Commerce certificates of origin made out in the names of two companies exporting ivory from Tanzania in 1978. Such practice is common, so much so that many traders were surprised to hear that a state monopoly exists.

The modern situation is not entirely unexpected for, even before independence, the Tanganyika Game Department was never able to reconcile the increases in ivory exports, with its own knowledge of what should have been available.

3. Kenya

As soon as Mombasa became the base for British penetration of Kenya and Uganda it attracted ivory traders. Thus by the turn of the century it was seen as a serious competitor with Zanzibar (Kuntz 1916). The Uganda railway to Lake Victoria and the steamer services to the Zaire borders on Lake Albert
**HATI YA KUTOA VIPUSA NJE**  
(Isihawilishwe)

<table>
<thead>
<tr>
<th>Nambari</th>
<th>Aina ya Kipusa</th>
<th>Idadi</th>
<th>Uzito/Daraja</th>
<th>Alama ya Usajili</th>
<th>Aina</th>
<th>Nambari</th>
<th>Mahali</th>
<th>Tarehe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Matokeo</td>
<td>=71</td>
<td>437kg</td>
<td>1st Class</td>
<td>1884</td>
<td>1884</td>
<td>Dom</td>
<td>3/8/78</td>
</tr>
</tbody>
</table>

**Namba ya Mpelekaji:** 

Salih ya Mpelekaji

Mtafiti Mkuu Mamlaka ya Kisayansi

Mkurugenzi wa Wanyama (Mamlaka Usimamiaji)

Tarehe: 3/8/78

---

1. Vipusa vilivyotajwa hapa lazima visafirishwe mnemo muda wa siku thelathini za kutolewa hati hili.
2. Hatii hili lazima wakati wote ilandane na vipusa vilivyotajwa mpaka kumfikia mpokeaji.

---

**Anwani:**

*Jina*.

**Tarehe ya kutolewa:** 3/8/78

**Tarehe ya kumalizika:** 2/7/78

**Malipo Sh. 2/-**

**Hati hii imetolewa kwa (Jina):**

Tangania Wild Life Corporation

**Anwani:**

Ikiwa ni idhini ya kusafirisha vipusa vilivyotajwa chini ili kumpelekea (Jina na Anwani)

**Kibali au ruhusa nyinge:** Mauzo

---

**FIG. 8 a. EXAMPLE OF A TANZANIA PERMIT.**
**HATI YA KUTOA VIPUSA NJE**  
*(Isihawilishwe)*

<table>
<thead>
<tr>
<th>Nambari</th>
<th>Aina ya Kipusa</th>
<th>Idadi</th>
<th>Uzito/Daraja</th>
<th>Alama ya Usajili</th>
<th>Kibali au ruhusa nyininge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kilo</td>
<td>gramu</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Republiki</td>
<td>one</td>
<td>2</td>
<td>5</td>
<td>TB 10228</td>
</tr>
<tr>
<td>2</td>
<td>Republiki</td>
<td>one</td>
<td>14</td>
<td>-</td>
<td>TB 10229</td>
</tr>
<tr>
<td>3</td>
<td>Republiki</td>
<td>one</td>
<td>14</td>
<td>-</td>
<td>TB 10231</td>
</tr>
<tr>
<td>4</td>
<td>Republiki</td>
<td>one</td>
<td>5</td>
<td>-</td>
<td>TR 10232</td>
</tr>
<tr>
<td>5</td>
<td>Republiki</td>
<td>one</td>
<td>4</td>
<td>7</td>
<td>TR 10233</td>
</tr>
<tr>
<td>6</td>
<td>Republiki</td>
<td>one</td>
<td>3</td>
<td>-</td>
<td>KD 62-7K1</td>
</tr>
<tr>
<td>7</td>
<td>Republiki</td>
<td>one</td>
<td>3</td>
<td>1</td>
<td>KD 69-7K</td>
</tr>
<tr>
<td>8</td>
<td>Republiki</td>
<td>one</td>
<td>3</td>
<td>4</td>
<td>KD 75-7K</td>
</tr>
<tr>
<td>9</td>
<td>Republiki</td>
<td>one</td>
<td>3</td>
<td>2</td>
<td>KD 80-7K</td>
</tr>
<tr>
<td>10</td>
<td>Republiki</td>
<td>one</td>
<td>3</td>
<td>-</td>
<td>KD 81-7K</td>
</tr>
</tbody>
</table>

**Fig. 8.5**  
**EXAMPLE OF A TANZANIA PERMIT.**

**Sahihi ya Mpeleka:**  
**Mtafiti Mkuu Mamlaka ya Kisayanzi:**  
**Mkurugenzi wa Wanyama (Mambo Chini mamilaji):**

Tarehe: 26/9/78
Certificate of Lawful Export

Section 40 (2)

Station: Cluny
Date of issue: 26/9/78

This Certificate of Lawful Export is issued to

Cluny

being the holder of a Certificate of Ownership No. 97463 issued at Tabora on date 19/1/78 by any other authority namely:

Cluny

is entitled to export the following trophies:

(a) Elephant ivory or rhinoceros horn:

<table>
<thead>
<tr>
<th>Species</th>
<th>Weight</th>
<th>Registration Mark and Serial No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elephant tusks</td>
<td>9</td>
<td>78 101 89</td>
</tr>
<tr>
<td>Elephant tusks</td>
<td>10</td>
<td>78 102 89</td>
</tr>
<tr>
<td>Elephant tusks</td>
<td>8</td>
<td>78 102 00</td>
</tr>
<tr>
<td>Elephant tusks</td>
<td>8</td>
<td>78 102 01</td>
</tr>
<tr>
<td>Elephant tusks</td>
<td>2</td>
<td>78 102 02</td>
</tr>
</tbody>
</table>

(b) Other trophies:

<table>
<thead>
<tr>
<th>Species from which trophy obtained</th>
<th>Type of trophy</th>
<th>No.</th>
</tr>
</thead>
</table>

Signature of Holder

Registered Officer

FIG. 8 c. EXAMPLE OF A TANZANIA PERMIT.
1. Goods consigned from (Importer's business name, address, country)
NATIONAL TROPHY & CARVINGS CO. LTD.,
P.O. BOX 5282,
DAR ES SALAAM,
TANZANIA

2. Goods consigned to (Consignee's name, address, country)

3. Means of transport and route (as far as known)
BY AIR ALITALIA AZ 1821

5. Item number

6. Marks and numbers of packages
ONE HUNDRED ELEPHANT TUSKS 210 PCS PACKAGES
AND FIVE

7. Number and kind of packages; description of goods
IN TWO

8. Origin and weight or other quantity
TANZANIA 2000 KGS

9. Certificate or other weight or other quantity
(see Notes overleaf)

10. Number and date of invoices
INV. No. 117 15/8/78

11. Certification
It is hereby certified, on the basis of control carried out, that the declaration by the exporter is correct.

I HEREBY CERTIFY THAT THE GOODS REFERRED TO HEREBIN ORIGINATED AT TANZANIA.

THE DAR ES SALAAM CHAMBER OF COMMERCE
APPROVED AND DESIGNATED AS AN ISSUING AUTHORITY BY THE GOVERNMENT OF THE UNITED REPUBLIC OF TANZANIA UNDER THE CUSTOMS FORMALITIES ARRANGEMENT OF 1931.

Place and date, signature and stamp of certifying authority

12. Declaration by the exporter
The undersigned hereby declares that the above details and statements are correct; that all the goods were produced in TANZANIA (country) and that they comply with the origin requirements specified for those goods in the Generalised System of Preferences for goods exported to HONG KONG (importing country).

Place and date, signature of authorised signatory

FIG. 8d. EXAMPLE OF A TANZANIA PERMIT.
CERTIFICATE OF ORIGIN

The undersigned, duly authorised by THE ARUSHA CHAMBER OF COMMERCE AND AGRICULTURE, hereby verifies the declaration made below by:

M/R TROPHY AND ANTIQUES TANZANIA, P.O. BOX 856, ARUSHA, TANZANIA

in respect of the undermentioned goods to:

to notify:

at per (name of vessel) KL 568/320-345, KL 801 to HKG.

from (port of despatch) M.T.A. (JRB) to (port of destination) HONG KONG.

<table>
<thead>
<tr>
<th>Number of packages</th>
<th>Marks and Numbers</th>
<th>Gross Weight</th>
<th>Net Weight</th>
<th>Description of Goods</th>
<th>Customs Export Entry No. and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 pkgs. ivory tusk polished</td>
<td>THE CHAR-TERED BANK TSU IMSHA TSU, KOW-LOON, HONG KONG.</td>
<td>500kgs</td>
<td>500kgs</td>
<td>65 pcs. of ivory tusk polished</td>
<td>C 31 No. 000005 dated 27-9-78</td>
</tr>
</tbody>
</table>

that the goods specified in the schedule above are of TANZANIA origin, production or manufacture, unless otherwise stated.

For ARUSHA CHAMBER OF COMMERCE AND AGRICULTURE

Tanganyika Management & Trust Co., Ltd.
Secretaries

FIG. 8 e. EXAMPLE OF A TANZANIA PERMIT.
tapped substantial ivory sources, all of which had to pass through Mombasa.

Game laws in Kenya were radical from the outset and, unlike in other colonial territories, they barred Africans from hunting almost all animals - let alone elephant. Nonetheless the 'natives' were encouraged to bring ivory they found to Government for a reward, white men and some Asians shot elephants on licence, and under Government supervision elephants were shot to make way for agriculture, or in retribution for damage to crops. These policies gave rise to ivory exports which moved from c.30 tonnes in 1925 to only c.40 tonnes in 1970, some 45 years later. From 1970 to 1973 exports rose steeply so that in the latter years exports were 260% higher than the average annual export of domestic ivory for the decade 1960-1969. After 1973 they fell back slightly, but remained above 100 tonnes in 1974 and 1975; they then slid to a mere 12 tonnes in 1977. The data are presented in Figure 9 and Table 43.

In addition to domestic ivory, Kenya also fostered a substantial, if erratic, trade in tusks from other countries. The dimensions of this business are given in Tables 44 and 45 and illustrated in Figure 9. From the mid 1930s it was substantially larger than the country's internal legal production.

Throughout the period 1925-1978, the Kenya ivory business has been dominated by Indians. Dealers had to have a licence to engage in the trade and were only permitted to buy from persons with a 'Sale permit' to sell tusks, or from Government at the biannual auctions of official ivory. After independence some African entrepreneurs entered the business - either in partnership or as 'fronts' for Indians. This development culminated in the issue of Collector's Permits giving carte blanche to 'gather' ivory. In effect it both stimulated and legalised widespread elephant killing. The permits were issued
FIG. 9 KENYA'S EXPORTS AND RE-EXPORTS OF RAW IVORY 1925-1977

Exports

Re-exports
in the first instance on instructions from the highest authority in the land. Once the system was established it expanded rapidly. High prices in 1973 raised elephant hunting to a 'gold rush' syndrome, and Collector's permits were augmented by licences to shoot elephants, issued at a rate of 7 per day.

Discipline within the Kenya Game Department collapsed after 1970. Government ivory ceased to be sold entirely by auction and much went by private treaty.

"For example, the ivory register in headquarters does not give the impression of a document recording the possession and transfer of articles to the value of hundreds of thousands of pounds. Sources and destinations of pieces of ivory taken on register are not necessarily given; whole pages of entries are crossed out without explanation. This register reveals the sharp increase in the practice of ivory transfer direct from HQ to individuals or dealers rather than via public auction at the ivory rooms. In the sixties over 90% of ivory went to the auctions in Mombasa; in 1970 80% went to the Ivory Rooms; in 1971 and 1972 combined this fell to 44%; in January to July 1973 only 23% of ivory recorded at HQ found its way to the Ivory Rooms. Leading personalities including both Assistant Ministers in our own Ministry (Tourism and Wildlife) were among those buying from HQ." (Internal Office Memo.)

Public outcry led to a closure of elephant hunting. The Minister for Tourism and Wildlife announced in the local press in August 1974 that there would be an end to private export of ivory. However these were words aimed at placating public outcry. Ivory kept coming into the country unrecorded and the home trade continued in private hands until April 1978 when trophy dealing was banned by Presidential decree. Even then business went on in private hands with Government sanction. In March 1979, the Ministry of Tourism and Wildlife sent a limited circular to 6 international traders for the sale of ivory and rhino horn by confidential 'tender', the secrecy of this sale being highly improper. They were asked to submit bids for:
383 pieces of ivory weighing 861 kg
136 " " " 972 kg
34 " " " 427 kg
4 " " " 95 kg
1460 " " " 1634 kg
30 pieces of rhino horn 26.5 kg

Figures 10 a-d are evidence of the 'unusual' manner in which the export of ivory was permitted. Figure 10 a shows a permit issued to a private company - the United Africa Corporation for 11.1 tonnes of ivory on the 15th August 1975. Figure 10 b is 'unusual' in that it is a permit issued to a Uganda Company to cover cargo in transit. Normally cargo travels on permits issued by the country of origin. In fact the ivory was Kenyan and not Ugandan. Figure 10 c is a permit issued by the Department of Wildlife Conservation and Management to itself to 'possess' trophies, unnecessary as being Government, it has never needed such documents. Figure 10 d is a permit allowing export of ivory, also made out in the name of the Department. This evidence of departmental 'private' dealing is reinforced by the discovery of an account in the name of the Kenya Department of Wildlife Conservation and Management in a New York bank!

In addition to the traffic authorised by the Department of Wildlife Conservation and Management, I have also seen ivory exported in crates marked 'Wooden Carvings'.

4. **Uganda**

Uganda has a denser human population than either Tanganyika or Kenya and throughout this century competition for space between men and elephants has been intense. From the outset of colonial government this was a problem.

In 1912 natives were issued with rifles to shoot crop-raiding elephants. This proved insufficient. In 1918 District Commissioners were empowered to hire European gunmen to kill
FIG. 10 a. EXAMPLE OF A KENYA PERMIT.
PERMIT OF LAWFUL EXPORT

(Issued under section 37 of the Wild Animals Protection Act)

This Permit of Lawful Export is issued to Mr. Uganda Arts & Crafts of (Address) P.O. Box 136, Arua

who, being the holder of a Permit of Legal Possession No. [redacted] is entitled to export the following game trophies to [redacted].

(a) Ivory or Horn Weight (Kg.) Registration Mark/Serial No.

\[
\text{(13) One hundred thirteen pieces of elephant tusks weighing (1436.9 Kgs) only}
\]

(b) Other trophies:

<table>
<thead>
<tr>
<th>Species</th>
<th>Type of Trophy</th>
<th>Quantity (in words)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHIEF LICENSING OFFICER</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILDLIFE PROTECTION &amp; MANAGEMENT</td>
</tr>
<tr>
<td>DATE 3/8/78</td>
</tr>
</tbody>
</table>

Signature of Holder: [Signature]

Chief Game Warden, Kenya

FIG. 10 b. EXAMPLE OF A KENYA PERMIT.
**REPUBLIC OF KENYA**

**THE WILD ANIMALS PROTECTION ACT**
(Cap. 376, Laws of Kenya)

**PERMIT OF LAWFUL EXPORT**
(Issued under section 37 of the Wild Animals Protection Act)

This Permit of Lawful Export is issued to **Mr. Uganda Arts & Crafts**
of **P.O. Box 136, Arua**, who, being the holder of a Permit of Legal Possession No. **1971**
from **Uganda** (or other authority) is entitled to export the following game trophies to...

---

**(a) Ivory or Horn Weight (Kg.)**

**One hundred and thirteen pieces of Elephant tusks weighing 1436.9 kg. Only**

---

**(b) Other trophies:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Type of Trophy</th>
<th>Quantity (in words)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**CHIEF LICENSING OFFICER**

**WILDLIFE, MANAG & REGULATION**

**DATE 3/8/78**

**Signature of Holder**

---

**Chief Game Warden, Kenya**

**FIG. 10 b. EXAMPLE OF A KENYA PERMIT.**
CERTIFICATE OF OWNERSHIP (FOR POSSESSION OF TROPHIES)
ISSUED UNDER SECTION 42 OF THE WILDLIFE (CONSERVATION AND MANAGEMENT) ACT, 1976

Name of certificate holder (CAPITALS) WILDLIFE CONSERVATION MANAGEMENT

date of birth

address BOX 4, 02976 NAIROBI

who, being the holder of a Dealer's Licence No. BANK DRAFT

(or any other authority)

is entitled to possess the following trophies:

(a) Ivory or Horn (weight kg.)

<table>
<thead>
<tr>
<th>Species</th>
<th>Type of Trophy</th>
<th>Quantity (in words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elephant tusks</td>
<td>(100) pieces</td>
<td>Weighing (816.5) Kg</td>
</tr>
<tr>
<td>Rhino horns</td>
<td>(11) pieces</td>
<td>Weighing (24) Kg</td>
</tr>
</tbody>
</table>

(b) Other trophies:

<table>
<thead>
<tr>
<th>Species</th>
<th>Type of Trophy</th>
<th>Quantity (in words)</th>
</tr>
</thead>
</table>

Given under my hand this 7th day of Aug., 1978.

Director

Note: This permit does not authorise the owner to export the item(s) listed unless endorsed by the Minister.

The attention of the certificate owner is drawn to section 42 of the Act.

FIG. 10 c. EXAMPLE OF A KENYA PERMIT.
REPUBLIC OF KENYA

THE WILD ANIMALS PROTECTION ACT
(Cap. 376, Laws of Kenya)

PERMIT OF LAWFUL EXPORT
(Issued under section 37 of the Wild Animals Protection Act)

This Permit of Lawful Export is issued to [Redacted] of [Redacted] of (Address) [Redacted]

who, being the holder of a Permit of Legal Possession No. [Redacted]

(or other authority) [Redacted]

is entitled to export the following game trophies to [Redacted]

(a) Ivory or Horn Weight (Kg.) [Redacted]

(b) Other trophies:

<table>
<thead>
<tr>
<th>Species</th>
<th>Type of Trophy</th>
<th>Quantity (in words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Redacted]</td>
<td>[Redacted]</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>[Redacted]</td>
<td>[Redacted]</td>
<td>[Redacted]</td>
</tr>
</tbody>
</table>

Signature of Holder

Chief Game Warden, Kenya

FIG. 10 d. EXAMPLE OF A KENYA PERMIT.
elephants, payment being a proportion of the ivory handed in. This system was closely followed by licensing which permitted a sportsman to kill 20 elephants per licence. These efforts did little to resolve the human-elephant conflict. In 1923 C.F.M. Swynnerton of the Tanganyika Government was sent to advise the Uganda Government on the problem. As a result of his recommendations, a new Department was formed to handle elephant control which became the Uganda Game Department in 1925. In principle this new body was modelled on the Kenya Game Department. Its officers claimed to be predominantly interested in conserving wild life. In fact their main pre-occupation was 'elephant control' and the Department has been a major ivory producer. (Between 1925 and 1959 the Departmental Annual Reports record 34,782 elephants killed in protection of property.) A result of this work is that the range of elephants declined from more than 70% of the country's land area in 1929, to less than 7% today.

Elephant poaching was known to be widespread (Anon. 1939, 1946, 1947, 1948, 1949, 1955, 1957). When Government declared an amnesty in 1968 for all with illicit ivory, paying a reward for tusks handed in, many tonnes were surrendered within six months. That so large an amount was readily available suggests Government tapped an illicit trade. However, through the years the extent of the illegal trade was never documented.

Lacking a seaport, Uganda never developed an entrepôt trade in the same manner as Kenya. Indeed, at the outset ivory was sold by auction in Kampala, but before the second World War this changed and the Kenya Government auctioned all Uganda's ivory in Mombasa on commission. This system continued until 1967, when, once again, auctions were held in Kampala. Thus while ivory in transit from Zaire moved through Uganda to get to Mombasa, the country did not develop an entrepôt trade. As elsewhere in East Africa, Indians managed the Uganda trade until 1971 when all of their race were deported.
Law and order deteriorated so rapidly under Amin that from 1971 the official records of exports are of dubious value. The series of data from 1929 to 1976 are presented in Figure 11 and Table 46. These fluctuate about the 20-30 tonne level from 1929 until 1974 with a depression during the war years and a major peak to over 60 tonnes in the late 1960s. This is accounted for by the reduction of 2,000 elephants in the then Murchison Falls National Park (Laws, Parker & Johnstone, 1975) and the ivory amnesty already mentioned which crossed the annual divide between 1968 and 1969. After 1974 exports appear to have dropped steeply to c.5 tonnes in 1976 - the lowest official export since the preceding century.

The few imports of raw ivory are presented in Table 47.

It is known that the Customs record is incomplete. Kyemba (1977) states that the former President - Milton Obote - and his then Chief of Staff, General Amin, were involved in large-scale ivory smuggling from Zaire in the mid 1960s, volumes of which never appeared in the official statistics.

With the disintegration of Government under Amin a variety of permits were issued authorising ivory export - some for large enough amounts to belie the veracity of the Customs record. Samples are presented in Figures 12 a-c.

5. Sudan

In the last chapter it was apparent that the Sudan was a major ivory producer through much of the 19th century and up until 1914. However, the trade diminished considerably and though I have no data for the years 1915-1973, we have Nalder's (1936) comment:

"Ivory was for many years the only product of any importance: supplies gradually diminished and in 1832 the demand practically died away..."

From this it is apparent that the trade dropped substantially after 1914 - as was the case in East Africa, although the volume taken by the Abyssinian-Swahili brigands (Chapter 1)
FIG. 11 UGANDA'S EXPORTS OF RAW IVORY 1939-1976
THE REPUBLIC OF UGANDA

THE GAME (PRESERVATION AND CONTROL) ACT

LICENCE TO PURCHASE AND EXPORT GAME TROPHIES
(Issued under section 10 of the Act)

Serial No. 38596

Station: Kampala
Date: 14-10-77

Mr./Mrs./Miss. Ms. Sadiq, Trading Co. of Box 31073
Kampala

holder of this licence, is permitted to purchase and export* 1691 pieces of raw ivory - 2000 Kgs., without contravening the provisions of the above Act.

Fee: Shs. 2/50

*Indicate here the nature of the trophy obtained.

Chief Game Warden.

GPRU—500—300 bks.x30v.2—7-74. (S. C. 19).

FIG. 12 a. EXAMPLE OF A UGANDA PERMIT.
I hereby certify that the Game Trophies herein described below have in my opinion been obtained legally in accordance with the Game Trophies Act and that the said Game Trophies have been licensed for export.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NO. OF PIECES OR PKGS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAW IVORY</td>
<td>1007 PCS.</td>
<td>RAW IVORY 5227 KGS NETT.</td>
</tr>
</tbody>
</table>

Identification marks: IPP 4/78

Consignor: UGANDA ARTS CRAFT

Address: P.O. Box 135, ARUA

Consignee: 

Address: 

Conveyed by: ROAD THROUGH AKAMBA PUBLIC ROAD SERVICE TO KALROGAL IN TRANSIT

Licence No.: 39683

(Shipping Marks) NONE

Signature: [Signature]

Name: [Name]

Original to Consignee
Duplicate to Chief of Vessel
Triplicate to Consignor
Quadruplicate to Commissioner of Customs & Excise, Uganda,
P.O. Box 444
KAMPALA, UGANDA.

FIG. 12 b. EXAMPLE OF A UGANDA PERMIT
I hereby certify that the Game Trophies herein described below have in my opinion been obtained legally in accordance with the Game Trophies Act and that the said Game Trophies have been licensed for export.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NO. OF PIECES OR PKGS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAW IVORY</td>
<td>1537 PIECES OF IVORY</td>
<td>6837 KGS, NETT</td>
</tr>
</tbody>
</table>

Identification marks: UPP 7/78

Consignor: UGANDA ARTS CRAFTS, P.O. BOX 136, ARUA.

Consignor and Address:

Consignee and Address:

Conveyed by: ROAD THROUGH AKAMBA PUBLIC ROAD SERVICES, B. TO NAIROBI IN TRANSIT.

Licence No.: 38735 OF 9/6/78

(Shipping Marks): NONE

Original to Consignee
Duplicate to Chief of Vessel
Triplicate to Consignor
Quadruplicate to Commissioner of Customs & Excise, Uganda, P. O. Box 444, KAMPALA, UGANDA.

Signature: [Signature]
Name: William [Name]
Authorised Licensing Officer

FIG. 12 c. EXAMPLE OF A UGANDA PERMIT
until 1930 went undocumented. However, the trade did not die out completely, for a number of Arab ivory merchants in Khartoum have an unbroken record of business which extends, through fathers and grandfathers, back into the last century. Further, there are a number of old ivory carvers in Omdurman and Khartoum who have been in business all their lives.

In 1955 southern Sudanese troops mutinied in Juba and precipitated a recessionist guerilla war which raged until 1972. The main source of Sudanese ivory was in the south and the war greatly slowed down ivory trading in the traditional manner: i.e. from the negro southerners, to urban, Arabised northerners, thence down the Nile to Khartoum. However, the southern rebels (AnyaNya) did use ivory to obtain provisions and weapons, selling it across the Zaire, Uganda, Kenya and Ethiopian borders.

Seventeen years of war destroyed the southern Sudanese economy. At its end, the region was back in the same position it had been at the turn of the century. The only source of revenue of any consequence was, once again, ivory. In 1973, as part of the celebrations to commemorate the first anniversary of the war's end, it was decided to hold an auction of ivory. This I organised for the Regional Government. It coincided with the onset of a spectacular rise in the price of ivory which precipitated a scramble for ivory throughout the south. As part of a consultancy for a client firm, I used the opportunity to enter the trade, buy ivory and obtain insight into the business both locally and internationally.

Ivory stockpiled during the war poured forth and it was instructive to see who had it. Prior to my arrival ivory had not been moving fast or in quantity, as sufficient transport did not yet exist to move it. However, by flying to outlying posts, I was able to get to it, rather than it having to come to me. Thus I bought from Negroes, Greeks, Indians, Arabs, Englishmen, an Irishman, from traders and companies, from game
wardens, Government Ministers, peasants, pilots, policemen; from administrators and AnyaNya rebels, hotel receptionists and a judge. The incentive to digress on this episode is great, but suffice it that I was shown that Sudan is still a major source of ivory. It also showed conclusively that its value and use is as embedded in Africa today as ever it was a hundred years ago. It also brought home very forcefully that, as always, transport is the major constraint upon the flow of ivory, for I was totally unable to move what I knew to be available, despite having funds to purchase everything I saw.

The Sudan's exports of raw ivory from Customs records for 1973-1977 are presented in Table 48. From my own experience I am certain that they are too low. The Sudan has rigorous exchange control laws, and substantial duties have to be paid on ivory exported. The economy is frail and many luxury goods are difficult to obtain. It is thus an ideal climate for illegal export. Figure 13 shows a permit issued to a trader for 2190 tusks - at least 1095 elephants. In the same period (the latter half of 1978) I personally saw documents authorising the export of a further 15.6 tonnes and an order for an additional 16 tonnes from Sudan (which would not have been placed without some confidence that it would be fulfilled). Thus from permits issued, the Sudan's exports in 1978 should have been 52 tonnes (with a possibility of a further 16) but this does not show in the Customs record.

While the trade figures for 1978 are incomplete at the time of writing, the levels of 'export' are substantially higher than in previous years and not in accordance with the country's policy of 'limited' elephant hunting.

6. Ethiopia

Since the Italian conquest of Ethiopia in 1933, there has been little official trade in ivory. The country has a few elephants around Harrar and along the south-western border with
The permit is issued by the Department of Wildlife Protection, Government of the Sudan, for the export of 2190 pieces of ivory tusks weighing 23,800 kilos to Hong Kong. The permit is valid from 20th June, 1973, and is issued to Mrs. Mohamed Awadalla El Awad, a Merchant residing at P.O. Box No. 473, Khartoum. The permit is to be used for the export of these tusks for commercial purposes.
the Sudan. In 1968 I made an aerial reconnaissance along the border, saw no live elephants, but many tracks and a number of skeletons indicative of hunting. I gained the impression that elephant densities were light-to-moderate and that there were probably more elephants than was or is held to be the case in conservation circles. The areas in which there are elephants, are remote and somewhat lawless. They serve as refuges for fugitives, both from the Sudan and Ethiopia - at that time a substantial number of Sudanese AnyaNya were there. On these grounds alone there must have been an ivory trade of sorts, but inhibited by the limited transport facilities.

In 1973 I visited Addis Ababa and enquired after the availability of ivory. The maximum I could have purchased was c.10 tonnes, most of which was said to have come from the western border, or from within the Sudan.

In 1976 one firm offered a company in the U.S.A. 7 tonnes and seemed to be seeking outlets for regular supplies. From this very limited evidence it would seem that there is still a small flow of ivory from Ethiopia. Officially, however, exports are less than 1 tonne a year. The only data available are presented in Table 49.

The Department of Wildlife Conservation and Development believes that less than 5 elephants were killed legally between 1974 and 1979, but that illegal hunting took place to an unknown degree (Survey Questionnaire).

7. Zambia

Zambia has a substantial elephant population (e.g. Caughley 1973) but a 'low profile' in the public ivory eye. Nevertheless it had both an external and internal trade in ivory artefacts, which entailed importing carved items as well as local manufacture - the market for which was the relatively large, urban and affluent mining community of expatriates.
Data on the import and export of ivory are presented in Figure 14 and Tables 50-54. Table 51 gives the only Customs data of this survey which are backed closely by evidence from the local conservation authority in Table 52. The pattern of raw ivory exports is of interest in that for nine of the 14 years covered - 1964, 65, 66, 72, 73, 74, 75, 76 and 77 - they are remarkably constant, averaging 26 tonnes in a range of 20-33 tonnes. The intervening period of 1967-1971 averaged 49 tonnes, but exports were erratic, ranging between 2 and 113.9 tonnes. This was also the period in which the Government was enmeshed in a controversial elephant cropping project in the Luangwa Valley of Zambia and I assume that the pattern of exports was in some way linked to the conservation politics of the time.

In the past Zambia sold much of its ivory to Mozambique. This stopped when that country became independent. With physical isolation from sea ports, a political outlook which denies rapprochement with Rhodesia, a fall in the price of copper and a general economic performance far behind expectations (Jolly 1978), Zambia has had to impose stringent exchange controls. These have recently included a ban on exporting ivory. At the same time the circumstances have created considerable incentive to use it to move capital away from the country. In the main this has taken two channels. Until the ban on exports most ivory was grossly undervalued to minimise what had to be returned to the country and to allow the balance between the real and invoiced price to be paid overseas.

The other channel has been the more unusual outright smuggling through concealment. One ruse used was sealing ivory in containers, bribing Customs officials not to inspect them too closely, and shipping the containers out as "heavy machinery parts" for repair. Thus Hong Kong obtained ivory imports from Australia whence the 'machinery parts' had been shipped.
FIG. 14 ZAMBIA'S EXPORTS OF RAW IVORY
1964-1977
Other ruses have included equipping trucks with false floors or hidden compartments and also dummy fuel tanks. In addition to Zambia's own smuggling there is also a through-flow of ivory from neighbouring Zaire and a possible back-flow from Malawi. Both streams have been predominantly directed toward and through South Africa. Some attempts have also been made to ship through Malawi where at least one such consignment has been seized.

Assertions were heard from a wide variety of sources that senior officials in the Zambian Government were implicated in widespread ivory exports.

8. Malawi

Malawi has its elephants (c.4,000) concentrated in sanctuaries - national parks, game reserves or forest reserves and under more effective supervision than any state with the possible exceptions of South Africa and Rhodesia. Export of raw ivory is not encouraged. That recovered from the country's elephants is sold to local craftsmen. It is then carved and sold to tourists who may export their purchases without let or hindrance. The volume of these local raw ivory sales is given in Table 55 and average c.1.2 tonnes a year. There is some poaching of Malawi's elephants, but it is within the population's capacity for replacement (Anstey and Bell, pers. comm.)

Attempts to smuggle ivory into Malawi are recurring and fall into two classes. The first concerns commercial consignments from both Zaire and Zambia, which are routed to overseas destinations through Malawi's Chileka airport. Several such consignments have been intercepted by the Malawi Customs Investigation Service and confiscated. (This ivory is sold by international tender if it is greater than can be absorbed into the local carving trade.) The photographs in Figure 15 are in fact from such a case when a vehicle and its contraband were seized.
FIG. 15 TRUCKS FITTED WITH FALSE FLOORS AND HIDDEN COMPARTMENTS—TRADITIONAL DEVICES FOR MOVING CONTRABAND—MOVE ILLEGAL IVORY WIDELY IN CENTRAL AFRICA.

(Photos: J. Clifford)
Malawi's facilities are too small for any major ivory traffic to develop without becoming conspicuous and detectable.

The second form of smuggling concerns ivory brought into Malawi as barter currency to purchase goods unobtainable in Mozambique and Zambia. In view of the depressed economies in these two countries and the healthy conditions in Malawi, there is said to be a constant dribble of tusks across the border. Because these come in, carried by people on foot, using numerous, unpolic ed backwood trails, interceptions are infrequent but do occur. What happens to this ivory is largely a matter of supposition though it is believed that a certain amount is taken in by the local carving industry. Some has certainly been bought by private individuals and freighted out as personal effects. If it accumulates into larger consignments, the most likely way in which it would leave the country would be by heavy road transport through Zambia and Botswana to South Africa. However, only one such consignment has been detected in recent years. Alternatively this ivory could be railed away from Malawi through Mozambique, but by both rail and road it would have to be disguised as something else or hidden as in Figure 15.

9. Botswana

Botswana, South Africa, Namibia, Lesotho and Swaziland share a common Customs and Excise Union. Trade Statistics are published by the Union and do not give breakdowns for the individual states. There are thus no published Customs data for Botswana's ivory trade prior to 1975, when the country commenced an independent annual trade record. The system for doing this is still in the process of development and in 1975 and 76 values only were published. Such data as are available from this source are presented in Table 56.

While an analysis of export permit duplicates might reveal considerable information on Botswana's ivory trade, no such examination was made and the Department of Wildlife and National
Parks has made no collation of the data. Short of substantial research, the Botswana government is unable to give a clear picture of its ivory trade. Fortunately, however, the major concern trading ivory in the country, Botswana Game Industries (Pty) Ltd. (BGI), provided an insight into volumes.

All tusks taken legally in Botswana are given individual registry numbers; each year the numbers commence at 1. The first tusk to be registered at any station in any year would be given the station prefix of two letters, the number 1 and the year. Thus the first tusk registered in Francistown in 1978 would be FT/1/78. The last number of each year will convey the number of tusks that were registered at that station.

While BGI is unlikely to always purchase the last number it is likely to obtain some numbers during the last weeks of the year and thereby obtain a close idea of the year's total registrations. On this basis it is estimated that for the years 1975-78, BGI bought 59% of ivory registered in Botswana, weighing 43,991 kg: an average of 8,798 kg a year. From this one can deduce that the country's average annual production has been c.14,912 kg per annum - say 15 tonnes.

The number of licences to shoot elephants has varied between c.550 and c.800 per annum over the same period, and the average weight of tusk bought by BGI is c.12 kg, i.e. 24 kg per elephant. On the basis of licences issued, annual ivory production should have been between 13.2 and 19.2 tonnes.

The two estimates are not unrelated and both are imprecise. Nevertheless as the BGI figure falls between what should become available from licences, I feel that it is a worthwhile guide to the order of Botswana's ivory production.

Unlike many other countries (e.g. Tanzania and Uganda), where elephants conflicting with agriculturalists is a problem, this is not the case in Botswana, and little ivory comes from
this source. Similarly, quantities found from natural mortality are small.

In addition to its own production Botswana, largely through BGI's international trading, imports ivory from elsewhere in Africa. While this was in principle straightforward, the disturbed political conditions around Botswana now complicate the trade. The situations in Zambia, Rhodesia, Angola and Namibia are all powerful incentives to move capital. Botswana's position makes it an obvious first base into which ivory can be moved. The country's early accession to the Washington Convention on Trade in Endangered Species enhanced this situation as it made Botswana Export Permits for ivory worth a great deal more than those from the majority of countries that held back from ratifying the treaty.

In the past two years there has been a proliferation of small ivory exporters in Botswana and a rise in the number of tusks shipped secretly over the border into South Africa. I examined some such ivory in South Africa and in Hong Kong saw applications for permission to import 6 tonnes of ivory from Botswana. The only concern with the capital and established trade position to produce this quantity out of Botswana is BGI, who knew nothing of the applications or the applicant. The conclusion, therefore, is that either there is an extensive poaching operation in Botswana (for which there is little supporting data) or the country is having its name taken in vain for other ivory.

10. South Africa and Namibia

South Africa has one source of ivory of any consequence: the Kruger National Park. Annual cropping programmes to hold elephant numbers to a predetermined level have produced between 1.9 and 6.2 tonnes annually over the past seven years.

Namibia has elephants in a narrow belt across the north of the country, including the whole of the 'Caprivi Strip'.
Trade statistics for the Southern African Customs Union are given in values only. The data are presented in Table 57 for 1972-77 imports and exports of both raw and worked ivory, and include estimates of weight.

In addition to these exports, South Africa has an ivory manufacturing industry which consumes at least 5 tonnes per annum, and probably more (Trade sources).

The South African/Namibian data do not reconcile readily with Botswana's statements and the low volumes I believe to be produced internally. Suffice it that the information is too imprecise to analyse accurately. This is in part a reflection of the political turmoil racking southern Africa, which creates a climate for concealment of trade statistics - particularly of a commodity such as ivory.

11. Zaire

Data on Zaire's ivory trade are given in Table 58. They derive from two sources (1) the Department for the Environment, Conservation of Nature and Tourisme (now the Zaire Institute for the Conservation of Nature), and (2) the United States Embassy in Kinshasa. The former covered 4 years 1973-76 and exports are given as 1 to 29 tonnes per annum. The second source covered six years 1972-77 ranging between 0.2 and 1,293 tonnes per annum. They do not correspond. Further, the second source also indicates a very substantial export trade in worked ivory of up to 78 tonnes per annum. All traders I have consulted on the data feel that they are false. The general impression is that Zaire's total exports are between 200 and 300 tonnes a year. The Zairois Government did negotiate an arrangement for selling all official ivory on commission. At the time - c.6 years ago - their 'official production' was c.120 tonnes per annum. However, they planned to raise it to 200 tonnes per annum. In the end the agreement was abandoned and sales are now back in Government hands.
CERTIFICAT D'ORIGINE ET DE LÉGITIME EXPORTATION.

Je souscris DITUZOLELE M'BONGI, Directeur à la Conservation de la Nature et Gestion des Ressources Naturelles, atteste par la présente que Monsieur DIALLO A. OUMAR, résident au N° 125 Avenue du Rail à KINSHASA/BARUMBU, est détenteur de 175 pointes d'ivoire (soit trois tonnes) qu'il a achetées conformément à la réglementation en vigueur en République du Zaire.

La présente lui est établie pour une légitime exportation.

15, Avenue des Cliniques N° 15/KINSHASA – GOMBE – B. P. 73 Kin. 14 - 12348 Kin. 1 – Téléphone: 30235 - 31252

FIG. 16 a. EXAMPLE OF A ZAIRE PERMIT
CERTIFICAT DE LEGITIME DÉVOULATION DE L'IVOIRE D'ÉLEPHANT.

Je soussigné : KABAYA NT. NDI MA MULYA BA, Ingénieur, Coordonataire Régional de l'Environnement, Conservation de la Nature et Tourisme pour la Région de l'Équateur, atteste par la présente:

Conformément à la Convention de Washington sur le commerce des espèces de faune et flore sauvages menacées d'extinction et en vertu de l'autorisation d'achat de l'ivoire brut n° 971/DECENT/DOC/78 du 6/3/78 accordée par le Commissaire d'État à l'Environnement, Conservation de la Nature et Tourisme à Kinshasa,

Le ETS. B.S.K. KINSHASA a présenté, en mon office, en date du 18 Juillet 1978 : 222... pointes d'ivoire brut pesant au total 27000... Kgs... dont les caractéristiques reproduites ci-dessous et que sa/ leur possession est légalement citée:

<table>
<thead>
<tr>
<th>N°</th>
<th>Poids</th>
<th>Qualité</th>
<th>Long. arc.</th>
<th>Contref.</th>
<th>Circonf.</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>222... 2700 Kgs. Entière</td>
<td>'222 POINTES' divergent 'allant de 1Kga.5°0 A 19Kga.9°0'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL : 2700 Kgs.

Origine : Région de l'Équateur pour transport par avion.
Fait à Kinshasa, le 18 Juillet 1978.

Fig. 16 b. EXAMPLE OF A ZAIRE PERMIT.
ATTÉSTATION TENANT LIEU DE CERTIFICAT
D'ENREGISTREMENT DES POINTES D'IVOIRE N° 45/78.

Nous soussignés BAMWISHO, Contrôleur de la Station de l'Environnement Conservation de la Nature & Tourisme en Zone de Beni attestons par la présente avoir enregistré 7,500 Kg de pointes d'Ivoires appartenant au Citoyen : ETS. RUMANGIZO COOPER et représenté par le Citoyen : A. SAID, délégué à cette fin par le Citoyen : le par sa note du ........ en Transit par UGANDA.

Les pointes ont été achetées depuis Janvier 1978 et sont prêt à l'exportation.

La présente attestation est sincère.

LE CONTRÔLEUR PRINCIPAL DE L'ENVIRONNEMENT CONSERVATION DE LA NATURE ET TOURISME STATION DE ZONE,

BAMWISHO.

ATTACHÉ DU BUREAU DE 1ER CLASSE.

FIG. 16 C. EXAMPLE OF A ZAIRE PERMIT.
The traders recognise Zaire as the largest source of ivory in Africa. However, they are also aware of the unmentionable political fact that Zaire is virtually a non-state. Large tracts in the east and north are, in many respects, independent of Kinshasa - certainly where rural life is concerned. This is particularly true of the ivory trade. Over the past decade there has been acute competition within the Government for control of ivory exports. Thus in 1978 Kinshasa issued one export document (Figure 16 a), the officers in Mbandaka issued a Certificate of Legal Possession which they meant to be valid for exporting ivory to Hong Kong (Fig 16 b - see bottom right corner above signature "pour exportation ver Hong Kong"), while from Beni yet another document is used (Figure 16 c). In this latter permit is a forgery: compare the shank of the figure 7 at the end of the second typed line in the heading with the shank of the 7 in the fifth typed line in "7,500 kg". It is obvious that it was originally 1,500 kg.

The bulk of Zaire's ivory exports come out illegally through neighbouring states - Congo, Central African Empire, Sudan, Uganda, Burundi and Zambia. In 1973 between 2 and 7 tonnes a week were being brought into Juba, a lot of which I personally saw. The main entrepreneurs in this smuggling were Senegalese. Small quantities are airfreighted to Europe or the Far East as personal belongings; large consignments are sent to Europe, usually Belgium, for disposal.

The magnitude of the Zaire ivory exports is difficult to confirm because of the manner in which they are mixed with those of neighbouring countries.

12. Burundi

Burundi has no elephants, but exports substantial amounts of ivory. These come from two sources - Zaire and Tanzania - in similar proportions. A Burundi export document is attached as Figure 17.
Annexe :
Objet :

- CERTIFICAT VETERINAIRE ET WILDLIFE -

1 certify that Pieces 838 soit 4,337 kgs = 100 colis of Ivory belong to MANJ-BURUNDI P.O. Box 2986 Bujumbura, were been examined and found in good condition for exportation purposes.

TO WHOM IT MAY CONCERN

R : Export licence BI/8.257 the ivory referred to in this licence was not obtained in contrevention of the laws of this country for the protection of fauna and flora and the export will not be detrimental to the survival of the species.

Destination :

Dr. NZIBARIZA François, Veterinary of Government.
13. Congo

Limited data on the Congo ivory trade are presented in Table 59. A confidential informant testifies to having seen large quantities of ivory, and from diplomatic sources ascertained that in 1977 c.83 tonnes were exported. On the other hand the Congo Government informed the U.S. Embassy in Brazzaville that in 1978 the country imported 11 tonnes and exported 17.6 tonnes of raw ivory. The difference between the two, 6.6 tonnes, is assumed to be domestic production from c.150 elephants which the Government say are shot annually.

The records are of doubtful value, however, as I personally examined Congo documents which indicated that more than 20 tonnes left that country in 1978. Brazzaville acts as an outlet for Zaire ivory and the two sources are inextricably confused.

14. Cameroun

Little information was obtained on the Cameroun other than the data presented in Table 60. Ivory is trafficked across the border in both directions by Senegalese and the country is considered an easy source of documentation. The same confusion that permeates the Zaire/Congo ivory production also envelopes the Cameroun.

15. Central African Empire

Through the 1970s the C.A.E. has grown rapidly as a major ivory producer. Exports of ivory (Table 61) are the monopoly of one company (La Couronne Import/Export) in which the Emperor has a large shareholding. The company not only trades in C.A.E. ivory but also processes substantial quantities from Zaire, Cameroun, Congo, Gabon and Chad with attendant confusion of records.

A law exists which forbids the export of tusks under 10 kg in weight, and these are supposed to be retained for local manufacture. However the law is not strictly adhered to as I
have personally handled many tusks of less than 10 kg from C.A.E. (Volume 2).

16. Gabon

Gabon produces a constant supply of ivory. The Government estimated annual average production to be c.6 tonnes of raw ivory for export, and 0.2 tonnes of carved ivory. The country has no ivory imports. These data are shown in Table 62. However the trade is managed by Senegalese and from what they say, Gabon may produce substantially more than Table 62 indicates. Again there is substantial trans-border traffic in both directions.

17. Upper Volta

Upper Volta has a small elephant population and a negligible ivory trade as indicated in Table 63.

18. Ivory Coast

The Ivory Coast is anomalous among African states as an ivory importer and consumer, rather than an exporter. This is not a development of long standing, but something that has developed through the 1970s. Not only is ivory worked in the country, but it also imports carved work in greater quantity than it exports. These data are presented in Table 64. Comparative data indicating i) the source of raw ivory imports into the Ivory Coast and ii) a suggestion that the data in Table 64 might be underestimates, are presented in Table 65.

The base for this Ivory Coast trade in tusks is the large French community resident in the country coupled with a growing and substantial tourist trade; c.84,000 in 1974 (Anon. 1978) and nearer 100,000 tourists today. Imports of raw ivory are predominantly from Zaire basin Francophone countries and are managed by the same Senegalese entrepreneurs.
EUROPE, ASIA AND AMERICA

Note: All E.E.C. countries stopped recording ivory as an individual item in trade records w.e.f. 1st January 1978. From then on it was lumped with a variety of other commodities of animal origin and became irredeemable from them. The E.E.C record therefore stops at 1977.

1. Belgium

Belgium, and principally its port Antwerp, assumed great importance in the world ivory trade once the nation was involved widely in the Congo (Zaire) basin. However, despite handling large volumes of tusks, Belgium never developed a carving or ivory working industry of any consequence. Worked ivory was imported in small quantities from other nations. Its involvement has been with raw ivory as a trade commodity, with little internal use.

The pattern of Belgium's trade has already been presented in Tables 23 and 24 in Chapter 3, and this is now augmented with Tables 66, 67 and 68 and the whole 90 year period 1888-1978 is illustrated in Figure 18. This started with a rapid rise to an average of over 300 tonnes per annum between 1900 and 1914, a dip during the 1914-18 war, a recovery in the early 1920s, then a progressive fall to nothing in the 1939-45 war. Following this there was a gradual and somewhat uneven recovery to over 70 tonnes in 1960. The volume fell back with the troubles of Zaire's first five years of independence, then bounced back to over 100 tonnes per annum in the last years of the decade. The picture appeared set for further growth when, inexplicably, the official figures present a sharp reverse and fall to 1 tonne or less per annum today.

In fact there was no down-turn in the 1970s and there is at least as much ivory passing through Belgium now as there was in the early 1920s. It does not appear in any Customs and Excise statistics or Annual Trade Reports, because it never comes out of bond.
FIG. 18 BELGIUM'S IMPORTS OF RAW IVORY 1888-1977
I shall anticipate points which will be made later in this report, by stating that this development in Belgium's ivory business is not necessarily negative from the aspect of either the conservation of elephants or the ivory traders. Criticisms levelled at it so far have been made in gross ignorance of the background against which the bonded ivory trade evolved.

2. **Britain**

Like Belgium, Britain's interest in ivory has traditionally been trade in the raw commodity and no particularly British ivory artwork has ever developed. Where craftsmanship evolved, it was in the application of ivory to enhance other products. Thus the makers of the best cutlery gave ivory handles to their tableware; hairbrushes of silver were backed with ivory; piano keys given an ivory veneer and bagpipes ivory joints. With the absence of a large ivory crafting community there has been comparatively little demand for raw ivory imports, once Britain's trading position was lost. Today, the bulk of ivory entering Britain is for re-export, with relatively little being taken for internal use. Present demand is less than 5 tonnes a year.

British data on ivory imports and exports are presented in Tables 69 and 70, and illustrated in Figure 19 for the era 1788-1977 (191 years). From the tables where imports and exports of raw ivory are comparable, i.e. 1975, 76 and 77, of the 75 tonnes raw ivory imported, 64 tonnes were re-exported, indicating retention of 11 tonnes in Britain over the 3 years (3.7 tonnes p.a.)

3. **France**

France owned African ivory lands (e.g. C.A.E., Cameroun, Senegal, Ivory Coast) but never developed an ivory entrepôt trade of the order of Britain's or Belgium's. This is not to say that she didn't develop ivory industries, for she did.
FIG. 19 BRITAIN'S IMPORTS OF RAW IVORY 1788-1977
"In 1840 there were eleven manufactories of ivory goods in Dieppe, France; and in nearly every large city to-day has one or more such" (Holder 1886).

Ivory surplus to these industries was mainly marketed through London or Antwerp. Today there are only 4 raw ivory traders of consequence in Paris. With one exception, their trade is almost entirely entrepôt between Africa and other markets. The one which does more than merely trade ivory is, as to be expected, of long standing while the others are of relatively recent origin.

Data on France's imports of raw ivory are given in Table 71 and re-exports in Table 72. The pattern of imports is shown in Figure 20. This is of interest in that imports were less than 10 tonnes p.a. from 1966-1971, rose six to eightfold between 1972 and 1974, and then fell sharply to 21 tonnes or less after 1975. This rise was an entry into the entrepôt business. Between 1966 and 1971 (both years included) imports were 42 tonnes, averaging 7 per annum. Re-exports of raw ivory were slightly under 4 tonnes or an average of 0.6 tonnes a year, indicating an annual internal consumption of c.6.4 tonnes. Between 1972 and 1974, imports totalled 221 tonnes (74 per year) and re-exports 210 tonnes, leaving 11 tonnes in France, an annual average of between 3 and 4 tonnes. In 1975, 76 and 77, imports were 54 tonnes, and re-exports 32 tonnes, leaving 22 tonnes in France, or 7 tonnes a year. Thus internal demand showed little, if any growth over 11 years, while the import/export trade expanded by over 900%, then fell back for an overall growth of c.157%.

4. Germany

At the turn of the century Germany was a major 'ivory' nation. This status changed radically during and after the first World War when it not only lost its African territories, but underwent a series of economic crises. The country's ivory carving industry (described in chapter 6) kept going, maintained by internal demand. Again this was disrupted by the
FIG. 20 FRANCE'S IMPORTS OF RAW IVORY 1966-1977
second World War and the partitioning of Germany into the eastern German Democratic Republic and the western Federal Republic. The centre of the country's ivory crafting was in the west, and by 1952 when our records start, was responsible for imports of c.15 tonnes of raw ivory a year. Germany's imports and re-exports of raw ivory are presented in Figure 21 and Tables 73 and 74.

From 1952 until 1974 Germany's annual imports averaged 25 tonnes and ranged between 15 and 32 tonnes. There was a slight rise in imports within this period. Before 1967 the 30 tonne p.a. mark had not been reached, but in 1967 and onwards to 1974 it was reached or exceeded on 4 occasions. Re-exports of raw ivory averaged 0.7 tonnes a year, ranging between c.0.2 and 3.3 tonnes, to indicate an average internal demand of 24.3 tonnes per year. There was an increase of re-exports in the years 1971, 72 and 73 as they account for 3 of only 4 years in which re-exports exceeded 1 tonne. However, this does not detract from the picture that for 22 years, 1952-1974, Germany's imports of raw ivory were almost exclusively for its own use.

In 1975, 76 and 77 the pattern changed abruptly. In these three years imports totalled 209 tonnes (70 tonnes a year average) an increase of 180% over the preceding 22 year average. Of the 209 tonnes, no less than 162 (77.5%) came from Kenya. During the same 3 years re-exports of ivory amounted to 51 tonnes (17 tonnes a year average), an increase of 2,329% over the preceding 22 years. Almost all this increase was re-exported to Hong Kong.

The volume of ivory retained internally over the 3 years was 158 tonnes - on average, 53 tonnes a year. This is slightly over double the previous 22 years' annual retentions in Germany. It reflected both an increased internal consumption and the establishment of reserve stocks available for both local use and future export. In 1978 at least 20 tonnes from the
FIG. 21  GERMANY'S IMPORTS OF RAW IVORY 1952-1977
accumulation were exported to China (Trade source) but will not appear in trade statistics. In 1978 there was a sharp decline in ivory imports - though the official trade statistics can no longer be analysed to demonstrate its order with any accuracy.

The rise in Germany ivory imports and exports had little to do with the traditional German ivory-working industry. It was mainly the province of a small group of Indians, working in three 'rings' to get money out of Kenya. Much of this was undertaken with the connivance of the Kenya Department of Wildlife Conservation and Management which provided necessary documents. The Indians worked with or without German partners, one at least of whom is now 'operating' the system out of Namibia and South Africa. However the imposition of CITES regulations has compromised development of the German entrepôt trade, as have measures taken by the Kenya Government to remove the senior officials responsible in Nairobi.

5. Italy

Through the Venetian connections with eastern and Arab trade, Italy's imports of ivory stretch back before medieval times. The major use has been closely linked with religious art, and even today there seem to be ties between the Catholic faith and ivory - for Madonnas, Crucifixion figures etc. Thus Italy's imports of raw ivory have been, and are, predominantly for working within the country. The data are presented in Tables 75 and 76 for imports and re-exports respectively.

Between 1970 and 1977 imports were erratic, totalling 55 tonnes, and varied between 4 and 9 tonnes a year (an average of 7 tonnes) with one exception of 19 tonnes in 1973, when 14 tonnes arrived from Uruguay. Re-exports totalled 0.7 tonnes in the 8 year period indicating an internal demand of c.7 tonnes a year. If the anomalous 1973 import is ignored, the annual demand is c.5 tonnes, with virtually no re-export trade.
6. Netherlands

A trading nation having historic connections with the east, the Netherlands has long fostered an intermittent trade in raw ivory. However as there is only one importing company today, normal trade convention would be compromised if the government revealed detail of the individual's business. Therefore no official data have been or will be released on the country's imports of raw ivory, but the order of magnitude can be deduced from i) African exporters' data, and ii) European, Asian and American importers' figures.

7. Spain

The Spanish ivory trade is similar in many respects to that of Italy. It is heavily oriented toward religious art, but has little official record of entrepôt business in raw ivory. Data on the import and export of raw ivory are presented in Tables 77 and 78. They illustrate a relatively constant inflow of between 2 and 8 tonnes (average 4 tonnes) between 1969 and 1974. In 1975 they rose to 19 tonnes, in 1976 to 30 tonnes, and 1977 to 33 tonnes. Response to enquiries suggest that this substantial rise is not taken up in internal consumption, but is being both held and re-exported. In addition, trade talk has it that there is an illegal flow of some consequence from Portugal into Spain.

The re-exports given in Table 78 indicate a negligible volume of raw ivory leaves the country. However, information from within the ivory trade suggests that these data are unreliable.

8. Switzerland

Switzerland has no particular prominence in any aspect of the ivory trade. However, as ivory is frequently used to move capital, and as Switzerland is an economic 'nerve centre', its raw ivory exports and re-exports were examined. The data for the period 1960-1977 are presented in Tables 79 and 80.
Over 17 years, 14 tonnes of ivory were imported - an average of 0.8 tonne per annum. The largest recorded volume in any one year was 1.3 tonnes.

The sum of re-exported ivory is 13.3 tonnes and at face value, it would seem that almost all raw ivory imported is then re-exported. On closer analysis this is not the case. For 16 of the 17 years covered, annual re-exports average only 80 kg, i.e. 0.08 tonne, indicating a retention and internal consumption of 90% of raw ivory imported. The exception is an export of 12 tonnes in 1974 - at that time more than the entire raw ivory imports of the 14 years 1960-74. It thus seems likely that at least one consignment of ivory entered Switzerland undetected by Customs officials.

9. India

A description of India's ivory trade is given in Chapter 6. Suffice it that the country has for centuries been one of the world's major ivory marts. I have recovered no import data from 1915-1934, though from Zanzibar and the East African records of that time, India was receiving raw ivory from there. By 1934 imports averaged 72 tonnes a year through to 1939. In the second World War India was the only outlet for East African, Zanzibar and Zaire ivory, which could be transported by Arab and Indian dhows. Freed of all competition, the Indians made the most of the opportunity and their imports rose to over 260 tonnes per annum during the war years.

From independence in 1947 India's economy has been unhealthy. Government imposed heavy import duties on luxury goods including ivory. In these circumstances, India was unable to compete with other buying nations and imports have progressively fallen down the years to, officially, less than 10 tonnes p.a. in the late 1970s. The import data are presented in Tables 81 and 82 and illustrated in Figure 22. For reasons outlined in Chapter 6, I believe recent import statistics to be unreliable.
FIG. 22  INDIA'S IMPORTS OF RAW IVORY
1944-1976
In Table 83 data on the exports of raw ivory are presented. These were obtained as two sets and while one clearly was related to ivory previously imported, it is not clear whether the other represents genuine Indian elephant ivory. After the war India re-exported some of the large stocks of ivory it had accumulated, but since then has not figured as a source of raw ivory of any consequence at all.

10. **Singapore**

As an affluent eastern entrepôt, Singapore seemed a likely ivory trade centre. It has a large Chinese population and also has many Indians who could have trade and family contacts in Africa. The country's import/export data were examined and information on raw ivory are presented in Tables 84 and 85 for the period 1970-1978.

From 1970-75 imports averaged 0.3 tonne a year. In 1976 and 1977 they rose to 11 and 10 tonnes respectively, and in 1978 to 22 tonnes. In all three years Kenya supplied the bulk of these imports - 79%. Previously the main supplier had been Hong Kong.

Prior to 1976, Singapore had exported a total of 0.6 tonne averaging 0.2 tonne p.a. This illustrates that until then, Singapore played an insignificant role in ivory, purchasing a little from a variety of countries and exporting a similar amount. From 1976 onwards Kenya commenced to use Singapore as a routing post for ivory to Hong Kong and Japan. Thus over the three years 1975-78, Singapore re-exported 31 tonnes of raw ivory, i.e. 72% of what had been received from Kenya.

11. **Hong Kong**

As Hong Kong is the world's leading ivory mart, a separate descriptive section (Chapter 6) has been devoted to it. Suffice it here that it has shown rapid growth ever since the last World War, but this appears to have slowed down and may even be declining in the face of competition from Japan. The country's
data on raw ivory imports and re-exports are presented in Figure 23 and Tables 86 and 87.

Imports have risen from c.71 tonnes in 1952 to over 719 tonnes in 1976, since when they have fallen back to 603 tonnes in 1978. However, fluctuations of 100 tonnes at this level of trade are probably 'normal' and the term 'fallen back' should not be taken other than in that sense. The proportion that exports are of imports (Table 88) show that while Hong Kong is primarily an import working country, it also fosters a substantial distribution trade to other eastern countries such as Thailand, Taiwan, Korea and China.

12. Japan

The Japanese have a long historical attachment to ivory and a large trade in the commodity. Although Japan was not visited during this survey through shortage of time and funds, no less than 36 companies in Japan were identified as importers of raw ivory. This number alone places Japan second to Hong Kong. As the list is not complete, it is possible that there may be even more importers than in Hong Kong.

Japan's imports of raw ivory are presented in Figure 24 and Table 89, and re-exports in Table 90. These have shown a more or less steady rise from c.29 tonnes in 1950 to 368 tonnes in 1978 (i.e. over 1,200%).

Data on re-exports in Table 90 only cover 1970-78, during which period they never exceeded 10 tonnes and averaged only 5 tonnes a year. In 1978 Japan exported only 2.5% of raw ivory imported. These figures establish it as a major consumer of raw ivory - almost equal to Hong Kong. An important difference between the two is that the Japanese are very selective of the ivory they buy and as a rule want tusks that average 14 kg or more in weight. To be able to select, they have to rely on other major ivory centres where large stocks are available.
FIG. 23  HONG KONG'S IMPORTS OF RAW IVORY  
1952-1978
FIG. 24 JAPAN'S IMPORTS OF RAW IVORY 1950-1978
13. **U.S.A.**

A detailed comment on the U.S. ivory trade is given in Chapter 6. The salient aspects of the trade are presented in Figure 25 and in Tables 91 and 92. The first table was compiled of data submitted to me by the U.S. Fish and Wildlife Service. Fortunately additional information was received from a trader - K. Enright - which showed that the Government material prior to 1972 included large quantities of whale ivory. This is confirmed by J. Hallagan (see Chapter 6). Information on the world's sperm whale catch is presented in Appendix 4.

Table 92 gives the U.S. elephant ivory trade, with whale teeth extracted. It is the basis for Figure 25. No data are available on re-exports.

The country is a minor importer of raw ivory. However the data give an illustration of what is most accurately termed the "Beilenson Effect" (which I define as 'the unforeseen consequence of law made in ignorance'). Between 1967 and 1975 the average annual imports of raw ivory into the U.S.A. amounted to 5 tonnes, ranging from less than 1 to 9. In 1976 these increased by 600% to 35 tonnes, falling back gradually to 9 tonnes in 1978 (Hallagan in litt.) This spectacular rise in imports was the outcome of a publicity campaign mounted by Representative Beilenson of California, which led to a legal ban on the importation of ivory into that state. This campaign stimulated ivory buying to pre-empt the ban, and investment in the commodity with the certainty that its value in the state would rise dramatically once ivory became a prohibited import.

The surge of speculative buying was not confined to California and washed across the U.S. as Beilenson made it known that his intention was to secure a national prohibition in due course.

14. **Saudi Arabia**

Saudi Arabia's proximity to the Sudan makes it a suitable staging post for Sudanese ivory - usually illicit. Data are presented in Table 93. The figure of an export of 315 tonnes
FIG. 25 U.S.A.'S IMPORTS OF RAW IVORY 1967-1978
is so improbable that I disregard it from further consideration.

**COMPARISONS**

Having presented import and export data from a wide range of countries, we are now able to make some estimate of the overall volume of ivory leaving Africa annually. This will be facilitated by brief return to Figures 4 and 5.

The national flow chart illustrates the medley and combination of steps ivory moves through to cross a national border in Africa. This is picked up as a broad generalisation in the international flow chart which presents a pictorial summation of the data in Tables 38 to 93. In essence the flow of ivory is still heavily influenced by recent colonial history and is divisible into Anglophone and Francophone groups. There is substantial overlap between them. The Anglophone group tends to export direct to Hong Kong and have used Germany as an important route post, whereas Francophone's ivory ends up in the Far East but is channelled through Belgium.

Japan draws its supplies mainly from Hong Kong and Belgium enabling it to be selective. However this is not apparent in Table 89, which shows very small imports from Hong Kong and virtually none from Belgium. The observation is summed in Table 94 which shows that Japan discounted at least 98% of the exports sent her by Hong Kong in 1970-78. Similarly she acknowledges only 2 tonnes from Belgium in the same period. Belgium has no official data with which to check this. However, the traders aver that they do ship considerable quantities to Japan and have done so for some years; in 1978 they shipped not less than 83 tonnes. Explanation of the apparent deficits lies in Japanese insistence that the African origin of their ivory imports is stated on invoices. Thus virtually all received from Belgium and Hong Kong is not attributed to these countries, but to the original African sources of origin. This complicates comparison of African export records with Japanese import data for, in many instances
the ivory will not have been originally consigned to Japan.

In making comparison between Africa's exports with corresponding imports, Japan has to be discarded. This notwithstanding, a sample of 5 African countries' (Tanzania, Kenya, Uganda, Sudan and Zambia) is contrasted with up to 10 overseas importers' records during the 1970s. As many years as possible are included to tone down annual variations. The 1970s are considered on their own because they present the modern picture and also cover the era in which ivory transport has speeded up. Recall the points made at the outset of this chapter - that exact agreement between the import/export data should not be expected, and that I have arbitrarily accepted that differences of up to 15% are of no consequence. The comparisons are made in Tables 95-100.

In Table 95 the sum of Tanzania's exports is within 13% of the corresponding annual imports received. As 82% of the total exports were to Hong Kong and within 9% of its official receipts, this reinforces the generalisation that during the 1970s, Tanzania's Trade Statistics are verified by the corresponding imports. However there are anomalies and all is not 'straight'. For example Tanzania exported 65 and not 37 tonnes in 1976 (Table 101) and the apparent agreement between exports and imports could be through coincidence.

In Table 96 not one of Kenya's exports comes within acceptable limits of the import statements. Overall, Kenya appears to have exported 2.6 times as much ivory as its official records admit to.

Uganda's records of inconsistency (Table 97) outdoes Kenya's, as it would seem that 3.4 times more ivory went out than was recorded by Uganda.

In Table 98 the Sudanese record of official exports corresponds at a general level with receivers' statements.
Again it is Hong Kong's dominant position which has the over­
ridding influence. The lesser amounts to other countries are 
erratic. The Sudanese traders do go to considerable lengths 
to conceal their ivory's origin, not to avoid legalities, but 
because their country's ivory has a tendency to crack, and 
fetch lower prices.

From Table 99 it is apparent that Zambia's export records 
do not tally with the importers' statements, which are greater 
by 57%.

All countries are combined to give an African sample in 
Table 100. The evidence is impressive. The receiving 
countries brought in nearly twice as much as was said to have 
been sent. It remains to be determined which side is 'right'. 
In the ivory trade there is no advantage to overstate exports 
or imports. All the incentives are the other way, to conceal 
them! This is particularly so in Africa where there are laws 
to be avoided, where there is criticism over not conserving 
fauna and where there is considerable incentive to move 
capital illegally. At this level alone, I accept that the 
African exports are likely to be deflated. The abundance of 
supporting data need not be gone into here. Therefore in 
moving towards an estimate of overall exports of ivory the 
importers' data provide a more acceptable base than the 
exporters'.

There are two exceptions to the evidence that the 
importers' records give greater volumes than the exporters' 
statements: Italy and the U.S.A. Table 100 shows that both 
receive less ivory than is consigned to them: 70% and 77% less 
respectively. Both are 'terminal' links on the raw ivory 
chain and there is little evidence that this situation could 
have arisen from ivory consigned through, rather than to them, 
and thereby caused a wrong entry on the dispatching countries' 
records. The weight of evidence is that the Italian and U.S. 
Customs records give understatement and have failed to record
all ivory entering the two countries.

THE VOLUME OF AFRICAN EXPORTS

A compendium of importers' statements of volumes received from Africa in 1976, 77 and 78 is presented in Table 101. It is augmented by inclusion of imports from Belgium as a) that country's bonded trade is all but exclusively ex-African, and b) it does not publish data on volumes taken into bond. Such amounts as do enter Belgian bond from non-African territories will inflate the overall total, but I believe such inflation to be small. The figures which emerge are 1976: 1123 tonnes; 1977: 849 tonnes and 1978: 808 tonnes. The last of these is not strictly comparable with the others, as it has no European data. All indications are that 1978 was, overall, a bigger year than 1977. Traders in France, Belgium, Spain and Germany were active and reported good business, and it does not seem unreasonable in these circumstances to augment the 1978 imports from Africa by the average internal requirements of Britain, France, Germany, Italy and Spain = 50 tonnes, which brings it close to the preceding year.

The totals given include the element of Japanese double counting referred to earlier. Thus the difference between what Hong Kong sent to Japan and what the Japanese acknowledge receiving must be deducted from the totals, as it has been accounted for by Japan giving it as ex-Africa. These deductions are 191, 81 and 151 tonnes for 1976, 77 and 78 respectively (Table 94), which reduce our estimated imports ex-Africa to 932, 768 and 707 tonnes for the three years. These are of course absolute minima for they exclude imports by many lesser 'ivory' countries.

There is, however, one country of considerable importance in the ivory trade - China - that is missing, and must be taken into account if only by inference, in any overview of the world situation. By instruction, this country was excluded from the survey, as IUCN was to handle the matter through diplomatic
channels. No results have been communicated to me and I assume, as of the time of writing, that this endeavour has failed. Nonetheless the data already presented in the tables do give some indication of past consumption and a clue to what it might be now. These are concentrated in Table 102 to give an erratic picture, which varies from 0 to 240 tonnes a year during 1962-78, averaging 59 tonnes.

Rumour is rife that Tanzania is making part payment of its debt to China for the TANZAM railway, in ivory. I have come across no concrete evidence to support this, though such an arrangement would make sense. It is of note that whereas the Zanzibar ivory trade officially 'died' in 1964, in that and the following three years, Tanganyika sent no less than 122 tonnes of ivory to Zanzibar. This does not appear as an import on any of the records to hand. It is possible that it went to China which had an active presence on the island at that time.

Chinese purchases from African exporters appear to have been low since 1975. However, up to 60 tonnes of raw ivory were bought from European traders in 1978 (Trade sources). While China may also have bought from countries for which I have no data or which do not publish all their information, the most recent evidence of 60 tonnes is close to the 1962-78 average. Cautiously, I accept this average as the amount by which to increase the estimate of modern African ivory production. In consequence the estimates for 1976, 77 and 78 rise to 991, 827 and 766 tonnes respectively.

The estimates are still minima. They take no account of India's illegal imports which may be substantial (Chapter 6). Nevertheless, treated with the caution that should be accorded any generalised estimates, it seems that after a depression of 6 decades, the volume of ivory leaving Africa is once again of the same order as it was between 1900 and 1914; and perhaps a little higher.
VALUES

Between 1925 and 1952 the value of ivory is deduced from the combined East African and Zanzibar exports as in Table 103.

The average value of raw ivory imported by major ivory nations is illustrated in Figure 26 and Table 104. On the basis of the prevailing price i.e. $74.42/kg, Africa should have received $60,056,940 in 1978. However, in view of the evidence that nearly half the continent's exports go undeclared, the actual value accruing to it may have been more of the order of $30,382,292, with the balance having been "extracted".

In the same table (104) the sum of recorded imports (which includes ivory moving between the temperate zone non-producers as well as Africa's exports) was 993 tonnes in 1978 worth nearly $74,000,000. To this we may add 50 tonnes as an approximation for European internal consumption and a further 59 tonnes for absent China, bringing the volumetric turnover in raw ivory to about 1102 tonnes with a value of c.$82,000,000. The dimensions of the worked ivory business will augment this as shown in the following chapter.

It is also of note that in 1978, the difference between estimated total imports, 1102 tonnes and imports ex-Africa, 766 tonnes, is 336 tonnes or 44% of the ex-African figure. This amount is representative of the raw ivory traded between non-African countries. As in the trade pre-1914, it is still a very substantial element of the business.
FIG. 26 THE PRICE OF IVORY, 1770 - 1978.

To this point value in £ Sterling
Data on the international trade in worked ivory are presented in 43 tables, as listed:

<table>
<thead>
<tr>
<th>Tables</th>
<th>105-107</th>
<th>108-110</th>
<th>111-112</th>
<th>113-115</th>
<th>116-119</th>
<th>120-123</th>
<th>124-137</th>
<th>138-139</th>
<th>140-141</th>
<th>142-145</th>
<th>146-147</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Britain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The information is of limited value as they do not give a complete picture of the international trade in worked ivory. This is for a variety of reasons. Much raw ivory imported into Germany, Italy, Spain and Switzerland, for example, is 'consumed' internally and its worked volume and value never appear in trade statistics. At some point in processing much ivory becomes another product. Thus pianos with keys veneered in ivory, cross borders and enter trade records as pianos - not ivory. Tables inlaid with ivory are furniture, and ivory ear-rings are jewelry etc. On departure from a country tourists need not declare ivory purchases made. The volume is substantial and fully one-fifth of Hong Kong's worked ivory leaves in this way, undocumented in the trade records. For these reasons alone, the data in tables 105-147 are at best minimum indications of the size of the worked ivory industry.

Table 148 sums international exports from as many sources as I have been able to accumulate information. Despite this incompleteness, they do encompass all the major ivory-working countries' international commerce. They may contain an element
of re-exporting whose magnitude cannot be obtained. Disregarding this and taking 1977 as the most recent year for which we have European records, Africa supplied 1% of the worked ivory exports, Europe 10% and Asia 98%. The given data form a large enough sample for these proportions to be representative of the international wholesale trade in worked ivory.

In 1977 the European countries contributed 13 tonnes to world exports of worked ivory. Trade sources confirm that 1978 was at least as good a year. If this is so, the 1977 volumes (less Holland's - for which we have a 1978 statement) multiplied by the average 1978 worked ivory price (Table 149) will give grounds for estimating what the missing European contribution may have been to 1978's overall worked ivory export value ($1,582,747.40). Combining this to the Far Eastern exports in Table 148, the minimum turnover of the international wholesale export trade in worked ivory will have been c.$35,402,452.74.

The most striking feature of this figure is that while we know it to be deficient to an unquantifiable degree, it is less than half the amount of the world's estimated turnover value for raw ivory in the same year (Chapter 4: $82,000,000). If the working of ivory into artefacts was the primary reason for acquiring raw ivory, one would expect annual intake of raw material to be converted into a finished product within the same or subsequent year. The value of wholesale exports of worked ivory should be the raw value plus the cost of processing, wholesaling and profit. The Chinese carvers have a rule of thumb (Chapter 6) which is that the wholesale price is made of 3 equal parts: 1) the cost of the raw material, 2) the cost of processing and selling, and 3) profit. This finds close agreement with data in Table 150 in which the price of worked ivory over 17 years averaged 3.4 times that of raw ivory (an average mark-up of 239%). Thus it is reasonable to have assumed that the value of the wholesale trade would be of the order of
3 times the material's raw worth, i.e. 3 x $82,000,000
= $246,000,000. It is difficult to believe that our estimate
of c.$35,000,000 is low to the tune of $211,000,000 or 86%.
That amount of worked ivory could not have been missed or
consumed internally!

Ivory exporters do mark invoice values down, to relieve
their customers of import duties and taxes. Trade sources
suggest that this artificial depreciation occurs regularly
and averages perhaps as much as 20%. If this has happened to
our estimate of $35,000,000, the true value would be nearer
$44,000,000 which is still far below the expected $246,000,000.
The most logical explanation is that not all raw ivory is made
available for working.

The idea receives further support from examination of
Table 149, which shows clearly that over the past 17 years
the difference between raw ivory prices and wholesale worked
ivory values have steadily diminished from 355% in 1962-1965
to 156% in 1974-1978. It gives substance to the ivory carvers'
repeated plaint in Germany, India, Hong Kong and Malawi, that
ivory is becoming too expensive to carve. Neither they nor
their customers will be able to afford it. Such a situation
would never have been the case if straightforward customer
demand for worked ivory had been the reason for the pattern of
price increases shown in Figures 26 and 27 and in Tables 104,
149 and 150. This subject will receive further attention in
the following chapter.

On the basis of the incomplete data available, it would
seem that the turnover of the wholesale worked ivory trade is
of the order of $44,000,000. Taking this as a base it is also
possible to make a crude and modest estimate of the retail
worked ivory trade. Mark-up between the wholesale and retail
prices for ivory are usually large: of the order of several
hundred percent. However if we take 100% as a working figure,
the world retail trade will turn over $88,000,000 a year.
FIG. 27  COMPARISON OF WORLD RAW AND WORKED IVORY AVERAGE VALUES 1962-1978

Average value of world imported worked ivory

Average value of world imported raw ivory

To this can be added Hong Kong's sales to tourists (25% of worked ivory exported) which in 1978 will have been $7,744,500 = $95,744,500.

World turnover in the ivory trade can thus be summed:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw ivory</td>
<td>$82,000,000</td>
</tr>
<tr>
<td>Wholesale worked</td>
<td>44,000,000</td>
</tr>
<tr>
<td>Retail worked</td>
<td>95,744,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$221,744,500</strong></td>
</tr>
<tr>
<td>Say</td>
<td>$222,000,000</td>
</tr>
</tbody>
</table>

Many analyses could be made from the data in Tables 105-147. However I will confine myself to three which I consider particularly pertinent to the ivory survey.

The first is to illustrate the Beilenson effect on the wholesale trade in worked ivory. The U.S.A.'s role as a customer for Hong Kong's ivorywares is illustrated in Figure 28 and Table 151. From these it is apparent that the U.S. was taking a diminishing role in Hong Kong's trade between 1970 and 1975. When the California law was enacted, the Beilenson effect is immediately apparent in 1976, 1977 and 1978 and traders confirm that there was a dramatic rush to stockpile worked ivory, which persists into the present.

The second point worthy of examination is whether India's low imports are in keeping with her exports between 1970 and 1977. The data are assembled in Table 152 where exported worked ivory values are converted to Kg, then to equivalent weight of raw ivory needed to make the given weight of worked ivory. Thus between 1970 and 1976 India exported the equivalent of 75 tonnes raw ivory in worked form. During the same period she imported 156 tonnes of raw ivory. The surplus of 81 tonnes may have been taken internally by tourists. However, it is of note that during the 5 years 1972-76 the carved ivory equivalent exceeded the imported ivory by 60.3%. Thus the picture of inconsistency prevails.
FIG. 28 U.S.A.'S IMPORTS OF WORKED IVORY AS % OF HONG KONG'S EXPORTS 1970-1978
The third and final issue is what can be gained regarding China's worked ivory trade, from buying countries import records. The sum of exports are presented in Table 153. Over the past 9 years China has averaged annual exports of worked ivory equivalent to 43 tonnes of raw ivory. As the list is incomplete, but likely to encompass the bulk of exports, this figure is in concert with the estimate that China may import 59 tonnes of raw ivory per annum.
A. HONG KONG

Introduction - the background

The Hong Kong ivory trade evolved from traditions which reach back at least three thousand, five hundred years to the roots of Chinese culture. More than any other people, they have appreciated ivory as a medium for art. With it they enriched religion and illustrated their mythology and historical legend. In consequence, ivory and those who work with it have a place in Chinese society that has no ready Western counterpart.

From the Shang Dynasty of c.1600 B.C. until the nineteenth century, Chinese demand for ivory was predominantly internal. Its main use was, probably, the illustration of religious figures. Consumption was nonetheless substantial for by the ninth century it was an important trade item for the southern port of Canton. The Arab Soleiman observed that traders were forced to pay high import dues and that all tusks over 30 catties (c.18 kg) in weight had to be sold in an official market where undervaluation was common. To evade this, large tusks were cut into sections weighing less than the stipulated minimum. The extensive contact between China and Arabia between the 7th and 10th centuries suggests that many of the tusks brought to Canton would have had African origin, as "Arab" ivory is more likely to have been African than Asian.

In the wake of the opium wars of the last century, Western trade forced itself upon China in an unprecedented manner and in the process Britain acquired its tenure on Hong Kong. The same era saw Victorian Europe and America develop a fashion for Chinese ivory work. Exports to meet this rapidly overtook internal demand. It also brought about an increase in the number of people working with ivory, particularly in the vicinity of the ports of Canton, Amoy, Shanghai, Tientsin and Hankow, the largest increase occurring in
Kwagtung Province around Canton.

Hong Kong's close proximity to Canton, combined with Britain's African and Indian interests, made it an inevitable entrepôt in the flow of ivory into China. In appreciation of its strategic position some ivory craftsmen moved into the British Colony, the better to pursue their trade. However, it was not until around the middle of the present century that Hong Kong became anything other than an appendage to, and staging post for, the larger ivory businesses on mainland China.

The Sino-Japanese war of the late thirties and early forties caused an inflow of ivory craftsmen to Hong Kong. This was greatly accelerated by the subsequent Communist/Nationalist civil war and raised the number of ivory workers from c.100 who had existed pre-war, by an unspecified but very large amount (certainly by a proportion of several hundred percent). This massive immigration and concentration of talent in Hong Kong's free enterprise economy provided the foundations for the territory's modern position in the world ivory trade.

Institutions controlling the trade
1) The Hong Kong Ivory Manufacturing Workers General Union.

In 1947 some 200-300 ivory craftsmen banded together to form the Hong Kong Ivory Manufacturing Workers General Union. Its primary purpose was (and still is) to preserve the traditions of the trade and to look after the welfare of its members. An early aim was to ensure that they received fair returns for their work. To achieve this the Union established a schedule of piece-work rates for the range of tasks and items produced, giving craftsmen freedom to work as and how they liked and relieving employers of the liability of fixed salary payments.
As might be expected in a craft of great age, Chinese ivory workers are conservative and proud. Each aspect of production has its specialists. By custom a craftsman should concentrate on one process and seek fulfilment through attaining perfection in that field. Thus cutters (sawyers), on whom division of tusks into their most economical cuts depends, do not carve. Jewelry makers should not carve figures. Those making human figures would not make dragons, and an expert on ivory balls should not engrave. This compartmentalisation produced a co-operative, integrated trade in which specialists relied upon specialists. Sons tended to follow their fathers' footsteps and a five year apprenticeship had to be served to be accepted among one's peers as an ivory craftsman. A craftsman's family was very much part of a production unit with wives, daughters and sons all helping him in some way. It is this system that the Union seeks to safeguard and perpetuate. In this sense it is more a craftsmen's guild than a trade union.

Over the years the Union has grown and now numbers c.2000 members of whom c.1700 are of Cantonese origin and c.300 from Fukien. Members are aware that supplies are finite and that there is a limit to the number of workers who can make a livelihood from ivory. This and the wish to preserve their craft's traditions has led to a policy of restricting Union membership. Only those who have served an appropriate apprenticeship are admitted. Attitudes favour sons following their fathers into the body and are against outsiders.

Despite restriction of the Union's size, many elder members are concerned that their sons are failing to show interest in ivory craftsmanship as the long apprenticeship is unattractive when equally well paid jobs in other spheres need no comparable training. The number of apprentices coming forward indicates that a decline in Union membership is inevitable. There is thus an ambivalent situation in which the desire to keep the Union limited and exclusive is
counterbalanced by distress that the long-term welfare of the institution and its traditions are at risk through a fall-off in youth interest.

2) The Hong Kong and Kowloon Ivory Manufacturers Association.

As outlined earlier the 1940s saw large numbers of ivory craftsmen arrive in Hong Kong. They came from a society in which protocol and conforming to precedent were important, into a free-trade, Western influenced atmosphere. It permitted expansion of the craftsmen's horizons and some soon extended themselves beyond the limits set by their apprenticeships. The ambitious were able to purchase and sell others' work, take on employees, buy, import and deal in raw ivory and to wholesale and retail finished carvings locally and overseas. These activities went outside the original scope of the Ivory Manufacturing Workers General Union. Indeed they contained potential for conflict with the interests of less ambitious workers.

Realising this the new entrepreneurs acted to protect their widening interests. In 1966, they established the Hong Kong and Kowloon Ivory Manufacturers Association. (At the same time, it is worth noting that they retained membership in the Workers Union.)

The Association's purpose is to guard the welfare of the ivory trade as a whole, as well as attend to the particular interests of its 50 or so members. These represent a cross-section of craftsmen, manufacturers, importers, exporters, and general ivory traders. In principle, it is open to anyone with a bona fide interest in the ivory trade in Hong Kong and upon payment of $21.5 entry fee and dues. In practice it has no non-Chinese members, and the majority of the Association's members are men of long standing in the traditional ivory business. Only in very recent times have some younger men joined without the benefit of an apprenticeship in ivory craftsmanship. These tend to be the sons of the Association's
founders, who have trained in running the family businesses rather than actually working with ivory. Their education and business experience has given them a broader knowledge of the modern world and its problems than has hitherto characterised ivory workers, making them a considerable asset to the Association.

Relations between the Workers Union and the Manufacturers Association are somewhat strained. Reasons for this are several. The most severe problem facing the Union arises from instability in the price of raw ivory which has been a growing trend since the late 1960s. During 1978 the cost per kilo rose by as much as 150%. The unpredictability of these trends has placed the traditionally independent craftsman in a difficult position. Overnight he finds that he must outlay three times as much to obtain his raw material, with no certainty that he can sell a finished produce at a similarly marked-up rate, or that prices may not have fallen by the time he has a product for sale. This compromises both his financial and artistic independence. To hedge against financial embarrassment he has to accept assignments on commission or employment from dealers sufficiently affluent to take risks. In consequence 30% of the Union's members are out of work, under-employed or forced into aspects of the trade they do not like. Incorrectly the Union believes that the Association's members are responsible for the increases in the price of ivory. Further friction arises from the Association's employment of unskilled workers in the production of 'junk' jewelry for an indiscriminate, unartistic market in the U.S.A. and Europe.

The Association is well aware of the problems facing the members of the Union. With their backgrounds there is still a great deal in common between the two organisations; indeed on some issues it is impossible to draw distinction between them. The Association's members are equally proud of the trade's long traditions and just as keen to see them perpetuated. Where they differ is on adapting the old system to the modern
world. The Association recognises that there has been polarisation between itself and the Union along employer-employee lines. While this was never planned, it is probably an inevitable consequence of operation in a free-enterprise system. However, polarisation received a powerful boost from attitudes between the U.S.A. and China after the Communist victory in 1949.

It was American policy to ban all trade with China. To ensure that Hong Kong could not act as cover for Chinese carved ivory to enter the U.S.A. their Government decreed that all Hong Kong produced carvings destined for U.S. sale had to have a comprehensive certificate of origin. To acquire this the carvings had to be made in U.S. Government approved premises. As the U.S.A. comprised the largest single ivory market for Hong Kong at that time, many craftsmen had little option but to comply. However, having to work under specified rules removed much of the individual's freedom and even more of his family's help. Unavoidably in these circumstances an employer/employee relationship developed between the owner of the premises (factory) and the concerned craftsmen. Though the need for ivory to be of certified non-mainland Chinese manufacture has now gone and there has been a reversion toward the older pattern of independence, the imposition had a lasting effect on the outlooks of those concerned. It is in the interests of the industry as a whole that some rapprochement is made between the parties.

3) The Hong Kong Government.

There are two Government Departments with specific responsibilities toward Hong Kong's ivory trade. The primary role is held by the Agriculture & Fisheries Department which controls the import and export of raw unworked ivory. The main purpose of this control is as an international measure to conserve elephants through the application of CITES formulae. To this end no raw ivory may be imported or exported into Hong Kong without a licence issued by the Department.
Contravention of these laws may result in prosecution, a fine and forfeiture of the ivory concerned. The Director of the Department may, without stating any reason, refuse to issue a licence to either import or export raw ivory.

Currently, and as a general rule, any application for a permit to import raw ivory will be granted. However, it is a condition of the permit that at the time the import is made the ivory is accompanied by an original, legal export permit from the Government of the exporting country. This permit is surrendered to the Hong Kong authorities at the point of import. The absence of a permit to export constitutes an offence rendering the consignment subject to automatic confiscation.

The second Government Department concerned with the ivory trade is that of Trade, Industry and Customs. Here, the responsibility is to ensure that worked ivory exported from Hong Kong conforms to CITES formulae through adherence to the Hong Kong Certificate of Origin system. Under the strictest interpretation of CITES requirements, every item made from ivory should have a certificate confirming its lawful origin. However as such items number millions, and as a single tusk can produce hundreds, such a requirement was clearly impractical. Instead manufacturers of ivory wares who wish to export under Hong Kong Certificates of Origin have to comply with strict procedures to guarantee that their wares do not derive from unlawful ivory. These conditions include maintaining accurate and up to date books and records to show stocks, intake of raw material, production, wages paid, etc. Registered factories are subject to periodic detailed inspections by Government Officers. Contravention of the terms renders the guilty party liable to imprisonment for one year and a fine of c.$ 20,000.
Steps and structure of the trade

1) Volumes and values.

The Hong Kong Commissioner for Census and Statistics publishes a monthly bulletin giving details of the Colony's imports and exports. This contains data on the ivory trade which show:

i) volume, value and origin of all raw unworked ivory imported into Hong Kong, 1952-1978

ii) volume, value and destination of all raw unworked ivory re-exported from Hong Kong, 1962-1978

iii) value and origin of all worked ivory entering Hong Kong, 1962-1978

iv) value and destination of all worked ivory imported then re-exported from Hong Kong, 1962-1978 and

v) value and destination of all ivory worked in and exported from Hong Kong, 1962-1978.

These records derive from import and export declarations made to the Hong Kong authorities at the time of import/export. Values and volumes are from data stated on the relevant invoices. These records cover the periods shown and are presented in toto in Tables 86, 87, 105, 106 and 107.

2) Importing.

According to the Agriculture and Fisheries Department records, 50 Hong Kong companies applied for permits to import raw, unworked ivory into Hong Kong in the period 23rd June (when the licensing system commenced) to 30th November 1978. It is believed that while this may not be a complete list of ivory importers, it is at least indicative of its order. Of the 50 firms, 1 was Japanese, 1 European, 12 Indian or Pakistani, and 36 Chinese.

The Japanese importer is mainly concerned with acquiring ivory for a parent concern in Japan and does not normally import into Hong Kong. The European was seeking ivory for use in jewelry manufacture and does not import regularly.
The Indian and Pakistani firms are among the oldest ivory importers in Hong Kong. Until the mid 1960s they dominated this aspect of the trade. Their sources of supply were from people of similar race and creeds (sometimes linked by family connections) who controlled the ivory export trade out of Eastern Africa through the ports of Zanzibar, Mombasa and Dar es Salaam. The Indo/Pakistanis lack the Chinese cultural connections with ivory, and trade in tusks because they have attractive commercial qualities. Most of them buy and sell ivory as a sideline or addition to other businesses. Though they follow closely the deliberations of the Association, none are members.

Since the mid 1960s, Chinese firms have progressively reduced the Indo/Pakistani command of ivory importing. This is a logical extension of the growth which led to the founding of the Ivory Manufacturers Association.

Traditionally the Indo/Pakistani importers sold their ivory to Chinese dealers, to factories or re-exported it. They did not involve themselves further in the trade. On the other hand many Chinese importers have close links with successive stages in the trade. Thus of the 36 recorded as having applied for permits to import ivory, 9 (25%) were also registered as manufacturers of ivory with the Trade, Industry and Custom Department's ivory control scheme under the Certificate of Origin system.

3) Dealers.

Ivory passes from importers to dealers. These are an unspecified number of Chinese firms who do not themselves import, but buy raw ivory on its arrival in Hong Kong. It is then resold to factories. The dealers do not stand out as a clear category in the business. Much dealing is in fact done as a "sub-department" of other involvements in ivory (e.g. manufacturing).
4) Factories.

The term factory is slightly misleading as it suggests a large institution. Many ivory factories are not much more than family affairs. According to the Trade, Industry and Customs Department (TICD) in 1976 there were 121 factories working ivory. In 1978, 156 were registered with the TICD. This increase may include some missed out of the 1976 estimate and is not wholly representative of new factories.

Factories obtain their ivory through direct import, buying from importers or buying from dealers. In 1976 one out of 121 imported all its ivory from overseas, 7 purchased both overseas and locally, while 113 purchased from dealers and importers. In 1978 the number engaged in direct importing on their own account had risen to c.34 (an increase of 425% over 1976).

Once ivory has been acquired by a factory it is either worked by craftsmen on the premises or farmed out to an independent craftsman to be made into the required articles, for a fee. In some cases craftsmen are permitted to sub-contract their commitments to other workers.

Data obtained from the Trade, Industry and Customs Department show that the ratio of work carried out on the factory premises had an inverse relationship to the size of the factory. This is illustrated in the following table:

<table>
<thead>
<tr>
<th>1 Employment Group Size</th>
<th>1-9</th>
<th>10-19</th>
<th>20-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Craftsmen working on premises %</td>
<td>74.0</td>
<td>52.8</td>
<td>19.1</td>
<td>10.8</td>
<td>5.9</td>
<td>2.8</td>
<td>17.8</td>
</tr>
<tr>
<td>3 Craftsmen working off premises %</td>
<td>26.0</td>
<td>47.2</td>
<td>80.9</td>
<td>89.2</td>
<td>94.1</td>
<td>97.2</td>
<td>82.2</td>
</tr>
<tr>
<td>4 Median of employment group size (1)</td>
<td>4.5</td>
<td>14.5</td>
<td>29.5</td>
<td>74.5</td>
<td>149.5</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>5 No. of people indicated by calculating what (2) is of (4)</td>
<td>3.0</td>
<td>7.7</td>
<td>5.6</td>
<td>8.0</td>
<td>8.8</td>
<td>5.6</td>
<td>6.5</td>
</tr>
<tr>
<td>6 % (1) is of total 121 factories</td>
<td>24</td>
<td>23</td>
<td>33</td>
<td>14</td>
<td>5</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>
It illustrates that irrespective of the size of the factory it is unlikely that there will be more than 9 craftsmen working on the premises and that the average is between 6 and 7. This pattern has its roots in the traditional independence of the Chinese ivory men. It is based on a family 'core' of father and 5-6 direct family or close relatives. After this, size of the 'family' is related to the amount of work which can be 'farmed out' on contract or commission to others. This pattern is apparent on any visit to factory premises. Clerical, administrative and other staff have a conventional linear relationship to the size of the factory: the larger the factory the greater the proportion of such staff employed. This is illustrated below:

<table>
<thead>
<tr>
<th>Employment Group Size</th>
<th>Average staff (Clerical, Admin., porters etc.) excl. Craftsmen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 9</td>
<td>0.9</td>
</tr>
<tr>
<td>10 - 19</td>
<td>3.2</td>
</tr>
<tr>
<td>20 - 49</td>
<td>3.7</td>
</tr>
<tr>
<td>50 - 99</td>
<td>6.3</td>
</tr>
<tr>
<td>100 - 199</td>
<td>19.8</td>
</tr>
<tr>
<td>200 +</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Disposal of completed ivoryware is usually related to a factory's size. Small units may sell to larger concerns with export orders, or to the many small ivory retailers that abound in Hong Kong. Large concerns retail and wholesale locally and overseas. The bigger traders often have several ivory shops in Hong Kong and some have their own retail premises in the U.S.A. and elsewhere.

5) Craftsmen or Outworkers.

These are the people represented by the Hong Kong Ivory Manufacturing Workers General Union. Over 70% are independent or semi-independent, working on their own premises. They produce ivoryware on commission for factories, or independently for sale on their own account. It is not unusual for a craftsman to work for several factories simultaneously. The manner in which craftsmen acquire ivory is related to their reputation and standing with the factories with whom they do
business. A factory will give a man of high standing and proven industry such ivory as is necessary for him to meet their requirements. In other instances the craftsman may have to buy the ivory from a factory with an understanding that if he produces the required items within a stipulated period and to an acceptable standard, it will be bought back from him at a predetermined price. If he defaults he is at liberty to sell his product elsewhere, for the factory will have been covered from loss by his original purchase of the ivory. If a craftsman has capital and the will to buy ivory on his own account, he does so and sells his products as he chooses.

6) Employment.

The Ivory Workers Union believed that there were 200 non-member craftsmen in addition to their membership of 2,000. The total of c.2,200 craftsmen was considered reasonable by both Government and the Association. The Union also believed that the average man would have between 3 and 5 dependants which, if it is so, means that between 8,800 and 13,200 people were wholly or partially reliant on ivory crafting in 1978.

The Union and the Association believed the average ivory carver earned about $430 a month or $5,160 per annum, making an annual payroll of c.$11,352,000. In addition to the craftsmen there were c.500 administrative, clerical and other staff supported by the trade, each earning on average $2,780 per annum, making an additional $1,390,000 to bring the trade's gross annual payroll to slightly under $13,000,000 (HK$ 60,502,000).

7) Demand for ivory in the carving industry.

Ideas vary on how much ivory is required to keep Hong Kong's ivory craftsmen fully occupied and the industry healthy. The Manufacturers Association ventured a figure of 240 tonnes per annum.
The Workers General Union estimated that a supply of 0.5-1.0 kg was needed per craftsman per working day. On a 250 working day year to allow for public holidays and weekends, this would call for between 275 and 550 tonnes of raw ivory annually. These beliefs can be tested against the following information derived from data given to me by the Trade, Industry and Customs Department, which was in turn obtained from 121 factories in 1975.

<table>
<thead>
<tr>
<th>Employment Group Size</th>
<th>1-9</th>
<th>10-19</th>
<th>20-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kg consumed</td>
<td>9,320</td>
<td>27,555</td>
<td>70,936</td>
<td>68,157</td>
<td>72,714</td>
<td>6,499</td>
</tr>
<tr>
<td>No. craftsmen</td>
<td>127</td>
<td>290</td>
<td>1,173</td>
<td>1,110</td>
<td>659</td>
<td>216</td>
</tr>
<tr>
<td>Kg/craftsman</td>
<td>73.39</td>
<td>95.02</td>
<td>60.47</td>
<td>61.40</td>
<td>110.34</td>
<td>30.09</td>
</tr>
<tr>
<td>Kg/craftsman per day</td>
<td>0.29</td>
<td>0.38</td>
<td>0.24</td>
<td>0.25</td>
<td>0.44</td>
<td>0.12</td>
</tr>
</tbody>
</table>

From this data it is obvious that no factory in any employment group category provided its workmen with more than 0.44 kg of ivory per day. This x 2,200 workers x 250 working days per annum = 240 tonnes a year consumption. That this is the figure quoted by the Association is probably no coincidence, for the data must have come from its members in the first instance.

Another form of analysis is given in Table 154 in which Hong Kong's exports of worked ivory are converted back to their equivalent of raw ivory. This is not a straightforward procedure for the worked exports are only published in value and not volume. Fortunately some of the importing countries for which we have data publish both the volume and value they receive from Hong Kong. Summed separately for the years 1975, 76 and 77, the values of their Hong Kong imports in each case are 50% or more of Hong Kong's exported value (73%, 53% and 50% respectively). It seems reasonable to assume that the corresponding import volumes will represent similar proportions of Hong Kong's volume of worked ivory exports, which permits an estimate of the overall export weights.
While Hong Kong distinguishes between exports of ivory carved locally and worked ivory imported and then re-exported, no such distinction is apparent in the receivers' import statistics. All Hong Kong imports fall into the same category, thus the exported volume calculated in the previous paragraph will contain a certain amount of ivory worked outside Hong Kong. This can be accounted for by subtracting a proportion from the exported volume, which is similar to the fraction worked ivory imports are of home-produced exports.

To this modified figure must be added 25% to account for what tourists take undocumented, and the whole increased by a further 20% to represent wastage during the carving process.

From this rather laborious calculation we get estimates that 188 tonnes of raw ivory were used in carving in 1975, 261 tonnes in 1976 and 315 tonnes in 1977 - an annual average of 255 tonnes over the three years. This is within 6% of the 240 tonnes estimated by the Association, giving credence to their claim. However, the 3 years do suggest a rapidly rising requirement - as much as 68% over 3 years. The 1977 estimate of 315 tonnes would represent 0.57 kg per worker per working day. This is within the requirements claimed by the Workers General Union. In 1978 the figure could have been slightly higher. However the upper limit of 1 kg per man per working day suggested by the Union would entail an annual consumption of 550 tonnes of raw ivory per annum. This does not seem realistic in the light of the available evidence. From the information to hand I believe that in 1978 Hong Kong's carvers consumed more than 300 tonnes of raw ivory, but this figure is not representative of the 11 years 1968-1978. Indeed the average is likely to have been less than 200 tonnes.

8) Mechanisation.

Traditionally Chinese carvers used hand or foot powered drills and lathes and polished ivory manually. Now the majority use electrically driven systems. This has speeded up
the carving process considerably. It used to take a craftsman 2 weeks to make a matched pair of medium sized Emperor and Empress figures. Mechanisation has reduced it to one week. A set of 6 concentric balls - the outer little bigger than an orange - took 5 days to make. Now it takes 2. Modern techniques have therefore halved the time taken to make articles. In theory therefore, the same work force can handle twice the amount of ivory processed in a given time. Further mechanisation and technical improvements may take the workman's capacity well above present limits.

9) Stocks or Hoards.

The 1976 Trade, Industry and Customs Department believed that 121 factories examined carried the following stocks:

- 3 (2.5%) had none
- 48 (39.7%) sufficient for 2 months work
- 31 (25.6%) sufficient for 4 months work
- 19 (15.7%) sufficient for 6 months work
- 20 (16.5%) sufficient for 9 months work or more.

During the current survey one informant believed that stocks held in 1978 were greater than in 1976, with many factories holding a 6 month stock and quite a few having up to 2 years' supply.

On the 31st October 1978 stocks registered with the Trade, Industry and Customs Department under the ivory control scheme for Certificates of Origin for exports to the U.S.A., were recorded as:

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw ivory</td>
<td>107,818.09 Kg</td>
</tr>
<tr>
<td>Semi-finished products</td>
<td>4,066.23 Kg</td>
</tr>
<tr>
<td>Finished products</td>
<td>12,481.29 Kg</td>
</tr>
<tr>
<td>Total</td>
<td>124,365.61 Kg</td>
</tr>
</tbody>
</table>

In the opinion of the Manufacturers Association the value of all stocks of ivory in Hong Kong were thought to be $30,864,000 (HK$ 150,000,000).
Referring to import and re-export of raw ivory records for the period 1962-1978 issued by the Commissioner for Census and Statistics, Table 88 shows a total of 6,131 tonnes was imported while 1,740 tonnes (28%) were re-exported. The balance of 4,391 tonnes have either been rendered into worked ivory, re-exported in the ignorance of the Commissioner for Census and Statistics, or are still in Hong Kong. The most likely answer is an amalgam of all three possibilities. While the carving industry of 1978 might take over 300 tonnes a year, it is most unlikely that even 200 tonnes per annum were carved in the first half of the 18 years 1962-1978. However, if 200 tonnes is taken as the average, then there is still a large deficit of c.991 tonnes to account for. From what I saw in Hong Kong one point is clear: if the bulk of this "missing" ivory is held as stock, it is well dispersed and not in the hands of one or few individuals.

The only evidence of a single firm ostentatiously hoarding was owned by a group of Indians from Kenya. In an attempt to dominate the world market in c.1973, they accumulated between 100 and 200 tonnes, but failed in their endeavour. They have left Hong Kong.

10) Conversion Raw to Worked Ivory.

Of tusks carved the proportion lost as irrecoverable waste varied from 15-50% of the original piece of ivory. The more usual range within these limits was 20-25%. Mechanical carving in which pieces can be ground down to the required shape is far more wasteful of ivory than older, manual methods. However this notwithstanding, every effort is made to turn all ivory waste to some good use. Indeed two factories in Hong Kong specialise in importing ivory waste from Japan for the manufacture of small articles (e.g. beads).

11) Pricing Worked ivory.

As a very crude rule of thumb the price of an article of worked ivory can be divided into three equal components:
a) the cost of the raw material
b) the cost of labour
c) profit.

However it must be emphasised that this is a very general approach. Mass produced jewelry items such as beads might wholesale for as little as 15% over the price of raw material (that is sound ivory and not the cost of waste from which they are made, which is far cheaper!). On the other hand items of artistic merit might sell for several thousand times the cost of the material and labour.

12) Internal purchases.

Hong Kong residents buy little ivoryware. However according to dealers, tourists purchase a quantity equivalent to 25% of the worked ivory exported annually. This estimate is close to the 28% claimed in 1977 by the Trade, Industry and Customs Department.

A certain amount of imitation ivory - a plastic/bonemeal compound - is also sold to tourists, who unwittingly think it genuine.

13) Illicit trade.

While the international news media and conservation lobbies have created a widespread impression that Hong Kong is the centre of massive illegal ivory trafficking, hard data on the subject are remarkably few. The main reason for this is, of course, that until June 1978, trade in tusks was virtually unrestricted. It was a case of where no laws exist, no laws can be broken!

Since June 23rd 1978, Hong Kong has implemented CITES procedures to regulate the import of elephant ivory. In the 5 months June 23-November 30 1978, there were only four unequivocal instances of attempts to evade the law. Two entailed forged documents, and two concerned the same man in Zaire sending a box of ivory labelled "personal effects" to a Hong Kong ivory
dealer. Both consignments (of c. 200 kg) were detected and confiscated.

Occasionally in the past ivory has been detected coming into Hong Kong in the guise of some other commodity but such instances have been rare. In all attempts the concealment has been made to hide the commodity from the African authorities and not to dupe the importing country's officials. However, despite the incentive in Africa, the dealers believed that "concealed" ivory was uncommon. The reasons for this seem straightforward.

While an occasional tusk, or small batches, would be easy to smuggle out of Africa, the trade of consequence concerns ivory by the tonne. This and a tusk's shape make large quantities difficult to conceal. In the circumstances it is far easier to acquire corruptly issued documents and export ivory as "legal" from Africa, than to run the risks of having a concealed consignment intercepted. Thus, while there can be no doubt that much ivory traded has illegal origins, this is blurred and hazy, or often undetectable by the time it has reached the overseas importer.

The foregoing notwithstanding, some of the importers with close African connections are not only aware of the illicit status of ivory they import, but assist actively in getting illegal tusks out of Africa. The presentation of clearly forged documents (one company) and attempts to hide ivory from me (another company) left no doubt about their complicity in and knowledge of illegal ivory ex-Africa. However this evidence pertained to 2 firms out of 50. There are undoubtedly more, but the salient fact is that they are the minority, not majority of Hong Kong's ivory importers.

Many more of the importers bringing ivory directly from Africa, make payments to their suppliers through deposits in banks elsewhere than Africa. There are those who are incensed
by this, claiming that it deprives under-developed Africa of its just dues - which is true. Conservationists hold up this reasoning as an element in the case against any trade in ivory. However a larger, if less vocal body of opinion (international traders) believes payment into foreign accounts to be a just and inevitable consequence of inequitable economic laws in Africa. The facts, where Hong Kong and ivory are concerned, are that no Hong Kong law prevents payment where payment is requested, and that irrespective of opinion on banking payments outside Africa, the practice is a feature of international trade, to which ivory is no exception.

Elephant conservation

The Hong Kong Government is committed through CITES to regulating the trade in elephant ivory. An import/export licensing system for raw ivory has been established. Licensing of worked ivory was considered but in view of the impractically large volume of paper work this would entail (each item produced would require a separate document), the idea was abandoned. Nevertheless a system of issuing certificates of origin under Hong Kong's stringent Certificate of Origin system has been set up. This means that companies exporting to countries which abide by CITES rules (and which form the bulk of Hong Kong's worked ivory market) may only use African elephant ivory of proven lawful origin.

As the law stands, Hong Kong is as well off to control its trade in ivory, as any other country. Indeed its position is better than most. As yet, and in view of its very large wildlife products trade, it has inadequate staff in the Department of Agriculture and Fisheries to enforce the laws if there were widespread efforts to break them. However, more personnel are to be provided and at this point in time there do not appear to be concerted efforts to by-pass the laws.

The ivory traders and craftsmen, as represented by the Association and the Union, are well aware that growth in the
industry cannot continue as it has over the past 30 years. All parties appreciated that there is a point at which supplies must level out or start to decline. Not only was it sound business sense to contain trade to sustainable or legally unavoidable offtakes, but it was contrary to many elements of Chinese culture to condone wanton destruction of animal life. Traders and craftsmen were keen to know what a sustainable output of ivory ex-Africa might be. Both Association and Union affirmed that they would support all sensible (with strong emphasis on sensible) measures to conserve elephants.

The Ivory Manufacturing Workers General Union put forward several suggestions for bringing some stability to the trade. These were that:

1) The Hong Kong Government should make the Union the sole legal importer of ivory. In turn the Union would distribute the material among craftsmen on a co-operative basis.

2) If the foregoing was not possible, the Government should ban the re-export trade in raw ivory (on the theory that because merchants could sell raw material outside Hong Kong they had greater scope for driving prices upward).

3) The Government should peg profits on the sale of raw ivory (but not the finished product!) to a maximum of 20%.

Central to these proposals was the belief that the Association members were responsible for putting up the price of raw ivory, which was incorrect (as will be shown elsewhere in this report). However, it is of consequence to note that if the Union hasn't quite got the issue in focus, it nonetheless appreciates what the issue is: the price of ivory. Lower the price and the elephant hunting rate would decline.

Presenting a rather broader viewpoint, the Ivory Manufacturers Association held that the key to the problem was in African hands. If the Africans were unable to enforce their own laws, then no amount of action overseas would resolve
their problem. Countries might refuse to allow import of ivory without valid export permits from the land of origin, but the Association pointed out that most ivory already was covered by permits. Who could determine whether these were corruptly issued, other than those in the issuing country?

Accepting that internal African control was unlikely to be effective, or that whatever actions were taken on the continent would need international support, the Association expressed willingness to try any sensible measure to help. It was agreed that output does seem to respond to price changes and that if these drop, production would dip. However members were pessimistic about achieving control over the price of ivory.

The idea of an international ivory cartel was debated. Indeed the Association had independently considered the idea. Any unified attempt to lower the price of ivory would fail completely if it was not adhered to by all traders. Further, the one or few who broke the unified approach would stand to make immense gains. The Hong Kong traders were very dubious as to whether their Japanese counterparts would enter into a cartel agreement.

If a cartel was to be established, it should be developed in two stages. The first would seek to get a unified buying policy established in Hong Kong. If this was successful the system could be extended to take in foreign ivory dealers.

Related to this first step was the idea that all ivory imports into Hong Kong were placed in the hands of a single organisation. If this was structured as a Company in which all parties, Government and Union included, could buy shares, and protect their interests, it could then auction its wares periodically in Hong Kong, to both local and international traders.

It was held that the idea had possibilities, but would need further discussion with Government and the international trade.
Throughout my contacts, the Association retained its pessimism over controlling ivory production from outside Africa. I must emphasise that this was clearly rooted in the problems involved and through no desire to put a brake on attempts to stabilise ivory production.

The possibility of holding an international conference of ivory traders in Hong Kong to which selected specialists from other fields (such as law, international trade and biology) might be invited, was worth consideration.

A point made independently by both Union and Association members was that recent price increases in ivory were directly stimulated by anti-trade activities in the U.S.A.
This chapter is based on research and a report prepared for the ivory survey in March 1979 by Dr. E.B. Martin. His results have been added to and re-arranged slightly to integrate them into the matrix of the study.

Although we are not certain when Indians started carving ivory, it has played an important part in the culture for centuries. Archaeologists in Rajasthan have found evidence of its use at least as early as the 1st century BC. Hindu brides required ivory bangles much as western women demand wedding rings. These bangles were made in the Cutch - hence the term Cutchi for bangle ivory (see Chapter 2). By the 18th century, when many maharajahs and other princes had consolidated their political and economic control of the sub-continent, Indian use of ivory had gained world renown in carvings, paintings and furniture inlays.

Asian elephants have of course supplied some of India's demand for ivory. In 1875-77 annual supplies from this source were between 4.1 and 7.7 tonnes (Holder 1886). A certain amount of this did not necessitate the death of an animal. Tusks grow throughout life and the Indians periodically sawed sections off those on their tame elephants. The stub was bound with a brass ring to prevent splitting, and the process repeated every 8-10 years (Holder op. cit.) In 1978 the Indian Forest Department recovered 3 tonnes of Asian elephant ivory. It is clear that today and in the past Asian ivory has met only a small proportion of Indian demand; in the last 150 years, perhaps as little as 3-5%. The bulk must therefore have come from Africa. An influence in this direction is the Indian carvers' preference for African ivory as they believe that it does not split so easily as Asian elephant tusks. Today all ivory imported into and exported from India must, by law, be from African elephants. No international trade in Asian elephant ivory is permitted under CITES.
From Chapters 1, 3 and 4 and Tables 35 and 82, it is clear that India has until very recent time been one of the world's major ivory markets. In the mid-late 19th century it was importing up to 250 tonnes a year, and may have approached this mark in previous centuries. Imports declined early in this century to average c.72 tonnes a year in the 1930s. However, they regained their former 19th century peak during and immediately after World War 2. Since 1948 ivory imports have declined. From 1960-61 to 1976-77 the annual average was 37 tonnes and since 1973 has not exceeded 10 tonnes.

From at least the 1830s until 1964, Zanzibar was India's main ivory supplier. The political revolution on Zanzibar in 1964 brought the association to an end and the suppliers between 1964 and 1973-74 became Kenya, Uganda and Tanzania (combined they provided 99% of India's demand). Since 1973-74 middlemen in Europe, Dubai and Hong Kong have supplied proportionately more, about 47% of the total.

The reasons for India's apparent decline in the ivory trade are several. Firstly, since independence the Indian Government has sought to conserve foreign exchange by limiting the import of luxury goods including ivory. To do this it has not only enforced stringent exchange controls but demanded a high import duty on raw ivory - in 1978 this was levied at 120% of value. In contrast other ivory importing countries levy no (or very slight) import duties on raw ivory. Secondly, merchants elsewhere - e.g. Hong Kong - have been prepared to pay higher prices. Thirdly, India's ratification of the Washington Convention calls for both imports and exports to be covered by special permits. These can only be obtained from New Delhi and constitute a strong bureaucratic disincentive to trade in ivory.

The importation of raw ivory into India is handled mainly by 10 companies who specialise in the business. More than half of them are in Bombay, the balance in New Delhi. At least two
have operated for more than 50 years. Dr. Martin visited one in Bombay that was established in 1901 which, typically, has subsidiary operations, i.e. small factories where ivory is worked and shops around the country retailing numerous ivory items.

Ivory objects are sold in every part of India with the largest concentrations in the main tourist centres: Bombay, Madras, Jaipur, Delhi, Bangalore and Calcutta. In almost every deluxe and first class hotel in India there is a shop selling tourists ivory trinkets. There are, as one would expect, tremendous variations in prices for similar items sold in hotel shops, airports and state handicraft establishments. On average, however, one would pay $15 for a plain bracelet, $35 for a carved bangle, $175 for a 12 inch Hindu statue, $350 for a 12 inch nude female figure, $110 for a magic ball (set of concentrics), $1,250 for a medium-sized rosewood table inlaid with ivory and $45 for a modern pornographic painting on ivory. The most expensive item Dr. Martin saw in December 1978 was a 40 x 27 inch sculpture of a chariot pulled by 6 bullocks. Its price was $18,750. These prices reflect the cost of raw ivory in India which in December was $187 (Rupees 1,500) per kg, the difference between this and the world market price of $74.42 being mainly due to the high 120% Indian import duty.

85-90% of Indian ivory work is destined for export or the tourist trade. Tourists need no permits for ivory items acquired in India and taken out with them.

Despite the restrictions and taxes on ivory, India still has more ivory carvers than any other country including Hong Kong. Dr. Martin estimated that in December 1978 there were 7,200 carvers (craftsmen who spend at least 50% of their working time on ivory). However, he gathered that this is probably half the number who worked in ivory a decade ago. Decline notwithstanding, it is difficult to see how current imports can keep 7,200 men occupied for even 50% of their time.
It is also difficult to accept that in the years 1972-77, more worked ivory was exported, than legal raw ivory imported.

Table 152 gives the value of India's worked ivory exports divided by prevailing average worked ivory price to give volumes of raw ivory equivalent, for the years 1970-76; these are then compared with recorded imports or raw ivory during the same period.

Referring to Table 82, the last 4 years of import records give an average of 5,600 kg raw ivory per annum. This would in turn average 0.78 kg per carver per annum. Even if each man only devoted half his working days (125) in each year to ivory, his consumption would be 0.006 kg per day. With a wastage of between 0.12 kg (15%) and 0.39 kg (50%) based on Hong Kong data, the average workman would annually produce a result weighing between 0.39 kg and 0.66 kg - the weight of a medium sized statuette, worth between $175-350 when retailed to a tourist. On the basis of official import figures it is hard to accept that the industry would continue at all on such marginal imports. The implication is that imports of raw ivory are in fact very much larger than indicated in the trade statistics.

All carvers are men, the majority Hindu. Most of them work out of their own homes and few receive a salary. Since ivory is so expensive, few craftsmen can buy it to work on their own account. Instead they are supplied by merchants who pay for the finished carvings on a piece-work basis. A few craftsmen working for the larger companies are provided with a place to work, tools and food, but they are exceptions. A Hindu god carving seven inches in height, will take one man 10-14 days to complete, for which he would be paid $36. Craftsmen's earnings range from $24-242 per month.

In northern India modern ivory workers use electric lathe machines (which were gradually introduced after World War 2), and only put on the finishing touches to their carvings by hand.
Furthermore, the items from these northern areas - Delhi, the Punjab, Rajasthan and Bengal - consist of the more mundane types of bangles, lamps, chess sets, paintings, miniature Taj Mahal replicas, letter openers, necklaces, magic balls, ear-rings and salt and pepper shakers.

In the south, ivory carvers shun machines and only use hand tools (chisels, rasps, drills, files etc.) Their workmanship is of a comparatively higher quality and more individualised. Of course it takes longer to produce an ivory carving by hand, so despite the fact that there are more craftsmen than in the north of India, considerably less ivory is worked there.

The main centre for ivory carving in the south is Trivandrum, the capital of Kerala. Religious sculptures are the most common items and include not only Hindu gods, but Christian saints and Crucifixion scenes. The Trivandrum craftsmen are, moreover, well known for carving intricate figures on whole tusks.

Notwithstanding the inaccuracies which undoubtedly exist in the records the ivory traders of India are pessimistic about their future. They do not have enough raw ivory to supply the 7,200 carvers and feel that they cannot afford the present prices of legally imported ivory.

The craftsmen can be re-trained to work in other media. Their apprenticeship requires some 8 years, but after this, they can pick up wood carving in a matter of 3 months. Many of them are now carving in sandalwood, and earn approximately the same amount of money as they could in working ivory.

The local market shows little Indian demand for ivory pieces, although prior to World War 2 it was considerable and in particular catered for Hindu brides' bangles. This has now changed as, except in Gujerat and Rajasthan, Indian women have become 'modern', preferring jewelry of plastic, gold and silver.
Raw ivory has never been stored for investment purposes or as a hedge against inflation, nor do ivory traders hold more than a 6 month supply at any one time in India, though one might be forgiven for assuming that they did through consideration of Table 152 which shows imports of 120 tonnes in 1970 and 1971, while the equivalent of only 17 tonnes was exported.

The Indian Muslims do not care for ivory at all, as they consider it dead animal matter.

In conclusion, the trade has fallen to a relatively low ebb due to sharp price rises, heavy government taxation and the fear of further impending restrictions. Carvers are turning their skills to other media. What they still produce panders to foreign buyers, often without taste, who accept vulgar copies of masterpieces and who - Spaniards in particular - encourage and demand pornography on ivory plaques, instead of supporting creative artistry. What a travesty of one of India's finest traditions!
D. **MALAWI**

Malawi is perhaps unique amongst African countries in that it does not permit the export of its own raw ivory, but insists that it be manufactured internally. This policy which only became official in 1973, was possible because there was a body of indigenous ivory carvers already at work.

These carvers have featured in Malawi for most of this century. However their style and choice of subjects is strongly Asian, and I believe that the craft developed under the supervision of one or several Sinhalese carvers who came to Malawi many decades ago.

As in Hong Kong, India and Germany, the Malawi carvers are distressed by current soaring prices for their raw material.
E. U.S.A.

This section is edited from a report written for the survey by J.B. Hallagan.

In the United States ivory has been imported for over 200 years for a variety of uses. Initially, as the north-eastern seaboard states became industrialised, its use was largely utilitarian - for combs, billiard balls, piano-keys, pistol grips and knife handles. In 1843 J.P. Waters, U.S. Consul to Zanzibar, commented that two Connecticut comb factories buying ivory from the Salem merchants, cut over 454 kg a week apiece, without meeting all their orders. In this respect its use was similar to the evolution of the British industry. However, after 1914, it shifted to aesthetic uses in artworks. The utilitarian functions of ivory have been supplanted by plastics. However, these cannot usurp its role in scrimshaw, jewelry and other art which depend on the inherent value of ivory, much as gold jewelry depends on the value of gold.

Scrimshaw is a unique American art form dependent on ivory, which evolved in the 18th and 19th centuries as a pastime for whalers spending months or years on the high seas. The working definition of scrimshaw has changed over the years. Originally it was considered a carving of whale bone or teeth. In the early 1900s the definition shifted to indicate a work of art from a sperm whale tooth, whale bone being excluded. Today, scrimshaw includes works from either sperm whale teeth or elephant ivory and those who practise the art are scrimshanders.

The introduction of elephant ivory into scrimshaw has come about through the decline in availability of sperm whale teeth. Thus today most scrimshaw is of elephant ivory. A distinct form of scrimshaw is traditional in Alaska with the use of walrus teeth. Here too, the original material is diminished in supply, and being substituted with elephant tusks. The demand here is for small tusks of 1-3 kg which resemble walrus teeth.
On 1st July 1975 the United States ratified accession to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The main source of ivory, the African elephant, was listed as an Appendix II species, thereby requiring party nations to adhere to a permit system in which elephant ivory had to be accompanied by a permit issued by the country of origin. However CITES did not prohibit imports from any country. In 1976, at the instigation of A. Beilenson, the State of California instituted a ban on all ivory imports. This action caused a wave of speculative buying in which one Californian brought in more than 18 tonnes of raw ivory. It was widely felt in the ivory trade that the ban would become nationwide.

In 1978, under pressure to create a national ban, the U.S. Department of the Interior's Fish and Wildlife Service listed the African elephant as a threatened species and placed special restrictions on the ivory trade in the United States. After June 11th 1978, American firms could only import ivory (and other elephant products) from nations that were signatory to CITES. In addition, all ivory must have originated in a CITES party nation which in effect limited imports to those from Botswana, Zaire and South Africa.

The attempt to totally prevent the importation of ivory continues with Representative Beilenson having introduced a Bill (H.R. 2826) to prohibit the importation or exportation and certain other transactions involving elephant products.

Motivations behind efforts to eliminate the United States from the world ivory trade are dubious at best. Many Americans are philosophically opposed to the utilisation of wildlife species for any purpose and unfortunately try to force this belief upon others. The belief stems from a number of misconceptions cultivated by the American news media.
With the historical background and assembled data we can now consider some wider aspects of the ivory trade.

No one has successfully explained our attraction to ivory. It seems revered wherever it occurs, whether from walrus in the Arctic or whales in the South Pacific. The attraction is too widespread to have been the product of cultural contagion. In this it is like gold. Things are of value if made of ivory; ivory is not valued because things are made from it. Thus it has survived industrial replacement for 19th century uses and demand for it is perhaps greater than ever. Whatever the primordial reason for our fascination with ivory, it is this which underlies its many roles in human affairs. This is so spontaneous that it is virtually impervious to changes in fashion, mores and politics, convincingly borne out by the historical record.

I have held for some time that ivory was sought for more than conversion into objects of art or adornment. The case has yet to be conclusively proved. However, the observations in Chapter 5 that the international transactions in worked ivory are very much less than the expected turnover; that those accountable are even less than the turnover in raw ivory and that the price of worked ivory is not keeping pace with the increases in raw ivory value, strongly support the contention. The situation would appear to be analagous to the role of gold-smiths and jewellers in the gold trade. They do not set the price of gold. They have to go along with values dictated by much broader economic forces, over which they have no control whatsoever. If art and adornment were the sole or major uses of ivory, the carvers and their customers would determine prices in a simple supply and demand relationship. That the ivory workers feel jeopardised to the point where many believe they can no longer continue in business because prices are too high, is convincing evidence that demand for art and adornment does
not set the price of ivory. In the absence of any industrial use the only logical alternative is as a medium of 'investment'.

With its very long history of value, which has survived centuries of political and economic change, ivory is a logical commodity to hoard. While difficult and costly to obtain, it has always been available in vast supply for those with the means to get it. However belief that supplies were at last giving out would exacerbate the incentive to invest in it. Of all animal commodities it is particularly susceptible to an upward Beilenson effect on price. In view of the crescendo of "concern" over the status of the African elephant that has built up during the past 15 years, the incentive to invest in a precious commodity which can only become more precious (not only in proportion to economic inflation, but beyond this through rising scarcity) will have been severe.

Thus throughout this survey I have sought the hoards. Evidence has been hard to come by for good reason. A hoard would represent a substantial accumulation of personal wealth and in the same manner of bank accounts, be private. Taking my own case, I would never divulge my personal wealth let alone throw it open to inspection, to some nosey Parker enquiring on behalf of a vociferous, hostile conservation public. This understandable attitude to the privacy of wealth notwithstanding, I did identify one stock of 35 tonnes of ivory held purely and simply as an investment. I saw 20 others in Hong Kong and Europe which grossed over 60 tonnes - ranging from 0.4 - 15 tonnes in size. However, these were held as large buffer stocks for manufacturing enterprises as well as speculative investments. Some of the ivory had been held over long periods for not only did I see a tusk which I had personally sold in Uganda in 1966, but also some of the same era from Tanzania. One tusk had been in the holder's possession for 23 years.
It was generally accepted that stocks were higher in 1978 than at any time previously. The reasons given varied, but were obviously influenced by the belief that the prices of ivory must, in the long run, continue to rise. The primary stimulus to this seemed to be unease over general economic conditions. However, a strong secondary influence was that CITES would have a pronounced Beilenson effect in driving prices upwards.

This evidence of investing in ivory was unequivocal, though the overall quantities of raw ivory held for this purpose could not be determined. I was informed that stock-piles of worked ivory also existed - particularly in the U.S.A. which is confirmed by Hallagan - but these were not considered as long-term investments. The reasoning seemed sound: once ivory is carved into an artefact its sales outlets become limited to demand for that item. The raw tusk, however, retains the full spectrum of ivory uses and is thereby a safer investment.

In Chapter 6 it was recorded that the Hong Kong merchants believed that the combined stock of raw, semi-finished and finished ivory had a value of $30,864,000. This is a minimum figure for, as in all business everywhere, privacy is treasured. When figures have to be revealed to Government it is a tendency to only show what has to be shown. Hoards representing private wealth would be concealed, not only from Government, but even from fellow merchants for a variety of personal and business reasons. On these grounds alone I believe that the investment in ivory in all its forms must be higher than $30,864,000.

The strongest element in favour of this assumption is the shortfall of 991 tonnes of ivory in the 1962-1978 import/export record. At 1978 values of $74.42 per kg this would now be worth c.$74,000,000. As said in Chapter 6, I do not believe that all this shortfall is held as raw ivory today. Nevertheless
from the sample of stocks I saw, I believe that several hundred tonnes are distributed through Hong Kong in predominantly small, personal caches, with a minority surpassing 15 tonnes. I believe that the value of all raw ivory stocks will certainly be above $50,000,000 and is perhaps substantially higher.

Other stocks of raw ivory may be held in a variety of countries. There are some in Europe (personal observation) and there is widespread but unconfirmed feeling that large amounts exist in Japan. The rapid growth in Japan's imports of raw ivory favour this view somewhat, for they are not matched by rises in worked exports to indicate that there has been a corresponding growth in either the number or output of Japan's ivory carvers.

The concept of raw ivory being held for its own worth also gains some support from the observation in Chapter 4 that 44% of what was traded in 1978 was not ex-Africa, but between industrialised countries.

Suffice it that if the rest of the world's holdings combined equalled Hong Kong's, raw ivory held as an investment may be worth $100,000,000 - $200,000,000 at today's prices. Since 1970 the price of raw ivory has risen x 10 from $7.44/kg to $74.42/kg in 1978, i.e. on average 112% of the 1970 price per annum. One need be neither clairvoyant nor a mathematician to appreciate what the value of the investment will be a decade hence.

In Chapter 3 I estimated that ivory production between 1800 and 1849 had been of the order of 400 tonnes a year, between 1850-1899 it had risen to 700 tonnes, and from 1900-1914 to 800 tonnes. Thus in that span of 115 years, the volume of raw ivory may have totalled 67,000 tonnes. From 1915 to the present (estimating for the trough between 1915 and 1946) it is not unreasonable to postulate an average of around 400 tonnes a year = c.25,600 tonnes. The production of raw ivory
over the past 179 years could thus have reached 92,600 tonnes. What has happened to it?

A crude approach to the potential value of this ivory might be

\[
\text{average modern processed } \times (179 \text{ years production ivory price} \times \text{less 20\% waste factor})
\]

\[
$122.39 \times (92,600 - 18,520) = $9,066,651,200
\]

Obviously much, if not most of this potential would no longer be around. Most of the combs, backs of hair brushes, inlaid furniture, ear-rings, brooches, billiard balls and bracelets will have reached the garbage heap long ago. Yet if even 5\% of this value is extant today, we are still talking of a substantial sum, c.$450,000,000. However, this is speculation: the purpose is merely to establish an order for the possible value of ivory held.

Determination of the value of ivory in circulation as personal possessions was beyond the limits of this survey. However, the Hon. Julian Guest, a valuer in London, kept record of ivory artefacts in 115 Property and Content valuations made between 13th March 1978 and 1st March 1979. Items such as ivory-backed hairbrushes were not included. Of the 115 households, 10 held items of ivory worth $357,892 ($35,789 per household average). He has further suggested - with considerable caution be it noted - that there may be up to 600,000 British households with ivory of a similar value. If this is so, it indicates ivory holdings of $21,473,400,000. In these estimates there is also an intrinsic antique value.

Britain is not particularly ivory conscious, and the value of holdings in Europe will be far higher. Efforts to obtain an index of ivory in the U.S.A. failed. Again the very limited evidence to hand must be treated with caution, but it makes the point that ivory held is worth very large sums of money.
A further illustration of this fact can be derived somewhat more firmly from the value of Hong Kong's worked ivory exports from 1962 to 1978, upgraded to 1978 prices. This is a legitimate approach for the quality of the material remains constant and can be measured according to prevailing prices. This process denies any antique value which might accrue. The upgrading is presented in Table 155. The retail value of Hong Kong's worked ivory exports of the past 17 years is slightly under $500,000,000, without making any allowances for the various discounting processes that are involved in diminishing trade values for evasion of duties etc.

Most of this ivory is not consciously owned as an 'investment'. Nevertheless it represents substantial wealth which can readily be converted into money. This potential is constant and is the backing which indirectly serves the lesser, but still potent, deliberate investment in the raw material. The point must be made forcefully that injudicious publicity could bring about a rekindled consciousness of the potential of owned ivory artefacts, and stimulate an upward Beilenson effect of far greater magnitude than has occurred with ivory previously. The salient issue is that, for all my inability to describe the investment in ivory precisely, it is perfectly clear that it is a de facto investment of very substantial measure: its values are likely to be billions, rather than hundreds of millions of dollars.

Evidence of ivory's use as a straightforward currency (i.e. a commodity used as a medium of exchange) is fairly commonplace in Africa at many levels. It is effective for trans-border trade between two countries which will not accept each other's national money (the rule in Africa rather than the exception). It enters a higher plane when used to move money out of Africa. Depending on urgency, this is frequently done at apparent par-losses. Evidence of other aspects can be seen in comparison of Zambia's ivory values (Table 51) with prevailing values (Table 104).
At a level of yet higher finance it is used as a medium like gold to go into and out of according to general economic conditions. Thus I observed a telex from one trading company (not normally in ivory) to a similar trading-house in another country offering 15 tonnes of mixed ivory at $100 per kg - unseen - with four hours for acceptance. The prevailing price at this time was c.$55 per kg. The offer was accepted. A month later there was a reverse transaction between them at the same price. For reasons best known to themselves they wished to be out of money and into ivory and vice versa in a typical 'futures' move.

For further evidence of an incomprehensible (to me) financial manipulation of ivory, examine the transactions between Singapore and Hong Kong in Tables 84 - 87. No one could (or would) explain this to me.

To give an overall appreciation of ivory's economic history relative to other economic trends, I present a comparison of indices for ivory, gold, wholesale commodity prices and the £ Sterling from c.1870-1977 (Figure 29). The ivory price index (Table 156) takes 1914 as 100 for no other reason that it came at the end of a period of stability. The gold and commodity indices are taken from Jastram's (1977) tables 1 and 2 and chart 1. The index of the £ Sterling was provided by Barclays Bank Ltd through the courtesy of Robert Whyte Esq.

The occasional sharp peaks or depressions in the ivory index may be the consequence of insufficient data. These notwithstanding, the general pattern indicates that ivory is the currency or commodity "that got left behind". The recent large price rises have in fact merely made up lost ground.

A final observation to conclude this chapter concerns the effect price has had on ivory production. This is necessary because it is frequently asserted that elephants are killed at increased rates because of rises in the price of ivory.
FIG. 29 AN ILLUSTRATION OF TRENDS IN 4 INDICES: (i) THE PRICE OF GOLD, (ii) THE PRICE OF IVORY, (iii) THE £ STERLING, AND (iv) GENERAL COMMODITY PRICES. 1914 = 100
If this is true any substantial drop in the price of raw ivory should produce a corresponding dip in the level of production. The only major fall in ivory prices happened in the depression of the late 1920s and early 1930s. If we examine the Tanganyika and Kenya data for that era it is quite obvious that basic production did not fall back substantially. While we do not have total Uganda ivory production prior to 1939, we do have the number of elephants killed on crop-protection work (Uganda's major source of ivory) from 1925-1946 and these, presented in Table 157 show that no fall-off in elephant killed occurred during the depression. It is clear illustration that elephants will be killed and ivory produced for reasons outside the ivory trade. A drop in ivory price will not stop elephants competing with humans.

At a different level the fall in ivory prices did have a retarding effect. It stopped many sportsmen from hunting as they could no longer be sure that receipts from ivory would cover costs or show profit. This is evident in the number of licences taken out in Uganda over the depression period (Table 158). The effect on the volume of ivory traded, as against the rate at which elephant were killed, can be seen in Zanzibar's export figures for this period. As with the elephants killed by sportsmen, exports were reduced. The lowered prices caused merchants to stop buying, or to hang onto stocks in hopes of better times. (Quite a few went bankrupt in consequence.) The lesson from the depression is that lowered price will remove some, but not all incentives to kill elephants.

This is reiterated in review of the exports (production) of East Africa from 1929-1962. Data on volume and local prices are presented in Figure 30 and Table 159. In the construction of both volume and price indices, 1929 was taken as 100 and subsequent variations are expressed as proportions of that year's volume or value and added or subtracted from 100 to give index values. Years after 1962 are not comparable to those preceding it, as the entrepôt trade was banned and greatly reduced volumes.
FIG. 30 EAST AFRICAN IVORY EXPORT INDEX AND EAST AFRICAN IVORY PRICE INDEX 1929-1962
1929 = 100
In the 1970s the irregularities commented on in Chapter 4 became so gross as to render examination pointless.

To reduce the influence of annual variation - an inherent feature of ivory production - the volume indices from the first 5 years (1929-1933) are averaged and compared with that from the last 5 years (1958-1962). Thus over this span of 34 years, volume rose from an average index of 85 to 295 or 6 index points a year. The same comparison with the price index gives an increase of only 0.2 points a year. These very different rates of increase support the hypothesis that forces other than price change brought about the growth in ivory production. This is made abundantly clear when the ivory prices are considered against general inflation. During this period East Africa's was a Sterling currency with an inflation rate of c.4% p.a. between 1930 and 1962. Thus the average price of $3.99/kg ivory for the 5 years 1929-1933 should have reached $8.78/kg thirty years later merely to have retained relative value. Thus through 30 years of a de facto declining monetary value, ivory production increased.

A similar picture emerges from examination of Hong Kong's raw ivory import trade for 1952-1978. The data are laid out in Figure 31 and Table 160. Over the 21 year span 1952-1972 the average volume index of the first 5 years rose an average of 12 index points a year to an average of 399 in the last 5 years, 1968-1972. The comparable value index rose at 11 points a year. In 1952-57 the Hong Kong import price averaged $4.42/kg and rose to $7.54/kg. The inflation rate in this era was running at c.7.3% p.a. and to have maintained relative value the price of ivory should have risen to $11.52/kg. Thus we have increasing imports through yet another period of decline in relative value.

To this stage, neither the East African data, nor the Hong Kong material give any support at all for the hypothesis that a rise in price was responsible for raised production. Indeed
FIG. 31 VOLUME INDEX OF HONG KONG'S IMPORTS OF RAW IVORY AND CORRESPONDING PRICE INDEX 1952-1978
1952 = 100
volumes of ivory increased as relative price decreased. Even at the annual level there does not appear to be any striking correlation between volume/value fluctuations.

After 1972 the situation alters dramatically: ivory value rose at a far faster rate than volume. Thus between 1972 and 1978 the value index rose 1891 points, while the volume index rose 644 points by 1976, but fell back to a final increase of 480 in 1978. In these circumstances it is obvious that the rising price could have acted as a very strong incentive to raise ivory production. Its increase in relative value outstripped prevailing inflation rates to make it a very sought-after commodity.

Today the value incentive is additional to the other forces which brought about raised production in the decades before 1972. Ivory has regained its relative value from the last century to give us some understanding of its immense power in the past.
Having established the nature of the modern trade, I shall try to regain a historical perspective of endeavours to control it. These attempts have, in the main, been confined to Africa. They have had two separate roots:

1. the material - for economic and commercial advantage;
2. the immaterial or aesthetic - as a measure to ensure the survival of elephants.

In application they have overlapped to confuse their separate evolutions. It is thus worth reviewing the record, trying to keep them separate for as long as possible.

The Material

For social and economic advantage, many African peoples had rules which determined who could kill elephants and how they might do so. For example:

"The Bari and Bari-speakers have - or had - a professional caste of elephant hunters known as 'Liggo' (sing. Liggitot) whose craft was hereditary, but if the male line dies out can be acquired from the family by purchase" (Nalder 1937).

These social permissions and inhibitions worked (any Bari who was not a Liggitot would have the Liggo to look out for if he went killing elephants!) The widespread rule that one tusk of every elephant killed belonging to the Chief is another example of a rule that worked. This particular law had society's support in the same way that westerners pay rates and taxes: even though tusks went to the Chief, his wealth was in many respects the communal treasury. Such customs worked particularly well when there was solidarity and cohesion within the tribe, and even better when internecine strife and tribal isolation made it difficult for the erring individual to trade with hostile neighbours. These circumstances have largely disappeared.
The Portuguese tried to regulate the Mozambique ivory trade to their advantage by eliminating Indian competition. By right of might they penalised their competitors with restrictions on movement, the imposition of licences, taxes and duties (Alpers, 1975, goes into this at length). They failed, and merely illustrated that other than in the short run, physical strength is no substitute for business acumen and capital and seldom overcomes basic economic forces. On the other hand the Indians, who had both capital and trade wisdom obtained what they wanted by enmeshing greater Portuguese interests in Goa in a net of credit and capital loans. At the same time they were willing to tolerate all manner of degredation and humiliation in the pursuit of their goal. Where ivory is concerned, the Mozambique lesson is that internal legislation, on its own, cannot counter external economic influence.

The Sultan of Zanzibar - Sayyed Said bin Sultan - taxed the ivory trade heavily, a tradition his successors pursued throughout the 19th century. In 1848 Customs duties ranged from 15-50% of prevailing international prices and in 1864 these were between 4-25% depending on the origins of the tusks (Bennett and Brooks, 1965). Each tusk over 2.7 kg was registered with an individual number, and, at least on Zanzibar, the system worked efficiently. What we do not know is how much ivory from the Sultan's African dominions by-passed Zanzibar. There are few records to indicate that evasion was commonplace through the incentive must have been strong. The size of the ivory flow through Zanzibar was so large as to suggest that the taxation was not a major deterrent to trade. It gained strength in that the major buyers - Indian, American and European - were based on the island.

The Emperor of Ethiopia not only claimed the first tusk to touch the ground of every elephant killed, but also levied a duty of 10% ad valorem on ivory traded through Addis Ababa or 8% on that passing through Harrar (Powell Cotton 1902). The general lawlessness of the region and the high reward for
avoiding the Emperor's levies and rights, made evasion likely though there are no data available to me which support or disprove this.

In review it seems that the regulations imposed on the ivory trade prior to the 20th century worked - particularly the Zanzibari registration and taxation. The ease of moving ivory was far less than today, and there were fewer markets. It appears that a free trade in ivory was prepared to pay for the privilege by accepting taxation. However the data are too few and incomplete for worthwhile comparisons to be made between the 19th century attempts at regulation and anything that has happened in the 20th century.

Once Africa was divided between the European powers, the new landlords laid claim to ivory. In some cases they permitted free trade to continue for a while as in the first few years of the British East Africa Protectorate (to become Kenya in 1923), or claimed as a Government monopoly as in the Sudan, or a company monopoly as was the case of the Imperial British East Africa Company in Uganda (Lugard 1893). In commercial terms it paid for many of the early administrations. Extending the same point made in Chapter 1, Gessi (1892) copied a letter from his colleague Casati to the editor of the journal 'Esploratore':

"The whole expense of the administration of Bahr-el-Ghazal and the countries of Niam-niam... do not exceed £7,800 sterling. The ivory sent to Khartoum from time to time (all of which belonged to the Government) exceeded three thousand hundred weights, representing the value of about £90,000."

Nalder (1936) confirmed this and, quoting Emin Pasha, wrote:

"Ivory was the main article of which an average of 148 tons reached Khartoum every year".

Nalder then went on to comment that

"At only Sh 5.00 a lb (£0.55 per kg) this would have been worth £E 75,000, more than the combined revenues of Mongalla and the Bahr-el-Ghazal today" (i.e. 1936, after 38 years of British Administration.)
Stigand in 1914 wrote:

"On the first occupation of any part of Africa, unless mineral wealth can be discovered, there is actually nothing to hand that we want but ivory and wild rubber"

The references are numerous. Little wonder that the Governments were immediately interested in the status of elephants. Ivory arrived in Government coffers through confiscation, through offering rewards to the natives to bring in ivory they had hidden, and readily accepting it as cash whenever payment to Government was necessary (e.g. Stone 1972 p.443 - Kamba payment of hut-tax in 1902). However it was in this era that the immaterial reasons to preserve elephants were aired vigorously and the two roots of modern policy became entwined.

The Immaterial

The immaterial - the aesthetic - are, as in other attitudes towards elephants and ivory, shared with us by Negroes. The process of hunting, the taking of life, was widely involved in metaphysical ritual and sanction. Thus the Kamba who were elephant hunters of repute, had social controls by which this activity was carried out:

"Hunting, like other aspects of life, was governed by religious rules and ceremonies. Activities before hunts were often identical to those preceding raids, and successful hunters were afforded the same respect given to successful war leaders" (Lindblom 1920).

I could continue to dredge the archives for evidence of African aesthetic perceptions, but prefer to give two instances from personal experience.

The Watta (Waliangulu, Wasanye) of eastern Kenya are elephant hunters and ivory collectors by heritage. They admire the successful hunter - regardless of race. Dropping an elephant with a shot brings forth their congratulations. Witnessing elephant culling in Uganda, Kenya and Tanzania, when every day a complete herd was destroyed, with no survivors and
done coldly, mechanically, with no *esprit de chasse*, they were impressed. However it was more with a sense of foreboding and unease and they offered no congratulations. "This" said one, "is something else..."

In Rwanda the last bush elephants (140) were engulfed by expanding humanity. Nightly they destroyed surrounding crops and on occasion killed people. The instances were increasing, leaving one practical solution - their extermination. The Government made arrangements for this to be done. While being relieved at the news that the elephant menace was to go, there was also disquiet among the locals. It was one thing to kill a raiding elephant. It was even all right to kill a lot of them, but total elimination was frightening. "It will" some said "be a provocation to God. There will be retribution."

Well there was - at least in their eyes. Within the hour of the relevant high official placing his signature on the contract of destruction, his son died. At the end of the operation, when all that survived were a few captive elephant calves, one killed a lady filming them.

Such aesthetic perceptions placed some limits upon what was killed, when and where, and no African I have ever talked to has advocated the extermination of all elephants. The positive side of this coin is that now and in the past, Africans as well as white or brown men want some elephants to be.

Laments that elephants were doomed have been a regular historical feature. They were certainly voiced when the supply of ivory almost gave out in Pliny's day. It is not surprising that the volume of the ivory trade in the last century led many to assume that it would not last, just as the same applies today.
Schweinfurth (1872) wrote:

"It would be no unfortunate event in Africa if some of the European philanthropists who now squander their homœopathic charities on the welfare of the negroes, were to turn their sympathy a little to the pitiable lot which has befallen the elephant...its indiscriminate slaughter...compels us sorrowfully to ask and answer the question 'Cui bono?!...No wonder therefore, if this noble creature...should...perhaps sometime during our own generation, be permitted to rank in the category of the things that have been, and to be extinct as the ure-ox, the sea-cow or the dodo."

R.B. Woosnam, Game Warden of the British East Africa Protectorate wrote in 1912 (Anon. 1913):

"I have only recently heard, on the very best authority, that in German East Africa (Tanzania) the elephant is almost exterminated, the same may be said of Italian Somaliland and Abyssinia, while the Congo, both French and Belgian territory, will shortly be in the same condition if it is not so already."

Such statements have an uncanny resemblance to many modern attitudes!

Stigand (1914) in a continuation of the quote from him given earlier in this chapter, said:

"The collection of these latter (ivory and rubber) is a decreasing trade which exhausts the country, but does not develop it."

And so it was in the era of the 1880-1914, that the aesthetic drive to preserve elephants became an issue, was vigorously expressed and engendered considerable debate. It was at this time that the two forces for elephant preservation - the material and the immaterial - became entwined, supporting one another, conflicting with each other and providing a confused basis for the evolution of policy on the matter. From now on it is difficult to separate the two influences clearly and they must be considered together.

The Twisted Strands

The situation of confusion which prevailed widely in Africa between 1900 and 1914 is synthesised in the following comments

"This is the most difficult problem to deal with of all game preservation questions, because of the value of ivory and on this account it is almost impossible to obtain unbiased opinions on the subject.

There are three points of view from which the subject may be surveyed:

I) The Customs Officers:— who necessarily look at it mainly from the immediate revenue point of view.

II) The Sportsman:— and advocate of game preservation, who of course looks at it from that point of view."

The writer then submitted his own view that the solution lay in a combination of I) and III). He then quoted from a report written on the ivory trade by the Lt. Governor of the Protectorate—F.J. Jackson in 1909. This is of great relevance:

"The original Game Ordinance was passed in 1900. (Note that legislation had been enacted prior to this in 1897, 1899 and 1900, but probably not as a composite Ordinance.) This prohibited free trade in ivory, but little notice was taken of the Law, except that it gave birth to the ivory smuggling trade.

Towards the end of 1902 traders, particularly Indian merchants, alleged that there were large quantities of female and old ivory still in the hands of natives, and on the representations of the Chief of Customs, a notice was published in the 'Official Gazette' authorising the purchase of small and female ivory by Government Officers at 50 per cent of its value up to June 1903. On June 15th a further extension was granted on the same terms until March 31st 1904, again on December 1st 1904, the purchase was allowed to continue, but at 25 per cent of its value. Finally an Ordinance was enacted ('Official Gazette' of April 15th, 1905) prohibiting the possession of ivory under 11 lbs (5 kg) but it was not until the present ordinance was enacted that trading in ivory was altogether prohibited. By that time most of, if not all, the old and buried hoards of female and small ivory had been brought in. But there is little doubt that the natives, encouraged by the traders, continued to kill the elephants for the ivory alone, for in December 1907, the District Commissioners reported that there was a considerable quantity of ivory in the possession of natives. Instructions were accordingly issued to buy up this ivory at 50 per cent of its value, after it had been sent to Mombasa for valuation. This was found unsatisfactory as the natives took the inevitable delay for a breach of faith on the part of
Government and thought that their ivory had been confiscated. Orders were, therefore, issued in August 1908, to pay natives on the spot for ivory at the rate of Rs 4 per lb " (£0.57 per kg which was about 50% of prevailing market value).

The writer then takes up the tale in his own words:

"In August 1908, at a meeting of the Executive Council the ivory question was again brought up by the Honourable Treasurer who recommended free trade in ivory, supported by a memo from the Chief of Customs."

The recommendation was not accepted as it was held that it would lead to excessive elephant killing. However the Government purchase of ivory continued and the volume bought increased annually.

And so debate raged. To buy ivory was to encourage the natives to kill elephants; not to, was to waste enormous wealth. Needless to say the natives were confused. When told not to kill elephants they asked "Then why does the Government give us Rs 4 per pound for ivory?"

If the natives had produced only adult male tusks, the preservationists would have been less alarmed than they were by the continued appearance of female and immature ivory. To kill young and females was against all the tenets of good game-keeping as it was then practised in Europe, Britain and America.

A point of particular interest was that the early Game preservationist - the immaterialist or aesthete - did not advocate preserving all elephant everywhere. Again quoting from the 1910-11, 1911-12 report (Anon. 1913):

"At the outset I think it will be generally recognised that it is neither possible nor desirable to attempt to preserve elephants or any other game where it is inimicable to the interest and development of the Protectorate. But we have in this Protectorate and in Uganda many places where elephants can be preserved without their doing damage to any one, and it is only under these conditions that I advocate their preservation."
Stigand (1914) - a man well known in his time for his interest in what we now call conservation - wrote:

"It is not compatible for elephant and civilisation and progress to live alongside each other."

We now know that by the erection of physical barriers of suitable design, e.g. ditches, fences, etc., they can live beside (but not amongst) each other. The point made, and made repeatedly, was that elephant should be preserved (conserved in modern idiom) in areas set aside for that purpose. It is fashionable to see national parks as new developments in Africa, yet the concept - if not the terminology - was much in vogue from the outset of colonialism in Africa. Indeed the records convince me that the early administrators were, with the exception of parties in the United States, well ahead of their times on the matter. The establishment of what is now the Kruger National Park in 1898 is a case in point. The pragmatism of the first administrators' approaches was related to their breadth of outlook and lack of specialisation. In having responsibility for all affairs in their domain - law, politics, social welfare, land tenure, agriculture etc. as well as the game laws - they had to achieve balance between interests. But this is digression: the issue of consequence in relation to the ivory trade is that the aesthetes, the immaterialists, saw the issue of preservation in fairly clear-cut terms. The elephants needed reserved space. In essence they foresaw that policy on this particular issue must move from the general to the particular. It never did. The material outlook which, equally correctly, saw ivory as a general resource, could not come to terms with the idea of not husbanding it everywhere. Policy fell between two stools: it drew its form from the value of ivory as a revenue resource, and its drive from an aesthetic desire to preserve elephants.

The regulations reflect the situation. Most African territories introduced legislation which set a tusk size limit below which elephants were not to be shot. However, depending on a number of considerations, this limit varied from place to
place. The prohibition of taking tusks of less than 5 kg (11 lbs) was a widespread law, though in some countries it was higher. The absence of uniformities encouraged the movement of under-limit ivory from high-limit countries to the nearest neighbour with a suitably low limit. It established the point that with an international currency such as ivory, the regulation of its movement calls for common laws and an equality of enforcement between nations.

As African economies expanded, became more complex and capitalised and integrated with those of the owning powers, so did the relative importance of ivory recede. It always remained a commodity of value but, as an element of, for example, the British Empire's economy, it was insignificant. The inevitable outcome of the complication and expansion of imperial economies was that ivory was no longer something that featured in the environment of those who, at the highest levels, made economic policy. Thus as early as 1914 in British Africa the dominant influence in legislating on the ivory trade had become the immaterial. It gained ground across the continent, but nowhere, at any time, has policy towards elephants been able to disconnect itself entirely from the value of ivory. Indeed early on, the immaterialists clouded their case through the introduction of a new material issue - tourism. Already by 1910-1912 licence revenue from sportsmen was of the order of £10,000 p.a. (Anon. 1913). To put this into a modern perspective the £ of 1900 would be worth more than £15 today and the £10,000 was in relative terms worth more than $1,500,000 (c.$300,000) today. This was presented as an alternative to ivory revenue:

"By making stringent regulations restricting the shooting of elephant, and making elephant-shooting licenses (and photographic permits, and permits to enter parks etc.) rather than the actual collection and sale of ivory, the source of revenue, it will be possible to draw a limited profit out of elephant and ivory for a number of years" (Stigand 1914).

Thus as early as the first decade of the 20th century commercial tourism was being presented as a material reason for
wildlife preservation and, *ipso facto*, was cause for regulating the ivory trade.

Each Colonial power legislated on ivory in accordance with its individual system of law, but the common European background produced certain similarities. These were augmented through informal contacts. For the greater part the ivory laws have become integral to general Acts and Ordinances for the preservation of wildlife. Their essence in regard to ivory rests on 3 points:

1. elephants are made to appear state property,
2. ivory is state property and may only be possessed if
3. it is acquired in accordance with the law through purchase of a game licence to shoot elephants, or through a legally authorised channel of trade.

Generalising, the British and Belgian territories were more strict than their French and Portuguese counterparts.

A legal nicety makes me claim that elephants are made to appear state property. At least under the British or ex-British laws, no actual claim of ownership was ever made - for good reason. If ownership could be proved, then the owner could be sued in the event of the owned inflicting damage or injury to person or property. Elephants do immense damage to peasant agriculture in many parts of Africa, e.g. in Tanzania it is sufficient to induce the Government to shoot, on average, 2,000-3,000 a year. Thus the laws merely bar people from killing or disturbing elephants. They only become state property when dead - except in the case of those killed legally under the law. The effect is of course that elephants are *de facto* state property.

In 1933 an attempt was made to unify conservation law throughout Africa. A convention was held in Brussels to consider the best means of preserving the natural fauna and flora of Africa which were in danger of extinction or permanent injury. There was consensus that animals which were particularly rare or
- to coin the modern phrase - "endangered" were to be listed under Class A, whose conditions were that such animals should not be hunted, killed or captured without special permission from the highest authority in the territory. This should only be given under special circumstances, solely in order to further important scientific purposes or when essential for the administration of the territory. A second Class B was designated for animals which, while not requiring such rigorous protection as those in Class A - the "threatened" of today - should not be hunted, killed or captured; even by natives, except under special licence granted by the competent authorities. All countries listed elephant in Class B and some placed elephants with tusks of less than a certain size in Class A. However, other than to go on record as the first major attempt to unify African conservation policy, the Brussels Convention introduced little that was new and not already practised. It brought about few, if any, changes in the field.

Where ivory was concerned, the natives continued to bring in immature and female tusks, and mutter as they might, Governments continued to pay rewards for them. The collision of interests - leave it and lose revenue versus take it and encourage elephant killing - has never been resolved. All that happened was that rewards for recovery failed to keep pace with increase in prices. From c.50% of value early in the century they regressed to c.10%. The hope was that this was sufficiently attractive to encourage natives to hand in such ivory as they happened upon, but insufficient incentive to them to hunt live elephants. In synthesis the issue was left to hope. And so things muddled along until the era of independence.

Independence disconnected many economies from imperial systems, to reform at the lesser national level. Their strength now rested upon the resources within the new state boundaries. Once more ivory's status reverted from relative insignificance to an obvious prominence. It 'came home' (see Figure 29). It was so enmeshed in conservation law and subtle international
pressure, that overt attempts to expand official use of ivory for revenue were few. One exception took place in Kenya. Certain persons were awarded "Collector's" Permits which authorised them to seek ivory from natural mortality and among the rural people who might already be in possession of it. Instead of waiting for 'the natives' to bring ivory in for reward, Government authorised private individuals to go to them. The idea was that having recovered such ivory as they could, the collectors would bring it to Government to arrange its sale and make some division of proceeds between the two parties. The origin of this policy was as political as it was economic. Suffice it that it was flagrantly abused and fulfilled all earlier premonitions in inciting widespread elephant hunting. The permits were rescinded in 1973.

While governments may have refrained from changing official policy toward ivory on conservation grounds, the revenue men's eyes were drawn to it sharply from another direction - that of the need for exchange control. The rapid onset of independence trapped many investments originally made in a climate of free currency movement. Equally many investments made in the belief that a particular fiscal policy would be pursued were embarrassed when programmes changed (e.g. from capitalistic to socialist). The incentives to remove capital from independent Africa have been considerable and many devices have been used. Ivory was a prime vehicle for this purpose. In this respect one is drawn back to Nalder's (1936) comment quoted earlier:

"In this undeveloped land money, except for ivory, is not to be had for nothing."

While situations at independence were never quite so stark, the fact remains that in many African countries, their only genuine "international" currency was ivory. It is hardly surprising that in many, if not most African countries which produce ivory, ultimate control of its exports is now firmly back under the revenue authorities.
To summarise: regulations toward ivory through this century have been influenced by aesthetic pressures and have sought to at least stabilise elephant exploitation. The data in Chapters 4 and 5 illustrate unequivocally that they failed. Excepting the periods of the two World Wars and the Great Depression, trends have been consistently upward, with a sharp acceleration in the independence era. At all stages official statistics are minima, for they do not include illicit exports. It is as though we are beside Sir Frederick Jackson in 1909 writing that

"the law ... gave birth to the smuggling trade" (Anon. 1913)

and achieved little else.

Somehow perspectives were lost. Conservation literature from the past eighty years is marked for its repetitiveness and the absence of new idea. The Brussels Convention of 1933 only reiterated concepts three decades old.

African ivory exports reached a peak slightly under 1,000 tonnes a year between 1900 and 1914 after a gradual climb over the previous 4 centuries (Chapter 3). After 1914 exports fell back and remained below the earlier high point until the late 1970s when they again reached the 1900-1914 levels. It might be argued that the intervening decades of lowered exports are evidence of some effectiveness of law to control the ivory trade. I would not argue that they had no influence, but it was minimal. This was least during the World Wars and the Depression when enforcement staff were at a minimum and conservation issues of least importance. When prosperity and peace permitted attention to elephants and ivory; when the regulations should have had greatest effect, the ivory commerce recovered ground and expanded. The French territories which did not attempt to enforce ivory law very rigorously and permitted considerable trade, still had numerous elephants. From this it is clear that the major influences upon the restriction of trade were essentially fortuitous and, as always with ivory, directly connected with its transport. War and penury inhibited movement, prosperity facilitated it.
It is worth considering the failure of regulation in the African ivory trade a bit further under specific headings.

1) The Number of Elephants

Elephant numbers have been consistently under-estimated throughout this and the last century. As late as 1969 (Laws, 1970) it was thought probable that there were less than half a million bush elephant left in Africa. Earlier regional estimates were far more pessimistic. Laws, Parker and Johnstone (1975) illustrate this for Uganda and in 1934 Kenya's population was believed to be 13,000 (Anon 1935) when real numbers must have been more than 200,000 (Parker, unpublished data).

At all times ivory trade statistics should have caused those who believed in the fewness of elephants, to pause. That tens of thousands were represented in each year of Africa's ivory exports, and that such exports had been sustained over decades, was never seen in its most straightforward light—that elephants must be numerous. The perspective was never the production of ivory over time, but production at any one time, this being so much larger than expected that it has always been seen as the apogee of a crisis. This is as true today as it was nearly one hundred years ago. Thus a great deal of legislation has been made under the influence of an immediate but spurious calamity.

The results of the IUCN survey into the status of the African elephant should rectify the misapprehension over numbers, and should eliminate this as a cause for unrealistic legislation.

2) Natural Mortality

Elephants are mortal. Yet read literature on the ivory trade, particularly that relevant to law enforcement (e.g. Game Department reports for what is now Kenya and Uganda 1910-1965, and 1925-1960 respectively) and one has grounds for doubting
that this was accepted! When elephants die, they leave ivory—freely available for collection by the first person who happens upon it. Natural mortality produces much immature ivory, as death rates are highest among the very young (and very old), and also produces female tusks as that sex also dies! It is and always has been a large potential source of ivory. Thus while I do not hold that natives didn't kill young and female elephants, for they did, an acceptance of natural mortality would have gone a long way towards ameliorating the administrators' disquiet over the continual appearance of young and female ivory.

3) Africans and Ivory

Believing elephants to be a small fraction of their real number, automatically confounded understanding of both the interaction between elephants and humans, and the role ivory played in some rural economies. All accounts of the true situation must have seemed exaggerations. This ignorance was exacerbated even further by a gross lack of knowledge of African custom and outlook. The overall misunderstandings will have been worsened by a deliberate African secrecy about ivory once a government pronounced its monopoly of ownership.

The game laws established on European formulae and in ignorance of local conditions were not only unrealistic but, in many cases, manifestly unjust. With a stroke of a bureaucratic pen the whole Watta tribe was dispossessed of its mode of life—elephant hunting and collection of ivory. It is ironic that the law was made without knowledge of such dependence. At a lesser, but nonetheless severe level, Lindblom (1920) (quoted in Stone, 1972) writing of the Kamba people, said:

"When the first game laws were passed in 1897, the ivory trade and most hunting activities were made illegal. The advent of British Authority not only affected the Kamba business community, but the social structure of the people as well."
It was noted that in times of famine and drought, the ivory handed over to government invariably rose (Stone 1972). However this did not establish the obvious - that there was an element of necessity in it. It merely brought official dismay at the increased poaching.

The low price offered as reward for ivory handed in acted as a guaranteed minimum. From this base the possessor of ivory could negotiate better bargains with illicit dealers. Being as low as 10% of prevailing market value it also favoured the traders, for they did not have to offer a great deal more to secure tusks. This policy guaranteed that a minimum of 'native' ivory came to government and at the same time provided an 'alibi' for poaching. Where it was tried, the alternative of not paying anything merely aggravated the situation. It was a vain supposition to believe tusks would be left alone. With their traditional knowledge of ivory, its wide availability and Africa's prevailing poverty, the local people took (as would all in similar circumstances) and still take advantage of it. The absence of a government reward system certainly wouldn't have inhibited the movement of ivory in the past, nor does it do so today. Illustration of the incentives which prevailed and prevail is simple.

In the pre-1914 era when Government paid a reward of £0.58 per kg of ivory surrendered by natives, one 10 kg tusk would bring more than a man could expect as a labourer in a year's work. When I started the Galana Game Management Scheme for the Kenya Government in 1960, employees (who were all elephant hunters by tradition) were paid cash $7.7 (Shs 55.00) per month i.e. $0.26 per day, all found. At the same time Government was rewarding these same people $0.62 per kg of ivory they might turn in. A pair of 10 kg tusks would thus return them $12.4 which was better than a month's wage. Frequently far larger tusks were handed in and pairs grossing 50 kg were quite common. Even at Government's stingy rates, these would earn the equivalent of 4 months' wages. The possessor could get up to
3 times the Government rate on the illegal market. Today the Kenya poacher can obtain c.25-33% of current market value for ivory ($74/kg). A pair of 10 kg tusks will raise $370-444. The minimum urban wage (Nairobi and Mombasa) is $45 per month and rural wages are $26 per month (Anon, 1977). Thus in a week's work to get (kill or find) a pair of 10 kg elephant tusks, a man stands to make the equivalent of between 8 and 17 months' wages. Added to this incentive is the chronic unemployment which plagues Kenya. The scale of benefits is similar across Africa. It defies the common misconception that poachers sell their ivory for pittances. The tusks from one elephant killed or found dead give the poacher far greater relative benefit than is obtained at all subsequent stages in trading them in their raw state. Understandably then, any injunction depriving those who benefit from this resource, has caused resentment.

"There is a curious belief extant that although laws are normally framed in order to be observed, the Game Laws can be broken with impunity, and there is often a feeling of intense resentment when cases of breaches of the Game Laws are brought into Court" (Anon. 1925).

This was written in Uganda in 1925 and was claimed to apply equally in 1950 (Anon 1950). It is yet another shard of evidence that the law was unacceptable to society.

The leniency of sentences for poaching in Africa is a frequent source of conservationist complaint. In 1978 a Zambian poacher killed 5 elephants which produced ivory worth several thousand dollars, and was fined $154. This was typical of sentences in eastern Zambia (Towers, pers.comm.) In 1978 the Kenya newspaper Daily Nation recorded at least 3 cases which concerned 208 tusks, where those convicted were fined substantially less than the value of their ivory. What is not taken into account in the complaints is that the fines are low through a general sympathy with the poacher. The law is applied in the interests of society and not any particular group!
Failure to understand the background of both necessity and tradition, coupled with a great misapprehension of elephant numbers, are further elements in the overall failure of the expatriate law relating to ivory. The history of the trade bears this out. Yet, if further evidence is required, ethnological and historical investigations by Marks (1975) and Stone (1972) give it convincingly.

4) Manpower

In its wisdom, the IUCN has laid down certain criteria for the admission of national parks and nature reserves to the UN List of National Parks & Related Reserves or the UN List of National Nature Reserves. Among these are certain manpower requirements. In regions of population density of less than 50/km², parks and nature reserves must have at least one person working full time at the management and supervision of each 100 km². In regions of population density of more than 50/km², there must be one full time worker per 40 km². These criteria should (but do not) bar most African national parks from UN listing. However, disregarding whatever rationale was used to arrive at these figures, let us for the moment accept them as necessary for the successful enforcement of game law.

In 1910 the complement of the British East Africa Protectorate's game law enforcers was less than 100 men, i.e. area per member of staff was in excess of 5,800 km². In 1955 the staff, of what was now Kenya's Game Department, had risen to 243 and some 30,000 km² of their jurisdiction taken over by the new National Parks Trustees. Nevertheless that still left more than 2,200 km²/man over which the law was to be administered. The National Park authorities were better off having 117 men over c.30,000 km² which reduced the area per man to 256 km².

In 1925 the Uganda Game Department had 18 men to cover 197,058 km², i.e. 10,948 km² per man. By 1951 those responsible for law enforcement had risen to 25, i.e. 7,882 km² per man. These Kenya and Uganda figures are representative of the better
staffed of the African conservation bodies for the era 1900-1960. The position was not quite as bad as it would appear, for other general law enforcement bodies - the Police and Administration aided the Game Department. In addition, there were part-time helpers - honorary game wardens - at least in the British African territories. Even so, there were too few people to enforce unpopular laws which prevented the use of a widespread and basic resource, the length and breadth of the land. The support they received from other bodies was subject to a major constraint. Administrators and Police are mainly occupied within society; their work is where people are and, ipso facto, where animals are not. Policemen patrol streets, not wildernesses and, with much of their job are actively assisted by the public. In 23 years of work closely connected with conservation, I have never come across a case where an African poacher has been arrested and brought to justice by his fellow peasants.

At a continental level the manpower available to enforce conservation law is only fractionally more today than it was before 1960. In a sample of 15 countries (Table 161) the area per conservation man ranges between 187 km² and 27,500 km². The average is 1,106 km². The national parks which comprise c.5% of the 15 countries' area (Appendix 5) are far better off, for a substantial proportion of available manpower is concentrated on this relatively small fraction. From 10 countries which provided data, a park area of 174,056 km² has 3,276 personnel assigned to it; i.e. 1 man to 53 km². However, the distribution is not even and made to look far better than it is by one country - Tanzania. With a Park staff of 1,890 and parks of 32,276 km², they have 1 man per 17 km². Removing this exception, Ethiopia, Gabon, Ghana, Ivory Coast, Malawi, Niger, Rhodesia, Senegal and Upper Volta have 141,780 km² of parks, with 1,386 men: 102 km² per man.

Outside the national parks - which is where 75% of Africa's elephants are - the ratio of men to area is much lower and
varies from 2,200 km² to 153,000 km² per man. However both this and the preceding parks' figures are optimistically misleading. Substantially more than half the manpower available is not committed to law enforcement, but to ancillary services, i.e. administrative, clerical, accounting, welfare and research works. Thus Kenya, which has the biggest conservation staff in the sample - 3,107 persons - has an anti-poaching force for the two Tsavo Parks of c.150 men (F.W. Woodley, pers.comm.) which gives c.139 km² per man.

If the manpower in the parks is marginal or insufficient, then the situation outside them is hopeless. As the law-enforcement requirement is held to be related to human density i.e. the presence or absence of people, it follows that the preservation of animals outside parks calls for more rather than less law enforcers than the parks. In a nutshell, manpower for conservation (0.007% of 132,002,038 people in the sample) is too sparse to have had anything but a very local effect. In only one country in Africa - Malawi - has this issue been accepted and approached in a rational manner (Appendix 6). Elsewhere the contention has been denied.

Where it has been sought impartially, the evidence is easily come by as borne out by the ethnological and historical work of Marks (1975) and Stone (1972). Botswana and The Gambia are two examples where animals existed without the presence of a conservation authority. Until 1966 Botswana had so small a Game Department as to be of no consequence and even now has 5,221 km² per man. For most of this century, The Gambia had no organisation actively responsible for fauna conservation. Despite this it still has an abundant and varied fauna albeit deficient in the largest species (Parker 1973). Both cases show that the ineffectiveness or absence of a game department has not, of its own, meant that animals would not survive. The corollary is that the presence of game departments does not necessarily ensure there is game in many countries.
Perhaps the most telling evidence of all is the African record of ivory exports - nearly 50% short of the true figure. Many factors obviously have bearing on the success or failure of conservation law enforcement. However the most fundamental of all is adequate manpower. Lack of this, as has been and still the case, is a cornerstone in the failure of regulation of the ivory trade.

This topic will appear again in Volumes 2 and 3.

5) Economic and Political

Today many African countries face similar problems to those which afflicted the Portuguese. The ubiquity of exchange control regulations is a comment on the confidence "capital" has in governments. Through its negotiability, ivory is particularly sensitive to changes in political and economic climates. It has an inverse relationship with political and economic stability. In times of trouble it is at a premium; when things go well, it is not so sought after.

In its most extreme form this is apparent in war. In earlier research I came across it being hoarded and traded by the Anyanya of the southern Sudan. They confirmed that they used it to acquire provisions and arms. On this survey I obtained first hand evidence of its use by UNITA and FNLA guerillas in Angola to get ammunition. Somali poaching in Kenya has some similarities (Appendix 7).

Only slightly less extreme are the situations where disparate economies are adjacent. Both Mozambique and Zambia are in chronic economic ill-health. Basic commodities, rice, soap, salt, sugar, matches - to name but few - are unobtainable in most rural areas. All are available in the relative affluence and stability of Malawi. However both Mozambique's and Zambia's currencies are worthless in Malawi and commodities can only be obtained through barter of home grown products and ivory. Thus through no cause of its own, other than to possess a stable
political and economic climate, Malawi is faced with an ivory traffic from its neighbours. This comes across the borders in dribs and drabs in payment for goods unobtainable in its country of origin. The source of much of this ivory is from an even more fundamental need — food. In Angola, Mozambique, Zambia, Zaire and the Sudan, many tusks are a secondary product of elephants killed for meat.

For similar reasons ivory has flowed into Kenya, the Ivory Coast and South Africa as a currency of commerce. It moves from impoverished zones towards the stronger economies, usually because it is a "hard" currency for the trade between them. The system does not stop in Africa. A general merchant in Hong Kong agreed that on many occasions he had supplied textiles to Africans from eastern Zaire and Uganda and taken payment in tusks because they had nothing else to offer.

In these situations, ivory trade regulations fail because they are superficial to the far more fundamental issues at stake. The causes of failure are both apparent, unavoidable and far beyond the resolution of specific conservation laws.

6) The Trade

Perhaps the greatest cause of all misapprehensions about the trade in ivory concerns the traders themselves. Reiterating from Chapter 8: the Game Warden of the British East Africa Protectorate said in 1913 that there were 3 points from which the ivory trade may be surveyed:

1) the Customs Officers: from the revenue point of view,
2) the Trader: for the profit he can make, and
3) the Sportsman: from the preservationist view.

He then submitted that resolution lay in 1) and 3), a view that has been widely held ever since and is apparent in the most modern endeavour: CITES. The trader has been left out; not only left out, but generally reviled since 1914. Suffice it that I know of no other instance where attempts have been made to regulate a trade, without reference to the traders concerned.
Such obtuseness is indefensible and, on its own, is ground for wondering what real psychological motivation is behind the modern outcry on ivory. Had any attempt been made to understand the trade; had the traders themselves been approached for information, much of what is laid out in this report would have been obvious decades ago. That these steps were never even attempted is the reason why so many regulations were made in ignorance, and failed!
The Washington Convention on Trade in Endangered Species of Fauna and Flora (CITES) updates and expands the 1933 Brussels Convention. It extends the earlier concept from an African to a global context and switches emphasis from sanction of hunting - which is impossible to control other than at the national level - to trading which is, theoretically, more vulnerable to international regulation. However it shows no fundamental changes in principle and its strength relies on the issuance of permits at a national level. Animals listed as "Endangered" (the old Class A) may not be traded (hunted) at all, others listed as "Threatened" (the old Class B) may not be traded (hunted) other than under permits.

The list of animals endangered or threatened covers at least 527. Each is supposed to be identified by its scientific name. As with most law concerning trade, the enforcing authorities are Customs and Excise officials. Meticulous enforcement of CITES relies on the ability of these officers i) to know the scientific classification of plants and animals listed, and ii) to be able to recognise them when they see them. This calls for botanical and zoological knowledge far beyond the interest or competence of average laymen. Not only does enforcement of CITES call for an ability to recognise the 'whole' animal, but parts thereof, i.e. when incorporated into a watchstrap, as a panel in a handbag, etc. At all levels these requirements need expertise that is not only beyond the layman, but well beyond most specialists as well. The observation has been met in some countries by restricting the points through which "wildlife products" might enter them (e.g. the U.S.A. limits entry to New York, Miami, New Orleans, Chicago, Seattle, Los Angeles, San Francisco, Honolulu, Anchorage, Fairbanks and Juneau). At these points, it is held, there is access to specialists who can make correct identification.
The ability to enforce CITES may exist in some of the western, technical societies. However, it certainly does not apply elsewhere. In many Third World countries there is difficulty enough in understanding the modern international languages, let alone the Latin scientific system of classification. In a circular explaining CITES to the public the U.S. Government has written:

"Common names vary from place to place and are often colloquial or imprecise. Scientific names are unique and make it very clear exactly what species or sub-species you plan to work with."

This is a mis-statement of fact. Scientific names are not unique and some taxonomists do not recognise the validity of sub-species. Many ornithological works illustrate the extreme diversity in scientific nomenclature. For example a small African bird — in English the Tawny Flanked Prinia or Wren Warbler — has been known under the following names:

- Drymoica affinis
- Cisticola tenella
- Prinia mystacea
- Prinia subflava

The African Fish Eagle is either

- Cuncuma vocifer
- Haliaætus vocifer

While these variations may be resolved among the esotericists who make them up in the first place, they mean nothing at the Customs post between Botswana and South Africa — both signatory to CITES.

As more countries accede to CITES and as animals and plants are added to its lists, it will become yet more unwieldy. At best it is only partially enforceable and is in danger of becoming totally unenforceable; a state which is worse than no law at all. While the motivation behind it is straightforward enough, it is too ponderous and impractical to succeed as it is.

Ivory reflects this pessimistic view. Full enforcement of the CITES laws calls for the identification of all worked ivory's origin. It is beyond the laymen to differentiate between the
various types of ivory (note "ivory" is a trade term for dentine): African elephant, Asian elephant, hippo, warthog, bushpig, forest hog, babirusa, walrus, narwhal, sperm whale and many assorted species' canine teeth. Williamson (1938) and Ritchie (1969) both indicate that under ultra-violet light the origin of ivory can be determined, and confirmation was hoped for during the survey. This failed from bureaucratic impediment. Nevertheless such examination of ivory artefacts in any quantity is beyond all but limited application. The situation is further confounded by the immense volume of ivory artefacts that have accumulated down the years. It is difficult to tell the age of ivory merely by appearance.

A case in illustration of the reluctance behind enforcement of CITES concerns India. The Asian elephant is listed as "Endangered" and its ivory is not supposed to be traded internationally. However, Customs officials are not to know whether an ivory chessman is of African or Indian elephant in origin. That the Indian Forestry authorities made 3 tonnes of Asian elephant ivory available to carvers in 1978, makes it almost certain that this will find its way across borders: much has probably already done so. If India really wished to forego the c.$222,000 this material was worth, all Asian elephant ivory should be removed from trade by incineration. In like manner, and as an aside, African Governments should calcine all rhino horn coming into their hands, rather than offer it for sale as 'legitimate', i.e. as Government sanctioned.

In a nutshell, the control of worked ivory through CITES is too difficult to effect. Each bangle, each ivory bead, cabochon or pendant should have its document of authority. The sheer volume of paper required makes this totally impractical. And so the major ivory working countries, for all their ratification of CITES do not meet the requirement. Finally, small items of worked ivory can be passed through postal systems with no Customs and Excise examination.
Raw ivory is a different issue altogether and an anomalous wildlife product for the ease of its identification. It may be hard to separate African from Indian tusks (all of the latter I have ever examined I suspect to have been of African origin and mistakenly ascribed to India), but there is little else similar to a raw elephant incisor. Not only are tusks easily recognisable, but they are also difficult to conceal if in quantity. Ivory in its raw state is a commodity which can be policed in trade more readily than almost any other item covered by CITES. Thus the convention has influenced trade to a considerable degree in the importing countries which have ratified it. Again, all the influence has not been positive.

As all countries which import ivory have not become parties to the Convention, CITES created a competitive imbalance between them; the trade disadvantage being against those which have signed. It also created a Beilenson effect that the merchants hold to have driven prices upwards. Its immediate influence was, de facto, to make ivory a rarer commodity than it actually is. A further careless outcome was 'trapping' considerable quantities of 'innocent' ivory. A classic case I observed in Germany.

Carvers often buy stock to last them a year or more. During that period the raw ivory represents a substantial aspect of the individual's capital. Thus I made the acquaintance of an elderly carver whose business was largely in exports of the traditional Erbach art to Switzerland. Switzerland acceded to the Convention and this man was faced with the prospect of losing his trade with that country, or finding permits to prove the legality of what had been perfectly legitimate but permitless ivory. Without such documents his income and investments were imperilled. He obtained 'permits' with considerable reluctance, for he was forced across the psychological threshold between the legal and the illegal.
This happened on a far grander scale in Hong Kong. Fortunately the Government there took a pragmatic view and introduced the law gently and with warning. Even so there is much ivory which is compromised as, though it was legitimately permitless when acquired, when the point comes to re-export it in whatever form, someone is going to have to fiddle some document somehow.

Yet another related instance of the manner of CITES imposition and its production of a Beilenson effect concerns the U.S. action to limit import of elephant products to those African countries which had acceded to CITES. At the time this effectively barred all African countries save Zaire, Botswana and South Africa, from exporting ivory to the U.S. which, not unnaturally, placed a premium on Botswana permits and Botswana ivory. It led to the forgery of Botswana export permits and an incentive to get ivory from Botswana. Both the developments were unwanted!

It is in this matter of permits that CITES greatest weakness lies. It is as though the act of conservation is obtaining the document, rather than the document being no more than an affirmation that conservation has been done. As an African trader said "Well, after all, a permit is a piece of paper..."

The salient point is that permits are nothing new in Africa's ivory trade. They have been necessary in most countries for most of this century. True, they come in all manner of shapes and guises - as the few figures in Chapter 4 show clearly. Their variety alone compromises their purpose. It was planned to include a compendium of African game laws as an appendix to this report. A request made on 4th August 1978 to the U.S. Fish and Wildlife Service to obtain these through the U.S. Embassies in Africa, has failed. Their absence notwithstanding, most countries on the continent with elephant populations have laws for the control of the ivory trade. None were as "fool-proof"
as Kenya's. Yet the laws and the permits failed. Replacement with another set of documents is no advance upon the previous position.