

The Ivory Markets of East Asia

Esmond Martin and Daniel Stiles



Published by Save the Elephants

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Kenya

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Front cover photograph:
Japanese craftsmen still carve the finest ivory items for the local market, such as this recently made 30 cm figurine.

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Drawings by Andrew Kamiti



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Executive Summary

This monograph reports on a survey of the ivory trade in four East Asian nations and one Special Administrative Region: China, Japan, Taiwan, South Korea and Hong Kong. The purpose of the survey was to establish a set of baseline indicators on aspects of the trade in the selected countries. From this, conservationists will be able to monitor and evaluate future changes, in accordance with CITES Resolution Conf 10.10 (Rev.). The target users are national government officers, non-government organizations (NGOs) involved in wildlife conservation, and CITES officials. The information in this report can be used to assess the effectiveness of policies, laws and enforcement activities related to ivory trading nationally and internationally. The data can also be used to infer the demand for illegal ivory, which is correlated with elephant poaching.

Two investigators working independently between March and May and in December 2002 carried out the surveys. Martin visited Japan and Hong Kong while Stiles covered China, South Korea and Taiwan.

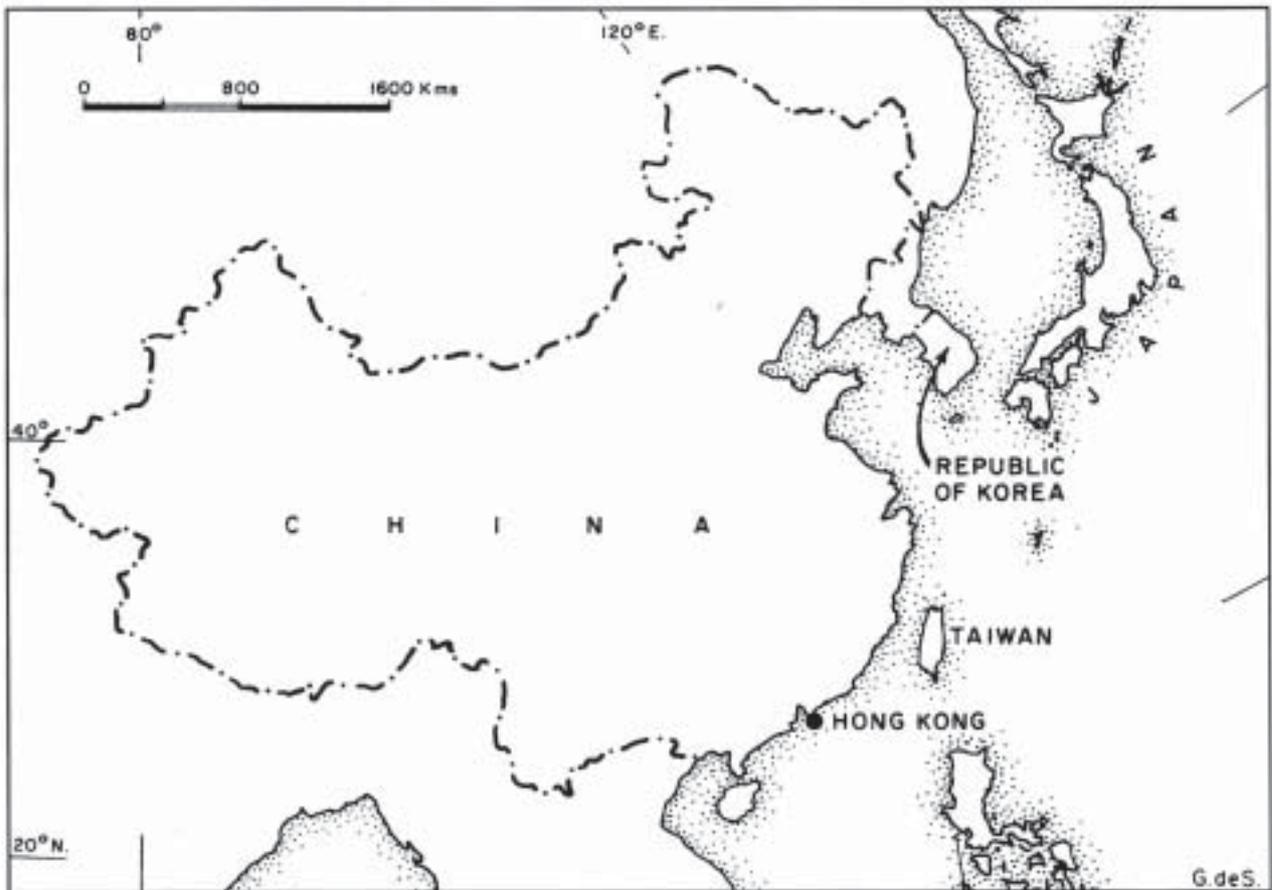
The main findings were:

- Over 54,000 ivory items were seen in 413 retail outlets in the 11 cities visited.
- Hong Kong had by far the most (35,884), followed by China (9,096 in three cities) and then Japan (7,565 in two cities). Taiwan (1,849 in four cities) and South Korea (36 in Seoul) had small quantities of ivory items.
- Japan has the most active legal ivory carving industry in East Asia. Most ivory is used to make name seals (~80%), followed by musical instrument parts (10%).
- Almost all Japan's worked ivory production is bought locally and stays in Japan.
- The most expensive raw and worked ivory is in Japan. Beijing, China, has intermediately expensive worked ivory, while Guangzhou, Shanghai, Hong Kong and Taiwanese cities have roughly comparable, lower prices of worked ivory.
- China has emerged as the main ivory manufacturing centre for all Asia, surpassing Hong Kong and Japan. Often with the involvement of Hong Kong businessmen, smuggling rings import African ivory, process it, and re-export it through Hong Kong and Macau to Europe, Japan, North America, Singapore and Thailand (the order of importance is unknown). China is probably also the only country in East Asia that has more worked ivory retail outlets now than in 1990.
- China had the largest illegal ivory industry in East Asia and was the main destination of illicit African ivory in 2002. Small, private ivory workshops have replaced the larger, government-owned factories since 1990. These are unlicensed to deal with ivory and are therefore illegal. Most are located in Guangdong Province. They often use mammoth ivory, bone and stone as cover for elephant ivory working and exports.
- Foreigners buy most of China's ivory items. They purchase it either in China or in neighbouring countries. Chinese nationals have been increasing their share of ivory purchases since 1990 as the economy grows.
- Both Taiwan and South Korea were primarily transit and/or processing and re-export centres for ivory in the 1980s and 1990s. Today the ivory industry of Taiwan is dying and it is already dead in South Korea because of lower global demand for ivory products and increased government law enforcement.
- The main buyers of East Asian worked ivory are ethnic Chinese of various nationalities and Japanese. Europeans and Americans also continue to buy worked ivory in Asia.
- The internal ivory markets of all the countries surveyed have declined considerably since the CITES ivory international trade ban in 1990. The number of ivory craftsmen has plummeted in East Asia from about 2,200 in 1989 to fewer than 300 in 2002. Hong Kong, Taiwan and South Korea have no full-time ivory carvers.
- The CITES-approved raw ivory sales to Japan from southern Africa in 1999 were not seen as important by ivory dealers outside Japan. Non-Japanese traders interviewed did not think it heralded a relaxing of the international ivory trade ban. Most ivory business people in East Africa were pessimistic about the future of the industry. Taiwanese vendors of worked ivory (the only ones interviewed after the CITES 12th Conference of the Parties in 2002) were not

even aware that a second one-off southern African ivory auction had been approved for 2004, subject to certain conditions.

- East Asian ivory business people attribute the decline in the industry to the activities of Western conservationists and journalists, which have resulted in a significant drop in Western buyers, who previously were the principal customers. They do not see this situation as susceptible to change.
- In recent years East Asian governments have begun to pay more attention to controlling the ivory trade. China and Taiwan, in particular, have introduced new laws and have increased efforts to stop illegal ivory imports and to prosecute smugglers.
- More needs to be done by East Asian governments to control effectively the ivory trade and to implement recommendations made in CITES Resolution 10.10 (Rev. CoP 12) and CITES Resolution 12.39.

Introduction



Map of places visited by the investigators in East Asia in 2002

This report presents the results of the third in a series of surveys that describe the status and trends of the elephant ivory trade in a region of the world, in this case East Asia. The previous reports covered Africa (Martin and Stiles 2000; Stiles and Martin 2001) and South and South East Asia (Martin and Stiles 2002; Stiles and Martin 2002). The places surveyed for this report were Japan, Hong Kong, China, Taiwan and South Korea. The present surveys were carried out in 2002. Save the Elephants sponsored the work.

The purpose of these ivory trade surveys is to gather data on a set of indicators that portray the scale of the market in ivory in order that governments, wildlife conservation organizations and CITES representatives can appreciate the extent to which ivory is traded in selected countries. In the first round of surveys these data are compared to any existing data from available sources to assess any changes that have taken place from previous years, thus suggesting trends in the ivory markets up or down. It is hoped that future surveys utilizing the methodology employed here will enable the standardized monitoring and assessment of country and regional ivory markets as called for by CITES Resolution Conf. 10.10 (Rev. CoP 12). The assumption is made that elephant killing is correlated with the market demand for worked ivory. An increase in ivory sales will indicate a corresponding rise in elephant deaths to supply the ivory needed to satisfy demand, though releases of stored raw and worked ivory stockpiles must be taken into consideration. For this reason an effort was made to establish the level of current ivory stockpiles in the locations surveyed.

The objective of the surveys is first to establish a set of baseline indicators of the ivory trade so that future monitoring and assessment can be carried out on the effectiveness of policies, laws and enforcement activities relating to the internal and international trade in ivory. The CITES policy most in need of evaluation related to elephants is that of permitting renewed and limited

international sales of ivory to Japan from three southern African nations in 1999 (Botswana, Namibia and Zimbabwe) and three more to as yet unnamed buyers in 2004 (Botswana, Namibia and South Africa). The data presented in these reports will be instrumental in achieving this objective. Any changes in the trade indicators of key countries can be compared with elephant killing as signalled by the Monitoring of Illegal Killing of Elephants (MIKE) system and with ivory seizures as recorded by the Elephant Trade Information System (ETIS) administered by TRAFFIC, to ascertain whether significant correlations occur.

Methodology

The cities discussed in this report are the most significant ones in East Asia in terms of traders, craftsmen and vendors of ivory. The word ivory in this report is always elephant ivory unless specified otherwise. The cities surveyed were Tokyo and Osaka in Japan; Hong Kong; Guangzhou, Shanghai and Beijing in China; Taipei, Tamsui, Taichung and Kaohsiung in Taiwan; and Seoul in South Korea. The two investigators have been working in Asia since the late 1970s and thus knew that Japan, Hong Kong and China were by far the most important countries to survey for ivory items. South Korea was also surveyed because there were rumours that its ivory market might have been increasing. Taiwan was surveyed, as it has been a significant destination for smuggled ivory.

The two investigators carried out fieldwork in East Asia from March to May and in December 2002. Martin worked in Japan and Hong Kong; and Stiles worked in China, Taiwan and South Korea. Martin and Stiles carried out almost all the surveys as they had done in Africa in 1999 and in South and South East Asia in 2000/1 in order to maintain consistency in data collection. The alternative of hiring different groups of local people to carry out the surveys was decided against because of the variability in the quality of information that would have been collected. The two investigators interviewed importers, traders, members of various ivory associations, craftsmen, vendors, customers, government officers and wildlife conservationists. Martin had worked earlier in these places and thus knew exactly where to go and whom to see. Some of the key people had been interviewed many years earlier and were still active 22 years later and were very forthcoming with information.

Since Japan is almost surely the country where the southern African countries would like to sell their official stockpiles of tusks and since Japan is still active in all aspects of the ivory industry, more time and attention were allocated to this country than elsewhere. Furthermore, the Japanese traders were the most co-operative in providing information, so the Japan chapter in this report has more detail in the text and tables than the others. The Japan survey took six weeks. The work in Hong Kong took three weeks and China took a month. Ten days were spent in Taiwan and seven days in South Korea.

The survey work concentrated, as in the previous two surveys, on identifying the ivory items seen for retail sale and counting them all. Based on the kind of data collected in Africa and South and South East Asia, the investigators obtained the same type of data to measure the scale of the ivory trade and trends over time. These indicators were: the prices of tusks and of raw ivory pieces by weight in kilograms, the total number of ivory workshops and craftsmen in each city, the total number of retail outlets selling ivory items, the number of ivory objects seen for retail sale and the prices of a standard representative set of worked pieces. Ivory not displayed openly was not counted, unless the vendor brought it out to show.

The bulk of material in this report is presented city by city in each of the five chapters: Japan, Hong Kong, China, Taiwan and South Korea. The sources for the 2002 raw ivory prices in the report for Japan are from the ivory associations and for past data for Hong Kong from the owners of the workshops and the craftsmen, but never from one individual. The worked ivory retail prices given in the tables come from the price tags on items or from the prices asked by shop-owners or salespersons. In Japan, these are the prices most commonly paid, since bargaining is unusual. Elsewhere, where discounts are offered and where these are notable, discounted values are mentioned in the text.

Collecting and analysing price data

Since one of the most important indicators in assessing trends in the ivory markets is the price of ivory, particularly raw ivory, the reliability and comparability of prices collected and analysed are critical. Important criteria for determining the price of raw ivory are: (1) size, mainly diameter, (2) smoothness of the grain and whether there are breaks, fissures or blemishes, (3) colour and consistency of the colour, (4) humidity content leading to the relative hardness of the ivory and (5) translucency. The relative importance of these factors can vary according to the types of items for which any given piece of ivory is intended, but in general they are given here in order of importance. There is a strong positive correlation between size, weight and price of a tusk or cut piece of raw ivory.

For past prices one must use what is available in the literature, and details are rarely provided, except for weight. Therefore, in the comparisons of prices from different places and times the best that can be achieved is comparability of weight. It is assumed that the prices given in the literature are average prices for average tusks, in terms of the price criteria factors, of any given tusk weight.

Another consideration is the reliability of the prices collected. For worked ivory, the pricing is straightforward. The price of any item is either marked or is provided by the salesperson in a retail outlet. The first asking price is reported here. There are potential pitfalls, however, with raw ivory. The raw price changes at each level of the chain, from poacher to first middleman, to second middleman, to ivory carver or workshop owner. The number of middlemen can vary. Some can be referred to as dealers or wholesalers. Much of the raw ivory is obtained illegally, thus there are risk-mitigation costs (e.g. bribes and consignment disguising); ivory comes from various sources with different purchase prices and it varies according to the pricing factors presented above. If the informant thinks for any reason it is to his advantage to lie, the investigator might be given a false price. An informant does not necessarily need an incentive to tell the truth if there is no penalty for stating it. For example, in research conducted in Myanmar in 2002 by one of the authors (D.S.), subsequent to the South and South East Asia ivory survey (Martin and Stiles 2002; Stiles and Martin 2002), two informants allowed the researcher to inspect their raw ivory purchase records over the last few years. The prices were perfectly consistent with those reported in Martin (1997) and Martin and Stiles (2002).

To avoid potential pitfalls the method used is to ask each informant for the average prices of different weights of tusks of average good quality sold from the last middleman to the workshop or individual carver. Several informants are asked the same question; and when consistency of prices is obtained, it is accepted and reported. It is assumed that several informants independent of one another will not report the same false price, as the probability of collusion is remote. If there is significant variability in prices, this is reported (for example, see the Democratic Republic of Congo section in Martin and Stiles 2000, Table 3). This does not control the pitfalls completely, but short of being an ivory trader it is the best that one can achieve.

Analysing price trends presents other difficulties. Two currencies are always involved: the local currency and the currency used for standardization so that comparability among countries can be achieved. If one point in time is being discussed the only problem is which rate to use when converting to the standard currency, which in this methodology is the United States of America dollar (USD). There is the bank rate and any black market or money-changer rate that might exist. The method here is to use the average highest rate at which the USD can be obtained at the time the price is collected by the investigator. The highest rate is the one that most people use and which is most applicable to ivory transactions.

When comparing points in time, the problem is more complicated. Local currencies rise or fall in value (or even change entirely, starting at a new artificial rate) vis-à-vis the USD over time. The USD has its own various types of inflation-rate indicators. Which one is most relevant to the ivory trade? For these reasons the two previous Save the Elephants' ivory reports have not applied any inflator index to past USD prices reported in the literature. Unfortunately, without using some commonly accepted inflator index it is not possible to speak of price trends correctly. The Gross Domestic Product (GDP) Inflation Index has therefore been applied to the raw prices reported here (Table 61). Readers who wish to employ other indices can do so from the raw data contained in this report.

There are many other factors that influence ivory pricing: added value, storage costs, stockpile quantity for both buyer and seller, market conditions (immediate and mid-term demand) and so on. In spite of the myriad problems attendant in collecting and analysing prices, the authors feel that at least for raw ivory it is still a useful indicator of supply and demand trends.



Japanese netsuke of a *nah* mask

Results

Japan

The legal position of the ivory trade in Japan

Japan acceded to CITES on 4 November 1980. In January 1990 the CITES ban on all legal commercial imports and exports of ivory came into force for the Parties. In 1997 the Ministry of International Trade and Industry (MITI) revised the procedures of the import of ivory and other elephant products from the three southern African countries (Zimbabwe, Botswana and Namibia) which had their elephant populations downlisted to Appendix II at the 10th Conference of the Parties to CITES. This revision was legalized on 18 September 1997 (Japan Government, Ministry of Foreign Affairs, *Notice No. 449*). In July 1999, according to the Japan Wildlife Research Center (pers. comm.), which had been contracted by the Environmental Agency (EA) to record all ivory transactions within Japan, 5,446 tusks weighing 49,572 kg were imported into Japan from the official auctions held in southern Africa.

The internal trade in ivory products is legal, subject to a strict control system. The legislation to implement this control system is *The Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES)* which was adopted on 5 June 1992 (Kiyono 1997). A Cabinet Order was issued on 14 June 1995 (*No. 240*), which states that tusks from elephants and products made from them would be covered by *LCES* (Kiyono 1997). In June 1995 the domestic trade control system started. The government introduced compulsory registration of all tusks, cut pieces and waste held commercially by ivory trading businesses. In addition, all traders in ivory had to register their names, addresses, types of items traded and the date they started trading ivory. The traders introduced a check, this one voluntary, that was to mark on a management card each piece cut from a tusk with the trader's name, address and telephone number. The weight, form of the ivory and other relevant data are also given. Finally, the traders organized for themselves a non-compulsory certification process, by which an official adhesive seal was introduced, to put on their ivory objects. These seals carrying the CITES logo and a serial number give more confidence to the customers that the ivory items they are buying are from legal sources. In March 1999 one extra control procedure was introduced for name seals. In Japan, name seals used for stamping documents are called *hankos* or sometimes *inkans* while rough blocks to be carved into name seals are called *inzais*. All retailers of *hankos* and *inzais* have to notify the EA and MITI and keep a ledger recording the sales of their products. The ledgers record, among other details, the individual transaction, the name and address of the purchaser, whether a certification seal was offered, the size of the *hanko* sold, and the number of *hankos* and *inzais* still in stock. MITI and the EA have to be able to inspect these ledgers (TRAFFIC Japan, pers. comm. April 2002).

These internal control procedures, except for the registration of the retailers of *hankos*, are recorded in more detail in *Still in Business* (Kiyono 1997) and *Japan's Trade in Ivory after the Tenth Conference of the Parties to CITES* (Kiyono 2002). It is sufficient to say in this report that the retail trade in ivory products is well controlled in Japan; the country has the most effective control system of any in Asia. After all, since the making of *hankos* consumes about 80% of all raw ivory and *hanko* controls are compulsory, about four-fifths of the retail sales are recorded and checked by the government. It would probably not be a good idea to bring in many more regulations on the retail and wholesale trades because the system would become too costly and bureaucratic.

Privately-owned ivory items, such as jewellery, are not required to be registered or reported to a government agency. Personal effects made out of ivory may be exported or imported legally for certain types of residents, according to Article VII of CITES (Kiyono 1997), but this rarely occurs.

Introduction

Fieldwork was carried out in Tokyo (8 million people in the central metropolitan area) from 29 March to 25 April 2002 and in Osaka (2.5 million inhabitants) from 26 April to 8 May 2002, the main ivory centres of Japan. One-day visits were also made to Nara and Kyoto during the six-week period.



Map of Japan

History

Japan has over 1,250 years of recorded history of ivory. In the Shosoin Store House in Nara are ivory items, such as combs, measuring sticks, needle containers, and objects called stones for the game of Go; most were probably made in China (Akagi 1976) and date back to about 750 AD. It is not known when the Japanese started to carve tusks themselves in any quantity, but St Aubyn (1987) believes the carving of name seals in Japan probably dates back at least 1,000 years, while other scholars hypothesize a date in the 8th century (Akagi 1976). By the 16th century raw ivory was being imported into Japan in some quantity, probably via China, but when Japan was closed to most foreigners from 1639 and foreign trade was greatly restricted as well, ivory imports declined. At that time, small numbers of combs, inros (containers for tobacco or medicine worn on a belt), lids for containers holding ground tea leaves and netsukes (toggles for kimonos) were being made in Japan for the wealthy elite and art connoisseurs (Akagi 1976). During the 18th century netsukes made out of ivory by Japanese craftsmen became well known and many were of high quality. However, it was not until the opening of Japan again to foreigners in the latter half of the 19th century that ivory tusks came into Japan in significant quantities. Details on the weights and origins of the tusks from 1882 to 1979 are given in the book *The Japanese Ivory Industry* (Martin 1985). To summarize, imports of tusks gradually increased from a few tonnes per annum in the 1880s to 132 tonnes in 1919. The 1920s witnessed the largest imports of tusks into Japan up to that time, 78 tonnes a year, and these quantities were not surpassed until the 1960s. The 1920s was also the first decade that Japan received large quantities of ivory from Africa. In earlier years, most of the raw ivory originated in Asia, especially Thailand and the East Indies, considered by the Japanese as the highest quality ivory in the world, along with India's tusks, as they are harder and possess less cross-hatching and lines. Imports fell in the 1930s due to the world depression, and from 1942 to 1947 was zero. In the 1950s, Japan imported on average 70 tonnes a year, while in the 1960s this figure increased to 95 tonnes, with what is now the Democratic Republic of Congo (DRC), the Republic of Congo, Kenya and Tanzania supplying the bulk. The price average was USD 6.45/kg during the 1960s (Martin 1985).

In the 1970s, Japan became the largest consumer of ivory in the world, importing on average 255 tonnes per annum costing USD 43/kg (Martin 1988). The following decade recorded about the same amount of tusks imported, according to Japanese Customs figures: an annual average of 253 tonnes with an all time high of 475.7 tonnes in 1983 and 473.8 tonnes in 1984. The price of raw ivory rose sharply from USD 76/kg in 1980 to USD 288/kg in 1988. From 1980 to 1988, the largest suppliers of these tusks to Japan were the following countries: Republic of Congo (23%), Central African Republic (19%), DRC (16%) and Sudan (13%), according to Japanese Customs figures. By the early 1980s Japanese customers were buying perhaps 38% of all the worked ivory by weight in the world, followed by the European Union (18%) and the USA (16%). Thus, Japan was consuming more than twice as much as the entire European Union or the USA (Cobb 1989).

How were the tusks being used in the 1980s? In 1980 55% of all the ivory was used to make name seals, 20% jewellery, 10% for musical instrument parts, 5% for sculptures and netsukes, and 10% for miscellaneous items (Martin 1985). By 1988, the percentage for *hankos*

had risen to an estimated 64% of the total, musical instrument parts up to 12%, sculptures and netsukes up to 6%, and other items remained the same at 10%. The gross amount of tusks to make jewellery declined sharply, however, to only 8% of the total (Milliken 1989).

Sources and prices of raw ivory in Japan from 1990 to 2002

Since 1990 there has been only one significant legal import of tusks into Japan, and that was in 1999, when almost 50 tonnes were brought in from southern Africa. In the first half of 1999 an auction was held in each of the three southern African countries which had their elephant populations downlisted to Appendix II following the decision made at the 10th Conference of the Parties held in Harare in 1997. On 16 July 1999 all of these tusks were imported into Japan. According to the Japanese Ministry of Finance (Japan Wildlife Conservation Society 2000), Zimbabwe provided 19,912 kg of raw ivory with an average tusk weight of 15.3 kg and a declared value of Y 12,410 (USD 115)/kg. Botswana provided 17,168 kg with an average tusk weight of 9.5 kg and a declared value of Y 12,112 (USD 112)/kg. Namibia's portion was 12,359 kg with an average tusk weight of only 4.5 kg and a declared

value of Y 6,748 (USD 62)/kg. Thus the total weight of tusks imported was 49,735 kg, according to the Ministry of Finance, which had an average weight of 8.8 kg and was worth Y 10,904 (USD 101)/kg (Japan Wildlife Conservation Society 2000). This total of 49,735 kg is slightly higher (by 163 kg) than the figure given by the Japan Wildlife Research Center (JWRC), but since the difference is less than 0.4%, it is not significant. The price per kg for the Zimbabwe stockpile was the highest because the average weight was the greatest. Namibia's prices were almost half of Zimbabwe's on a per kg basis because Namibia's tusks were about one-third of the weight on average, and Namibia's ivory in general is of lower quality. This is because it tends to be more brittle and cracks more easily due to the low humidity in most of the country. Since the Japanese had to pay to move the tusks from the three countries into one location for export to Japan, their transport costs were high, along with other expenses such as insurance. Japanese buyers claimed that the actual cost of this raw ivory landed in Japan almost doubled the auction prices to just under USD 200/kg (Japanese ivory traders, pers. comm. April 2002). Many of these tusks were sold soon after their import for an average price of around USD 244/kg, not an excessive mark-up.

Since 1989, Customs figures record imports of "ivory, ivory powder and waste" of 391 kg in 2000 and 265 kg in 2001. Both the exporting countries and Japan may have declared some of these imports as old stockpiles.

Besides the legal imports of raw ivory from 1990 to early 2002, there have been some tusks illegally brought in, but for obvious reasons they are impossible to quantify. From 1990 to 1996 there were five seizures of ivory reported to the TRAFFIC Bad Ivory DataBase System (BIDS), which had been seized in Japan. Only two of these shipments were of raw tusks: one in 1991 (62 tusks weighing 798.5 kg) and the other in 1992 (27 tusks weighing 370 kg). The other seizures were mostly *inzais* and worked ivory (Kiyono 1997).

On 26 April 2000 the Tokyo Customs and Saitama Police confiscated 500 kg of raw ivory (132 cut pieces) that had been shipped from Singapore to Kobe, hidden among chopsticks. A British national of Chinese origin, resident in Hong Kong, had imported the ivory into Japan, and a Japanese ivory manufacturer of *hankos*, who was a board member of the Japanese Federation of Ivory Arts and Crafts Association (JIA), tried to collect it. Customs, however, intervened. Both men were arrested. The Japanese man paid a fine of Y 300,000 (USD 2,780) (TRAFFIC 2000; TRAFFIC Japan 2000) and the JIA expelled him from the Association (Minoru Sakurai, Chairman of JIA, pers. comm. April 2002). This incident was a major embarrassment to the ivory traders in Japan.

Another source of tusks for the ivory manufacturers is old stockpiles. The Japan General Merchandise Importers Association (JGMIA) reported that the stockpiles of tusks held by 61 of its members at the end of 1989 were 114 tonnes (Kiyono 1997). A more recent registration of tusks took place between June 1995 and November 1996, and 92 tonnes (5,992 tusks) were recorded. By late 1996 the stockpiles of tusks which were registered totalled 81 tonnes, but these two figures do not include all ivory stockpiles in the country, only those tusks owned by traders and intended for domestic trade (Kiyono 1997). With the legal import of about 50 tonnes from southern Africa in 1999, stockpiles increased temporarily. In 2001 the weight of the tusks registered by the dealers was 89.5 tonnes consisting of 7,437 pieces (Kiyono 2002).

The 50 members of the JIA, the main body in Japan representing the ivory traders, do not know how many tusks remain in Japan, but they estimate the stockpiles owned by traders were around 100 tonnes in early 2002. The members believe (pers. comm. April 2002) that the annual consumption of tusks over the past few years has averaged between 10 and 15 tonnes.

Of the 50 tonnes of tusks imported in 1999, about 15 companies, mostly based in Tokyo and Osaka, owned them, but not in equal amounts. By April 2002, just over half had been made into various items, while the rest remained in warehouses.

Most of the main ivory manufacturers in Japan obtain their tusks from auctions organized by the JIA Tokyo branch, and by the Osaka Ivory Arts and Crafts Association, the Osaka branch of the JIA. The JIA in Tokyo organizes auctions every three months at their headquarters. One trader in Tokyo, one of the largest in the country, who was a major importer of ivory during the 1980s, supplies most of the tusks for the Tokyo auctions, about 200-300 kg on each occasion. He supplies both hard and soft ivory and since there have been no legal imports of hard ivory since 1989 the hard ivory from Central Africa (and perhaps a small amount for West Africa as well) was most likely imported in the 1980s. During the March 2002 auction, some Association members offered

tusks averaging 10kg, both soft and hard ivory, for sale individually to about 25 traders. Only members of the Tokyo branch of the JIA were allowed to place bids. The bidding was on a kg basis. The highest price for a tusk was Y 70,000 (USD 560)/kg and the lowest 20,000 (USD 160)/kg. The buyers had three months to pay (Sakurai, pers. comm. April 2002 and Kazukiyo Okada, Executive Director, JIA, pers. comm. April 2002).

In Osaka, auctions are held twice a year. At each one about 200-300 kg are offered (50-60% by one Osaka based trader). Only the members of the Osaka Association may bid. In the November 2001 auction, 250 kg of tusks and scrap, both hard and soft ivory, were offered. The highest price of Y 60,000 (USD 488)/kg was obtained from an old large tusk of hard ivory in good condition; the lowest price was Y 25,000 (USD 203)/kg for a damaged full tusk (Members of the Osaka Ivory Arts and Crafts Association, pers. comm. April-May 2002).

The wholesale prices for raw ivory in Japan are based on three main factors: first, whether hard or soft; second, weight; and third, condition of the tusk. Firstly, hard ivory from Central and West Africa (and also from Asia, which is now rare to find in Japan) is desired because the tusks are denser, more translucent and slightly pinkish in colour. Hard tusks are preferred for the making of *hankos*, netsukes, sculptures and musical instrument parts because they last longer as they are tougher and produce a brighter finish. Since there have been no legal imports of hard ivory since 1989, the wholesale prices for hard ivory tend to be about 20% higher (see Tables 1 and 2), due to their greater demand and scarcity. Secondly, larger tusks are greatly desired because they are more useful. For example, two and a half times as many *hankos* can be made out of one tusk weighing 20 kg than two tusks weighing 10 kg each, due to the proportionately larger cavity found in a smaller tusk (Martin 1985). Consequently, a hard tusk weighing 35 kg costs over 50% more per kg than a tusk weighing 10 kg, or more than double per kg for a 5-kg one (see Tables 1 and 2). In fact, Japanese ivory craftsmen have been most insistent amongst ivory craftsmen in Asia in demanding and obtaining the largest tusks on the world market. Thirdly, the condition of a tusk is an important determinant of price. Cracked tusks, which are more commonly exported from the dry regions of Namibia and northern Sudan, are of poor quality and thus are worth considerably less. Thus, the most valuable tusks are large (especially over 30 kg), hard and in excellent condition, from the forest elephants of Africa or Asia.

The wholesale price of tusks probably reached an all time high in Japan in the mid-1990s just before the CITES Parties in 1997 agreed to the export of ivory to Japan from southern Africa. The prices for raw ivory in 2001 were about the same in yen as in early 2002.

In late 2001 and early 2002, the average weight of a tusk sold was 7-10 kg and the wholesale price for a hard one in Tokyo or Osaka averaged Y 38,250 (USD 311)/kg or Y 30,500 (USD 248)/kg for a soft tusk (see Tables 1 and 2). A tusk weighing over 30 kg sold wholesale for about Y 62,000 (USD 504/kg). Small tusks under 5 kg were of little value.

Table 1
Average wholesale prices of ivory tusks in Tokyo in early 2002

Weight (kg)	Type of ivory	Price/kg in yen	Price/kg in USD
30	hard	65,000	520
20	hard	50,000	400
20	soft	40,000	320
15	hard	50,000	400
15	soft	40,000	320
10	hard	40,000	320
10	soft	30,000	240
5	hard	22,500	180
5	soft	17,500	140
scrap, 1 kg	soft	1,100	9

N.B. USD 1 = 125 yen

Sources: Japan Federation of Ivory Arts and Crafts Association (JIA), Tokyo; Kitagawa Ivory Company, Tokyo.

Table 2
Average wholesale prices of ivory tusks in Osaka in early 2002

Weight (kg)	Type of ivory	Price/kg in yen	Price/kg in USD
35	hard	60,000	480
35	soft	50,000	400
30	hard	59,000	472
30	soft	49,000	392
20	hard	53,000	424
20	soft	47,500	380
10	hard	36,500	292
10	soft	31,000	248
5	hard	27,500	220
5	soft	27,500	220
scrap, 1kg	soft	2,000	16

N.B. USD 1 = 125 yen

Source: Osaka Ivory Arts and Crafts Association

Ivory workshops in Japan

There has been a sharp decline in ivory production in Japan compared with before the 1990 CITES ban. This has been especially so for mass-produced items such as name seals and jewellery. There are several reasons for this. There has been a severe shortage of tusks since 1990, and almost no hard tusks have been imported legally. Due to the shortage of tusks, the price of ivory became relatively high, reducing customer demand. The high cost of living in Japan has also driven prices up relative to other countries so Japanese tourists and businessmen prefer to buy cheaper ivory items abroad. There has also been an economic recession in Japan since early 1990. Furthermore, conservation organizations within and outside Japan have made ivory less popular to the average consumer by publicizing that elephants are endangered animals and that many are killed illegally for the ivory trade. This campaign by conservationists has resulted in some shops reducing their ivory items for sale.

Name seals have been known in Japan since the Chinese Tang period (AD 618-907) and have been made in Japan for at least 1,000 years out of a variety of materials, including ivory (St Aubyn 1987). In the early part of the 20th century ivory was an expensive raw material, so most hankos were made out of water buffalo horn, wood or crystal. It was not until the 1950s that ivory became popular, but even then, only the head of the *hanko*, where the hallmark was carved, was manufactured out of ivory. By the middle 1960s when the Japanese economy began to grow significantly, *hankos* made completely out of ivory became popular. By 1980 55% of the gross weight of ivory used in that year was made into *hankos* (Martin 1985). This percentage increased to 80% in 2001 (see Table 3). Of the 50 tonnes of raw ivory imported from southern Africa in 1999, about 75% went into the making of *hankos*. In early 2000 there were 17 *hanko* manufacturers in Japan, according to JWRC (Kiyono 2002).

Name seals are an extremely important part of Japanese life. They are used instead of personal hand signatures on almost all legal documents. Until the latter part of the 1990s, it was not possible to get married, to sign a legal document, to buy a house, or to carry out any important commercial transaction without the use of a *hanko*. Due to the modernization of the economy, hand signatures and the use of credit cards have become more important.

There are two methods used for making ivory name seals: by hand and by machine. It is curious that in one of the most advanced and modern industrialized countries, people are still making *hankos* by hand. Craftsmen used to make name seals mostly from hard ivory, but today from soft ivory due to the scarcity of tusks from forest elephants (see Table 4).

Table 3
Percentages of raw ivory used to make items calculated by gross weight in Japan for various years

Item	1980	1988	2001
Name seal	55	64	80
Jewellery	20	8	2
Musical instrument parts	10	12	10
Figurines and netsukes	5	6	5
Misc.	10	10	3

Sources: Martin 1985 (for 1980); Milliken 1989 (for 1988); JIA, pers. comm. April-May 2002 (for 2001)

Table 4
Percentages of hard and soft ivory used to make into items in Japan for various years

Item	1980		1988		2001	
	hard	soft	hard	soft	hard	soft
Name seal	65	35	10-15	85-90	3	97
Netsuke	95	5	'mostly soft'		50	50
Sculpture	80	20	-	-	70	30
Pianokeys	0	100	0	100	0	0
Musical instrument parts	>95	negligible	-	-	100	0
Jewellery	60	40	-	-	40	60

N.B. - = no data

Sources: Martin 1985 (for 1980); Milliken 1989 (for 1988); JIA, pers. comm. March-May 2002 (for 2001)

The number of ivory name seals being made in Japan has decreased by almost 90% from 1988 to 2001 (see Table 5). The proportion of ivory consumed in the making of name seals (compared with other ivory items), however, increased from 64% in 1988 to 80% in 2001. This is because, although demand for name seals has decreased due to the use of more plastic credit cards and Western style signatures, demand for jewellery, the other main consumer of ivory, has decreased further. Craftsmen made about 36,000 ivory *hankos* in 2001 in Tokyo and about 72,000 in Osaka (Hidekazu Yamada, Chairman, Osaka Ivory Arts and Crafts Association, pers. comm. April 2002). Alternative materials are now preferred for name seals, especially black buffalo horn from Cambodia, Thailand and Vietnam and Dutch buffalo horn, so named as it was first imported from Indonesia when it was called the Dutch Indies, but this paler buffalo horn is now imported from Australia and South Africa.

Table 5
Estimated number of ivory name seals made in Japan for various years

Year	Number
1980	2,000,000
1988	850,000-1,000,000
2001	116,000

Sources: Martin 1985 (for 1980); Milliken 1989 (for 1988); Osaka Ivory Arts and Crafts Association members, pers. comm. April-May 2002 (for 2001)

As for netsukes, their production significantly declined even before the 1990 CITES ban in Japan as Hong Kong businessmen started to copy the Japanese style of netsukes in quantities in the 1970s. For instance, one Chinese man from Hong Kong came every year in the 1970s to a shop in Tokyo to buy some of the finest Japanese new ivory netsukes for about USD 1,000 wholesale each. He then returned to Hong Kong, and copied them (Fumitsuta Yano, pers. comm. 1980). Hong Kong businessmen could sell their netsukes at much lower prices, sometimes by 90%, due to cheaper labour, although the quality of carving was inferior to those made in Japan (Martin 1993). The Hong Kong ivory companies were able to sell large quantities of these netsukes to wholesalers and retailers in Asia, Europe and North America, replacing many of the Japanese sales. Only the best quality Japanese-made netsukes could survive.

There has been a sharp decline in the amount of raw ivory used for making jewellery compared with the early 1980s. Several factors were responsible for this abrupt change: the price of ivory increased; the fashion for white coloured jewellery changed; and the image of owning ivory became negative due to the efforts of foreign and local conservation organizations which opposed the ivory trade. Today, few craftsmen make ivory jewellery and the items seen in shops are mostly old stock. Electric drills and other electrically powered tools are used to shape the jewellery, but the workmanship is usually inferior. There are very few workers left in Japan who only make jewellery. Most jewellery manufacturers obtain their ivory from offcuts and scrap from the making of *hankos* and *bachis*. The *bachi* is the plectrum for playing the traditional musical instrument, the three-stringed *shamisen*. *Hanko* or *bachi* makers also make a few items of jewellery such as ear-rings, necklaces and broaches.

The production of ivory chopsticks has fallen in Japan hugely. In 1980, about 50,000 pairs of ivory chopsticks were made in Japan (Martin 1985), but today only 5,000 pairs are manufactured because they are expensive and unfashionable. Most people prefer to eat with wooden or plastic chopsticks, which are cheap in price, light in weight, and do not turn yellow and warp with age. Since 1990 there has been a decline of about 75% in the number of ivory chopsticks made in Japan (Tamotsu Ishibashi, maker of chopsticks in Tokyo, pers. comm. April 2002).

Japan used to be a major producer and exporter of piano keys producing, for example, 6,000 sets in 1988 (Milliken 1989), but the 1990 CITES ban essentially put an end to this business. The manufacture of ivory parts for guitars has also experienced the same fate. In 1980 the company, Yamaha, alone, produced 120,000 guitars with a bridge, saddle and nut made out of ivory, many of them for export (Martin 1985). The ivory ban eliminated this activity as well.

Tokyo workshops

There were about 50 ivory workshops in Tokyo in 2001 employing approximately 70 craftsmen. Each workshop specialized in certain ivory items as described below.

Name seals

Most of Tokyo's *hanko* workshops use machines, as in Osaka where there is twice as much *hanko* production. One company in the Tokyo Ivory Association still uses hand tools, however. According to this father and son team, who run Motohashi Ivory in Tokyo, hand-made name seals are of a better quality than machine-made ones, although they admit there is no difference in price. When asked why they continued only to make *hankos* by hand, the 82-year-old father gave the following reasons for not using machines. It would entail a different way of working; the machines would create too much dust; more space would be required; and machines are expensive (Yukio Motohashi, pers. comm. April 2002). The father makes the *hankos* while the son markets them to five or six wholesalers and occasionally makes *hankos* as well. They work six days a week from 9am to 5pm with a break for lunch. In early 2000 they legally bought small tusks within Japan, which originally came from Botswana, weighing 5 kg each for ¥ 30,000 (USD 240)/kg. From a 5-kg tusk, they can make 50 *hankos* (20/kg) with about 50% waste, part of which is used to make small items such as ear picks by other artisans. The father and son make mostly the most popular size personal *hankos*: 1.2 x 6 cm, 1.35 x 6 cm and 1.5 x 6 cm. Fifty years before, the father made mostly square *hankos*. These gradually went out of fashion and were replaced with round ones. The father-and-son team makes 800 *hankos* a month and sells all of them. In order to supplement their income, they also sell a wide variety of other ivory items made by other craftsmen.

Figurines and netsukes

For at least a century, the Japanese master craftsmen, who only carve figurines and netsukes, have been carving some of the finest of these items in the world. In 1980 there were 300 such carvers in Japan, with the majority in Tokyo (Martin 1985). By 1988 there were 120 to 150 (Milliken 1989). In 2001 numbers had declined to perhaps between 70 and 120, some of whom were only part-time (Ryoshu Shotaro Miyazawa, Associate Director, Japan Ivory Sculptors' Association, pers. comm. April 2002). Craftsmen have changed jobs, retired or died, with only a few being replaced, due to the very limited interest in ivory statuettes and netsukes. For example, the number of members of the Japan Ivory Sculptors' Association has dropped from 100 in 1980 (Martin 1985) to only 60 in 2001 and fewer of them now work full-time in ivory. They carve in order of importance: boxwood, deer antlers, nuts, hippo tusks and amber, as well as other materials. There are 10 master craftsmen, 30 carvers with considerable experience and skill, and 20 who are less experienced. Of the total, three are women. The carvers usually work at home with one or two family members. Each family owns around a hundred tools (chisels, knives, rasps and other files), which they usually make themselves.



Japanese traditional tea ceremony spoons

In the Tokyo area is one of the best master craftsmen in Japan, Hodo Sekizawa. He was born in 1929 and has been carving ivory for 50 years. He lives in Kanagawa Prefecture, south-west of Tokyo, and makes netsukes and sculptures, especially Noh players (Noh is a traditional Japanese drama with dance and song), sumo wrestlers and Buddhas. Since Hodo produces some of the finest human sculptures in Japan, he demands the highest quality tusks. In 2001 he paid up to ¥ 90,000 (USD 732/kg) for hard ivory, well above the average price, in order to obtain the finest tusks. He works six to seven hours a day six days a week, mostly using hand tools, but he also employs electric tools, especially for polishing the finished items. In a typical year he can complete 12 netsukes, 3 figurines and 10 items of jewellery which are made from offcuts from netsukes and sculptures. He earns ¥ 500,000 (USD 4,000) a month, well above average for a master craftsmen (see Table 6). In comparison, a waiter earns ¥ 175,000 a month. The average basic monthly wage for full-time employment in Japan in 2001 was ¥ 310,183 (USD 2,522) excluding overtime and bonuses (Japan Government 2002).

Hodo has tried carving mammoth tusks, but he does not like them. There is too much waste (up to two-thirds), too many cracks; it has a darker colour than elephant ivory and a bad smell. He has also tried hippo teeth, but finds them too small and too hard, making carving more difficult and the ivory is prone to crack. Other Japanese carvers do not like mammoth ivory or hippo teeth to carve either.

Table 6
Average monthly earnings for ivory craftsmen in Japan for various years

Type of work	Year	Amount earned in USD	
Name seal machine-made	1980	1,450	
	1988		
	2001	2,600	
Netsuke and sculpture carving	a) 5-10 years' experience after apprenticeship	1980	1,300
		1988	
		2001	1,600
	b) >10 years' experience after apprenticeship	1980	1,900-2,800
		1988	2,417
		2001	3,200

N.B. - = no data

Sources: Martin 1985 (for 1980); ivory craftsmen, pers. comm. March-May 2002

Musical instrument parts

Today most of the ivory, which is consumed for musical instruments, is for making *bachis* for the *shamisens*. Tokyo is the main centre for making these large plectrums. There are eight companies employing 16 to 24 craftsmen who make *bachis* in Japan. Each company produces 5-10 *bachis* a month, totalling 480 to 960 a year (Tamotsu Ishibashi, maker of *bachis* and a former President of the JIA, pers. comm. April 2002). The largest hard ivory tusks are required to make *bachis*, at least 20 kg and preferably 28 kg and above. One manufacturer in Tokyo in 2001 bought a 45 kg tusk for ¥ 65,000 (USD 528)/kg to make *bachis*. Since the making of *bachis* is a highly skilled profession using usually only hand tools, the workers producing the top quality ones are very well paid. For example, in one company in Tokyo, the two most experienced craftsmen, each with over 40 years in the profession, received a monthly salary of ¥ 475,000 (USD 3,800) plus an annual bonus of ¥ 1,400,000 (USD 11,200) making total earnings each of USD 57,724 for 2001. These earnings are exceptionally high and are well above the average for most *bachis* makers. From the offcuts of *bachis*, other musical instrument parts are made: the pegs holding the three strings on the *shamisen*; the moveable 13 bridges for the *koto* (a large 13-stringed instrument), and *koto* nails which are sets of three picks/plectrums attached to the thumb and first two fingers to play the *koto*. In the recent past, small parts of the *biwa* (an uncommon traditional Japanese stringed instrument which few people play today), called the *itoguchi*, *taikan*, *hangetu*, *maeita* and *inome*, were made out of ivory, but since the ivory ban, few of these tiny parts have been produced in ivory. Instead they are now being made out of bone. Plastic is now used for piano keys and some *bachis*.

Other items

There is at least one firm in Tokyo where the workers sometimes make ivory chopsticks. They make and sell about a hundred sets a month. The workers use hard ivory only, because soft ivory

tends to bend too easily. Until fairly recently, only hand tools were used in this workshop, but now machine tools are employed. There are two types of chopsticks made in this workshop: 24 cm long ones for men and 19 or 21 cm ones for women.

There is a variety of other ivory items still made in Tokyo, but in fewer quantities than prior to the international ivory ban. Among them are Buddhist rosaries, cufflinks, ear picks, good luck charms, jewellery, lids of tea containers, loop ties, shoe horns, spoons for the traditional tea ceremonies and tracing spatulas (for marking cloth to cut). These are normally made out of the small off-cuts left over from carving *hankos* and musical instrument parts.

One other item, popularly produced in the 1970s and 1980s in Tokyo, was the polished tusk. In 1974 in an ivory exhibition in the Mitsukoshi Department Store in Tokyo, the most popular item for sale was the polished tusk. Over the six-day period of the exhibition, 40 to 50 of these tusks were sold (Akagi 1976). Their popularity was common in other department stores as well, due to an effective advertising campaign in the Japanese media.

The proponents of ivory trading attempted to encourage Japanese to invest in these tusks, partly at the expense of gold, and this was quite successful as the Japanese like the colour white and considered ivory a valuable raw material. The dealers strongly implied that putting money into these tusks would eventually produce a good economic return as elephants were decreasing in numbers and the price of raw ivory was increasing. The proponents knew that it would be much more difficult to convince the Japanese of the artistic value of netsukes and sculptures (Akagi 1976). One collector in the 1970s amassed nine tonnes of large polished tusks (Fumitatsu Yano from Makino Brothers, pers. comm. 1980). An executive of the company, Toyota, living in Nagoya, had built up a collection of 100 such tusks by 1980, which he stored under the floors of his house (Isao Yamada, ivory trader in Kyoto, pers. comm. 1982). Another man, by 1980, had collected two tonnes of polished tusks with an average weight of 50 kg a tusk (the largest tusk was 75 kg). He claimed that these huge tusks had mostly come from around Isioro in the DRC and then moved to Antwerp via Bujumbura in the 1970s (anon. dealer in Tokyo, pers. comm. 1980). In the early 1980s there were hundreds of such tusks to be found in ivory shops in Japan, but now only a few are seen, and they were polished some years ago. There appears to be no longer a demand for them. Some are starting to darken. So instead, they are being sold to craftsmen to carve into ivory items (Hidekazu Yamada, Chairman, Osaka Ivory Arts and Crafts Association, pers. comm. April 2002). Thus, most of these investors did not earn the returns they had expected from stockpiling tusks.

Osaka workshops

There were about 23 ivory workshops in Osaka in 2001 employing approximately 37 craftsmen. As in Tokyo, each workshop specialized in certain ivory items, and these are described below.

Name seals

In the early 1980s two workshops in Osaka manufactured over half the name seals made in Japan. One has since closed down, but the other produces the largest number of *hankos* in Japan today. Its production, however, has dropped considerably from a peak of 430,000 in 1989 to 30-35,000 in 2001, a decline of over 90%. Before the 1990 CITES ban, this workshop used only ivory for *hankos*, but by around 1991 started using black and Dutch buffalo horn. By 2001 the workshop was manufacturing 200,000 name seals from buffalo horn in order to ensure that the family business survived. The workshop buys black buffalo horn for ¥ 500-800 (USD 4-6)/kg and Dutch buffalo horn from ¥ 800-1,500 (USD 6-12)/kg, compared with a 10-kg soft elephant tusk for ¥ 31,000 (USD 240)/kg.

In 2001, the workshop consumed 99% soft tusks and only 1% hard tusks. This was a great change from the early 1980s when almost two-thirds of the ivory was hard (Milliken 1989). This workshop employed in 2002 seven artisans and they made all the seals by machine as this is more economical due to the high cost of labour. The most skilled craftsman earned ¥ 7,000,000 (USD 56,000) a year including bonuses, while the less experienced workers earned ¥ 4,000,000 (USD 32,000) per annum, including bonuses.

From the southern African sales in 1999, the owner of this workshop bought 9 tonnes of tusks, the most for any single trader. By early 2002, most had been used up. The workshop owner had

about 3 tonnes of soft and old hard tusks remaining in his storeroom. The largest tusk weighed 72 kg and originated from the DRC.

By using machine tools, an artisan in this workshop, only producing ivory *hankos*, can make about 100 a day, many more than by hand. Some believe the hand-made ones are superior but others deny this. The wholesale prices are roughly the same. Usually the seven craftsmen spend most of their time making *hankos* of buffalo horn. Black buffalo horn is more resilient and thus lasts longer than Dutch buffalo horn and is less expensive and so 80% of the *hankos* are made from black buffalo horn in this workshop.

The second largest workshop making *hankos* (of various materials) that exists nowadays has also experienced a major decline in production. The company made 66,000 ivory *hankos* a year just before the 1990 CITES ivory ban, decreasing to 20,000 by 2001. The company made 54,000 name seals from buffalo horn in 2001. This is a family business with the mother, father and two sons working in it. They make about 10-15 *hankos* (1.5 x 6 cm) from about 1 kg of ivory, depending on tusk size. In early 2002, the company only had about 2 tonnes of ivory in stock that would last for about two years. The father was worried from where the new sources of tusks would come. A further economic problem for the company is that since the 1990 CITES ban, the family has not been able to sell ivory offcuts to traders in Hong Kong, as they had previously done, and the companies in Japan which used to make jewellery from some of their offcuts no longer wanted them as demand for jewellery had largely shrivelled up. Now the company has to pay the transport costs to get rid of the small offcuts and scraps because they have no economic value.

Three other *hanko* manufacturing companies use ivory. The biggest bought 5.5 tonnes of tusks from southern Africa in 1999 for *hanko* production and by April 2002 had 2 tonnes left. The workshop consists of the owner, his son and two employees who are paid on average Y 875 or USD 7 an hour with a small annual bonus of Y 250,000 or USD 2,000. This company started, unusually, using buffalo horn in the 1950s and then switched to ivory in 1981 when the owner joined the Osaka Ivory Arts and Crafts Association. In the late 1980s the workshop produced 36,000 ivory *hankos* a year, but by 2001 output had declined to 22,800. The owner had to revert to using buffalo horn in the 1990s to stay in business and he made 24,000 buffalo horn *hankos* in 2001. In order to improve the turnover of the business, the owner tried using poor quality mammoth tusks to make *hankos*, which he bought for Y 10,000 (USD 80)/kg. He could not sell his mammoth name seals because potential customers thought they looked dirty, according to the owner, so this failed. He believes that buffalo horn *hankos* will become more predominant as business in ivory *hankos* will continue to decline.

The investigator visited a small *hanko* workshop using ivory, which had just one craftsman as it was badly affected by the 1990 CITES ivory ban. The craftsman used to produce 12,000 name seals in ivory per annum in the 1980s, but produced only 1,200 in 2001. His wife used to help, but now there is not enough business to justify her employment. In order to supplement his income, in 1999 the craftsman started inlaying lengthways thin strips of a silver material into buffalo horn *hankos* and produced 300 of them a month. Occasionally, he uses strips of gold, but as these *hankos* are significantly more expensive, there is little demand for them. Older, more traditional people seem to prefer these *hankos* with silver and gold inlays.

Netsukes and lids

There are very few craftsmen still carving netsukes in the Osaka/Kyoto area, and very few making lids for tea containers. There is only one company still producing netsukes which is a member of the Osaka Ivory Arts and Crafts Association. This company is also the only one in the Association producing lids. The proprietor has been in the ivory business for 50 years and lives in Kyoto. Prior to the 1990 CITES ivory ban he employed eight carvers making netsukes. Five of his employees changed occupations completely (one became a taxi driver) and two died. He presently employs one full-time craftsman, who earned including bonuses Y 4,200,000 (USD 34,146) in 2001, and three part-time workers who get paid for what they produce. The company makes only two or three netsukes a year, only with advanced orders from customers, who are nowadays Japanese. After the 1990 CITES ban, when the company could no longer export their ivory netsukes, the craftsmen had to spend most of their time producing lids for tea containers, which are easier to sell. The company used to make these lids from about 1952 to 1962, and the proprietor regrets that he has had to revert to such work. He buys scrap ivory for the lids because larger pieces are not

required and it is cheap at Y 4,000 (USD 32)/kg. His buying price for scrap has declined over the past few years because of the fall in demand for jewellery, which is made from much of the scrap ivory. In 1987 the proprietor paid Y 10,000 (USD 81)/kg. The craftsmen use 80% soft ivory for these lids. There is no extra charge for those made from expensive hard tusks although they produce a better finish after polishing. The ivory lids are crafted using lathes and wheels normally used for making pottery. A thin piece of wood, usually boxwood imported from Thailand, costing USD 4.80/kg, is stuck to the base of the lid. Sometimes gold leaf is placed at the bottom of the wood to entice customers, although it is not profitable to do that.

The artisans in this company make lids in 10 sizes, and can produce a total of 40 larger and 70 smaller ones a day. Larger ones are sold to a wholesaler for Y 4,000 (USD 32) and smaller ones for Y 1,600 (USD 12.80). Ivory lids are made for all the special tea containers, but cheaper containers have plastic lids with no gold leaf (not crafted by ivory carvers) which sell in comparison for Y 400 (USD 3.20).

Musical instrument parts

Although the Osaka area is the main part of Japan that produces name seals, it is not the centre for making parts for Japanese musical instruments, as that is Tokyo. There are, however, two companies in the Osaka Ivory Arts and Crafts Association which make parts for Japanese musical instruments. The investigator visited one of them, a workshop producing parts for the koto (the 13-stringed traditional musical instrument). The ivory craftsman in this workshop, who has had 50 years' experience, is still making koto parts. He requires large tusks of at least 30 kg of hard ivory to make the bridges that are 5.5 cm long. He uses hand and machine tools. It takes him two days to make one set. A set consists of 13 bridges and one spare. He sells these directly to the music shops for Y 80,000-140,000 (USD 640-1,120). For making the picks, or plectrums, which are 2.5 x 1.5 cm each in size, he uses mostly hard ivory, but with a shortage since 1990, he also uses some soft. He can make 10 sets of koto picks (there are three in a set) per day. He sells each set for Y 800-1,200 (USD 6.40-9.60).

In the late 1980s, this old man used 10 tusks averaging at 30-35 kg each for this work; and his wife, brother and brother's wife helped in the business until the CITES ivory ban and the decline in demand for koto ivory parts. In 2001 he only used two tusks. His business is down by 80%; many koto parts are now being made out of plastic. He is not training any apprentices and has discouraged his son from joining the family business because he perceives there will be no future for him in ivory.

Other items

There are four companies in the Osaka Ivory Arts and Crafts Association that make other small items such as dice, jewellery and teaspoons. The investigator visited one of them. The company in Kyoto, near Osaka, that produces netsukes and lids makes a few other items as well, including pieces for the game called *kagetsufuda* that is played at the start of the traditional tea ceremony to see who receives the tea first. It consists of 10 small pieces of ivory (2.6 x 1.4 cm) which are covered with gold lacquer making the pieces expensive to produce. This company makes about 150 sets each year by special order; there is none available for sale in shops. The proprietor sells each set for Y 30,000 (USD 240).

The company also makes spoons for the traditional tea ceremony, using hard ivory in order to avoid warping and they are sold to a dealer for Y 5,000-7,000 (USD 40-56). The company produces 1,000 a year and the owner claims that his workshop is the only one in the country making them. He uses the smallest scrap ivory to make knives to cut little sweets for the traditional tea ceremony. He buys this scrap for Y 1,500 (USD 12)/kg. The knives are 10 cm long and very thin. The workshop can produce 50 of them a day using hand tools, but the workshop often buys in ready-made ones to sell on. They are sold wholesale for only Y 300 (USD 2.40) each as they are easy to make and use very little raw material.

The company also produces 10 cm-tall tea bottles, called *chatsubo*, which are used to store *sencha*, a middle-grade green tea. The proprietor makes 30 a year and sells them for Y 80,000 (USD 640) each.

Business is declining for all the ivory objects he makes today. This is especially true for the items made for the Japanese tea ceremony as young people are not so interested in this traditional ritual.

Retail outlets and prices for worked ivory in Japan

Previous studies of Japan's ivory trade have not examined antique shops and stalls for old and new ivory items, despite the fact that there are more of them selling ivory items than any other type of retail outlet. Old ivory items as defined in this chapter were made prior to World War II. Unlike other Asian countries, there has been a keen interest by Japanese collectors for over 50 years for old ivory jewellery made in England, France, Switzerland and Italy. Japanese and also European dealers still buy some ivory antiques in Europe and bring them to Japan to sell. In the 1980s when the Japanese economy was booming and the interest in all ivory objects was great, dealers earned large profits by selling these objects at high prices. With the weakening of the Japanese economy, beginning in early 1990 and still continuing today, along with the change in fashion away from ivory, the prices and sales of European jewellery, in particular, have decreased in Japan.

The majority of the antique galleries, department stores, gift shops and ivory specialty shops selling ivory was surveyed in Tokyo and Osaka (other towns and cities being far less important for ivory in Japan). In Osaka, it was possible to find the majority of *hanko* shops with ivory in the main commercial areas, but this was not the case for Tokyo, being so large and spread out. In Tokyo, there are many *hanko* shops although most of the smaller ones did not have ivory.

Most *hankos* sold are for personal use, but some are made for businesses. There are three kinds of personal name seals and seven for businesses in Japan. The most important personal one is the *jitsuin*, which can be used for all legal transactions and is unique to the individual. The two other personal name seals, the *sanmonban* and the *mitomein*, are the mass-produced ones bought with the names already on them and are not legally binding, but are used for personal communications. Each of the seven business seals has a specific purpose. The *kaishain* gives the name of the company. The *shachoin* states the hallmark of the company president's name. The *yakushokuin* gives the name of an important company officer. The *keiin* is used to stamp stock certificates and stock ledgers. The *wariin* is used to show that there is a continuation of more pages to a document. The *teiseiin* is used to certify that an error was made. The *keshiin* is used to mark revenue stamps (Martin 1985). Almost every adult still must own at least one personal *hanko* and most businesses still require them as well. Due to the fall in demand, very few business *hankos* are made of ivory any more as they are bigger and require more ivory and are thus considered too expensive.

Tokyo retail outlets

The investigator counted a total of 96 shops and stalls with ivory items for sale in the city. Old ivory items were sold in shops called antique galleries and at private stalls in the department stores. New ivory items were sold mainly in department stores, *hanko* shops, ivory specialty shops and gift shops (see Table 7). More ivory items were for sale in the ivory shops while the antique galleries and private stalls in department stores combined displayed the least quantity.

Table 7
Types of retail outlets and number of ivory items surveyed in Tokyo in early 2002

Type	No.	Percentage of total	No. of items	Av. no. of items/outlet
Antique gallery/stall	51	53	694	14
Department store	17	18	421	25
Gift shop	9	9	1,524	169
Grocery shop	1	1	5	5
Ivory specialty shop	7	7	2,362	337
Name seal shop	9	9	241	27
Netsuke shop	1	1	100	100
Stationery shop	1	1	11	11
Total	96	99	5,358	56

The total number of ivory items seen on display for sale in Tokyo was 5,358. There were also 83 mammoth ivory objects counted (see Table 8). The most common was jewellery followed by human

figurines, good luck charms, name seals and netsukes, along with less common items (see Table 9). Japanese buy nearly all these objects at varying prices (see Table 10). Even in the 1980s, not many foreigners bought ivory items in Japan because the prices were too high compared with those in other countries. The main items they bought were netsukes, some sculptures, and a little jewellery. Since 1990 even fewer foreigners have bought ivory items, due to the CITES ban on international trade, according to Japanese traders.

Table 8
Number of retail outlets seen with ivory items and mammoth ivory items in Japan in early 2002

City	No. of outlets surveyed with ivory	No. of items	No. of outlets surveyed with mammoth ivory	No. of items
Tokyo	96	5,358	2	83
Osaka	42	2,207	1	10
Total	138	7,565	3	93

Table 9
Ivory items seen for retail sale in Tokyo in early 2002

Item	Percentage of total
Jewellery	28
Human figurine	14
Good luck charm	13
Name seal	11
Netsuke	11
Lid for traditional tea container	4
Animal figurine	3
Ear pick	2
Misc. incl. bachi, bowl, box, Buddhist rosary, carved tusk, chopsticks pair, cigarette holder, comb, cufflink, flower, inro, key chain, loop tie, mirror, shoe horn, spoon and knife for the tea ceremony, tracing spatula, tie clasp	14

Table 10
Retail prices for recently-made ivory items (excluding name seals) seen in Tokyo in early 2002

Item	Size in cm	Range of price in USD	Average price in USD
JEWELLERY			
Bangle	3	84-144	114
Cufflinks, pair	4	96-304	213
Ear-rings, pair		12-96	50
Hairpin	15	40-104	80
Necklace, small beads		40-184	113
Necklace	5 cm flower	80-416	186
Pendant	6	224-880	724
Ring	1.25	14-128	58
FIGURINES			
Human, high quality	6	576-6,800	3,096
	9	4,800- 6,000	5,560
	15	4,000-14,400	7,600
	20	4,800-30,400	16,160

Table 10 continued

Item	Size in cm	Range of price in USD	Average price in USD
TUSKS			
Carved base	50	36,000	36,000
Carved	100	7,120-36,000	18,373
Polished	90 (7kg)	8,000	8,000
MISC.			
Bachi (plectrum for the <i>shamisen</i>)			
	small	1,840-1,920	1,880
	medium	2,560-2,880	2,720
	medium/large	5,440-5,760	5,600
	large	7,600-10,400	9,200
Buddhist rosary		120-624	278
Chopsticks, pair			
male	22.5	168-612	310
female	19.5	128-416	209
Cigarette holder	10	168-1,920	746
Earpick	10	8-18	12
Flower	8	40-80	60
Good luck charm	2.5	20-104	46
Inro	10	784-4,400	2,656
Japanese chess set, <i>chogi</i>		3,120	3,120
Koto bridges, 14	5.5	3,200	3,200
Koto picks, 3	2.5	40-80	60
Mahjong set		4,000	4,000
Netsuke	5	320-11,200	2,124
Paper knife	14	40	40
Shoe horn	9	20-36	26
Tea ceremony fork	10	8-24	14
Tea ceremony spoon	20	120-240	172
Tea container	10	1,600-2,400	2,000
Tracing spatula	13	120-640	300

N.B. USD 1 = 125 yen

Prices of recently-made ivory items are generally higher in Japan than anywhere else in the world. For example, a plain *hanko* (1.5 x 6 cm) made in Myanmar (Burma) without the hallmark sells there retail for only USD 40-50 (Martin and Stiles 2002), compared with about USD 250 in Tokyo. The cost of labour and overheads are the main factors for this huge discrepancy. High prices in Tokyo also encourage Japanese tourists and businessmen to buy ivory *hankos* in China and South East Asia. Although there are no reliable statistics, they smuggle from these countries into Japan probably thousands of *hankos* and other ivory items, especially jewellery, for themselves each year. In many of the retail markets for ivory items in Asia, the Japanese are some of the major buyers (Martin and Stiles 2002). Before the 1990 CITES ban, European and American collectors were the main buyers of Japan's netsukes, but not for the new ones because of the export ban (vendors of Japanese netsukes, pers. comm. April 2002).

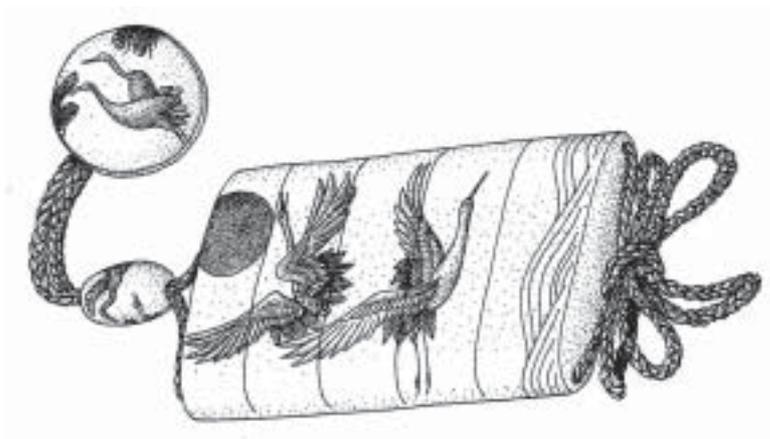
Antique galleries and private stalls in department stores

In Tokyo, the investigator found more antique galleries and private stalls in department stores selling all types of ivory (usually in small amounts) than any other type of retail outlet with ivory for sale. This is because Tokyo is by far the largest city in the country and the nation's capital so antique galleries and private stalls in department stores are more numerous. The total number of ivory items, both old and new, found in the 51 outlets was 694 with 298 of these being old items. About 20% of the antique galleries and stalls visited were selling ivory; they displayed on average less than seven old ivory items each. The most common of these were netsukes, almost all carved in Japan; broaches, mostly made in England, France and Switzerland in the 19th and early 20th

centuries; tea container lids made in Japan; pendants made in England and France in the late 19th and early 20th centuries; human figurines, mostly French from the early 20th century; and necklaces made in Italy and France in the 19th and 20th centuries (see Table 11). The antique galleries and stalls seen selling ivory also had almost all the foreign-made ivory items, including some new. Of the 201 foreign-made objects seen on display in the city, 51% was made in China, 46% in Europe and 3% elsewhere (see Table 12).

Table 11
Old ivory items (made before World War II) seen for retail sale in Tokyo in early 2002

Item	Number	Percentage of total
Netsuke	165	49.5
Broach	34	10
Tea container lid	21	6
Pendant	11	3.5
Human figurine	9	3
Necklace	8	2.5
Ear-rings, pair	5	1.5
Inro	5	1.5
Cross	5	1.5
Hairpin	5	1.5
Painting	5	1.5
Box	5	1.5
Knife	5	1.5
Fork	5	1.5
Misc. incl. hairbrush, comb, furniture, human penis, snuff bottle	45	13.5
Total	333	100



Japanese inros, traditional containers for holding medicine or tobacco

Table 12
Country of origin for ivory items surveyed not made in Japan for retail sale in Tokyo in early 2002

Country	Number of items
China	102
UK	35
France	24
Unknown European country	24
Italy	9
Myanmar	3
India	2
USA	1
Indonesia	1
Total	201

(There were also 60 netsukes made in China from mammoth ivory.)

most of the department stores (pers. comm. April 2002), but this study shows some ivory items, as mentioned above, are still on sale. In early 2002, ivory objects, mostly name seals and tea container lids, and to a lesser extent, chopsticks were found for sale in 17 department stores. These were Ginza Bungu, Ginza Mitsukoshi, Giuza Matsuzakaya, Seibu located in Ikebukuro, Tobu in Ikebukuro, Mitsukoshi in Ikebukuro, Tokyu Hands in Ikebukuro, Takashimaya in Nihoubashi, Tokyu in Shibuya, Shibuya Seibu, Isetan in Shinjuku, Mitsukoshi in Shiujuke, Odakyu in Shiujuke, Keio in Shiujuke, Takashimaya Times Square in Shiujuke, Matsuzakaya in Ueue, and Daimaru in Tokyo Station. These department stores displayed 230 name seals, 134 tea container lids, 12 pairs of chopsticks and 37 miscellaneous ivory items. There has been a decline in ivory items for sale of probably at least two-thirds since 1990.

Department stores

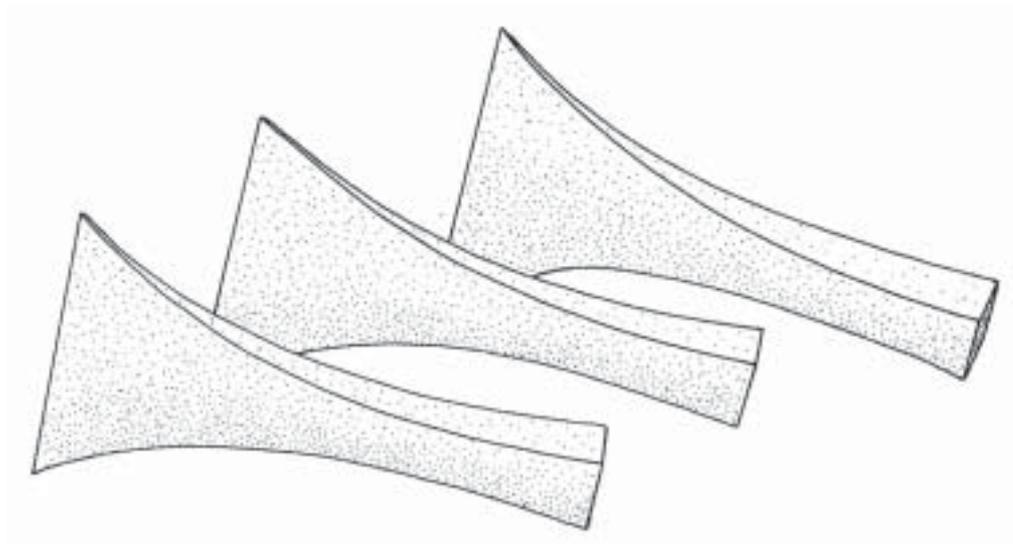
The investigator visited all the major department stores in Tokyo, and most sold ivory. There were 17 large department stores selling ivory, with 413 ivory items displayed in regular collections and department store exhibitions. In the 1980s Tokyo's department stores regularly displayed name seals, lids and chopsticks; these continue to be sold. The stores also sold in the 1980s expensive sculptures, netsukes, *bachis* and women's jewellery (see Table 13). These latter ivory items have been gradually phased out since 1990, and are rarely displayed even in spring and summer, the traditional times of year when ivory sales are at their peak. Many customers avoid buying luxury ivory items now. The officers of the ivory associations in Tokyo think that ivory has disappeared from

Table 13
Retail prices for ivory items seen in department stores in Tokyo in 1980

Item	Size in cm	Average price in USD
JEWELLERY		
Bangle	3	33
Bracelet		66
Broach	5	38
Ear-rings, pair, plain		13
carved		22
Necklace, carved		71
Necklace, small beads		93
Pin, bird	5	80
Pin plain, small		15
large		44
MISC.		
<i>Bachi</i> (plectrum for sham isen)		
medium		664
large		1,047
Name seal, plain, round with hallmark carving,		
ink pad and case	10.5	52
	12	71
	13.5	88
	15	97

N.B. USD 1 = 125 yen

Source: Survey carried out by Esmond Martin in Tokyo in November 1980



Bachis, plectrums for the Japanese musical instrument called *the shamisen*

Name seals — There were 13 department stores displaying ivory *hankos* for sale — on average 18 per store along with *hankos* made of other materials, nearly all for personal use. The most popular are those made from black buffalo horn (from the domestic water buffalo), imported from South East Asia, then boxwood mostly from Japan, but also from Thailand and China. These are followed by the so-called Dutch buffalo horn, and then fourthly, ivory. Ivory *hankos* are less popular now as they are the most expensive of the four and there has been pressure on some consumers not to buy them (see Table 14). There were *hankos* made of other substances, but far less frequently seen. These were coral, sheep horn from Tibet, tortoise shell (*bekko*), amber, bamboo, birch wood, ebony, sandalwood, agate, amethyst, crystal, jade, lapis lazuli, quartz, tiger’s eye, plastic and titanium. The rarest seen were hippo teeth, whale teeth and “zirmina” which is a very hard and heavy artificial substance. Poorer quality *hankos* are also for sale in much greater quantities, with common names already hallmarked on them. These mass-produced ones are usually made of plastic, wood or rubber.

Table 14
Retail prices for plain, good-quality name seals in department stores in Tokyo in early 2002

Material (1.5 x 6 cm)	Average price in yen	Average price in USD
Lapis lazuli	105,450	844
Zirmina (artificial hard substance, blue or white)	66,817	536
Ivory	59,650	477
Agate	46,550	372
Crystal (clear)	37,975	304
Amber	36,500	292
Dutch buffalo horn (tan coloured)	34,405	275
Sheep horn	28,300	226
Titanium	27,700	222
Black buffalo horn	26,767	214
Boxwood	13,200	106

(The name seals surveyed here are the most common good quality, plain round ones. The price includes the cost of carving a hallmark with up to four characters, the case and a small ink pad.)
 N.B. USD 1 = 125 yen

There were salesmen in five of the department stores who would give information on their turnover of name seals; They said there were 1 - 10 ivory *hankos* sold each month, or an average of three per month. They also stated that sales had dropped by 90% since 1990 because of the CITES

ivory ban, bad publicity on ivory, and the country's economic recession. The best time of year for selling the ivory name seals is in the spring when parents often give presents to their children leaving school. The summer is also a good time to sell ivory *hankos* because women like the colour white during this season. The best single day is Valentine's Day when men buy their girlfriends or wives presents.

The sales of buffalo horn and boxwood *hankos* have not declined as much as those of ivory. One department store salesman said he sold only one ivory *hanko* a month as opposed to 40 of buffalo horn and boxwood. Another department store sells two or three ivory seals a month, compared to 70 made of buffalo horn (or 100 in a good month), 65% of which are of black buffalo horn. A third department store sells three to four ivory name seals a month, in comparison to 150 made from some of the good quality materials as listed above.

There is a large mark-up from the ivory *hanko* manufacturer's selling price to the retail price in a department store. If the maker of a name seal sells one for Y 10,000, then the final price in a department store is Y 30,000 plus 5% consumption tax. Ivory name seals are generally, but not always, more expensive in department stores than in *hanko* shops, due to the big mark-up as their overheads are so much higher. Table 15 gives an average price for the most popular size ivory name seal — 1.5 x 6 cm — for all retail outlets surveyed of Y 52,053 (USD 416), but for department stores only, it is Y 59,650 (USD 477). These are personal ivory name seals as business *hankos* are rarely made of ivory since the 1990 CITES ban. Personal *hankos* are almost all one length: 6 cm long but a few are 4.5 cm long. For both sizes, the width is most usually 1.5 cm or 1.35 cm, but also commonly 1.2 and 1.5 cm. From 1.2 cm and below, only two characters can be carved on the head while for the larger ones up to four characters can be carved.

Table 15
Retail prices for plain, good-quality ivory name seals of various sizes in Tokyo in early 2002

Size in cm	Average price in yen	Average price in USD
1.5 x 6	52,053	416
1.35 x 6	48,720	390
1.2 x 6	36,697	294
(The prices include the cost of carving a hallmark with up to four characters, the case and a small ink pad.)		
Size in cm	Average price in yen	Average price in USD
1.5x6	37,775	302
1.35x6	30,701	246
1.2x6	30,533	244
(These prices do not include a case or ink pad.)		

N.B. USD 1 = 125 yen

There are also very expensive, extremely high quality ivory *hankos* occasionally for sale for which top artisans use the finest hard ivory from forest elephants; this ivory has the best lustre. They always select the ivory near the tusk core, where there are very few cross-hatchings or other lines, so it has the best grain. This ivory near the core is also the densest with the least chance of cracking. The Odakyu Department Store in Shinjuku offered a 1.5 x 6 cm high quality *hanko* for Y 226,000 (USD 1,808), but sells only one or two of these a year for personal use.

There were sometimes other expensive ivory name seals on display. Most typical were *hankos* with special carvings or inlay work; one 1.5 x 6 cm *hanko* inlaid with a little gold was offered for Y 110,000 (USD 880) in the Isetan Department Store in Shinjuku. One department store displayed a name seal made from hippo tooth which was 1.8 x 6 cm in size for Y 148,000 (USD 1,184), but in nine years only two have been sold in this store. There was a 1.5 x 6 cm violet-coloured crystal *hanko* for Y 84,000 (USD 672), a 15 x 60 cm titanium one for Y 91,000 (USD 728) and a special 1.5 x 6cm lapis lazuli *hanko* for Y 150,000 (USD 1,200).

The cheapest good quality *hankos* were those made of boxwood, which sold for an average Y 13,200 (USD 106), and plastic with no ready-made hallmark priced at Y 3,643 (USD 29) on average.

The cheapest poor quality name seals were the mass-produced plastic ones with hallmarks already on them. They sold for as little as ¥ 300 (USD 2.40) in the department stores.

The investigator randomly chose two department stores for a detailed survey of the different *hankos* for sale. The Matsuzakaya Department Store in Ueno displayed 74 *hankos* made of black buffalo horn, 57 made of Dutch buffalo horn, 42 of wood, and 29 of ivory, plus hundreds of cheap plastic ones already hallmarked. The Ginza Matsuzakaya Department Store offered for sale 62 Dutch buffalo horn *hankos*, 24 ivory, 9 black buffalo horn, 9 boxwood and 2 titanium plus 2,048 cheap wooden ones already hallmarked, 3,088 cheap plastic ones already hallmarked, and 2,045 cheap rubber and plastic combined ones already hallmarked.

Some people who obtain their good quality *hankos* in department stores buy them without the case so they can choose one. The most popular cases are made out of cow leather, averaging in price ¥ 2,720 (USD 22) or vinyl for ¥2,350 (USD 19). Some customers choose more expensive materials such as seal skin for ¥ 5,000 (USD 40) or crocodile skin for ¥ 14,160 (USD 113).

After a customer buys a *hanko*, he or she has his/her name hallmarked on it. The salesperson sends the name seal to an artisan to do the work; the artisan may or may not work in the department store. It takes about a week to have the hallmark done, and up to 10 days for a hallmark on a crystal one, but crystal is less popular because it breaks if dropped. Most of the country's hallmark craftsmen are concentrated in Yamanashi Prefecture to the west of Tokyo. In 1980 there were 2,000 craftsmen carving hallmarks on ivory name seals in the prefecture, and perhaps up to 10,000 if all part-time craftsmen were included (Martin 1985). These numbers, however, have decreased sharply since then.

Tea container lids — Tea container lids are the next most popular item sold in department stores in Tokyo. Tea containers hold the finely ground tea leaves used in the traditional tea making ceremony. The container itself is usually made of pottery, but very occasionally of ivory. The more expensive containers have ivory lids. Of the 17 department stores with ivory, 10 displayed for sale tea containers with ivory tops, averaging 13 per store. Most of these tea containers are about 10 cm high and dark in colour. Some are hundreds of years old and very expensive. The highest price was ¥ 2,300,000 (USD 18,400). Almost all the old tea containers have ivory lids, while the newer, cheaper containers usually have plastic tops. Since most of the original old ivory lids have broken, the majority of the old tea containers have new ivory lids. These are round or oval and vary in size. They have a very thin wood base with gold leaf underneath that inserts into the container. According to one master craftsman who makes these tops from his home in Kyoto, the purpose of the gold leaf is to detect poisons (Yoshida, pers. comm. April 2002). An antique dealer claimed the gold also helps to protect the tea from bacteria. New ivory lids with gold leaf are occasionally sold without pots in department stores to replace broken ones: a 3.8 cm lid costs ¥ 9,500 (USD 76) and a 4.4 cm one ¥ 11,000 (USD 88).

Chopsticks — The third main ivory item sold was chopsticks. There were 12 pairs seen for sale in five department stores in 2002. They could be ordered in most of the other department stores, but this is unusual. Ivory chopsticks used to be much more commonly offered for sale, but they are now expensive, and customers prefer alternative cheaper materials. The average price for a pair of ivory chopsticks for men (22.5 cm in length) was ¥ 30,500 (USD 244) and for women (19.5 cm) was ¥ 25,000 (USD 200). A set of male and female chopsticks made out of ivory with gold at the ends was offered at ¥ 243,000 (USD 1,944). High quality lacquer ones, in comparison, cost ¥ 10,500 (USD 84), cherry blossom wood or cheap lacquer ¥ 1,000 (USD 8), bamboo ¥ 500 (USD 4) and plywood for single use ¥ 31 (USD 0.35).

Name seal shops

There are masses of small *hanko* shops in Tokyo selling ready-made name seals, but not ivory ones. The investigator visited all the *hanko* shops he could find, which were normally the bigger ones, and these sometimes sold ivory. Nine *hanko* shops with ivory were found. There were 241 ivory *hankos* in total. Although it was more usual to find ivory *hankos* in a large department store than a large *hanko* shop, there were more ivory *hankos* for sale in the average *hanko* shop in Tokyo (27) than in the average department store (18). The most popular good quality *hankos* (requiring the

hallmark to be carved after purchase) were those made from boxwood as they are cheaper in price. Next were those made from black buffalo horn as it is durable and does not break easily.

Salesmen in some *hanko* shops pride themselves in giving special treatment to their customers, in particular to those who purchase ivory name seals. For example, a few even go to the extent of collecting the individual's birthday and good luck signs in addition to his name. They claim that in knowing more information, they can have the hallmark more intricately and personally carved. It takes about three weeks to have the work done by a highly skilled craftsman who may or may not be working in the shop, and these specialized *hankos* cost between ¥ 200,000 (USD 1,600) and ¥ 400,000 (USD 3,200). However, very few people spend this much for a *hanko*.

Sales of ivory name seals varied from two to 120 each year, with an average of 43 for the nine shops seen with ivory. Some of the shopkeepers and managers had been working in these shops for many years, and three of them gave figures on sales in earlier years, allowing trends in sales over time to be calculated. Since the 1990 CITES ban, sales have declined by perhaps 80% in the *hanko* shops that have remained in business. In one shop, sales were four times greater in 1989 than in 2001. In 1992 they were double in another shop compared with 2001. In a third shop, sales in 1995 were three times more than in 2001.

Ivory specialty shops

In the 1980s there were many more shops specializing in ivory items than today. The investigator found only seven during the 2002 survey, offering 2,362 ivory objects, mostly cheaper items. The increased price of ivory, Japan's recession, changes in fashion and the CITES export ban caused most of the shops to stop selling ivory as neither the Japanese (for most items) nor foreigners (for netsukes) were so keen on buying ivory after 1990, according to the shopkeepers. The largest surviving ivory specialty shop is Makino Brothers, founded in 1933 by Takaharu Makino (Makino 1976). Here, sales of ivory items have dropped by 95% since 1989 because the owners, who had learned English, concentrated on selling items mainly to Americans for export. They sold to them mostly human figurines, birds and netsukes. They also sold a little ivory jewellery, but to Japanese, as American women usually found Japan-made jewellery old-fashioned in style and too expensive. When the ivory demand collapsed in the 1990s, Makino Brothers, similarly to the six other remaining ivory specialty shops surveyed, introduced different lines of merchandise to sell to Japanese consumers. Makino Brothers' efforts were not very successful. They tried selling ox bone jewellery made in China as an ivory substitute because it was cheap. A small beaded necklace sold at only ¥ 2,400 (USD 19), but this flopped as the Japanese did not like jewellery made from bone. Mammoth ivory jewellery, such as necklaces for ¥ 10,000-15,000 (USD 80-120) and broaches for ¥ 5000 (USD 40) also failed to attract customers because they smell unpleasantly and can crack. They finally moved to jewellery with diamonds, seashells and semi-precious stones that was more successful. Makino Brothers still has a large quantity of ivory objects on display, about 600, such as birds, flowers, good luck charms, jewellery, loop ties and statuettes, but sales are extremely slow. About 60% of the shop area is now allocated to non-ivory items.

Another main ivory specialty shop called Hyoutan has suffered a 50% decline in sales since 1989. The owners have reduced by two-thirds the number of ivory items on display, leaving 560 ivory items on view in 2002; 300 of these were good luck charms. Japanese sometimes attach such charms to their mobile telephones or key rings. This shop was selling charms from ¥ 2,500 to 9,000 (USD 20-72) as they are not very well carved. Ill-informed foreigners complaining to the owner in front of Japanese customers that all sale of ivory was illegal did not help business in the 1990s.

A third ivory specialty shop, Sunamoto, founded in 1884, sells the finest ivory items, according to ivory experts in Tokyo, especially sculptures of humans and gods. The shop also displayed for sale ivory chopsticks, ear picks, good luck charms, *hankos*, jewellery, netsukes, loop ties and tobacco containers. The customers in the 1980s were Americans, English, French and then Germans. Japanese only bought 5-10% of the total sales. In 2002 the nationality of the buyers had changed completely: 97% were Japanese and 3% foreign, including a few British and Germans. Compared with 1989, the sales of ivory items had declined by 50-70%. Partly as a result of this, since 1990 the shop has displayed netsukes made also of amber, boxwood, deer horn, ebony and sandalwood. The best selling items in 2001 were netsukes made of ivory and other materials, and ivory jewellery. This shop still was displaying its exquisitely carved ivory sculptures despite very few being sold. For

instance, there was an outstanding 28 cm Buddha head carved by the famous ivory craftsman called Hodo for ¥ 8,500,000 (USD 68,000); an 18 cm warrior for ¥ 3,000,000 (USD 24,000) and a 20 cm Buddha statuette also carved by Hodo for ¥ 3,200,000 (USD 25,600). These prices are very high and thus few large sculptures are sold a year. The most expensive sold in yen in the last 20 years in Sunamoto was a 60 cm Buddha statuette, which took three years to carve, for ¥ 20,000,000 (USD 80,500), bought by a private American collector in 1982. The most expensive one in the 1990s was a 1.7 m carved and painted tusk that took three years to complete. It was sold to a Japanese businessman in the mid-1990s for ¥ 18,000,000 (USD 165,000). Sunamoto also offered for sale in 2002 magnificently and recently carved tusks, such as one a metre long with a dragon and two leopards carved onto it for ¥ 4,500,000 (USD 36,000) and a 50-cm base of a tusk with a tiger and dragon for the same price. High quality ivory netsukes were available for ¥ 490,000 (USD 3,920) to ¥ 1,400,000 (USD 11,200). Each year, Sunamoto's main ivory sales consist of one or two of the finest sculptures, 40 netsukes and 50 items of jewellery. According to the manager, despite the decline in the number of craftsmen and a decrease in the number of customers, the quality of the carving of sculptures and tusks has remained extremely high. She expects the craftsmanship to remain high in the near future and that the finest sculptures will continue to be bought, but perhaps less often.

Gift shops

Some of the former ivory shops that used to display most of the ivory items are now general gift shops selling a variety of non-ivory objects. One of these shops is called Cygnet, located in the luxurious Imperial Hotel. Compared with just before the 1990 CITES ban, the turnover in ivory was half by 2001 in this shop, and ivory items occupied a quarter the amount of space. Items which sold most frequently at the time of the 2002 survey were good luck charms for ¥ 3,000-11,000 (USD 24-88), with 120-130 sold per year. These were followed by jewellery, such as small pairs of ear-rings for ¥ 2,500 (USD 20), twisted rings for ¥ 3,000 (USD 24); and chopsticks for ¥ 52,000-75,000 (USD 416-600) a pair. Only about three or four figurines are sold per year, due to the high price, such as four 10-cm humans mounted on a piece of wood, which were on sale for ¥ 4,000,000 (USD 32,000), and an 18-cm mother with baby for ¥ 2,500,000 (USD 20,000). Now, almost all the customers are Japanese, although there are some buyers from other parts of Asia, including Hong Kong, Philippines and South Korea, plus a few Europeans who buy good luck charms.

Osaka retail outlets

A total of 42 outlets with ivory items was surveyed (see Table 16). Since Osaka is the centre of the *hankomaking* business, it is not surprising that the largest number of retail outlets surveyed were *hanko* shops, 43%, followed by department stores, 24% (see Table 17). Unlike Tokyo, Osaka has relatively few antique galleries because it is a less important city.

Of the 42 outlets, the most common ivory items for sale were name seals, 44%, and necklaces, 13% (see Table 18).



Japanese brooch

Esmond Martin



There are a few storerooms with large quantities of tusks in Japan. Most of the heavy tusks came from the Democratic Republic of Congo before 1990.

Esmond Martin



Some Japanese ivory master craftsmen still use hand tools to make name seals.

Esmond Martin



Japanese musical instrument parts are still made out of hard ivory, although there have been no legal imports from West and Central Africa since 1989.

Esmond Martin



The average retail price for an ivory name seal, including the hallmark, ink pad and case, was USD 477 in 2002 in Japan.

Esmond Martin



The ivory cabinet, about 30 cm high, was made in Japan in the 1980s, but such items are rarely made today.

Lids for tea containers and traditional tea utensils are still being made out of ivory in Japan



Esmond Martin

Esmond Martin



While ivory is used for the most expensive tea container lids, as seen here, plastic is preferred for the cheaper ones.

Good luck ivory charms are popular in Japan.



Esmond Martin

Table 16
Retail prices for recently-made ivory items (excluding name seals) seen in Osaka in early 2002

Item	Size in cm	Range of price in USD	Average price in USD
JEWELLERY			
Bangle	2	184-240	212
	3	376	376
Broach, flower	5	216-680	485
Buddhist rosary			
small		176	176
large		320	320
Ear-rings, pair		16-104	52
Necklace, plain		126-312	235
small beads		45-384	186
Pendant	6	90-378	242
Ring	2	40-48	44
FIGURINES			
Human, high quality	5	2,800	2,800
	10	1,600-8,000	5,867
	15	8,000-27,200	17,600
	23	12,000-64,000	38,000
	33	48,000-56,000	52,000
TUSKS			
Carved	40	16,000	16,000
	120	51,200	51,200
Polished	90	41,760	41,760
Tip (paperweight)	4-8	110	110
MISC.			
Belt buckle	4	24	24
Cart with three humans	30	54,400	54,400
Chopsticks, pair			
male	22.5	240-432	325
female	19.5	216-336	259
Chopsticks holder	8	20-30	25
Cigarette lighter			
carved		2,400	2,400
uncarved		1,568	1,568
Earpick	11	13	13
Flower on a branch	30	10,400-22,400	16,400
Good luck charm	4	32-104	61
Inro	5	1,760	1,760
Mahjong set		8,320	8,320
Netsuke	5	176-4,800	2,135
Offcut	5	64	64
Shoe horn		64-80	72
Tea ceremony spoon	20	168-280	228
Tea container	5	8,640	8,640
Treasure boat with many figures	45	35,200	35,200
Vase	20	2,880	2,880
	23	3,200-4,480	3,840
	38	24,000-46,400	35,200

N.B. USD1 = Y 125

Table 17**Types of retail outlets and number of ivory items surveyed in Osaka in early 2002**

Type	No.	Percentage of total	No. of items	Av. no. of items/outlet
Antique gallery/stall	3	7	11	4
Department store	10	24	325	32
Gift shop	5	12	174	35
Ivory specialty shop	1	2	1,037	1,037
Name seal shop	18	43	638	35
Stationery shop	4	10	21	5
Tea ceremony shop	1	2	1	1
Total	42	100	2,207	53

Table 18**Ivory items seen for retail sale in Osaka in early 2002**

Item	Percentage of total
Name seal	44
Necklace	13
Ear-rings, pair	9
Offcut	8
Good luck charm	4
Pendant	3
Ear pick	2
Broach	2
Sculpture, human and gods	2
Misc. incl. animal figurine, bangle, bracelet, box, Buddhist rosary, chopsticks pair, chopsticks holder, cigarette lighter, container, flower, loop tie, Canton ball, netsuke, paper weight, pen stand, ring, shoe horn, spoon, stamp pad, tea container lid, tie clasp, tracing spatula, vase, wind chime	13

Name seal shops

A total of 18 *hanko* shops offered for sale 638 ivory name seals ranging from 3-168. The average shop displayed about 34 ivory *hankos*. *Hanko* shop ivory prices in Osaka were about the same as those in the *hanko* shops in Tokyo. If one examines the prices for all ivory *hankos* in Osaka, which included the *hanko* shops, department stores and a few other retail outlets, the prices were slightly higher than for Tokyo (see Tables 15 and 19), but the difference was less than 10%. Only three *hanko* shops would give information on their ivory sales. They reported an average of 32 sales in 2001. This was more than in Tokyo's *hanko* shops.

The number of *hanko* shops has declined recently in Osaka as in most places in Japan. From 1987 to 2002 at least 20% of Osaka's *hanko* shops closed down because of lack of business.

Table 19**Retail prices for plain, good-quality ivory name seals of various sizes in Osaka in early 2002**

Size in cm	Average price in yen	Average price in USD
1.5 x 6	54,778	438
1.35 x 6	52,400	419
1.2 x 6	35,600	285

(The price includes the cost of carving a hallmark with up to four characters, the case and a small ink pad.)

N.B. USD1 =Y 125

Department stores

The investigator visited all the large department stores, and most sold ivory. There were 10 department stores selling 325 ivory items of which 234 were *hankos*, 32 were tea container lids, 15 were pairs of chopsticks and 44 miscellaneous items. Although Osaka's department stores are smaller than those in Tokyo, their layout is similar. Most of them have separate counters selling name seals and chopsticks while the tea containers with ivory lids may be displayed with modern Japanese ceramics or in the antique section if old. There were a few ivory objects in Osaka's department stores that were no longer available in Tokyo's, such as human figurines. In the Matsuzakaya Department Store were some unusual carvings: a 30-cm tall female figurine made in the late 1970s for ¥ 240,000 (USD 1,920); a 22-cm fisherman with nets exquisitely carved during the Meiji Restoration (1868-1912) for ¥ 1,500,000 (USD 12,000); and a set of three coloured eggplants 16 x 20 cm in size for ¥ 2,500,000 (USD 20,000). Other types of items found in Osaka but not in Tokyo included men's chopsticks with a carved wavy pattern made in the 1980s, priced extremely high at ¥ 250,000 (USD 2,000) and a name seal made of special ivory (1.8 x 6.3 cm) for ¥ 310,000 (USD 2,480), one of the most expensive *hankos* for its size in any department store. One department store, again unusually, sold ivory parts for Japanese musical instruments. These were the bridge for a *shamisen* for ¥ 12,000 (USD 96) — plastic ones were selling for ¥ 2,500 (USD 20)—and koto picks/plectrums in sets of three for ¥ 5,000-10,000 (USD 40-80) depending on the quality of workmanship. The price for koto picks is five times higher than when the artisan sells his items wholesale to a music shop, which shows again the high mark-up in department stores compared with what the artisan gets.

Gift shops

Five gift shops were found with ivory displayed for sale: 174 ivory items in total. Most was women's jewellery, 146 items, which are sold especially in summer. There was a 30% price reduction for necklaces and pendants to stimulate sales in early 2002.

Ivory specialty shops

There is only one ivory specialty shop left in Osaka. The largest manufacturer of name seals in Japan owns it. Almost all the items are not made in his workshop but bought from others. This shop displayed for sale 1,037 ivory objects, the largest collection for any shop in Japan. There were also 10 items of jewellery made from mammoth ivory. As well as the displayed items, there were probably several thousand more items in stock in the building—again far more than anywhere else. Of the items on display, about 44% was jewellery, 17% offcuts of all sizes, probably used for decoration or paperweights, 9% *hankos*, 6% good luck charms, and 24% miscellaneous items including the most expensive and important objects. These are human figurines and typify the highest quality of carving by Japanese master craftsmen. One of the most expensive was a 23-cm tall man carrying a bag stained brown and priced retail at ¥ 8,000,000 (USD 64,000). Another figurine was a fisherman 33-cm high holding a net and priced at ¥ 7,000,000 (USD 56,000). Other outstanding objects included a 44-cm long treasure boat with many small figurines on it made in 1999 for ¥ 4,400,000 (USD 35,200); a 125-cm tusk with a dragon carved on it for ¥ 3,200,000 (USD 25,600); and a magnificent selection of vases from the base of the tusk, beautifully inlaid with dragons and other animals priced at up to ¥ 3,000,000 (USD 24,000). For the last few years, all the customers for these works of art have been Japanese while foreigners buy the small and cheap items that they can risk smuggling out of the country. Japanese dealers also come to this shop and buy items wholesale at half the retail price, the only shop seen in Japan that had both wholesale and retail prices on labels.

Antique galleries

Only three antique shops were found that had ivory and they were selling just 11 old ivory items. These were a koto with ivory parts made during the Meiji Restoration for ¥ 200,000 (USD 1,600), one 15-cm crucifixion scene made in Western Europe for ¥ 130,000 (USD 1,040), four netsukes for ¥ 460,000 (USD 3,680), two inros for ¥ 90,000 (USD 720) and ¥ 350,000 (USD 2,800), a Chinese-made Happy Buddha 15 cm tall for ¥ 50,000 (USD 400) and a Chinese-made bangle 2-cm thick for ¥ 30,000 (USD 240).

There were 25 foreign-made ivory objects: the old items listed above plus other new items. Of the 25 items, 23 were made in China (11 netsukes, 2 Happy Buddhas, 2 Canton balls and 8 miscellaneous items), one made in France (a brooch) and one made in an unidentified European country (the crucifixion scene).

Ivory associations in Japan

Unlike other countries that have recently had or still have ivory associations, such as Hong Kong and Zimbabwe, the Japanese associations are by far the most influential, both within the country and overseas. These associations promote the ivory business and high quality craftsmanship. They date back to the 19th century when a group of 20 carvers met in 1878 and in the following year established the Association called Kanko'e. Since then, other ivory associations have been set up, mostly in Tokyo and Osaka (Martin 1985). By far the most influential one now is the Japan Federation of Ivory Arts and Crafts Association (JIA). It was set up in 1985, combining the Tokyo Ivory Arts and Crafts Association with the Osaka Ivory Arts and Crafts Association. The JIA now consists of a Tokyo branch and an Osaka branch. The latter often calls itself, the Osaka Ivory Arts and Crafts Association, instead of JIA.

Since the mid-1980s the amount of ivory consumed by the industry in Japan — which mostly is handled by the JIA — has declined from about 300 tonnes a year to 15-20 tonnes in 2001 (JIA, pers. comm. March-April 2002). Members of the Association are mostly old and are not training their sons in the business because they fear there will be no future in it. Old craftsmen are thus retiring with no apprentices to take over their skills.

JIA, Tokyo branch

Membership for the Tokyo branch of the JIA (formerly the Tokyo Ivory Arts and Crafts Association) has fallen from 64 in 1980 to a low of 37 in 2001 (see Table 20). Nearly all the members are located in Tokyo and in the surrounding prefectures. Of the 37 members of the JIA in Tokyo, five or six make primarily hankos as well as being the main ivory importers; five or six carve sculptures and netsukes; five produce jewellery; four make traditional Japanese musical instrument parts; five are retailers, and the 12 remaining are retailers that were inactive in early 2002. There are about 20 other active ivory companies that are not members of JIA (JIA, pers. comm. April-May 2002).

Table 20
Membership numbers of the main ivory associations in Japan. 1980-2001

Year	Tokyo Ivory Arts and Crafts Association until 1984, JIA Tokyo Branch from 1985	Osaka Ivory Arts and Crafts Association	Japan Ivory Sculptors' Association	Tokyo Ivory Carvers' Friendship Association
1980	64	30	100	25
1988	47	30	-	-
1996	42	21	60	-
2001	37	13	60	5

N.B. - = no data

Sources: Martin 1985 (for 1980); Milliken 1989 (for 1988); Kyono 1997 (for 1996); members of the ivory associations, pers. comm. March-May 2002 (for 2001)

Each member pays a monthly fee of Y 10,000 (USD 80). Meetings are held for the membership every month in their headquarters in Taito-ku to exchange ivory goods and to discuss matters dealing with the ivory trade, such as CITES issues. Every three months, the Association organizes an auction of raw ivory in order to support the needs of its members. At their headquarters, the Association also displays for retail sale many types of ivory items made by its members. In early 2002 368 items consisting of about 100 necklaces, 60 broaches, 56 pairs of ear-rings, 43 ear picks, 24 cigarette holders and many other items in smaller numbers were on view in the showroom. The Association also occasionally publishes catalogues to promote the high quality of Japanese ivory

craftsmanship. Once a year it organizes an exhibition of the members' work at Matsuzakaya Ueno Tokyo.

The JIA also supports the annual traditional Buddhist ceremony for the elephant at the Goko-Ku-ji Temple in Bunkyo-ku, Tokyo. This 17th-century temple has held the ceremony since 1890. Initially, the ivory craftsmen and dealers planted a cherry tree inside the compound every year. This has stopped due to lack of space. In the early 1960s the Tokyo Ivory Association donated a stone sculpture of an elephant which is still in the temple grounds. Each year at springtime, members of the JIA and other interested individuals, meet in the late morning at the temple to perform the ceremony praising the elephant. On 15 April 2002, the investigator attended the ceremony with about 80 others. At 11 o'clock that morning, everyone gathered inside the main temple building called the Kannon-do that was constructed in 1681 to exhibit a collection of works of art. Inside, an ivory tusk had been placed near the altar. The ceremony began with chanting, traditional music and discourses in Sanskrit by the Buddhist priests and their assistants. It ended at 11.35am at which time the congregation, including five women, moved into another building where there were speeches on the elephant and ivory trade. Everybody enjoyed eating, drinking beer and tea, and talking into the afternoon.

Members of the JIA in Tokyo hold strong views on the ivory industry. They believe that certain conservation organizations and media in Japan and elsewhere have misrepresented the plight of the elephant and the Japanese ivory trade. They cite, for example, an NHK television programme shown in Japan on 2 March 1994 which stated incorrectly that CITES had banned all domestic trade in elephant ivory products in Japan. After many of the ivory associations and traders complained, NHK wrote an unsigned letter of apology to them saying the NHK had erred and that the internal trade in legal ivory products was not prohibited by CITES, nor the Japan Government. NHK did not correct their mistake to the public, however. The NHK television programme put off some potential buyers, thus damaging financially the Japanese ivory industry.

Some members of the JIA Tokyo branch believe that some Western conservationists publicize elephant numbers in Africa to be much lower than they are. The JIA also thinks that there has been no reliable evidence to show that the one-off sales of government-owned tusks in southern Africa in 1999 to Japanese traders increased poaching in Africa or Asia, as some conservationists believe. The JIA argue that certain African countries have legal stockpiles of ivory that could be sold to Japanese dealers with the money invested into elephant conservation. The Association believes that these African governments desperately need hard currencies. These governments instead have to pay to store their tusks.

The Association is upset that the 1990 CITES ban severely hurt the ivory industry of Japan with many hundreds of craftsmen, dealers, shopkeepers and hallmark makers losing their livelihoods. They consider that at future CITES conferences of the Parties, the most important point to discuss is whether the re-opening of the ivory trade under tight controls between certain African countries and Japan will or will not cause increased elephant poaching. If this did not occur in 1999, according to the Association's information, they ask why should it happen in the future.

Osaka Ivory Arts and Crafts Association

The next most important ivory association in Japan is the Osaka Ivory Arts and Crafts Association as it is composed of some of the biggest ivory manufacturers in the country. Membership has decreased from 35 in 1978 to 13 in 2001 (none are members of the Tokyo branch) due to the decline of the ivory industry. Of the 13 members, one lives in Kyoto and two in Fukui while the others live in and around Osaka. Each member paid a monthly fee of Y 6,000 (USD 49) in 2001, but due to the recession in the ivory business it was lowered to Y 3,000 (USD 24) in early 2002. The Association is less active than its counterpart in Tokyo, but it does organize regular monthly meetings, twice-yearly auctions of tusks, twice yearly meetings with the Tokyo branch where some members sell raw and worked ivory to one another, arranges parties and excursions and holds an annual ceremony at the Shitenoji Temple in Osaka to praise the elephant. It does not, however, usually produce its own catalogues, but collaborates with the Tokyo branch on this.

Some members of the Osaka Association spoke about their views on the ivory trade. One former chairman argues that many elephants die each year of natural causes in Africa and that their tusks should be sold to Japanese traders because the money raised would increase the income of some

of the poorest countries in the world and support a traditional Japanese industry. Controls on the Japanese ivory trade are some of the most comprehensive and effective of any country. He believes there will of course be some ivory smuggling from Africa and Asia into Japan, as no control procedure can be 100% effective. He concedes that elephant poaching is a serious problem in Central Africa as these countries have weak law enforcement. Members of the Association want to purchase only legal ivory in those countries of southern Africa which wish to sell their tusks, have effective controls on their stockpiles, and are willing to allow international inspections on the ivory leaving Africa and coming into Japan. In agreement with members of the Tokyo branch, members of the Association in Osaka think the 1990 CITES ivory ban was fuelled by misinformation on the status of Africa's elephants and because the illegal ivory trade was exaggerated. Indeed, like the Tokyo branch, they believe the one-off sale of 50 tonnes in 1999 was beneficial not only to Japan, but also to those southern African countries involved and did not harm other elephant populations. They thus believe more of these sales should take place.

The Association fears that if the dealers in Japan do not obtain African ivory within the next five years or so, the Japanese ivory industry will collapse. The members ask, if the Japanese ivory businesses disappear, in the future, when African countries may feel ready to sell ivory, there will be no market for it in Japan. They further point out that there is no country that can replace Japan as an appropriate buyer of tusks; no other has such strict controls and Japan is not a re-exporter of ivory.

Japan Ivory Sculptors' Association

The Japan Ivory Sculptors' Association exists to support the highest quality of ivory carving within the country. It is descended from the first group of ivory carvers who met in Tokyo in 1878 (Thoren 1978). In 1980 there were 100 members, but by 2001 the number had fallen to 60. There are 17 in and around Tokyo, and in the following nearby prefectures there are 15 in Saitama, 5 in Kanagawa, 6 in Ibaraki and Tochigi, 3 in Gumma and 3 in Fukushima. There are 11 others scattered about. All of them, of whom three are women, carve netsukes and figurines requiring the highest and most artistic skills. They only work in ivory, not mammoth tusks, which they dislike. Each member pays a ¥ 3,000 (USD 24) monthly fee that is used to pay the Association's overheads and to publish leaflets and catalogues. Their latest catalogue, magnificently produced (Japan Ivory Sculptors' Association 2001), consists of 80 pages, mostly in colour, illustrating 154 newly carved ivory items. Nowadays, ivory catalogues such as this have less English text in them as the foreign market has shrunk. The carvers are worried about the future of their profession. Many of them are old and have no other skills. The Association members hope that the economy of Japan will pick up, encouraging more Japanese buyers, and that the members will be able to get a constant supply of tusks. If Japan's supply of tusks does decrease further, the members think that this sector of the ivory industry should be given priority as it consumes only small amounts and produces the highest quality works of art.

Tokyo Ivory Carvers' Friendship Association

The Tokyo Ivory Carvers' Friendship Association has existed in its present form since 1974. Its main purpose is similar to the Japan Ivory Sculptors' Association: to maintain high standards in the carving of ivory. In 1980 there were 25 members, but by early 2002 there were only five. Each member specializes on one item such as birds, Buddha sculptures, human figurines or netsukes. The members pay ¥ 1,000 (USD 8) and meet once a month to discuss various issues on ivory, such as the future sources of quality tusks. One member said that due to the bleak future of the ivory industry in Japan, the Association may soon become extinct (Gyokusho Suzuki, pers. comm. April 2002).

The use of ivory substitutes in Japan

The Japanese consumer does not like substitutes for ivory such as mammoth tusks, hippo teeth and various resins. Makino Brothers in Tokyo has tried to sell items made from these alternative materials, but as already noted, without success. Mammoth ivory objects are widely available in China and Hong Kong, but this survey found less than 100 such items in Tokyo and Osaka. The

Japanese people have had an appreciation for ivory, dating back over 1,000 years, and today still prefer it to the cheaper substitutes.

The size and value of Japan's ivory industry in 2001

In 1980 there were about 300 ivory carvers (including their apprentices) in Japan, making figurines and netsukes. By 2001 their numbers had decreased to about 70-120, some working only part-time (Miyazawa, pers. comm. April-May 2002). In 1980 there were about 3,000 people who mainly made their livelihood producing these and other ivory items. This number included ivory craftsmen, company employees, and *hanko* makers, but not retailers or hallmark carvers (Martin 1985). By 2001 there were about 1,000 in Japan (JIA, pers. comm. March-April 2002).

The largest decrease in the ivory industry has been the quantity of tusks used. From 1980 to 1985, Japanese used about 300 tonnes on average per year. In the late 1990s and in 2000 and 2001 the average had dropped to around 10-15 tonnes annually, a decline of at least 95% (JIA pers. comm. March-April 2002). By early 2002 the Japanese ivory dealers had come to terms with this low supply of tusks and had accepted that they could survive on a constant supply of 15 tonnes a year (JIA, pers. comm. April-May 2002). Theoretically this could be supplied from the legal sources in southern Africa.

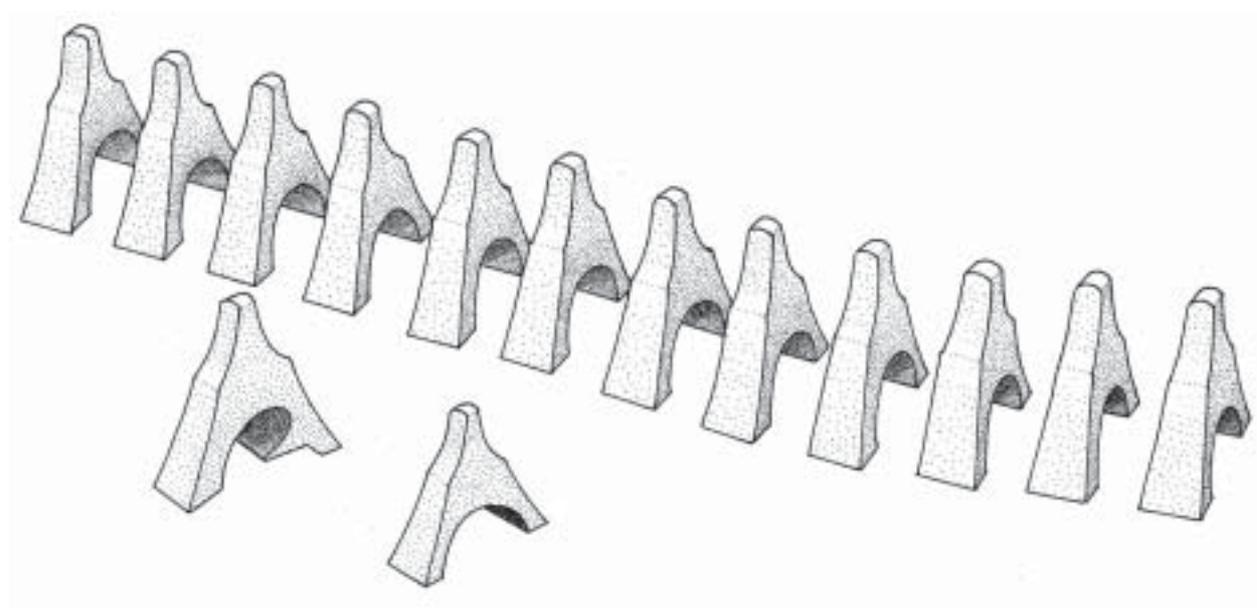
The value of the Japanese ivory industry has obviously declined very substantially since the 1980s. The retail value of the ivory industry was estimated in 1988 to be USD 300-450 million (Milliken 1989). In 2001, the estimated retail value had dropped to USD 38 million (see Table 21). These statistics illustrate very well indeed that the ivory industry of Japan since the late 1980s has experienced a massive decline.

Table 21
Estimated retail value of Japan's ivory trade for various years

Year	Value in yen	Value in USD
1980	56,460,000,000	250,000,000
1988	39-59,000,000,000	300-450,000,000
2001	4,736,000,000	38,000,000

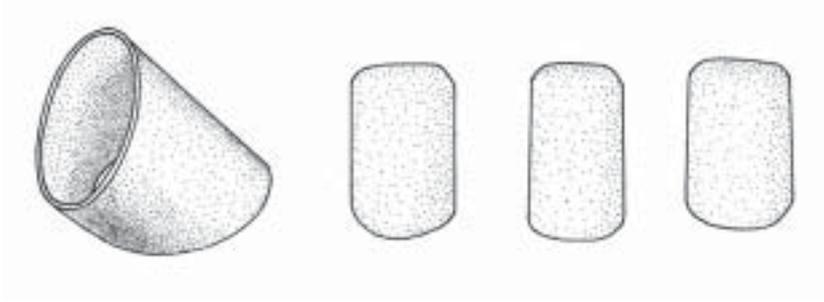
Sources: Martin 1985 (for 1980); Milliken 1989 (for 1988); members of the ivory associations, 2002 (for 2001)

Vendors' views on ivory market trends and the future



Bridges for the Japanese stringed instrument, *the koto*

Japan's vendors are pessimistic about the future of the ivory industry. Many retail outlets have closed down and the remaining ones have reduced their ivory displays, some considerably. This has been due to reduced sales since 1990. The retail value of the industry has declined by about 90% since the 1990 CITES ivory ban. The vendors stated in April 2002 that if new quantities of tusks are not imported into Japan within the next few years and if the demand for ivory objects does not increase then the ivory industry including retail sales would collapse.



koto picks

Hong Kong

The legal position of the ivory trade in Hong Kong

When the United Kingdom joined CITES in October 1976, it took out a reservation for Hong Kong on the Asian elephant and, on 4 February 1977, one for the African elephant. This was in order to allow more time for the authorities in Hong Kong to set up an ivory trade policy which would conform with the requirements of CITES. On 3 July 1978 both these reservations were withdrawn when a new import policy was put into place that was stricter than what was required by CITES (Milliken and Melville 1989).

On 16 June 1989, the Agriculture and Fisheries Department of the Hong Kong Government stopped issuing licences for the import of raw ivory, but allowed entry those consignments that had already been ordered (TRAFFIC 1989). Although the CITES ban on all commercial imports and exports of ivory came into effect in January 1990, the British Government (which governed from 1841 to 1997) wanted to give more time for the Hong Kong traders to dispose of their stockpiles abroad. Therefore, on 18 January 1990, the UK took out a reservation to allow for the re-export of existing stockpiles of ivory to continue until 17 July 1990 (TRAFFIC 1990). Thereafter, there were only two exceptions permitted for exports and imports, both only for small quantities of worked ivory. Firstly, Hong Kong residents moving to a new country were allowed to export up to 5 kg of worked ivory as a personal effect without a licence, which meets CITES provisions. Secondly, under the same control system and requirements, new residents to Hong Kong would be allowed to import up to 1 kg of worked ivory as a personal effect, also without a licence (TRAFFIC 2000; Lee et al. 1997). From 1990 to 1996, under this provision of personal effects, 311.5 kg were exported and 23.4 kg imported (Lee et al. 1997). From 1997 to 2001, only 171.5 kg were exported, and 72.4 kg imported, according to official statistics (see Table 22).

Table 22
Official exports and imports of ivory from/to Hong Kong as personal effects in kg. 1997-2001

Year	1997	1998	1999	2000	2001
Exports	144	0.52	12	0	15
Imports	5.5	12.7	3.9	41.8	8.54

Source: Agriculture, Fisheries and Conservation Department (AFCD), unpublished statistics

The Hong Kong Government registers ivory traders. In 1990, the number of ivory traders registered was 880, but by April 2002 this number had decreased to 667 (see Table 23). This latter figure is misleading, because many traders are inactive or sell only very small quantities of ivory. The Agriculture, Fisheries and Conservation Department (AFCD) believes that there were less than 200 ivory traders who were actually still in business in 2001 (pers. comm. May 2002).

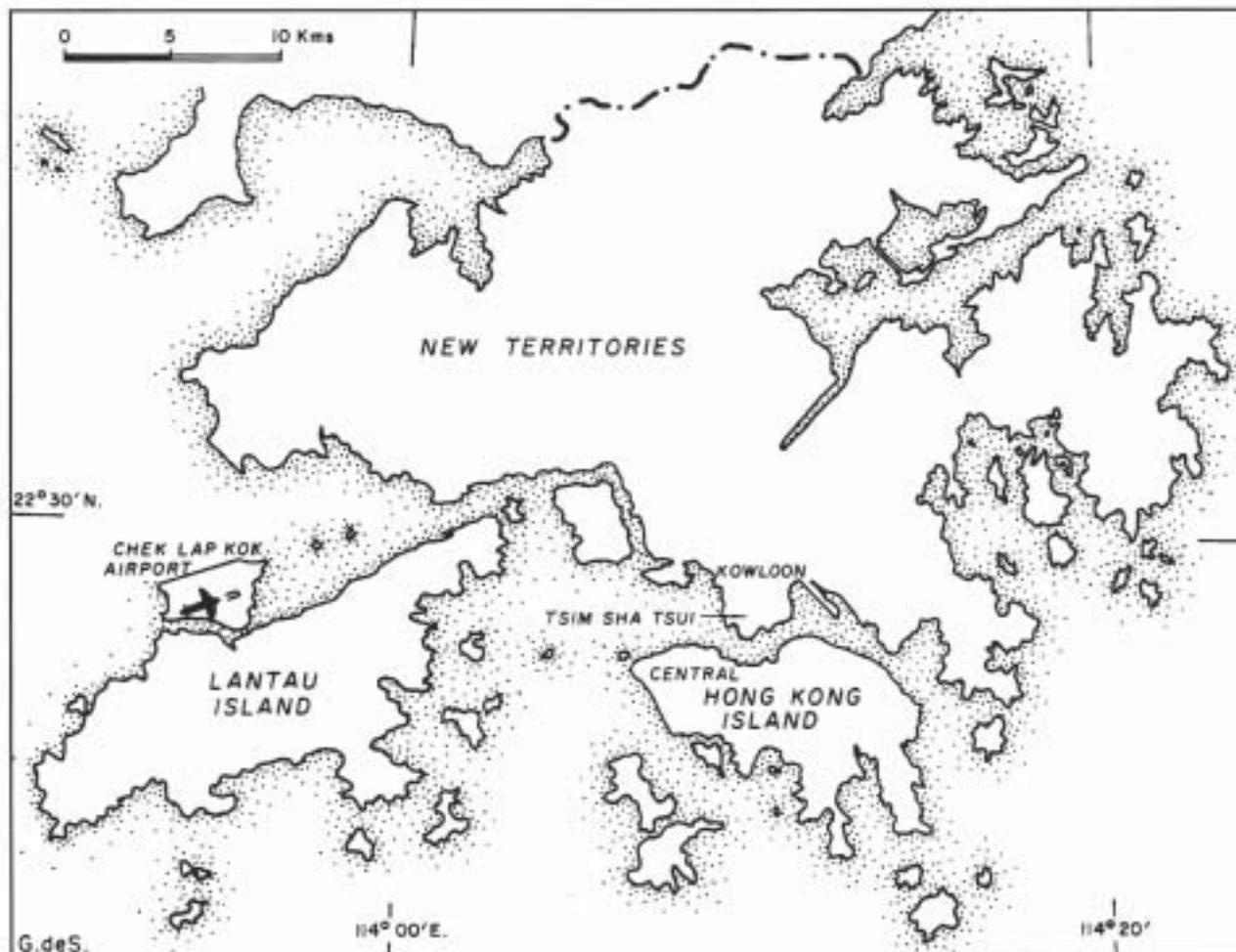
Table 23
Number of ivory traders registered with the Hong Kong Government, 1990-2002

Year	1990	1992	1994	1996	1998	1999	2000	2001	2002 (April)
No. of traders registered	880	807	746	697	675	673	665	665	667

Sources: Agriculture and Fisheries Department (AFD) and AFCD, its later name, unpublished statistics

The government issues two kinds of possession licences for ivory, one for the possession of commercial stocks, the other for personal possession of raw ivory and of worked ivory weighing 5 kg or more. In April 2002 there were 773 valid possession licences for commercial ivory (see Table 24). The difference between the number of registered ivory traders and the number of commercial possession licences held by the traders (which is higher), may be due to one trader being issued with more than one possession licence (AFCD, pers. comm. May 2002). Personnel

from the AFCD visit all of these ivory traders at least once a year to ensure that their stocks of ivory tally with the record and that each tusk is marked in the official manner (AFCD, pers. comm. May 2002).



Map of Hong Kong

Table 24
Number of commercial possession licences for ivory issued by the Hong Kong Government, 1990-2002

Year	1990	1992	1994	1996	1998	1999	2000	2001	2002 (April)
Licences issued	1,101	907	899	836	776	771	762	768	773

Sources: AFD and AFCD, unpublished statistics

Although Hong Kong reverted to China in 1997 and became a Special Administrative Region (SAR), it maintained a separate CITES Management Authority from mainland China. This is also true for the former Portuguese enclave of Macau, which also has its own CITES Management Authority.

Between 1990 and 1996, according to cases reported to the TRAFFIC Bad Ivory DataBase System, a minimum of 61,211 ivory items weighing at least 6,031 kg going to, from, and in transit through Hong Kong were confiscated. For worked ivory the largest seizure during this period was 46,947 semi-worked blocks (to be made into name seals) weighing over 985 kg, which were confiscated in Japan in 1990. The largest seizure of raw tusks occurred in 1994 when 441 weighing 2,040 kg were confiscated in Taiwan (Lee et al. 1997). Within Hong Kong itself, according to the AFCD, between 1991 and 1996 there were 78 seizures of ivory items totalling 1,953.7 kg (AFCD, pers.

comm. January 2003). From 1997 to 2001 relatively small quantities of ivory, both raw and worked (just over 232 kg, consisting of 528 pieces), were seized in Hong Kong (see Table 25). The largest amount by weight was only 83 kg of tusks, which were flown into Hong Kong in 1998 and were seized by the AFCD in the unclaimed baggage section of the airport. Of the 38 seizures from 1997 to 2001, at least 19 were destined for mainland China. There is of course some ivory, mostly worked, which is bought legally by foreign tourists and businessmen who visit Hong Kong each year, but it is exported as tourist items, nearly always with no licence which, strictly speaking, is illegal. Unfortunately, it is not possible to quantify the amount. Retail sales of ivory items have declined by over 95% since 1997, so it would not be much.

Table 25
Official confiscations of ivory in Hong Kong. 1997-2001

Date	Transport	Smuggling	Purpose	Type	Quantity	Arriving from/destination
07.03.97	by sea/air	hand-carried	transit	worked	5.8 kg (60 pc)	Macau/Taiwan
13.03.97	by air/air	hand-carried	transit	worked	3.05 kg (3 pc)	Brazil/China
07.05.97	by air	hand-carried	export	tusk	3.95 kg (4 pc)	Taiwan
08.05.97	by air/air	hand-carried	transit	tusk	3 kg (2 pc)	UAE/China
07.07.97	by air/air	hand-carried	transit	cut pcs	0.57 kg (1pc)	UAE/Dubai
31.08.97	by air	hand-carried	import	tusk	1.4 kg (1 pc)	Ghana
15.10.97	by air	manifested cargo	import	worked	3.86 kg (7 pc)	USA
16.12.97	by air/land	hand-carried	transit	tusk	10.26 kg (2 pc)	Thailand/China
03.03.98	by air	hand-carried	import	tusk	1.45 kg (2 pc)	Singapore
01.05.98	by air/air	hand-carried	transit	worked	1.1 kg (1pc)	Bahrain/Philippines
31.05.98	by air	unclaimed	import	tusk	82.66 kg (12 pc)	Unknown
21.06.98	by air	manifested cargo	import	worked	7.3 kg (6 pc)	Ivory Coast
14.07.98	by air	unclaimed	import	worked	6.44 kg (155 pc)	Unknown
31.10.98	by sea	hand-carried	import	worked	1.25 kg (35 pc)	China
21.01.99	by land	hand-carried	import	worked	9.12 kg (7 pc)	China
17.04.99	by sea	hand-carried	import	worked	2.5 kg (18 pc)	China
25.04.99	by air/land	hand-carried	transit	tusk	5.3 kg (3 pc)	Russian Federation/Togo
18.05.99	by air/air	hand-carried	transit	worked	0.7 kg (28 pc)	South Africa/China
20.06.99	by air/air	hand-carried	transit	worked	1.3 kg (1 pc)	France/Nigeria
07.08.99	by air	hand-carried	transit	worked	7.1 kg (56 pc)	South Africa/China
01.01.00	by air/land	hand-carried	transit	worked	6 kg (25 pc)	South Africa/China
21.01.00	by air/land	hand-carried	transit	worked	5.17 kg (5 pc)	France/China
21.01.00	by air/land	hand-carried	transit	worked	4.25 kg (10 pc)	France/China
13.03.00	by air/air	hand-carried	transit	tusk	3.56 kg (2 pc)	South Africa/Thailand
22.06.00	by air	air parcel	import	worked	3 pc	UK
17.07.00	by air/air	hand-carried	transit	worked	3 kg (8 pc)	Netherlands/China
28.07.00	by air/air	hand-carried	transit	worked	16.55 kg (18 pc)	Zimbabwe/China
01.08.00	by air/air	hand-carried	transit	worked	3.72 kg (1 pc)	South Africa/China
25.09.00	by air/land	hand-carried	transit	worked	2.9 kg (2 pc)	Togo/China
13.11.00	by air/land	hand-carried	transit	worked	3.7 kg (8 pc)	Togo/China
13.11.00	by air/land	hand-carried	transit	worked	4 kg (8 pc)	Togo/China
06.01.01	by air	manifested cargo	import	worked	2.5 kg (2 pc)	South Africa
11.02.01	by air	manifested cargo	import	worked	0.5 kg (3 pc)	Cuba
03.03.01	by air/land	hand-carried	transit	worked	0.62 kg 14 pc)	Nigeria/China
18.06.01	by air/air	hand-carried	transit	tusk	13.5 kg (1 pc)	South Africa/China
26.07.01	by air	manifested cargo	import	worked	11 pc	USA
07.09.01	by sea/air	hand-carried	transit	worked	0.845 kg (2 pc)	Macau/Singapore
19.10.01	by air	air parcel	import	worked	2.808 kg (1 pc)	Qatar

Source: AFCD, unpublished statistics

While internal sales of raw ivory are still legal in Hong Kong, all tusks must nevertheless be marked and registered with the government. In the mid- 1990s, traders were supposed to report their stockpiles of tusks with the AFCD every three months, but by 2002 this requirement had been dropped. Instead, government inspectors check the stockpiles at least once a year.

In summary, wholesale and retail sales of worked ivory and tusks are still legal in Hong Kong, although no commercial imports and exports (except for pre-Convention stock) are allowed nor personal and household effects of 5 kg or above for residents, under Hong Kong law and CITES regulations.

Introduction

Fieldwork was carried out in Hong Kong from 24 to 28 March and from 9 to 19 May 2002. The population of Hong Kong is about 6,700,000 with an average population density of 6,260/kin², one of the highest in the world.

History

Before World War II, Hong Kong's ivory trade was of little significance. Mainland China was the largest ivory centre in the region. In 1945 the population of Hong Kong was only 600,000. During the chaos that occurred in China immediately after World War II and the subsequent establishment of a communist government in China in 1949, Hong Kong's population expanded sharply. During this time, many businessmen who owned ivory factories in China and their workers fled communism and set themselves up in nearby Hong Kong, especially in Guangdong Province. For example, a former Chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, named Au Ming Chi, worked in a small factory in Guangzhou (then Canton) in the 1930s and 1940s with eight other ivory craftsmen. During the communist revolution he fled to Hong Kong and, using his specialized knowledge of ivory he bought the Nathan Ivory Factory, including the main shop on Peking Road in Kowloon. By 1979 he was buying ivory items from 200 Hong Kong craftsmen, and exporting them wholesale all over the world.

Just before World War II there were an estimated 100 ivory craftsmen in Hong Kong, but by 1947 there were at least 200-300 (Parker 1979). The industry expanded further in the 1950s and 1960s, partly due to the nationalization of all privately-owned businesses in China, which drove many more ivory traders and craftsmen into Hong Kong. By 1960 there were 1,500 ivory craftsmen in Hong Kong and in 1970 about 3,000, almost all coming from mainland China (see Table 26). One reason for the 1970 peak was that around this time craftsmen started using electric tools in Hong Kong. This greatly increased the output of a craftsman; after that date fewer craftsmen were required to produce the same amount of ivory goods (Au Miug Chi, pers. comm. 1979). By 1979, when the investigator first studied Hong Kong's ivory industry, almost all craftsmen were using electric tools, especially drills. The use of electrically powered tools in the late 1970s in Hong Kong decreased the time to make a sculpture or a concentric ball (Canton or magic ball) by at least 50% (Parker 1979).

Table 26
Estimated number of ivory craftsmen in Hong Kong. 1939-2002

Year	Number of ivory craftsmen	Source
1939	100	Parker 1979
1947	200-300	Parker 1979
1960	1,500	Au Miug Chi, a former chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, pers. comm. 1979
1970	3,000	Au Ming Chi, pers. comm. 1979
1978	2,200	Parker 1979
1979	2,200	Au Ming Chi, pers. comm. 1979
1982	1,500	Wilson Way Hung Au, a former chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, pers. comm. 1982
1988	600-1,000	Milliken and Melville 1989
1989	600-800	Lee Chat, a former chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, pers. comm. 1989
2002	5-6 (part-time work)	Various ivory traders, pers. comm. March and May 2002

The Hong Kong craftsmen earned about USD 430 a month in 1978 compared with only USD 35 in mainland China. The Hong Kong craftsmen were far more productive, however, because they used more electric tools and were also more motivated as they were paid for what they produced rather than earning a monthly salary as in mainland China.

In the late 1950s, Hong Kong became the largest importer of tusks in the world. From 1952 to 1959 annual imports of tusks averaged 124 tonnes. This increased to 224 tonnes per annum in the 1960s and rocketed to 463 tonnes a year in the 1970s, according to Hong Kong's Customs and Excise Statistics (Parker 1979 and 1989).

Nearly all this was African ivory imported from Africa or sometimes via Europe and the Gulf states (Parker 1979). During these decades, Hong Kong was a major re-exporter of tusks to China and Japan and thus did not consume all the ivory that was imported.

By the late 1970s Hong Kong's ivory industry was extremely well organized. There were two associations controlling the trade. One was The Hong Kong and Kowloon Ivory Manufacturers Association that had about 50 members in 1978. The other was The Hong Kong Ivory Manufacturing Workers General Union that had 2,000 members of whom about 1,700 originated from Guangdong Province and 300 from Fujian Province in China.

In 1978 there were perhaps 50 or so Hong Kong based importers of tusks: there were 36 Chinese, 12 Indian and Pakistani, 1 European and 1 Japanese, according to Parker's fieldwork at the time. None of the non-Chinese were members of the associations. Yet, interestingly, the Indian and Pakistani firms were some of the oldest in Hong Kong and had been some of the largest importers in the 1950s and 1960s, obtaining their supplies from their Indian and Pakistani colleagues in Zanzibar, Mombasa and Dar es Salaam (Parker 1979). They were also some of the largest importers of rhino horn at that time.

In 1976 there were 121 ivory workshops (called "factories") in Hong Kong, and 156 in 1978 (Parker 1979). These establishments were often family-based with six or seven artisans, unlike the large government-owned factories in China, which employed hundreds of artisans in a single building (Martin 1988). In the late 1970s, craftsmen used the largest quantity of ivory in making jewellery. Most items were mass-produced and inexpensive. They also made good quality netsukes, sculptures and carved tusks, taking orders from wholesalers and retailers or carving items of their choosing which they sold to the ivory dealers. Of the especially high-quality items, there was a large Chinese junk that was hand-coloured and took a Hong Kong family two years to make; it was sold in 1978 to an Arab for USD 150,000. There was another slightly smaller Chinese junk (180 x 120 cm) with many human figures that took a craftsman five years to complete and the retail price was USD 198,000 in 1979. The buyer would have also probably been an Arab as they were the usual purchasers of these large and intricate items.

An estimated 2,200 workers consumed an annual average of 255 tonnes of tusks from 1975 to 1977 (Parker 1979). By 1978, the annual payroll for the craftsmen and 500 administrative staff was HK\$ 60,502,000 or USD 13 million. In that year, the government had on its register 108 tonnes of raw and 16 tonnes of worked ivory worth an estimated USD 30,864,000 (Parker 1979).

During the late 1970s about 75% of all ivory items made in Hong Kong were exported wholesale worldwide, especially to Europe and North America. It was mainly foreign tourists who bought the remaining 25%. The Hong Kong Chinese rarely bought ivory items for themselves, but sometimes purchased items as presents for their American or European friends. The few Hong Kong Chinese who wanted ivory to keep chose chopsticks, cigarette holders, jewellery and pairs of polished tusks.

In the early 1980s the making of ivory items in Hong Kong declined by about 30% due to the world economic recession. Some of the ivory craftsmen and businessmen consequently changed jobs (Wilson Au, a former chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, pers. comm. 1982). One sector of the ivory industry that did not decline in the early 1980s was ivory imports. A Sudanese trader from Khartoum became the biggest importer of tusks into Hong Kong from 1977 to 1983 and probably the largest in the world. Most of these tusks came from Sudan with a lot routed through Saudi Arabia (Parker and Martin 1983). The tusks were of very poor quality as they originated from the humid southern part of Sudan and were transported to arid Khartoum where they tended to crack. Consequently, the wholesale price was 30% lower than the average for other African tusks. In 1982 Sudan exported about a quarter of the African

tusks that were sent abroad and thus became Africa's largest exporting country, with most of it handled by this one man in Hong Kong. After his activities were exposed in the international media, especially the *Sunday Times* of London, the Sudanese trade collapsed from an average of over 150 tonnes a year from 1979 to 1983 to merely 2 tonnes by 1984 (Hong Kong's Customs records as quoted in Parker 1989). The Chinese businessmen in Hong Kong were delighted that the Sudanese trader stopped his imports as he had given the industry a bad name. International conservation organizations used this incident to lobby against the Hong Kong ivory trade and the ivory trade in general, which influenced the CITES decision to ban the international trade in ivory in early 1990.

Throughout the middle and late 1980s the ivory business in Hong Kong continued to decline. Imports of tusks decreased sharply from an annual average of 479 tonnes from 1980 to 1984 to 186 tonnes a year for 1985 to 1987. The number of craftsmen declined by two-thirds from 1980 to 1989. There were several reasons for these declines. The Hong Kong and other governments brought in further regulations on the ivory trade that made it more bureaucratic and less financially attractive to businessmen. These new regulations also made it harder to obtain African tusks: governments were trying to reduce the trade in tusks from illegally killed elephants. The raw ivory coming into Hong Kong therefore cost more money; the average import price for all raw ivory went up from USD 39/kg in 1983 to USD 83/kg in 1987. In the following year, 1988, the average import price was just over USD 100/kg, with 5-10 kg tusks costing USD 180/kg (Ian Parker, pers. comm. June 2003). This encouraged some traders to give up the business, thinking that they could not pass on the added costs of the ivory to their customers. Meanwhile, international conservationists put pressure on potential buyers not to purchase ivory items. Few new craftsmen were attracted into the profession as they saw little future in the business. The apprentice period was too long and potential ivory artisans could earn more money doing other work. Old ivory craftsmen with years of experience retired and the few replacements did not have their expertise, so the quality of the average carving in Hong Kong went down (Au Ming Chi, pers. comm. 1985). A final reason for the declining ivory industry was that labour costs were far higher in Hong Kong than in China, Myanmar and Thailand, making the prices of ivory objects too high to compete.

Thus, at the time of the ivory bans of 1989 and 1990, the Hong Kong ivory industry was already in a severe decline. These bans essentially killed off the crafting of new ivory items in Hong Kong, but left a huge amount of worked ivory which became progressively more difficult to sell.

Sources and prices of raw ivory in Hong Kong from 1989 to 2002

In mid-1989, according to a registration carried out by the Agriculture and Fisheries Department (AFD) — which later became the Agriculture and Fisheries Conservation Department (AFCD) — the craftsmen and traders declared 497 tonnes of raw ivory consisting of 119 tonnes of full tusks, 73 tonnes of large cut pieces and 305 tonnes of small cut pieces. The craftsmen and traders also declared 168 tonnes of worked ivory, made up of almost 7 tonnes of polished tusks, 77 tonnes of large objects and 84 tonnes of small objects (Milliken and Melville 1989). From July 1989 to July 1990, at the time when the reservation expired (which had allowed traders a six-month period after the CITES ban to export ivory from Hong Kong), traders sold over 200 tonnes of raw and worked ivory (see Table 27). From then on, when all exports of raw and worked ivory were banned, sales of both were slower. From July 1990 to April 2002, stockpiles of tusks and carved items, the majority being raw ivory, fell from 463.4

Table 27
Official raw and worked ivory stock figures in tonnes for Hong Kong. 1989-2002

Year	Tonnes
1989 (June)	665 (497 raw and 168 worked)
1990 (February)	474 (324 raw and 150 worked)
1990 (July)	463.4
1992 (February)	404
1994 (April)	345.1
1995 (December)	306.5
1996 (December)	286.3
1997	278.1
1997	268
1997	264.3
1997	261.3
1997	256
2002 (April)	256

Sources: Lee et al. 1997; letter from AFD to D. Melville of WWF Hong Kong, 27 February 1990; AFCD, pers. comm. May 2002

tonnes to 256 tonnes. The majority of the decline occurred between 1990 and 1995 when the traders disposed of almost 157 tonnes. Between December 1995 and April 2002 the traders disposed of only 50.5 tonnes. This consisted of both raw and worked ivory.

Since there were no legal exports of raw or worked ivory after July 1990, and Hong Kong Chinese bought very few ivory items for themselves, why did these stockpiles diminish so much? TRAFFIC East Asia in 1997 was unable to give a precise answer: "It is not known whether the steady decline of stocks in Hong Kong is due to local trade and consumption, or if it represents illegal exports by means such as a personal effects exemption" (Lee et al. 1997). At the end of their 1997 published report on Hong Kong, TRAFFIC does give an opinion: "Seizure information since the ban suggests there is another, underground trade in semi-worked ivory passing through Hong Kong and destined for other Asian markets. In addition, the habitual use of the 5 kg personal effects exemption to carry ivory to Taiwan and Japan is of special concern and could constitute a significant means of illicit trade" (Lee et al. 1997). The AFCD in early 2002 told the investigator that the decline in stockpiles was due to internal sales within Hong Kong, loss and illicit exports (pers. comm. May 2002). The relevant question to answer is which of the above factors mentioned by the AFCD is the most significant. Loss is probably the least important. There were indeed purchases of ivory items by foreign tourists, as in 2002 there were many thousands of ivory items for sale in Hong Kong. If there were no demand for ivory items, shopkeepers would not display them in such quantity in shops in the most exclusive tourist areas of Kowloon and Hong Kong island. Foreign tourists, however, rarely buy tusks (polished, carved or raw) because they would be too difficult to smuggle into their home countries. Of the 13 million foreign visitors who came to Hong Kong in 2000 (Hong Kong Government 2001), some obviously bought smaller items, especially jewellery, which they could more easily hide on themselves or in their luggage. For the early and middle 1990s, TRAFFIC East Asia believed, as mentioned above, that the 5 kg personal effects exemption was probably being abused with a significant trade in ivory from Hong Kong to Taiwan and Japan (Lee et al. 1997). To what extent this ruse is still being used is not known, but the AFCD is aware that ivory items are being smuggled out of Hong Kong to other destinations in Asia (AFCD, pers. comm. May 2002).

Concerning tusks, probably many have been moved illegally out of Hong Kong since July 1990. The most likely recent destination has been mainland China, which is adjacent to the Hong Kong border and where there is still an ivory carving industry, now mostly in private hands. Evidence for this smuggling is partly based on official seizures of ivory from Hong Kong destined for China. Irrespective of how tusks are leaving Hong Kong, there is no doubt that since the mid-1990s there has been very little demand for tusks in Hong Kong by the carving industry. When the international ivory ban came into force, Hong Kong traders already had a huge supply of worked ivory and needed no more tusks to carve. Some traders sold off their worked ivory to other dealers to get out of the business.

According to two major ivory sellers, who very occasionally will make new ivory objects on special order for customers, the wholesale price for raw ivory in early 2002 (registered before the CITES ban and thus legal) was around USD 200/kg for a 5 kg piece and USD 320/kg for a 10 kg piece. This compares with USD 270/kg for a 20 kg tusk in 1998, a price paid by the Nathan Ivory Factory in June of that year after the company canvassed the market for the lowest price (Manager, Nathan Ivory Factory, pers. comm. 1998). Since the demand for tusks is now so low, there is no generally accepted price for raw ivory, as there is in Japan, and the above prices are only indicative. They seem unusually high given the low demand and large stockpiles, but ivory owners interviewed were not willing to sell for less.

Ivory workshops in Hong Kong

In the early 1980s the investigator visited a typical workshop called Pak Lok Ivory Manufacturers. It was located in Kowloon in a nondescript, concrete, high-rise building that contained businesses and residences. The workshop was reached via Mr Pak Lok's flat and two security metal gates designed to keep out spies who might want to copy his ivory carving techniques. In one room were three men making the Canton balls for which Pak Lok was famous. The first craftsman formed a piece of ivory from near the tip of the tusk into a rough ball. The second man made the concentric balls using a lathe and the third used an electric drill to decorate the outer layer of the ball with a lace-like appearance. Full tusks were lying on the floor, while others were stored in a

cupboard. Ivory shavings covered the floor. These were used either to polish the finished ivory items, or sold to traditional Chinese medicine shops, or used as a fertilizer. Above Mr Pak Lok's flat were two other rooms with a craftsman in each, making the intricate decoration on the inside layers of the balls, using dentist drills. It took five days for three craftsmen to complete a 20-layer concentric ball in this workshop. There was a total of 10 craftsmen, all of them young, and they were paid for what they produced and thus worked extremely hard. Nathan Ivory Factory bought most of the balls to sell in Hong Kong or for export wholesale. The owner of this company would provide the tusks and supervise the carving to make sure he was getting what he ordered.

Most of the craftsmen in Hong Kong were not formally educated and few spoke English. They did not earn high salaries, and many worked long hours for six days a week. In 1980 the average craftsman earned the equivalent of USD 430 a month, which rose to USD 772 in 1989 during Hong Kong's economic boom (see Table 28). Compared with before the 1990 CITES ban, when Hong Kong was one of the world's main manufacturers of ivory items, there were no full-time ivory workshops left probably by the late 1990s. In the late 1980s there were 600 to 1,000 ivory craftsmen. Around 1988 an estimated 50% of ivory production by weight was used for name seals, 30-40% for netsukes and figurines, and less than 20% for jewellery (Milliken and Melville 1989). Most of these items were made in small so-called factories, mostly family-run enterprises.

Table 28
Average monthly earnings for ivory craftsmen in Hong Kong for various years

Year	HK\$	USD	Source
1979/80	2,150	430	Parker 1989 as quoted in Martin 1985
1988	5-10,000	640-1,280	Milliken and Melville 1989
1989	6,000	772	Lee Chat, then Chairman of the Hong Kong and Kowloon Ivory Manufacturers Association, pers. comm. 1989
2002	10-15,000*	1,282-1,923	William Lau, Star Company, pers. comm. May 2002

* These were full-time earnings: craftsmen normally were working part-time in 2002.

Some ivory workshops survived into the early 1990s, but by the mid-1990s almost all had closed down due to the fall in demand for new ivory objects. By 2002 there were probably no full-time ivory craftsman left in Hong Kong (AFCD officials and ivory traders in Hong Kong, pers. comm. May 2002). One prominent ivory dealer claimed he knew all the ivory craftsmen still working, because he occasionally asked one to repair an ivory object. He claimed that there were five or six left in 2002, but none working full-time. According to him and another large ivory dealer who gave almost identical figures, a craftsman working half-time in ivory would earn about HK\$ 5,000 or USD 640 a month. If by chance he would be required to spend a month's work on a special item, he might earn HK\$ 10,000-15,000 (USD 1,282-1,923), about the same for a craftsman carving stone.

What happened to all these former ivory craftsmen? In 1990, the Hong Kong Government set up a scheme to re-train several hundred ivory craftsmen by offering them expertise in jewellery-making, printing, and in other professions. While they were being re-trained they were given HK\$ 2,500 (USD 320) a month subsistence allowance (AFD, pers. comm. 1990). Some of these courses lasted several weeks. These training activities generally failed, however, according to AFD. The former ivory craftsmen who were re-trained to work in stone, for example, could not compete with craftsmen who had years of experience working that material. Due to the failure of this training exercise, it was stopped the same year it was started (AFCD, pers. comm. May 2002). Since unemployment was not a problem in Hong Kong until 1997, most of the former ivory artisans obtained jobs, but not the ones they wanted. Some became taxi or tuck drivers or waiters while at least one became a pastry chef carving decorations on chocolate cakes (David Melville, a former head of WWF Hong Kong, pers. comm. 1990).

Retail outlets and prices for worked ivory in Hong Kong

The investigator surveyed hundreds of shops and galleries selling ivory on Hong Kong island and in Kowloon. He visited most of the antique galleries, ivory specialty shops, curio stores and gift

shops outside the hotel complexes, souvenir shops in the hotel complexes, department stores, and a few jewellery shops. There were 85 shops found offering for sale 35,884 ivory items on open display (see Tables 29 and 30). Some of the larger ivory shops had thousands of ivory objects stored away in strong rooms, enclosed in cabinets and elsewhere in their retail establishments, but they were not counted, as they were not on view to the average customer.

Table 29
Number of retail outlets seen with ivory items and mammoth ivory items in Hong Kong in early 2002

No. of outlets		No. of items		Av. no. items/outlet	
Elephant	Mammoth	Elephant	Mammoth	Elephant	Mammoth
85	29	35,884	12,207	422	421

Table 30
Types of retail outlets and number of ivory items surveyed in Hong Kong in early 2002

Type	No.	Percentage of total	No. of items	Av. no. of items/outlet
Antique gallery	34	40	1,678	49
Department store	8	9	7,571	946
Gift shop not in hotel	14	16	699	50
Gift shop in hotel	12	14	1,271	106
Ivory specialty shop	14	16	24,446	1,746
Jewellery shop	3	4	219	73
Total	85	99	35,884	422

According to AFCD (pers. comm. May 2002), the number of active ivory traders (outlets) was 198 in early 2002, but this figure is probably too high. The investigator visited 45 outlets (43% of the AFCD estimate), skipping some of the shops above ground level that few tourists would find. Regrettably, previous studies by Parker, Milliken and Melville, Lee et al. and others did not count the numbers of ivory items on display for retail sale in Hong Kong, so no comparisons can be made with present-day data. There are also no prices given for individual items in previous reports for the 1980s and 1990s, and only a few are available from the late 1970s, which are reported below.

Of the 35,884 items offered for retail sale in early 2002, 24,446 were found in the ivory specialty shops, 7,571 in department stores, and 3,867 elsewhere (see Table 30). There were more antique shops with ivory, 40% of the total number of shops selling ivory, than any other single category of retail outlet. Ivory specialty shops and curio/gift shops outside hotel complexes followed. Jewellery shops found with ivory were the fewest (see Table 30).



Japanese-style netsuke

The most numerous items offered for retail sale were jewellery (43% of the total), followed by figurines and netsukes, then name seals and chopsticks (see Table 31). Retail prices are given in Table 32 for most of these items.

Table 31
Ivory items seen for retail sale in Hong Kong in early 2002

Item	Percentage of total
Jewellery	43
Netsukes and sculptures	30
Name seals	13
Chopsticks	10
Misc.	4
Total	100

Table 32
Retail prices for recently-made ivory items seen in Hong Kong in early 2002

Item	Size in cm	Range of price in USD	Average price in USD
JEWELLERY			
Bangle	1.25	23-44	32
	6	53-102	74
Bracelet with balls		42-92	67
Broach	4x4	11-42	27
Necklace, small beads		23-71	43
Ring	thin	7-36	17
FIGURINES			
Mostly humans and gods	9	292-1,209	485
	30	3,974-8,436	6,949
	38	8,333-8,769	8,551
	50	3,244-30,769	11,224
netsukes	5	31-192	97
TUSKS			
Carved	30	1,885	1,885
	60	2,674	2,674
	88	3,590	3,590
	120	112,821	112,821
	30kg	25,641-51,282	38,461
Polished	60	3,821	3,821
pair	78 kg	32,052	32,052
MISC.			
Box	6	104	104
Cigarette holder	10-18	33-36	34
Chopsticks, pair		18-86	59
Canton ball,			
11 layers		354	354
30 layers		3,692	3,692
42 layers		7,500	7,500
48 layers		12,179	12,179
52 layers		16,650	16,650
Mahjong set		2,949-6,154	4,393
Name seal, plain, round			
no hallmark	1.5 x 6	15-192	60
Pipe	9	37	37
	20	54	54

N.B. USD 1 = 7.8 HK dollars

Antique galleries

Most of the antique galleries surveyed were in two areas: in the Hong Kong Hotel arcade in Tsim Sha Tsui (the main tourist area of Kowloon), and in and around Wyndham and Hollywood Roads on Hong Kong island. The 34 antique galleries counted each offered for sale at least one ivory item made before World War II, but most of the 1,678 items were relatively new.

Although there were more antique shops selling ivory objects than any other type of retail outlet, the average number of ivory items (49) was the lowest of all the shops. These antique galleries, however, offered some of the most beautiful old carvings found in Asia. Perhaps the most delicately carved objects seen in the survey were 49 ivory fans nearly all made in Guangzhou in the 18th and 19th centuries. The oldest were not usually painted and were made for the Chinese elite. By the mid- 19th century fans were made also for the export market and were painted. The oldest one was carved around 1700. It was 18 cm long and priced at USD 6,150. The most expensive was an exquisite cockade fan made around 1800, priced at USD 19,230.

Probably the next most exquisite antique items were 13 card cases made in Guangzhou in the 19th century. Such objects were often elaborately carved, primarily for the European market. A card case 10 cm long was selling for USD 833-1,513, averaging USD 1,340. The most numerous antique pieces were sculptures and netsukes, mostly of humans. Almost all were carved in China. Prices varied widely from USD 242 for a 9 cm tall Buddha to USD 1,538 for a slightly erotic sculpture of a nude woman used by doctors in China in the 19th century to illustrate the female anatomy. Other antique ivory items, all from China, included boxes, cages for crickets (15 cm tall, made in the 1870s), chess sets, chopsticks, erotic figures, a foot scratcher, jewellery, name seals, opium pipes, rattles and vases. Prices varied from USD 256 for the 4.5 cm foot scratcher, USD 1,923 for a 45 cm opium pipe to USD 4,870 for the cages for crickets.

Over 90% of the ivory antiques on sale in Hong Kong were made in China. This was followed by Japan. Japanese items were netsukes, a 13 cm female figurine made in the late Meiji period for USD 1,600, a 19th century paper knife for USD 744. From UK there were hairbrushes, from France a late 19th century domino set for USD 641, and from Indonesia, a pair of Bali-made late 19th century bangles for USD 795 each.

Ivory specialty shops

There were 14 ivory specialty shops found that had huge quantities of ivory items for sale: 24,446. As in the past, nowadays most ivory items in Hong Kong are still openly displayed in these specialized shops that sell ivory almost exclusively, and more recently mammoth ivory objects have also been for sale in them. Since the early 1990s most of the well-known ivory specialty shops have closed down, and the owners have gone into new businesses. According to the Yellow Pages in Hong Kong telephone books, the number of ivory businesses advertising in these directories has declined from 264 in 1988 (Milliken and Melville 1989) to only 38 in 2002 (*Yellow Pages Business 2002*, 2002). In the 1980s and early 1990s several of the larger ivory companies even took out small advertisements, along with a listing in the Yellow Pages, but in the 2002 directory there was not a single advertisement for any ivory company.

The two largest ivory specialty shops in Hong Kong in 2002 were located in Central (on Hong Kong island) and displayed 5,275 and 4,917 items. These were some of the largest quantities in Asia. Neither shop has good business, not being close to tourist hotels. In one the shopkeeper could not even speak English. They claimed to sell most of their items to Hong Kong Chinese, especially chopsticks and ornaments, and to Europeans and Japanese. The most common items sold were figurines, jewellery and chopsticks, all small items that can be hidden in luggage.

There were several large ivory specialty shops in Tsim Sha Tsui catering to the huge number of foreign tourists who visit Hong Kong. Tourism has increased sharply since the 1990 CITES ivory ban. The number of foreign visitors (tourists, businessmen and others) to Hong Kong increased from 6,795,413 in 1991 to 13,059,477 in 2000 (Hong Kong Government 2001), the largest number in Asia. The most numerous visitors have recently been the Japanese (1,382,417 in 2000) who are one of the main buyers of the netsukes, name seals and chopsticks. Other prominent buyers include Europeans, Americans and then Hong Kong people. In order to encourage the Japanese and other foreigners to buy ivory, some of the ivory specialty shops offer discounts of up to 50%. They also stay open in the evenings to

attract tourists who are out sightseeing during the day. Some of them are open even on Sundays. Many of the ivory objects seen in these specialty shops were made in China. The quality of the Chinese items varied enormously; jewellery was of mediocre quality, while some of the larger sculptures and scenes of traditional life of the Chinese were crafted with considerable skill.

Both Hong Kong craftsmen prior to 1991 and Chinese carvers made erotic figures for the Hong Kong market, and these were usually hand coloured. There were hundreds for sale in Hong Kong in 2002; most of them were crudely carved copulating couples. Some were quite realistic with much carved detail, but occasionally the sexual organs were greatly exaggerated in size. Most erotic figurines were small, around 5 cm, so they were attractive to foreign customers, being easy to smuggle, and were reasonably priced at around HK\$ 500 (USD 64) to HK\$ 650 (USD 83).

Curio stores/gift shops not in the hotel complexes

There were 14 curio stores/ gift shops found selling ivory items that were not in the hotel complexes. Most were in Tsim Sha Tsui, near some of the major hotels. They displayed an average of 50 ivory items compared with 1,746 in the average ivory specialty shop. These items were the usual trinkets: jewellery, name seals and small figurines, and were bought by foreign tourists, especially the Japanese. There were almost no well-carved or large objects for sale. Some of these retail outlets price their items in Japanese yen in order to attract Japanese customers.

Souvenir shops in the hotel complexes

Although almost all major tourist hotels and their adjacent retail shops on Hong Kong island and in Kowloon's Tsim Sha Tsui were surveyed, only 12 displayed ivory, mostly in the older hotels. In total there were over 1,000 items with an average of 106 items per shop. Perhaps few sell ivory because most of these hotels and shops date from after 1990 and they would not stock items that were not selling well. Some tourists prefer not to leave their hotels at night but to shop inside them. Prices tend to be higher in these retail outlets compared with shops elsewhere. For example, a shop in the famed and expensive Peninsula Hotel offered plain round name seals for HK\$ 1,500 (USD 192) which were for sale elsewhere for an average of under HK\$ 500 (USD 64). The shop manager in the hotel stated that most of his customers for ivory were Japanese and his prices, although high for the name seals, were lower than for similar ones found in Tokyo, which is hardly the case.

As expected for the exclusive hotel shops, there were a few very expensive ivory items to cater for some of the richest tourists in the world who stay at these hotels. In the Peninsula Hotel was a 90 cm long sculpture of a nude female, used in the past by traditional Chinese doctors, selling for HK\$ 250,000 (USD 32,051).

Department stores

Most department stores do not sell ivory. Only eight of those visited did and these displayed a total of 7,571 ivory items. Most of them specialize in Chinese mainland goods, such as baskets, clothes, ivory items, jewellery, lacquer ware and porcelain. Some of the prices for ivory items were much lower than the equivalent goods made in Hong Kong due to the lower salaries on mainland China, sometimes a tenth. This price difference was even bigger because of discounts of up to 50% on ivory items made in China. Compared with the curio shops and the hotel souvenir shops, there was a much larger selection of ivory goods, especially for bigger objects. There were also some very expensive items, such as an 11 kg carved tusk 100 cm long for HK\$ 240,000 (USD 30,700) after a 50% discount, and a 50 cm sculpture of an old man for HK\$ 153,000 (USD 19,600) after a 40% discount.

The use of ivory substitutes in Hong Kong

With the sharp decline in the sales of ivory items after the CITES ivory ban, Hong Kong businessmen explored other merchandise to sell. An obvious choice was to replace elephant ivory with other substances such as mammoth tusks and hippo teeth, along with cheaper alternatives.

Mammoth tusks

Mammoth ivory was and still is the most popular high-quality substitute for elephant ivory. Since

labour charges are much lower on mainland China, Hong Kong businessmen started importing significant quantities of mammoth tusks in 1994, then exporting them to mainland China for manufacturing into a variety of items. These objects were then brought to Hong Kong for export mostly to Europe and North America or for retail sale in Hong Kong. This switch, from the production of ivory items in Hong Kong to the making of mammoth ivory objects on mainland China for the Hong Kong and foreign market, is one of the most significant changes to have occurred in the 1990s in the Hong Kong ivory industry.

In the early 1990s not much mammoth ivory was brought into Hong Kong, according to the Census and Statistics Department of the Hong Kong Government. Starting in 1994, however, fairly large quantities were imported (see Table 33). From 1994 to 2001 69,565 kg of mammoth tusks were imported into Hong Kong for an annual average of 8,696 kg. Most were imported from Russia (59%) followed by Austria and then Germany. The origin of most of the tusks was Russia followed by Canada. The declared price per kg did not vary much from 1994 to 2000, averaging at USD 58/kg per year (see Table 33).

Table 33
Official imports of mammoth tusks into Hong Kong. 1992-2001

Year	Country of export	Kg	Value in USD/kg
1992	USA	20	462
	Germany	224	131
	Total	244	158
1993	Macau	598	42
	Germany	810	28
	Total	1,408	34
1994	Mainland China	80	64
	Macau	329	70
	Germany	1,375	114
	Austria	11,025	45
	Total	12,809	53
1995	Canada	1,272	33
	Germany	1,469	32
	UK	2,116	86
	Mainland China	2,342	11
	Total	7,199	41
1996	Germany	2,897	73
	Mainland China	3,257	44
	Russia	6,050	76
	Total	12,204	67
1997	Germany	352	109
	Russia	5,648	63
	Total	6,000	65
1998	France	140	82
	Mainland China	552	52
	Russia	8,342	56
	Total	9,034	56
1999	Germany	1,170	53
	Russia	5,713	63
	Total	6,883	61
2000	Mainland China	58	208
	Russia	4,983	57
	Total	5,041	59
2001	Mainland China	25	200
	Russia	10,370	60
	Total	10,395	60

N.B. USD 1 = 7.8 HK dollars

Source: Hong Kong Government, Hong Kong Trade Statistics, various years

After the mammoth tusks are imported into Hong Kong they are graded. The best quality tusks sold wholesale in Hong Kong in 2001 for USD 220/kg, average quality USD 45/kg, and poor quality USD 10-20/kg. Most of these tusks sold wholesale for between USD 60 and USD 160/kg. Some of the full tusks stay in Hong Kong and are sold wholesale or retail, usually polished. Any carving is always done on mainland China. From 1994 to 2001, 42,636 kg of mammoth tusks were re-exported, an annual average of 5,329 kg, mostly to be manufactured into objects for Hong Kong businessmen (see Table 34). The figure of 42,636 kg is 61% of the total weight of the tusks imported into Hong Kong over this recent eight-year period. Almost all these tusks re-exported from Hong Kong went to China (93%) with smaller amounts to Germany 4%, USA 1% and Macau 1% (see Table 34). In China the Hong Kong businessmen set up several of their own factories, usually with a mainland Chinese partner, to make the mammoth tusks into objects such as netsukes, figurines, jewellery and carved tusks. For example, one of the largest manufacturers of mammoth items based in Hong Kong opened a factory in Zhongshan, China, north of Macau, in 1997 where he could employ skilled and cheap Chinese labour. In 2001 he had 100 craftsmen who ate and slept at the factory. About 80% of the time they worked in mammoth ivory and 20% in teak wood, using mostly electric tools. They were paid an annual monthly salary of 800 renminbi or RMB (USD 98) with the finest carvers receiving the equivalent of about USD 300 a month. In 2001 this factory consumed about 3 tonnes of mammoth tusks, but there was 60% waste since a large part of the tusk cannot be well carved.

Table 34
Official re-exports of mammoth tusks from Hong Kong. 1994-2001

Year	Importing countries	Kg	Price in USD/kg
1994	Mainland China	360	64
	Macau	427	64
	Total	787	64
1995	Mainland China	3,392	53
	Total	3,392	53
1996	Mainland China	4,645	104
	Total	4,645	104
1997	Japan	135	149
	Mainland China	3,994	60
	Total	4,129	63
1998	Japan	12	449
	Spain	112	220
	USA	120	331
	Mainland China	8,288	54
	Total	8,532	61
1999	USA	76	263
	Germany	1,804	49
	Mainland China	5,403	71
	Total	7,283	68
2000	Japan	1	385
	USA	255	46
	Mainland China	4,884	56
	Total	5,140	56
2001	Mexico	2	2,244
	USA	49	55
	Mainland China	8,677	49
	Total	8,728	49

N.B. USD 1 = 7.8 HK dollars

Source: Hong Kong Government, Hong Kong Trade Statistics, various years

In early 2002 the investigator counted 12,207 mammoth ivory objects in 29 shops in Hong Kong, most of them the same ones that sell elephant ivory. Quantities varied from 1 to 3,799 per shop

with an average of 421 items. The most common items were netsukes and figurines, which made up over 90% of all the mammoth ivory objects. They were mostly small, around 5 cm, representing humans or animals. Most were stained brown using tea, coffee and various incenses to emulate some of the Japanese netsukes and figurines that are sometimes stained brown with a dried fruit. Turning items brown also makes them look older and disguises the dark imperfections on mammoth tusks.

The average price for these netsukes and figurines was USD 85 and USD 590 (see Table 35), a very low price compared with that for similar ones in Japan. The quality of workmanship was not quite up to Japanese standards, but was reasonably good and certainly acceptable to the average buyer. In fact, the quality of carving was at least as high as that of the elephant ivory items. Amongst the more popular small figurines were rather graphic erotic couples, usually a man and woman copulating in one of many different positions. These 5-cm couples sell from USD 115 to 205.

Table 35
Retail prices for new mammoth ivory items seen in Hong Kong in early 2002

Item	Size in cm	Range in price in USD	Average price in USD
FIGURINES			
Mostly humans and gods	18	462-718	590
	50	30,769	30,769
	60	62,821	62,821
Netsuke	5	13-205	85
TUSKS			
Carved	23	1,474	1,474
	55	3,333	3,333
	90	5,769	5,769
	120	41,026	41,026
	150	112,821	112,821
	180	174,359	174,359
MISC.			
Chess set	4 cm/piece	1,154	1,154
Junk	105	32,051	32,051
Name seal, plain, round no hallmark	1.5 x 6	26	26
Snuff bottle	6	64	64
	10	215	215
Vase	23	3,077	3,077
	30	3,462	3,462

N.B. USD 1 = 7.8 HK dollars

There were large objects made of mammoth ivory, such as vases and groups of human skeletons that are popular with American buyers. There were some very large objects, especially polished and carved tusks, and these were extremely expensive. One shop owner in early 2002 sold a pair of polished mammoth tusks weighing 195 kg in total to an Italian for USD 100,000. Another polished pair in the same shop weighing 140 kg in total was offered for USD 38,462 while a single one weighing 93 kg was USD 44,872. Carved mammoth tusks were the most expensive items made of mammoth ivory. One such 30 kg tusk, which originally weighed 48 kg, with hundreds of small figurines carved along it, was priced at USD 51,282. The most expensive of all was a 180 cm long highly curved tusk on which were elaborately carved traditional Chinese warriors fighting one another. It had taken two carvers in China five and a half years to complete. The retail price was USD 230,770.

Most of the buyers for wholesale (and retail) mammoth objects are from the USA, countries within the European Union and Japan, in that order. There appears to be no significant criticism from the international conservation community against buying these items, as the mammoth became extinct over 10,000 years ago. Compared with the early 1990s, sales of mammoth ivory

items have expanded considerably in Hong Kong and abroad. Retail sales, although of less magnitude than wholesale goods, have been helped because few countries demand a government licence to export or import mammoth ivory items.

Hippo teeth

Hippo teeth were put onto Appendix II of CITES in 1994, but are allowed to be imported with proper permits. Compared to mammoth tusks there are not many items made from hippo teeth, as they are much smaller, tend to crack more easily and are more difficult to carve because they are harder. For every 20 mammoth ivory items seen in the shops, there were one or two hippo teeth items. The raw material is imported from Africa and in early 2002 it sold wholesale in Hong Kong for USD 52/kg. Most hippo teeth are sent from Hong Kong to China, because of the cheap labour, to be made into items such as netsukes and small figurines. At least eight retail outlets selling hippo teeth were noted in Hong Kong during this survey, but there would have been more, if fully counted. Some of the hippo teeth were crudely carved such as 10-cm crocodiles selling for HK\$ 180-250 (USD 23-32). Good carvings such as an 18-cm turtle and a 60-cm dragon were USD 577 and USD 7,051 respectively. Unusually, there was one very expensive item made from hippo teeth: a 180 cm long barge with many human figurines for USD 120,000.

Other ivory substitutes

There are a variety of even cheaper alternative materials to elephant ivory, mammoth tusks and hippo teeth. These are cow bones, fish bones, resins and stone powder. None has the feel or texture of ivory, being lighter in weight and less attractive. Most shopkeepers do not try to deceive potential customers, but sell items made from these substances quite cheaply.

Vendors' views on ivory market trends and the future

Almost all shop owners in Hong Kong see very little future for their ivory business. Many of the large ones closed down in the 1990s and those that were still in business in 2002 were hoping to sell off their old stock and then stop selling this line of merchandise. Almost no proprietor was buying new ivory items in early 2002. Some owners, while still offering ivory items for sale, had diversified into mammoth ivory objects, which were selling much better. For example, the owner of one very large shop on Hong Kong island (which had on display over 3,000 elephant ivory items and almost 4,000 mammoth ivory items), admitted that in 2001 90% of the gross sales were mammoth ivory objects, only 5% elephant ivory items and 5% hippo teeth objects (anon. ivory trader, pers. comm. May 2002).

No ivory vendor believed that CITES regulations would change in the near future to allow imports of raw ivory into Hong Kong or permit the commercial export of ivory items either wholesale or retail from Hong Kong. All the vendors were extremely pessimistic. Most were examining other business opportunities that would be more lucrative and have a brighter future.



Chinese late 18th Century fan.

China

The legal position of the ivory trade in China

CITES entered into force in the People's Republic of China on 8 April 1981. The *Wild Animal Protection Law* of 1 March 1989 categorizes protected species as Class I and II, in conformance with CITES classifications Appendix I and II respectively. The Asian elephant was put into Class I in 1989 at the time the law was enacted, though this species has been on CITES Appendix I since 1976. On 14 April 1993 the African elephant was also accorded Class I status under Article 24 of the *Rules for the Enforcement of the Protection of Terrestrial Wildlife*. The sale or purchase of Class I protected wildlife or their products is prohibited, except for those owned before listing in 1989. In the case of ivory, all importers, exporters and manufacturing workshops were required to register with the CITES Management Authority between August 1989 and 1 January 1990. Those that did not register prior to the deadline were prohibited to import, export or work ivory. Some 110 companies registered (Lee and Parry-Jones 1997).

The export of ivory requires a permit issued by the CITES Management Authority with the agreement of the Endangered Species Scientific Commission and the Wildlife Conservation Department and must be cleared by Customs after examination of the export permit. If ivory can be proved to be from pre-ban stock, it can be exported. Seized items are required to be turned over to the State Treasury under the 1987 *Customs Law*, and violators can be subject to prosecution under China's *Criminal Law*. It is not clear what happens to ivory after seizure by any of China's enforcement agencies (O'Connell-Rodwell and Parry-Jones 2002), though in 2000 the Environmental Protection Agency found a consignment of seized illegal ivory in the Huang Po auction house in Guangzhou that had been valued by the Ngai Gong ivory carving workshop, strongly suggesting it was to be sold (anon. reviewer, in litt. March 2003).

It is legal to process and sell raw and worked ivory with a permit within China from stocks held by registered companies prior to 1 January 1990. Technically, therefore, the private companies that have begun processing and selling ivory since economic liberalization began in the 1990s are operating illegally, as they were not registered to do so before 1990. If asked, workshop staff and ivory vendors say their ivory is pre-1990. Since the ivory itself was never registered there is no way to confirm this. In late 2002 the CITES Management Authority of China carried out a national survey of ivory stockpiles and several of the companies surveyed declared stocks acquired well after 1990. The source of the ivory is not indicated in their survey table (WWF-China, in litt. June 2003; China CITES Management Authority (CMA) 2002).

Under China's *Criminal Law*, the smuggling, purchase or sale of protected wildlife or their products worth between RMB 100,000 (USD 12,195) and RMB 200,000 (USD 24,390) is punishable by 5-20 years in prison and if worth more than RMB 200,000 the punishment can be life imprisonment or the death penalty (*China Daily*, 10 May 2002). The price standards used to value ivory, however, are quite artificial. In 2001 the State Forestry Administration issued *Notification 2001/234* to value one whole tusk or pieces equalling one tusk to be RMB 250,000 and cut pieces of ivory equalling less than one tusk at RMB 5,000. The size of the tusk is not specified. The penalties for ivory smuggling, therefore, are harsh and reflect the determination of the Chinese Government to address the illegal ivory trade situation in the country.

The Chinese Government has become quite strict about the illegal import and export of ivory, but internally the "enforcement of this [Wild Animal Protection] law is weak and the situation is exacerbated by vagaries within the law and overlapping responsibilities between government agencies" (TRAFFIC East Asia in litt. May 2002). Raw ivory stocks have not been registered and there is no system of inspections of ivory workshops or retailers, thus it is not possible to ascertain the source of ivory on the market. China is, however, beginning efforts to register commercial ivory stocks and to conduct 'experimental' inspections of ivory importers, exporters, manufacturers and retail outlets (China CMA 2003) and to overcome other deficiencies (China CMA 2002).

A Chinese delegation that visited Kenya in March 2000 told the Kenyan Minister of the Environment that China supported the 1990 CITES ivory ban (*The Daily Nation*, 10 March 2000). The position of the Chinese CITES delegation at the 12th Conference of the Parties in 2002 was ambiguous, however. It is not known whether they supported or opposed the southern African

proposals to renew limited ivory trading (TRAFFIC, pers. comm. June 2003; Reuters, 5 November 2002). For further details on Chinese wildlife laws and procedures see O'Connell-Rodwell and Parry-Jones (2002).

Introduction

Guangzhou (population 6.7 million), Shanghai (population 14.2 million) and Beijing (population 12.6 million) were visited between 26 March and 23 April 2002. Guangzhou (Canton) and Beijing have long been known as the biggest ivory carving centres in China (Martin 1988; Laurie 1989), and Shanghai, as an economic and tourism hub, was expected to be an important ivory retail location.

The ivory industry in China needs to be understood within the context of the economic transformation that has taken place in the country over the past 15 years, particularly in the eastern cities. From a poor and isolated country China has emerged as the sixth largest trading nation in the world. By the end of the decade it is expected to displace even Japan and Germany to become the second largest after the USA. Farmland has been transformed to factories, with Guangdong Province's Pearl River Delta becoming the centre of the manufacturing explosion. Thousands of factories have been built in Guangzhou, Shenzhen and Dongguan, employing millions of former peasants. The country's acceptance of capitalism, combined with an abundance of cheap labour, massive foreign investment and the reduction of international trade barriers has sparked this economic eruption. As a result, Hong Kong, Taiwan and Singapore have lost thousands of jobs, even whole industries, as production has moved to China (Iritani and Dickerson 2002). Ivory processing was one of these industries. China has become what is probably the largest ivory manufacturing and exporting country in the world.



Map of China

In the 1980s and 1990s with the progressive liberalization of China, the ivory processing factories opened their doors to foreigners and co-operated with visitors in answering questions and allowing photographs. Television documentaries and published undercover investigations surrounding the debate concerning the downlisting of certain southern African countries' elephant products, including ivory, to Appendix II in 1999 and 2000 were highly critical of China's ivory industry, and included the names and photographs of ivory retail shops, workshops and individuals. Chinese ivory industry personnel are now very guarded and suspicious of Western foreigners, and foreigners are no longer allowed into ivory workshops, though questioning in showrooms and shops was permitted in places.

History

China has one of the longest continuous records of carving ivory in the world. There were 20 ivory carvings found in the Neolithic site of Hemudu in Zhejiang Province dating to about 5000 BCE. During the Shang Dynasty (1600-1030 BCE) ivory was used to make items such as hair pins, fish hooks, sword handles, jewellery and vessels. Decorative objects were carved in relief showing dragons, cicadas and birds. Guangzhou was importing worked ivory by sea from Persia during the Warring States period (475-221 BCE), some of which was found in a tomb in 2000 (*China Daily*, 6 June 2000). In the Han Dynasty (206 BCE-220 CE) ivory items were put in graves and ivory was sent from the southern lands north to the rulers as tribute (St Aubyn 1987). Al Masudi (956 CE) wrote that the Chinese used long, straight tusks for carrying palanquins and that they burned ivory as an incense before sacred images and on altars (Kunz 1916).

Buddhist and Daoist figurines have long been important ivory carving subjects, as they are considered to bring luck of various types when displayed in the home. The oldest ivory Buddhas are known from the 13th century CE, and the Eight Immortals (the Ba Xian) date from the 14th century. Other common figures from Ming Dynasty times (1368-1644 CE) are Kwan Yin, (the Goddess of Mercy, a bodhisattva that corresponds to Avalokitesvara); Guandi, the God of War, based on the Han Dynasty general and hero Guo Guan; Li Tiekuai, a sage depicted as a beggar holding a crutch and pilgrim's gourd; Fu, Lu and So, three Immortals who are the gods of luck, money and long life respectively; and Zhongli Kwan, an Immortal who carries a fan to revive the souls of the dead (Watson 1984). These subjects are still carved today.

The famous Canton or magic balls were first referred to as *gui gong qui* (devil's work balls) as early as 1388. These concentric, elaborately carved balls became popular with European traders in Guangzhou (Canton) in the 17th to 19th centuries. Emperor Kangxi of the Qing Dynasty established the Imperial Ivory Works in about 1680 in Beijing (Kunz 1916). The Europeans introduced tobacco snuff and in 1705 Kangxi's palace workshops were producing snuff bottles. The Portland Art Museum in USA held a large Chinese snuff bottle exhibition in June 2002 and ivory examples are still found for sale today in China. In 1758 there was an ivory workshop in the Forbidden City during the Qianlong reign, the artistic peak of Chinese ivory carving (St Aubyn 1987; Clunas 1996).

Europeans stimulated the Chinese ivory industry from the 16th century on, and the Spanish from the Philippines and Portuguese from Macau taught carvers how to sculpt Catholic motifs such as the Madonna, Christ on the cross and various saints. Zhangzhou on the Fujian Province coast became a major European-style ivory carving centre. The British, Dutch and Danes also began trading in ivory. Guangzhou was the main ivory carving centre from the 18th century to 1930. Canton balls, Chinese junks and dragon boats, jewellery, pagodas, boxes and containers of various sorts, vases, combs and hairbrush handles, paper-knives and toys were popular items. In the 19th century ivory fans with intricate fretwork and chess sets became popular in the UK, USA and elsewhere. In the 1920s all the ivory workshops in Guangzhou were found on one street and the carvers were organized into a guild, though they were poorly paid (Kunz 1916; St Aubyn 1987).

In the late 19th and early 20th centuries China began to import large quantities of African ivory tusks from Europeans, who had now set up colonies in Africa, and in response to the difficulty of supplying a growing ivory demand from dwindling herds of Asian elephants. In the 1930s and 1940s the ivory industry was interrupted by war, and after the Communist takeover in 1949 many carvers fled to Hong Kong. During the late 1960s and early 1970s, themes of the Cultural Revolution became popular subjects for ivory carving: Chairman Mao, Red Guards, People's Heroes, etc. (Markbreiter 1987). Following the Cultural Revolution in 1976 the Chinese Government set about

reviving the ivory industry and by the late 1980s there were about 100 ivory factories employing around 1,500 carvers (Martin 1988; *China Daily*, no date, 1989).

In antiquity the Asian elephant was found over much of China and around 1000 BCE still ranged as far north as the Yellow River basin (Clunas 1996). Human population growth and agricultural expansion have inexorably pushed the few remaining animals into the southern part of Yunnan Province bordering Myanmar and Laos, mainly in the Xishuangbanna Nature Reserve. In 1985 there were an estimated 230 wild elephants in this area and the population was increasing at a rate of 3-5% a year (*Xinhua News Agency*, 29 March 1985). In 2000 the numbers were thought to have grown to 250-300 (Kemf and Santiapillai 2000). There are no domesticated elephants in China used in the timber industry as seen in South East Asia, though many are used in the entertainment industry and are displayed in zoos. The demand is so high that live elephants are imported from other Asian countries and from Africa. Between 1989 and 2000 some 57 elephants are known to have been imported, 46 of them wild (O'Connell-Rodwell and Parry-Jones 2002).

The main threat to Chinese elephants is the expansion of rubber plantations and human-animal conflict (Kemf and Santiapillai 2000), though the local people around the nature reserve have had their firearms confiscated to reduce poaching after elephant killings were reported from 1992 to 1994 (Lee and Parry-Jones 1997; Parry-Jones 2001).

Sources and prices of raw ivory in China from 1981 to 2002

Almost nothing is known about China's ivory industry prior to about 1980 as the country was essentially closed to Westerners after the Communist take over in 1949 up to the early 1980s. No one has conducted a detailed study of how the ivory carving trade operated prior to 1980.

China imported legally an average of 32 tonnes of raw ivory a year from 1980 to 1989, with the quantities increasing each year (Martin 1988; Laurie 1989). All this ivory originated in Africa and transited Hong Kong, Singapore or European countries. In 1986 19 tonnes and in 1989 over two tonnes of illegal raw ivory from Africa were seized in China. This was later released to government ivory factories (Martin 1988; Lee and Parry-Jones 1997; EIA 2000a). According to the *Customs Law* of 1987 the 1989 seizure should have been turned over to the State Treasury. In addition, an unknown quantity of illegal Asian elephant raw ivory from Myanmar, Laos and Vietnam was smuggled overland across the porous border (Martin and Stiles 2002). In 1999 an unspecified number of tusks coming from Myanmar was seized at Ruili in Yunnan Province (O'Connell-Rodwell and Parry-Jones 2002).

Even China supplied ivory to the market from its own few elephants in the early 1990s. Between 1992 and 1994 poachers killed at least 39 Chinese elephants and 381.4 kg of tusks were confiscated in Xishuangbanna in Yunnan Province. Four poachers and smugglers were convicted and executed (*New China News Agency*, November 1995, in Lee and Parry-Jones 1997). The 2002 government survey showed the Xishuangbanna Forest Administration holding only 140.8 kg, however.

In 1989, prior to the 1990 CITES ivory ban, Laurie (1989) estimated that China held 50 tonnes of raw ivory stocks. The entire province of Guangdong, in which Guangzhou is located, only had stocks to supply two months of production. Tianjin, a port near Beijing, had the only large stocks in the country, but the quantity was unspecified (Laurie 1989). In 1990 Caldwell and Luxmoore (1990) and Martin (1990a) stated that the government import-export companies and ivory workshops held more than 200 tonnes of ivory, most of it worked. Additional worked ivory was located in retail outlets.

Prior to 1990, government-owned corporations under the Ministry of Foreign Trade (China National Arts and Crafts Import Export Corporation, CNACIEC) and the Ministry of Light Industry (National Arts and Crafts Company) controlled the ivory processing workshops and import and export of ivory. There were no privately-owned ivory workshops (except individuals working secretly in their homes) and the government was the sole source of legal raw ivory, though a couple of private companies could buy raw ivory from government companies and re-sell it internally. Laurie (1989) reported that individual carvers, who worked privately, bought the illegal ivory smuggled from Africa and Asia and sold it to tourist shops after carving. Table 36 shows the prices of raw ivory paid by importers from 1981 to 2002.

Esmond Martin



This traditional Japanese warrior was carved in the 1990s; such ivory sculptures are rarer nowadays.

Esmond Martin



An 18 cm Japanese ivory figurine such as this sells for USD 24,000.

Off-cuts and other lower quality pieces of ivory are made into jewelry, as seen here for sale in Osaka. In the background are ivory name seals.



Esmond Martin

Esmond Martin



Each year at the Goko-Ku-ji Temple in Tokyo, a Buddhist ceremony takes place to praise the elephant; it is supported by the ivory traders. On the altar can be seen a tusk.



Some shops in Hong Kong sell mammoth ivory items nowadays, a good substitute for elephant ivory.



This pair of swans carved from mammoth ivory was on sale in a Hong Kong department store for USD 62,820 after a 50% reduction in price due to the lack of demand for large prices.



In the 1980s, craftsmen in the DaXin Ivory Carving Factory in Guangzhou, China, produced large and ornate carvings.



The DaXin ICF was one of several government-owned factories in China that employed hundreds of ivory craftsmen in the 1980s.

Daniel Stiles



This elderly carver in Guangzhou started his own ivory outlet after being made redundant from the DaXin ICF.



Daniel Stiles

High quality mammoth ivory can be as white and as well carved as elephant ivory.

Daniel Stiles



Most ivory in China is carved today in privately-owned workshops in Guangdong Province using smuggled African ivory.



A customer chooses an ivory bangle in the Jade Market in Guangzhou.

The largest ivory outlet in Guangzhou is Yue Ya Tang.



The Shanghai Friendship Store had many large tusks that were carved or polished and sometimes painted.

Table 36
Prices of raw ivory in China. 1981-2002

Year	Price USD/kg	Av. tusk size in kg	Buyer	Source
1981	60	18	CNACIEC, Guangzhou	Laurie 1989
1985	63	<14	DICF, Guangzhou	Martin 1988
1985	70	15-29	DICF, Guangzhou	Martin 1988
1985	85	30	DICF, Guangzhou	Martin 1988
1988	186	7	CNACIEC, Guangzhou	Laurie 1989
1989	250	6	CNACIEC, Guangzhou	Laurie 1989
1989	250	10	BICF, Beijing	Laurie 1989
1989	400	25	BICF, Beijing	Laurie 1989
1989	250-350 (white)*	10	CNACIEC, Beijing	Laurie 1989
1989	350 (yellow)*	10	CNACIEC, Beijing	Laurie 1989
1989	200	5	BICF, Beijing	Martin 1990a
1989	250-300	10	BICF, Beijing	Martin 1990a
1989	400-500	20	BICF, Beijing	Martin 1990a
1989	197	6	Private, from Myanmar	Laurie 1989
1989	256	10	Private, from Myanmar	Laurie 1989
1990s	172-273	?	Private, mostly African	O'Connell and
2000	372	?	Private, from Myanmar	Parry-Jones 2002
2002	120-170	?	Private, from Africa	China Daily 2002 and Wan Ziming, in litt. December 2002

CNACIEC — China National Arts and Crafts Import Export Corporation

DICF — DaXin Ivory Carving Factory

BICF — Beijing Ivory Carving Factory

* White usually means the softer savannah elephant ivory while yellow refers to the harder forest elephant ivory. The 'yellow' ivory can be pinkish at times.

Taking the average weight 18 kg tusk in 1981 as the reference, the price rose from USD 60/kg in 1981, to USD 70/kg in 1985, to USD 400/kg in 1989. The sharp price increase in 1989 after only a small price rise from 1981 to 1985 was probably due to ivory stockpiling by consumer countries prior to the 1990 CITES ban. The CNACIEC reported in April 1989 that it could no longer afford to buy ivory on the open market due to the high prices that Japanese buyers were paying (Laurie 1989).

The general manager of the DaXin Ivory Carving Factory (DaXin ICF) said that in the 1990s the average price of black market raw ivory was RMB 1,500/kg (USD 172-273/kg at RMB 5.5-8.7 = USD 1). In 2000 a Forestry Police officer in Yunnan Province stated that Asian tusks sold for RMB 3,000/kg (USD 372/kg at RMB 8.07

= USD 1) (O'Connell-Rodwell and Parry-Jones 2002). The 2000 reported Asian ivory was probably from Laos and/or Vietnam, since less than 5-kg tusks in Mandalay, Myanmar, sold for only about USD 150/kg in 2000 (Stiles, unpublished) while Laotian and Vietnamese raw ivory sold for USD 350-500/kg (Martin and Stiles 2002). The only published information on current prices in China comes from the *China Daily* newspaper of 10 May 2002. In 1998, entrepreneur middlemen bought African raw ivory (countries not specified) from smugglers at the Beijing airport and sold it to ivory factories in Beijing and surrounding provinces for USD 120-170/kg (price verified by Wan Ziming, Director of the Division of Enforcement and Training, CITES Management Authority of China, in litt. December 2002). The size of the ivory pieces was unspecified. The middlemen said they made a USD 2.40-3.60/kg net profit, so they probably paid about USD 100-150/kg to the smugglers. This price fits well with the price reported (USD 144/kg) in August 2002 for African raw ivory seized at the Bangkok airport (*East African Standard*, 23 August 2002). Raw ivory could be bought for USD 15-30/kg in parts of southern, central and West Africa in 1999 (Martin and Stiles 2000), so the smugglers must have made a good profit. The tusks from southern Africa that were being sold to Hong Kong traders for USD 25-50/kg in 2002 (EIA 2002) indicates that prices have gone up in southern Africa since 1999, suggesting increased demand in China.

Raw ivory prices in Mandalay, Myanmar, in February 2002 ranged from USD 155-175/kg for 5-10 kg tusks, up to USD 375/kg for over 10-kg tusks. Prices in Hanoi, Vietnam, in March 2002 were

USD 300/kg for cut blocks of smuggled Angolan ivory up to USD 400/kg for tusks of Asian ivory weighing over 5 kg (Stiles, unpublished 2002). Raw and worked ivory from Myanmar is smuggled into China now from Myitkyina and Mandalay via Mu Sei to Ruili (called Shweli in Myanmar) (Parry-Jones 2001; Martin and Stiles 2002). Raw ivory sold for USD 250-300/kg for over 2-kg tusks in Laos in 2001 (Martin and Stiles 2002), and Laotian tusks may find their way into Yunnan Province, along with other wildlife products that are known to enter China, via the Mo Han border crossing (Parry-Jones 2001). EIA (2002) reported that a retail vendor in Beijing selling worked ivory manufactured in Zhenping, Henan Province, said that some of his ivory came from Myanmar and India, but no prices were given.

Workshop owners must therefore pay much higher prices for ivory smuggled into China from South East Asian sources than for African ivory, demonstrating the competitive advantage of African ivory and the economic incentive to poach African elephants. Chinese traders do not make the quality and price distinctions between the usually hard Asian and central African ivory and the soft southern and eastern African ivory that Japanese and Taiwanese traders do, though they tend to prefer African ivory because of its larger size.

China took out a reservation on the 1990 CITES ivory ban that ended on 11 January 1991. During the reservation period in 1990 China declared to CITES legal imports of 9.1 tonnes of worked ivory and 271 kg of raw ivory. Between 1992 and the end of 1998 some 423 carved ivory pieces and 30 tusks were declared imported. In 1999 no ivory was reported to CITES being imported (O'Connell-Rodwell and Parry-Jones 2002). In 1990 China declared exporting 9,442,401 ivory carvings and 2.4 tonnes of carvings which, if accurate, would more than account for the 9.1 tonnes imported, leaving a large deficit in the carved ivory stocks for that year. TRAFFIC East Asia was unable to clarify for this report whether the 2.4 tonnes of carvings were included in the 9 million plus ivory carvings exported or was additional to it (TRAFFIC East Asia, in litt. June 2003).

Between 1991 and 1998, 571 tusks, 345 kg of ivory items and 1,006,111 ivory items were declared to CITES as exported. Given the estimated stocks in 1990 of 200 tonnes of raw and worked ivory and the enormous exports in 1990, this additional export quantity should have more than emptied the storerooms. There were many discrepancies in the reports sent by China to CITES and compiled and analysed by the Wildlife Conservation Monitoring Centre in Cambridge, England, and it was not possible to track with accuracy where the ivory was originating and going to (O'Connell-Rodwell and Parry-Jones 2002).

In 1997 Lee and Parry-Jones (1997) reported that the CNACIEC was no longer selling ivory. Apparently their stocks were exhausted.

Most of the raw ivory entering China today no doubt originates in Africa, as Asia no longer has enough elephants to sustain the current level of the ivory trade. The DaXin ICF and several retail ivory vendors said that the worked ivory they sold came from South Africa. The quantities currently smuggled in, however, were not known up to the end of 2002:

There is no effective reporting system established within China for seizures of ivory or other wildlife products, and no centralized database for such information. Furthermore, information on seizures made by relevant agencies is often not released, either within China or externally. Thus, while some information on the illicit ivory trade is available, the total amount of ivory illegally entering China is not known (TRAFFIC East Asia, in litt. June 2002).

The CNACIEC, the National Arts and Crafts Company and the government-owned DaXin and Beijing ivory carving factories say they no longer import raw ivory due to the 1990 CITES ban. Therefore, the government-owned factories must rely on pre-1990 stocks. According to the results of the survey carried out by the Chinese Government in 2002 (WWF-China, in litt. June 2003), the DaXin ICF held 11.5 tonnes of raw and worked ivory at the end of 2002 and the Beijing Ivory Carving Factory (Beijing ICF) held 722.8 kg. How much of this was raw ivory was not specified in the table.

There are now several privately-owned ivory trading and processing companies in China. The ones interviewed in this study, for example Yue Ya Tang in Guangzhou, said they used only pre-

1990 ivory stocks purchased from the government. Informants said that ivory from these stocks is now very difficult to obtain, as the supply is near exhaustion. A private ivory workshop employee in Guangzhou said in 2000 that the government-owned Guangdong Province Import and Export Company held only one to two-years worth of raw stock, and that the National Arts and Crafts Company and Metropolitan Export Company might also have a small amount. He also said that all of the ivory was from Africa (EIA 2000b). These stocks should now be exhausted. Apparently, the ivory is actually owned by the Chinese Communist Party (Feng You 0 Supply and Marketing of Foreign Trade Agency head, DaXin Ivory Carving Factory, pers. comm. March 2002).

The ivory processed in China in the private workshops today must be for the most part smuggled ivory. Since the government cannot import ivory legally, and the private ivory companies are not going to admit importing or buying illegal ivory, there are only seizure data to assess new sources of raw ivory. The DaXin ICF manager said they had not bought ivory from the government for “a very long time”, and they did not know the current government raw ivory price. He said their raw ivory stocks were very low, which would suggest that most of their 11.5 tonnes stockpile was worked ivory, but nonetheless they were not interested in buying illegal African ivory. A Friendship Store manager and a vendor in Beijing said that the Beijing ICF was essentially closed due to the lack of raw material, and other vendors who used to obtain their worked ivory stock from this factory substantiated this.

Another possible source of raw or semi-worked ivory to mention is Asian-owned ivory workshops in Africa. Based on illegal ivory seizures Dublin et al. (1994), Milliken and Sangakula (1996) and Nash (1997) concluded that workshops in several African countries were producing ivory semi-worked blocks and name seals that were smuggled to China and other Asian countries. No evidence was found for this in this survey in China, but that is not surprising as it would take some time to find.

In 2002 the EIA (2002) uncovered an ivory smuggling ring working out of Lilongwe, Malawi. Poached ivory from Mozambique and Zambia was brought to Lilongwe where buyers from Hong Kong would inspect and pay for it (USD 25-50/kg). It would then be shipped either to China or Japan via Singapore.

The stockpiles of ivory listed in the 2002 government survey held by private and government businesses are so incomplete that no estimate of the national stockpile can be made. The China CMA did find, however, that there was a shortfall of 110 tonnes in the national ivory stockpile since 1991. This suggested that illegal selling had taken place and the government has instigated an investigation (China CMA 2003).

Seizures

A history of seizures of illegal raw ivory destined for the Chinese market may give an idea of the illegal sources and scale of the trade (see Table 37).

Table 37
Reported seizures of ivory destined for or leaving China since 1992

Year	Place seized*	No. of seizures	Origin	Quantity
1992	Hong Kong	1	Africa	688 kg tusks
1994	Belgium	2	Africa	165.5 kg semi-worked blocks
1995	Uganda	1	Uganda	2 tusks
1996	China	1	Africa	749 kg tusks
	Belgium	4	Africa	0.7 kg semi-worked blocks
	Belgium	4	Africa	13.5 kg tusks
	Hong Kong	1	Africa	9 kg semi-worked blocks
	Hong Kong	1	Africa	283 kg raw pieces
1998	France	1	Cameroon	600 kg tusks
	China	2	Africa	1,600 kg and 670 kg tusks
1999	Russia	1	Nigeria	537 kg tusks
	Kenya	1	Africa	600 kg tusks
	China	1	South Africa	2,100 kg tusks
	UAE	1	Kenya	1,845kg**

Table 37 continued

Year	Place seized*	No. of seizures	Origin	Quantity
2000	China	3	Africa	700 kg tusks, 102 other tusks, 412 semi-worked pieces, 3,249 jewellery items
	China	1	Asia	8 kg tusks
	China	1	Myanmar	11 tusks
	China	1	Africa	507 kg semi-worked pieces
	China	1	Gabon	140 kg tusks
2001	China	1	Benin	123 kg pieces
	China	3	Africa	70 kg pieces
	Shanghai, China	58	Africa	39 pieces and 4,700 worked items
	Beijing, China	41	?	13 tonnes various
	China	1	?	1,100 kg various
	Netherlands	1	Nigeria	518.2 kg tusks
	Dagang, China	1	Nigeria	2,613.5 kg tusks
	China	1	?	29.9 kg semi-worked pieces
	Belgium	1	Mali	150 kg tusks and worked pieces
	UK	1	Kenya	445 kg tusks
2002	India	1	Zimbabwe	8 kg
	Switzerland	1	Kenya	72 kg tusks and 3.7 kg worked items
	China	1	Africa	11 cases
	China	1	DRC	3,334.6 kg tusks
	Hong Kong	1	Dubai	1.7 kg worked pieces
	Shanghai, China	3	Nigeria	9 pieces
	Shanghai	1	Congo	55 pieces
	Shanghai	1	Africa	35 pieces
	Shanghai, China	1	Côte d'Ivoire	33 pieces
	Shanghai, China	1	Namibia	2 pieces

* TRAFFIC was unable to provide information on the direction of the ivory, whether in or out.

** The destination was said to be the 'Far East', so it is not certain it was China.

Sources: Lee and Parry-Jones 1997; CITES 2000, 2002a; EIA 2000a; Hongfa Xu, China Wildlife Trade Programme, TRAFFIC East Asia, in litt. June 2002; *People's Daily*, 10 May 2002; and O'Connell-Rodwell and Parry-Jones 2002; TRAFFIC 2002a, b; China CITES Management Authority 2002

In addition to the above, the head of the Kenya Wildlife Service announced that in 2000 some 690 kg of ivory originating in different African countries had been seized in Kenya from various diplomats that year, most of it destined for China (*East African Standard*, 9 March 2000).

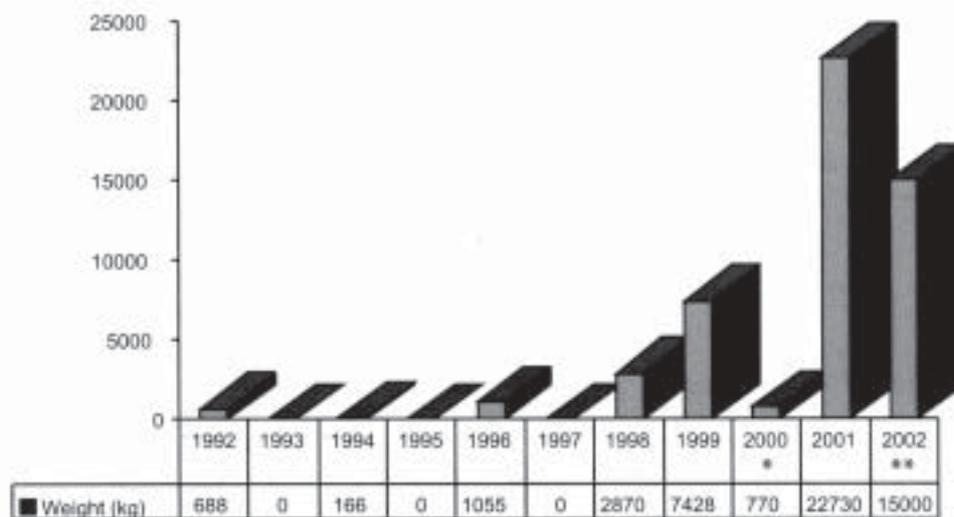
The raw unadjusted seizures data indicate an increasing volume of ivory moving into China since 1996 (see Fig. 1), totalling over 17 tonnes of tusks, 14.1 tonnes of unspecified pieces, 564 unweighed tusks and raw ivory pieces, about 8,000 ivory items, and 11 cases containing unspecified amounts of ivory found in almost 150 seizures. Other seizures made in China subsequent to CITES 12 have not yet been made public (TRAFFIC, pers. comm. June 2003). The ivory stockpile survey carried out by the Chinese Government showed that at the end of 2002 there were 26.15 tonnes and a further 11,012 pieces of seized raw and worked ivory held in various national and local government stores (WWF-China, in litt. June 2003). TRAFFIC East Asia estimated that between January 1998 and September 2001 a minimum of 30-45 tonnes of ivory destined for or entering China was seized (O'Connell-Rodwell and Parry-Jones 2002). Based on Table 37 and the TRAFFIC East Asia report, the total of seized ivory intended for use between 1996 and 2002 in China would be roughly 40-50 tonnes. Since *Notification 2001/234* there has been a dramatic rise in the number of seizures in China, signifying a new commitment by the Chinese Government to deal with the illegal ivory trade problem.

In addition, there was an unconfirmed report in May 2002 in the Hong Kong *South China Morning Post* of a seizure of 9,000 kg of ivory at Beijing's international airport (Ralph Jennings, *South China Post*, pers. comm. May 2002). This appears to be the total amount apprehended in several seizures over time (Parry-Jones, in litt. June 2002), and how much of it is reported in Table 37 and how much might be additional is not known. The *South China Morning Post* reported on 28 May 2002

that “an organ in China of a foreign country” was involved in smuggling into China 14 tonnes of ivory. Because of repeated examples of their diplomats being caught smuggling African ivory, the People’s Republic of Korea (North Korea) is the most likely foreign country. Friendship Store vendors told Steven Leung (O’Connell-Rodwell and Parry-Jones 2002, Annex 2) that East Asian diplomats had been selling them ivory seal blanks from Africa, obviously smuggled in.

China is the principal destination of seized raw ivory in the world, as determined by newspaper articles, TRAFFIC and The Elephant Trade Information System (ETIS) reports, and personal communications made by the Chinese authorities (Milliken et al. 2002a, b). TRAFFIC found 301 cases of ivory seizures in China from other sources (Milliken et al. 2002b, Table I), that have now grown to almost 400 (TRAFFIC, in litt. May 2003). This most likely indicates the depletion of government-owned raw ivory stockpiles, since if stocks were sufficient to meet demand, high-risk smuggling would not be practised. Officially, ETIS reported only 17 ivory seizures in China from 1989 through April 2002 (O’Connell-Rodwell and Parry-Jones 2002; Milliken et al. 2002a), indicating problems with their reporting system.

Figure 1. Approximate weight of raw and worked ivory seized entering China, 1992-2002



* The year 2000 amount would be bolstered by whatever proportion of the 690 kg of ivory seized in Kenya was destined for China.

** The 2002 amount is a projected estimate.

Ivory workshops in China

Up to about 1960 ivory carving was done using hand tools, but since then electric drills, grinders and polishers have become standard equipment (Martin 1988). Workshops operate in assembly line fashion: some staff are designated to design items, others specialize in roughing out certain types of objects (such as figurines, jewellery, crustaceans and name seal blanks), others craft the finer work, which is sometimes only a part of the finished piece (such as the hands or face of a figurine, or legs of a lobster or crab). Additional workers wash, smooth and polish finished items, and another section of staff paints or engraves designs on items.

Guangzhou workshops in the past

At the time of the Communist take over in 1949 there were 58 ivory factories in Guangzhou. Many of the craftsmen moved to Hong Kong and by 1989 there remained only two, large, government-owned factories and several individual carvers working from their homes (Martin 1988; Laurie 1989; Lee and Parry-Jones 1997). The DaXin ICF, established in 1954, was by far the largest manufacturing works with a reported 300 carvers in 1985 (Martin 1988) and 370 carvers in 1989 in two locations, though the carvers themselves said there were only 200 (Laurie 1989; Martin 1990a).

In the 1960s the DaXin ICF processed 15 tonnes of ivory a year, falling to 10 tonnes annually in the 1970s as raw ivory prices rose. In 1985 consumption was down to 2 tonnes a year (Martin

1988), but by 1988 it was back up to 6 tonnes a year (Laurie 1989). Laurie gave no consumption data for 1989. Martin (1990a) stated that the DaXin ICF consumed 10 tonnes of ivory in 1988 and 6 tonnes in 1989; between August 1989 and May 1990 the DaXin ICF carved no ivory at all (Martin, unpublished).

All of Guangdong Province used 13 tonnes of ivory in 1983 and 9 tonnes in 1988 (Laurie 1989). This means that in 1988, if Laurie's figures are used, factories other than the DaXin ICF in the province processed only about 33% of the ivory consumed, and the DaXin ICF consumed the rest. The Guangdong Arts and Crafts Import and Export Corporation (the local branch of the CNACIEC) purchased all ivory in the province. The last recorded purchase was on 23 November 1988 (O'Connell-Rodwell and Parry-Jones 2002).

It is unclear how much ivory the DaXin ICF held when the CITES ban came into effect. Laurie (1989) stated that all of Guangdong Province had enough ivory for only two months of production, which based on 1988 consumption would have been about 1.5 tonnes, of which two-thirds, one tonne, would be with DaXin ICF. Lee and Parry-Jones (1997) said that the DaXin ICF alone had 50 tonnes of raw ivory in early 1990. This would mean that the DaXin ICF somehow obtained almost 55 tonnes of raw ivory (about USD 11-22 million worth) between May 1989 and April 1990, including the 6 tonnes processed in 1989. This does not conform with statements made by the DaXin ICF management in 1989 that they could no longer afford to buy raw ivory (see above). Caldwell and Luxmoore (1990) confirm that it was unlikely that China would have bought Hong Kong's large stocks prior to the ban, as it had foreign exchange problems. In addition, the Guangdong CNACIEC had imported no ivory since late 1988.

Further clouding the picture is O'Connell-Rodwell and Parry-Jones (2002) stating that in 1989 the DaXin ICF registered 20-30 tonnes with the CITES Management Authority, of which only a tonne was raw ivory. In 1989 did the DaXin ICF have one tonne or 20-30 tonnes of ivory? It is possible that in May 1989 the DaXin ICF had one tonne and by the end of the year, if that is when they registered with CITES, they had accumulated 20-30 tonnes, and then by early 1990 stocks reached 50 tonnes. If this is so, import records do not reflect it. Where did the ivory come from? Table 38 shows the reported stocks of raw and worked ivory at the DaXin ICF from 1989 to 2000.

Table 38
Raw and worked ivory stocks in tonnes at the DaXin Ivory Carving Factory, 1989-2002

Year	Raw	Both	Worked	Source
1989 (early)	~1			Laurie 1989
1989 (late)	~1		20-30	O'Connell-Rodwell and Parry-Jones 2002
1990	50			Lee and Parry-Jones 1997
1997		20		Lee and Parry-Jones 1997
2000	<1		17-18	O'Connell-Rodwell and Parry-Jones 2002
2002		11.5		WWF-China, in litt. 2003

Before 1985, 30-kg tusks were common, and workshops preferred the larger tusks (Laurie 1989). By 1989 the average tusk size used by the DaXin ICF was 6-7 kg and there were increased imports of scrap ivory from Hong Kong (USD 20/kg in 1986 and USD 30/kg in 1987; prices were not stated for 1988 or 1989), indicating a shortage of affordable good ivory (Laurie 1989). Martin (1990a, b) reported that only one carver was still working in the DaXin ICF in May 1990, an astounding decline. If the factory had 50 tonnes of raw ivory at that time and was not working it, they must have had a high inventory of worked ivory, confirmed by Martin (1990a, b) who said the stocks of ivory items were worth USD 5 million.

The second ivory factory in 1989, Yiguang ICF, had about 100 craftsmen (Laurie 1989). Martin (1988) states that Guangzhou had only one large ivory carving factory in late 1985, the DaXin ICF, so the Yiguang ICF apparently did not exist then. If it were a relatively new factory in 1989, this would suggest that the ivory market was growing in the late 1980s, consistent with the increasing amounts of imported ivory reported in CITES Management Authority statistics (Laurie 1989).

By 1997 the number of DaXin ICF carvers was back up to 50, and the factory held 20 tonnes of raw and worked ivory. This means the factory sold 30 tonnes of ivory in eight years, or an average

of 3.75 tonnes annually. The average age of the carvers was about 50 (Lee and Parry-Jones 1997). The second smaller DaXin ICF in the city centre was closed by this time.

In early 2000 the Environmental Investigation Agency (EIA 2000a, b) found that the DaXin ICF claimed to have 50 ivory carvers, though only three were observed working. DaXin ICF management said that most of the worked ivory in China was sold to foreign visitors through the government-owned Friendship Store chain, which has large department stores in the main cities. The DaXin ICF could also export worked ivory to foreign countries if they received an import permit from that country. All ivory exports from China with CITES papers were said to go through the Beijing Gongmei Corporation, a government-owned company. A manager of Beijing Gongmei said that all ivory carvers in Guangzhou worked for the company (EIA 2000b). This is another name for the Beijing Arts and Crafts Company (Julian Newman, EIA, in litt. July 2002), which in the 1980s was owned by the National Arts and Crafts Company (Laurie 1989). Beijing Gongmei said they were the only company with both the right to export ivory and the necessary pre-1990 registration to operate legally. With the import permit the DaXin ICF could then obtain an export permit from the State Forestry Administration in Beijing. The DaXin ICF employees were preparing a shipment to Japan at the time of the EIA visit in 2000, and they had made one in 1999. The CITES Management Authority also had to authorize the export. EIA did not report the ivory stocks of the DaXin ICF.

TRAFFIC visited the DaXin ICF later in 2000 and reported that about 20 carvers worked there. The factory staff said that they were still using the one tonne of raw ivory from 1989(!) and that about 17-18 tonnes of the worked ivory remained (O'Connell-Rodwell and Parry-Jones 2002). This would indicate that average sales between 1990 and 2000 were about 3.3 to 3.4 tonnes a year, though only 3-4 tonnes had been sold since 1997, indicating a much higher sales rate prior to 1997. The DaXin ICF sold worked ivory to the Friendship Store and other department stores and to luxury hotels. They reported to TRAFFIC investigators that they sold 30% of their production internationally, presumably CITES-approved from pre-ban stocks. The 11.5 tonnes declared by the DaXin ICF to the Chinese Government in late 2002 indicated that another approximately 6 tonnes had been disposed of since 2000, or about 3 tonnes a year, consistent with the earlier rates.

EIA (2000a, b) visited a second government-owned ivory workshop called Ngai Gong, where only four carvers were observed working. Because of export difficulties, they sold most of their ivory within China. They said foreigners could easily get the ivory out of China, but its import into their home country could be a problem. Because of the 1990 CITES ban, they said that business was declining and the ivory industry was depressed. They stated that they had enough raw ivory to last about two years. The factory manager said that he had been offered illegal ivory, but apparently did not buy it.

EIA reported that Yue Ya, a private company, had an ivory workshop in Guangzhou and another in Beijing and three retail outlets in Guangzhou. Yue Ya started up in 1990 and by 2000 was a major producer of worked ivory, selling to the Friendship Stores and other shops and hotels throughout China. One of the directors said that all the ivory they used was from pre-1990 government stocks. He said that business had been growing, and he could arrange to export ivory to Hong Kong for any buyer. No data were provided by EIA concerning the number of carvers, ivory production figures or amounts of raw stock held.

The EIA (2000a) reported that retail shops in the Jade Market obtained ivory from private carvers who had left the DaXin ICF and were now in business for themselves. O'Connell-Rodwell and Parry-Jones (2002) stated that the DaXin ICF was probably the only legal ivory carving factory in Guangdong Province.

Shanghai workshops in the past

In 1985 the Shanghai Jade Carving Factory had about 120 ivory carvers and used 5-6 tonnes of ivory a year (Martin 1988). No other ivory workshops have been identified in the literature in Shanghai.

Beijing workshops in the past

In 1985 Beijing had two large ivory carving factories, Beijing ICF, owned by the National Arts and Crafts Company and founded in 1958, and the Arts and Crafts Factory (Martin 1988). The Beijing ICF employed 550 carvers in 1985. It processed 15 tonnes of ivory in 1976, 10 tonnes annually in

the early 1980s, 4 tonnes in 1988 and 1.5 tonnes in the first six months of 1989 (Laurie 1989). Martin (1990a), however, stated that the 1988 consumption was 9 tonnes, and 4 tonnes in 1989. The Arts and Crafts Factory employed about 80 carvers in 1985 (Martin 1988).

By 1989 the Beijing ICF had broken up into six factories, only one of which worked ivory. The number of ivory carvers was about 800 in 1986 and had fallen to less than 400 by 1989 according to Laurie (1989) and 300 according to Martin (1990a). By 1990 the number of active ivory carvers was down to six and they had not carved or sold any ivory in the first three months of the year. In early 2001 they said that they employed 10 carvers. The Beijing ICF registered 3 tonnes of raw and 5 tonnes of worked ivory in 1989 (O'Connell-Rodwell and Parry-Jones 2002), though the *China Daily* in 1989 reported that the factory held 6.4 tonnes of worked ivory and 2.4 tonnes of tusks. By April 1990 the Beijing ICF had only 2 tonnes of raw ivory stock (Martin 1990a).

There were at least four other ivory workshops in Beijing in 1989, each employing 10-15 carvers, but it was not stated whether they were private or government-owned (Laurie 1989). In 1989, therefore, Beijing had a total of 500-600 ivory carvers in about six factories (Laurie 1989).

O'Connell-Rodwell and Parry-Jones (2002) report that a large ivory carving factory in Beijing (Arts and Crafts?) closed soon after the 1990 CITES ban.

In 2000 the EIA (2000a) visited the Beijing ICF and found that only a few older carvers were still working, and the factory had large stocks of carved ivory. All of the younger carvers had left to find other employment. Beijing Gongmei owned the Beijing ICF. The Beijing ICF had exported worked ivory through Beijing Gongmei to Japan recently, and undercover EIA investigators were offered CITES permits to export ivory if they would make a large order. Beijing ICF owned another carving factory called Beijing GuKe, but no information was given about it (EIA 2000b).

In February 2001 the Beijing ICF told TRAFFIC investigators that they still had over a tonne of raw ivory left and 5 tonnes of worked ivory. TRAFFIC East Asia thought that they were the only legal ivory workshop in Beijing (O'Connell-Rodwell and Parry-Jones 2002). If this were accurate, and the declared stockpile of 723 kg at the end of 2002 was also correct, it means that the factory disposed of over 5 tonnes of ivory in a little under two years, a reasonable disposal rate and similar to that of the DaXin ICF. Many retail outlets in 2002 in China and Taiwan reported being supplied by the Beijing ICF until recently and Martin and Stiles (2002) found that the Beijing ICF supplied several shops in Singapore with ivory. In the 12 years 1990-2002 they therefore obviously disposed of more than one tonne of ivory. This means that they must have bought new stocks between 1989 and 2001. The factory has evidently now ceased buying new raw stocks,

Other workshops in the past

Ivory factories were also known in the 1980s in Shenzhen, Tianjin, Nanjing, Suzhou, Hangzhou, Fuzhou, Harbin, Kunming and Yangzhou, and there were probably others. Martin (1988) estimated that there were 1,200-1,500 ivory carvers in China processing about 30 tonnes of ivory a year in 1985.

The Kunming ivory carving factory closed soon after the ban (O'Connell-Rodwell and Parry-Jones 2002). The *China Daily* (13 February 2001) reported in an article bemoaning the demise of Chinese traditional arts that the Nanjing Ivory Sculpture Factory had been 'merged', but the article did not say with what, or if it still produced ivory. Presumably it closed, as the other factories that were mentioned in the article were defunct.

EIA (2000a) visited an ivory factory in Zhuhai Special Economic Zone, near Macau, and found 40 young carvers there. The workshop processed mammoth ivory, hippo teeth and elephant ivory. The elephant ivory was exported illegally through Hong Kong to Europe, Japan, Singapore and the USA labelled as mammoth and hippo ivory. France was the biggest buyer and the USA the smallest.

Wholesale buyers of worked ivory in the past

Most of the worked ivory up to 1990 was exported to Hong Kong, followed by Singapore, Taiwan, Japan, Europe and the USA. In 1989 in Guangzhou roughly 30% of workshop production was for local retail sales to foreign visitors in China, mainly Westerners, and 70% was exported wholesale. In Beijing only 2% was sold locally, with 98% exported wholesale to Hong Kong and then on to Western Europe, USA, Japan, Taiwan and Singapore (Laurie 1989). The ivory sold by the factory to

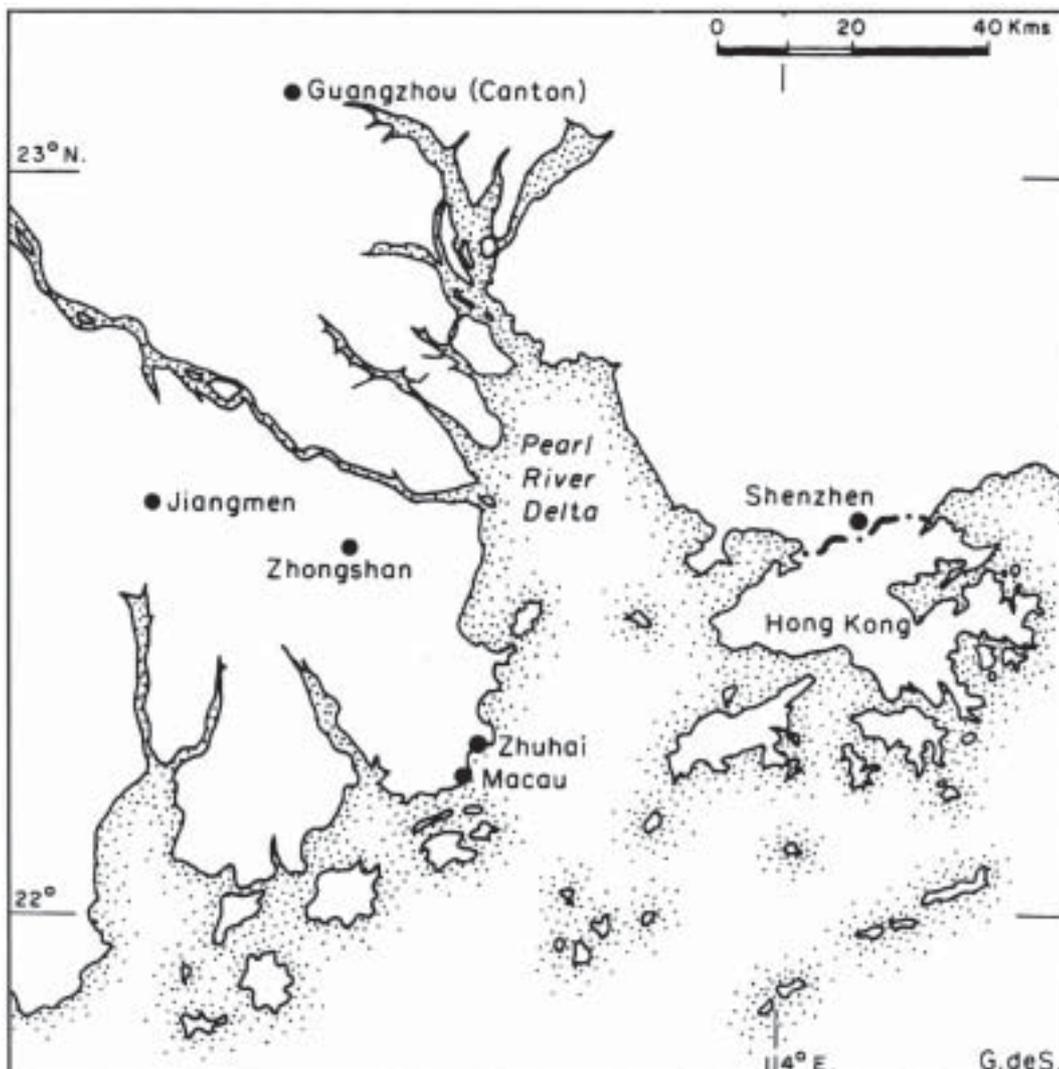
visitors before the ban was mainly to Japanese, Europeans, Malaysians and Singaporeans (O'Connell-Rodwell and Parry-Jones 2002).

Between 1996 and the end of 2000 some 1,821 kg of worked ivory were legally exported to Japan. No ivory exports to Japan are reported for 2001 or 2002 (JWCS 2002). In 1996, 22 pieces of smuggled worked ivory from China were seized in Japan, followed in 1998 by the interception of 100 blank names seals (JWCS 2000).

Ivory workshops in China today

The government-owned ivory factories have continued their decline and today produce only a small fraction of the worked ivory that they used to do. They also produce a much smaller market share, as private workshops now process most of the ivory. The primary cause is lack of legal raw ivory, and secondarily, fewer buyers have led to greatly lowered sales. Prior to 1990 foreigners bought the majority of the worked ivory, either through wholesale exports or by purchases within China. After 1990 most legal exports had stopped, and Western tourists and businessmen in China bought much less ivory to take home, as it could be confiscated by Customs officials or create a risk of even greater penalties.

Private workshops do not advertise their presence, and ivory shop vendors will rarely give out information regarding the workshop names or locations. In fact, almost all the vendors interviewed in this survey said that their ivory came from government-owned factories, mainly DaXin ICF and Beijing ICF, except for a few shops in Guangzhou's Jade Market that named other workshops.



Map of China.

Guangzhou workshops

All ivory retail shop employees said that the DaXin ICF was the only ivory factory still operating in Guangzhou, except for the owner of the Cho Mammoth Ivory Carving Factory. He said that even the DaXin ICF had stopped carving and had made all their carvers redundant because of a lack of raw stock and business. The Friendship Store said that the DaXin ICF was its sole provider and that there were no other ivory workshops in Guangzhou. This investigator was unable to locate any large workshop other than the DaXin ICF and an investigation made by the EIA in June 2002 does not mention any workshops (EIA 2002).

The DaXin ICF manager said that they still employed about 30 carvers, but that raw ivory stocks were very low and new supplies were difficult to obtain. He did not know what the current raw ivory price was from government stocks. He said they were not interested in buying illicit African ivory and that the company could not engage in any illegal activity. Given the declared stockpile of 11.5 tonnes and the average annual rate of depletion of 3 tonnes, the DaXin ICF will be completely devoid of ivory in 2006 (Table 38).

The DaXin ICF showrooms (downstairs and upstairs) still had a large number of finished pieces for sale (286), and the staff said that there were more in stock (probably over 11 tonnes). The staff said it was against their policy to allow visitors into the workshop, and despite repeated requests to get inside it was not possible. The workshop door was closed and the workshop could have been empty.

DaXin ICF staff said that they could sell worked ivory to foreigners, but they would not assist in exporting it, even to Hong Kong, without an import permit from the destination country. They said that they had helped, in the past, but that it was very difficult to do now.

This investigator's interpreter said later that the workshop staff had no incentive to sell ivory as they were government employees and thus did not benefit from any profit being made. This is another reason why private ivory companies are replacing government ones.

The Yiguang (Laurie 1989) and Ngai Gong (EIA 2000a) workshops were apparently closed, as no one asked knew of them and they were not listed in the telephone *Yellow Pages* (the DaXin ICF was).

The owner of Yue Ya Tang was found near the Jade Market in one of his two shops. He said that he had closed his factories and sent the staff home because he could no longer buy ivory from the government. There were a few carved mammoth ivory and hippo teeth items for sale in the shop, but when asked if he would switch to mammoth ivory to stay in business he said no. He said he would start a new business when his worked ivory stocks were finished. On an earlier visit to his shop, however, the saleswoman said that the workshop still had about 12 carvers, but that the raw ivory stock was very low. The retail shop sold 100 g sachets of ivory carving waste at 20 RMB (USD 24.40)/kg, evidence that some ivory crafting had been done fairly recently. Ivory waste, usually small chips, is used in Chinese medicine after being ground into a powder. It is used as a diuretic and to treat epilepsy and osteomyelitis. It can also be calcined to a fine charcoal to make 'ivory black' ink (Parker and Amin 1983). (The DaXin ICF was selling ivory powder in 2001 for USD 7/kg (O'Connell-Rodwell and Parry-Jones 2002).) The 2002 EIA report implied that Yue Ya was still active in working and distributing ivory to other parts of China. One of their investigators found worked ivory outlets in Guangzhou and in the town of Shan Tuk, 40 minutes from Guangzhou, selling Yue Ya products in 2002, but the date of manufacture was not known (anon. reviewer, in litt. March 2003).

In 2000, Yue Ya Tang had an English-language brochure and an English signboard on the shop near the Jade Market (EIA 2000a). Today, at the new shop near the Jade Market, there is no brochure and the business card and shop sign are only in Chinese characters, suggesting that Yue Ya Tang is aiming at Chinese customers. The other, older shop in Guangzhou still has English writing on the sign.

Only one other workshop was found in Guangzhou, a single carver working from a small workshop-retail outlet near the closed smaller DaXin ICF, also on DaXin Street. He said he had formerly worked at the DaXin ICF, but that he had been made redundant. He said he was working with pre-1990 ivory bought from the government, but he did not disclose the price he paid.

An employee in one shop in the Jade Market said that their ivory was carved in the Kung Fa workshop in Jiangmen, about 80 km south of Guangzhou. Another retailer close by said that their elephant and mammoth ivory came from the Zhongshan Tan Zhou Yiming Craft Carving Factory

in Zhongshan, about 100 km south of Guangzhou. This workshop also had an office in Macau, not far from Zhongshan, This factory consumed three tonnes of mammoth ivory in 2001. EIA was told of another ivory workshop in Zhong Yi in Guangdong supplying a Jade Market shop (anon. reviewer, in litt. March 2003).

Since even government-owned factories find it difficult to obtain raw ivory from the sole legal source (the government), private workshops such as those in southern Guangdong Province must be buyers of smuggled African and Asian ivory.

Shanghai workshops

The Shanghai Jade Carving Factory no longer carves ivory. Almost all worked ivory sold in Shanghai comes from Guangdong Province, with some from Beijing. No ivory workshops were found, nor was any ivory carving waste found for sale. EIA (2002) found a retail outlet that sold ivory paintbrushes that were apparently manufactured in Shanghai from African ivory. They were told (but did not see) that there were 10-15 small workshops, each employing three to four people, in the Pudong and Nanwei areas of Shanghai that supplied shops in Yu Yuan Gardens (anon. reviewer, in litt. March 2003). It is highly unlikely that this many workshops operate currently, given the relatively small amount of ivory for sale, unless it is for the export market. Only one workshop in Shanghai declared ivory in the 2002 Chinese Government ivory stockpile survey (WWF-China, in litt. June 2003). It held only 135.2 kg of "ivory products". There was one musical instrument company listed with 66.7 kg of ivory that might have worked the material. Three other unspecified types of companies held a total of 108 kg of ivory. They could have been workshops, though the company names had nothing to do with carving or arts and crafts.

Beijing workshops

A Beijing ICF spokesperson said the factory was closed at the time of this survey and several retail ivory vendors said that the company had gone bankrupt. This investigator's visit to the workshop arranged by telephone was abruptly cancelled when the Beijing ICF found out that he was a Westerner. The investigator spoke with a staff member by telephone through an interpreter who said that the manager was not even in the factory, and she confirmed that they were closed. A Beijing Friendship Store salesperson said that the Beijing ICF was still operating, but that it was bankrupt, making only name seals now and employing few craftsmen. An ivory antique dealer on Liulichang Street said the same thing, and stated that the Beijing ICF was unable to fill her requests for high-quality carved items. Employees of the Beijing Arts and Crafts Department Store, owned by Beijing Gongmei (as is the Beijing ICF), said that all but three of their almost 1,000 ivory items came from Guangdong Province. It seems safe to say that the Beijing ICF, once the largest ivory factory in China employing up to 800 ivory carvers, is now almost finished, which is not surprising given that since 1996 their profits have decreased from USD 109,000 to 24,200 a year (O'Connell-Rodwell and Parry-Jones 2002). EIA (2002) investigators were told that the factory only worked bone now. The 723 kg of ivory declared in the government survey in 2002 must be made up of name seals, small items, a little raw ivory and waste. Literally every ivory vendor in Beijing who was asked said that all their new ivory items came from Guangdong Province, but that many of the older items were carved in the Beijing ICF. No one claimed to know of any other ivory workshops in Beijing, which sounds unlikely given all the illegal raw ivory seizures reported there, but none could be found. The government ivory stockpile survey listed only the Beijing ICF as a definite ivory workshop, based on company names (WWF China, in litt. June 2003). A "Medicinal Materials Group Company" storeroom in Beijing declared 1,397.8 kg of raw and/or worked ivory, which should be looked at closer by the authorities.

O'Connell-Rodwell and Parry-Jones (2002) reported that former Beijing ICF ivory carvers had started working in private family-run businesses. They bought illegal raw ivory and carved it into items that they sold to shops. These carvers are the most likely buyers of some of the African ivory smuggled into Beijing. One Beijing vendor said in 2000 that he could get as much worked ivory as he needed. The large amount of seized ivory implies much ivory enters Beijing illegally, in which case some must leave as raw or worked ivory, since the Beijing market is too small to absorb it. Many of the ivory items seen in Taiwan for this survey in 2002 resembled those displayed in Beijing, and Martin and Stiles (2002) found some of Beijing's worked ivory in Singapore and

Thailand. It is likely that it goes wholesale to other Asian countries as well. O'Connell-Rodwell and Parry-Jones (2002) stated that the Beijing ICF carved mammoth ivory for Hong Kong traders and exported it to Hong Kong. Elephant ivory items could easily be exported with it.

Other workshops

Ivory workshops nowadays seem to be concentrated in Guangdong Province as it is close to Hong Kong and Macau. The workshops employ young carvers and are in rural areas as the labour costs are lower (less than USD 100/month) than in Guangzhou and the other eastern urban areas. Over 100 million labourers have poured into Guangdong Province since 1987 to feed the burgeoning industries. The province produces 50% of China's GDP and one-third of the world's shoes (BBC World Service, 18 July 2002). Aside from the DaXin ICF, only one other identifiable workshop holding 45 kg of ivory was listed in Guangdong Province in the 2002 government survey (WWF-China, in litt. June 2002).

Informants told of mammoth ivory factories in Fujian Province and they might also carve elephant ivory. Since the Tianjin ICF had the largest stocks in China in 1989 (Laurie 1989), they might still be in business, but limited resources did not allow a visit there, EIA (2002) located a workshop in Tianjin that manufactured about 10,000 ivory paintbrushes a year, a new specialty, and informants in Beijing told them in 2002 of two ivory workshops in Henan Province, one in Nanyang and one in Zhengping (anon. reviewer, in litt. March 2003). No workshops could be identified from names listed, other than those previously mentioned, in the 2002 government ivory stockpile survey.

There is no way to estimate the number of elephant ivory carvers working in China today without a more extensive, in-depth survey. There seem to be no more than 30 still working in Guangzhou, if that, maybe one in Shanghai to make the paintbrushes and about 5-10 individuals in Beijing. There are perhaps 10 larger ivory workshops still operating in China, and these, together with the small family workshops, probably employ fewer than 200 craftsmen (estimates confirmed by Wan Zeming, CITES Management Authority of China, in litt. December 2002).

Wholesale buyers of worked ivory today

Since no accurate statistics are kept on ivory exports it is difficult to know what proportion of worked ivory production is sold internally and what proportion is exported legally or illicitly. Martin and Stiles (2002) reported that in Nepal 33% of the worked ivory on display in Kathmandu came from China, in Bangkok 36% of the ivory antiques seen came from China, and in Singapore all new ivory items came from China and Hong Kong. A survey in Bangkok of Chinatown, six luxury hotels (16 shops selling ivory), the River City Complex and the Chatuchak Weekend Market in early 2003 found that over half the recent ivory items were from China (Stiles, unpublished). Many vendors in Taiwan admitted in this survey that their ivory items originated in China, though others denied it, as they knew the import was illegal. Customs statistics in Japan showed that that over 1.8 tonnes of worked ivory were imported from China, apparently legally, between 1996 and the end of 2001 (JWCS 2002). Very few Chinese items were seen in Vietnam, Laos and Cambodia and none in Myanmar. It is likely that much of the production of the ivory factories in Guangdong Province near Macau and Hong Kong is exported abroad via those cities. There does not seem to be a high risk of seizures of worked ivory, unlike raw ivory, as worked ivory can be labelled as something else (for instance bone, hippo teeth or mammoth ivory) and Customs officials cannot distinguish between them. From Hong Kong and Macau the worked ivory most likely goes to Taiwan, Singapore, Thailand, Japan, Europe and the USA.

Retail outlets and prices for worked ivory in China

In 2001 the Chinese Government began requiring all retailers of worked ivory to register with the government and obtain a permit (Jane Peng, Beijing ivory retailer, pers. comm. April 2002). The China CMA (2003) referred to this registration as 'experimental'. No worked ivory was found for sale at any of the major tourist attractions, such as museums, Buddhist temples, the Sun Yatsen Monument and Chen Clan Academy in Guangzhou (which had ivory working exhibits, but only sold camel bone carvings), the Yu Yuan Gardens in Shanghai, and Tiananmen Square, the Forbidden

City, Summer Palace and the Temple of Heaven complex in Beijing. Shops selling wooden and ceramic figurines of Kwan Yin (bodhisattva of compassion) and Budaifu (Happy Buddha) are numerous in and around temple grounds. The fact that ivory figurines are not sold around temples is good evidence that most Chinese do not buy ivory. Kwan Yin is particularly revered as, in temples dedicated to her, believers can have their questions about the future answered by praying in front of her image while shaking numbered sticks in their hands or in a container until one falls to the ground. The number on the fallen stick refers to one of a hundred numbered metaphorical poems, supposedly spoken by Kwan Yin, that are usually posted somewhere within the temple. The believer interprets the numbered poem to answer his/her question.

Retail outlets for worked ivory in the past

This is the first study employing quantitative methods in China and therefore there is no information from the past on the number of retail outlets with ivory or the number of ivory items for sale.

One interesting source of data concerning worked ivory, however, comes from the CITES reports compiled annually by the World Conservation Monitoring Centre and TRAFFIC. China reported exporting some 115,435,697 pieces of worked ivory in the four years from 1987 to 1990, with a marked peak in 1989 of over 54 million items (Lee and Parry-Jones 1997). At the conservative estimate of an average 100 g weight per item (the average weight of a large-bead necklace or a 10 cm figurine), the four-year total would constitute over 11,154 tonnes of ivory, not counting the carving waste. This figure is not credible. China reported importing only 44.5 tonnes of ivory between 1980 and 1990 (Lee and Parry-Jones 1997), leaving a deficit of over 11,109 tonnes. In addition, the ivory stockpile figures of the nation's two largest ivory factories (DaXin and Beijing) during this period showed that nothing near these amounts existed. In fact, the DaXin ICF seems somehow to have added 50 tonnes between early 1989 and 1990 (Table 38).

The reported weight exports for the years 1987 to 1990 add up to 126.1 tonnes (Lee and Parry-Jones 1997). This gives an average of 1.09 g per item if the 115 million-plus figure is accepted, not even the weight of a ring, which is also not credible. Either the reported number of ivory carving exports is too high or the exported weight is too low (or both). Even after the ban, China reported exporting an amazing 1,006,111 ivory carvings from 1991 to 1998, which is simply not feasible. ETIS reported the seizures of only 137,139 ivory items for the entire world between January 1989 and 28 August 2002 (Milliken et al. 2002a), China probably exported huge amounts of its old worked ivory stock prior to the 1990 CITES ban taking effect, but the quantity should be deemed as unknown given the unreliability of the data.

This demonstrates that the only reliable way to collect data on the ivory trade is to collect it through observation in the field where ivory is worked and sold.

Past Guangzhou retail outlets

Lee and Parry-Jones (1997) found worked ivory for sale at the Friendship Store, the DaXin ICF showroom, at one roadside shop and at the White Swan and Garden hotels. They did not conduct a complete survey of the city and do not provide quantities.

Leung (O'Connell-Rodwell and Parry-Jones 2002) surveyed Guangzhou in 1999. He found ivory for sale only in the Friendship Store and in luxury hotel boutiques, but provided no quantitative data. He also reported that eight booths at the Guangzhou Trade Fair displayed ivory, but did not say who the vendors were, what the ivory types or prices were, or how the ivory could be purchased. Leung said that Hong Kong entrepreneurs found it profitable to buy ivory in China and re-sell it in Hong Kong.

The EIA (2000a) reported only that the Yue Ya company sold large amounts of ivory in three outlets and that they were a major supplier of ivory to other shops in China as well. They also found at least three shops in the Jade Market that sold ivory. No quantitative data were provided.

Past Shanghai retail outlets

Leung stated that he observed 50-70 outlets selling ivory in the Yu Yuan Garden and Bazaar area of Shanghai. Several shop owners said that business was good. Leung also found a wide variety of ivory items for sale at the Friendship Store and the Shanghai Arts and Crafts Store. He found ivory

for sale in the Sofitel, Hilton and Equatorial hotels and in two airport shops. Leung reported no quantities.

Past Beijing retail outlets

Leung found over 30 shops selling ivory on Liulichang Street, which is the antiques street, an unstated number of prestigious department stores on Wangfujing Street selling 30-40 ivory items each, and only a couple of shops selling ivory chopsticks on Dachilan Street. The Friendship Store contained the largest and most varied selection of ivory items. The Beijing Hotel was the only hotel found to sell ivory. Two airport shops sold ivory.

Past retail ivory prices

Table 64 shows the past retail ivory prices for China and other countries.

Past retail buyers of worked ivory

The biggest buyers of Chinese worked ivory from 1986 to 1989 were Japanese, followed by Europeans and then Americans (Martin 1988, 1990a). Laurie (1989) agrees that Japanese were the biggest buyers in 1989, along with Taiwanese, though the latter most likely made their purchases in Taiwan rather than in China at that time.

In the 1980s local Chinese bought very little ivory, as it was too expensive for them (Martin 1988; Laurie 1989). Lee and Parry-Jones (1997) stated that in 1997 the main buyers were tourists and that Chinese residents seldom bought ivory.

In 1999 Leung (O'Connell-Rodwell and Parry-Jones 2002) reported that the main buyers in six cities in China (including Guangzhou, Shanghai and Beijing) were, in order, from Japan, China, Hong Kong, Taiwan and Thailand (Chinese). Singaporeans and Malaysians were also buyers. From Europe, the main buyers were from Italy, Spain, France and England, though they were few in number and usually only bought one item. Americans were reported buying ivory in only two of the cities. Chinese mainly bought small items such as chopsticks, name seals and jewellery, while Taiwanese bought large items and sometimes sizeable quantities for re-sale.

By 2001 O'Connell-Rodwell and Parry-Jones (2002) thought that Chinese nationals had become the main retail ivory buyers, buying smaller objects.

Retail outlets and prices for worked ivory in China today

A total of 9,096 ivory items were found in 117 retail outlets in the three cities surveyed (see Table 39). Although the average number of items per shop is almost 79, in fact only a few outlets displayed many pieces while many shops carried only a few items. Guangzhou had by far the highest average number of ivory objects per shop. Several outlets said that they had ivory stocks not on display, so the numbers reported here are a minimum number. Only three pieces that could be identified as manufactured outside China were seen, African busts in Shanghai and Beijing.

Table 39
Number of retail outlets seen with ivory items and mammoth ivory items in China in early 2002

City	No. of outlets		No. of items		Av. no. items/outlet	
	Elephant	Mammoth	Elephant	Mammoth	Elephant	Mammoth
Guangzhou	21	3	3,855	817	184	272
Shanghai	35	3	2,045	292	68	97
Beijing	61	0	3,196	0	52	0
Total	117	6	9,096	1,109	78	185

In Guangzhou six of the outlets carrying elephant ivory also had mammoth ivory for sale, in Shanghai only one had both elephant and mammoth ivory, and in Beijing no mammoth ivory was seen anywhere.

In 2002 retailers said that the main worked ivory buyers were foreigners. Chinese carved ivory seen elsewhere (e.g. Hong Kong, Taiwan, Singapore, Thailand) indicates that exports are also important, although now illegal. In spite of the economic boom in China over the past decade, the average yearly per capita income in the three richest cities was 22,772 RMB (USD 2,777) in Guangzhou, 21,772 RMB (USD 2,655) in Shanghai and 19,155 RMB (USD 2,336) in Beijing (*Shanghai Star*, 4 April 2002). So worked ivory, which is expensive in China, is well out of the reach of the average Chinese citizen. Although more Chinese nationals than foreigners buy ivory items, mainly name seals, jewellery and smaller items, in terms of the total weight of objects, the Japanese and Taiwanese still predominate. They are followed by ethnic Chinese who are citizens of other countries, according to informants. The conclusion that Chinese nationals are not the principal buyers of worked ivory is supported by the CITES Management Authority of China (letter by Chen Jianwei, Executive Director General of the CITES Management Authority of China addressed to the CITES Secretariat, 4 October 2002). This differs from the conclusion of the ETIS-TRAFFIC report presented to CITES 12 (Milliken et al. 2002a) and of the EIA (2002) report. The newly-rich local Chinese are increasing their ivory buying and can be expected soon to eclipse foreigners.

Guangzhou retail outlets

Most of the worked ivory was found in nine shops in and around the Jade Market, in hotel boutiques (eight, with the Landmark and White Swan hotels having the most), in the DaXin ICF and in the Friendship Department Store (756 items). The Yue Ya Tang shop just outside the Jade Market had the most ivory displayed of any outlet, 842 items. The Friendship Store was the only department store found carrying elephant ivory. The Garden Hotel, reported previously to sell ivory (Lee and Parry-Jones 1997; EIA 2000a), had on display only eight plastic resin Canton balls. No ivory was found for sale in the domestic flight section of the airport. Table 40 shows a breakdown of the types of retail outlets in which ivory was found.

Table 40
Types of retail outlets and number of ivory items surveyed in Guangzhou in early 2002

Type	No.	Percentage of total	No. of items	Av. no. items/outlet
Antique gallery/stall	0	0	0	0
Department store	1	5	756	756
Gift shop	8	38	1,803	225
Ivory specialty shop	12	57	1,296	108
Total	21	100	3,855	184

The most numerous type of ivory item was the name seal, followed by jewellery (bangles, bead necklaces, pendants, rings, ear-rings). Next were human figurines of religious subjects such as Kwan Yin, the Happy Buddha, the three Daoist Immortals: Fu (money), Lu (luck) and So (long life), princes, temple guardians and warriors. After these, there was a wide variety of animal figurines (dragon-lion (*chi*), tiger, pig, goat, dog, snake, ox, water buffalo, cock, birds, elephant and fish), followed by netsukes, carved or painted vases, paintbrush pots and incense burners. Carved tusks (some with elaborate nature scenes), polished tusks, chopsticks, fans, cigarette holders, and ear picks were seen in several shops. Large, composite pagodas were seen in some of the more expensive shops.

The specialties of Guangzhou are the Canton ball and the dragon boat. The Canton ball is made up of several concentric layers of carved balls, one within another. The highest number of ball layers seen in this study was 35 in the Friendship Store, but there have been known to be up to 50 layers or more. The balls are made by hand and can take several people more than a year to make. Ivory Canton balls were seen in about half the outlets. They were also seen labeled as camel bone, but this is not possible as no camel bone is large enough and the inner core of limb bones, the largest bone, is hollow. The dragon boat is usually an oared boat, with a large dragon-head prow and dragon-tail stern. A variant is the sailing junk, but this boat has a cockerel or phoenix head as a prow. All of these types are expensive. The 15-cm diameter, 35-layer ball in the Friendship Store

cost 42,000 RMB (USD 5,122). Dragon boats made from a metre-long carved tusks with composite additions such as the prow, superstructure, people and oars can easily cost over 100,000 RMB (USD 12,195).

The prices of representative objects are shown in Table 41.

The Friendship Store and the luxury hotels had the highest prices, while the Jade Market shops were the least expensive. For example, a 12-cm diameter, 32-layer Canton ball in the Jade Market was only 12,000 RMB (USD 1,463) compared to the marginally larger, more elaborate ball in the Friendship Store at USD 5,122. A 20-cm pair of chopsticks in the Jade Market could be found at USD 30, while a similar pair mounted in a wood container in the White Swan Hotel cost USD 150,

At the DaXin ICF, the investigator requested to see some of the finer carvings, and the showroom manager brought some out from the stock, Table 42 shows what was put on view.

These prices were before bargaining, so the final price would be about 20-30% less. The Mao figurine was so expensive because it was carved during the Cultural Revolution for Mao Tse Tung by Gwoh Hang, a master carver now retired. It was not given to Mao because a crack developed in it. The prices are quite reasonable for such quality items, except for the Mao, and probably represent a discount due to the depressed market.

Informants said that the main buyers in Guangzhou were foreign visitors, mostly East Asians such as Hong Kong residents, Taiwanese, Japanese and Singaporeans. Vendors said few Westerners buy, except for small items, and the DaXin ICF complained that a Westerner had not bought ivory from them for over a year. The Yue Ya Tang manager said that it was because so few Westerners now bought ivory that the industry would end soon,

The *China Daily* of 26 October 2001 reported that the 2001 Guangzhou Trade Fair was displaying carved ivory along with carved jades, and O'Connell-Rodwell

and Parry-Jones (2002) reported that ivory was displayed at the 1999 and 2002 trade fairs as well. The trade fair is largely aimed at promoting exports to foreign countries.

Table 41
Retail prices for recently-made ivory items seen in Guangzhou in early 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1	22-30
Bangle	2-2.5	98
Necklace, small beads		27-55
Necklace, large beads		52-83
Pendant	3-4	5-10
Ring, plain		2-4
FIGURINES		
Animal	5	19-34
	10	258-773
	20	366-976
Human	5	32-40
	10	80-366
	20	293-872
	40	1,207-1,220
	60	3,659
TUSKS		
Carved	20	1,073
	40	1,100-2,902
	60	4,634
	100	11,585
Polished	20	305-402
	40	524-732
MISC.		
Chopsticks, pair	20	30-183
Cigarette holder	10-15	16-44
Name seal	2 x 6	31-79

N.B. USD 1 = 8.2 RMB

Table 42
Retail prices for fine ivory carvings at the DaXin Ivory Carving Factory in early 2002

Item	Price in USD
30 cm Mao Tse Tung	24,390
25 cm Long Life	1,683
22 cm Kwan Yin	1,585
17 cm Kwan Yin with child	643
15 cm Emperor Sha-n	1,951
16 cm Lu Lai Buddha	793
15 cm Happy Buddha	1,524
12 cm Happy Buddha	1,585
12 cm Canton ball (28 layers)	3,049
1.5 m dragon boat	8,049

Shanghai retail outlets

Most of the retail ivory was found in curio shops along the Fangbang Road Antique Market and in the contiguous area around the Yu Yuan Gardens (eight shops out of about 1,000) and in the Friendship Store, which with 1,359 items held the most ivory of any single outlet seen in the three cities surveyed for this report. The 2002 government survey reported that the Shanghai Friendship Store held 967 kg of ivory (WWF-China, in litt. June 2003). The Japanese-owned Isetan Department Store carried 88 ivory items and there were a few pieces in boutiques associated with the AnJang Hilton and Jingjian luxury hotels. These were the only hotels seen to carry ivory out of about 20 surveyed. The Shanghai Arts and Crafts Sales Department Store used to have a large section devoted to ivory, as indicated by signs that still remain over display areas, but most of the carved material shown was of wood. Only 29 ivory items remained, including a magnificent dragon boat from Guangzhou priced at RMB 258,000 (USD 31,463) and a sailing junk at RMB 228,000 (USD 27,805). The 2002 government ivory stockpile survey listed this company as holding just under 500 kg of ivory, thus they must have had the rest in storage. This was the only outlet selling ivory in the touristy Nanjing Road pedestrian shopping mall.

The Dongtai Street Antique Market carried 154 small ivory items in 19 shops (out of about 200). An African hollow bust was found here, priced at RMB 850 (USD 104), though the final price would have been closer to USD 60. No ivory was found in the Pudong “new Shanghai” area, though several luxury hotels and department stores were surveyed. The Hongqiao Airport displayed 28 ivory objects, all made in the Beijing ICF. No ivory specialty shops in Shanghai dealt exclusively in ivory. Given the great quantity of shopping outlets in Shanghai, the number of shops selling ivory was extremely small. EIA (2002) reported that in their survey of June 2002 there was evidence of a ‘partial clampdown’ on ivory selling in central Shanghai by the local government compared to what they observed in their 2000 survey (EIA 2000). Unfortunately, no quantitative data were presented in either report, so it is not possible to assess the assertion’s validity, though the lack of displayed ivory in the Shanghai Arts and Crafts outlet noted above supports it. Table 43 shows the breakdown of the types of retail outlets found in this survey.

The types of items for sale were similar to those seen in Guangzhou, but the Friendship Store carried an unusually high number of large carved and polished tusks and other large items, though it also had a comprehensive collection of name seals, jewellery, netsukes and chopsticks with small ivory mounts on which to place them. It also had some of the largest human ivory figurines seen in China, One elaborate, painted “beautiful lady” carrying a lantern on a pole measured over 1,3 m high and was priced at USD 195,122, the most expensive item seen in the survey. A smaller, less elaborate 58-cm “beautiful lady” was only USD 11,951, A 1.5-m carved tusk with an intricate nature scene was priced at USD 182,927. A pair of mounted polished tusks 1.45m-long cost only USD 21,341, indicating that the labour on the other objects was very expensive.

Other types included Canton balls on elaborate pedestals (one 42 cm high with human figurines in the pedestal cost USD 79,268), life-like painted fruit, 4-8 cm painted snuff bottles, paintbrush pots, Mao pendants and Buddha heads and teapots.

The ivory items seen in the Fangbang and Dongtai street markets were of lower quality and less expensive, though the mammoth ivory items in the shop specializing in it were quite well carved.

No shops in either the domestic or international sections of the airport were found selling ivory items, but the duty-free area was not seen.

Table 44 shows the prices of representative items,

Table 43
Types of retail outlets and number of ivory items surveyed in Shanghai in early 2002

Type	No.	Percentage of total	No. of items	Av. no. of items /outlet
Antique gallery/stall	20	59	156	8
Department store	3	9	1,476	492
Gift shop	8	23	216	27
Ivory specialty shop	3	9	197	66
Total	34	100	2,045	62

Table 44
Retail prices for recently-made ivory items seen in Shanghai in early 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1	48-61
Bangle	2-2.5	91-112
Necklace, small beads		88-133
Necklace, large beads		183-238
Pendant	3	46-98
Ring, plain		3-18
FIGURINES		
Animal	5	49-183
	10	671
	20	
Human	5	354-549
	10	252-1,000
	20	1,402
	40	3,189
	60	11,951
TUSKS		
Carved	20	
	40	3,269
	60	
	100	18,293
Polished	20	
	40	
	60	3,902
MISC.		
Chopsticks, pair	20	73-189
Cigarette holder	10-15	25
Name seal	2 x 6	43-48

N.B. - = no data USD 1 = 8.2 RMB

Vendors said that mainly foreign Chinese and Japanese bought ivory, and the only shoppers observed by this investigator looking at worked ivory anywhere in Shanghai were East Asians. There were many Westerners in the Friendship Store, but none in the large ivory section.

Beijing retail outlets

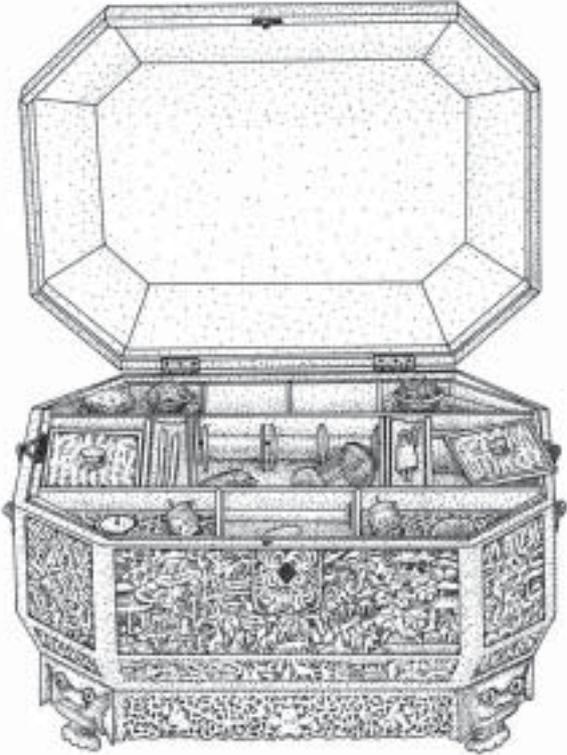
The largest number of ivory objects was found in four department stores, with the Beijing Arts and Crafts Department Store on Wangfujing Street having the most at 987, followed by the Friendship Store with 442 items and the You Yi Centre with 345. You Yi also had a considerable number of carved hippo ivory items for sale. Five hotels out of 24 visited displayed small amounts of worked ivory for sale, mostly name seals and jewellery, including the Hilton (68 items), the Beijing Hotel (23) and the Great Wall Sheraton (21). Liulichang Street had 23 antique shops selling 1,032 items of high quality worked ivory, many "antiqued" with smoke, while the multi-storied Hongqiao Market contained 183 items in 10 of its antique shops. The huge Panjiayuan Market had 84 objects displayed in 18 of its closed antique shops, with other ivory items kept out of view. The hundreds of open-air curio stalls in the market sold no ivory. No ivory was seen in the airport. Table 45 shows the breakdown of the types of outlets.

Table 45
Types of retail outlets and number of ivory items surveyed in Beijing in early 2002

Type	No	Percentage of total	No. of items	Av. no. of items/outlet.
Antique gallery/stall	51	84	1,303	26
Department store	4	6	1,774	443
Gift shop	6	10	119	20
Ivory specialty shop	0	0	0	0
Total	61	100	3,196	52

The items for sale in Beijing were on average smaller than those in Guangzhou and Shanghai, with name seals, jewellery, small (less than 10 cm) human and animal figurines and snuff bottles being common. A large, carved 10 x 4 cm business seal cost USD 1,463 and another one 10 x 2.5 cm was priced at USD 439. The three main department stores mentioned above carried most of the larger figurines, carved and painted tusks, tusk section vases, paintbrush pots, and sword scabbards and hilts. Some of the carved tusks had only light engraving on them on the central part of a whole tusk, usually of a village or nature scene. The painting on tusks, usually in black or pastel colours,

consisted of Chinese calligraphic poems and nature scenes. The largest painted tusk found, 1,5 m, was priced at USD 40,244, No polished tusks were seen. A magnificent 38-cm tiger descending a tree was priced at only USD 1,683, which seemed a bargain compared to the items displayed next to it, No large Canton balls were found, other than some made of plastic. Most were under 10 cm in diameter, but one measuring 12 cm with 28 layers was seen in the Friendship Store priced at USD 7,073. Only one dragon boat and no sailing junks were found.



Chinese lady's sewing box c.1840

Only two African objects were found, 18 and 20-cm busts carved on small tusks in a shop on Liulichang Street. One interesting item was an antique 30-cm *hu* priced at USD 300 seen in a shop in the Hongqiao Market, A higher quality *hu* found in an expensive antique boutique in Singapore was priced at 900 Singapore dollars (USD 523) in 2001 (Martin and Stiles 2002). A *hu* is a tablet that court officials held before them for notes when in the presence of the Emperor in the Forbidden City in the Tang and Ming dynasty periods. First to fifth-rank officials were entitled to an ivory *hu* while sixth to eighth-rank used wood (St Aubyn 1987; Boda 1990).

Table 46
Retail prices for recently-made ivory items seen in Beijing in early 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1	27-55
Bangle	2-2.5	112
Necklace, small beads		24-67
Necklace, large beads		73
Pendant	3	10-15
Ring, plain		12
FIGURINES		
Animal	5	240-260
	10	1000
	20	
Human	5	85
	10	104-1,463
	20	1,450-3,171
	40	7,927
	60	10,366

Table 46 shows the retail prices

Table 46

Item	Size in cm	Price in USD	
TUSKS			
Carved	20	1,110-1,585	
	40	4,634	
	60	6,098	
	100	11,951-43,902	
Polished	20	463	(painted)
	40	2,927	(painted)
	60		
MISC,			
Chopsticks, pair	20	73-94	
Cigarette holder	10-15	43	
Name seal	2 x 6	85-122	

N.B. - = no data USD 1 = 8.2 RMB

of representative items in Beijing.

The main buyers were East Asians, though the Friendship Store and a couple of shops on Liulichang Street said that Westerners bought ivory occasionally, but the vendors did not know their nationalities. Local Chinese usually bought name seals and chopsticks, though once in a while high government officials or rich businessmen would buy mounted, painted or carved tusks to present as gifts to important people.

The use of ivory substitutes in China

Cow and camel bone were the most common substitutes seen in the three cities. Some of the bone carvings were of quite high quality and challenge ivory carvings in beauty, but bone does not maintain its appearance over time as well as ivory. Bone can crack and develop a bad odour and an unpleasant yellowish tint. Leung (O'Connell-Rodwell and Parry-Jones 2002) stated that ox bone was the most common substitute used in 1999. The Chen Clan Academy in Guangzhou has developed a method to treat bone to make it more lustrous and appear more like ivory. The Academy has its own carvers and sells quality bone carvings in its museum. They carved ivory in the past.

Mammoth ivory from Russia and Canada has been used as a raw material in carving since at least 1990 in China. The advantage is that it is legal to trade internationally, but the price for high-quality mammoth ivory is generally higher than for African black-market elephant ivory. The disadvantages, according to the Chinese craftsmen, are that it cracks easily while carving, has a rough outer rind, is sometimes tinted brownish and has a bad odour. One Hong Kong mammoth ivory workshop owner in Guangzhou said that he prefers mammoth ivory, however, and finds it more beautiful than elephant ivory. One advantage that people do not speak of is that worked elephant ivory can be exported as mammoth ivory.

The price of mammoth ivory in 1985 was only USD 24/kg, rising to USD 180-560/kg by 1989 (Martin 1990b). Caldwell and Luxmoore (1990) reported prices as high as USD 800/kg in 1990. In 2002 it was graded into A, B and C qualities; A, the best, is USD 200-220/kg in China and Hong Kong from dealers and is the only grade the workshops usually buy. Prices in Russia for A quality are considerably lower, USD 60-80/kg. B quality is about USD 60/kg in Hong Kong and C quality is rarely purchased.

The decrease in price from 1989, in spite of increased use since 1985, is because much greater quantities of mammoth ivory are available now as a result of global warming and permafrost melting in Siberia, northern Canada and Alaska, exposing the mammoth carcasses. Tusks over 100 kg are common, Tusks that have remained permanently frozen since the mammoth's death are the best quality. Those nearer the surface that have thawed and refrozen several times are poor quality.

Mammoth ivory workshops are increasing in number as elephant ivory becomes scarcer and business declines. Cho's Arts and Crafts has a factory in Guangzhou (Cho Mammoth ICF) and the owner said that they have one in Hong Kong. The Guangzhou factory employs 70 carvers, mostly young people, and they produce higher quality carvings than those seen in the DaXin ICF (even better than their 'quality' pieces). Mr Cho said that the Hong Kong carvers produce higher quality carving, but it is unlikely that a mammoth ivory workshop exists in Hong Kong. This survey and the Humane Society of the United States (HSUS 2002) investigators found only part-time carvers working from home in Hong Kong. Mr Cho exports mainly to Europe and the USA. He used to have an ivory carving business in Hong Kong, but switched to tagua nut, a vegetable substitute for ivory, soon after the CITES 1990 ban, switching again to mammoth ivory in 1997.

There are other mammoth ivory factories in Guangdong and Fujian provinces (such as Minhou Ganglian and Fuzhou Fuyi) that supply Guangzhou and Shanghai, but no mammoth ivory workshops were found in Shanghai or Beijing. All of the mammoth ivory factories found in this survey are owned or co-owned by Hong Kong companies.

Leung (O'Connell-Rodwell and Parry-Jones 2002) did not find mammoth ivory for sale in Guangzhou, except at the Trade Fair, but he did not visit the Jade Market in his survey, where most of the mammoth ivory is sold.

Mammoth ivory was most common in Guangzhou, where 819 items were found in six outlets. Shanghai had 292 items in four shops and Beijing had none. Some of the white mammoth ivory can be indistinguishable from elephant ivory and it makes the most suitable substitute in terms of quality and aging properties. One mammoth ivory workshop owner said that he thought that there was enough raw mammoth ivory available to supply the entire East Asian ivory market for 30 years to come. It should be remembered that some of the earliest art known consists of mammoth ivory animals carved some 30,000 years ago in southern Germany, a type that became common across Europe and Russia in the millennia to follow, along with mammoth ivory female figurines (Clark 1977).

Worked hippo ivory was also seen in small quantities in all three cities, but it has fallen out of favour with ivory buyers as they now know that it has poor aging properties, often cracking after two or three years, especially during dry periods. No African pig tusks were found, though they were seen in Singapore in 2001 (Martin and Stiles 2002).

Greenish-white nephrite jade and the higher quality white jadeite are possible substitutes for ivory, though jadeite is more expensive than ivory. Guangzhou has an extensive Jade Market where Chinese nephrite jade and Burmese jadeite are sold in great quantities. In a few of the shops jade and ivory were displayed together. Many of the jade carved objects, such as name seals, bangles, pendants and animals, closely resemble their ivory counterparts in style, though jade is more reflective and translucent. Jade shops were also common in Shanghai and Beijing. Jade and ivory share the attribute of being considered by the Chinese as a propitious substance to own and display in the house (Parsons 1969).

White plastic was seen used for name seals and other objects in the less expensive outlets. Even the expensive Friendship Store in Beijing carried several plastic Canton balls priced from USD 327 for one 16 cm in diameter down to USD 156 for one 10 cm in diameter. A resin substance is also used to imitate ivory and is sometimes employed along with plastic to make imitation carved tusks and larger, composite objects for which bone is unsuitable.

A new substance called ivory porcelainware has become very popular in China, and from a distance looks like ivory, but it is more yellow. Almost all gem and jade shops carry it. Many of the objects made from it, such as human and animal figurines, are similar in style to those made of ivory.

Vendors' views on ivory market trends and the future

Even in 1989, Chinese involved in the ivory industry were becoming pessimistic about the future of the ivory industry. They were aware that there was an active campaign in the West to ban the ivory trade and that elephant populations were threatened. Ivory was getting scarcer and more expensive, and some factories were already shifting to Burmese jade (jadeite) in anticipation of the end of raw ivory imports (Laurie 1989).

In 2002, without exception, all ivory vendors who were in business in 1990 said that ivory sales were lower in 2002 than in 1990. The increasing number of local Chinese benefiting from economic development and the rise in Taiwanese tourists and businessmen coming to the mainland had helped sales, but did not make up for the dearth of Western buyers and the previous ability to export freely. Leung (in O'Connell-Rodwell and Parry-Jones 2002) stated that ivory vendors in Beijing, Shanghai and Guangzhou reported that ivory sales were moderate to high. It would appear that the greater attention the Chinese authorities are giving to controlling the ivory industry since 2001 is having an effect on vendors' views, as they seemed more pessimistic at the time of this survey a year later.

The current level of ivory sales within China was enough to maintain a business, but most vendors thought that they would have to change to other products in about two years due to a

drying-up of the supply of raw ivory. The ivory sections of the Friendship Stores in Guangzhou and Beijing had empty shelves where previously ivory items had been displayed, which was also the case with the Beijing Arts and Crafts Department Store. Only the Shanghai Friendship Store was fully stocked. The shelves of the ivory section of the Shanghai branch of the Arts and Crafts Department Store were almost devoid of ivory.

Guangdong Province ivory workshops were more upbeat, as some said they could export to Europe, the USA, Japan and Taiwan via Hong Kong, using mammoth ivory, bone and hippo teeth as a cover (EIA 2000b). The Humane Society of the United States (2002) study found that Hong Kong traders were indeed smuggling Chinese ivory to the USA.

Everyone asked knew of the auctions of raw ivory in southern Africa in 1999 for the Japanese traders. The people spoken to at the DaXin ICF did not believe that the auctions heralded a softening of the CITES position on international ivory trade as they were aware that Japan had agreed not to re-export any ivory. They also did not think that CITES would permit Chinese traders to bid on African raw ivory in future. Thus, whether CITES allowed future auctions was irrelevant to them from a business point of view, but they did think that legal sales would reduce the demand for smuggled ivory. Similarly, the vendors spoken to were not optimistic about CITES lifting the export ban on ivory and most believed that there was no future for the ivory industry, except if one wanted to sell only mammoth ivory, which again had a limited future. EIA (2002), however, stated that in their 2000 investigation they found some Chinese ivory businessmen who thought that the 1999 ivory sales to Japan presaged a wider resumption of sales. Two informants in Guangzhou told them in 2000 that they thought the loosening of ivory trade restrictions would help business (anon. reviewer, in litt. March 2003).

Taiwan

The legal position of the ivory trade in Taiwan

Taiwan cannot become a Party to CITES for political reasons, but under Taiwan's *Wildlife Conservation Law* (WCL), which came into effect in June 1989 and was amended in October 1994, the commercial import and export of elephants and their products are prohibited. Domestic commercial trade in ivory was temporarily prohibited from 1989 to 1995 pending the introduction of a comprehensive domestic management system. The system, the Supplementary Regulations for the Management of Ivory Stocks (unofficial translation), was put in place in 1995 (Wu and Phipps 2002).

Taiwan's *Wildlife Conservation Law* states that:

- Asian and African species of elephants are protected under domestic law as Category I species (equivalent to CITES Appendix I), and are afforded the highest level of protection;
- trade in elephants and elephant products, including ivory, is strictly controlled; they cannot be traded internationally for commercial purposes;
- domestic commercial sale is possible only if those who possess ivory products and wish to sell their ivory products have registered and applied for a permit from their local government;
- registered whole tusks are to be marked with a non-transferable sticker for the purposes of identification;
- a receipt with a clear description of item(s), quantities, per unit prices, and total value, should accompany each commercial transaction involving ivory;
- ivory dealers are required to report sales volumes to the relevant local government agency on a quarterly basis.

The WCL is still in place, but the Supplementary Regulations for the Management of Ivory Stocks system was discontinued on 1st January 2000 as part of an overall move towards government decentralisation. Under this process, local municipal and county governments now are required to put in place ivory management systems within their individual jurisdictions.

Article 31 of the WCL (as amended in 1994) and Proclamation 84 of the Council of Agriculture (CoA, 23 June 1995), stipulated that those in possession of whole tusks, whether held for commercial or noncommercial purposes, must register or make a record of their possession with the relevant local government authorities. Holders of such tusks were required to mark them and to register their stockpiles with local authorities (Chen 1997).

According to the Supplementary Regulations for the Management of Ivory Stocks, merchants who held a business licence for operating a name seal shop, workshop, handicraft store, or auction house had to apply for a permit from their local county or municipal government between 1 October and 30 November 1995 in order to sell ivory legally. Of a total of 296 applicants, 285 businesses received a permit, including 155 shopkeepers in Taipei and Kaohsiung, 31 shopkeepers in Taipei County, and 30 in Taichung. Of the 285 permit holders, 129 were name seal shops, 22 were curio or souvenir shops and six were carving workshops or auction houses, while the nature of business of the remaining 128 permit holders was not known (Chen 1997).

Under the management system, the working of whole tusks and the sale of resulting ivory items was not allowed (Phipps and Chen 1997). This put all ivory carvers and workshops out of legal business. Further, merchants had to provide legal receipts to buyers with a description of the products, quantity, price and total value of the purchase. Buyers of ivory products were legally required to ask for such a receipt, and the name and address of a purchaser had to be recorded on the receipt if products were whole tusks. Merchants also had to submit records of their sales volumes to the relevant authorities on a quarterly basis (Phipps and Chen 1997). Involvement in illegal trade in ivory products was punishable by prison sentences of between six months and five years, or fines of NTD 300,000 to NTD 15 million. Those local governments that have announced new ivory management systems have, for the most part, incorporated the basic elements of the Supplementary Regulations for the Management of Ivory Stocks into their new management systems (Wu and Phipps 2002).

Introduction

The cities of Taipei (population 2.65 million), Tamsui (population 110,000), Taichung (population 940,000) and Kaohsiung (population 1.5 million) were visited between 16 and 27 December 2002.



Map of Taiwan

History

The history of ivory carving in Taiwan is not known. There is no definite evidence that ivory craftsmen worked in Taiwan prior to 1949 when the Kuomintang Government and thousands of its followers fled to the island following the Communist take-over of the mainland. None of the main Taipei museums contain ivory items made in Taiwan. So-called antique ivory carvings were being sold in the BaDe Street Antique Market in Taipei, but the vendors knew little about their age or origins. However, ivory carving has a long history on mainland China and Chinese from Fujian Province began migrating to Taiwan in the 15th century. The Fujianese city of Zhangzhou became a centre of ivory carving for European traders in the 16th century, and Europeans set up businesses in Taiwan at the same time. From 1684 to 1887 Taiwan was a county of Fujian Province and it is quite possible that ivory carvers migrated with other Fujianese, particularly those that made name seals.

There has never been a large local market for ivory products in Taiwan, and prior to the 1970s any ivory industry that may have existed would have been small. From at least as early as 1979, when ivory import records are available, to 1988 Taiwan was a growing ivory processing centre, with close contacts with Hong Kong ivory dealers. When Singapore banned raw ivory imports in 1986 (Martin and Stiles 2002), Hong Kong shifted ivory processing to Taiwan and sent ivory carvers there. Legislation introduced in 1987 and 1988 in Taiwan halted the ivory manufacturing growth, and most of the craftsmen returned to Hong Kong (Wang and Milliken 1989; Wu and Phipps 2002).

There are no wild elephants in Taiwan.

Sources and prices of raw ivory in Taiwan from 1989 to 2002

Up to 1980 Taiwan's role in the international ivory trade was modest. The official import statistics of tusks into Taiwan show that there was an increase from 20 kg in 1973 to 6,347 kg in 1976. In the 1980s, as global ivory markets increased, Taiwan began importing more raw ivory from Africa, stimulated by business relations with Hong Kong ivory dealers (Wang and Milliken 1989). Ivory manufacturing grew commensurately. Table 47 shows the main source countries and quantities of all categories combined (raw, worked and waste) of ivory imported into Taiwan between 1980 and the end of 1988. They are combined here, as the declarations of ivory type made to Customs by import companies were thought not to have been entirely accurate because of differential import duties (Wang and Milliken 1989). The most important source country was Tanzania (76.3 tonnes), followed by Congo Brazzaville (53.6 tonnes) and then South Africa (27 tonnes). These three countries supplied 68% of Taiwan's 231.4 tonnes of ivory imports from 1980 to 1988. Much of this ivory was illicit and transited Dubai in the United Arab Emirates. The 13.4 tonnes imported from the UAE in 1988 was from Africa as well. From 1980 to the end of 1986 the average annual import was 14.7 tonnes. In 1987 it spiked to almost 81 tonnes because mainly Hong Kong dealers moved ivory processing from Singapore to Taiwan after Singapore banned ivory imports and manufacturing. Demand in the Taiwan domestic market was only 1-2 tonnes of ivory a year, so most of the imports were re-exported. Large scale ivory imports ceased in 1989 after Taiwan enacted ivory import curbs in 1987 and 1988 (Wang and Milliken 1989).

The declared raw ivory import prices were on average USD 30/kg in 1987 and USD 58/kg in 1988, certainly understatements made for Customs purposes. Wang and Milliken (1989) did not obtain the real market value prices.

Raw ivory stockpiles were not inventoried or registered in Taiwan at the time of the CITES ban, thus the 1990 quantity is not known. Wang and Milliken (1989) thought that stocks were low, however. All raw ivory in Taiwan was registered with the government prior to the end of 1995 under the Supplementary Regulations for the Management of Ivory Stocks. TRAFFIC has not obtained this information and the investigator did not have the time to track down the information, thus it is not known outside specialized government circles what the legal raw ivory stockpiles were in Taiwan at that time, or now. According to the *China Times* (12 April 2000), 139 Taipei dealers registered 5,101 tusks, which was probably the great majority of Taiwanese raw ivory.

Table 47
All categories of ivory imported into Taiwan in kg. 1980-1988

Country	1980	1981	1982	1983	1984	1985	1986	1987	1988	Total
CAR	0	571	0	4,712	7,606	1,834	404	0	0	15,127
Congo	1,000	2,702	5,487	5,552	1,369	12,396	1,784	23,241	65	53,596
Hong Kong	557	1,164	1,067	728	964	370	108	631	876	6,465
Japan	1,697	1,886	2,503	2,492	1,973	2,112	1,856	962	0	15,481
South Africa	4,457	3,869	1,124	1,662	3,977	738	0	46	6,755	22,628
Tanzania	1,496	0	0	500	0	0	13,347	50,296	10,703	76,342
UAE	0	0	0	0	0	0	0	0	13,351	13,351
Zaire (DRC)	0	0	0	0	1,422	62	0	1,865	15	3,364
Other	1,015	1,381	2,373	684	328	0	45	3,817	15,391	25,034
Total	10,222	11,573	12,554	16,330	17,639	17,512	17,544	80,858	47,156	231,388

Source: Wang and Milliken 1989

According to published data, all raw ivory seized entering Taiwan between 1991 and 2000 was of African origin (Phipps and Chen 1997; Wu and Phipps 2002). All vendors questioned in this survey said that the source of their ivory was South Africa, also a common response in China. Seizure information indicates that West and central Africa were probably more important source areas, particularly Cameroon and Nigeria. Traders in both these countries are involved in the international smuggling of ivory originating in the DRC and the Republic of Congo, the Central African Republic, Gabon and Cameroon itself (Martin and Stiles 2000). It seems to be a common misconception in China and Taiwan that all ivory in Africa comes from South Africa. JWCS (2002)

reported that Singapore sold much of their large raw ivory stocks to Taiwan (and Japan) in 1998 and 1999 and that Taiwanese ivory dealers go regularly to Singapore to buy name seal blanks.

No prices for raw ivory in Taiwan were reported by Phipps and Chen (1997) or Wu and Phipps (2002). Joyce Wu of TRAFFIC Taiwan (pers. comm. December 2002) said that in most cases of ivory seizures no one showed up to claim the ivory, so there was no one to ask what was the price paid.

Up to 2000 Taiwan was an important destination for illegal raw ivory and blank name seals. Table 48 shows the seizures reported to TRAFFIC between 1991 and 2002, totalling 87 cases. Up to December 2002 no ivory seizures, other than small individual confiscations, were reported (Wu, pers. comm. December 2002; Milliken et al, 2002a).

Table 48
Ivory seizures in Taiwan reported to TRAFFIC. 1991-2002

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	1	1	6	13	10	10	12	15	12	7	0	0

Using TRAFFIC and press reports, ETIS found that an additional 69 ivory seizures were made involving Taiwan and other countries, making a total of 156. The 87 seizures in Taiwan itself totalled 12,938 kg of ivory and the 69 cases outside consisted of 2,446 kg (Milliken et al. 2002b). Over 15 tonnes of ivory involving Taiwan were therefore seized between 1991 and the end of 2000.

There also seems to have been an increase over time in ivory smuggling into Taiwan up to 2000. From 1990 to the end of 1995 some 31 cases involving 5,693 kg of ivory were reported (though Phipps and Chen (1997) stated it was 7,096 kg in this period), while between 1996 and 2002 the number of cases had increased to 56 involving 7,246 kg seized (Milliken et al. 2002b). It is not known if this ivory was being processed and mostly re-exported or simply transiting Taiwan. Certainly it exceeded domestic market needs. Since 2000, however, there have been no major seizures of ivory in Taiwan, perhaps indicating that ivory traders have ceased activities on the island in the face of increasing government vigilance. Apparently no new raw ivory is entering the country, but time will tell.

Since no raw ivory could be found for sale at the time of this survey, no current prices for raw ivory were available.

Ivory workshops in Taiwan

The modern ivory industry in Taiwan started in the early 1970s, Before then only a few craftsmen occasionally made name seals out of ivory. In 1973 a Taiwanese businessman brought in six ivory craftsmen from Hong Kong to teach the local artisans how to carve ivory. With the increasing number of Japanese tourists coming to Taiwan and with the popularity of foreign-made ivory items for sale in Taipei, this businessman decided to have some ivory items made by his company in Taiwan. He hired six Taiwanese wood carvers to learn from the six Hong Kong artisans how to carve ivory. The Hong Kong ivory craftsmen returned to Hong Kong around 1975 (Chen Yao Sheng, Taiwan ivory shop owner, interviewed in Taipei in 1979 by Esmond Martin).

From Hong Kong, about 50 to 100 ivory carvers came to Taiwan in 1987 to work the almost 81 tonnes of ivory that was imported that year (Wang and Milliken 1989). They made mainly name seals and jewellery, while Hong Kong and China produced the more skilful sculptures. When Taiwan banned raw ivory imports in 1988 most of these carvers left Taiwan. In 1989 only about 10 ivory carvers remained active (Wang and Milliken

1989). During the 1980s Taiwan was mainly an ivory processing and re-export locale. The USA (23.7 tonnes) and Hong Kong (20.4 tonnes) were the main wholesale destinations from 1986 to 1988 for worked ivory exports, followed by West Germany (8.9 tonnes), Japan (6.3 tonnes) and Singapore (4.5 tonnes). Worked ivory imports into Singapore were illegal after November 1986, but nevertheless the entire 4,5 tonnes imported by Singapore from Taiwan were in 1987 and 1988!

There are no reports in the literature concerning ivory workshops in Taiwan after 1989. Much of the worked ivory sold in Taiwan was imported previously from Hong Kong or China (Wu and

Phipps 2002), and these imports probably increased after 1990. It is much easier to smuggle worked ivory than raw tusks or cut sections. Taiwanese traders have been selling ivory name seals to Japan since the 1980s, and in 1990 and 1994 Japanese Customs seized a total of 12,222 of them. Some of these originated in Singapore (JWCS 2002).

The only ivory being worked in 2002 in Taiwan, according to ivory vendors and the TRAFFIC Taiwan office, is that involving name seals. In shops specializing in name seals, normally a hallmark artisan carves the name onto the base of the seal on the shop premises. Several one-man operations using electric tools were seen in the course of this survey. One name seal vendor in Taipei said that the head of the seal could also be carved into the shape of the buyer's astrological birthday animal for an additional charge of USD 44, JWCS (2002) reported that at least one carver manufactured ivory name seal blanks in Taipei, though he usually carved cow horn. Some Taiwanese dealers smuggle the ivory name seals to Japan.

If 'blood' ivory (literal translation of the Chinese word) is being used for a name seal, the craftsman will perform a small blessing ceremony before beginning carving at an auspicious time based on the buyer's birth date and time of birth (Joyce Wu, TRAFFIC Taiwan, pers. comm. December 2002). 'Blood' ivory, called vermilion ivory in Wu and Phipps (2002), is probably hard ivory from the forest elephant. 'Blood' ivory is described as being translucent, a characteristic of forest elephant ivory, suggesting a central African or South East Asian origin. Taiwanese believe that the difference between 'blood' and white ivory is the freshness of the tusk. 'Blood' ivory supposedly is cut from a live or recently killed elephant, while white ivory has aged before being collected. The 'blood' type of ivory is more expensive in Taiwan than the soft ivory of the savannah elephant, which is also the case in Japan (but not in China). The Taiwanese probably acquired the preference for hard ivory from Japanese influences. Japan ruled Taiwan from 1895 to 1945, and since then Japanese have been the main customers for Taiwan worked ivory (and possibly the raw ivory as well). In 2002 the charge for carving the hallmark ranged from USD 44-82 in Taipei, USD 35-59 in Taichung and USD 44-65 in Kaohsiung. Souvenir shops charged the higher amounts as they must send the seal blank out to be carved.

All ivory vendors interviewed during this survey said that no new ivory was being carved and that when the existing worked ivory stockpiles were exhausted that would be the end of selling ivory. They also said that all the former carvers were now retired, but it is likely that any remaining raw ivory is being carved secretly, as to leave it stored would represent a financial loss to the owner. There were various ivory items seen in Taiwan that were unusual and that were not seen in China or Hong Kong, suggesting they were carved locally. Of particular note were strange human heads and figurines representing some kind of monster or evil spirit, perhaps the demons that are seen in some Daoist carvings (e.g. Kuixing).

Retail outlets and prices for worked ivory in Taiwan

Wang and Milliken (1989) reported that there were more than 50 ivory retail outlets in Taipei and about five in Kaohsiung in 1989. They were geared towards tourists, and Japanese and Americans were the main buyers. Taiwanese did not like ivory jewellery and they bought mainly ivory name seals and chopsticks. In 1989 wealthy Taiwanese had developed a taste for large, composite sculptures on whole tusks of village scenes, which were manufactured in China and exported by Hong Kong. Informants in China reported in 2002 that Taiwanese now buy these large items in China to carry home personally. None was seen for sale anywhere in Taiwan during this survey.

Wu and Phipps (2002) provide some useful data on retail outlets and prices from 1999 that can be used for comparative purposes. Table 49 shows the number of ivory retail outlets found in the different cities in 1999 and 2002, broken down according to the categories used in this report. No department stores nor underground malls carried ivory in either survey. Even the Mitsukoshi Department Store chain, which commonly carries ivory in Japan, did not sell ivory in Taiwan. Wu and Phipps (2002) found some outlets that sold ivory in 1997 (as reported in Phipps and Chen in 1997), had stopped by 1999 and some vendors were complaining about declining ivory sales. The vendors attributed this decline to a drop in the number of Japanese buyers, who expressed fears about Customs possibly confiscating the ivory.

Table 49**Types of retail outlets and number of ivory items surveyed in Taiwan in 1999 and late 2002**

Type	Taipei		Tamsui		Taichung		Kaohsiung	
	1999	2002	1999	2002	1999	2002	1999	2002
Antique gallery/stall	'many'	24	4	2	0	0	0	0
Gift shop/stall	15	8	0	0	>3	12	10	6
Ivory specialty shop	1	1	0	0	1	0	0	0
Name seal shop	6	3	0	0	2	1	4	2
Total	>22	36	4	2	>6	13	14	8

In Taipei it is likely that there were more than 40 retail ivory shops in 1999, fewer than the over 50 in 1989. The number had fallen to 36 in late 2002. Retail price comparisons can be found in Table 61.

In total, in Taiwan some 1,832 ivory items were seen in 59 retail outlets in the four cities visited, an average of 31 pieces per outlet. An additional 31 mammoth ivory items were seen.

Taipei retail outlets

Most of the 36 retail outlets found selling 1,261 ivory items were antique stalls in the Antique Market on BaDe Road. The 24 table stalls out of a total of approximately 150 displayed 139 ivory items, most of them under 15 cm in maximum dimension. The largest object seen was a 32-cm tall modern sculpture of a kind of monster or god found in a second-hand bookshop in the market, priced at USD 3,529. The weekend ChienKuo Jade Market had only two table stalls with ivory out of a total of close to 200. One table was devoted exclusively to ivory, with 202 items, while the other had 44 pieces amongst a variety of other items. The owner of the ivory specialty stall said that the ivory came from a variety of source countries, such as Thailand, Myanmar and Malaysia. None of the carved figurines looked Burmese (Stiles 2002), though items such as cigarette holders, jewellery and name seals are generic in appearance and could have been manufactured there. While Thailand is a possibility, many of the items had the motifs and styles seen in China and Hong Kong. The largest item was a 30-cm Kwan Yin priced at USD 441, considerably under value. A 15-cm Kwan Yin was priced at USD 353, more in line with prices elsewhere, but still on the low side.

The remaining 10 outlets consisted of seven gift shops and three name seal shops located on main city streets, some near luxury tourist hotels. One of the shops was in a hotel (Lai Lai Sheraton). The most expensive and largest item found in Taipei was a 70-cm Wen Chang (Daoist god of literary men) priced at USD 10,000 (fixed price) in a stone and coral shop on Linsen North Road. A name seal shop on Changchun Road displayed a copy of a 12-cm Ming Dynasty period reclining nude woman (Watson 1984) priced at USD 882.

Table 50 shows a breakdown of the outlet types and the numbers of items seen. None of the six antique boutiques visited displayed ivory; only the stalls at the Antique Market carried items that were called antiques. All the name seal shops sold a variety of other things including ivory and non-ivory souvenirs.

Table 50**Types of retail outlets and number of ivory items surveyed in Taipei in late 2002**

Type	No	Percentage of total	No. of items	Av. no. of items/outlet
Antique stall	24	67	139	6
Gift shop	8	22	716	90
Ivory specialty shop	1	3	202	202
Name seal shop	3	8	204	68
Total	36	100	1,261	35

Four of the outlets also carried small numbers of carved mammoth ivory items (11 in total). The shop specializing in mammoth ivory reported in Wu and Phipps (2002) was not found in this survey.

The most common type seen for sale was the name seal, followed by human figurines of Chinese subjects (such as Kwan Yin, Happy Buddha, Long Life and potters), beaded necklaces and bracelets (including Buddhist rosaries), various kinds and sizes of cigarette holders (up to 4 x 18 cm), and small (<10 cm) carved animals. There were also chopsticks, ear picks, hairbrushes with ivory handles, other jewellery types, netsukes, paintbrush pots, snuff bottles/boxes and hollow tusk sections. Carved tusks were rare (three in total) and the largest example measured only 26 cm long. No polished tusks, pagodas or boats were seen. Only one Canton ball, 8 cm in diameter on a 33-cm ivory pedestal and priced at USD 2,353, was seen.

The average small size of ivory items in Taipei is most likely geared towards the foreign visitor market, as it is easier to hide small objects in luggage or on the person.

The antique and jade markets had the lowest prices and the tourist souvenir/stone/coral shops were the most expensive. The latter shops did not openly display 'blood' ivory items, thus they were not included in this survey in line with the methodology used-here. The name seal shops and three of the market stalls had 'blood' (i.e. hard) ivory name seals, and the prices were noticeably higher than comparable seals made of white, or soft, ivory. A 'blood' ivory plain name seal 1.5-2 x 6cm was priced at USD 118-176, while a comparable white ivory seal was priced at USD 106-132. The price difference is somewhat obscured, however, by the fact that the prices for white ivory prices include those in the expensive gift shops while the 'blood' ivory prices are exclusively from the less expensive markets. A 1 x 5-cm white ivory seal in the ChienKuo Jade Market was only USD 35! The same stall also had two pieces carved from elephant bone and two from mammoth ivory. Warthog teeth and teeth said to be from tigers were seen in the Antique Market, but no hippo teeth were found.

The main buyers in the gift shops were foreign tourists and businessmen, mainly Japanese and non-Taiwanese Chinese. The Taiwanese worked ivory prices are cheaper than those of Japan and Singapore and comparable to those in China and Hong Kong. Taiwanese are the main ivory buyers in the Antique and Jade markets, but resident and visiting foreigners also shop there. Westerners rarely buy ivory, according to informants, and when they do it is usually a jewellery piece or small figurine.

The prices quoted in Table 51 were the asking prices. The discount prices after initial (not hard) bargaining in the gift shops were 37-46% off the starting price. Hard bargaining would have obtained larger discounts.

Table 51
Retail prices for recently-made ivory items seen in Taipei in late 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1-1.5	59-65
	2-3	106
Necklace, small beads		76-88
Necklace, large beads		118
Pendant/broach	3	26
Ring, plain		9
FIGURINES		
Animal	5-6	103-118
	15	1,000
Human	5-6	88-365
	9-10	235-706
	20	2,500
	30	441
	70	10,000
TUSKS		
Carved	26	588
MISC.		
Chopsticks, pair	20	115-160
Cigarette holder	10-15	47-53
Name seal	1.5 -2 x 6	106-176

N.B. USD 1 = 34 New Taiwan dollars

Tamsui retail outlets

Tamsui is a small city only 20 km from Taipei on the coast. Only two antique shops on Chungcheng Road were found displaying ivory, but not all shops were open during the investigator's visit. A large temple celebration with a street procession was in progress and perhaps shops were closed in connection with it. The two shops carried in total 17 ivory items. The most expensive piece was a 14-cm Kwan Yin that the vendor said was made in the Qing Dynasty, priced at USD 750. Six of

the items were name seals, and one seal 2 x 6 cm was priced at USD 118. Other ivory items included snuff bottles (USD 147), various jewellery pieces and Buddhist/Daoist figurines.

Taichung retail outlets

Taichung is the third largest city on the island and is a centre of small to medium-sized manufacturing industries. Most of the 242 ivory items found in Taichung were located in the Lienmai and Wenhsin jade markets. The former displayed 148 ivory items in six stalls and the latter had only 31 items in three stalls. One shop near a tourist hotel displayed 25 items, and one name seal shop carried 38 ivory seals of various sizes. Table 52 shows the types of ivory outlets and numbers of objects.

Table 52
Types of retail outlets and number of ivory items surveyed in Taichung in late 2002

Type	No.	Percentage of total	No. of items	Av. no. of items/outlet
Gift shop/stall	12	92	204	17
Ivory specialty shop	0	0	0	0
Name seal shop	1	8	38	38
Total	13	100	242	19

There was a great variety of types of objects with no one category dominating. The largest item seen was a 32-cm painted 'beautiful lady' in a Lienmai Jade Market shop priced at USD 2,059.

Along with the usual name seals, jewellery items and human and animal figurines were a number of unusual pieces, such as a 9-cm distorted human head, 5-cm dancing elephants on a 15-cm ivory pedestal, a pair of 10-cm horsemen and an unpainted 17-cm Chinese cabbage (*bok choy*). No carved or polished tusks were seen. Twelve mammoth ivory items were also seen, mostly small figurines, but also a large bead necklace. Table 53 presents some of the asking prices.

The gift shop had the highest prices. For example, 2 x 6-cm name seals were USD 147 here, while in the name seal shop they were USD 118 and in the jade markets they varied from USD 88 to 118. The discount prices for carvings would be 35-50% less.

The main buyers in Taichung are Taiwanese, as few tourists come to the city.

Table 53
Retail prices for recently-made ivory items seen in Taichung in late 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1-1.5	65
	2-3	118
Necklace, small beads		40
Necklace, large bead		118-176
Pendant/broach	4	35
FIGURINES		
Animal	5-6	176
Human	5-6	103-294
	9-10	118
	17	529
	32	2,059
MISC.		
Chopsticks, pair	20	88
Cigarette holder	10-15	47
Name seal	1.5-2 x 6	88-147

N.B. USD 1 = 34 New Taiwan dollars

Kaohsiung retail outlets

Kaohsiung is the second largest city on the island. It is a main industrial centre and has the country's biggest seaport, which is the world's fourth largest container port. Most of the worked ivory found in Kaohsiung was located in six out of approximately 150 stalls in the Shihchuan Jade Market (274 items). Two name seal shops selling 55 ivory items were also visited. No gift or antique shop was carrying ivory out of the six found and no hotel shops were seen displaying ivory. Eight mammoth objects were found in the Jade Market, two name seals and six netsukes. Table 54 shows the breakdown of outlet types and the numbers of items seen.

Esmond Martin



The ivory carving industry in China expanded in the 1980s partly due to the increased number of foreign visitors. The craftsmen worked at the Beijing Ivory Carving Factory.



Daniel Stiles

An electric variety of old ivory items can be found in the Hongqiao Market in Beijing.

Daniel Stiles



Many antiques ivory boutiques on Liulichang Street in Beijing display for sale exquisite ivory objects.



Cow bone can make quite a good, less expensive substitute for elephant ivory.



In 1979 there were ivory craftsmen in Taipei using electric and hand tools, but by the late 1990s, all ivory carving had ceased in Taiwan.



This table in the Taipei Jade Market had the largest number of ivory items for sale in Taiwan.



No locally carved ivory figurines were found in Seoul. These items came from the Democratic Republic of Congo while other items were made in China, India and Indonesia. The large "tusk" lying flat is made of plastic.

Table 54**Types of retail outlets and number of ivory items surveyed in Kaohsiung in late 2002**

Type	No.	Percentage of total	No. of items	Av. no. of items/outlet
Gift shop/stall	6	67	274	46
Name seal shop	2	33	55	28
Total	8	100	329	41

The main types seen were name seals, cigarette holders, human figurines and bangles. Other items were ear picks, fans, paintbrush pots and carved plaques. The largest and most expensive piece seen was a 22-cm Kwan Yin priced at USD 2,941 in the Jade Market. The most expensive name seal found in Taiwan was a 2 x 7-cm seal of 'blood' ivory in a name seal shop priced at USD 294. No mammoth ivory was found. Table 55 presents representative prices.

The main buyers of ivory are local Taiwanese, but one vendor in the Jade Market said that a Westerner had recently purchased a small figurine from him. He did not know the nationality of the individual.

Table 55**Retail prices for recently-made ivory items seen in Kaohsiung in late 2002**

Item	Size in cm	Price in USD
JEWELLERY		
Bangle	1-1.5	59
	2	88
Necklace, small beads		88
Necklace, large beads		176
Pendant/broach	3	35
Ring, plain		9
FIGURINES		
Animal	9-10	294
Human	5-6	100
	9-10	250-294
	22	2,941
MISC,		
Cigarette holder	10-15	53-74
Name seal	1.5-2 x 6	74-294

N.B. USD 1 = 34 New Taiwan dollars

The use of ivory substitutes in Taiwan

The most common substitute seen to imitate ivory carvings was moulded bone powder resin. The Chinese Handicraft Centre in Taipei displayed over a hundred such pieces with a sign saying they were made from fish bone powder. The second most common substitute was cow bone followed by mammoth ivory. The prices of mammoth ivory objects were comparable to those of elephant ivory. Buffalo horn and tagua nut carvings were also seen. While not a substitute for larger ivory motifs, jade/jadeite is extremely popular in Taiwan for jewellery and smaller carvings that resemble ivory types. The prices of jade/jadeite are similar to those of ivory. For example, a 2 x 6-cm jade name seal was priced at USD 118 and a 1-cm wide bangle ranged in price from USD 59-112. No hippo teeth carvings were seen anywhere.

Vendors' views on ivory market trends and the future

There is widespread awareness in Taiwan of the ban on international trade in ivory. The local media apparently did not report on the CITES decision to allow limited trade in 2004, as no one seemed to know about it, but some salespersons knew of the 1999 auctions to Japan. Many gift shop workers believed it was now illegal to sell worked ivory in Taiwan, whether registered or not, and thus most people in a position to sell ivory items did not plan to do so. Many had already stopped ordering any new ivory items and were liquidating stockpiles. Small-scale vendors who sell all manner of items in the antique and jade markets will no doubt continue to replenish ivory supplies as long as there is a demand. Many admitted that they obtained their worked items directly from China or through middlemen traders, and they seemed prepared to continue doing so as long as there was little risk of penalties.

All vendors asked said that ivory sales had fallen tremendously since the 1990 CITES ban. Some also complained that profits on ivory had also fallen as they had reduced prices considerably to get rid of stockpiles due to government restrictions and public negative sentiment concerning ivory.

As long as the local governments who are responsible for implementing domestic ivory trade regulations actually enforce them, the trade in ivory in Taiwan should continue to decrease. A main problem is monitoring stalls not registered to sell ivory items in the antique and jade markets.



Chinese Immortals: Zhongli Kwan and Kwan Yin

Republic of Korea (South Korea)

The legal position of the ivory trade in South Korea

CITES entered into force in the Republic of Korea on 7 October 1993. Under the 1986 *Law Concerning Wildlife and Game*, amended in 1994 to conform with CITES regulations, it is illegal to import or export ivory or other controlled wildlife products without a permit issued by the National Forestry Administration. Contravention of the law is punishable by a maximum penalty of one-year imprisonment or a 3 million won (USD 2,275) fine. Anyone who transports, possesses or arranges to import or export illegal wildlife is subject to up to six months in prison or a one million won (USD 760) fine (Kang 1997).

There are no laws against possessing, working, displaying or selling raw and worked ivory within South Korea. Ivory stockpiles have never been registered (Kang 1997).

Introduction

Seoul (population 10.3 million) was visited from 23 to 30 April 2002. It was originally planned to visit Busan (Pusan) as well, but after finding no ivory industry in Seoul the trip there was abandoned.

History

Korea has no history of working or using ivory as art, religious sculpture, home ornaments or jewellery (Kim and Kim 1974). The extensive collections in the National Museum in Seoul do not contain a single ivory item. Ivory has been used for name seals probably since about the 1970s, when prosperity began to arrive after the Japanese occupation (1910-1945) and the Korean War (1950-1952). South Korea was selected to survey because of previous reports that ivory was being illegally imported, worked and sold, and that South Koreans were involved in buying ivory in Africa (Kang 1997; Martin 1998).

The Asian elephant range has never extended to the Korean peninsula.

Sources and prices of raw ivory in South Korea from 1984 to 2002

Published past ivory import statistics are contradictory. Martin (1992) and Kang (1997) provide differing amounts for 1984 and Milliken (1991) and Kang (1997) report different ivory import data for 1985 to 1990 (see Table 56). The discrepancy between Milliken and Kang is probably because Milliken relied on South Korean Customs import records, while Kang used export statistics of other (unnamed) countries to South Korea.

Table 56
Raw and worked ivory imports into South Korea, 1985-1990

Year	Worked ivory ¹	Raw ivory ¹	Ivory ²	Ivory ³
1984			<300 kg	958 kg
1985	24 kg	0 kg	2,960 items	
1986	560 kg	555 kg	2,459 items	
1987	358 kg	600 kg	47 kg	
1988	294 kg	2,249 kg	102 kg	
1989	28,828 kg	800 kg	473 kg	
1990	2,129 kg (Jan/April)	0 kg	2,703 kg, 2,535 items	

¹ Milliken 1991

² Kang 1997 (It is not stated how much was raw and how much was worked ivory.)

³ Martin 1992 (It is not stated how much was raw and how much was worked ivory.)

Most of the worked ivory came from Hong Kong. The almost 400% raw ivory import jump in 1988 from the 1986 and 1987 years was probably related to the Seoul Olympics, and it was perhaps used principally for making name seals. The worked ivory in 1990 came mainly from Hong Kong (1,382 kg), with the rest from Taiwan (400 kg) and Cameroon (347 kg) (Milliken 1991).



Map of Republic of Korea (South Korea)

Of greater interest is the more than 29 tonnes of worked ivory imported in 1989. Caldwell and Luxmoore (1990), accepting the figure, stated that there were rumours that much of this ivory was from Hong Kong, probably intended for re-export as South Korea did not belong to CITES until 1993, thus there would be few problems getting it out. Martin (1992) echoed this view. Milliken (1991), however, said that the import figure might have been in error and that the declared value suggested that the weight was actually 287 kg and not 28.7 tonnes. Export records for South Korea do not indicate that much of this ivory was re-exported in 1989; only 311 kg of worked ivory went to Japan. There are no South Korean ivory export statistics published after that. The two most likely countries to want this ivory, China and Japan, do not report importing it between 1990 and 1999 (O'Connell-Rodwell and Parry-Jones 2002; JWCS 2000, 2002). In 1991 almost 790 kg of tusks were seized in Japan coming from South Korea (Kang 1997), a small portion of the 28.7 tonnes (if it were that amount). There are no records of ivory ever being seized going from South Korea to China.

Martin (1998) reported that in 1997 South Koreans were illegally exporting raw ivory purchased in Sudan, presumably to South Korea, and Martin and Stiles (2000) were told of a Korean based in Kinshasa who was actively looking for raw ivory in 1999 in eastern DRC, though the informants did not know where the ivory would be sent.

A small source of worked ivory to shops came from students returning from trips abroad (Kang 1997).

No prices for raw ivory in South Korea were reported by Caldwell and Luxmoore (1990), Milliken (1991) or Kang (1997). There have been no ivory stockpiles documented in South Korea (Kang 1997).

In 2002 no vendor admitted to knowing of raw ivory entering South Korea and no evidence could be found for it.

Table 57 shows the 1989-2002 history of declared ivory seizures in connection with South Korea. The amount totals 4,367.6 kg of raw and worked ivory plus 9,198 unweighed items.

Table 57
Reported seizures of ivory destined for or leaving South Korea since 1989

Year	Place seized*	No. of seizures	Origin	Quantity
1989	Belgium	1		5 worked items
	Belgium	1		127 kg raw pieces
1990	Tanzania	1		897.4 kg tusks
	Hong Kong	1		58.9 kg tusks
	Hong Kong	1		11.7kg worked items
1991	Japan	1		789.5 kg tusks
	Belgium	1		3 worked items
	Belgium	1		149 kg raw pieces
	France	1		47 kg worked items
	USA	1		14 worked items
1992	Uganda	3		raw pieces, semi-worked blocks and worked items
	Hong Kong	1		34,4 kg semi-worked blocks
	France	5		759 kg worked items
	France	1		278 kg tusks
	USA	1		5 worked items
1993	South Korea	1		457 kg raw pieces
	South Korea	2		1,730 worked items
	France	3		114kg worked ivory
	Kenya	2		400 kg tusks
1994	USA	1		2 worked items
1995	South Korea	1		1.7 kg raw pieces
	South Korea	1		7,421 worked items
	USA	1		14 worked items
1996	USA	1		4 worked items
1997	Belgium	3	Gabon	160 kg semi-worked blocks
	South Korea	1	Gabon	83 kg raw pieces
1998-2002		0		0

* It was not possible to find out from TRAFFIC the direction of flow of the ivory, whether going in or going out.
Sources: Kang 1997; CITES 2000 and 2002a

The ETIS database reported that 4,892 kg of ivory were seized in South Korea between 1989 and 1996 and only 604 kg seized between January 1997 and mid-2002, all of it in 1997 (Milliken et al, 2002b). TRAFFIC and newspapers have not reported any ivory seized going to or coming from South Korea since 1997. China and Japan report no South Korean connection in ivory seizures between 1998 and 2001 and 1994 and 1999 respectively (O'Connell-Rodwell and Parry-Jones 2002; JWCS 2000, 2002). This supports the conclusion that South Korea has ceased to be an important consuming or transit country for ivory.

Ivory workshops in South Korea

Milliken (1991) stated that ivory jewellery was advertised in an industrial estate catalogue from Iri, in Chollabuk-do Province, but that both Customs officers and the only former South Korean ivory importer said that no raw ivory was being imported to supply the factories. The only carved ivory that Milliken found for sale was made in Hong Kong. Kang (1997) stated that there were a

few ivory carvers in the country, but did not say what they carved, She said that all ivory waste was discarded, as it was not used in traditional medicine as it is in China.

The raw ivory import statistics from 1984 to 1989 certainly suggest that up to 1989, raw ivory was worked in South Korea. The 0 kg imported in 1990 supports the statements of the Customs officers and the importer that raw ivory was no longer being legally imported.

The illegal raw ivory seizures of 149 kg in 1991, 427 kg in 1992, 857 kg in 1993 and 243 kg in 1997 going to South Korea suggest that ivory working was continuing, and Kang (TRAFFIC East Asia, in litt. October 2002) saw at least one ivory workshop in 1997. These were years of an economic boom in South Korea. The sudden end to ivory seizures after 1997 implies that raw ivory smuggling ceased, and that ivory working would have stopped not long after. Kang (1997) reported that it would take a week to fill an order for 20 ivory name seals, as they would have to be collected from several shops. This would not be the case if there were operating ivory workshops.

No ivory workshops were found in South Korea in this survey. Handicraft artisans, wood carvers and souvenir/antique vendors all said that Koreans did not work or use ivory (for example Lee Kyinh Hee, Director, Korean Antiques Association, pers. comm. April 2002). The online South Korean Yellow Pages yielded no companies involved in producing ivory objects. All of the worked ivory seen in shops came from countries other than South Korea, except possibly for some name seals. Seal vendors said that they obtained ivory name seals ready-made from Thailand. All the vendor did was to engrave the hallmark with an electric drill.

Wood carvers were seen crafting similar types of subjects that are seen made of ivory in other Asian countries (for instance Happy Buddha, bodhisattvas, especially Avalokitesvara, animals, carved vases) and some of these types can also be found carved in stone. So there is a demand for carved items for decorative and religious purposes, just no demand in South Korea for ones made of ivory. One woodcarver responded to the investigator that he had never heard of anyone carving ivory in South Korea.

Wholesale buyers

The only reported export of South Korean worked ivory was 311 kg of mostly name seals to Japan in 1989 (Milliken 1991). No South Korean ivory items were seized in Japan between 1990 and 1999 (Kang 1997; JWCS 2000, 2002; Milliken et al, 2002a), No worked ivory has ever been reported going to China, Singapore or Taiwan from South Korea. This would suggest that South Korean ivory name seal workshops produced seals for local retail outlets, not for export.

Retail outlets and prices for worked ivory in South Korea

There are no published reports of the number of retail outlets selling ivory, nor of the number of worked pieces seen for sale in the past. Milliken (1991) found small quantities of ivory from Hong Kong for sale in a few shops and in the Lotte Department Store in the Myeong-dong shopping area in Seoul and in Busan. He stated that the quantities and demand were insignificant.

Kang (1997) reported that 90% of the worked ivory sold in the country was in the form of name seals, and most of the rest was jewellery. Ivory name seals made up only 5-10% of the seal market by volume in 1997. Kang said that the 'ghost' market, which sold black-market goods from the American military base, displayed a few ivory name seals and trinkets, but that 50 ivory seals could easily be supplied from stockpiles nearby. This seems to contradict what she stated elsewhere in the report that it would take a week to gather 20 ivory name seals. When asked for clarification, Kang (in litt. October 2002) said that she had seen a wholesale shop stocked with large quantities and two other shops on the second floor of one of the Namdaemun Market buildings. She did not specify whether the items were of ivory, but presumably they were.

In 2002 there was a total of 14 outlets found displaying 36 ivory items. As in Japan and Taiwan, South Korea has name seal shops, usually associated with calligraphy paraphernalia, but only one displayed ivory openly. Table 58 shows the breakdown of shop type and number of items found in each type.

Over 300 souvenir and crafts shops, antique stores, department stores and hotel boutiques were visited in Myeong-dong, Insadong, Itaewon, the COEX complex in Gangnam-Gu, the Namdaemun and Dongdaemun markets, several underground markets, the three multi-storey complexes of the Dap Sim Ni Antique Market, and various tourist attraction shops in such places

as the National Museum, temples, and the royal palaces. In addition, the Tourist Information Office was requested to find ivory for sale, but they were unsuccessful. Most Koreans are not even familiar with ivory. Two souvenir shop staff in Itaewon said that a store across the street carried two large tusks. The 'ivory tusks' turned out to be a set of Texas Long Horn steer horns.

The highest number of shops with ivory (9) and the most items (23) were found in the touristy Insadong shopping area, with the rest mainly found in shops in Dap Sim Ni (3 and 5 respectively), which is a collectors' antique area not frequented by tourists. Two small (7 and 10 cm) standing ivory Buddhas and a mismatched pair (18 cm and 25 cm) of chopsticks were found in a small shop in the Chungmu Underground Shopping Centre.

No ivory was found in hotels, department stores (including two Lottes), mass-market souvenir stores, tourist attraction shops or in airport shops. Imitation ivory name seals and jewellery made of white plastic were found in the black-market area and in the adjacent section of the Namdaemun Market, probably the 'ghost' market referred to by Kang (1997). Vendors said that no ivory was sold in Namdaemun and they advised to try the Insadong area.

The largest number of items displayed in one outlet was five, this number being found in each of three antique shops in Insadong. All the items in one shop came from Indonesia, and the quality of workmanship was poor. Another, more expensive shop carried better quality small pieces from China and India: an 8-cm lady, three 8-12-cm Buddhas and a carved 6 x 4-cm tablet. Both shop owners said that there were no Korean ivory items, and that there were no ivory carvers in South Korea. Another shop in Insadong carried four items from the DRC: a 65-cm elephant bridge, a 40-cm African woman and a pair of polished tusks (48 and 50 cm). It also had a 10-cm Happy Buddha from China. The carving quality of the African pieces was low.

Six shops were found carrying a total of 13 genuine ivory name seals. Three of these were second-hand, with hallmarks, found in two shops in Dap Sim Ni. Several shops carrying name seals displayed white plastic models that resembled ivory. One name seal vendor went through seal catalogues with the investigator. Seal blanks (2.5 x 7 cm) could be ordered in ivory or jade for USD 100 each, in marble for USD 70, and in wood or soft stone for USD 30 each. He said that there was little market for ivory name seals and he did not carry any. He carved hallmarks for USD 50 each, a high price, probably because he was in the Itaewon area that caters to Westerners. He said that the name seal factories were outside Seoul, and that the ivory name seals came from Thailand.

Ivory items came from China (7; 19%), India (5; 14%), Indonesia (5; 14%) and the DRC (5; 14%). The name seals, a bangle and a small monkey were of uncertain provenance.

Table 59 shows the prices of representative items.

Table 58
Types of retail outlets and number of ivory items surveyed in Seoul in early 2002

Type	No.	Percentage of total	No. of items	Av. no. of items/shop
Antique shop	9	64	21	2.3
Gift shop	4	29	11	2.8
Name seal shop	1	7	4	4
Total	14	100	36	2.6

Table 59
Retail prices for recently-made ivory items seen in Seoul in early 2002

Item	Size in cm	Price in USD
JEWELLERY		
Bangle, antique (no other jewellery)	1.5	379
FIGURINES		
Animal	6	114
Human	5	227
	10	189-606
	20	
	40	758
TUSKS		
Carved	35	1,894
	65	530
Polished, painted	20	455
	50	379
MISC.		
Chopsticks, pair	20	27
Name seal	2 x 6	60-76

N.B. - = no data USD 1 = 1,320 won

The prices seemed to be made up *ad hoc* on the spot by vendors, except for the name seals, probably because they seldomly encountered customers interested in ivory, and also because the ivory items were such a minor part of their inventory.

Three of the vendors said that the ivory name seals were discounted in price. A 2.5 x 10-cm seal was priced at USD 189, certainly a bargain when compared to the same size seal seen in Beijing priced at USD 439. Name seals can no longer be used as legal signatures in South Korea, so they will probably follow the typewriter into oblivion.

Milliken (1991) stated that Korean women did not like ivory jewellery and that the main buyers of worked ivory were probably Japanese visitors. Martin (1990a) found that Chinese ivory workshops in 1990 tried to establish a market for ivory in South Korea, but were unsuccessful. Between 1991 and 1999 only two ivory carvings were reported being imported from China (O'Connell-Rodwell and Parry-Jones 2002). This would suggest that in the past there simply was not a significant demand for ivory in South Korea, and that most buyers were foreign visitors.

No generalizations can be made about the nationalities of buyers today when so few ivory items are sold annually. Vendors were certain that Koreans did not buy ivory, except a name seal occasionally. The vendors said that customers rarely bought ivory, and no vendor could be found who was interested in purchasing ivory wholesale from the investigator posing as an ivory dealer.

The use of ivory substitutes in South Korea

No mammoth ivory nor bone carvings were seen in Seoul. The absence of bone carvings, which are low cost substitutes for those who want but cannot afford ivory, is more evidence that there is no demand for ivory.

Vendors' views on ivory market trends and the future

There is no market currently for ivory and vendors did not think that the situation would change in future. The vendors were not concerned about this because ivory was unimportant for their business. South Korea is a good example of a country that has managed to produce a wide range of quality handicrafts and antiques without resorting to the use of ivory.

Status of the Ivory Trade in East Asia

Ivory trade indicators

Below in Table 60 are the aggregated data collected in the cities surveyed in 2002 of prices for raw ivory, the numbers of ivory workshops, craftsmen, retail outlets and worked ivory items.

Table 60
Ivory trade indicators for East Asia in 2002

Place	USD price/kg		Ivory workshops	Ivory craftsmen	Retail outlets with ivory	Min. no of ivory items
	for raw 2-10 kg	ivory 10-20 kg				
China						
Beijing	120-170	-	1	~6	61	3,196
Guangzhou	-	-	2	~10	21	3,855
Shanghai	-	-	0	1	35	2,045
Hong Kong	200	320	0	0	85	35,884
Taiwan						
Taipei	-	-	0	0	36	1,261
Tamsui	-	-	0	0	2	17
Taichung	-	-	0	0	13	242
Kaohsiung	-	-	0	0	8	329
Japan						
Osaka	220-292	292-424	~23	~37	42	2,207
Tokyo	140-320	320-400	~50	~70	96	5,358
South Korea						
Seoul	-	-	0	0	14	36
Total	120-320	292-424	~76	~124	413	54,430

N.B. - = no data

The largest retail market by far for worked ivory in East Asia was Hong Kong with 35,884 items seen. From 1989 to 2002 Hong Kong has probably sold the most ivory as well. The number of ivory items offered for sale in Hong Kong ranks as one of the largest in Africa and Asia, similar to what was seen in Bangkok and Phayuha Kiri in Thailand (Martin and Stiles 2002). The second largest market was China (not including Hong Kong or Taiwan) with 9,096 items surveyed in three of the largest cities in the country, all on the East coast. Japan followed with 7,565 items in the two main ivory centres, Tokyo and Osaka. Taiwan's domestic market was surprisingly small with only 1,261 ivory items seen in the capital, Taipei, and 571 items in the other three cities surveyed. South Korea had by far the least, 36 in the nation's capital, Seoul.

The rankings of the places visited, based on estimated weight of worked ivory seen for retail sale are as follows:

1. Hong Kong (Special Administrative Region)
2. China
3. Japan
4. Taiwan
5. South Korea

In fact Hong Kong, as far as the total weight of ivory seen, is ranked equally with Bangkok as the largest market in Africa or Asia, and this has been the case for Hong Kong at least since the mid-1990s. According to Parry-Jones of TRAFFIC, the Hong Kong and Chinese markets need to be more carefully controlled as it is obvious that tourists are smuggling out worked ivory. Furthermore, the

CITES Secretariat has not been adequately encouraging the monitoring of ivory in China and Hong Kong, and the governments of China and Hong Kong have not been enforcing their ivory regulations vigorously enough, though China is increasing efforts (China CMA 2002, 2003).

The total number of 159,493 ivory items seen for retail sale in the 12 Asian countries and one Special Administrative Region (SAR) Hong Kong — is about 30% more than the approximately 110,000 items found in the 15 African countries visited by the same two investigators in the late 1990s (Stiles and Martin 2001; Martin and Stiles 2002; Stiles and Martin 2002). In addition, many of the items made out of ivory in South and South East Asia are made from the tusks of the more endangered Asian elephant, which numbers from about 35,000 to 51,000 in the wild (Kemf and Santiapillai 2000), compared with approximately 500,000 for the African elephant (Barnes et al. 1999).

Retail ivory prices

Table 61 shows a range of retail prices for typical ivory items found in China, Hong Kong, Japan and South Korea in early 2002. These items would have been made from the 1980s onwards. Antiques are not included.

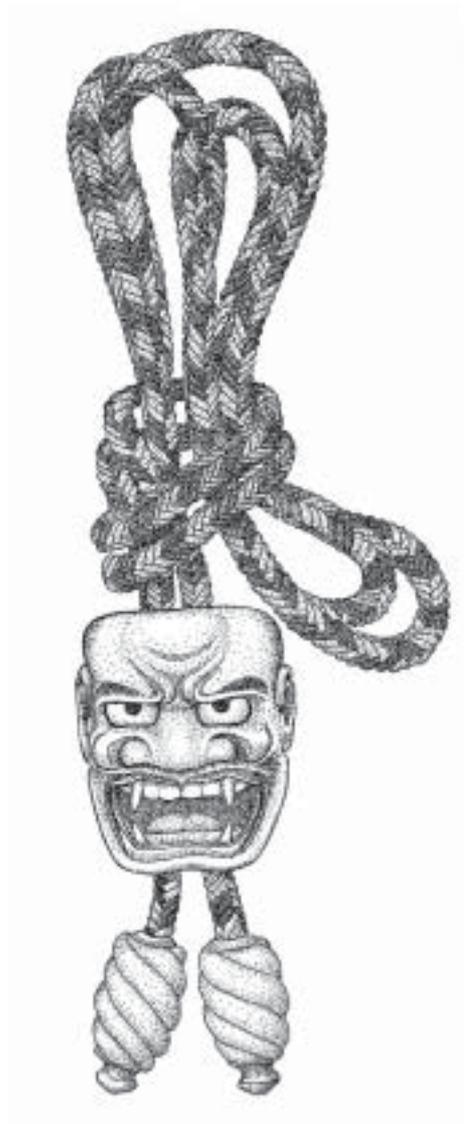
Table 61
Retail asking prices for ivory items in US dollars in East Asia in 2002

Ivory item	China	Hong Kong	Japan	Taiwan	South Korea
Animal figurine					
5-6 cm	19-260	31-277	192-680	103-176	114
10 cm	240-773	409-674	-	294	-
20 cm	366-976	-	2,080-4,000	-	-
Bangle					
1-1.5 cm	22-61	23-44	84-184	59-65	379
2-3 cm	91-112	54-77	184-240	88-118	-
Chopsticks, pair					
20cm	30-189	18-86	128-416	88-160	27
Cigarette holder					
10-15 cm	16-44	33-36	168-1,920	47-74	-
Human figurine					
5-6 cm	32-549	31-192	576-6,800	88-365	227
9-10cm	305-1,463	292-1,209	1,600-8,000	118-706	189-606
20 cm	293-3,171	764-1,933	4,800-30,400	2,500-2,941	-
40 cm	1,207-7,927	8,333-8,769	-	-	758
50-60 cm	3,659-11,951	3,244-30,769	-	-	-
Name seal, no case					
1.5-2 x 6 cm	31-122	15-192	144-488	88-294	61-76
Necklace, beaded					
small	24-133	23-71	40-384	40-176	-
large	52-238	43-71	144-600	118-176	-
Pendant/broach					
3 cm	5-98	11-42	144-200	26-35	-
Ring, plain					
small	2-18	7-36	14-128	3-9	-
Tusk, carved					
35-40 cm	1,100-4,638	1,179-2,692	-	-	1,894
60-65 cm	4,634-6,098	2,674-8,013	7,120	-	-
90-100cm	11,585-43,902	3,590-9,615	7,120-36,000	-	-
Tusk, polished					
60 cm	3,903	955-3,820	-	-	-

N.B. - = no data

The cheapest prices are found in outlets in China and Hong Kong followed by South Korea and Taiwan. By far the highest prices are in Japan, where labour is the most expensive in the region, and the costs of living such as rents and taxes are also great. The prices for netsukes and human and animal figurines are even more expensive in Japan because much of the carving is labour intensive as it is still done by hand and some objects require much time to complete. Price is also determined by the location of the retail outlet: ivory objects tend to be more expensive in luxury hotel shops than in most other outlets due to a higher mark-up.

Another factor is the cost of the raw material. For very large items, especially carved tusks, the price is high because very few big tusks have come onto the market recently.



Japanese loop tie

Trends in the Ivory Trade in East Asia

As was the case in Africa and South and South East Asia, previous ivory trade studies present only fragmentary data on East Asia, but the pattern of trends in ivory trading is clear. Table 62 presents past data from published sources, compared with the data gathered in this study.

Table 62
Past and present ivory trade indicators for East Asia

Place	Year	USD price/kg for 5-10 kg tusk*	Price/kg in 2002 USD using GDP Inflater Index	No. of workshops	No. of craftsmen**	No retail outlets	Minimum no. of items
China***	1985	63	94	>20	1,500	-	-
	1989	197-350	261-464	~15	900	-	-
	1990s	172-193	-	-	-	-	-
	2002	120-170****	120-170	~10	100-200	117	9,096
Hong Kong	1960	6	30	-	1,500	-	-
Kong	1978	65	149	-	2,200	-	-
	1988	180	248	-	600-1,000	-	-
	2002	200-320	200-320	0	0	85	35,884
Taiwan	1979	-	-	3+	10?	-	-
	1989	-	-	-	10	>55	-
	1999	-	-	-	-	>46	-
	2002	-	-	1	1	59	1,849
Japan	1980	76	149	-	300	-	-
	1988/89	288	396	-	-	-	-
	2001/02	140-320	140-320	~73	~107	138	7,565
South Korea	2002	-	-	0	0	14	36

N.B. - = no data

* Tusks are raw.

** The number of craftsmen excludes the makers of hallmarks on name seals.

*** Estimates of the workshops and carvers are for the entire country, not just the three cities visited, because published sources on the past referred to the whole country.

**** The weights were not reported, but the ivory was almost certainly in smaller than 5-10 kg tusks/pieces. Since they are the only recent prices available they are included here.

Table 63 shows the number of ivory seizures reported to TRAFFIC by governments between 1990 and the end of 2001 (Milliken et al. 2002a). This table demonstrates the limitations of ETIS, as press reports of ivory seizures number many more than those in the ETIS table. For example, ETIS received only five reports of ivory seizures in China in 2001 while press reports added to TRAFFIC data yielded 105 seizures (see Table 37).

Table 63
Number of ivory seizures in East Asia reported to TRAFFIC since the 1990 CITES ivory ban

Place seized	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
China	0	0	0	0	0	0	1	0	1	7	3	5	17
Hong Kong SAR	19	14	18	11	8	11	14	8	5	4	9	4	125
Japan	7	2	1	0	0	5	2	1	0	0	6	4	28
South Korea	0	0	0	2	0	1	0	1	0	0	0	0	4
Taiwan	0	1	1	6	13	10	10	12	15	12	7	0	87
Total	26	17	20	19	21	27	27	22	21	23	25	13	261

Source: Milliken et al. 2002a

The most significant trend discernible from Table 62 in China and Hong Kong is the decline in the number of ivory workshops and carvers. China and Hong Kong had a combined total of 2,000 to 2,500 craftsmen in 1985, while today the number is probably less than 200, not counting those who work mammoth ivory. China's ivory factories and workshops have gone from at least 20 large ones in 1985 to about 10 smaller ones today, and some of these are processing mainly mammoth ivory or bone. There are no ivory workshops with full-time employees left in Hong Kong, and informants said during this investigation that only five to six craftsmen work ivory part-time (see Table 26). The Humane Society of the United States (2002) reported that up to 50 ivory carvers were available to work on commission in Hong Kong, but the number is still well down from 1989. Raw ivory prices for 5-10 kg tusks peaked in 1989 at USD 350/kg in China and USD 200/kg in Hong Kong. In 2002 the price was USD 120-170/kg in China for raw ivory of unspecified size, though since the price was referring to seized smuggled ivory, the cut pieces were probably less than 5 kg each. For tusks of 5-10kg, prices in China will probably be comparable with those in Hong Kong. The price in Hong Kong in 2002 was somewhat higher than in 1988 in absolute USD terms but, when the GDP Inflation Index is applied, the 1988 and 2002 prices are approximately the same (Table 62). The indicators suggest a clear decline in market demand for ivory manufactured in China from 1989 to 2002, which was caused mainly by the drop in demand from Western markets and buyers after the 1990 CITES ban. Although hard data are not complete, some evidence points to a rise in ivory market activity in China beginning in about 1996, a view supported by the rise in ivory seizures there since 1997 (see Table 37 and Milliken et al. 2002a).

Additional information from Hong Kong supports a view of reduced ivory activity since 1990. In 1990 there were 880 registered ivory traders and 1,101 personal possession licenses for ivory issued. These numbers had dropped to 667 and 773 respectively by early 2002. However, the registered raw and worked ivory stockpiles had declined from 665 tonnes in 1989 to 256 tonnes in early 2002, indicating that over 400 tonnes of ivory had somehow been disposed of in the post-CITES ivory ban years, not counting illegal imports.

Based on ivory seizure data, between 1994 and 2000 Taiwan seems to have been an important destination for illegal ivory. Taiwan benefited greatly from the Information Technology revolution and its economy boomed during these years, putting disposable income into the pockets of people. There are many reports of the importance of Taiwanese ivory buyers in various countries (Laurie 1989; Nash 1997; Martin and Stiles 2002), and this demand was probably reflected in the domestic ivory market, though there are no data to substantiate this assumption. In 2000, local governments began serious implementation of regulations restricting ivory trade, and these actions appear to have dampened further an already declining demand for ivory. Wu and Phipps (2002) found evidence for a flagging ivory market between 1997 and 1999 and this trend appears to be continuing. Local ivory carving has all but disappeared in Taiwan and relatively small amounts of worked ivory are now smuggled in from China, mainly in the luggage of traders and returning residents.

Japan, too, shows clear evidence of a marked decline in the ivory industry since 1990. In 1980 Martin (1985) estimated that about 3,000 people were employed full-time in some capacity in working ivory; by 2001 this number had dropped to 1,000. Table 20 shows how membership in the various associations concerned with the ivory industry went down between 1980 and 2001 by 40-80%, and the retail value of the ivory market plummeted from USD 300-450 million in 1988 to USD 38 million in 2001, *Hankos*, by far the most common item made from ivory in Japan, have plunged from almost 1,000,000 manufactured in 1988 to only 116,000 in 2001. Even the average price of a 5-10 kg tusk, if inflation is taken into consideration, has dropped between 1988 and 2001 (Table 60). Raw ivory consumption in Japan slumped from 300 tonnes in 1980 to only 15-20 tonnes in 2001. Prior to 1990, the main buyers of ivory figurines and netsukes were Westerners, while today they are Japanese. As a consequence, far fewer of these items are being produced, and the proportion of ivory *hankos* to all ivory items made in Japan has risen from 64% in 1988 to 80% in 2001 (Table 3). The 1999 import of 50 tonnes of legal ivory from southern Africa gave the Japanese ivory industry some hope for the short-term future. The CITES approval at the 12th Conference of the Parties in 2002 for additional sales in 2004, and probably beyond, will certainly brighten what was a pessimistic outlook on the part of these ivory carvers and retailers.

There are few quantitative data for South Korea, but it seems clear that there used to be a modest ivory market in the country up to about 1997 (Kang 1997; Milliken et al, 2002a), which is

now moribund. As in Japan, most of the ivory was used in manufacturing name seals, but since the name seal stamp is no longer a legal signature in South Korea, the use of name seals is declining. In 2002 informants said that ivory name seal blanks are imported from Thailand rather than being manufactured domestically from raw ivory. There are no ivory workshops or carvers operating in South Korea, and ivory is almost non-existent in shops.

Overall trends

Prices of raw ivory

In China, Hong Kong and Japan prices rose dramatically in the 1980s as the market for ivory products expanded (see Table 62). In China, the only place in East Asia where information is available for the 1990s, raw ivory prices dropped in the decade following the CITES trade ban, and in 2002 that downward trend continued. No price data are available for the 1990s elsewhere in East Asia, but in Japan the pre-1990 and 2002 raw ivory prices (from wholesale dealer to workshop) were about the same in US dollars. If inflation is taken into account, the real price was lower in 2002 (USD 140-320) than in 1988 (USD 396) (Table 62), possibly due in part to the import of the 50 tonnes of southern African ivory in 1999. The lower price in East Asia as a whole is evidence of a drop-off in demand for worked elephant ivory. In all the countries this is due primarily to the fall in the number of Western buyers and markets, and in China and Hong Kong a contributing factor is probably the availability and use of mammoth ivory, with which elephant ivory competes. To remain competitive, elephant ivory prices cannot go too high. The fact that illegal elephant ivory can compete at all with legal mammoth ivory is an indication of how easily African ivory is smuggled into China in quantity, though the higher quality, in general, of elephant ivory and buyer preference for it are also factors. Highest quality mammoth ivory is more expensive than elephant ivory, however, costing a workshop USD 200-220/kg compared to USD 150-170/kg. The much larger size of the mammoth tusk probably explains the higher price.

Hard ivory from Asian and African forest elephants continues to be more expensive in Japan and Taiwan than soft ivory from the African savannah elephant. It is used primarily for chopsticks, high quality small figurines and netsukes, musical instrument parts and name seals. The continued use of this ivory has important conservation implications, as Asian elephant populations are severely endangered in some South East Asian countries (Kemf and Santiapillai 2000; Martin and Stiles 2002). It has recently come to light through genetic studies that the African forest elephant is a distinct species (Roca et al. 2001). It numbers considerably fewer than the savannah elephant, and since the species lives in Central and West Africa, regions plagued by poaching, the newly classified African species is threatened.

Workshops and craftsmen

China and Japan are the only places in East Asia where there are still ivory workshops and full-time craftsmen. The numbers of both, however, have plummeted from 1989 to the present. There are probably no more than 300 full-time ivory carvers today in East Asia, compared to over 2,200 in 1989. The main difference between the two countries is that China works ivory primarily for the foreign market while Japan's ivory production is for local consumption. The trend in China since 1990 is for the large government-owned ivory factories to wither away while privately-owned workshops have replaced them in importance. Most of these workshops are located in southern Guangdong Province near Hong Kong and Macau and in Fujian Province. Ivory carving, except for making name seals, has ceased in Taiwan due in combination to local restrictive legislation against crafting ivory and to much lower labour costs in China. Hong Kong, Singapore and Taiwan import virtually all of their new worked ivory from China.

Retail outlets

There are no earlier quantitative data on the number of ivory retail outlets anywhere in East Asia, except partial data for Taiwan, but informants in all the locations surveyed said that there were fewer outlets selling ivory now than before 1990, with the possible exception of China. With privatization, many new outlets selling worked ivory have sprung up in the major Chinese cities.

At the same time, the government-owned worked ivory outlets have reduced ivory stock (e.g. Friendship Department Stores, except in Shanghai; Arts and Crafts Department Stores). The available data suggest that the number of retail outlets has decreased overall in Taiwan. Wu and Phipps (2002) definitely found more shops selling ivory in Tamsui and Kaohsiung in 1999, and though exact numbers are not given, they probably found more outlets in Taipei and Taichung as well (see Table 49) than this 2002 survey. Altogether, there were 413 various types of retail shops found selling worked ivory in 2002 in the 11 cities surveyed in this report.

Retail prices

Table 64 compares retail prices in 1989 and 1997 for ivory items in the three East Asian countries for which data have been published. There is no published material on retail prices in Hong Kong for ivory items prior to this study so it is not possible to make comparisons for Hong Kong. Past prices in South Korea are given only for name seals (Kang 1997).

Table 64
Retail prices for ivory items in US dollars in East Asia in 1989 and 1997

Ivory item	China		Japan		Taiwan	
	1989	1997	1989	1997	1989	1997
Animal figurine						
5-6cm	61	-	-	-	-	-
10 cm	173	-	-	-	-	-
20cm	-	-	-	-	-	-
Bangle	-	-	-	-	-	-
1-1,5 cm	15-67	-	-	-	-	-
2-3 cm	-	-	-	-	-	-
Chopsticks, pair	-	-	-	-	-	-
20 cm	13-38	121	-	66-230	25-36	37-74
Cigarette holder						
10-15 cm	15-18	-	-	-	-	-
Human figurine						
5-6 cm	75-640	-	-	-	-	-
9-10 cm	-	171-874	-	-	-	-
20 cm	600-1,200	-	-	-	-	-
30-35 cm	2,300	1,362-2,385	-	-	-	-
50-60 cm						
Name seal, no case						
various sizes	-	18-100	-	70-725	36	93-556
Necklace, beaded	26-100	63-70	-	-	-	-
Pendant/broach						
3 cm	8-36	-	110	8-575	-	-
Ring, plain						
small	4-15	-	-	-	-	-
Tusk, carved						
35-40 cm	404	-	-	-	-	-
60-65 cm	1,437-2,570	8,250	-	-	-	-
90-100 cm	-	3,614-19,183	-	-	-	-
Tusk, polished						
60cm						

N.B. - = no data

Sources: Laurie 1989; Nash 1997; Wang and Milliken 1989; Milliken 1989

Comparing prices of worked ivory based only on gross type and size has drawbacks. One usually does not know if the quality of the raw ivory and/or the workmanship are equivalent. Nevertheless, we shall assume that the sampling of items to price has been random, allowing rough comparisons to be made. There are also the various problems outlined in the Methodology section. Comparing past prices with those of 2002 (Table 61), the following can be noted:

China - The prices of smaller items in USD terms seem much the same in 2002 as in 1989, when inflation is taken into account. Data are limited, but it appears that carved tusks over 30 cm in size were more expensive in 1997/2002 than in 1989, perhaps reflecting the scarcity of larger tusks in 2002.

Japan - There are only three types for which comparisons can be made since 1997. In US dollars, the price of ivory chopsticks has doubled and the price of the cheapest ivory name seals has also doubled over this five-year period. Pendants and broaches have increased by much smaller amounts, and if inflation is taken into account, the prices have remained about the same. This is because Japanese-made jewellery has gone out of fashion.

Taiwan - The only comparable types are chopsticks and name seals. The prices of ivory chopsticks have risen steadily from 1989 through 1997 to 2002, though not greatly when inflation and depreciation of the New Taiwan dollar are taken into account. The 1989 price of name seals probably did not include 'blood' ivory, thus comparisons are difficult, but considering minimum prices, it appears that white ivory name seal prices went up between 1989 and 1997, and since then have come down.

South Korea - In 1997 Kang (1997) reported that retail prices of personal name seals could range from USD 59 to USD 350. The few name seals that were seen for sale in 2002 ranged from USD 60 (1 x 5 cm) to 189 (2.5 x 10 cm). The price in inflation adjusted USD seems considerably lower in 2002, probably reflecting decreased market demand for ivory name seals.

Ivory substitutes

The most suitable substitute for elephant ivory in terms of appearance and quality is mammoth ivory. Hong Kong was the only place with significant quantities of worked mammoth ivory for sale, and Guangzhou in China displayed a few hundred items. Currently, mammoth ivory is aimed primarily at the Western market, as East Asians prefer elephant ivory. Hippo and wild pig teeth are even less popular than mammoth ivory, due to the small size and the brittleness of the material.

Worked camel, cow and fish bone are also sold in East Asia, though not in large quantities. In China and Hong Kong craftsmen create large, composite items made from carved bone and resin or plastic of high aesthetic quality. The cheaper price in comparison to ivory makes bone an attractive substitute, but bone does not have the positive cultural attributes that ivory does. Buffalo horn is also used for some of the same objects as ivory and it is popular in Japan for name seals.

Jade and ivory are held in high esteem amongst most East Asians for figurines, curios and jewellery. Many of the same types of items are carved from the two materials and they are often sold in the same kinds of outlets, except in Japan. High quality, white jade (jadeite) is usually more expensive than ivory, and large items cannot be made from it. These two factors make it a limited substitute. Jade is much more commonly sold in China and Taiwan than ivory and its availability might be reducing pressure on ivory as an ornamental material.

Various resin and plastic materials are moulded into objects that imitate ivory items. For some smaller ones, such as chopsticks, cheap jewellery, and tea container lids, these materials are popular and difficult to distinguish from ivory, but this is not the case for larger items such as figurines and polished tusks.



Japanese tea container

Discussion

Law enforcement efforts in East Asia

Traders in China are by far the worst offenders in the region for dealing in illegal ivory. Milliken et al. (2002c) confirm China's dubious distinction: "China emerges as the single most important destination for ivory that has been seized and reported to ETIS... In sum, the influence of the Chinese market is the single most important factor behind the observable change in the trend in ivory seizures in recent years". Martin and Stiles (2000) found from fieldwork in Africa that the Chinese were becoming more important retail buyers of worked ivory, especially in Sudan and CAR, and were also major buyers of ivory items wholesale for eventual sale in the markets of eastern Asia. The authors also found in their survey carried out in South and South East Asia that "by far the largest amount of the foreign worked ivory in the countries visited is from China" (Martin and Stiles 2002).

The change in China from a few large government-owned factories to many more, smaller, privately-owned workshops has made law enforcement more difficult for the authorities. According to China's law, only ivory items made before 1990 are legal and thus all the items being made in these new workshops are unlawful to sell. The new workshops themselves are illegal, as they were not registered to engage in the ivory business prior to 1990 as the law requires. Several companies listed in the 2002 government ivory stockpile survey declared having acquired the ivory well after 1990. The sources of this ivory should be checked.

It is obvious that Chinese officials were not enforcing adequately the laws concerning the ivory industry in early 2002. TRAFFIC East Asia confirms this and stated, referring to China, that "enforcement of legal instruments is weak. Since registration in 1989, no further monitoring of ivory stocks in China has been conducted. Traders are not required to have a specific permit to sell ivory... Implementation of legislation is hindered by a lack of inter-agency communication" (O'Connell-Rodwell and Parry-Jones 2002). The great increase in ivory seizures since the 2001 *Notification 2001/234*, however, suggests that China is becoming more aware of the problem and is taking some action. The Chinese CITES Management Authority (China CMA 2002, 2003), TRAFFIC (in litt. May and June 2003) and WWF-China (in litt. June 2003) all report that the Chinese Government has taken steps since 2001, with renewed vigour since CITES 12 in November 2002, to improve ivory monitoring and enforcement activities, including the development of a training module to educate relevant law enforcement staff on ETIS procedures.

This investigation found that Hong Kong traders contribute to the illegal trade in China by setting up ivory workshops there and by organizing smuggling networks to ship ivory from Africa to supply the workshops. These findings are consistent with those of EIA (2000a, 2002). Since Hong Kong is adjacent to southern China, the main area for ivory production in China, there are illicit movements of raw ivory into China and worked ivory from there back into Hong Kong. Hong Kong's huge tourist industry adds to the problem as tourists are continuing to buy small items to take out of Hong Kong illegally. The Hong Kong authorities find it extremely difficult to check such a huge number of visitors coming and going. Although not visited during this survey, Macau is also probably a transit point for ivory originating in China destined for overseas markets. Macau's authorities have not been reporting properly to ETIS (Milliken et al. 2002a).

On the other hand, controls on the ivory industry within Japan are well regulated (Milliken 2002a) and are the strongest within the region. Government officials check various aspects of the industry and there is a reasonable amount of voluntary controls that have been initiated by the ivory traders themselves. There are still problems with Japanese tourists importing illegally into Japan ivory jewellery, name seals and other small objects from countries such as China, Myanmar and Thailand. In addition, considerable quantities of ivory, especially rough *hankos*, have been seized on their way to Japan or seized within Japan from 1996 to 2001 (Kiyono 2002). Singapore appears to be the main entrepôt for these large quantities. Some evidence is given by the EIA (2002) and the Japanese Wildlife Conservation Society (2002) that this Singapore/Japan connection for illegal ivory is larger than previously thought.

Taiwan has been cracking down on the ivory trade since 1995 with new laws and better enforcement. It appears that these actions have had an effect. The number of ivory seizures has fallen in the country despite equal vigilance. There are also fewer ivory items on display for sale in Taiwan.

In South Korea, because there is virtually no market anymore for ivory due to lack of demand, there has been no recent need for law enforcement as there are hardly any ivory items for sale in the country. Table 65 summarizes the legal status of the internal sale of worked ivory in the places visited.

Table 65
Legal status of domestic sales of ivory in the places surveyed in East Asia in 2002

Legal	Conditional
Hong Kong	China (It is legal to sell raw and worked ivory with a permit for stockpiles held by registered companies before 1990.)
Japan	
South Korea	Taiwan (Companies need to register with local government, obtain a permit and record sales.)

Parties to CITES have attempted to introduce provisions to give greater control to domestic ivory industries in Asia and elsewhere. In June 1997 CITES Resolution Conf. 10.10 (Rev.) was adopted which recommended that all Parties that had ivory carving industries should: "a) register or licence all importers, manufacturers, wholesalers and retailers dealing in raw, semi-worked or worked ivory products; and b) introduce recording and inspection procedures to enable the Management Authority and other appropriate government agencies to monitor the flow of ivory within the State, particularly by means of: 1) compulsory trade controls over raw ivory; and 2) a comprehensive and demonstrably effective reporting and enforcement system for worked ivory". This resolution was further revised at CITES 12 to strengthen actions to be taken by governments (Conf. 10.10 (Rev. CoP12)).

CITES Resolution Conf. 10.10 (Rev.) has still not been fully implemented in East Asia. If China were to adopt and implement the provisions of this Resolution, then one of the largest markets in the world for illegal ivory would decline significantly.

The sources and movement of tusks in East Asia

Chinese traders have been importing illegally into China the largest quantity of tusks in the region since the mid-1990s. TRAFFIC estimates that from January 1998 to September 2001 "a minimum of 30 to 45 tonnes of ivory were seized destined for or entering China" (O'Connell-Rodwell and Parry-Jones 2002), and the present study has documented 40-50 tonnes seized between January 1996 and mid-2002 (see Table 37). Most of this ivory was tusks or roughly carved blocks for making name seals. Almost all of it originated from Africa, because ivory is much cheaper there (averaging USD 45/kg), compared with Asia (averaging USD 250/kg), and there is much more available from Africa. It appears that recently a lot of the tusks sent illegally to China originated from Central Africa, especially the DRC. For example, on 30 August 2002 a shipment of 3,335 kg of ivory which consisted of 303 whole tusks, 408 tusks which had been cut into 1,013 pieces; and 17 more pieces of cut ivory were seized in Shanghai by the Customs Department (letter from Wan Ziming, Head of the Division of Enforcement and Training, CITES Management Authority of China, to John Sellar, Senior Enforcement Officer, CITES, 17 October 2002). The origin of this ivory was the DRC and the shipment had been sent through Uganda to Mombasa, Kenya, and exported to Shanghai by ship. This and other seizures of ivory recently moving out of Central Africa indicate that the illicit movements uncovered in 1999 (Martin and Stiles 2000) are continuing (see Table 37 and CITES 2002a; Milliken et al. 2002a and EIA 2002).

There have also been regular movements of tusks from poached elephants out of southern and eastern Africa. This is best evidenced by the recent discovery and break-up of an ivory smuggling ring involving Hong Kong and Malawian businessmen smuggling ivory from Africa to Japan and China via Singapore (EIA 2002).

Other seizures have been made of ivory originating in southern or eastern Africa destined for Asia (CITES 2002a; O'Connell and Parry-Jones 2002).

The Chinese authorities are aware that the trade in ivory has increased recently. The Executive Director General of the CITES Management Authority of China wrote: "...in our opinion, several factors may contribute to the increasing of illicit trade in elephant products, particularly the raw ivory (tusks are involved in all of the significant seizures) in China" (letter to Mr Craig [Kirkpatrick], Director, TRAFFIC East Asia, from Chen Jianwei, Executive Director General, CITES Management Authority, 14 October 2002). One of these reasons is that since there is a demand in neighbouring countries for Chinese-worked items, traders in China have been importing tusks to make these items for illicit export.

In Hong Kong it is unlikely that significant quantities of tusks have been recently smuggled in for the local market because there are no full-time carvers remaining and there are large stockpiles of tusks that still have not been sold in Hong Kong. There are reports that some raw ivory may have transited Hong Kong to China since the 1990 CITES ban, as has probably been the case for some tusks stockpiled in Hong Kong at the time of the ban. In fact, according to the ETIS report, there have been 375 seizures of ivory products weighing 13,574 kg destined for Hong Kong or seized within Hong Kong from 1990 to mid-2002 (Milliken et al. 2002b).

Taiwan appears to have been an entrepôt for tusks going to China. The recent ETIS report (Milliken et al. 2002a) postulates that tusks originating in Africa were shipped to Taiwan and then sent on to China. TRAFFIC has reported that there were some large seizures of tusks, at least 6,152 kg, made by the Customs authorities in Taiwan from 1994 to May 2000. Most of these tusks came from Nigeria and Cameroon (Wu and Phipps 2002). Following large numbers of ivory seizures since 1991, coming in and out of Taiwan, none was made in 2001 or 2002. Either the smugglers are getting better at concealing the ivory, or they have stopped shipping ivory to Taiwan.

Few, if any, tusks are entering South Korea because there are no craftsmen and no market for ivory items. From 1998 to 2002 no ivory has been confiscated. Before 1994, there were seizures of tusks destined for South Korea and confiscations in South Korea (Kang 1997).

For Japan, there have been several attempts to import illegally tusks and roughly-made hankos recently, especially via Singapore. One of the most recent seizures occurred in mid-2002, when 532 tusks and about 41,000 roughly-made name seals from Africa were seized in Singapore on their way to Yokohama (Astill 2002). It is not known how many consignments have successfully entered the country. EIA (2002) estimated that at least 15 ivory shipments made it to Japan from southern Africa between 1994 and 2002, described in shipping papers as either timber or stone sculptures.

Movement of worked ivory in East Asia

There are two principal kinds of worked ivory movements: wholesale bulk exports from China to Asian, European and American markets and the small scale purchasing and carrying of carvings and jewellery by tourists and businessmen to their home countries. Both kinds of transport are illegal and usually constitute smuggling, though there are exceptions. Some countries allow small quantities of carved ivory to be imported/exported for personal, non-commercial use, and ivory antiques with proper documentation are allowed into many countries. The relative importance of smuggled bulk versus personally carried ivory is not known with any certainty, but reported seizures indicate that the bulk exports involve much larger quantities, sometimes totalling tens of thousands of items. This ivory is often falsely described as mammoth ivory, hippo teeth or bone, or is hidden amongst other export products in sealed containers.

Hong Kong and Taiwan have acted as both transiting locations of wholesale worked ivory from China to other countries and as sources of Chinese worked ivory carried by individual foreign visitors to their home countries. Taiwanese dealers were trading ivory *hankos* from Singapore via Taiwan to Japan through Hong Kong and China in 2002 (JWCS 2002). The Humane Society of the United States (2002) reports that dealers from the USA, Israel and Europe go to Hong Kong to buy ivory to carry back to their home countries in luggage. The bulk movements are largely controlled by Hong Kong and Taiwanese traders rather than by Chinese nationals.

Japan and South Korea are not sources of significant movements of worked ivory across their respective borders.

The USA is a much larger consumer of ivory items than previously thought. Between 1997 and 2001 the USA legally imported an average of USD 164.8 million of ivory a year. Most of the ivory was shipped from the UK (64%), with France, Canada and Japan being other important sources (HSUS 2002). It is legal to import antique ivory (more than 100 years old) and trophy tusks from hunted elephants in Africa. Table 66 shows the number of items of legal ivory imports to the USA.

Table 66
Legal ivory imports into the United States. 1997-2001

Description	1997	1998	1999	2000	2001	Total
Ivory carvings	3,761	4,281	3,848	8,082	2,750	22,722
Ivory jewellery	28	34	11	15	26	114
Ivory pieces (not manufactured)	0	11	133	32	44	220
Ivory piano keys	1,366	2,884	1,636	2,967	327	9,180
Pianos with ivory keys	0	343	145	1,004	15	1,507
Hunting trophies (two tusks each)	125	149	209	232	307	1,022
Tusks	15	689	68	45	140	957
Total	5,295	8,391	6,050	12,377	3,609	35,722

Source: U.S. Fish and Wildlife Service, reported by the Humane Society of the United States, 2002

In addition to the legal imports, an average of USD 235,000 a year of illegal ivory was seized in the USA between 1997 and 2001; and between 1990 and the end of 2001 some 2,628 ivory seizures were made by US authorities, the most seizures of any country in the world (Milliken et al. 2002b). Hong Kong was the largest source of this ivory. The Humane Society of the United States uncovered many contacts among Hong Kong business people, ivory workshops located in China and markets in the USA (HSUS 2002). Chinese workshops no doubt have similar arrangements with shop owners in European countries, which then pass on as 'antiques' various items to the USA.

Effects of the CITES 1999 auctions and views on the re-opening of trade

Ivory industry business personnel in China, Hong Kong and Taiwan did not believe that the 1999 southern African ivory auctions had a significant effect on either internal or external ivory demand. Most ivory vendors questioned were aware of the auctions, and that the southern African ivory went to Japan. Thus they did not feel that the renewed sales were relevant to their business. The Executive Director General of the CITES Management Authority of China, however, believes that the auctions caused a misunderstanding amongst some Chinese people that the international ivory trade had legally resumed (letter of Mr Chen Jianwei addressed to Mr Craig [Kirkpatrick] of TRAFFIC East Asia, 14 October 2002). Japanese ivory vendors did not report any increase in business after the 1999 auctions. There were no South Korean ivory vendors, as such, and the few name seal and curio vendors that sold ivory items who were asked about the auctions had no opinion.

The only objective way to assess whether the auctions had any impact on ivory demand would be to compare 1990s trade indicator data with corresponding data from 2002. Unfortunately, almost none exists. The price for raw African ivory in China seemed to be somewhat lower in 2002 than during the 1990s (Table 62). If anything, the number of seizures of illegal ivory reported by ETIS for the five East Asian locations for this study decreased after 1997, the year CITES authorized the ivory sales (Milliken et al. 2002a, b). Between 1990 and the end of 1997 the average number of seizures reported was 22.4 per year, and between 1998 and 2001 the average declined to 19.8 (data from Table 63). These data are too few and not reliable enough, however, to draw any firm conclusions.

An ETIS analysis (Milliken et al. 2002c) concluded that ivory seizures had increased since 1998 at the global level, even though the absolute number of seizures has declined each year since 1998, and the ivory volume has dropped each year since 1999. The interpreted increase is arrived at by applying statistical procedures to the raw data that reverse the apparent trend.

The effects of the 1999 auctions and the future 2004 auctions approved in general by CITES at the 12th Conference of the Parties in November 2002 can best be assessed by a repeat ivory trade

survey using the same indicators employed in this report in 2005 and 2006.

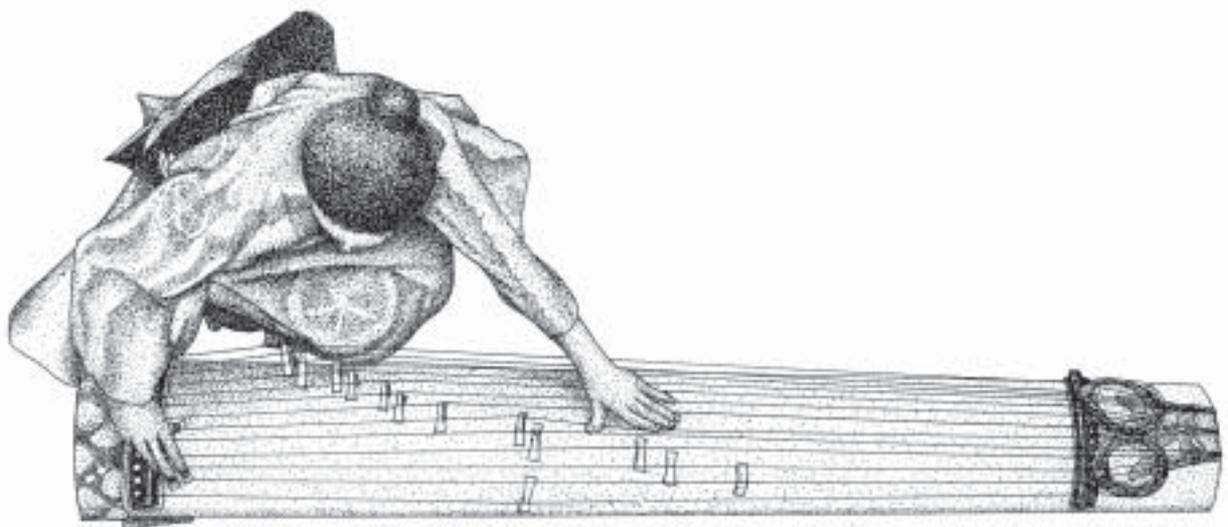
Ivory vendors in China, Hong Kong and Taiwan do not believe that CITES will ever approve a renewed international trade in ivory for their industries. Most ivory personnel seemed resigned to a collapse of the elephant ivory industry, and were already taking steps to carve and/or sell substitutes, or to change business completely.

Japanese ivory industry workers expressed the opinion that international ivory sales to them should be renewed. Many thought that there was no crisis concerning African elephant populations and that conservationists, mainly from the West, had misrepresented the situation. Members of the ivory associations in Tokyo and Osaka were aware of the increase in elephant numbers in southern Africa and of the arguments that those countries are using to obtain CITES authorization for ivory sales. The Japanese felt that the 1999 auctions had been beneficial to both the southern African countries that participated and Japan. This survey was conducted before CITES approved the 2004 ivory sales for South Africa, Namibia and Botswana, but there is no doubt that this action, and the prospect of annual quotas after 2004, have buoyed the hope of Japanese ivory carvers and vendors for a continued supply of African ivory.

East Asian views on the future of the ivory industry

The views of all ivory industry personnel in East Asia were pessimistic about the long-term prospects for the business. Most Chinese vendors thought that the industry could limp along for several more years at a low level, but that no growth would be possible due to the opposition of conservationists and negative attitudes in the West to the use of ivory. The position of mainly Western conservationists was not thought by East Asian ivory workers to be the most rational, but it was a reality that had to be accepted, however reluctantly.

Japanese ivory industry workers were not optimistic about their future in April-May 2002, the time of this survey, but one can assume that after the CITES decision in November 2002 to renew limited international ivory trade that they feel they have gained a new lease on the life of their industry. The Japanese feel strongly about this as the families of many ivory craftsmen have long histories in this trade; and the ones who carve figurines, netsukes and musical instrument parts feel justifiably that they are artists or skilled artisans and that their future has cultural value for Japanese society.



The traditional musical instrument, *the koto*

Conclusions

Domestic markets

Raw ivory

Japan and Hong Kong were the only two places visited that have fairly transparent dealings in raw ivory. However, estimated stockpiles in Japan intended for trade in early 2002 were only slightly lower in quantity than at the end of 1989 (114 tonnes versus about 100 tonnes, including the 50 tonnes imported in 1999). This indicates either an unrealistically low consumption rate (about 5 tonnes/year), or illicit ivory imports, or the stockpile figures are inaccurate. Hong Kong's data are less clear, as raw and worked ivory stockpiles are lumped together for 2002, but informants made it plain that large quantities of raw ivory had been processed, principally in China, since 1990 and exported. These findings are cause for concern.

China is thought to have had about 50 tonnes of raw ivory in 1989. The government survey of ivory stockpiles in late 2002 was not complete nor detailed enough to estimate what current stocks are. Legal raw ivory stockpiles, not counting seized ivory held by the government, are probably down to about a tonne for the entire country. Several government-owned retail outlets and the two remaining government factories hold probably close to 20 tonnes of worked ivory. The private ivory workshops are using for the most part smuggled African ivory.

The raw ivory stockpiles of South Korea and Taiwan have never been reported, thus nothing can be said about them.

Worked ivory

Probably the most surprising finding of this survey was the unexpectedly small size of the local market in China. In fact, China's three largest cities had modest markets, about the same as with smaller cities in South East Asia such as Ho Chi Minh City, Yangon and Singapore and they were less important than many African cities (Martin and Stiles 2000 and 2002). Taiwan and South Korea also had surprisingly small domestic markets. Anecdotal reports of ivory activity in these countries, and numerous seizures of illegal raw and worked ivory involving China and Taiwan, had led these investigators to believe that the domestic markets would be fairly important. Taipei was the only city in Taiwan with even a modest domestic market, and South Korea had no ivory market to speak of.

Hong Kong and Japan were closer to expectations. Hong Kong had the largest retail ivory market in East Asia and was on a par with Bangkok and Phayuha Kiri in Thailand, the two largest markets in South East Asia (Martin and Stiles 2002). Although the number of displayed ivory items in Japan's two largest cities was moderate, the relatively large number of active ivory carvers and workshops indicates that the ivory industry, though very much smaller than in 1990, is still vigorous compared with elsewhere in East Asia.

International implications

Movements of ivory

Based on the size of the domestic markets for worked ivory in China and Taiwan, one must conclude that the large quantity of seized raw ivory destined for those countries was intended for re-export. China processes the ivory and some is sold internally, but the majority is re-exported as worked ivory. It is either bought by foreign visitors or purchased wholesale for shipment out of the country. Much of it goes out via Hong Kong, according to informants, HSUS (2002) and EIA (2002). The principal nationalities importing this illegal ivory (some raw but mainly worked) are Japanese, members of the European Union and USA citizens, probably in that order, into their countries. Taiwan, on the other hand, re-exports most of the imported smuggled ivory, mainly to China and Japan (Milliken et al. 2002a; EIA 2002).

Relative scales of the most important ivory markets of Africa and Asia

With three regional ivory surveys complete, a comparison can now be made of the principal markets in Africa and Asia. Table 67 shows a summary of the ivory trade indicators in the most important ivory market countries. The fact that complete country surveys were rarely made should be taken into consideration when evaluating the table. For example, the numbers of outlets and items would be much higher for China, Japan and Thailand if many other cities in these countries had been visited. To a lesser degree this holds true for CÔte d'Ivoire, Nigeria and Vietnam as well.

Table 67

A comparison of ivory trade indicators for the most important ivory markets in Africa and Asia

Place	Cities/towns surveyed	USD price/kg 5-10 kg tusks*	No. of workshops	No. of craftsmen	No. of outlets	Min. no. of items
2002						
China	3	120-170	3	10-20	117	9,096
Hong Kong	1	200-320	0	0	85	35,884
Japan	2	140-320	~73	~407	138	7,565
Taiwan	4		0	0	59	1,849
Total for East Asia**	11	120-320	~76	~117-127	413	54,413
2000-2001						
Thailand	3	91-182	-	~76	194	88,179
Myanmar	2	142-350	11	55	53	5,801
Vietnam	2	350-500	6	~22	50	3,039
Singapore	1		0	0	23	2,700
Total for South & SE Asia**	18	91-500	30+	~200	521	105,081
1998-1999						
Egypt	3	62-98	11	110	142	21,460
Zimbabwe	2	12-17	7	30	33	20,475
CÔte d'Ivoire	1	58-80	15	97-107	52	20,114
Ethiopia	1	37-53	6	10-20	54	9,996
Cameroon	2	30-50	14	50	43	6,015
Nigeria	1	50	6	43	40	5,966
Total for Africa**	22	12-137	89	615-625	657	~110,000
TOTAL	51	12-500	~195	~940	1,591	~270,000

* Tusks are raw.

** Totals are for all countries in the region.

N.B. - = no data

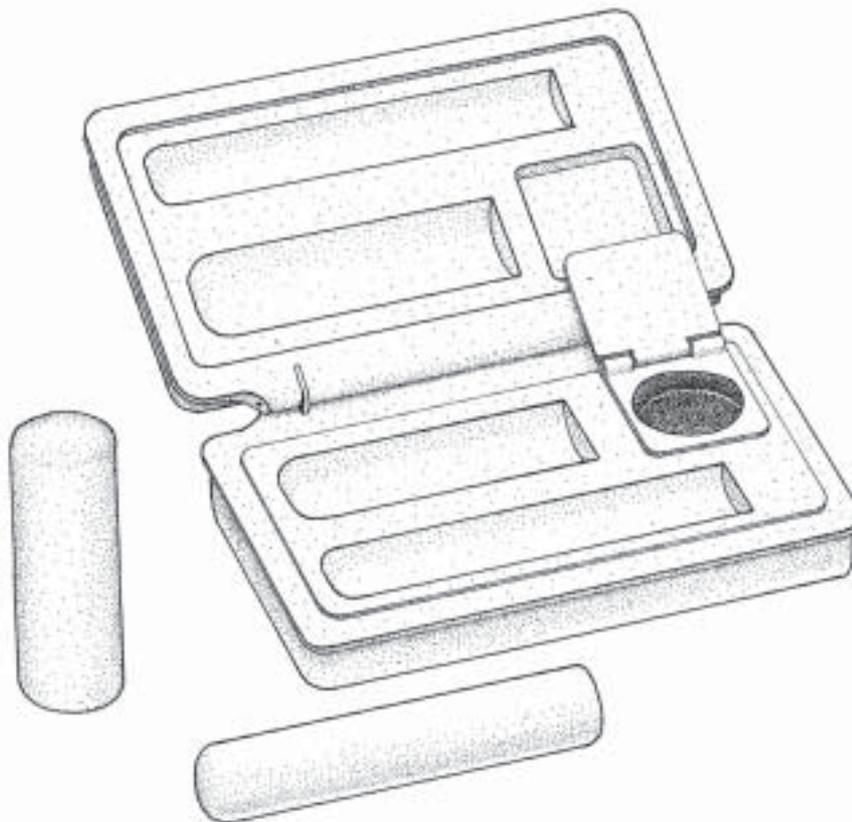
The 10 most important domestic ivory markets in Africa and Asia in terms of the number of displayed ivory items, number of retail outlets and the numbers of ivory workshops and craftsmen are:

1. Thailand
2. Hong Kong
3. Japan
4. China
5. Egypt
6. CÔte d'Ivoire
7. Zimbabwe
8. Ethiopia
9. Nigeria
10. Cameroon

It is also apparent that the least expensive raw ivory in the world is in Africa. The two Congos, the Central African Republic and Mozambique had the cheapest ivory found anywhere in 1999, USD 15-25/kg for a 5-10 kg tusk (Martin and Stiles 2000), but they are not in Table 67 because the domestic ivory markets are so small. As long as there is such a large price differential between African and Asian raw ivory, and unfulfilled demand for tusks exists in Asia, there will be economic pressure to poach elephants.

Ivory trade effects on elephant populations

The 1990 CITES ivory ban had an immediate and profound effect on elephant populations in both Africa and Asia. International ivory trading plummeted from 1990 to 1995, with initial steep falls in the price of raw ivory in Africa. Elephant poaching in Africa fell off dramatically in most places. However, as African elephant populations in the eastern and southern regions grew, populations in most of South East Asia declined, in some countries by more than 80% (Martin and Stiles 2002). It appears that demand for ivory rose in Asia in the 1990s, stimulated by economic development, motivating Asian elephant poaching. Political instability in some Asian elephant range states also contributed to poaching. The decline in African ivory supplies prompted raw ivory prices to rise in Asia around 1994/95. This price rise and renewed demand for ivory motivated traders to smuggle more ivory from Africa to Asia. Where data are available, they indicate that raw ivory prices and domestic markets in parts of Africa began to rise from about 1995 as well (Martin and Stiles 2000). Elephant poaching shows signs of increasing in parts of Africa (CITES 2002a), but it is not clear whether this is linked to an increase in ivory demand or to other factors. Only quantitative future monitoring and assessment of the global ivory markets, including Europe and the USA, would be able to answer that question.



Case for two Japanese name seals (*hankos*) with ink pad.

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Esmond Martin obtained his PhD in geography from the University of Liverpool. During the late 1960s and 1970s he studied smuggling across the Indian Ocean. He wrote *Zanzibar: Tradition and Revolution* (1978), co-authored *Cargoes of the East* (1978) and *Oman: a seafaring nation* (1979). In 1979 he started researching the trade in wildlife products, especially ivory and rhino horn, and has travelled extensively in Asia and Africa. Based on his fieldwork, he wrote and co-authored several books, including *Run Rhino Run* (1982), *Rhino Exploitation* (1983), *The Japanese Ivory Industry* (1985), *The Ivory Markets of Africa* (2000), and *The South and South East Asian Ivory Markets* (2002). He has also written articles for *Animal Kingdom*, *BBC History*, *BBC Wildlife*, *Biologist*, *National Geographic*, *Oryx*, *Pachyderm*, *Swara* and *TRAFFIC Bulletin*, among others.

Daniel Stiles has a PhD in anthropology from the University of California, Berkeley and received a Diplôme d'Etudes Approfondies (MS equivalent) in Historical Geology from the University of Aix-Marseilles II in France. He started professional life as an academic lecturing at the universities of Nairobi, Paris and Oxford. He spent 13 years working for the United Nations Environment Programme, UN Development Programme and UNICEF as staff member and consultant. His research has included 25 years studying nomadic pastoralists in Africa, and hunter-gatherers in Africa and Asia, with emphasis on human ecology and the trade of wild plant and animal products. He has over 140 publications in books, journals and magazines on anthropological, archaeological and environmental subjects. First coming to Kenya in 1971 to work with the Leakeys in northern Kenya and Olduvai Gorge, Tanzania, he settled there in 1977.