

# THE IVORY DYNASTY: A REPORT ON THE SOARING DEMAND FOR ELEPHANT AND MAMMOTH IVORY IN SOUTHERN CHINA

ESMOND MARTIN & LUCY VIGNE

The Ivory Dynasty:  
A report on the soaring demand for elephant and mammoth ivory in southern China

By Esmond Martin and Lucy Vigne

Cover photo: *The darker mammoth ivory carvings are from lower grade mammoth tusks (showing the dark outer layer) while the white ivory objects are from Grade A mammoth tusks, the latter colour being more popular in China.*

Photo credits: Lucy Vigne

Copyright: Esmond Martin and Lucy Vigne 2011

Published in London by Elephant Family, The Aspinall Foundation and Columbus Zoo and Aquarium, 2011



*Left:* Chinese women buying elephant ivory pendants in a registered ivory shop, Guangzhou, China.  
*Right:* A polished and a carved elephant ivory tusk with a large elephant ivory fan in the background are legally for sale in this expensive Guangzhou shop.

## CONTENTS

Summary .....	04
Introduction .....	05
Methodology .....	06
Ivory legislation in China .....	06
Survey results .....	08
Discussion .....	14
Conclusion and recommendations .....	16
References .....	17
Acknowledgements .....	17
Tables .....	18

---

## SUMMARY

China is the largest importer by weight of illegal ivory in the world (Milliken, et al. 2009). In response the government of China took steps to reduce this illegal ivory trade in 2004 by introducing an official identification card for each ivory item sold in registered shops. China was then approved by CITES to buy tusks from the southern African ivory auctions in 2008; Chinese traders bought 62 tonnes.

In January 2011 we surveyed ivory factories and retail outlets in Guangzhou, the largest city in southern China and an important ivory centre, and in Fuzhou, a city famous for carving. According to a factory owner in Fuzhou, in 2010 he paid on average USD 455/kg for government-owned 1-5kg tusks with a range of USD 303-530/kg. Similarly, privately-owned raw ivory in 2010 was USD 750/kg, according to various sources. Siberian mammoth high quality tusks were around USD 400/kg in 2010 wholesale in China.



While elephants are frequently carved from elephant tusks, mammoths are more commonly carved from mammoth tusks in China; this one was priced at USD 10,615.

In Guangzhou we counted 6,437 ivory objects (88% newer items) on display for retail sale of which 3,947 were being sold without ID cards therefore illegally. There were 80 outlets selling ivory in Guangzhou of which only eight displayed the compulsory ID cards. Demand for ivory is increasing; since 2004 there has been a 50% increase in the number of ivory items for sale in Guangzhou. There were also 6,541 mammoth ivory items counted, mostly in mammoth ivory specialty shops. Since 2004 there has been a 100% rise in mammoth ivory items in Guangzhou. This is mainly due to an increasingly wealthy Chinese population, and favourable publicity about mammoth tusks. In Fuzhou, ivory demand is much less: we counted only 282 ivory items (66% older pieces) in 39 outlets; none had ID cards. Mammoth ivory items numbered 100, mostly in one outlet.

Of all the elephant ivory items we counted in Guangzhou and Fuzhou, 63% did not have ID cards and were therefore illegally on display. Recommendations to cut down illegal trade are given in this report.

**IN 2010  
PRIVATELY-  
OWNED RAW  
IVORY WAS USD  
750/KG, AND  
HIGH-QUALITY  
MAMMOTH  
TUSKS WERE  
USD 400/KG  
WHOLESALE**



The Chinese population is over 1.2 billion, with millions of people earning enough money now to afford luxury items, such as ivory.

## INTRODUCTION

The economic boom in China has sparked increasing concern about China becoming a growing consumer of illegal ivory. China has a long history in ivory (Martin & Stiles, 2003). Ivory factories produce an array of elaborate carvings as well as figurines and smaller items. Guangzhou and Fuzhou in southern China are cities famous for their ivory carvers. Both cities have been rapidly increasing in population. The surrounding countryside is being converted into factory estates and high-rise housing to accommodate the thousands of workers, many who come from rural areas for employment.

After the 1990 CITES ban on ivory imports and exports, the Chinese increasingly turned to bone carvings and in more recent years started to carve large amounts of mammoth ivory (*Mammuthus primigenius*), which is imported legally (as the mammoth is an extinct species it is exempt from CITES) from Siberia via Hong Kong. In November 2008 Chinese ivory traders legally bought elephant tusks, along with traders from one other country, Japan (Vigne & Martin, 2010); this was during one-off auctions in Botswana, Namibia and South Africa. China bought 62 tonnes. CITES allowed this trade as the Chinese government had introduced new legislative measures to control their ivory trade.

This report seeks to answer a number of fundamental questions, namely: what has been the effect of this new injection of legal elephant tusks onto the Chinese market? How well is law enforcement working? What is the evidence of illegal ivory for sale? What are the views of the traders and consumers about elephant ivory and mammoth ivory? Are the two ivories being sold separately, together, or being mixed? And how has demand for elephant and mammoth ivory changed since 2004 when Esmond Martin last surveyed Guangzhou and Fuzhou's retail ivory markets (Martin, 2006)?

For comparison, we carried out fieldwork in Japan in late 2009, the only other country that has been allowed by CITES to import tusks since the 1990 ban. In Japan, we learned that consumer demand for ivory had declined due both to the local recession and a change in fashion, and that the Japanese ivory traders were wary of the future of their ivory business due to the uncertain supply of legal ivory. The Japanese consumers were not interested in buying mammoth ivory and there had been no significant imports of mammoth tusks for carvers since the early 1990s, so the mixing of the two ivories was not a concern (Vigne & Martin, 2010). As China is moving at a rapid pace, it was important to update our information there on the ivory factories and retail ivory trade. We visited Guangzhou and Fuzhou, two main ivory manufacturing centres. Guangzhou is also an important city for the retail ivory trade.

## METHODOLOGY

We (the authors) carried out fieldwork in the two main ivory manufacturing centres of southern China: Guangzhou (also important for retail sales) from 10th to 17th January and Fuzhou from 18th to 23rd January 2011. Factories and shops that were last surveyed in 2004 by Esmond Martin were re-visited where possible (Martin, 2006).



Factory workers carve ivory from both mammoths and elephants and also make large bone items such as the giant tusk on the right consisting of wood covered with tile-like carved pieces of cow bone.

Information on new locations was collected from the Internet, taxi drivers, ivory factory managers, and vendors. Most ivory retail outlets were surveyed. Ivory pieces on display for sale were counted, itemised, priced and photographed. Mammoth and hippo ivory items were similarly recorded. Vendors were interviewed about their sales and turnover. Three factories in Guangzhou and three in Fuzhou crafting items from elephant ivory, mammoth ivory and bone were visited. Data were collected on the numbers of craftsmen, tusk prices, items produced and amounts of materials used to compare with earlier surveys. For this report when the word 'ivory' or 'tusk' is used alone, it refers to elephant ivory. Old ivory items means made up to 1990 (identified by style and condition) and new ivory items means made after 1990.

## IVORY LEGISLATION IN CHINA

### Seizures

There are four main sources of elephant tusks in China: old privately-owned stocks, government supplies, the legal 62 tonnes imported in 2008, and illegal tusks smuggled into China after 1990. The last source is of great concern to wildlife conservationists and law enforcement officials. According to Elephant Trade Information System (ETIS) analysis, from 1990 to 2008, seizures of tusks and worked ivory en route for China and within China were the most in the world by weight and third by number of pieces (Milliken et al., 2009). ETIS concluded, 'China remains the most important contemporary player in the illicit trade in ivory' (Milliken et al., 2009).

### Legislation on retail sales

In order to reduce the selling of illegal ivory, the Chinese government only allows ivory items to be sold in specific registered shops, and the shop owner must also provide information to the government on how much is sold and to whom. According to Wan Ziming at Beijing's CITES office, in 2010 there were 33 designated ivory manufacturers and 137 designated ivory retailers in China. The list of designated ivory dealers for 2011 was expected to be similar. In Guangdong and Fujian provinces alone there were 12 ivory factories and 25 designated retail outlets in 2010. The shops must display framed certificates that state they are permitted to trade in elephant ivory. In addition, since May 2004, all elephant ivory items must have an ID card beside the object on display for sale (unlike mammoth ivory items). Small items, such as pendants, may have their ID cards in a drawer if there is no space with the item. If an item is over 50g, a photo of the item must be shown on the ID card as well as the serial number, name of factory, size, weight and other descriptions of the item. If an ivory item is less than 50g the 'ID card or certificate' does not have to have a picture of the item (Wan Ziming pers. comm. February and March 2011).

The State Forestry Administration provides leaflets in the ivory shops written in Chinese requesting customers to buy ivory only in designated ivory shops and to ask for the ID card. The leaflet explains how to identify an array of complex security measures on each ID card: hand-painted floral patterns and shading lines; laser anti-counterfeit labels for security; drip disappeared technology; security lines; relief shading; double 's' anti-lift incisions; colourless fluorescent security ink; and micro-film text. The leaflet describes the government's 'standardisation of domestic ivory management measures' and states that an ivory item cannot be separated from its 'ivory collection card' or ID card which guarantees its legal status. It says if an item is less than 50g and is a unique artistic piece with high value, then its photo is also recommended on the card but is not mandatory. Most small items (less than 50g) are mass produced with no independent features or patterns, such as necklaces, bracelets, rings, chopsticks and stamps, so these items require only a numbered card with no photograph.

The leaflet further notes for foreign tourists and expatriates that: 'without permission to import elephant ivory and its products [it] is illegal. Similarly [for] PRC citizens without permission to carry ivory and its products from abroad [it] is illegal [at] immigration also'. It also states that: 'Citizens from abroad, to carry ivory and ivory products [through] immigration, need to get permission from relevant departments of the exporting country and issue export certificates, while government departments need to get the consent of the appropriate department for an import licence [for] customs before release'. The leaflet further explains that only Botswana, Namibia, Zimbabwe and South Africa have their elephants on Appendix II of CITES, which allows controlled and limited trade in tusks under certain circumstances. The leaflet also states that the management, maintenance and development of this ivory tag information system, commissioned by the Chinese State Forestry Administration, was praised by the international CITES community. The leaflet also describes how to distinguish elephant

and mammoth tusk cross-sections, showing the typical crossed lines, and explaining that elephant ivory has an angle of 115 degrees while for mammoth it is less than a 90 degree angle. In reality these lines are often hard to see and distinguish.



These elephant ivory items for sale are legal due to the presence of government ID cards, although being less than 50g no photograph of the individual item is required on the ID card. These human figurines were selling for USD 369 and USD 208 in January 2011.

**AN IVORY ITEM CANNOT  
BE SEPARATED FROM  
ITS 'IVORY COLLECTION  
CARD' OR ID CARD  
WHICH GUARANTEES  
ITS LEGAL STATUS**

---

## SURVEY RESULTS

### Sources and prices of ivories in Guangzhou and Fuzhou

---

Illegal tusks from African and Asian elephants are still smuggled into China via various countries (Milliken et al., 2009). The only new legal ivory since 1990 imported to China arrived from southern Africa in 2009. In 2010, according to an ivory factory owner in Fuzhou, he obtained his tusks from the government in Beijing weighing 1-5kg for 2,000 Yuan/kg (USD 303/kg) for poor quality and 3,500 Yuan/kg (USD 530/kg) for high quality with an average of USD 455/kg. According to Hong Kong and mainland Chinese ivory traders, privately-owned tusks weighing 1-5kg of high quality were USD 750/kg and 5-9kg were USD 900/kg in southern China.

Guangzhou is close to Hong Kong, and just as for ivory, it is an ideal trading partner for mammoth tusks. Mammoth ivory is legally imported from Siberia often to Hong Kong and then into China. Some factory owners go to Russia to obtain mammoth tusks which they import first to Hong Kong as there is no import tax. In 2010 a Fuzhou factory owner paid USD 400/kg for grade-A, USD 300/kg for B, USD 260/kg for C and USD 120/kg for D in Hong Kong. The grades are mixed in a sale, A being usually 20%, B 20% and C with D 60% of the total.



This privately-owned factory was established after the 1990 ivory ban. It was recently refused government permission to carve elephant ivory. The factory last bought a supply of mammoth ivory in 2007 and hippo teeth in 2010.

This ivory carver works in the famous government-owned ivory factory called Daxin in Guangzhou.

### Ivory workshops in Guangzhou

---

Known as ivory factories, two out of three we visited were welcoming to us. The government-owned Daxin ivory factory, in early 2011, had 40 to 45 carvers, up from about 20 in 2004. We saw 22 men and women carving tusks. Two master carvers were helping to train the less experienced carvers in their specialties. Only two were carving mammoth tusks. Three were making magic balls - a Guangzhou specialty with up to 52 intricately carved hollow concentric balls inside each other. Most were carving figures and figurines with hand and electric tools, depending on the stage of manufacture. The carvers work five days a week from 8:30 to 4:30pm with lunch from 12-1pm. Most earn 2,000-3,000 Yuan (USD 303-455) a month, while about nine master carvers earn about USD 909-1,061 a month. The manager told us the factory produces 60% elephant ivory items and 40% mammoth ivory items by weight per year, and has four shops selling ivory in Guangzhou.

We visited a factory that carves mainly cow bone and employs 50 carvers. They craft elaborate landscape scenes, intricate pagodas, ornate boats, and the famous magic ball. Carvers specialise, for example, on trees or flowers or people that are then stuck together to produce a large composite piece, similar to those made of ivory. The sickly smell of drilling or filing bone is distinctly different from ivory.



*Left:* Grade-A mammoth tusks can be used to carve large items that are popular in China due to their size, good condition and whiteness.

*Right:* Erotic figures are liked by some foreign buyers, especially the Japanese, Germans and Dutch.

*Bottom:* Ivory carvers in China work long hours in the factories and often retire in their forties due to the intensity of the work to carve sometimes from their homes.



SOME FACTORY OWNERS GO TO RUSSIA TO OBTAIN MAMMOTH TUSKS WHICH THEY IMPORT FIRST TO HONG KONG AS THERE IS NO IMPORT TAX

The manager of the third factory had told us not to come. He said he did not want his ivory carving 'secrets' exposed, but we found a way there, to the surprise of all the carvers who had never seen a foreign visitor before. If we had been Chinese, the manager said, he would have thrown us out, but he allowed us to take some photos (as we did at the other factories) and see their ivory carvings. We counted 28 craftsmen; all were young men and women. The factory has no master carvers. The artisans were working on ivory, mostly carved tusks (bridges), and bangles. The manager said they also use mammoth ivory, but we did not see any. The factory has no ivory on display for sale, but we later visited two of its main retail outlets which sold mostly ivory.

### Retail outlets in Guangzhou —

The main retail outlets remain in central Guangzhou in some of the luxury hotels and in the market areas for jade, jewellery and antiques (Table 1). Some of these have been put into new shopping centre buildings. Mammoth ivory specialty shops had posters in the windows describing mammoths to customers, and with increased publicity, mammoth ivory has become an accepted substitute for elephant ivory. Some shops also displayed signs to say mammoth ivory items can be taken out of China but that the trade and use of elephant ivory are permitted in China only. Larger carvings were usually displayed in wall cabinets behind glass and small items under glass table-tops, including at the pay-desk.

There were 80 outlets seen selling elephant ivory (Table 2). These outlets also sold jade, jewellery, antiques, souvenirs/gifts, mammoth ivory, or were registered ivory specialty shops. Of these outlets, eight were selling ivory with ID cards and 72 outlets had no ID cards (25 selling new ivory and 52 selling old ivory with five overlaps). We counted 6,437 ivory items on display: 3,206 newer items with no ID cards, 2,490 newer items with ID cards, and 741 old items with no ID cards. Therefore 3,947 items (over half) had no ID cards so were illegal. Nearly all the items were carved in China. The most common were smaller items such as pendants, beads, figurines, bangles/bracelets and charms (in that order). Many of the old items for sale are rarely produced today, such as belt ornaments, hair brushes, containers for opium and incense, and games such as cribbage or mahjong. Vendors told us that their ivory sales were presently slow. Vendors sometimes told us their elephant ivory was mammoth, which does not require an ID card and which foreigners can export. When we asked for an ID card, vendors sometimes directed us to a verification office (mostly for gemstones) to prove the item's authenticity. The office had nothing to do with confirming its legal status. Generally, vendors tolerated our questions and photographs. There are many unregistered outlets with ivory that have not been officially inspected and some vendors freely admitted their ivory was illegal; no confiscations had taken place, we were told.



*Top:* Several shops in Guangzhou's jade area sell cheap fake ivory. *Middle:* Newly carved illegal ivory objects are sold to a Chinese customer. *Bottom:* The sign "Trade and use are permitted in China only" refers just to elephant ivory in this registered shop.

Most of the newest illegal ivory items were bangles and necklaces. In three antique shops in the jade shopping area we were shown 21 hidden new illegal ivory figures, mostly about 30cm, some in velvet-lined boxes. One vendor said his figures were new, and another claimed hers were old, but they had been stained to look old. (These were not counted in our survey as they were not on display). One jewellery shop had two bangles and a pendant on display with authenticity cards but not ID cards. The vendor explained they were expensive as the ivory was from the rarer elephants of Thailand, not from African elephants. The vendor demonstrated this with torch-light on the ivory showing a pinkish glow. He was not concerned the ivory was illegal. One Chinese man bought several large new illegal ivory objects (that the owner incorrectly told us were mammoth) from a jade shop, and two Chinese women bought legal ivory pendants in an ivory specialty shop, when we were there.

widely in price according to the outlet, workmanship and artistic value.

There were 30 outlets selling mammoth ivory (17 also selling elephant ivory items and 13 only mammoth). There were 6,541 mammoth ivory items (Table 2). Virtually all the objects were carved in China since 2004. Because of the brown outer layer, large cracks and stains, they are often uniquely shaped sculptures, not mass produced figures as is possible with elephant ivory. Only grade-A mammoth tusks produce white blemish-free items that resemble elephant ivory. Elephant ivory, being whiter, is more popular than mammoth in China. Prices of mammoth ivory items were therefore slightly lower to encourage sales. We saw no mammoth ivory items being purchased.

### Workshops in Fuzhou

In Fuzhou we interviewed ivory factory owners and managers who tolerated our 'market survey', as we were foreigners, they said. Fuzhou is famous for carving, especially the coloured Shoushan stone from the surrounding mountains. Wood and ivory carvers from all over China come to Fuzhou for employment. In the first of three factories we visited, there were 40 carvers, half from Fuzhou and the rest from elsewhere in China. They live in the factory buildings with their families. Both men and women carve. We were told men are more creative, being able to carve over a mistake more effectively, but women have more patience. The work is intense, requiring very good eyesight and a steady hand, and people retire from this factory in their 40s to carve ivory trinkets from home. The factory produces carvings from mammoth tusks (50% by weight of total factory production), cow bone (35%) and ivory (15%). Chinese, we were told, like full mammoth carved tusks and the carvers had about 40 pairs to carve, the heaviest being 70kg for a pair. We saw 28 carvers working mostly elephant ivory. They receive a salary of 1,500 to 5,000 Yuan (USD 227 to 758) a month. About 10 carvers had recently left to carve wood which is more profitable.



This card is not a legal ID card. These items are from the rare Thai elephant.

Prices varied considerably for similar items (Table 3). In small outlets, ivory items did not have price labels and bargaining was required. Pendants averaged at USD 66, cigarette holders were about USD 296, and name seals about USD 214. Figurines and figures ranged



Women ivory carvers are common in China, unlike elsewhere in the world.

Factory sales were poor in 2009 due to the world recession, but improved in 2010 with an increase in Chinese buyers. After the 1990 CITES ban on ivory the government had removed the factory's elephant tusks (600kg, compensating them only 200,000 Yuan – about USD 24,000 or USD 40/kg at the time). The factory owner disputed the low price and was almost jailed. He has only managed recently to buy more tusks from the government. First he needed a permit to carve ivory. Then he needed permission to buy tusks, writing to the government in May 2010. He had to wait till permission was granted in November 2010 to buy 1,500kg of ivory. The delivery was scheduled in early 2011. The factory must process a limited supply: 120kg from January to June, and 60kg from July to December, but would like more. The factory must also submit designs to the government and afterwards a photograph of each item for its compulsory ID card. The items are sold to shops and private customers in China. About 90% of the factory's mammoth ivory sales are wholesale within China; the rest is mainly exported to USA and Europe. In 2009, the owner's daughter went to Italy to sell mammoth tusks for 10,000 Yuan/kg (USD 1,470/kg) but the Italians would only offer less than half this amount, so the sale did not occur.

We visited a second factory with 20 ivory craftsmen, ten of whom were carving both elephant and mammoth ivory. The approaching 2011 Chinese New Year meant

some had gone on holiday. If the craftsmen are not from Fuzhou, they are given accommodation in new housing blocks around the city. The factory provides lunch and supper. The factory office had two wall glass cabinets to show the items they make: one for mammoth and the other for elephant ivory carvings and a glass-topped table for trinkets. In 2008 the factory owner went to southern Africa and bought tusks with the Chinese officials. The Chinese government only allows the factory to utilise 120kg a year, although the owner would like to carve more. Chinese religious figurines of Kwan Yin and the Buddha made from both ivories are particularly popular from this factory. In 2010 the company, which also has an enterprise in Hong Kong, brought 3,000kg of mammoth tusks from Hong Kong to use in this factory, having sold 1,000kg of these tusks in Hong Kong. In 2009 and 2010, 60% of the sales of mammoth ivory items were sold in China and 40% were exported, especially to France and the USA.

## FACTORY SALES WERE POOR IN 2009 DUE TO THE WORLD RECESSION, BUT IMPROVED IN 2010 WITH AN INCREASE IN CHINESE BUYERS

The third factory we visited in Guangzhou employed 50 to 60 mammoth ivory and bone carvers, having stopped utilising ivory in 1990. The bones come mostly from buffalo in Sichuan province and cost 6 Yuan/kg (92 US cents/kg). The owner uses a few camel bones which cost 7-8 Yuan/kg, but he prefers buffalo and cow bone, saying the quality is better. The owner had trained as an ivory carver, but due to the 1990 CITES ban he had diversified into substitute materials and had no intention of returning to ivory. He said some factories were

closing as it is hard to employ skilled carvers nowadays with increased pressure for the one child in a family to go to university rather than become an artisan. This factory produces large figures and furniture covered in thin bone rectangles. The main market for these is the USA where handmade products are appreciated.

There is no shortage of bones, but the factory needs more sales, and being luxury products his exports have been affected by the recent world recession. The factory also produces plain, polished mammoth tusks and mammoth ivory human and animal figures of a very high standard. There was a large display priced for sale. All were recognisably carved from mammoth tusk pieces of varied shapes, with the distinct outer brown layer and blemishes making unique sculptures. The factory does not produce trinkets or jewellery from mammoth ivory. 'You would be wasting the material' the owner explained, being an artist. Most of the mammoth ivory items are exported and none is sold elsewhere in Fuzhou. People in Fuzhou prefer to buy stone carvings to support their local industry.

### Ivory retail outlets in Fuzhou

A total of 39 outlets were counted selling ivory (Table 4): 16 displayed newer ivory carved since 1990 and 30 were selling old items (with seven overlaps selling both). There were no ID cards. Most of the outlets also sold antiques, gifts or Shoushan stone carvings – a specialty of Fuzhou. There were no ivory specialty shops. We counted 97 newish ivory items carved since 1990 and 185 old ivory items. Most ivory objects were not priced and some vendors offered inflated prices (Table 5). Most common were name seals, figurines and belt ornaments worn in the past on traditional dress (in that order). Older ones ranged from the common belt ornaments to opera glasses and magnifying glasses. Vendors said they were slowly selling off their ivory stocks and not replacing them, as turnover was too slow. During our week's survey in Fuzhou we saw no customers for any ivory. We saw 100 mammoth ivory items (Table 2). Nearly all (90) of the mammoth ivory offered for sale in Fuzhou was in the one factory shop. Again, we saw no buyers for mammoth ivory items.

Elephant ivory tusks in front of several mammoth ivory tusks are on display in an ivory factory for potential customers to see, along with trinkets in the table cabinet and mammoth and elephant ivory carvings in separate cabinets along the walls.



---

## DISCUSSION

### Trends in Guangzhou and Fuzhou since 2004 ———

Compared with Esmond Martin's 2004 ivory survey in Guangzhou (Martin 2006), the city has increased its production and retail sales of ivory carvings due to greater wealth and demand for luxury items in China. As well as tusks smuggled into China, the recent legal import of 62 tonnes of tusks from southern Africa have spurred on the ivory factories in both Guangzhou and Fuzhou and the retail trade in Guangzhou. The number of elephant ivory items seen for sale in Guangzhou rose by about 50% from 4,406 in 2004 to 6,437 in 2011, while outlets seen selling ivory rose a little from 72 to 80 (Martin, 2006). The proportion of jewellery items increased from 41% to 65% from 2004 to 2011 while figures and figurines dropped from 27% to 14%. This implies that smaller items are more popular compared with 2004. In 2004 vendors predicted there would be an expansion in mammoth ivory items for sale in Guangzhou and this proved accurate with an over 100% increase from 3,064 items for sale in 2004 to 6,541 in 2011. The mammoth ivory boom in southern China is due not only to the expanding and wealthier population, but also with increased publicity about mammoths on television and from posters, so the Chinese and other buyers have now accepted mammoth ivory as authentic. Items can also be sold more cheaply in mainland China and for export compared to similar items made in Hong Kong due to lower wages and rents. Mammoth ivory is also legal to export.

In Fuzhou, like Guangzhou, the ivory factories have been spurred on in their production of ivory items after traders bought ivory in the 2008 southern African auctions. Items on display for sale, however, dropped from 737 in 2004 to 282 in 2011, although the number of outlets was the same at 39. There was a slight proportional increase in figurines from 2004 to 2011 as these items have not been sold off yet. Most ivory objects for sale in 2004 had gradually been sold and had not been replaced as demand for ivory items

made in Fuzhou is higher elsewhere in China. In 2004 there had been six mammoth ivory items counted in the gift and antique shops compared to ten in 2011. A further 90 items were seen in a mammoth ivory factory shop in 2011 that was not visited in 2004, although the owner started production in 1992. Mammoth ivory made in Fuzhou has always been mostly exported or sold elsewhere in China.

### Legal and illegal sales in retail outlets ———

While ID cards are usually seen in the larger registered shops in Guangzhou, especially the Daxin ivory shops that are government-owned, there are loopholes. Some items were displayed with no ID cards – supposedly the cards had not been made yet. More commonly mammoth and ivory items were mixed. In a registered shop with separate cabinets for ivory and mammoth ivory, 15cm Buddha carvings of both ivories that looked identical were together. Furthermore, some of these Buddhas had ID cards beside them, and others were in a drawer. It would be easy to re-use these IDs if not taken by a customer, or if the buyer was mistakenly told his item was mammoth ivory. Another vendor in a registered shop claimed she did not know which items were which; most items looked like ivory but had no ID cards. For small items less than 50g cards are usually stacked in a drawer, but again the customer may leave with his purchased item without the card, as we saw happen with a pendant sale in a registered shop. This enables illegal ivory items again to be mixed in with legal items. Most of the outlets with ivory we visited were not registered to sell ivory and were selling items, both old and new, all illegally (with no ID cards) in Guangzhou and Fuzhou. Several vendors openly said their ivory was new and illegal and occasionally pretended new items were old. This suggests official inspections and confiscations have not taken place in most shops.

### The increased production of ivory substitutes ———

Consumer demand for mammoth ivory is increasing within China, as grade-A makes an acceptable alternative to elephant ivory and other grades can produce

unique sculptures of artistic merit. Only some objects, such as the many layered magic ball and chopsticks, cannot be carved from the more brittle mammoth tusks. Unfortunately this look-alike material can be confused with elephant ivory and even experienced carvers admit they often need a magnifying glass to tell the difference, especially for small items. Although some registered ivory shops have separate display cabinets for mammoth ivory and elephant ivory, others do not, and the two ivories can be mixed by mistake or purposefully. Some mammoth ivory specialty shops also sell ivory. Only mammoth ivory carvings that retain some bark-like exterior or have more acute angled cross-hatching visible on the base are identifiable.



Mammoth and elephant ivory items are sometimes difficult to distinguish, especially when stained to look old, as seen here.

Hippo teeth from Africa (on CITES Appendix II which allows controlled trade) in 2010 were USD120-150/kg wholesale, but few factories are buying them these days. In Guangzhou ten outlets offered 114 hippo ivory items, down from 457 in 12 outlets in 2004. Hippo teeth have become a less common substitute with the growth in mammoth ivory supplies. Being small in size, on CITES Appendix II, and having a tendency to crack makes them less popular compared with mammoth ivory. The most common hippo teeth items for sale in 2011 were figurines (54%) and bridges (29%). Some items are very expensive: a 20cm landscape carving was USD 3,000, and a 27cm carved bridge was USD 3,787 in

Guangzhou. In Fuzhou only one item – a hippo tusk – was seen for sale in one outlet.

There are several stores in the jewellery and jade markets of Guangzhou that sell quantities of inexpensive fake ivory beads, bracelets, necklaces, bangles, figurines and other common items. Vendors called the material resin, plastic, elephant bone, camel bone, reconstituted ivory powder, and sometimes ivory. Unlike plastic, this unknown material can withstand a flame, has no smell like bone, and has curving lines (like map contours) running through it that partly resembles ivory. The temperature, texture and weight resemble ivory. Some vendors confuse this material with ivory, accidentally and on purpose, and we did see synthetic beads with ivory pendants selling as ivory necklaces.



Thai elephant ivory pendant with fake ivory beads being sold as genuine.

## CONSUMER DEMAND FOR MAMMOTH IVORY IS INCREASING WITHIN CHINA

---

## CONCLUSION & RECOMMENDATIONS

There is a large illegal trade in retail ivory items without ID cards in Guangzhou. Of the 6,437 ivory items counted for sale, 61% were illegal and 39% were legal. Fuzhou's retail ivory items were few (282), but none had the compulsory ID card. The government attempts to control the illegal trade. For Guangzhou and Fuzhou and their provinces only 33 designated retail outlets are permitted to sell ivory, but we found ivory items in 119 outlets in the two cities alone. The Chinese government introduced an ID card system to allow the sale of legal ivory items. However, many ivory items being sold – perhaps 63% of the items we counted in Guangzhou and Fuzhou – did not have an ID card in the shop. Furthermore, some vendors were selling elephant ivory as mammoth ivory.

The number of mammoth ivory items counted in Guangzhou was almost the same as ivory seen for sale. Mammoth ivory items for sale in Fuzhou were very few – less than half those of ivory. Since 2004, in Guangzhou there has been about a 100% increase in the number of mammoth ivory objects seen which some say may have helped elephants as more customers are buying mammoth ivory items in place of elephant ivory. Both, however, are in increasing demand with the rising wealth and population in China. The number of ivory items surveyed in Guangzhou has risen by 50% since 2004.

What is clearly needed is further enforcement of the laws in place. The small shops and stalls, especially in the jewellery/jade market area of central Guangzhou, which sell some of the newest illegal ivory, need regular inspections to stop their illicit trade. Old items need to be given ID cards, as is the law. Officials need also to check frequently the registered ivory shops for ID cards. It would help if mammoth ivory items had to have similar ID cards to reduce ivory being sold as mammoth; some shops display them, but they are optional. It would

also help prevent illegal ivory trade if the traders worked towards an effective association to help manage their ivory industry. One improvement would be for ivory specialty shops and mammoth specialty shops to sell only one type of ivory, or at least a shop selling both to be clearly divided in order to reduce mixing. As grade-A mammoth and elephant ivory are so similar, traders may wish to sell only mammoth ivory sculptures with some outer layer visible to reduce confusion with ivory, thereby preventing the entry of illegal items that jeopardize their business. If Chinese officials and traders can tighten their controls and law enforcement, they can reduce the illegal ivory trade in China.

IF CHINESE  
OFFICIALS AND  
TRADERS CAN  
TIGHTEN THEIR  
CONTROLS AND  
LAW ENFORCEMENT,  
THEY CAN REDUCE  
THE ILLEGAL IVORY  
TRADE IN CHINA

---

---

## REFERENCES

Martin E, Stiles D. 2003. *The Ivory Markets of East Asia*. Save the Elephants, Nairobi and London.

Martin E. 2006. *Are we winning the case for ivory substitutes in China?* *Pachyderm* 40:88-100.

Milliken T, Burn R, Sangalakula L. 2009. *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A report to the 15th meeting of the Conference of the Parties to CITES*. Report for CITES CoP15 Annex 1 (unpublished).

Vigne L, Martin E. 2010. *Consumer demand for ivory in Japan declines*. *Pachyderm* 47:45-54.

---

## ACKNOWLEDGEMENTS

We would like to thank Elephant Family, The Aspinall Foundation and Columbus Zoo and Aquarium Conservation Fund for supporting our work in China.



## TABLES

**Table 01**

Types of retail outlets and number of ivory and mammoth ivory items surveyed in Guangzhou in January 2011

TYPE	IVORY		MAMMOTH IVORY	
	No.	No. of items	No.	No. of items
Antique outlet	49	1,116	0	0
Department store	1	559	1	27
Gift outlet	4	23	1	2
Specialty outlet	17	4,500	28	6,512
Jewellery outlet incl. jade	6	232	0	0
Other	3	7	0	0
<b>Total</b>	<b>80</b>	<b>6,437</b>	<b>30</b>	<b>6,541</b>

**Table 02**

Number of retail outlets seen with ivory and mammoth and number of items counted in January 2011

CITY	No. of outlets seen with ivory	No. of items	No. of outlets seen with mammoth ivory	No. of items
Guangzhou	80	6,437	30	6,541
Fuzhou	39	282	3	100

**Table 03**

Retail prices for recently-made ivory items seen in Guangzhou in January 2011

ITEM	Size in cm	Range in USD	Av. USD price
<b>JEWELLERY</b>			
Bangle	1	58 - 600	418
Bangle	2 - 2.5	430 - 1,150	845
Necklace, small beads		43 - 2,461	441
Necklace, large beads		170 - 2,462	731
Pendant	3 - 4	35 - 151	66
Ring, plain	0.25	3 - 18	10
<b>FIGURINES</b>			
Animal	5	258 - 554	414
	10	505 - 2,585	1,349
	20	-	10,769
Human	5	192 - 2,077	684
	10	563 - 2,277	1,145
	20	3,077 - 13,538	7,990
	40	-	13,846
	60	33,076 - 38,461	35,769
<b>TUSKS</b>			
Carved	20	-	32,307
	40	-	15,153
	60	25,538 - 30,769	28,154
Polished	40	12,308 - 19,692	16,000
	60	24,615 - 35,077	29,846
<b>MISC.</b>			
Chopsticks, pair	20	131 - 825	455
Cigarette holder	10 - 15	151 - 831	296
Name seal	2 x 6	92 - 554	214

NB USD 1 = Yuan/RMB 6.5

**Table 04**

Types of retail outlets and number of ivory items surveyed in Fuzhou in January 2011

TYPE	IVORY		MAMMOTH IVORY	
	No.	No. of items	No.	No. of items
Antique outlet	22	112	1	1
Department store	0	0	0	0
Gift outlet	15	152	1	9
Specialty outlet	0	0	1	90
Stone/Jade outlet	2	18	0	0
<b>Total</b>	<b>39</b>	<b>282</b>	<b>3</b>	<b>100</b>

**Table 05**

Retail prices for recently-made ivory items seen in Fuzhou in January 2011

ITEM	Size in cm	Price in USD
<b>JEWELLERY</b>		
Bangle	2-2.5	554
Necklace, small beads		74
Pendant	3-4	132
<b>FIGURINES</b>		
Animal	5	1,769
Human	5	1,769
	10	1,623
	20	9,230
<b>TUSKS</b>		
Polished	20	923
<b>MISC.</b>		
Cigarette holder	10-15	400
Name seal	2 x 6	85

NB USD 1 = Yuan/RMB 6.5