

Macau's elephant and mammoth ivory trade today

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Abstract

This article presents the results of a survey of the ivory trade in Macau carried out in 2015. Macau was once one of the largest centres for the ivory trade in Southeast Asia. In the early 1980s the Portuguese territory of Macau was a major importer of tusks from Africa and also a large processor of ivory, especially jewellery, for the Hong Kong market. The trade since then has declined sharply. At the time of a previous survey in 2004, there was only one ivory craftsman left and just 1,718 ivory items were counted on display for sale in 21 retail shops. In 2015 only 326 ivory items were counted, representing a decline of 81% in 11 years, and not a single ivory craftsman was active. The number of outlets seen with worked ivory, remained much the same as 11 years ago (21 in 2004 and 22 in 2015). Most shops, however, had changed, and those previously selling large numbers of newer ivory items had left the trade. In 2015, the majority of shops selling ivory displayed only a few, antique items. Millions of Chinese mainlanders now visit Macau annually; they spend nearly all their time and money on gambling in the fast-developing casino industry, and have little interest in purchasing ivory. Profit margins are too low for ivory vendors to display large stocks of new worked ivory and thus only a sprinkling of old or antique items was seen in the shops. From 2004 to 2015 the number of mammoth ivory items for sale in Macau rose from 151 to 590; however, the number of shops selling mammoth ivory only rose slightly, from four to five, between 2004 and 2015. The amount of mammoth ivory on sale in Macau is still relatively tiny and, similar to elephant ivory, the trade in mammoth ivory looks unlikely to expand significantly under present circumstances.

Résumé

Cet article présente les résultats d'une étude sur le commerce de l'ivoire à Macao réalisée en 2015. Macao était autrefois l'un des plus grands centres du commerce de l'ivoire en Asie du Sud-Est. Au début des années 1980, le territoire portugais de Macao était un grand importateur de défenses d'Afrique et aussi un grand processeur d'ivoire, surtout des bijoux, pour le marché de Hong Kong. Depuis lors ce commerce a fortement diminué. Au moment d'une étude précédente en 2004, il n'y avait qu'un artisan d'ivoire qui restait et on a compté seulement 1.718 objets en ivoire en vitrine pour la vente dans 21 magasins de détail. En 2015 on a compté seulement 326 objets en ivoire, ce qui représente une baisse de 81% en 11 ans, et pas un seul artisan d'ivoire n'était actif. Le nombre de points de vente observés ayant l'ivoire travaillé, est resté à peu près le même qu'il y a 11 ans (21 en 2004 et 22 en 2015). Cependant, la plupart des magasins avaient changé, et ceux qui vendaient auparavant un grand nombre de nouveaux articles en ivoire avaient abandonné le commerce. En 2015, la majorité des magasins qui vendaient l'ivoire mettaient en vitrine seulement quelques objets antiques. Des millions de Chinois continentaux visitent maintenant Macao tous les ans; ils passent presque tout leur temps et leur argent sur le jeu dans les casinos qui se développent rapidement, et ont peu d'intérêt pour l'achat d'ivoire. Les marges bénéficiaires sont basses et les vendeurs d'ivoire ne peuvent pas mettre en vitrine des stocks importants d'ivoire nouveau et travaillé; donc on n'a vu que quelques objets anciens ou antiques dans les magasins. De 2004 à 2015, le nombre d'articles en ivoire de mammouth en vente à Macao a augmenté de 151 à 590; cependant, le nombre de magasins qui vendaient l'ivoire de mammouth a augmenté très peu, de quatre en 2004 à cinq en 2015. La quantité d'ivoire de mammouth en vente à Macao est encore relativement faible et tout comme l'ivoire d'éléphant, il semble peu probable que le commerce de l'ivoire de mammouth se développe considérablement dans les circonstances actuelles.

Background

Macau is a former Portuguese colony that became part of the People's Republic of China in 1999. The territory consists of a small peninsula and the islands of Taipa and Coloane, located across the Pearl River Delta from Hong Kong. The Macau ivory trade is at least several hundred years old. In the early 17th century ships based in this then Portuguese colony went to Manila in the Philippines and brought back to Macau religious ivory objects to display in their churches. By the 18th and 19th centuries, religious statues were being carved in Macau (Martin 2006a). Ivory carving continued into the 20th century, with workshops crafting a variety of items. There was a lull during and after World War II. The first study of Macau's ivory carving industry was carried out in 1979, when artisans were producing mostly figurines, jewellery, chopsticks and name seals using electric machinery. These pieces were sold at lower prices than in Hong Kong, as labour was cheaper in Macau. There were then perhaps 20 ivory carvers in Macau compared with 3,000 in Hong Kong (Martin 2006a).

In the early and mid-1980s Macau's ivory industry expanded considerably. There were around 80 carvers in 1982 and 100 by early 1986 (T.H Poon, Tat Hing Ivory Wares Factory, Hong Kong, pers. comm. 1986). This expansion was due to a legal loophole that allowed some tusks, mostly from Africa, to enter Macau with dubious documentation and without approval from the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This was because, although both Portugal and its colony Macau became a Party to CITES in 1981, Macau had a separate CITES office, which Portugal did not always supervise closely to ensure implementation of CITES procedures. (Macau retained its own CITES office when it became part of the People's Republic of China in 1999.) In the early 1980s smugglers were sending many tusks from elephants poached in Tanzania and the Democratic Republic of Congo in transit to Dubai. From there, traders were able to send them in large consignments via Hong Kong to Macau. The raw ivory could not enter Hong Kong, where officials required proper CITES papers, but officials in Macau did not object to letting in these tusks. Between 1981 and 1985 the weight of tusks imported into Macau rose from 294 kg to 97,275 kg (Parker 1989, Reeve 2002). Once carved, however, the worked ivory was allowed by CITES to enter Hong Kong. Some Hong Kong ivory factory owners opened factories in Macau and brought in artisans from Hong Kong to help process

these dubious tusks for the Hong Kong market. Some Macau-based ivory factories also employed additional local craftsmen to work on these tusks (Woodrow 1988). The carvers in Macau produced a variety of items, especially beads for necklaces, other jewellery items and netsukes. Nearly all items went to Hong Kong for sale, which was the largest market.

In early 1986 the CITES Secretariat visited Macau and urged the Macau CITES authorities there to conform with CITES. The authorities then did, putting a stop to tusks entering Macau without proper CITES papers. Tusk imports fell drastically and some ivory factories closed down.

Also in early 1986, the Macau government compiled its first register of privately held stocks of raw ivory, but this only consisted of full tusks. Twenty-nine companies declared a total of 22,034 kg of ivory (Arnaldo Correia, Department of Commerce, Macau government, pers. comm. 1987). In November 1989 the Macau government compiled a register of raw and worked ivory; 25 companies declared a total of 17,734 kg. A couple of months later the CITES ban on the international trade in ivory came into force worldwide resulting in a further decline in the Macau ivory industry. Officials were vigilant and caught some dealers smuggling in small amounts of ivory who were fined amounts ranging from USD 63 to USD 625 (Martin 2006a). According to seizure data from the Elephant Trade Information System (ETIS), there were 19 ivory seizures in Macau from 1990 to 1999. In the next decade, ETIS recorded two seizures totalling 3 kg of ivory in 2002 and one seizure of 175 kg in 2003. Thus there were a total of 22 seizures in Macau from 1990 to 2009.

The domestic trade in pre-1990 ivory that was already in Macau remained legal after the CITES international ban. In 2001/02 the government liberalized the gambling law allowing foreign ownership of casinos, resulting in Macau becoming one of the major gambling centres in the world. In 2003 there were 11,887,876 visitors to Macau with about half of these coming from the Chinese mainland. The vast majority of visitors came to gamble (Government of Macau 2004). The economy thus boomed, making Macau's residents, then numbering 450,000, some of the wealthiest in Asia. While new hotels and casinos brought huge wealth, the ivory trade slumped.

A study carried out in 2004 found only one ivory craftsmen still working in Macau (Martin 2006a). He bought small pieces of raw ivory for USD 31 per kg to make miniature figurines as well as larger

pieces of raw ivory weighing one kg for USD 250 to produce name seals and bigger figurines. He displayed for sale 152 ivory items, especially pendants, name seals and miniature figurines, in his workshop/retail shop. His main customers were from Hong Kong, Japan, Macau, Singapore and Taiwan, but included few Mainland Chinese, as they were nearly all in Macau solely to gamble. In 2004 the peninsula and the islands of Taipa and Coloane were surveyed and a total of 21 retail outlets counted, displaying 1,718 ivory items. There were 12 gift shops and 9 antique shops with all but one located on the peninsula. Each outlet displayed between 1 and 557 ivory items (See colour pages vi). They were mainly figurines (33%), bangles (16%), pendants (10%) and rings (10%). Prices varied considerably according to the location of the shop. Name seals cost USD 10–108 and bangles from USD 10 to USD 100. Ethnic Chinese ran all the shops except two that were managed by Indians. These two offered Indian paintings on ivory, and Indian-made bangles and figurines. In general the main customers were Americans, Europeans, Japanese and Taiwanese (Martin 2006a).

In 2004 the retail sale of mammoth ivory items had just begun in Macau, at 3 antique shops and 1 gift shop, all on the peninsula. They displayed for sale 151 items, mostly figurines, as well as elephant ivory items. All the worked mammoth ivory had been crafted in Mainland China due to the lower labour costs there (Martin 2006b).

Methodology

An ivory study was carried out in Macau for eight days in January 2015. In this paper, where we refer to the word 'ivory' alone, we mean elephant ivory. Mammoth ivory is named as such.

We again looked at shops on the peninsula and on Taipa and Coloane for elephant and mammoth ivory in order to obtain data comparable with the 2004 survey. We collected data on the shop's name and location, type of outlet, number of elephant and mammoth ivory items displayed for sale, item types and approximate ages, retail prices, customer nationality, whether business was going up or down, and the vendors' views on future trends.

We collected information from historians at the Museum of Macau and from libraries, and from the Foreign Trade Division of Macau Economic Services. This generated statistics on Macau's economy and helped appraise the ivory industry. We also investigated

issues relating to ivory smuggling and CITES.

To enable comparative analysis of data over time and among locations, we examined prices of items (such as plain chopsticks, name seals and bangles) of a standard size and followed the methods of past data reporting, giving price range and average price.

Results

Since the mid-2000s huge economic advances have taken place in Macau. The average per capita income in this administrative region of China grew by a phenomenal 14.1% a year between 2011 and 2013. By 2013 the per capita income in Macau was one of the highest in the world, at USD 87,000, while the unemployment rate among the population of 625,000 was only 1.7% in early 2014. Macau's wealth is still based on the gambling industry that is now the largest in the world (See colour pages vi). In 2013 gambling revenue (excluding 'gratuities paid to the casino staff') totalled USD 45.2 billion that year, perhaps 4 times more than Las Vegas. In 2014 there were 35 casinos employing 80,000 people. The gambling industry continues to be based on the large number of visitors from China and also Hong Kong and Taiwan. In 2013 there were 29,325,000 visitors of whom 18,632,000 were Mainland Chinese, 6,776,000 were from Hong Kong, 1,001,000 were Taiwanese, and 474,300 were South Koreans. Mainland China and Hong Kong do not have legal casinos; hence many people from there come to Macau especially to gamble (Government of Macau 2014).

Landfills now join the formerly separate islands of Taipa and Coloane and have allowed luxury hotel/casino developments and new housing to mushroom in that area. The territory of Macau has almost doubled in size from 16 km² in 1971 to 29.9 km² in 2014 (Macau Government Tourist Office 2013). In early 2014, developers announced plans to spend USD 20 billion over the next few years to build yet more new casinos and hotels (*The Economist* 2015).

Legal aspects of the ivory trade

Macau border officials have recently seized several consignments of ivory. These included one of 244 kg in 2010, and 2 totalling 72 kg in 2013 (Tom Milliken, ETIS director, pers. comm., February 2015). Other Macau seizures in transit to the mainland were one in 2010 of 998 kg, one in 2013 of 34 kg and another in 2014 of 39 kg, as well as a seizure that occurred after it had transited through Macau in 2011 of 60 kg (C4ADS

2015). The fine for ivory smugglers, if caught, remains at a maximum of MOP \$ 5,000 (USD 625), but in early 2015 the government was considering raising this figure. Customs officials check smuggling particularly on the land border between Macau and Mainland China. The government also employs about 20 inspectors to check Macau's outlets for all commodities, including ivory, but as salaries are relatively low compared with the casino industry, it is difficult to increase the number of inspectors (Ng Chimei, Senior Advisor, Foreign Trade Division, Macau Economic Services and an official of the Macau CITES Management Authority, pers. comm., January 2015).

Ivory items in Macau that have been there since before the 1990 CITES ban or those carved using tusks imported before 1990 can still be legally sold. However, no raw or worked ivory imported since the CITES ban can be legally sold. Retail outlets require a business licence but no specific licence for selling ivory. Officials believe that most ivory items seen for sale are pre-1990 and thus legal, and they do not know of any ivory carver working today in Macau (Ng pers. comm., January 2015).

Retail ivory trade

We surveyed the new hotel and casino areas that have extensive shopping malls, consisting of well-known luxury retail outlet chains filled with brand names. None, however, had outlets selling ivory items, nor did we find any in the older hotel/casino buildings. We found 22 retail outlets with ivory items. The majority (17 small antique shops) were in the old part of the city known as the 'Historic Centre of Macau'. These were mainly around Rua de S. Paulo, Rua de Nossa, Senhoro do Amparo and Rua de Tercena. In this area a jewellery shop and a mammoth specialty shop also sold some worked ivory, but there were no elephant ivory specialty shops. Between the Lisboa and L'Arc Hotel, worked ivory was also seen in two traditional medicine shops and a curio shop (Table 1).

There were only 327 ivory items counted in total on display for retail sale, with numbers per outlet ranging from 1 to 84. Some vendors claimed that most ivory items for sale were carved in Macau before 1989. There were proportionately more antique ivory items seen for sale in Macau than in Mainland China and Hong Kong. Most were figurines/figures and jewellery that

Table 1. Types of retail outlets and number of elephant ivory items counted in Macau in January 2015.

Type	Outlets (no.)	Outlets (%)	Items (no.)	Av. items/outlet
Antique shop	17	77	258	15
Traditional Medicine shop	2	9	15	8
Curio shop	1	5	34	34
Jewellery shop	1	5	15	15
Mammoth specialty shop	1	5	5	5
TOTAL	22	101	327	15

Table 2. Elephant ivory items seen for retail sale in Macau in January 2015.

Item	Percentage of Total
Figurine/figure	40
Jewellery	40
Name seal	5
Toothpick	4
Chopsticks, pair	3
Container	3
Incense bottle	3
Cigarette holder	2
TOTAL	100

each made up 40% of the total (Table 2). There were also toothpicks, kohl containers, a bachi, binoculars, a crucifix, an incense burner and a page-turner.

Very few ivory items had price tags, allowing vendors to state a price of their choosing, depending on the appearance of the customer. The cheapest item was a pair of earrings offered for USD 38 (Table 3) and the most expensive was a 45 cm carved tusk for USD 14,375 probably carved in the early 1980s. Other expensive items were all antiques, for example a snuff bottle on sale for USD 11,875, a 12.5 cm paintbrush container for USD 11,875 and a 10 cm wooden Buddha with ivory face and hands for USD 10,000. The vendors were all ethnic Chinese with some of the older women unable to speak English. Customers, according to the vendors we spoke to, were from Mainland China.

Legal aspects of the mammoth ivory trade

As in nearly all countries and regions in the world, in Macau, all mammoth ivory trade (imports, exports and

Table 3. Retail prices for elephant ivory items in US dollars in Macau, January 2015

Item price	Size in cm	Origin	Range in USD	Av. USD
JEWELLERY				
Bangle	1-1.5	187-850	554	
	2.5	1,100-1,875	1,497	
Bracelet, beads	1-2	800	800	
Earrings, pair		1-2		38 38
Pendant	4-5		187-1,225	592
FIGURINES/FIGURES				
Human/animal	4-5	250-275	258	
	5-10	525-687	625	
	15	2,708-4,000	3,031	
	20	3,250	3,250	
MISC.				
Cigarette holder	10-15	900-1,100	125	
Chopsticks, pair		20	187-625	396
Name seal		2 x 6	475-625	525

*NB USD 1 = 8 Patacas (MOP\$)

Table 4. Types of retail outlets and number of mammoth ivory items counted in Macau in January 2015.

Type	Outlets (no.)	Outlets (%)	Items (no.)	Av. items/ outlet
Mammoth specialty shop	3	60	567	189
Hotel jewellery outlet	1	20	19	19
Antique shop	1	20	4	4
TOTAL	5	100	590	118

domestic sales) is legal. India, however, banned the trade in mammoth ivory in 1990. Growing opposition to ivory in the USA resulted in the ban of both raw and worked mammoth ivory sales in the States of New York and New Jersey in 2014, with another state currently considering a ban (AAPS 2014). How this will affect the industry in general is not yet known. Traders, however, do not go to Macau to buy mammoth ivory items in bulk for sale in their home countries, as they do in Hong Kong. Hence there was no concern about these new restrictions. Only occasionally do customers buy mammoth ivory items in the retail outlets, and generally for personal use.

Retail mammoth ivory trade

A total of 590 mammoth ivory items were found in five retail outlets (Table 4). There were three mammoth ivory specialty shops and one antique shop in the Historic Centre of Macau, on the Rua de Nossa, Senhora do Amparo, Rua de S. Paulo and Avenida de Almeida Ribiero. The mammoth ivory specialist

shops were recently established and displayed items in expensive new cabinets with modern lighting, unlike the shabbier outlets selling antiques and worked ivory. The fifth outlet was a jewellery store in a new luxury hotel on the opposite (eastern) side of the peninsula, which had large mammoth ivory carvings on display. Numbers of items per shop ranged from 4 to 288. There were figurines/figures (57%), and jewellery consisting of bangles, bracelets, necklaces, pendants and rings (38%). There were miscellaneous items ranging in size from a few full-carved tusks to name seals and cigarette holders. Most items were fairly newly carved and had come (legally) from Mainland China. The least expensive item was a cigarette holder for USD 84 (Table 5) and the most expensive was a Chinese man with nine children (40 × 30 cm) for USD 230,769. The vendors were ethnic Chinese, men and women, both young and old, as was the case with the ivory sellers. They clearly said to customers that mammoth ivory can be taken out of the country and thus could be purchased by customers of all nationalities.

Table 5. Retail prices for mammoth ivory items in US dollars in Macau, January 2015.

Item	Size in cm	Price range	Average price
JEWELLERY			
Bangle	1-2.5	244-875	516
Pendant	4-5	125-475	196
FIGURINES/FIGURES			
Human/animal	5	112-463	261
	10	2,500-5,156	3,625
	20-30	3,500-10,625	6,656
MISC.			
Cigarette holder	10-15	84-225	183
Name seal	2 x 6	125	125

*NB USD 1 = 8 Patacas (MOP\$)

Discussion

Mainland Chinese are the biggest buyers of ivory in the world and therefore one would expect, given the tremendous increase in mainlanders visiting Macau since the mid-2000s (reaching 18.6 million in 2013), that Macau's ivory retail trade would have expanded.

In fact, the retail ivory trade has been dwindling, with outlets numbering about the same as in 2004, but items for sale reduced in number by 81% (from 1,718 to 327 between 2004 and 2015). In 2004, a gift shop vendor displaying 557 objects (the most seen then in an outlet) was at that time offering large discounts as he said he saw no future in the ivory business. This outlet closed down several years later. Compared with five hotel shops in early 2004 displaying 325 ivory objects, by early 2015 there was no worked ivory for sale in the hotels, despite the recent construction of many new luxury hotels with large numbers of expensive shops. Nor were there ivory objects for sale in the gift outlets that had previously displayed recently carved ivory items.

The main reason for the lack of interest in ivory is that the majority of visitors to Macau come to gamble, especially the mainlanders, and spend nearly all their time in the casinos. This is the case in other large gambling centres, such as Las Vegas, where Dan Stiles surveyed the retail outlets in 2005 and found only 212 ivory items for sale in the city, compared with 2,605 in Los Angeles and 2,777 in the San Francisco area (Martin and Stiles 2008). Many of the shoppers in Macau are young and generally prefer to buy prestigious brands rather than luxury ivory carvings.

Since 2004 there has been a considerable turnover in retail outlets with ivory items for sale. Only three out of the 21 outlets seen in 2004 still were in the same

location with the same name displaying ivory in 2015, with one having become a mammoth specialist outlet to improve sales (Martin 2006a). In 2015 there were an additional 19 outlets counted, the majority selling almost entirely old ivory objects (pre-1990 items and antiques) numbering 327 (Table 1). In 2004 the average number of ivory items per outlet was 82 and in 2015 only 15. In 2015 it was mainly antique outlets that displayed ivory, usually second-hand items. Such items come and go from the various antique outlets, hence the large turnover of antique shops that have just a few old ivory items.

Vendors no longer want to display large numbers of recently made ivory objects as they did in 2004. The main reason is that as turnover in ivory is slow; they prefer to occupy shelf space with faster-moving stock to pay for the increasing shop rents, especially in the old town. Neither does it make economic sense to offer for sale a large stock of worked ivory with slow turnover in the new expensive casino/hotel/shopping mall complexes. Outlets also have had to offer considerably higher salaries to staff so as not to lose their shop assistants to the well-paying casinos.

Thus costs of ivory items have risen sharply between the two surveys of December 2004 and January 2015, by 5.6 fold overall for comparable common trinkets (Martin 2006a; Table 6). Hong Kong's retail prices for ivory items over these 10 years also rose in price, by 3.7 fold (Martin 2006b; Table 6). The prices of ivory trinkets of similar quality and age to those in Hong Kong (all pre-1990) for sale in Macau are a little higher than in Hong Kong. Therefore there is no incentive for buyers to come to shop for them in Macau, especially as the selection of items is a small fraction of that in Hong Kong.

In Macao, trinkets made of mammoth ivory for sale in 2015 (produced mostly post-2000 in Mainland China, as in Hong Kong), were cheaper than similar looking elephant ivory items, averaging USD 255 per piece for bangles, cigarette holders, name seals and pendants, versus USD 504 for similar items made of elephant ivory. These price comparisons exclude chopsticks; mammoth ivory is too brittle for the manufacture of chopsticks due to its great age. Prices of mammoth ivory trinkets in Macau matched those in Hong Kong very closely, as one would expect since they are supplied from similar sources. However, some items of mammoth ivory, such as bangles and pendants, were cheaper in Macau. Probably these items were older stock and the price differential reflected the slower turnover in Macau than in Hong Kong (Table 7).

Price of ivory items on display for sale in Macau were cheaper than on the mainland, where they are mostly made from new elephant ivory requiring ID certificates. There are also higher taxes on Mainland China than in Macau. In Beijing the average price for a pair of chopsticks, for example, was USD 746 compared with USD 396 in Macau (Vigne and Martin 2014).

In Mainland China, there is more out-of-sight illegal ivory trade than in Macau (Vigne and Martin 2014).

Macao, being a small peninsula, is easier to manage and laws there can be more easily enforced than on the mainland, where legislation prohibiting illegal ivory is much more difficult to enforce due to its huge area with many international borders. Furthermore, as there are few people interested in buying ivory in Macau, traders do not bother to risk smuggling in new items in bulk for retail sale. In contrast, on the mainland, even though only a fraction of the vast human population desires worked ivory (whether legal or illegal), much larger numbers of ivory items are purchased, generating a huge turnover and high profit margins.

Regarding mammoth ivory, of the four outlets in 2004 two were still selling mammoth ivory (along with elephant ivory) in 2015 and three new outlets were selling mammoth ivory alone. In 2004 when mammoth ivory was new to Macau, there were 151 items displayed for sale, mostly small figurines. In 2015, there was a wider range of items on sale, and the number of items displayed had risen to 590, but this is still a relatively small amount compared with elsewhere in the region. In 2004 these items were heavily concentrated in one gift shop and in 2015 most were found in two of the recently started specialist outlets.

Since there are so few restrictions on mammoth ivory, these vendors think that their future is brighter

Table 6. Retail price comparisons (USD) for elephant ivory items in Macau and Hong Kong in December 2004 and January 2015.

Item	Macao		Hong Kong	
	2004	2015	2004	2015
Bangle, 1-2.5 cm	55	773	57	519
Bracelet, beads 1-2cm	-	800	-	742
Chopsticks, pair, 20 cm	64	396	90	308
Cigarette holder, 10-15cm	87	125	123	224
Name seal, 2 x 6 cm	99	525	71	231
Pendant, 4-5 cm	-	592	-	314

*NB USD 1 = 8 Patacas (MOP\$)

Source for 2004 data: Martin 2006a,b, and unpublished raw data; Hong Kong 2015: Martin and Vigne (2015).

Table 7. Retail price comparisons (USD) for mammoth ivory items in Macau and Hong Kong, January 2015.

Item	Macao	Hong Kong
Bangle 1-2.5 cm	516	1,268
Cigarette holder, 10-15 cm	183	141
Name seal, 2 x 6 cm	125	251
Pendant, 4-5 cm	196	410

*NB USD 1 = 8 Patacas (MOP \$)

Source for Hong Kong: Martin and Vigne (2015).

compared to those dealing in elephant ivory. Ivory dealers want to unload their ivory objects and not replace them as turnover is too slow and the future not encouraging. As there were not many outlets selling ivory items, and these had extremely few customers, it was not possible to gauge the degree of substitution between mammoth and elephant ivory. In the three new outlets specializing in mammoth ivory the vendors displayed more confidence than among those selling elephant ivory items nowadays. Comparing the prices for a bangle made of both ivories, it can be seen that mammoth ivory is only slightly cheaper (Tables 6 and 7). This suggests that potential buyers are increasingly prepared to purchase a mammoth ivory bangle of the same quality instead of an elephant ivory bangle.

Conclusion

The 2004 and 2015 surveys in Macau found similar numbers of ivory outlets (21 and 22, respectively). The number of ivory items, however, had declined by 81% in the most recent survey, with only 327 objects counted in January 2015. As in 2004, nearly all of these pre-dated the CITES ban. Ivory vendors do not find the business profitable and are not replacing worked ivory that they sell. As in Hong Kong there is no legal ivory trade for items carved from post-1990 tusks in Macau but, compared with Hong Kong, stocks of old raw and worked ivory in Macau are small. We saw no 'behind the scenes' black market activities or hidden new worked ivory for sale in the retail outlets nor were we offered any illegal ivory outside the retail outlets. This suggests that Macau's ivory industry has declined due to lack of demand, and is now very small. People are coming to Macau in greater numbers, but to gamble not to buy ivory so vendors do not find the business profitable.

The number of mammoth ivory outlets in 2015 was much the same as in 2004 (five and four, respectively), but the number of items displayed for sale had risen nearly fourfold from 151 to 590 objects. There was more optimism among mammoth ivory traders compared to those selling elephant ivory. This is still a small business compared to the huge markets in Hong Kong and on the mainland where the big dealers are based. At the moment the big dealers do not think it is profitable to set up large shops selling worked mammoth ivory in Macau due to lack of demand. Both the mammoth ivory and elephant ivory industry are thus very small compared to mainland China and Hong Kong.

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