



MYANMAR'S GROWING ILLEGAL IVORY TRADE WITH CHINA

LUCY VIGNE and ESMOND MARTIN

2018



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SAVE THE ELEPHANTS
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Nairobi 00200
Kenya

2018

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ISBN 978-9966-814-09-8

Front cover:

These Chinese-carved ivory items were for sale in Mong La where illegal cross-border trade with China continues unabated.

Title page:

Much of the legal carved ivory for sale in Mandalay today is designed for the Chinese.

Back cover:

These Myanmar carved pendants for sale in Yangon are attached to red string to attract Chinese buyers.

Photographs:

Lucy Vigne:

Title page, pages 6 top, 9–12, 14 left, 15 left, 16–20, 22–23, 25–26, 28–29, 31–39, 41–43, 52, 54–56, 58–60, 62, 66–67, 70–72, 76–81, 86, 88, back cover

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Published by:

Save the Elephants, PO Box 54667, Nairobi 00200, Kenya

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This altar in a Buddhist temple in Kyaingtong shows the importance of tusks (or nowadays often tusk imitations) in Buddhism.



BHUTAN

INDIA

BANGLADESH

CHINA

MYANMAR

Myitkyina

Tamu

Irrawaddy River

Ruili

Muse

Mekong River

Lashio

Pangkham

Mandalay

Mong La

Dalou

Bagan

Kyaingtong
(Kengtung)

Taunggi

Tachileik

Golden Triangle SEZ
(Kings Romans)

Mae Sai

Nay Pyi Taw

★
Pyinmana

LAOS

Vientiane

*BAY OF
BENGAL*

Bago

Mt Kyaikhtiyo
(Golden Rock)

Yangon

Mawlamyaing

VIETNAM

THAILAND

Three Pagodas Pass

★
Bangkok

*ANDAMAN
SEA*

*GULF OF
THAILAND*



This photo of ivory carvers in Mandalay taken in 1959 demonstrates the availability of large tusks in those days.



Most Myanmar-carved ivory items seen for sale are small trinkets that meet today's demand.

Executive summary

IVORY SOURCES, PRICES, CARVINGS

- Much of the African ivory that reaches Myanmar is smuggled in containers to Vietnam and is transported usually in worked form up the Mekong River through the infamous Golden Triangle region into the east of the country on the border with China, to meet Chinese demand. Some items on sale in the border region were from Thailand and China.
- In late 2017, the wholesale price for African raw ivory in the Golden Triangle region was about USD 770–800/kg. The price appears to have remained stable since late 2015.
- Myanmar has more than 5,000 captive elephants, the largest captive elephant population in the world. There are also perhaps 2,000 wild elephants.
- Larger raw tusks from Myanmar’s male elephants are sometimes sold in Mandalay to Chinese buyers and smuggled across the Chinese border, in contravention of the CITES ban.
- In late 2017, raw tusks of Myanmar elephants were selling wholesale for local carving at an average of USD 961/kg.
- According to ivory dealers, in late 2017 domestic trade in licensed ivory from Myanmar’s captive elephants (trimmed tusk tips and from animals that have died) was legal. The trade in tusks from Myanmar’s wild elephants is illegal.
- About 10 ivory carvers remain active in Mandalay and fewer in Yangon. Carvers still use mainly simple hand tools or in a few cases electric drills, but not computer-driven machines.
- All Myanmar carvers are men. Their number has fallen with the decrease in local raw ivory available to them.
- Myanmar carvers nowadays produce very small ivory items, mainly jewellery, for sale in Myanmar.

RETAIL IVORY SURVEY RESULTS

- In our survey in Myanmar, carried out in late 2017, we found ivory items on display in five towns and cities out of eight visited, with 51

shops openly displaying 14,846 ivory items for sale. The majority of items on display were recently-made jewellery, with a much smaller number of older larger items, carved perhaps 20 years ago, such as figures and carved tusks. Vendors stated that Chinese customers buy about 90% of what they sell.

- While traders claim that much of the worked ivory on sale has been crafted by Myanmar carvers, from Myanmar’s elephants, over a third of the ivory items seen were in shops in Mong La on the China border, and appeared to be from African elephants.
- In Yangon, 27 retail outlets had 1,995 items displayed for sale, and another 3 small shops brought out 667 ivory items on request. In comparison, in 2006, a survey found 40 shops displaying 1,904 ivory items for sale.
- In Mandalay 6 retail shops displayed 4,630 ivory items for sale. The 2006 survey found 17 shops with 1,821 ivory items on display for sale.
- In Tachileik next to the Thai border we counted 7 retail shops with 2,913 ivory items displayed for sale. This is down from 2006 when there were counted 4,166 ivory items on display in 23 outlets.
- Bagan had one antique shop with 29 old-looking ivory items, and the town of Bago had none. No elephant products were offered for sale at the Golden Rock pilgrimage site following to a recent government crackdown.

MONG LA

- Mong La on the Chinese border has replaced Tachileik on the Thai border as the place with the largest number of illegal worked ivory items are on view for sale. There were ten shops open when our investigator visited the town, with 5,279 recently-made ivory items openly for sale. Of these, 2,467 were newly arrived items, mostly large pendants on shelves behind the counters in transparent plastic packets. A survey in 2013/2014 found 3,302 worked ivory items on view for sale in Mong La. This illegal trade is thus soaring, with a 63% increase in three years.
- Plain jewellery and plain utilitarian items, many newly mass-produced by Chinese and



The poaching of African elephants in remote areas leaves behind many orphans who will generally die without their mother's milk.

Vietnamese artisans, are openly on sale in Chinese shops to customers from mainland China. Only a few ivory items seen for sale in Mong La were produced by Myanmar carvers from local ivory. There were no ivory items on view for retail sale in the eastern Shan State city of Kyaingtong.

- In Mong La, Chinese shop owners offered mostly large, recently-made oblong and round Chinese-style pendants. These were displayed in glass display cabinets along with other ivory jewellery. There were also some more ornate pieces for sale that had been carved in China.
- A computer-driven machine in a Mong La ivory shop enabled Chinese artisans to produce decorated ivory items there on demand.
- In 2010 the Chinese government closed the official border crossing from China into Mong La in an attempt to shut down the casinos operating in the town. Despite border restrictions, trade catering to Chinese business people is growing. While mainland Chinese still visit Mong La, attracted by its shops, prostitutes and other entertainments, Chinese casinos, now located out of view of the border are still a popular attraction.

- The ivory trade in the Mong La area is expanding and it appears that ivory items are being sold both retail and in bulk to smuggle into China.

CHALLENGES

- In Yangon and Mandalay, visitors, nearly all Chinese, buy small ivory items that are easy to smuggle home. However vendors complained of slow sales of their legally worked ivory, and other luxury souvenirs during the previous two or three years.
- Myanmar elephants are under threat with tusks and other elephant products being taken illegally across the border to China. African elephants are also under threat from the ivory trade in eastern Myanmar, with border areas acting as a conduit for smuggled worked African ivory into China.
- In the absence of adequate, clearly publicized and enforceable legislation, the illegal cross-border trade in raw and worked ivory from Asian and African elephants is continuing largely unabated. Effective and enforceable legislation to control the trade will require more collaboration between China and Myanmar.

Introduction to Myanmar

Myanmar, formerly Burma, is a country in Southeast Asia with a total area of 676,587 km². It is a nation of about 55 million people belonging to more than 100 ethnic groups. Of these, 68% are Bamar, 9% Shan, 7% Karen, 4% Rakhine, 3% Chinese, 2% Indian and 2% Mon (MPI 2018). The majority Bamar are referred to as Myanmar people in this text while the smaller ethnic groups are named. Principal cities include Yangon (formerly Rangoon, the Colonial capital) and Mandalay (formerly capital of the Kingdom of Burma and home to the Royal Family). The current capital and seat of the government is Nay Pyi Taw. Myanmar shares borders with five countries: Bangladesh, India, China, Laos and Thailand. It has a nearly 2,000-km coastline on the Bay of Bengal and Andaman Sea (see map). It consists of seven states (Chin, Kachin, Kayin [Karen], Kayah, Mon, Rakhine and Shan), where many of the ethnic groups live, as well as seven central regions. Traditionally it has had an agricultural economy based around rice cultivation and timber extraction.

Over the centuries a succession of major ethnic groups controlled the country, with the Bamar coming into prominence in the 11th century. In recent history, after

three wars in the 19th century, the British took over the country and Burma became a British colony. Burma received its independence in 1948 as a democratic nation. Following a coup d'état in 1962, however, it became a military dictatorship. Following a further military coup, the country was renamed Republic of the Union of Myanmar in 1989. In 2010 there was a general election, after which the military junta was officially dissolved in 2011 and a nominally civilian government with a new constitution took over. Foreign relations improved with the release of Aung San Suu Kyi and other political prisoners. In the 2015 elections, Aung San Suu Kyi's party won a majority, but the Myanmar military remains a powerful political force.

Since independence in 1948 there has been ethnic strife, in what has been labelled the world's longest running civil war (Cockett 2015). This has involved human rights violations, as in the well-publicized ongoing crisis in Rakhine State on the Bangladeshi border, and there has been much international criticism of the government's treatment of ethnic minorities. For many years the military government remained isolated from the rest of the world and the economy almost collapsed mainly as a result



These baby Asian elephants were found in the forest and were being hand-raised at a conservation camp north of Yangon.



These three white elephants at the world famous Shwedagon Pagoda in Yangon are a symbol not only of Buddhism, but also of prestige, prosperity and political power.

of mismanagement. Since 2010, the government has been trying to improve the country's reputation abroad, and to revive the economy, and both tourism and trade have steadily increased. Nevertheless the income gap in Myanmar remains among the widest in the world and a large part of the economy is still controlled by supporters of the former military government. About 37% of people still live near or below the poverty line, especially in rural areas where many people lack adequate healthcare, education, electricity and roads (World Bank 2017). But new technology is boosting the economy, for example through the explosive growth in smart phones and internet usage that is leapfrogging the country into the 21st century.

Myanmar shares a very long (about 2,170 km) and porous border with China. Cross-border activity has increased markedly in recent years, including by smugglers and supporters of militias of the hill peoples living in border areas, as well as people just coming and going. From the early 1990s, communist China has been the prevailing foreign influence. As Myanmar opens its economy, the growing superpower is rushing in to exploit its neighbour's vast natural wealth, to meet its ever-growing demand for oil, gas and hydro-electric power, as well as for food, wildlife products, wood, gems and gold.

In the past, the depressed economy and lack of jobs in Myanmar led many people to leave the country to find work abroad in Thailand, Singapore and further

afield (Cockett 2015). Friends and relatives kept in touch with their families in Myanmar and, unlike in North Korea, it became impossible to isolate people in the country from world news. Protests by Buddhist monks during the 'Saffron Revolution' in 2007 and Cyclone Nargis, that hit the south of the country in 2008, drew the world's attention to this cut-off nation and its very poor economic conditions. Myanmar and its people were struggling, in part due to the impact of long-standing economic sanctions imposed by the USA and other Western countries. But in 2011 the new government under President Thein Sein set out to resolve internal conflicts and restore relations with the West (Cockett 2015). A series of political, administrative and economic reforms were introduced, as well as ceasefires with ethnic armies based in areas of the country that had been off limits for decades due to military conflict. The opposition politician Aung San Suu Kyi was released from house arrest and her party, the National League for Democracy, won a landslide victory in elections held in 2015. Despite the current crisis in Rakhine State and international condemnation of the government's persecution of the Rohingya people, the peace process is bringing rapid economic development into many other areas of the country. Many of the country's forest regions still have rich and diverse wildlife (Dasgupta 2017), but habitat destruction appears to be increasing. Forests are being destroyed for plantations and wildlife is being plundered for the illegal wildlife trade, especially to meet Chinese demand. This is a challenge for the authorities in both Myanmar and China.



Chinatown in Yangon is home to third and fourth generation Chinese who have lost contact with mainland China and are well integrated into Myanmar society.



These ivory items on display at the National Museum in Yangon are typical past styles of carving in Myanmar.



Wildlife legislation

Wild elephants have long been protected under the Wildlife Protection Act of 1936. On 8 June 1994 a new law was introduced, known as the Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law (Shepherd 2002), to safeguard wild animals and plants outside protected forest and wildlife areas. Notification No. 583/94, published later that year, listed ‘totally protected’ species, including wild Asian elephants. This notification prohibits the killing, wounding, possession, selling, and transporting of elephants or any parts of elephants without permission. Violation of the law can result in imprisonment for up to seven years and/or a fine. (Shepherd and Nijman 2008; Nijman and Shepherd 2014a; CITES/IUCN 2016).

On 13 June 1997 Myanmar became a signatory to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), which came into effect in the country on 11 September 1997. The Asian elephant has been listed on Appendix I of CITES since 1975, prohibiting almost all international trade in the species, and its parts and derivatives. The import and export of African ivory has also been banned amongst CITES member states (with the species listed on Appendix I) since January 1990. It is the Forest Department’s responsibility as the Myanmar Management Authority for CITES to ensure that illegal international trade is prevented.

In 1997, Myanmar also became a member of the Association of Southeast Asian Nations (ASEAN). In 2005 ASEAN adopted a Regional Action Plan on Trade in Wild Fauna and Flora to improve collaboration between government agencies responsible for controlling the illegal wildlife trade. The plan contained measures for enhancing law enforcement networking, inter-agency co-operation, strengthening national legislation, and increasing the availability of scientific information to guide wildlife trade management by CITES authorities. Originally covering the period 2005 to 2010, the plan was subsequently extended for a further five years. If put into effective action, this plan could help Myanmar to restrict illicit trade across its borders, mostly with China, Thailand and Laos.

Trade in government-owned ivory has been permitted for some time in Myanmar (Martin 1997). From the 1970s onwards, the government encouraged legal ivory carving (using licensed ivory) in order to preserve the country’s cultural heritage. It held auctions of its ivory stocks and supported the

Myanmar Traditional Arts and Artisans Association, awarding prizes to carvers for the best ivory sculptors (Stiles 2002). This ended when Myanmar joined CITES in 1997, in recognition of international pressure against the ivory trade (Stiles 2004).



This sign was seen in Tachileik on the border with Thailand, an area renowned for drug smuggling. We saw no signs warning visitors against smuggling ivory or any other endangered wildlife products.

However, according to dealers in late 2017, trade in ivory from captive elephants was still permitted with a licence from the Forest Department in Yangon and Mandalay. Exact current legislation, however, is unclear (Nick Cox, WWF Myanmar, pers. comm., September 2018). Ivory apparently could be legally traded including male tusks, tusk tips and female tusks from dead captive animals. Tusk tips may be cut off and sold every few years from government-owned captive elephants (mostly used for logging) or from a privately-owned elephant if it has worked for the government for at least three years during its life, according to vendors and dealers. Captive elephants refer to both domestic elephants and domesticated elephants (those taken from the wild).

In pursuance of the ivory trade ban, Parties to CITES are required to submit elephant product seizure data within 90 days of official confiscations of smuggled ivory to ETIS (Elephant Trade Information System), which has been managed by TRAFFIC on behalf of CITES since 1997. But Myanmar has been extremely lax in complying with this requirement. The ETIS 2016 report to CITES expressed concerns about the domestic ivory market in Myanmar (Milliken et al. 2016). Issues of resources and capacity need to be addressed in order to regulate this market effectively (Faith Doherty Environment Investigation Agency, pers. comm. July 2018).

There have been some encouraging developments in the last two years. In 2016, WWF Myanmar

welcomed the government's new plan to close down the wildlife trade in Mong La, a town which has become a notorious hotspot for open trade in endangered species and their products, including ivory. (WWF Panda 2016; M Aung 2017). Myanmar has also stepped up efforts to protect its own elephants. In early 2017 the Ministry of Natural Resources and Environmental Conservation (MONREC) produced the 'Myanmar Elephant Conservation Action Plan'. The plan sets out a series of priority actions to be implemented over a period of 10 years, involving the collaboration among government departments and participation of international conservation agencies (Kyaw Ye Lynn 2017). However, in general, while wildlife laws in Myanmar are often carefully updated (Burma Myanmar/library 2007) they are seldom enforced. Without effective enforcement, the laws of the country are largely meaningless.

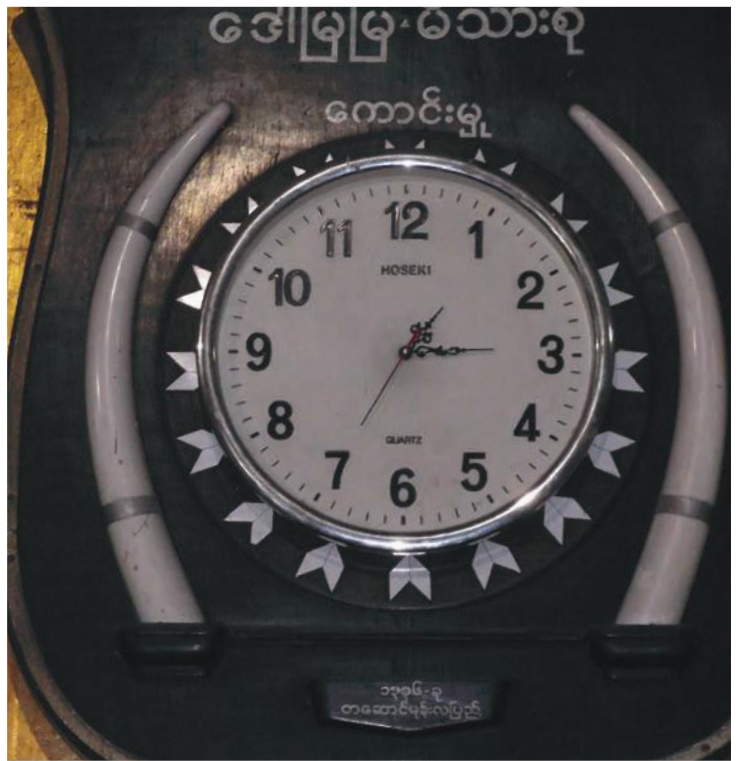
In 2013, in an attempt to address global concerns about the fate of the world's elephants, the 16th Conference of the Parties (CoP16) of CITES gave certain countries a National Ivory Action Plan (NIAP) process. This is a set of guidelines, including actions and timeframes, intended for implementation by countries identified as being 'of concern' due to the important role they play in the illegal ivory trade (CITES 2017). However, Myanmar has not been included in the initial lists as a country of concern, probably because the illegal trade in worked African ivory in Mong La continues to operate largely under the radar.



Neighbouring Thailand is clamping down on the ivory trade as seen in these posters at Bangkok's Chatuchak weekend market (left) and at the main international airport (right). There were no such signs at the Yangon International Airport.



King Thibaw's ivory chair is on display in the National Museum in Yangon. He was the last Burmese sovereign reigning from 1878 to 1885.



Mandalay's Maha Thakya Thiha Temple has two clocks with elephant tusks, given by a Mandalay family in the early 1970s.

Myanmar's past ivory trade

The following three sections provide information on the ivory trade in Myanmar in three recent historical periods: (1) up to 1995; (2) in 1995, when Esmond Martin (E.M.) researched the ivory industry

and not all his data were published; and (3) from 2001 to 2016. This is followed in the next section by the results of the most recent study carried out by E.M. and Lucy Vigne (L.V.) in late 2017.

The history of the Myanmar ivory trade up to 1995

It is likely that some of the earliest ivory items carved in the country were small statues of the Buddha dating back to the 12th century. Other items made of ivory were dagger hilts (St Aubyn 1987). Relatively little has been published, however, on locally-made ivory items crafted earlier than the 18th century. Perhaps this is due to its lack of importance as a handicraft amongst the inhabitants in those times and the relative insignificance of Myanmar's participation in international trade then compared with neighbouring China, India and Thailand. In 1857 King Mindon moved his capital to Mandalay and almost immediately started to construct the Royal Palace of Mandalay. Royal workshops were established in and around the Palace where craftsmen used ivory. Stiles (2002) believes that organized ivory carving probably began in the court of King Mindon in the 1860s. Indeed, in 1995, the owner of Tin Aung Ivory Workshop told E.M. in Mandalay that one of his ancestors worked as an ivory carver in King Mindon's workshop. In 1995 the Cultural Museum displayed an ivory chess piece which was probably made in Mandalay by royal craftsmen in the latter

half of the 19th century. The museum also displayed one of the few pre-19th century ivory items seen in 1995: an 18th century *kamawar* or slab of ivory with Buddhist scriptures written on it in Pali (the language of sacred texts of Theravada Buddhism). Monks read from the *kamawar* to ordain a novice monk as a full member of the monastic community.

In 2017, in the National Museum in Yangon, we saw King Thibaw's ivory chair, crafted for him in 1878 by French and Italian furniture makers, as well as teak wood cabinets, bookcases and wardrobes all in European style. Other ivory items in the museum included two 19th century swords with ivory handles for relatives of the royal family; a tusk tip, used as an 'authority seal', presented by King Mindon to a dignitary in the 19th century; and two Naga ivory bangles. In a large room of handicrafts there was a shelf of old ivory carvings with no dates specified.

In 1885 the British took over the country and King Thibaw, the last king of Burma, was sent into



Before the CITES ban was strictly enforced, often ivory figures and figurines carved in Myanmar were bought by Western visitors.

exile. With the dissolution of the monarchy and the departure of the royal family, the royal workshops there were also disbanded. The ivory industry then continued under the influence of the British and Indian merchants and administrators, who bought worked ivory from Mandalay, Pyinmana, Mawlamyaing and Rangoon. The carvers in Mawlamyaing were believed to use 8–12 pairs of tusks a year (Kunz 1916). The art historian, George Kunz, was fairly critical of the carvers at the time of World War I stating “little originality is exhibited by the Burmese carvers and this art is very conventional” (Kunz 1916). At that time the craftsmen produced boxes, picture frames, knife handles, carved tusks, chairs and Buddha figures.

The British capital of Burma was the coastal city Rangoon. After World War I, Burma became the richest country in the region. The economy expanded rapidly, based on exports of timber, rice, oil, rubber, silver, jade and other natural resources. Many Indians, Chinese and British arrived in the country to work in the huge mercantile enterprises that flourished in the country. The ivory trade grew in this period. After World War I, Rangoon had more resident Indians than Burmese (Cockett 2015) and some of these Indians were the major customers for ivory objects made in the country.

During World War II, the Japanese invaded and seized control of most parts of the country. From 1942 to 1945, Japanese soldiers became major buyers of ivory items, notably chopsticks, name seals and cigarette holders. There was also a large local demand for ivory combs. After World War II the main buyers of ivory items were again Indians, including Indian money lenders (called *chettys*), and the British. The Indians bought Hindu figures, hair pins and bangles while the British preferred utilitarian items such as cigarette holders, cigarette cases and paper knives. Ivory items were made mostly in Rangoon and Mandalay from both local and imported tusks.

Around 1952 the ivory merchants and ivory carvers established an association to promote their businesses. In 1962 the country was one of the most prosperous in Southeast Asia (Cockett 2015). On 2 March of that year, General Ne Win seized power in a coup d'état and introduced ‘the Burmese way to Socialism’. Ne Win’s government nationalized the economy and pursued a policy of autarky, isolating the country from the world.

Government officials confiscated almost all privately owned businesses, including the ivory workshops, sometimes at gunpoint, and these were handed



Ivory combs used to be popular amongst the Myanmar people.

over to the military-run state corporations. Some businesses owned by Burmese citizens were given back to their previous owners a few months later. However foreign-owned businesses were kept under state control, with the previous owners receiving little or no financial compensation. About 400,000 Indian and 500,000 Chinese residents left the country (Cockett 2015), while foreign visitors were limited to 24 hour visas (later extended to one week). These measures hurt all trade, including the ivory industry, with the departure of the Indians, Chinese and British who had been its main customers.

Sales of tusks and ivory items through the border town of Tachileik into Thailand kept the ivory trade alive, as well as sales to a few diplomats, notably Japanese, in the main cities. In 1981, raw tusks were priced wholesale at USD 26/kg and tushes at USD 10-13.5/kg (Tables 1 and 2). At that time there were just 30 ivory carvers in Mandalay, and a few left in Rangoon (Table 3). However, numbers of ivory carvers picked up into the 1980s and 1990s (Table 3). This was as a result of sales of ivory in Tachileik increasing during this period, fuelled by the rise of tourism in Thailand (Martin and Vigne 1997). In 1993 30 pairs of raw tusks were seen for sale in Tachileik by wildlife conservationist Tim Redford (Martin 1997).

There are few records of the ivory trade in the 1970s and 1980s as apparently most documents at the Forest Department in Yangon were destroyed in 1988 during the political struggles that took place that year (Martin 1997). Official Thai statistics show annual average imports of ivory from Burma of 115 kg from 1982 to 1989.

In 1988, in response to the failed economy and intense political oppression, pro-democracy demonstrations took place throughout the country. Security forces killed thousands of demonstrators, and General Saw Maung staged a coup d'état and formed the State Law and Order Restoration Council (SLORC). In 1989, SLORC declared martial law after further widespread protests. The military government finalized plans for People's Assembly elections on 31 May 1989. SLORC changed the country's official English name from the 'Socialist Republic of the Union of Burma' to the 'Union of Myanmar' in 1989.

In May 1990, the government held free elections for the first time in almost 30 years and the National League for Democracy (NLD), the party of Aung San Suu Kyi, won 392 out of a total 492 seats. However, the military junta refused to cede power and continued to rule the nation until 1997 (Lintner 2011).

Myanmar's ivory industry in 1995

The Myanmar government had been exporting wild animals and their products, including ivory, for decades in order to earn hard currency and, by the mid-1990s, it was recognized that poaching was causing a decline in the wild elephant population in the country (Martin 1997)

Smuggling and the black market grew during the period of military rule and, by the 1990s, large amounts of ivory were being transported overland unofficially from Muse in Myanmar to the Chinese border town of Ruili (called Shweli by Myanmar people) (Martin 1997; Martin and Stiles 2002).

At the same time the military government was making it easier for foreign visitors to obtain visas and increased the time foreign tourists were allowed to stay in the country. Furthermore the government encouraged more foreign investment with the result that the economy began to grow more quickly, including a little more demand for ivory. The number of ivory carvers in Mandalay increased from the low point of 30 in 1981 to about 50–60 in 1995 (Table 3).

In 1995, shop owners in Mandalay and Yangon told E.M. that people would come and sell tusks to them for their carvers to use. These tusks came from privately-kept elephants, whose owners would sell tusk tips and good-sized whole tusks and female tushes when the animals died. Ivory craftsmen believed Asian tusks were superior in quality to those of African elephants. Asian tusks were finer and more suitable for detailed carving whereas

African ivory was too 'fibrous' and when polished the colour was not as attractive. Tushes from female Asian elephants, however, were less appreciated as they were considered to be too hard. Carvers worked from their homes in small workshops. Raw ivory then was on average USD 239/kg wholesale for an average tusk and about USD 118/kg wholesale for small tusks, pieces and tushes (Tables 1 and 2).

In those days carvers were still making many large items and carved tusks were often available for sale. The time required to work on an item varied according to the detail and size. A 2-cm Buddha amulet took about two days to make, a 6-cm elephant figure 2–3 days, a 15-cm figure 6 days, and a 42-cm figure 17 days. A shop owner either paid for artistic merit, such as for a figurine, or for the length of the carving, usually by the inch. The price paid per inch for a carving ranged from USD 0.83–2.50 and averaged USD 1.32. Based on information obtained from 25 of the 50–60 known ivory craftsmen, the average amount of ivory used by each craftsman in 1995 was 257 viss. The viss is the local unit of weight in Myanmar and equals 1.6 kg; thus each craftsman used on average 411 kg of ivory in 1995.

In 1995, over 90% of all the ivory items for sale in Yangon were in two very busy commercial areas, the Bogyoke Aung San Market (formerly the Scott Market) and in shops around the Shwedagon Pagoda. The huge Bogyoke (pronounced bo-jock) Market had over 2,000 shops selling the biggest selection of souvenirs and jewellery in Myanmar. These included



In 1995, there were about 50–60 ivory carvers in Mandalay, the main carving centre in the country.



The carvers of Mandalay produced a great variety of ivory items for sale.

many items made of jade and gemstones, which the country is famous for. At least 17 of these shops also sold ivory items. The most expensive ivory item seen in the country was in this market, a 20-cm elaborately carved tusk on sale for USD 20,000.

Yangon's ancient Shwedagon Pagoda with its famous 325 foot central stupa (the name given to the traditional mound-shaped buildings containing Buddhist relics) is one of the most important tourism sites in all of Southeast Asia. There is space for small shops on the steps to the main Pagoda entrances. In 1995 13 outlets on the south steps openly sold ivory items alongside wooden religious souvenirs. At that time the craftsmen there, some of whom rented the shops, worked both ivory and wood, but not stone. The ivory and wood carvers who produced items for these shops earned USD 2.5–4.9 a day. The main buyers in Yangon in 1995 were foreigners: Italians, Japanese, Thais, Singaporeans, Taiwanese, Germans and Hong Kong Chinese (Martin 1997).

The most common ivory items seen for sale in Yangon in 1995 were human figurines/figures often dressed in fine costumes, chopsticks, and intricately carved tusks, especially elephant bridges (Table 4). These are whole tusks, with the tusk curved section facing upwards like a bridge, and the upper part carved to represent an elephant family crossing the bridge. Elephant bridges were especially popular among foreign buyers of ivory, as well as name seals, chopsticks, cigarette holders and jewellery. Average prices for chopsticks were USD 32, for name seals USD 30 and cigarette holders USD 17 (Table 5). Prices in Mandalay were similar: cigarette holders

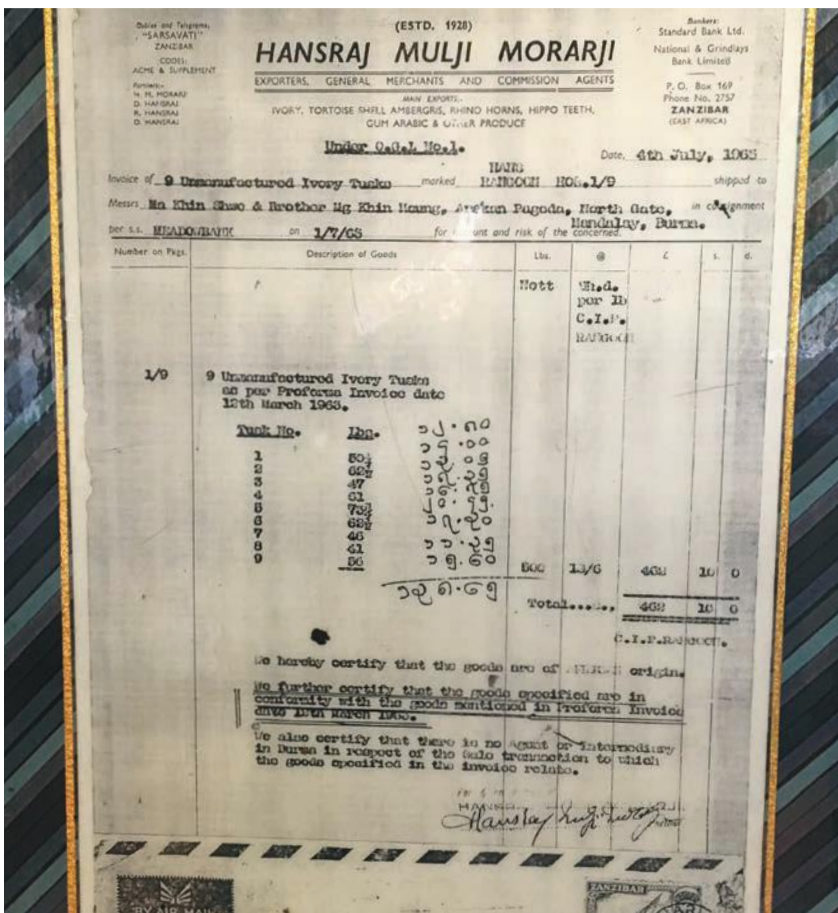
were about USD 21, name seals USD 23, a pair of chopsticks USD 27, a 6-cm elephant USD 42, and a 60-cm elephant bridge USD 708 (Martin 1997). Chinese and Japanese bought most of the chopsticks and name seals, South Koreans preferred narrow name seals, Singaporeans chose Buddha figurines/figures, Italians (some were then working in a factory near Mandalay) bought elephant bridges, figures and jewellery, and other Europeans liked figurines of kings and generals from the country.

In Mandalay in 1995 there were about four main ivory retail shops which also served wholesalers, sometimes producing chopsticks and other items to meet orders from China, even though by this time the cross-border trade in ivory was illegal (Martin 1997). Some of these businesses were decades old, and had often been founded by ivory carvers themselves, as recorded in detail by Stiles (2002).

Small 3–5 cm amulets were very popular with local customers (who in 1995 bought the largest number of ivory items, but not the largest quantity by weight). In the traditional Myanmar week there are eight days and there is an animal representing each day: Monday tiger, Tuesday lion, Wednesday elephant with tusks, extra day elephant without tusks, Thursday rat, Friday guinea pig, Saturday dragon and Sunday the Garuda bird. People liked to have an amulet in the form of the animal of their birthday or of a different animal as recommended by a local astrologer. Many families own several amulets, including some with Buddhist images for the protection of their children, made of ivory or wood. These were normally kept in a pocket or worn as a pendant or displayed in the house.

In 1995 E.M. interviewed an ivory dealer in Mandalay who had started carving ivory in 1942. He had built up a large company, initially using local tusks and employing 20 craftsmen. During the Japanese invasion (1942–1945) the company sold mainly name seals, chopsticks and cigarette holders to the Japanese. At that time, he also sold many ivory combs to the local people and this demand for the local market remained strong after the Japanese were defeated and left the country. In the 1940s his company was making 50 combs a day, for which 2.4 kg of raw ivory were required, and production for the domestic market continued in the 1950s and 1960s. In 1962 the new socialist government closed down his business, like most businesses in the country, as part of the drive towards nationalization. As he was Burmese, his company was allowed to open about three months later. Raw Burmese ivory was first exported in significant quantities in 1956, averaging 2,431 kg/year from 1956 to 1962 (Martin 1997). In 1962 the dealer's company was affected by a shortfall in local tusks. So that year he started to import legally tusks from Africa, obtaining (legally) 500 pounds (227 kg) a year, mainly from Zanzibar.

In 1964 the government banned the import of tusks and confiscated this trader's last order of tusks of 227 kg. By 1970 the price of raw ivory had increased. Combs became more expensive and domestic sales to Burmese citizens declined as they could only afford wooden combs and, in the 1980s, plastic ones. In 1970 the company had only 10–12 ivory carvers left. They started to diversify, making a wider selection of ivory items for foreigners, as well as buying from other dealers to sell in their Mandalay shop to the few foreign visitors and Embassy staff who were allowed to enter the country. In this period, the company produced and sold, for example, name seals, chopsticks, shoe horns, figurines, bangles, necklaces, earrings, cigarette holders, cigarette cases and hair clips. In the 1980s the company's main customers were Japanese, French and German, but the number of carvers had been reduced to seven. A major blow to the company's ivory sales was the CITES ban on the international trade in elephant ivory, implemented in January 1990. Potential customers were increasingly fearful of smuggling ivory objects into their home countries. The effect was that by 1995 the company employed only five ivory carvers; the number of craftsmen had declined continuously since 1942.



This invoice for the sale of ivory from Zanzibar to a prominent Mandalay ivory trader was issued in 1963. The trader was stopped from importing African ivory tusks by the military government in 1964. His shop (right), however, was allowed to continue selling ivory items as seen here in the early 2000s.



In 2001, the average wholesale price for raw tusks was USD 142/kg. There were still many traditional and religious figures on display.



on display.

The ivory trade in Myanmar since 2000

By the early 2000s the two main sources of tusks were still from wild elephants (illegal) and from domesticated Myanmar elephants (legal). Some wild elephants were poached by members of the Myanmar army and by soldiers of various ethnic minorities (Martin and Stiles 2002). One ivory dealer who was interviewed intimated that raw ivory was being imported in the early 2000s from India through Tamu in northwest Myanmar, and from Bangladesh through Rakhine State, some to be worked by Myanmar ivory carvers, but quantities were unknown (Shepherd 2002).

The average wholesale price in 2001 was USD 142/kg (Martin and Stiles 2002), but this price rose the following year to USD 173/kg (Stiles 2004), due to a shortage of tusks at that time (Table 1). In 2001, Stiles found 5 ivory workshops employing 10 carvers in Yangon and there were about 45 ivory carvers in Mandalay. A detailed study in 2002 found 32 carvers in Mandalay, who were using 40–45 kg of ivory in a month (Stiles 2004). A 3-kg whole tusk would take 30–40 days to finish carving while a 2-g piece would take 10 days. In Mandalay, ivory carvers earned about USD 68–91 a month, a reasonable income at the time (Martin and Stiles 2002).

A vendor in Yangon in 2000 said she sold about one carved tusk a month (Shepherd 2002), with large items selling well at the time. In February 2001 Stiles

counted a total of 53 shops selling 5,801 ivory items in Yangon and Mandalay: in Mandalay 19 shops with 2,363 items and in Yangon 34 retail outlets with 3,438 items (Table 6). In Yangon there were 15 shops at the Shwedagon Pagoda and 7 in the Bogyoke Market. In Mandalay there were 11 shops at the Mahamuni Pagoda and 6 handicraft/ivory boutiques in town, as well as two luxury hotel gift shops (Martin and Stiles 2002). Items for sale included a variety of large objects, especially figures of Buddha, dancers, fishermen and hunters, as well as whole carved tusks. Smaller items included human figurines in traditional dress, name seals and jewellery. Retail prices for standard items were USD 4–10 for a cigarette holder, USD 20–60 for a pair of chopsticks, USD 40–55 for a name seal and USD 175 for a 20 to 30-cm carved tusk (Martin and Stiles 2002). The main customers were ethnic Chinese from Thailand, Hong Kong and Singapore as well as some Europeans. There were few buyers from mainland China (Daniel Stiles, ivory researcher, pers. comm., January 2018) as people living there still could not afford ivory items, unlike today.

In a survey carried out in early 2006 raw ivory wholesale prices had not changed much since 2001 (Shepherd and Nijman 2008). At this time 80 shops were counted selling ivory in Mandalay, Yangon and Tachileik with a total of 7,891 ivory items for sale (Table 6). There were 40 shops in Yangon with 1,904



The border town of Tachileik was a major trading centre for worked ivory from Myanmar to Thailand in the 2000s, selling items such as these seen for sale in late 2017.

ivory items for sale and 17 shops in Mandalay with 1,821 ivory items for sale. Most items were sold to visiting Chinese, Japanese and Thai buyers. Tachileik had 23 shops and the largest number (4,166) of items for sale. This town is located on the Thai border and traders at the market there sold mainly to day visitors from Thailand, many of whom bought items wholesale for resale in their shops in Thailand. There were 25 other items found at Three Pagodas Pass and Golden Rock, making a total of 7,916 items seen over the whole country in this survey. Retail prices ranged from USD 6 for a pair of earrings to expensive bridges that were priced mainly by length, from USD 450 for 25 cm, to USD 1,300 for 80 cm and USD 4,500 for 1.2 m. Mandalay ivory dealers were also still sending bulk wholesale orders to China, which were smuggled across the border. Chinese demand was for plain utilitarian items such as chopsticks and name seals. Carvers regretted (and still do) that Chinese buyers have no interest in the beautifully carved tusks and figures that they took pride in and used to take so much skill, time and effort to produce.

By the early 2000s the Special Development Zone of Mong La in eastern Shan State (that borders China, Laos and Thailand) was established as an important trade hub for international trade in illegal wildlife products to China, in violation of international commitments (by both Myanmar and China) under CITES. The city, governed by an overlord and policed by the insurgent National Democratic Alliance Army, had been granted autonomy in June 1989. Mong La developed as a de facto Chinese enclave

with traders based in Shan State and China both benefiting economically by the arrangement. There was virtually no intervention from Myanmar or the China government in their illicit trading activities. Night clubs, 24-hour casinos, brothels, exotic foods, and shopping for wildlife delicacies made the town a lucrative place for business for all.

In a 2006 survey that concentrated on the morning wildlife market, no ivory items for sale were seen in Mong La (Shepherd and Nijman 2007). According to later informants, ivory items were on display in certain expensive shops at that time, but in much smaller quantities than today.

A later survey in Mong La in January 2009 found 200 ivory items for sale and by December 2013/January 2014 the figure had risen to 3,302 items in 27 shops, all in full view and openly offered for sale (Nijman and Shepherd 2014a). According to vendors, these were produced mainly by Chinese carvers in China and Mong La, possibly using a combination of ivory from Myanmar elephants and from Africa. One shop displayed Chinese government-issued registration cards (or copies) that were familiar in licensed outlets in China at the time (Nijman and Shepherd 2014a). Most items were large pendants, with average prices of USD 273 each, as well as bangles for USD 591 and necklaces for USD 439 (on average). The amount of worked ivory sold in retail outlets had increased substantially in Mong La in 2013/14, indicating the occurrence of considerable cross-border smuggling, both to and from China (Nijman and Shepherd 2014a).

Methodology for fieldwork in Myanmar, late 2017

In 2016 we learned that the ivory trade in Myanmar appeared to be flourishing in Mong La on the border with China (Nijman and Shepherd 2014a; Karl Ammann, film maker and Chris Shepherd, TRAFFIC, pers. comms. 2016). Discussions in late 2016 with ivory dealers in Laos during fieldwork there (Vigne and Martin 2017) indicated that dealers were expanding trade into areas near China where law enforcement is poor (Vigne and Martin 2017). Moreover it appeared that ivory for sale in Mong La was not only of Asian but increasingly of illegal African origin. It seemed imperative to update information on the ivory trade in Myanmar by carrying out a field survey to assess the extent of the current ivory market. In late 2017, we therefore undertook a survey of the ivory markets of Myanmar, with ‘markets’ defined here as any places with shop and stalls selling ivory items.

Three months before we departed, we asked our guide-researcher to go from Kyaingtong (Kengtung) on dirt roads to Mong La (as the main road was closed) to carry out a reconnaissance in the town. This involved two days’ travel to get there, two days

in the town, and two days for the return trip. He took a camera and attempted to film his visit for us in the market and shops to give us an idea of the types and quantities of items for sale.

Our survey work was conducted from 19 November to 12 December 2017, accompanied by the same guide. We explored the main markets where tourists and potential buyers of ivory go: i.e. Yangon, Mandalay, Bagan (ancient capital of the first kingdom unifying the regions that now make up Myanmar and the country’s most famous tourist site), and Kyaingtong (that is the gateway to Mong La on the Chinese border). As the road from Kyaingtong to Mong La was still closed our guide-researcher who had become experienced in our techniques of data collection and who could pass unhindered through the long dirt back tracks from Kyaingtong to Mong La, carried out the survey work in Mong La with our guidance, taking photographs and filming inside the shops when possible to share his findings with us later. He knew Mong La well from previous visits. We then went to Tachileik on the Thai border and still a popular shopping town for day-trippers



Myanmar carvers are known for producing figures of the Buddha, holy monks and traditional dancers.

from Thailand. We also visited the Golden Rock at Kyaikhtiyo town, a celebrated Buddhist pilgrimage site, and the town of Bago. These areas were chosen to obtain data for comparison with findings with past studies (Martin 1997; Martin and Stiles 2002; Stiles 2002; Stiles 2004; Shepherd and Nijman 2008 and Nijman and Shepherd 2014a).

We started in Yangon from 19 to 24 November then flew north to Mandalay, where we stayed until 29 November, when we drove west to Bagan for three nights. We then flew back to Yangon on 2 December. From Yangon, the main hub for internal air travel, we flew east to Kyaingtong, where we stayed until 6 December working with our guide-researcher on information he had obtained in Mong La. Then we drove for three hours south to Tachileik giving us the afternoon and next day to survey the market. We flew back to Yangon for a night, to depart early the next morning by car, via an elephant tourist camp, to the Golden Rock. We had that afternoon and the next morning to survey the shops and stalls. We returned by car on 9 December via Bago to Yangon for final survey work there before departing Myanmar on 12 December.

In keeping with past methodologies, for comparison,

we collected data on the locations, number and type of shops selling ivory on view. We counted the number and type of ivory items on display, but did not include items not on display that were subsequently shown to us when we made further inquiries. We noted retail prices of items in US dollars, the local kyat (pronounced chat) or, in certain places, Thai baht or Chinese yuan. In this text all prices are converted into US dollars at the exchange rate at the time of the survey, for consistency and to enable comparative analysis. We ascertained if extra ivory items were hidden away, and only brought out to show to prospective buyers. Information on the shop owners, vendors, and the nationality and types of customers was recorded at each location. Most people we met involved in ivory were helpful and cooperative. Many people in the tourist business speak some English due to the growth in tourism.

We examined the quality of the carved items in the shops, and tried to ascertain where and when they had been carved. Items were identified as antique from the colonial period, or more recently crafted, or new. Most vendors and ivory dealers were happy to answer our questions, and to spend considerable time with us, as their businesses are conducted legally and they had nothing to hide. This made it generally easier to take



In 2001, carved ivory elephant bridges such as these were openly on display in Yangon's famous Bogyoke Aung San Market.



Tachileik is a town on the border with Thailand and a centre of cross-border trade. The main roundabout displays a sign saying 'City of the Golden Triangle'.

notes and photographs compared with other places we have visited recently, where ivory is illegal. Shop owners and vendors in Mandalay were particularly cooperative regarding our interest in ivory.

We visited ivory carvers in Mandalay, watching their carving techniques and new developments. We found out how many carvers are active in Myanmar today and what they produce nowadays, as well as asking them how they saw the future. Again, they were all helpful with their replies to our questions and we spent a lot of time talking to them.

With the help of our guide when translation was needed, we collected information from shop owners/traders and carvers on the sources and wholesale prices of raw ivory. Raw ivory prices were quoted to us in the local currency kyat. Where feasible, we asked shop owners whether the ivory was from Myanmar, elsewhere in Asia or from Africa. We learned about present legislation and the need for licences to sell and buy raw ivory, and for shop registration to sell ivory items. We travelled to areas visited by tourists that had been surveyed before and looked out for signs and any information indicating that it is illegal to take ivory out of the country.

We asked shop owners and vendors about their views on the trends in the ivory trade, past and present, as well on the future of their business. We ascertained the current demand for raw and worked ivory and what sells the most and to whom. We also watched the production and sales of substitute ivory and alternative products. Photographs were taken to help with the counting and naming of objects wherever possible and to keep a record of items available for comparison purposes. In the evenings the notes made during each day were typed up in detail to keep a clear record of our findings.

Later, using data collected in Myanmar, an analysis was made of wholesale and retail prices of raw ivory, the numbers of shops selling ivory and the quantity and types of ivory items, as well as trends in the ivory markets over space and time. Results of our recent surveys in nearby countries with those obtained in Myanmar were compared. We thoroughly scrutinized publications, press articles and reports on Myanmar, including many published online, in order to understand the challenges facing Myanmar and the complications involved in regulating the ivory trade.



Mandalay ivory dealers who buy wholesale licensed raw ivory generally only can buy pieces and small tusks. Rarely do they nowadays purchase larger tusks to carve as below, working on small raw pieces as seen here in a carver's bowl amongst some tools.



Results of ivory survey, late 2017

Sources and wholesale prices of raw ivory in Myanmar

Most raw ivory in Myanmar is sourced from captive Myanmar elephants. There are approximately 5,000 captive elephants (3000 government-owned and 2,000 private) in Myanmar, most used for timber extraction, more than anywhere else in the world, in addition to perhaps 2,000 wild elephants (Leimgruber et al. 2011, Tomlinson 2017). Only male Asian elephants have tusks, and poachers are not interested in killing wild females for small tusks, but other elephant products are also in increasing demand (Elephant Family 2018). Generally the larger Myanmar raw tusks, even if licensed by the government, are smuggled to China. There may also be a small cross-border trade in ivory from India through Myanmar to China's Yunnan Province, similar to rhino horn, which is occasionally seized in the Shan State border town of Muse (Stiles 2004; Emslie et al. 2017). The main border enclave in Shan State is Mong La that functions as a notorious 'backdoor' wildlife trafficking hub to China (Nijman and Shepherd 2014a) trading in ivory mostly of African origin for sale in processed form.

In August 2017, police arrested nine suspects in connection with the killing of two wild elephants in the Irrawaddy region, following the poaching of eight other elephants in the region earlier that year. All were shot with poisoned crossbow bolts that kill them in 24 hours; the poachers wait for them to die. Often poisoned arrows are used as there are heavy penalties for gun ownership; so high-powered rifles, which are common in Africa, are rarely used for killing elephants in Myanmar (Scigliano 2017).

Elephant poaching has increased in Africa in recent years, resulting in an estimated decrease in the total population of African elephants of at least 118,000 elephants from 2006 to 2013 (Thouless et al. 2016). Much of the poaching is to supply ivory to Asian markets, and there is extensive documentary evidence of large shipments of ivory being smuggled into Asia. Some of these shipments are intercepted, but most reach their destinations successfully.

In recent years raw ivory has been smuggled from Africa along varied routes to Asia, much of it to Vietnam, Thailand, Laos and China. In August/September 2017, on his reconnaissance visit to Mong La, our guide-researcher glimpsed 5–10 raw tusks piled on the ground of a back room of a Chinese shop selling ivory items. According to informers, these had most likely been smuggled into Myanmar from neighbouring countries through the lawless Golden Triangle area along with worked ivory trinkets. During a survey carried out in

Myanmar in 2013/2104, 43 raw tusks were counted in Mong-La, possibly representing a combination of Asian Myanmar ivory and African ivory smuggled into Myanmar via China. This suggests that Mong La is now a significant hub for the trade in ivory intended for the internal Chinese market (Nijman and Shepherd 2014a).

In Mandalay and to a lesser extent Yangon, licensed tusks/tushes and tusk tips from Myanmar's large captive Asian elephant population are available for sale to local carvers, but much less readily than in the past, according to dealers and carvers. Mandalay, traditionally the main carving centre in Myanmar, has the most established licensed ivory dealers. They explained that legal wholesale prices in 2017 for average 1 to 5-kg tusks ranged from USD 671 to 1,157/kg or an average of USD 961/kg (Table 1). Tusks of 1–3 kg are less expensive than large tusks weighing over 5 kg. Small pieces of tusk that are cut from the tips of captive elephants are the cheapest: a 2.5-cm tusk tip was priced at USD 231/kg in 2017 (Table 2). For comparison the average wholesale price for Asian raw ivory in 2016 was USD 921/kg, and this was down from the 2013 price of USD 934/kg (Table 1). Recent prices have therefore been stable but, due to general price inflation and increased international demand for ivory, they are much higher than in 2002, when the wholesale price was USD 173/kg at the exchange rate of that time (Table 1).

The US dollar has increased in price against the kyat in recent years, making it more profitable for dealers to sell the larger expensive tusks of Myanmar elephants for hard currency to China (in contravention of the CITES 1990 international ban), than to traders in Myanmar who pay in kyat. Local licensed dealers admitted that currently they can buy only small tusks, for their carvers in Mandalay to craft into trinkets. Two merchants in Mandalay explained that large tusks are no longer available to them in Myanmar, since brokers, who are generally recent Chinese residents in Myanmar who have connections with army personnel as well as in China, buy them up for sale to China. We were told that the Chinese like to buy plain polished tusks, or tusks carved in China in the Chinese fashion. Chinese prefer dragons, for example, as opposed to the Buddhas and curly decorations produced in Myanmar. The Japanese do not buy raw ivory, we were told, as it is logistically too difficult to get them to Japan. Demand from tourists in Thailand, where law enforcement has improved, has also shrunk considerably, particularly in comparison to rapidly growing demand from China.



Ivory carvers in Yangon make mostly amulets for local people from the small leftover pieces of ivory as seen here in the bottom right of the photograph.



Buddhism is practised by 90% of Myanmar's population and is predominantly of the Theravada tradition as also in Thailand.

Yangon

History and background

Yangon today has a population of about 5,160,000. In 1755 King Alaungpaya conquered central Myanmar and built a new city around the Shwedagon Pagoda that he named Yangon, meaning ‘end of strife’, subsequently extending the area to include an important seaport. The British renamed it Rangoon, made it capital of their colony, and transformed the city by constructing grand imperial buildings. It remained the capital until independence in 1948 and following the military coup in 1962. In 1989 it

was renamed Yangon. Starting in 2002, a new capital city was created at a location in central Myanmar. In 2005, the seat of government was relocated to the new city, named Nay Pyi Taw, leaving the downtown area of Yangon to disintegrate. Since the elections in 2010 local and foreign investment has flooded in, but rather than restoring the large old buildings, investors prefer to construct new offices which are appearing all over the city. Recovery of the city’s infrastructure is proceeding, but slowly.

Ivory carving

Yangon’s most popular tourism site, the Shwedagon Pagoda, is where both wood and ivory carvers used to work and sell their products. In late 2017, four shops on the north stairs had signs in the Myanmar language saying ‘carving shops’ and we saw a few wood carvers using traditional hand chisels and hammers. They said they had not carved ivory for 10 years. On the south steps were seven shops with signs in English that contained the word ‘ivory’ in their shop titles, and one in the Myanmar script that said ‘carving’. Vendors told us there are about 20 carvers living in and around Yangon, all from Myanmar, but most only produce work in wood. There are now only about three to five master carvers who sometimes produce work in ivory, as other ivory carvers had become too old and were affected by poor eyesight due to the strain of carving close-up for many years. Most carvers are based in Mandalay (see below), not in Yangon (Table 3). Ivory carvers have a slow output. A carver in Yangon told us that a 15 to 20-cm Buddha ivory carving may take 1.5 months to make. Carvers there produce amulets, distinctive delicate leaf pendants or flowers and very small bead bracelets, but also cater to the Chinese style by producing round and oblong carved

Buddhist pendants. In addition to ivory jewellery, they also make cigarette holders, chopsticks and name seals, as in the past.

Two shop owners at the Shwedagon Pagoda explained that they buy small pieces of licensed ivory and commission a carver, telling him what items to make according to what is selling best in the shop. They commented that they need nowadays to book a good carver in advance, as they are often away working on wood. One shop had some hand tools that the vendor showed us, having been in the ivory carving business for some years. In contrast, shop owners at registered shops selling worked ivory at the Bogyoke Market generally remarked they do not want the headache of choosing raw ivory for the carvers. “We lose money if we choose the wrong raw pieces so it is better the carver buys these and we buy the ready-made items.” It was not clear how the vendors could be sure that ready-made ivory items were all from licensed Myanmar raw ivory, but the vendors appeared confident regarding the legitimacy of their displays of ivory items. Some vendors offer carvers work on commission if a customer requests a specific carving on a plain item.



Tusk pendants with dragon heads are a popular design made for the Chinese, along with plain cigarette holders and round pendants with a hole.

Retail outlets, ivory items for sale and prices in Yangon

In Yangon we counted 27 retail outlets displaying 1,995 ivory items for sale (Table 7). The majority of shops and items were in the Bogyoke Market, most notably in 19 jade/jewellery outlets, mostly located to one side of the main central building, that displayed a total of 1,854 worked ivory items in the top of their glass counter cabinets. All had signs saying they were registered shops. The next largest collection of ivory items for sale (but not on display, so not in the count) were in three Buddhist shops along the southern steps of the famous Shwedagon Pagoda. These sell items to offer at the temple and to keep as amulets, souvenirs and for worship. They had 667 ivory items, which were brought out to show us on request. About half were oldish small pendant charms or amulets, many carved to represent holy monks and some Buddha teeth (that look like solid tubes and are considered religious). Others were freshly carved accessories in new plastic bags, mostly jewellery to suit Chinese tastes: necklaces, bracelets, tusk pendants, other small pendants and bangles. There were also six antique shops in Bogyoke Market displaying 93 old ivory items, of various kinds, including some older figures of beautiful women in fine clothes that are generally not seen anywhere else today. There was also a new wood carving shop with new prayer beads and ivory amongst the wood beads (Table 7). Elsewhere in the city beside a museum we found one souvenir shop with 42 older ivory items on sale, including some naturalistic figurines (Table 7), and some bone items amongst them that the owner said were ivory, hoping for a higher price.

Most items seen on sale in Yangon were pendants, bracelets, necklaces and rings (Table 8), with

pendants making up by far the majority (61%) of the total. These were mostly Chinese-style medium round and oblong pendants, but there were also some local-style leaf and flower pendants. Some of the pendants were carved with designs of dragons, zodiac animals, and religious images of Buddha and Gwan Yin to suit Chinese taste. Other items included figurines, bangles, name seals, chopsticks, cigarette holders, cutlery, earrings, combs, goblets and hairclips (Table 8). Most of these utilitarian items require no artistic skills to produce, although the hair clips showed the ornate lattice patterning typical of Myanmar carving. The more recently carved ivory items were in the Chinese style, such as big bead bracelets, but there were also Mandalay-style bracelets with tiny ivory beads. There were also some figures of Ganesh (popular with Thai visitors). Expensive big items such as carved tusks were not seen in Yangon.

Prices for expensive items at the Shwedagon Pagoda shops were labelled in US dollars, while small items were usually quoted to us in US dollars or kyat, as we preferred. At the Bogyoke Market items were not labelled with the price and, when asked, the vendors gave the prices in US dollars. Prices ranged from a small amulet for USD 7 at the Shwedagon Pagoda, to a 20-cm figurine labelled as costing USD 7,900 in the museum souvenir shop (Table 9). A plain oblong pendant measuring 45.4 × 64.2 mm (that the vendor measured with callipers) was priced at USD 185, and a carved pattern of choice could be commissioned for USD 40. A discount of 20% could generally be given.

Customers, vendors and their views in Yangon

During our two visits to the Shwedagon Pagoda there were monks there buying wooden religious carvings. This famous site is visited by large groups of tourists of all nationalities, but vendors complained that they were rushed by their guides to the top to see the golden stupa and rarely stopped on the steps en route to look in the shops. The vendors, Myanmar men and women, rent their small stall shops for about 40,000 kyat (USD 30) a month and struggle to make sufficient sales, they said. This is especially the case for ivory items. Business is poor, they lamented, as they can no longer display ivory in their poorly secured stalls now that it is so expensive, and have to keep it securely hidden from view. Also they do not want to draw attention to their ivory by placing it on display in case it attracts negative pressure and questioning from tourists or officials, we were told. Vendors at the three shops where we were shown ivory explained they knew ivory is allowed from dead domesticated elephants but illegal from wild ones. One reassured us she had a paper from the forest officer to say the ivory that they have bought to sell is licensed from captive-bred elephants; another reiterated they would only buy licensed ivory.

All agreed that the Chinese were by far their main customers nowadays and bought about 90% of their ivory items. We were told that if a foreigner buys a small ivory piece for a souvenir it is fine to take home, but the vendors politely explained that they could not sell large ivory items to foreigners. Even up to 2002/2003 were plenty of carved tusks, figures and elephant bridges for sale in Yangon (D. Stiles, pers. comm., July 2018), but vendors told us that now most sales are of smaller, less expensive items.

There were more foreign customers at the Bogyoke Market, which is the most famous shopping destination in Yangon for Myanmar people and visitors of all nationalities. While vendors were usually friendly, some, particularly at two antique shops, were very hostile. They didn't want us to take photographs and aggressively warned us that we were foreign and could not export ivory items. However, we saw no signs to this effect in Yangon (or anywhere in Myanmar).

During three survey visits to the main Bogyoke Market area with worked ivory for sale, Chinese customers and Thai monks were looking at jade and



Vendors remarked that Chinese customers buy about 90% of their ivory items, although they said sales have slowed down considerably since around 2014.

amber pendants, and showing no interest in the ivory ones. The turnover of ivory is especially slow, the vendors complained. Vendors stated the Chinese were their main customers, accounting for perhaps 90% of sales, followed by Thais, South Koreans and Japanese. The vendors remarked that while Chinese men like to buy large ivory bangles to wear themselves, Japanese women occasionally purchase the smallest bangles and they also like name seals.

The vendors at the jade and jewellery shops, nearly all women, remembered all the prices and were generally happy to inform us. As at the Shwedagon Pagoda, they said it was fine for tourists to buy one or two small ivory items for presents or souvenirs and wear them to go home and that the government allowed this. After our questioning, some became suspicious of us, as Westerners do not buy ivory nowadays; indeed vendors at one stall got a warning not to talk to us.

The bulk of Bogyoke Market shops/stalls we saw with worked ivory started selling it at least 10 to 20 years ago and the shop owners remembered that business was good then. All complained that turnover nowadays was very slow. Sales of luxury souvenir jewellery, notably jade and ivory, had slowed down “in the last two or three years”, they said, with most tourists coming merely to look. There are now cheap flights from Thailand and elsewhere in Asia so most

visitors come to shop for bargains, not for expensive items, we were told.

The owners and vendors at the shops selling ivory in the Bogyoke Market are mostly second and third generation Chinese-Myanmar living in Yangon, many in downtown ‘Chinatown’. Those we spoke to had never been to China and were completely cut off from the country. They were unaware of, and not interested in the domestic ivory ban there. They were poorer than the mainland Chinese visitors to their shops. They had become more local in their attitudes, quieter and more tolerant, having absorbed the Myanmar culture. These vendors explained that the Chinese like to wear ivory jewellery as it makes them feel protected and then the blood runs well through the body. Ivory powder can be put on the skin to make it smooth and healthy, and Chinese believe that if an ivory item has a black point this protects against poisons. Being Chinese-Myanmar, they were more knowledgeable about Chinese traditional beliefs and uses of ivory than most Myanmar vendors elsewhere. An older third-generation Chinese-Myanmar woman at a general jewellery shop in the main hall of the market was delighted we were interested in ivory, because very few Europeans nowadays are, she lamented. She was proud of the artisans’ craft, but her items had stayed in her glass cabinet unsold for some time collecting dust and she would not replace them.



Stores on the steps leading to Shwedagon Pagoda sell religious items and souvenirs. But unlike in the past, there is little worked ivory on sale, and it is not on display.



This ivory artisan in Mandalay takes five minutes to make each bead.

Mandalay

History and background

Mandalay (population c. 1,200,000) is located in northern Myanmar and is the cradle of Myanmar arts and culture. Puppetry, traditional dance shows, craft shops and nearby religious and historical sites abound, attracting foreign tourists. In the Mandalay area there are the interesting remains of several post-Bagan capitals of the region with Mandalay itself being the final capital from 1857 to 1885. In 1885 the British took over the Royal Palace and deported King Thibaw. During World War II in March 1945 the Palace was largely burned down, but it was reconstructed in the 1990s. It consists of more

than 40 timber buildings and a watchtower and is one of the city's main tourist attractions. New Mandalay around the Palace is laid out on a grid pattern. Since the 1990s large numbers of Chinese immigrants, especially from nearby Yunnan Province, have come to settle in the city. They have prospered in trade, building themselves ornate concrete houses with fancy balustrades. These recently arrived Chinese still have family links in China, encouraging more trade between the two countries, unlike the several generations-old Chinese-Myanmar in Yangon, who have mostly lost their ties with China.

Ivory carving

The number of active ivory carvers remaining in Mandalay has declined from about 15 ten years ago, to 10 at the time of our visit in late 2017. The carvers, local people and always men, aged today from 30 to 60 years old, all live in Mandalay and work from their houses. They do not need a licence to carve, although a licence is needed to buy raw tusks and sell worked ivory. Most ivory for carving is bought by ivory dealers, descendants of ivory carving families, who now own licensed specialist shops where most worked ivory is on sale in Mandalay. The traders explained the process to us. They buy Myanmar tusks for their carvers on licence from the Forest Department or from a private elephant

owner who has permission to sell their tusk tips and the whole tusks when their elephant dies. This permission is granted if their elephant has carried out government logging work for at least three years.

Before buying raw ivory the local ivory traders show photos of the tusks offered for sale to their carvers who advise which to buy depending on the items required to be made. From the middle of a tusk the carver can make about 15 bangles. He needs a 9-cm piece to make four big bangles. The core inside the bangles can be sliced into pendants or cut long-ways into cylindrical sticks for name seals. Or these are cut up to make beads. From a solid section of tusk



The ivory carver shapes the bead with a wide flat chisel.

weighing about two viss (3.2 kg) a carver can make about 150 best quality beads. Most beads are plain, but Chinese visitors like designs of dragons and roses on pendants, the carvers commented. Carvers in Mandalay also commonly make cigarette holders from the base tusk section and other items. Chopsticks must be made from big tusks that are harder to obtain nowadays. They require 25-cm centre lengths.

The ivory trader/shop owner, having provided ivory to the carver awaits his return to the shop with the completed items he has ordered, paying him for his labour. The carver then receives more raw ivory to carve whatever is needed next. We watched one ivory carver visit a licensed shop with four plain bangles he had just made. The vendor measured the internal diameter of each for their widths and paid for the work accordingly. For efficiency in ivory production a shop owner may arrange for four ivory carvers to work together with one doing the initial tusk-cutting, one shaping the items such as bangles, one carving a design on them, and one finalizing the details and checking the finish. All the stages can be entrusted to a single carver, if he prefers. A carver in Mandalay can craft a small pendant in a day, whereas he may take a month to carve an elephant figure with a ring of calves around it from a hollow 12-cm portion of tusk. The carving of a large pendant requires a week to order for a customer on commission. In the past a carver was taught to carve four traditional motifs: an elephant, an ogre, a female and lotus stems with buds and blossoms; only then was he considered

an accomplished ivory sculptor (Myint 1997). Nowadays such items are infrequently seen as they are not in demand by the Chinese.

There are hundreds of young Myanmar carvers in Mandalay. But they work only in wood. Because raw ivory is so valuable, shop owners do not want apprentice carvers to work on ivory. The apprentices themselves do not want to carve ivory in case they make a mistake and have to pay for it. Carvers also said the next generation has no patience for this work. It takes five years to learn to carve ivory, as opposed to one year carving wood. Experienced ivory carvers we spoke to regretted that they were not passing on their skills, even to their children. They see no future in the ivory carving profession, despite its long tradition.

We visited two ivory carving workshops in Mandalay, both in the carvers' homes. Nobody spoke any English, as it is not normal for them to meet the tourists, so communication was all through a translator. The first location was a simple traditional wood house consisting of a room/workshop downstairs and a bedroom above. The artisan we met was 54 years old and said he made mostly ivory beads and had worked on ivory for 35 years. He had been born in the same house and had always lived here with his brother, who made bone beads, and sisters, one of whom was stringing wood beads. He learned to carve ivory from his uncle. He works six hours a day (from about 9.30 am to 4.30 pm with a lunch break), 7 days a week, taking time off to go

to the temple once a week. There was no electricity used except for a fan and a fluorescent tube light for the carver to see his work.

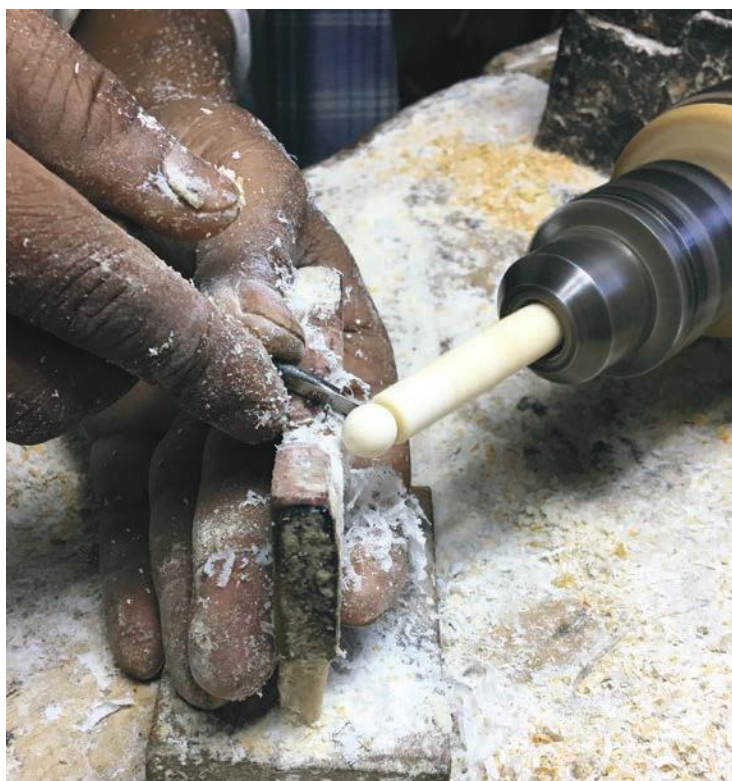
We watched the carver operating a treadle foot pedal to spin the ivory inserted in a machine on his narrow table. He held a chisel to the spinning bead to shape it. First he used an arrow-shaped chisel to scrape the outside, next a wide flat one to shape the bead into an oval or round shape and to cut into the ends as it spun, holding the chisel in place with a small wood bridge. Then the carver used wet sandpaper and bamboo peel in turn to smooth the bead, gathering ivory powder from the table and rubbing it onto the bead to smooth and polish it further. The carver finally used a thin-tipped chisel to make the hole, and added the finished bead to others in a plastic container. Next the carver would connect a narrow cylindrical stick of ivory into his vice to cut off a piece to make another bead. Before starting work on the next bead, he would sharpen his tool tips with a file.

Ivory beads take five minutes each to make and the carver earns 250–300 kyat per bead. He said that he can make up to 150 beads in 12 hours giving him a maximum gross income of about USD 15 per day (75 beads/day × 275 kyat each = 20,265 kyat). His brother earns 7,000–8,000 kyat or about USD 5.6 a day from carving bone beads. The ivory carver can make four bangles in two hours and 10 in a day. This earns him about 15,000 kyat (USD 11) for an average day's work. He also makes plain cigarette holders

that are then finished by another ivory carver who does any detailed carving that is required. For this sort of work, another shop pays its carvers 150,000–200,000 kyat (USD 111–148) a week, or about USD 19/day on average. All the daily rates earned by ivory carvers are significantly more than the minimum wage in Myanmar which is about USD 3.3/day.

The bead carver we met still spends 90% of his time on ivory as he has done for the last 10 years, but sometimes passers-by bring him some wood to commission an item to be made. He remembered that 30 years ago he used about 30 big tusks annually and 3 to 4 years ago about 20 big tusks annually; now he uses 40 small tusks each year. Fresh ivory that is less than a month old will smell when initially cut, but it is easier to carve. If it gets too dry it becomes brittle. He said, as did the vendors, that the quality of objects in demand has dropped so shop owners only buy the smaller less expensive tusks, which are adequate for making small, simple items.

The second workshop we visited was in a front room of a more modern house next to a sitting room furnished with a simple modern sofa and armchairs. Here two brother ivory carvers (38 and 40 years old) live, also still in the same house in which they were born, with their mother, their wives and young children. They learned to carve ivory when they were 19 and 21 in a class with six other pupils, taught by an ivory carver who lived next door. They are the only two alive today, they told us; all the others had



Beads are cut from a solid tube of ivory with a tiny hole made in the middle for the string.

died of drink! The two brothers work 5 hours a day, 20 days a month, taking special ‘moon days’ off to go to make offerings at the temple.

They used to work together carving whole tusks into elephant bridges, a task that took them 1.5 months for a big tusk. In those days business was good as raw ivory was cheaper and they earned good money; moreover the cost of living was far lower when they were younger. Until about 5 years ago, they received tusks that were 10 cm in diameter and 45 cm high to work on. Nowadays the shop owners give them only small tusks to work on. The supply of large tusks has fallen and the shop owners do not want to put money into large items that do not sell well anymore, they explained. From the small tusks (perhaps only 4 cm in diameter and 25 cm high) they mostly make pendants. They make bigger carved pendants from the solid part of the tusk and smaller ones from the narrower tip end. In their workshop, they proudly demonstrated their traditional ivory carving techniques as well as some newer adaptations. They carve figurines from scratch, using synthetic figurines of Chinese style as models to copy. They also receive plain ivory beads and cigarette holders produced by the artisan we met earlier to carve dragons or birds on them as requested by the licensed shop owners. The younger brother does the initial shape of a carving with chisel and hammer and then uses a drill while the older brother finishes off the detail by hand and with a drill. They got electric drills only two years ago and this makes their work faster, by a third they said.

Carving is only a side-line for them now as their wives run a clothes shop selling lungis (the type of sarong worn in Myanmar) and this is now their main business. Selling clothes is more profitable than carving ivory. The wives earn 15,000 kyat (USD 11) each a day at the shop, and employ a helper for 70,000 kyat (USD 52) a month. If there is no work to do in their family shop, the older brother commented, he can make three pendants or three figurines of about 4–5 cm, earning 4,000 kyat (USD 3) for each. Normally he and his brother work together and can produce two 4–5 cm pendants or figurines (for example depicting Gwan Yin or a dragon) in five hours. From this work they each earn 8,000–10,000 kyat (about USD 7).

Together the two brothers consume about 1 kg of ivory a month, working mainly in the four winter months. They work in winter to produce ivory products for the peak sales period, which is Chinese New Year. Traditionally, ivory carvers avoided working in the hot dry early summer months when ivory can crack, and this is still the case today as carvers have no air conditioning in their houses. During summer the brothers carve cow bone, producing products for sale to tourists of all nationalities in Bagan. Working together, they use about 3 viss (4.8 kg) of cow bone a month. As demand for their ivory items has shrunk, they mused, in perhaps 10 years ivory carving will be over in Mandalay.



Mandalay ivory carvers generally make very small figurines nowadays using either a chisel as seen on the left or sometimes an electric drill as seen on the right.



Mandalay's three ivory specialist shops still display old ivory items such as shoe horns and larger figures, but they sell very slowly.

Retail outlets, ivory items for sale and prices in Mandalay

In Mandalay we saw six outlets with a total of 4,630 ivory items for sale (Table 10). These included three specialist shops licensed to sell ivory that had been prominent in the ivory industry for many years. The very large number of items for sale (4,437) in these three shops meant that the total number of items for sale was higher than in Yangon, even though there were fewer retail outlets in Mandalay. Small pendants used as amulets or charms represented the largest number of items (over 1,000) on display in these three shops. We also found three souvenir shops selling ivory, two at the Mahamuni Temple and one other large handicraft shop, that together had 193 ivory items on display.

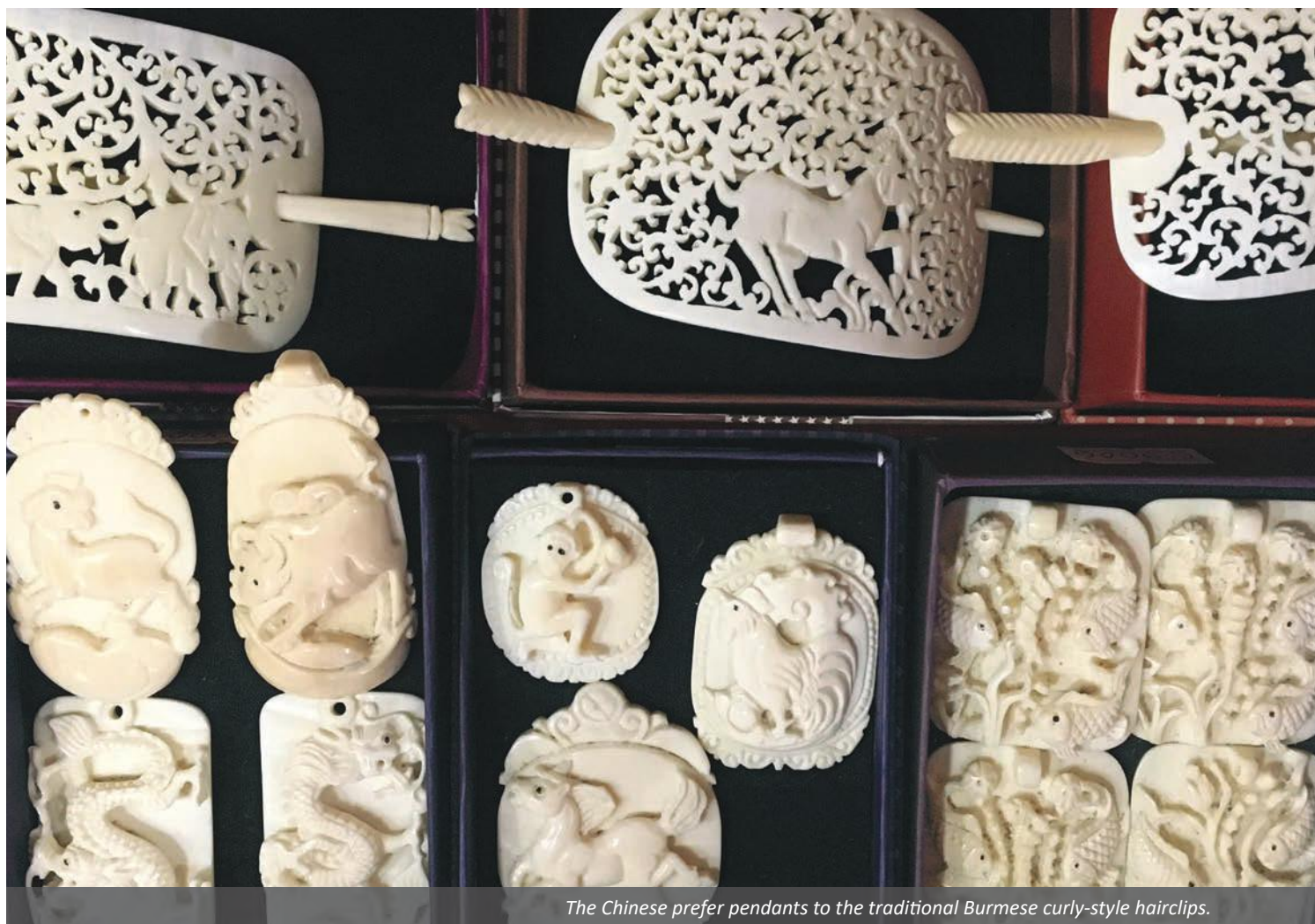
Pendants (57%), necklaces (11%), figurines (7%) and bracelets (5%) made up most of the items for sale in Mandalay (Table 11). Shops in Mandalay also had the biggest range of ivory items seen in Myanmar, including large numbers of small items, such as ear and tooth picks, cocktail sticks, rings and earrings, that can be made from small left-over pieces of ivory. These little items were set out in rows of dishes or small plastic containers.

The specialist shops also stocked some older items such as shoe horns, combs and hair clips, produced in the past for local demand when they were still affordable. There were some unusual utilitarian items, including several large sugar bowls and a teapot

carved out of solid ivory, European-style knives and forks, and Chinese tea scoops. We saw three femur heads that used to be carved for hip replacement operations; Mandalay was famous for these in the past (Stiles 2004). These shops also contained a huge variety of Myanmar figures/figurines, especially of kings, generals, traditional dancers and fishermen. Others depicted the Buddha in many positions, including under a bodhi tree, as well as monks and holy men. There were also some elaborate old ivory boats with long oars, and traditional bullock carts (that are still seen on the roads today). These items are not popular with the Chinese. For Chinese customers, a very few intricately carved paint brush pots were displayed, but mainly there was jewellery and the common plain utilitarian items.

Some of the items in the shops had been on display for over 20 years, especially the larger items. These older items, the vendors reiterated, do not sell well. The British, Europeans and Americans liked to buy them before the CITES ban came into effect in 1990, but they do not suit Chinese tastes. We counted 23 elephant bridges for sale, all carved in the old style with elephants and twirling lattice patterning.

Vendors matched each other's prices and had not put their prices up; nor were they going down despite current poor sales, they explained. Some items had price labels on them in kyat or US dollars and



The Chinese prefer pendants to the traditional Burmese curly-style hairclips.

the vendors/shop owners also quoted prices from memory. In one specialist shop the prices were labelled at the back of the shelves for the vendor only to see. Few discounts were offered, and then perhaps only 10%. Bigger discounts were only considered on bulk purchases. Prices in Mandalay ranged from USD 4 for a simple charm or slender ring to USD 9,500 for a 30-cm figure. Items were generally inexpensive, with a well-carved paintbrush pot selling (on average) for only USD 771. Chopstick pairs were USD 130, and personal name seals (6 × 2 cm) cost USD 64 (Table 12).

Prices of items in the local currency, which has been steadily losing value, have been gradually rising over the last 10 years. Prices in kyat of ivory items in 2017 were double those of 10 years ago, in common with those of most other goods, vendors said. One vendor remarked that seven years earlier a simple ivory small bead necklace had been for sale in his shop for 80,000 kyat; in 2017 a necklace of the same design cost 120,000 kyat, but the price in US dollars remained about the same (around USD 90). The devaluation of their currency means that local people in Mandalay can no longer afford to buy ivory items, since the cost of even a relatively cheap item can equal a month's salary.

One shopkeeper produced eight special pieces from a back room, in response to our request to see the most expensive ivory items. (Since they were not on display these items were not included in the count.) These included five carved tusks of Myanmar elephants, of which four were offered in pairs having come from the same two elephants. This contrasts with 'pairs' of wild African elephant tusks sold in China, which come from bulk shipments and are selected to match each other but are not, of course, from the same elephant. We were told that these five were recently carved by local carvers, and were about a year old. The carvings along the tusks were representations of the Buddha, in the style preferred by Thai monks who come to Myanmar. Buddhists only place tusks from elephants that have died of natural causes on their altars, because Buddhism does not condone the killing of animals.

At the Mahamuni Temple, a major pilgrimage site with its venerated 13-foot-tall Seated Buddha covered in gold, there are lines of small shops selling mainly religious souvenirs. In 1995 E.M. counted six outlets with 200–400 ivory items, mostly ivory figurines, elephant bridges/carved tusks and necklaces, some old and some new, but no other wildlife products. On our visit 24 years later, we found two shops with 84

ivory items, including a few new Chinese-style bead bracelets, but no carved tusks.

Mandalay's large Zay Cho Market no longer had any ivory items for sale. There was a shop selling Naga handicrafts and showing photographs of the traditional dress of this ethnic group, which lives in west Myanmar near Nagaland, a northeastern State of India. The Nagas wear wide ivory bangles

Customers, vendors and their views in Mandalay

As in Yangon, around 90% of the customers buying ivory in Mandalay are Chinese, many who now live in Myanmar or come from the mainland China for work or tourism in the winter months, when they buy ivory items to take back as presents for friends and family for the Chinese New Year. Vendors in Mandalay complained that Chinese only bought ivory at this one time of year. Many Chinese customers are from among the growing number of newcomers that have been arriving in Mandalay, from Yunnan province especially, since the 1990s. Chinese residents in Mandalay may take Chinese friends and colleagues from mainland China to shops selling ivory, that are not easy to find without a guide as they are scattered around the city. Or Chinese visitors may find their way to the shops by word of mouth. Of course the vendors cannot tell Mandalay Chinese residents apart from mainland Chinese to warn the latter not to buy ivory if they live abroad. Nor are there any government warnings in

on their upper arms, obtained in the past from wild elephants, but these were not for sale in the market or anywhere else. Nor did we find any antique shops selling ivory items. There are few antique ivory items left in Myanmar, as nearly all were sold to Thailand when tourism was growing there, especially from the 1980s onwards, when people in Myanmar were desperate for money.

shops in Chinese or any other language warning that it is illegal to travel across international borders with ivory and that there are strict penalties for doing so.

Vendors commented that the Japanese used to buy worked ivory, especially name seals. Now there are very few Japanese customers. The Myanmar people usually can afford only the tiniest amulet or charm pendants due to the minimal purchasing power of the kyat against foreign currencies, so for them most items are prohibitively expensive.

The vendors, all local people from Mandalay, were very friendly and welcoming, more so than in Yangon. They were aware that their profession is legal and were not suspicious of our questions and interest. Rather they were proud of their artistic heritage and lamented that ivory figures carved in the past were rarely appreciated for their artistic merit and cultural value any more. Some vendors were



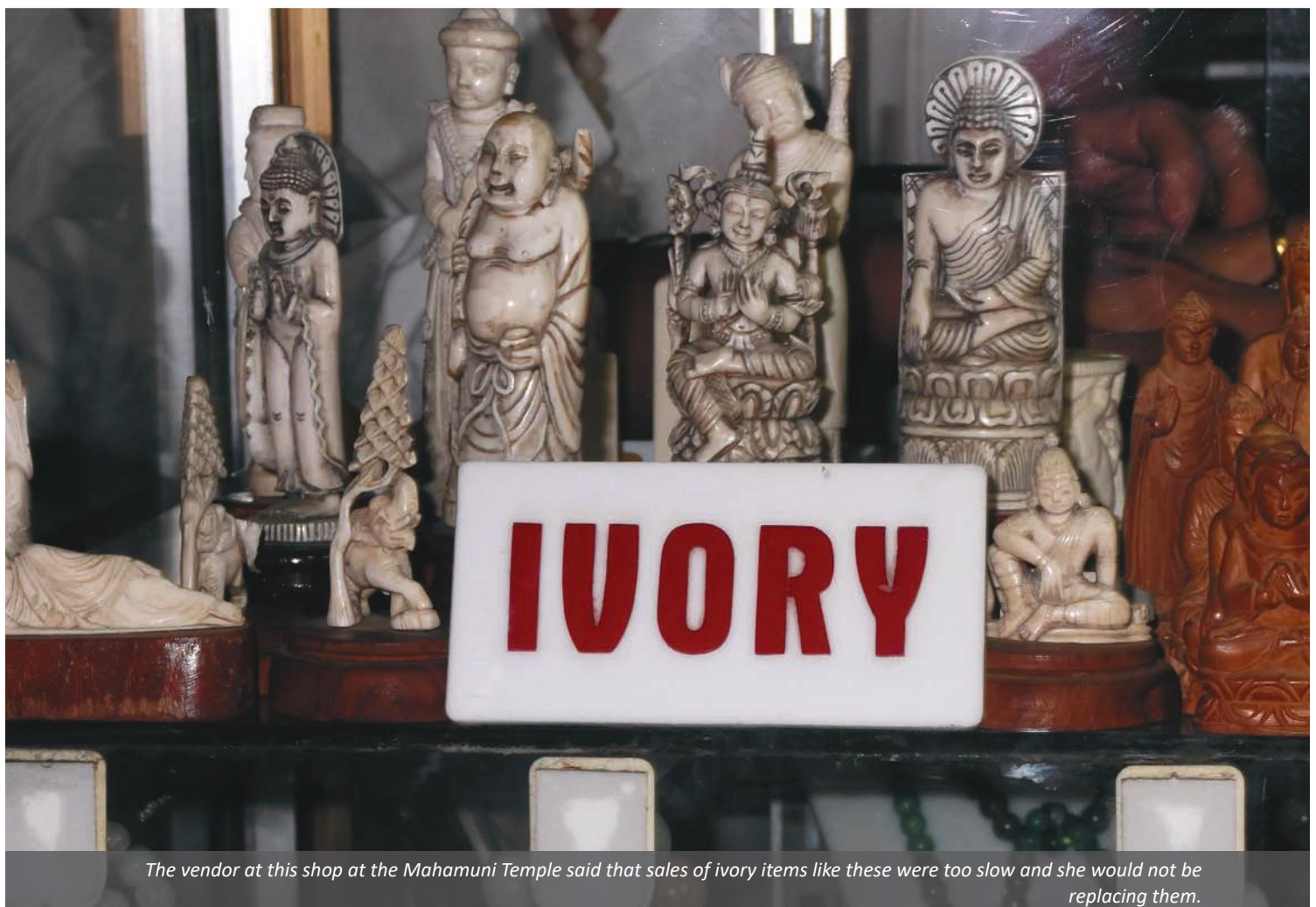
Chinese customers choose to give small ivory items such as these as presents at Chinese New Year.

happy to keep hold of their older ivory figures and in one specialist shop we saw a cabinet put to one side containing items that were the owner's private collection and not for sale. (These were not included in the count or priced.) In a souvenir shop near a temple the vendor complained she had bought items from a carver eight years ago and they were selling very slowly. She hadn't put up the prices (to reflect the falling value of the kyat) as she wanted to get rid of the last pieces and did not intend to replace them. Indeed the price labels in kyat looked tatty and had not been recently updated.

Sales of all handicrafts had fallen over the last three years, vendors stated, explaining that fewer foreign visitors were interested in luxury items, while restrictions on the ivory trade in their countries put them off buying ivory especially. Vendors said that it was not difficult to take small individual ivory items out of Myanmar as souvenirs. Yet even souvenir sales are very low. One vendor said he sold only 9–10 ivory items a month, mostly trinkets such as pendants, bangles, chopsticks and beaded necklaces. Another said she can go a whole year without selling a large item. Business was good in 1995 but has gone down steadily since then, with the previous

three years or so being the worst for all handicrafts outlets and some other businesses as well, a vendor explained gloomily. They see no future for the next generation in Mandalay in carving ivory, despite being legal, because there are so few buyers except for the Chinese. And many Chinese visitors just want to buy cheap trinkets, such as horoscope pendants on red Chinese string, for example. Shopkeepers and carvers are losing pride in their work, and frustrated at being unable to produce their traditional ivory figures and the carved tusks, due to lack of interest among foreign visitors and lack of purchasing power among Myanmar citizens.

The specialist ivory shops were no longer making money selling worked ivory but they continued to display their items, having specialized in selling ivory for generations. On one shop wall, we saw photographs of famous ivory carvers taken in 1959. One vendor said she kept her shop going in memory of her father, but she made her money from another shop selling beauty products. Another said he was diversifying into other handicrafts to earn more money, selling wooden items, sequined fabrics, lacquerware and other products more popular than ivory among foreign visitors and tourists.



The vendor at this shop at the Mahamuni Temple said that sales of ivory items like these were too slow and she would not be replacing them.



In Tachileik there were many small ivory trinkets with gold clasps similar to those that used to be on display for sale in Thailand.

Tachileik

History and background

Tachileik (population ca. 51,550) is a border town in eastern Shan State. An area nearly a quarter of the size of Myanmar, Shan State is largely rural with only three cities of significant size: Kyaingtong, Lashio and the capital Taunggi. Shan State borders China to the north, Laos to the east and Thailand to the south. Tachileik is in the midst of forested hills, on the banks of the Mae Sai River, a tributary of the Mekong River, at the border crossing that leads to the Thai town of Mae Sai. It is notable for its market of shops and stalls that line several narrow roads. The Tachileik authorities first allowed entrance to Thais in the mid-1980s and other foreigners from about 1989 onwards (Martin and Redford 2000). Vendors were desperate to make money from Thais and other visitors from Thailand, openly selling tiger

and clouded leopard skins and many other wildlife products, as well as elephant tusks and ivory items carved in Myanmar (Martin and Redford 2000). When tourism opened up in Thailand mainly from the 1980s, trade in Tachileik helped support the Myanmar ivory industry, at a time when tourism to Myanmar was severely restricted and the industry was in the doldrums. Today the town has expanded. There is a resort with a casino and golf course catering to Myanmar officials and Thai businessmen who come there for meetings. Tachileik is also a transit town for Thai tourists visiting Kyaingtong, and who used to visit Mong La when the road was open. Many visitors shop in the bountiful market that sells inexpensive tax-free goods from neighbouring countries.

Retail outlets, ivory items for sale and prices in Tachileik

In Tachileik we counted 2,913 ivory items on display for sale in seven shops selling jade, Buddhist items, souvenirs, wood or jewellery. The largest numbers of ivory items were in two shops selling jade (with 1,991 items between them) and one souvenir shop (with 740 items) (Table 13). The majority of items for sale were pendants (65%), mostly small (1 to 2 cm) with gold-coloured fasteners that were typical of Thai rather than Myanmar ivory work, with similar ones nowadays seen made of bone in Bangkok. In Myanmar, not having access to fasteners, carvers make ivory loops for their pendants. Next most frequently seen were name seals (10%) and earrings (6%), followed by smaller numbers of necklaces, rings, figurines and bangles (Table 14). The figurines

were not of traditional Myanmar people as for sale in Mandalay, and some resembled Chinese. The owner of the jade shop with the most ivory on sale said she would not be replacing her Myanmar ivory items as sales were too slow. We saw only a few of the large plain pendants preferred by the Chinese. These were in a souvenir shop, where the vendor was very hostile and suspicious of foreigners and photography. He had presumably been censured in the past by Westerners for selling ivory. This was in sharp contrast to Mandalay and most shops in Yangon where vendors were friendly and obliging.

Worked ivory seen varied significantly in type and style from shop to shop, suggesting they had been



Large numbers of ivory name seals, necklaces and bangles were for sale in the market area of Tachileik.



These ivory and 'elephant hair' bangles from Thailand were for sale to tourists in Tachileik.



Nameseals and other goods can be brought from China down the Mekong River for sale in Tachileik.

supplied from different countries and by different traders, unlike in Bogyoke Market in Yangon where the ivory items were all much the same. One vendor said that sellers from Bogyoke Market come to offer items. Some jewelled bangles with fake elephant hair and genuine ivory were identical to those made in Thailand that we saw for sale in Chatuchak Market in Bangkok. There were also other ivory items for sale that appeared Thai made and had probably come from Thailand quite recently, as it is now much more difficult to display worked ivory there due to improved law enforcement. In late 2016 we learned from ivory dealers in Laos that Thai traders had been off-loading ivory for this reason (Vigne and Martin 2017b). A few items, such as name seals, were decorated with Chinese calligraphy and fine drawings, and no doubt came from China. Overall, Tachileik is a melting pot of goods for sale from

various countries in the region. Here one can buy dry packet foods from Thailand (which we saw Myanmar people buying in bulk), and cheap tax-free Chinese goods such as clothes, blankets and handbags. Many of these are presumably transported to Tachileik along the Mekong River. Prices of items for sale in Tachileik are quoted in Thai baht.

The cheapest ivory items were ear and tooth picks (USD 9 each) often sold in pairs. The most expensive item was a 30-cm fairly thin carved tusk for USD 3,682 (Table 15). There was a baby's bangle, unusual in Myanmar, on sale for USD 77. Items purposely did not have price labels, allowing vendors to charge more to Western visitors like ourselves; however by bargaining it was possible to obtain a reduction of 20–30% on the original asking price.

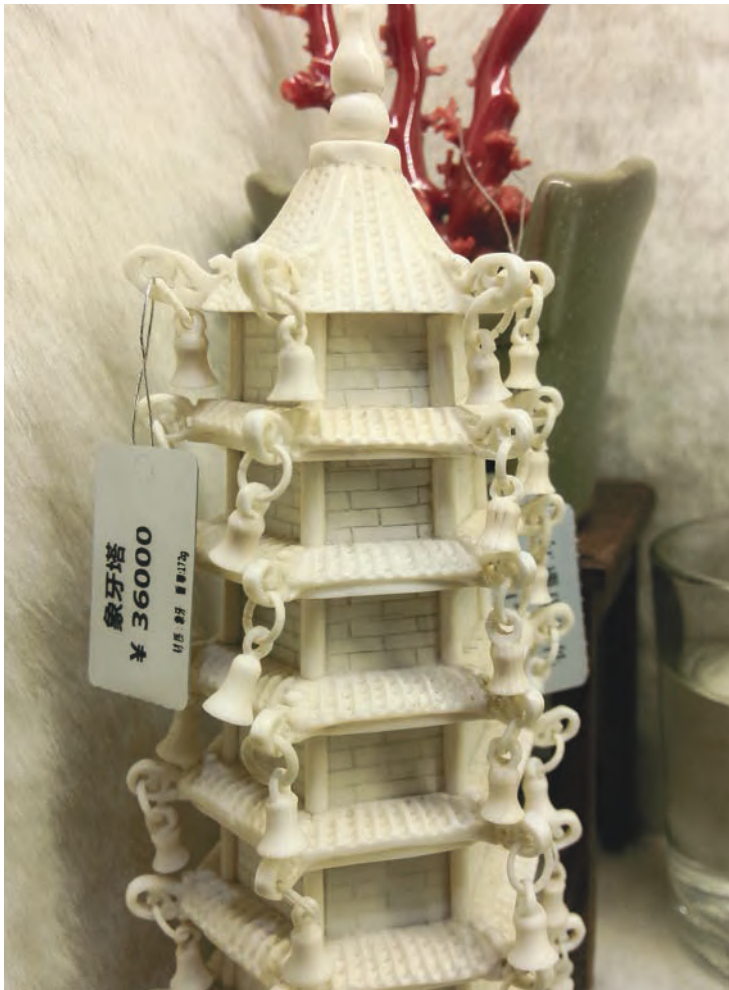
Customers, vendors and their views in Tachileik

Vendors in Tachileik were Myanmar (Bamar) men and women (the dominant ethnic group of Myanmar) and Shan men and women. Customers were mostly Thais, Thai-Chinese and others from Thailand who come to Tachileik for the day to shop for local handicrafts and cheap items from China. Vendors with ivory items said their customers were Chinese. We saw a number of name seals for sale that vendors said were bought by Chinese customers, but there were few new big pendants and big beaded bracelets in styles preferred by the Chinese as this is not a hotspot for visitors from China.

Vendors said it was alright to take small ivory items back to Thailand, and even a 15-cm figure that could be put into one's suitcase. The vendor of small carved tusks we saw for sale helpfully explained that it would not be advisable to take them over the border into Thailand as the tusk shape could be recognized by customs officials. We saw no posters or information in the town to warn customers that it is illegal to take ivory from Myanmar into Thailand. Generally the shopkeeper commented that sales of worked ivory were slow compared with the past.



Mong La, on the Chinese border, has become a large and prosperous town.



This pagoda and walnut were two of several ivory items clearly carved in China seen for sale in Mong La.

Mong La

History and background

Mong La in eastern Shan State is a frontier town located in the notorious Golden Triangle region on the border with China's Yunnan Province. It has a population of around 20,745 but is rapidly expanding as more traders from China come to make money in the town. Administratively, Mong La lies within the so-called Special Region 4. This is a largely autonomous area controlled by the ethnic Shan National Democratic Alliance Army (NDAA) led by a Shan-Chinese businessman called Sai Lin. In 2000 the US State Department described Sai Lin as "a major narcotics insurgent leader, but he has successfully rid his area of opium cultivation" (Rose 2015). The NDAA had long been accused of involvement in the illicit drug trade to fund its operations. However, in 1992 a peace settlement was agreed between the militia in Special Region 4 and the Myanmar government. As part of the peace agreement, the NDAA agreed to end the opium trade and Mong La's ruler declared the region 'drug free' in 1997. In exchange the government agreed to support Shan State by allowing them to build two main tarmac roads from Tachileik to Kyaingtong, and from Kyaingtong to Mong La in order to open up the region to trade. This allowed Thai tourists to travel on the tarmac route from Tachileik to Kyaingtong and onwards to Mong La. However, Mong La rapidly expanded as a location for casinos catering for Chinese gamblers from across the border. The town became known as a centre of prostitution and vice, while the large food market became notorious as a conduit for sale of illegal wildlife products into China. In January 2005, concerned about the town's lawlessness, Chinese forces crossed over to Mong La and shut down the casinos and then sealed the border. Sai Lin responded simply by moving the casinos out of town to a forested site several kilometres away. There were 28 casinos in 2015, still catering to Chinese gamblers despite the 'closure' of border, and connected by Internet to gamblers in Shanghai and Beijing (Rose 2015).

The Kyaingtong to Mong La road was closed around October 2016 as the government was worried that the United Wa State Army from neighbouring Special Region 2 could join the Shan State Army in Special Region 4 and become too powerful, and potentially a threat to the Myanmar government. As a result Thai tourists can no longer visit Mong La and the shops are completely reliant on Chinese visitors. The only Chinese officially allowed across the border to Mong La are generally small numbers of tour groups and

certain traders, many who come across for the day to sell their produce in the market. Some Chinese, including gamblers, come illicitly across the border through the forest, but the motorbike operators who transport them have to be careful.

Despite these restrictions, Mong La is geared entirely towards China. It runs on Beijing time (1.5 hours ahead of Myanmar), and has a Chinese electricity supply and mobile phone connections. The businesses and shops are Chinese-owned with Chinese signs and the currency for trade is the Chinese yuan. About 80% of the people working and living in the area are Chinese (Nijman et al. 2015). One way or another, many Chinese continue to come to the town for gambling and prostitutes. The main casinos are now about 10 km west of Mong La in the village of Wang Hsiao (Strangio 2014; Nijman et al 2015). Not only ivory, but other wildlife products are openly available in Mong La. The so-called morning market remains a significant hub for trade in endangered wildlife products, including large amounts of pangolin scales and skins that are now being smuggled into the region to meet Chinese demand (Nijman et al. 2015). Worked ivory sells mostly in specialist shops in the town, again catering to the Chinese.



New buildings have been constructed for Chinese businessmen to come and live in Mong La, in anticipation of increasing business and cross-border trade.

Ivory carving

There are no Myanmar carvers in Mong La. A few small items carved in Mandalay, such as delicate three-string small bead necklaces, can be found for sale in a couple of shops. Pieces of high-quality Chinese-carved ivory are sometimes brought across the border into Mong La for open sale. Most items for sale in shops in the town, however, are new Chinese-style pendants, bangles and beaded goods, mostly made in Vietnam and Laos from illegal African ivory, as well as some from Thailand and China.

Plain rather than carved bangles, plain beaded jewellery and plain cigarette holders are popular. But customers generally prefer carved pendants. In late 2013/early 2014 according to Nijman and Shepherd (2014), carving was done by Chinese artisans, based mainly across the border in China. In late 2017 we saw a CNC (computer numerical control) router in one shop. This is a cutting machine that performs simple machine processing work and can produce many pieces with carving in 3D relief, including curves and contours. The CNC

router comes with the software to create the design and turn it into a code for the machine to operate. A fine tool is placed into the spindle head that is then placed over the item to be carved and the machine does the rest. The machine can also be used simply to polish. Machine-carving is much faster than hand-carving and many Chinese customers are content with a machine-made item. The shop vendor with the machine explained that large oblong pendants are sold plain and then the customer can select their preferred Chinese zodiac animal (mouse, ox, tiger, rabbit, dragon, snake, sheep, horse, monkey, chicken, dog or pig) to be carved on it by the machine. Informers told us that recently many of the mass-produced items seen for sale, have been coming, already carved, from Thailand, Vietnam and Laos, where large illegal shipments of ivory have arrived from Africa in recent years. Ivory traders in Thailand are off-loading their stocks due to stricter controls and the Golden Triangle area is a convenient place to move them to, according to ivory dealers in Laos.



This machine for processing ivory items was seen in a Chinese ivory specialty shop in Mong La.



Chinese ivory carvings are typically wrapped in plastic to protect them and prevent dessication.



Ivory items from recently carved African ivory are nearly all smuggled into Mong La for Chinese shop owners to sell to Chinese customers.



Retail outlets, ivory items for sale and prices in Mong La

In Mong La there were 10 shops open when our guide-researcher visited the town, selling 5,279 ivory items, nearly all recently processed and made from African elephant tusks. Tusks from recently poached African elephants make up by far the majority in trade in the eastern Asian region in recent years based on our studies and information from informers (Thouless et al. 2016). This count was made by our guide-researcher who we trained beforehand to count and itemize common objects. When he returned we went over his findings in detail together. From pictorial images in 7 of the 10 shops we could verify and refine his counting, adding less common items on view for sale. Mong La had the largest number of items seen in Myanmar during this survey (Table 16). Of the 10 shops, there were 7 ivory specialty shops selling 4,436 of the items counted, with two shops selling wildlife products and a souvenir shop accounting for the remainder. Rows of large ivory pendants and other jewellery items were displayed within long glass-topped modern-built counters in well-lit and prosperous looking Chinese shops. Most of these outlets were in one line of shops close to one another.

As elsewhere in Myanmar, pendants comprised the majority of items seen (59%) followed by beaded necklaces (11%), that sometimes had a large ivory

pendant attached, chopsticks (8%), bangles (7%), bracelets (6%), cigarette holders and name seals. These are all items that are particularly sought by the Chinese (Table 17). Like everything else in Mong La, the shops catered noticeably to Chinese taste. The pendants were virtually all the medallions of the type preferred by the Chinese, typically oblong and measuring 4×6 cm, mostly carved but some plain.

There were some intricate carvings and figurines that had obviously been smuggled in from China for open sale in Mong La. These included a 5-tier Chinese pagoda, a typical Chinese screen, two walnuts (used for hand exercises) and a miniature ruyi (a ceremonial sceptre that Chinese nobility used to carry and rich Chinese now use for ornamentation). There were also 30 ivory netsuke (miniature figurines originally used as kimono toggles in Japan), mainly of humans and often in erotic positions; some of these were priced with labels in yuan for an average of only USD 364 each (Table 18).

Most shops had no labelled prices on the items; all vendors quoted prices for ivory in yuan only, in common with everything else in Mong La. The most expensive item was a 30-cm carved tusk on sale for USD 9,521. The cheapest and smallest item was a 2-cm pendant that cost USD 61 (Table 18).



Lines of gold chairs in this plush ivory specialty shop in Mong La awaited Chinese customers.

Most of the large shops seen selling worked ivory also had stocks of recently acquired pendants, for bulk sale, stacked in clear view on the back shelves behind the counters. They had not been seen in Mong La before, according to our guide-researcher, nor seen during other recent survey work (Nijman and Shepherd 2014a). These items were still in their transparent plastic packaging, as received from the manufacturer (which allowed them to be counted for the survey). There were 1,855 of these pendants in total, mainly large oblongs, many still plain, with some round medallions, as well as tooth/tusk shaped pendants, some with dragon heads. One vendor commented that if a gambler makes money, friends in China ask for these as presents, especially with

carvings of the zodiac animals, which are considered to bring good luck. You have to buy a packet, she said, and then you can order a carver to make the animals of your choosing. Wholesale buyers could buy the packs in bulk too if they wished. Other new items stacked in packets included 360 pairs of chopsticks, 126 ivory bangles, 40 beaded necklaces and 9 cigarette holders. In total, these items on the back shelves still in packets numbered 2,390 or 45% of all the ivory items seen in Mong La. These clean new bags of mass-produced ivory items indicate the existence of a growing illegal trans-border trade in processed ivory that is moving into Mong La from neighbouring countries through the Golden Triangle.

Customers, vendors and their views in Mong La

The customers were all Chinese, as were the shop owners. Some of the vendors had been granted residency in Mong La, after having lived there for several years. Although few customers came into the shops, there was evidence of a lively business with deliveries of new items stacked up in the shops. Vendors appeared in no hurry to make a small sale. Due to the porous international border with China, and the lack of law enforcement on both sides in this remote forested and mountainous area, it is an

easy matter for buyers of ivory items in Mong La to transport them in bulk into China. There is no need for them to worry about being caught breaking the law. Likewise, it is relatively easy to transport ivory items to suit Chinese taste into Mong La from neighbouring countries through the infamous Golden Triangle region. In the town itself, Chinese vendors and customers appear at liberty to do as they wish with no pressure to hide their activities.

Bagan and Golden Rock

History and background

Marco Polo wrote that the Bagan area was “one of the finest sights in the world”, which indeed it still is. Grassy fields are studded with ancient pagodas, stupas and temples stretching in all directions. For a period of 230 years, from about 1057 until 1287, Bagan’s kings built more than 4,000 of these religious buildings, of which over 3,000 survive, although extensively rebuilt over the years. Some are several storeys high, while others are small with only a simple altar. Styles vary with some sporting impressive maize cob or onion-shaped domes. Its heyday was at a time of religious transition from Hindu and Mahayana Buddhism to the Theravada Buddhism that still predominates in Myanmar. During the 19th century the British called the main town of the area Pagan, but the name reverted to Bagan in 1989. Today Old Bagan and nearby New Bagan, as well as Nyaung U town, are situated in what is known as the Bagan Archaeological Zone, which covers an area of about 67 km² located in central Myanmar. Tourism has increased hugely in recent years, and there are numerous hotels in both Old and New Bagan and a proliferation of souvenir shops and stalls.

The Golden Rock near Kyaikhtiyo town is one of Myanmar’s most holy religious sites. Perched on top of Mount Kyaikhtiyo in Mon State east of Yangon, it is a precariously balanced huge boulder, covered in gold with a stupa on top. It is a major pilgrimage site for Myanmar’s monks, and for many Buddhists, who ascend the mountain in large numbers to pray, especially from November to March. Legend has it that the rock remains balanced there thanks to the presence in the stupa of a precisely placed hair of the Buddha that was received from a hermit in the 11th century. Thousands of people visit the rock every day. From the bottom of the mountain one can walk up to the rock, but most visitors reach the top in specially designed open buses that drive up and down the winding road in an almost constant stream, carrying about 50 passengers each. Some people come for the day or sleep at the top either in small hotels or in the open on a blanket at the Golden Rock site itself, bringing food and bedding with them. Today, men and boys are allowed across a small bridge to touch the rock and place gold leaf stickers on it while they worship, while women and girls sit praying with candles nearby. It has become an important tourist attraction, with many shops, as well as a place of worship.



Bagan's Sulamani temple built in 1183 had murals of different ages including these of elephants with fine tusks.

Retail outlets, ivory items for sale and prices in Bagan

Our survey of Bagan's souvenir, antique and wood-carving shops revealed only one antique shop with two side rooms displaying more valuable items that included some old ivory: 29 items (Table 6). The vendor showed us these rooms hoping to make a special sale. The majority of figurines said to be ivory were made of bone and darkened to look old. There were 10 figures/figurines that were authentic ivory products, as well as a large elephant bridge, 2 unusual sets of white chess pieces, 2 long bead necklaces, 2 combs (one with a fine tooth missing), 1 rosary necklace and 1 name seal. No other ivory items were seen.

At the Golden Rock there were small poorly constructed wooden souvenir shops at the base of the mountain selling cheap souvenirs for visitors, as well as dried fruit and jams for the many walkers climbing 1.5 km up to the top of the mountain to worship at the Golden Rock. A line of shops and stalls on either

side of the Golden Rock itself sold food as well as cheap souvenirs. In total, close to the top, there were 22 traditional medicine shops and another 8 with herbal medicinal oils smelling strongly of tiger balm for massaging tired feet. Few shops sold anything of value, and there were no ivory items seen in stalls at the base or at the top of the mountain. Endangered wildlife items, many obtained from the surrounding forested areas, had been seen for sale at the Golden Rock as recently as early 2017 (Nijman and Indenbaum 2017). However, by the time of our visit they had virtually all been cleared away, following publicity and criticism in the international media (AFP 2017a). We saw only four bear paws in one stall. A couple of larger traditional medicine shops with animal products had attentive young vendors watching customers, saying aggressively 'no photos' and putting their hands in the way of the lens if an attempt was made.



Bone figures such as these seen in Bagan's Nyaung U town are sometimes offered as ivory, with stained ones said to be old.



There had been a clampdown at the traditional medicine shops at the Golden Rock religious site with no elephant products to be seen during our late 2017 visit.

Customers, vendors and their views in Bagan and at the Golden Rock

In Bagan the antique shop vendor with ivory items was used to tourists and was a good saleswoman. She said she had real ivory, but many poor vendors in Bagan cheat the customers selling bone, which indeed is the case. The market and main temple stalls offered us a few fake old-ivory carved figures of traditionally dressed people. The vendors were used to tourists who cannot distinguish old from new or ivory from bone. Although some Chinese tourists visit this famous site, they do not come to shop for ivory here, only the usual and plentiful handicraft souvenirs.

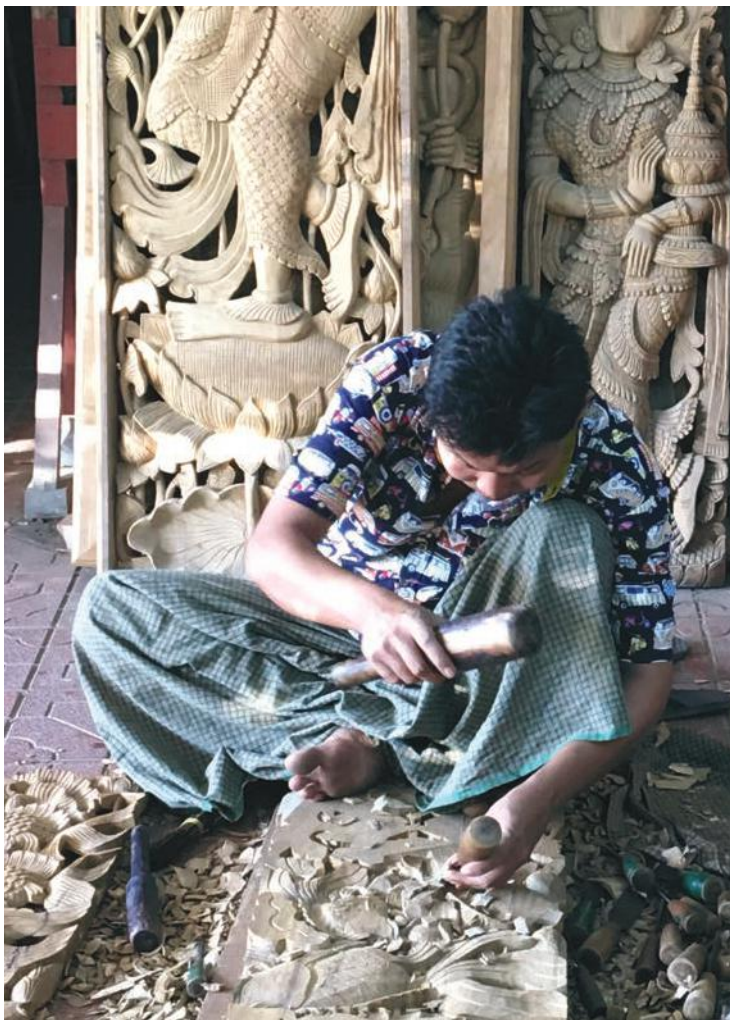
At the Golden Rock vendors are also poor and sell only cheap items, mostly catering to Myanmar people. As mentioned above, they no longer sell illegal endangered wildlife products. There is now a poster campaign, along with awareness talks, to

reduce the illegal sale of animal parts, as well as preventing wild animal curries in restaurants in the area (Anon. 2017a). Authorities now warn sellers if they make a first offence, and then take action against them in accordance with the law for second and subsequent offences.

The rock is a site of pilgrimage for adherents of Theravada Buddhism, which predominates in Myanmar and Thailand. Many Myanmar and Thai monks come here with their begging bowls, and the place is of huge significance to them, but they are not here to shop. The site has no religious significance for adherents to Mahayana Buddhism from China, Vietnam and Tibet. So there are relatively few Chinese, except those visiting from curiosity, along with Westerners and others. This site does not offer luxury item sales, such as ivory or jade.



Myanmar has some of the best jade in the world that many rich Chinese like to buy. Bone and wood carvings are cheap alternatives to ivory but cannot be carved so intricately. In Mandalay the craftsmen take great pride in their big wood carvings.



Substitutes and alternatives to ivory in Myanmar

Ivory craftsmen cannot carve the same detail on bone as on ivory, but may use cow bone as a cheap substitute to produce cigarette holders, hair pins, rings and other small items to sell at souvenir shops and religious stalls near the temples. Carvers in Mandalay buy the cow upper leg bones (femurs) for USD 1 for about 10 of them, from Muslims who eat beef. They do not like elephant bone as it is too hard, they said. A bone carver we met in Mandalay made beads with the same implements as for ivory beads but, due to bones being hollow, he can only make one large bead from the top of the femur and smaller beads from the rest of the bone. He creates the necklace by positioning the largest bead at the base of a necklace, with the other becoming smaller towards the two ends. Ivory beads can be much bigger and this is one reason bigger beads are preferred by the Chinese. Buffaloes are not seen around Mandalay or Yangon, and the carvers do not use their bones.

At Mandalay's Mahamuni Temple, some shops had a few poorly crafted bone trinkets priced at 40 cents for a charm/amulet pendant, USD 1–2 for tooth pendants measuring 3–7 cm, USD 1.5 for a ring, USD 2 for a 10-cm cigarette holder or 3-cm elephant figurine or a thin Holy Man 7 cm tall, and USD 4 for a bone necklace.

We saw the most bone items for sale in the souvenir shops in the Bagan area. Vendors at the souvenir stalls were eager to sell, and would drop their prices if need be, for example from USD 4 for a bone ring to USD 4 for three bone rings. At these stalls, bone cigarette holders, hairpins and animal amulet pendants were all USD 5–6 each, bone combs USD 6–7 each and 5-cm figurines USD 15 each. These prices were for items sold to foreign tourists, and were higher than those sold to local people at temples. For example in Bagan's Nyaung U town market, bone cigarette holders and hairpins were only USD 1 each. The best bone carvings were of upright men and women in traditional dress, 12-cm tall, offered to tourists for USD 35. Others that were darker were on sale as 'antiques', supposedly 40–70 years old, with asking prices ranging from USD 50 to 100 and averaging at USD 70. Only one vendor admitted they were made to look old. They were obviously made from cow bone femurs recognizable by the shape of the base and by the presence of little 'flecks', and lacking the Schreger lines or 'cross hatchings' typical of elephant ivory.

At Tachileik the market vendors displayed only a few bone items, including amulet pendants for USD 1–5, combs and hairpins for USD 3 and cigarette holders for USD 6.

Elephant bone items were more commonly made for sale in the mid-1990s than today (Martin 1997). In Bagan we saw a 3-cm elephant bone Buddha amulet pendant that the shop owner had bought from an elephant keeper in Rakhine State, for which the vendor was asking for USD 2, compared to USD 1 for her cow bone amulet. She also had on display for sale various hand-carved 3 to 4-cm pale stone animal figurines.

We saw very few synthetic ivory items, such as bangles, made to resemble ivory that are commonly seen in China and Vietnam. Myanmar people are not generally interested in these. However, since these imitations are rare in Myanmar, foreign customers do not expect them and may be tricked into being told they are ivory. In Yangon's Bogyoke Market we saw some large synthetic bangles in one shop, behind glass, being sold (rather convincingly) as ivory. In the same market there were some synthetic chopsticks on sale as elephant bone for USD 11. There were also a few synthetic items on sale in shops in Tachileik, where they can easily be imported from Thailand and China, which the vendors pretended were ivory. They included 4-cm tooth pendants for USD 4 and 1-cm bangles for USD 15.

Powdered or dried pieces of Myanmar elephant hide is used by some Chinese to treat various ailments, including eczema. These can also make good presents to bring back home to friends in China, we were told. A full elephant hide can cost about USD 30,000. This is similar to the price of a baby Myanmar elephant sold live to Thailand to the organizers of tourist elephant performances (Scigliano 2017). At the Golden Rock, unprocessed hide used to sell for perhaps 5,000 kyat (USD 4) per square inch (Anon. 2017b), before the sale of animal products was stopped. Mong La still has hundreds of dried elephant skin pieces openly for sale. Chinese vendors there may chop up the dry hide on a cloth on the pavement in front of their shops into small sellable pieces. Amber-looking beads made from elephant hide are now being marketed to Chinese consumers, including on the internet, according to Elephant Family (2018) and could be sold as an alternative to ivory beads. But these are



A number of fake ivory bangles were seen for sale in Tachileik. Here the vendor briefly holds a flame under the bangle to trick buyers into believing that it was genuine ivory as it did not melt.

not common and we did not see them in the Myanmar shops selling worked ivory.

Carved hardwoods and scented woods are commonly used as less expensive alternatives to ivory for items such as amulets, jewellery, figures and large sculptures. We saw wood carvers in Bagan, Bago, Mandalay and Yangon, mostly making religious figures with their simple hand tools. Rosewood, sandalwood, ebony and teak are used for more expensive items. We saw plain ebony and rosewood chopsticks on sale for USD 7 and carved chopsticks for USD 22. The biggest wood carvings we saw being made were in wood workshops in Bagan. These included an almost life-size young elephant on sale for USD 5,000, which we were told took two people 45 days to carve, and a young rhino for USD 2,800, which took two people 30 days to carve. A wood carver said he could make four 12-cm elephants in one day using a hammer or chisel. The work took the same time using the new electric hand drill he had just acquired, he commented. In Tachileik, sandalwood animal figurines that vendors had acquired from Yangon's Bogyoke Market were for sale. A vendor we interviewed was selling 20-cm Buddha wood figurines for (on average) USD 11 each.

Temple shops in several locations displayed long prayer bead necklaces or rosaries made of whitish beads made from palm tree fruit stones soaked in water to remove the outer layer; these were on sale

for USD 4. There were also whitish bracelets with the beads made from seeds of the bodhi tree (*Ficus religiosa*) or sacred fig tree, under which the Buddha is said to have attained enlightenment.

A souvenir-handicraft shop for foreigners in Mandalay had a dolomite (whitish stone) 6-cm Buddha on sale for USD 75, made by a stone carver who also carved jade and marble, but not wood and ivory. An ivory Buddha figurine of the same size was on sale in the same shop for USD 225. Occasionally we saw other pale stone small figurines and amulets for sale, but these items were infrequent.

For expensive jewellery, jade is more popular than ivory, and large jade pendants far outnumber ivory ones in the Yangon Bogyoke Market. Myanmar is famous for best quality (jadeite) jade that is not mined in China (where there is only nephrite jade). Jade is considered the best of the stones/crystals in Chinese culture for healing properties and to ward off evil spirits and makes an acceptable alternative luxury item to ivory, and is much more commonly seen worn by the Chinese. Monks from Thailand and tourists from China, in particular, like to buy these. Inexpensive jade pendants for sale in Bogyoke Market ranged in price from USD 50 to 100 while expensive ones could cost as much as USD 700–1,000, but a 20% discount could be obtained. Fake jade pendants were also for sale for USD 5–10. In

the jade market of Mandalay you can select your own piece of jade stone and have it cut as you wait.

Rhino horn, mostly from animals poached in South Africa, is an expensive alternative to ivory for jewellery and other items. Like ivory, rhino horn is considered to bring the wearer prestige, protection and power. Rhino horn is much more versatile than most other horns as it can be made into substantially larger items due to its wide base. The larger African rhino horn can be processed into large pendants, beads and bangles and these can be seen openly for sale in Mong La, often alongside ivory items. Horn craftsmen, such as those working in villages around Hanoi in Vietnam, use it for carving cups and bowls in order to satisfy the growing demand for large, expensive items by the status-hungry Chinese new rich. The leftover shavings and pieces are sometimes displayed for sale as traditional Chinese medicine, in the same way as ivory powder and elephant hide powder may be sold, so that nothing is wasted. Carved hippo teeth from Africa are also occasionally available in Mong La (Nijman and Shepherd 2014a), as well as products made from casques and bills of the helmeted hornbill, which are sometimes seen displayed beside worked ivory and rhino horn in Mong La. Like rhino horn, helmeted hornbill casques and bills consist of carvable keratin, and since they come from a Critically Endangered species that is listed on CITES Appendix I, are considered especially rare and valuable.

We saw black water buffalo horns being made into knife handles by two traditional blacksmiths in Kyaingtong, Shan State. Domestic water buffaloes are plentiful in this highland forested area. The two brothers could make four handles from a buffalo horn, that is stronger than wood and much cheaper than ivory, producing 10 knives a day and selling them for USD 5 each. In the past, expensive knives or swords had ivory handles, as seen in the National Museum in Yangon.

In Mandalay one carver had been given a new orangey synthetic material to try carving as an experiment. He had been told it was rhino horn. It had fake hair-like follicles running through it (long bubbles that occur in the heating process when the material is made). But he found it too soft, and demonstrated this to us, so it was no good as an alternative to ivory, he commented.

If Myanmar people have money to spare, they prefer to buy gold as a safe investment, as it is always saleable and the price is determined on international markets. Myanmar gold is good and hard, better than Thai gold, we were informed. Myanmar people buy and sell their gold items in Chinese gold shops, for example in Mandalay, as a way of storing or withdrawing their money, just like in a bank. They no longer have much interest in worked ivory, usually preferring jade.



Jade shops are popular amongst many customers in Yangon; in comparison ivory is rarely seen.



Sales of ivory items as seen here in Tachileik have fallen in recent year, but there are still a variety of trinkets and small items for sale as seen here, including earrings, cigarette holders, name seals, pendants, pen knives and rings.



Discussion

Trends in the ivory trade of Myanmar

Ivory carving has a long tradition in Myanmar but the local ivory industry has been in steady decline for many decades. This is evidenced by the decline in the number of carvers (Table 3), and in the number of shops selling Myanmar worked ivory (Table 6), particularly since the start of the present century. Intense demand for ivory from Chinese traders, and the fall in value of the kyat, mean that large Myanmar tusks are now too expensive for local dealers to buy, and most are nowadays illegally exported to China.

Mandalay continues to be the main centre for ivory carving using Myanmar ivory. Most carvers are from families with a long tradition of ivory carving, and carvers still prefer to use hand tools, rather than electric drills. The best and most varied locally-carved ivory are still found in family-run specialist ivory shops in Mandalay. However, most of the items we saw on sale were very small (Tables 11 and 12). The average tusk size bought by Myanmar dealers has decreased over the years, from 10 kg in the 1980s to 7.5 kg in the early 2000s and 1–5 kg in the 2010s. Using their own terminology, local dealers and carvers can only afford the small tusks of ‘forearm’ length, instead of the ‘full arm’ length tusks they used to buy. Vendors told us that some high-quality pieces on display had been carved as long as 20 years ago.

The fall in the number of shops and carvers in Myanmar also reflects falling demand for worked ivory. As raw ivory prices climbed through the 1980s and 1990s (Table 1), local demand collapsed. By the turn of the century, the only Myanmar who could afford ivory were military officials, who bought small items as status symbols and as gifts for other officials, both local and foreign (Shepherd 2002). Most ivory items were found in tourist souvenir shops, for sale to foreigners, often near the pagodas (Martin and Stiles 2002). For example, in 2000, there were eight shops with considerable amounts of worked ivory on view at the Shwedagon Pagoda in Yangon (Shepherd 2002). In our survey in late 2017, we found only three shop owners at the Pagoda with small items of ivory, and these were kept hidden away. Today most worked ivory is sold at jade and jewellery shops (Table 19) notably in Yangon (Table 20) in the Bogyoke Market. In Mandalay, the family-run licensed specialist shops sell most ivory items, as in the past (Table 20).

The range of items on display in retail outlets has also changed, compared with the past. Not only are

there far fewer of the large ivory items (figures and carved tusks) that Western visitors used to purchase (before it became illegal to do so). Numbers of other traditional items, such as name seals and chopsticks, that used to be popular among the Chinese, Japanese, and Taiwanese (Shepherd 2002), have also declined. In late 2017, in all four locations where we saw significant amounts of worked ivory for sale (Yangon, Mandalay, Tachileik and Mong La), the majority of items on display were pendants, ranging from 2-cm amulet charms to 6 × 4-cm oblongs. These accounted for between 57 and 65% of the total number of items for sale, while necklaces made up the next highest percentage in all four locations (10–12%), followed by bangles in Yangon, figurines in Mandalay, earrings in Tachileik and chopsticks in Mong La (Table 21). The pendants were generally of medium size in Yangon, small in Mandalay and Tachileik and large and newer in Mong La. Vendors all said that by far the greatest proportion of customers (about 90%) were Chinese, with some Thai, South Koreans and Japanese also buying occasionally. They all prefer small items that can be taken out of the country easily. It is important to stress that while the total number of items counted was high (Table 6), the overall weight of worked ivory has fallen, since most of the items for sale are small and there has been a large drop in the sale of carved tusks.

There has also been a major change in the location of retail outlets, reflecting new ivory smuggling routes in the region. Most large raw tusks and worked ivory from Myanmar used to be smuggled from Tachileik across into neighbouring Thailand when tourism there was booming, but today they are smuggled into neighbouring China where demand for ivory is soaring as the economy continues to grow (Shepherd 2002). The focus is on Mong La on the Chinese border, from where mostly worked African ivory is smuggled into China. The number of shops in Tachileik has declined from a peak of 23 shops in 2006, with 4,166 items counted (Shepherd and Nijman 2008), to just 7 shops in late 2017, with 2,913 items, mostly small pendants, on display. By contrast, in Mong La the trade has grown from 2006 when a survey found no ivory items for sale, to 200 counted in 2009, and up to 3,302 counted in a 2013/2014 survey (Shepherd and Nijman 2008; Nijman and Shepherd 2014). By late 2017, our survey found 5,279 ivory items on display. Nearly all items on sale in Mong La are made from African elephant tusks, recently smuggled in from neighbouring countries.



Chinese men prefer the biggest beaded ivory bracelets such as the one on the right which was priced at USD 650 at a souvenir shop in Mandalay.

Price trends for raw and worked ivory in Myanmar

Raw ivory is legally available for sale in Myanmar from the thousands of elephants used in the logging industry (both government and privately-owned). There is also an illegal trade in tusks collected from poached wild male elephants. Prices per kilogram quoted for legal ivory in Mandalay rose steadily from the 1980s to the end of the century. During this period, prices soared in the devaluing local currency, but the US dollar price also rose 10-fold (Table 1). Prices in US dollars were fairly constant from 2001 to 2006 (Shepherd and Nijman 2008), then shot up, reaching an average price of USD 934/kg in 2013, and continuing to rise more slowly, reaching on average USD 961/kg in 2017 (Table 1). This rapid increase in price in the last 10 years probably reflects increased demand from China. Tusks can be easily transported by road across the border into China, in contravention both of CITES and China's new ban on the domestic ivory trade. (Dealers we spoke to were unaware of and disinterested in China's approaching domestic ivory trade ban and did not feel it affected them.) This 2017 price for legal Myanmar ivory is higher than for raw African ivory on the illegal market, which according to our informers fell to USD 730/kg in China in February 2017 (Xinhua 2017). This price differential can be explained by the looming closure in domestic ivory trade in China at the end of that year, and because master carvers and discerning customers generally prefer rarer Asian ivory. The tusks tend to be straighter as well as harder in texture and thus more suitable for fine carving.

Retail US dollar prices for worked ivory in Myanmar were highest for most items in Mong La (Table 22). Retail prices (specifically in Yangon and Mandalay) rose in the 2000s. However the rate of increase was notably different among different product types. The prices of earrings and rings increased only a little (e.g. for earrings, from USD 12 in 2001 to USD 19 in 2017), but prices of some other items rose dramatically. Prices for bangles, which had remained steady between 1995 and 2001, had soared to an average of USD 440 by the time of our present survey. This probably reflects increased demand from Chinese customers. Prices of other items favoured by the Chinese, such as chopsticks, cigarette holders and name seals, had also increased significantly since 2002. However all prices in kyat have risen sharply due to the devaluation of the local currency, making ivory too expensive for most local buyers (USD 1 was worth 120 kyat in 1995, 440 kyat in 2001 and 1,350 kyat in 2017) (Table 23).

Prices in Mong La were nearly all noticeably high compared with elsewhere in Myanmar (Table 24). This is probably due, not only to the proximity of the border, but also to the fact that many Chinese who visit the town have more money to spend and prefer more refined carving. In Mandalay chopsticks and cigarette holders were less expensive than in Yangon and Tachileik, as shopkeepers there said they had decided amongst themselves to keep their prices constant with one another and had not put them up in response to slow sales.

Prices of ivory items in Myanmar compared with neighbouring countries

We carried out recent surveys (from 2014 to 2017) in the main locations openly selling worked ivory in the shops of China, Vietnam, Laos and Myanmar. Although Myanmar had the fewest number of shops displaying ivory items, 51, compared with 81 in Laos and 242 in more prosperous Vietnam, the number of items counted on view for sale was high: 14,846, compared with 13,248 in Laos and 16,099 in Vietnam (Table 25). There has been a sudden and significant increase in the number of items on sale in Myanmar due to the surge of new ivory items, mainly from African tusks, passing through Mong La. While prices overall have remained fairly constant in these countries during this 2–3 year period, items popular with the Chinese such as bangles, beaded bracelets and large pendants had become more expensive in Myanmar because of this new—and growing—trade in Mong La close to the Chinese border (Table 26). Elaborate, recently-carved ivory items of Chinese origin in a shop were less expensive in Mong La in late 2017 than those that had been legally available

in China in late 2015, such as an average-sized intricately carved paintbrush pot for USD 3,509 in Mong La compared to similar ones on sale in China for an average of USD 5,581 (Tables 18 and 26). For common and comparable utilitarian items—cigarette holders, chopsticks and name seals—prices overall in Myanmar were similar to those in Vietnam and Laos and much lower than those of legal items seen in China (nearly all in licensed outlets) before the ban on domestic ivory sales.

Shortly before the ban in China on 31 December 2017, some of the licensed outlets there were offering ivory items at discounted prices though these were still far higher than those selling illegally at the time in China, and those in Vietnam, Laos and Myanmar. In 2017, according to TRAFFIC (Zhao et al. 2017), average prices in China for legal chopsticks were USD 542 and for illegal ones USD 153, while legal bangles cost USD 1,581 and illegal one USD 568. Prices of illegal items available in China were thus



Paint brush pots carved in Myanmar as seen here generally have dragons on them to suit Chinese taste, but are often less intricate and less expensive than in China.



In Bangkok, bone and fake ivory synthetic items on display as above have largely replaced ivory ones due to stricter law enforcement in the city; these sell for much lower prices than ivory.

more in line with worked ivory in Vietnam, Laos and Myanmar. In 2015 in China, small shops in Hangzhou offered us illegal ivory pendants for USD 5–7/g (Vigne and Martin 2017). In Laos in 2016, Chinese vendors offered us plain pendants for USD 3–8/g depending on the quality of the ivory and the vendor’s salesmanship skills (Vigne and Martin 2017). In Myanmar, locally carved ivory items, which take a much longer time to make using hand tools, are not priced per gram. We found in Mong La, as in an earlier survey (Nijman and Shepherd 2014a), that ivory items there were not priced per gram either, but per item, so price comparisons per gram were not possible.

Online transactions appear the cheapest way to buy worked ivory in the region. WeChat and QQ are popular (Elephant Family 2018), as well as Taobao (Taobao apparently suspends traders after a warning but they can create a new site/platform; Karl Ammann, pers. comm., August 2018). However, there is a risk involved to the buyer as you cannot examine the items

in your hands or with a torch and magnifying glass as in a shop, which Chinese customers like to do to check for authenticity and quality. Prices on social media platforms are generally lower than in physical stores as there are far fewer overheads. Sometimes items on sale online may have been processed in Africa, since small items are easier to smuggle than large tusks, with just the final details added in China (Zhao et al. 2017). Surveys in central African cities show a shift from open domestic retail trade of worked ivory to underground transactions mainly for export to meet Chinese demand. Also, in Congo, for example, ethnic Chinese are reported to be transforming tusks to worked ivory products in-country at their remote project sites. Items are transported to Brazzaville and then smuggled abroad (Nkoke et al. 2017).

TRAFFIC carried out an 18-month survey of Bangkok’s ivory market from December 2014 to June 2016 to assess the market trends. This was a period when Thailand had been required by CITES to improve its legislation on ivory and comply with



1号手把件



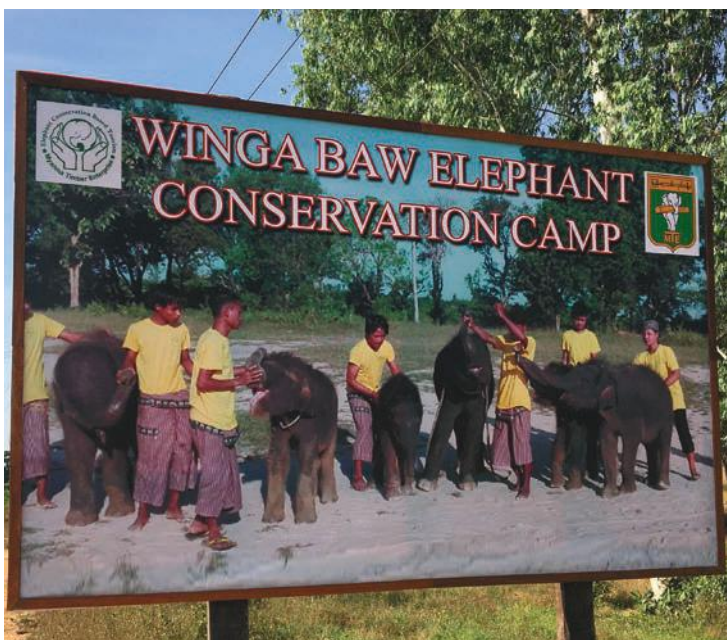
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Ivory is increasingly available online in China and nearby countries to meet Chinese demand, with prices generally lower than in retail outlets. Items are often priced by weight rather than based on carving skill.

CITES requirements, which it largely achieved by January 2015. Indeed the number of shops selling ivory dropped and the number of items on sale fell significantly from 7,421 items to 283 over the survey period (Krishnasamy et al. 2016). Prices ranged hugely, but on average were in keeping with the region. Bangles in late 2015 and 2016 were on sale at USD 141–708, rings for USD 11–34, earring pairs for USD 14–42, and pendants for USD 8.5–113. Most items on sale were very small trinkets. However the number of ivory items found on sale on the internet grew, according to TRAFFIC, confirming concerns regarding a potential market shift from the physical marketplace to online platforms, which facilitate illegal trade.

In 2016, the CITES 17th Conference of the Parties (CoP17) noted that “the growth of the internet has facilitated communication and commerce between individuals and institutions on a global scale, and there is need continually to scale up efforts to address wildlife crime linked to the internet” (CITES 2016,

Document 29). An Interpol conference held in June 2018 discussed how to combat illegal online sales of ivory. Representatives of some of the main online websites, such as Baidu, Ebay, Etsu, Instagram, Google, Gumtree and Rakitan, all expressed their wish to rectify the problem of illegal trade. The philanthropist Jack Ma, founder and CEO of Alibaba, China’s largest e-commerce website, has pledged his support for wildlife conservation at the African Ranger Awards Ceremony in South Africa on 7 August (Solheim 2018) and is also supportive and tackling the growing problem of online illegal wildlife trade; thus it is possibly just a matter of time before something is done about it. Funding independent researchers appears to be the most promising way forward, in order to identify the illegal trading platforms and pass information to law enforcement officers with the appropriate jurisdiction. Achieving this goal will require collaboration between private and public sectors, among law enforcement agencies of different countries and, at a country level, between different state agencies (Stiles, pers. comm., June 2018).



In late 2017, this camp was home to 7 orphaned elephants, as well as 8 timber elephants that were jobless as the indigenous forest where they worked had been cleared for agricultural land and rubber plantations.



This sign for World Elephant Day illustrates that there is increasing awareness about elephants.

Awareness and law enforcement efforts

“Elephant conservation and the ivory trade are both undermined by corruption in countries where weak rule prevails with abnormal concentrations of power in one individual or institution, and no counter-balancing mechanisms are in place” (Smith et al. 2015). Organizations are particularly vulnerable to corruption when permits and licences are required. A correlation has been demonstrated to exist between elephant poaching and corruption, while corruption also undermines legal sales of ivory. Both the legal trade and trade bans can break down when corrupt officials collude. Cronyism and nepotism reduce the likelihood of crimes being reported and embezzlement reduces conservation funding levels, allowing the illegal wildlife trade to flourish unhindered.

The Myanmar government under State Counsellor Aung San Suu Kyi and her colleagues has a myriad of other major problems to tackle, including curbing human rights abuses, stopping civil insurrections and securing peace, and rectifying the impact of decades of economic mismanagement. For the government, the illegal wildlife trade pales into insignificance in comparison. There has simply been a lack of political will to curb the growing illegal trade in ivory and other wildlife products from local and global sources through Myanmar, although NGOs working there are encouraging officials and giving support.

Elephant poaching in Myanmar has been an increasing concern; there is a lack of information to track down poaching rings, according to officials. Poachers sell the tusks, hide, and other parts of elephants to brokers

in the Mandalay region, who smuggle them into China through Muse township in northern Shan State, or using other border routes on the country’s lawless eastern periphery (Zaw 2017; Kronholm 2017). Often well-connected ‘kingpins’ are involved in getting elephant products safely to their destinations in China (Zin 2017; Anon. 2017c). U Win Naing Thaw, Director of the Forest Department’s Natural and Wildlife Conservation Division, explained: “We have investigated how poachers peel off the hide of the elephants, remove the tusks and freeze them, and smuggle them to a neighbouring country”. Fines for convicted poachers may be less than USD 60, however (AFP 2017). Young live elephants are also smuggled into Thailand for the entertainment industry (Nijman 2014; Zaw 2017; AFP 2017b). In January 2017, Minister of Natural Resources and Environment U Ohn Win announced a new Elephant Conservation Project, which aims to register and protect elephants and to crack down on the trade in their parts, and there is talk of shutting down border wildlife markets. This new initiative has NGO support; for example WWF Myanmar, which is particularly concerned about Mong La, is working with the ministries and law enforcement agencies (Phyo 2017, M Aung 2017). According to Saw Htoo Tha of the Wildlife Conservation Society (WCS Myanmar), “it is very important to conserve wild elephants. If the departmental heads and civic organizations carry out the necessary conservation tasks for the wild elephants, they might succeed. Locals must participate in elephant conservation tasks. We would like to urge the locals to inform us if they see poachers” (H Aung 2017).

NGOs, in collaboration with film makers and celebrities on local TV, are starting to provide more information to help Myanmar people understand and value their elephants. Saw Htoo Tha explains: “Previously they would be hunted for their tusks but as the male elephant population decreases, the poachers will now kill any elephant they can find and sell other parts, the skin, the trunk, the feet or the penis, all of which are in demand in the Chinese market. The meat under the foot is supposed to be especially tasty, and the other products are consumed for their perceived medicinal qualities.” Since the Myanmar government reduced logging operations to stop deforestation, the timber elephants have also become more vulnerable to poaching and trafficking (Kronholm 2017. “We are investigating whether we can reintroduce captive elephants into depopulated areas” said Christy Williams, director of WWF Myanmar, which has raised money to train rangers to fight wildlife crime (Tomlinson 2017; Anon. 2017c). Myanmar has also agreed with CITES to set aside about 1,500 km² for elephant sanctuaries (Anon. 2017d).

A detailed study has brought international attention to the elephant skin trade (Elephant Family 2018). WWF Myanmar launched a campaign in June 2017 called ‘Save Their Skins’ to raise awareness of the demand in elephant skin as well as other wildlife products. On 4 November 2017 an elephant awareness campaign was launched in Yangon, calling for a halt to the illegal wildlife trade in the city. ‘Voices for MoMos’ is backed by a consortium of NGOs, including WCS, Fauna and Flora International (FFI Myanmar, Grow Back for Posterity, the Biodiversity

Nature Conservation Association and Friends of Wildlife (Phyo 2017; Mosbergen 2017; Scigliano 2017; Zue 2018). Thus there are growing efforts by conservation organizations to help Myanmar’s elephants and also to combat illegal trade. Efforts in Cambodia to combat ivory trafficking (Nguyen and Frechette 2017) include plans for a genetics lab to tighten law enforcement against illegal ivory (FFI 2018). This could help Myanmar too. NGO support is spreading fast in the region.

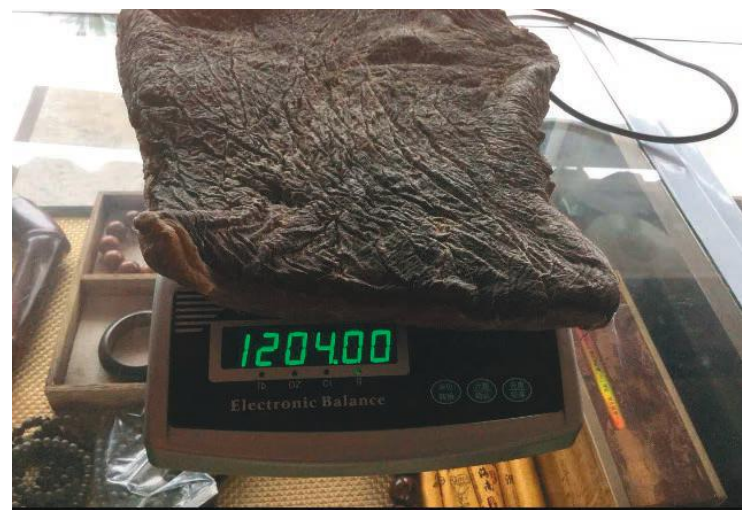
Social media can also have an impact in spreading awareness internationally of the need to curb illegal wildlife trade. On 13 January 2014 a short report was published on the TRAFFIC webpage following a survey by Chris Shepherd and Vincent Nijman entitled ‘Thousands of pieces of ivory found for sale on Myanmar’s border with China’. Three days later a petition was independently uploaded on the Care2 petition website urging Myanmar and China to crack down on the sale of ivory to save elephants. By 4 February 2014 the petition had been signed by more than 50,000 people in more than 130 countries (Nijman and Shepherd 2014b).

But without concrete action to stop the activities of illegal traders, they continue to expand their operations. It is not the local Myanmar ivory carvers with their small legal domestic ivory industry who are cause for concern, rather those involved in smuggling increasing amounts of mainly African ivory from Myanmar to China, especially though Mong La. Our survey in late 2017 confirmed that there has been a substantial growth in sales of ivory items in Mong



大象皮的药物作用是止血，敛疮。外伤出血，及创伤、溃疡久不愈合 治胃出血，养胃润肺清肠，软化皮肤 对败血病患者有良好的辅助效果。用它煲汤喝。可养胃。

皮到货!!!



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皮到货!!!

There has been an increase in the sales of elephant skin online for the Chinese market.

La since 2014. Where are the items coming from? Similar items to those seen in Mong La are being made notably in Vietnam and elsewhere in the region, and smuggled through the Golden Triangle for open sale here for the Chinese market. Ivory continues to be smuggled in large amounts from Africa into Vietnam to meet demand in mainland China (EIA 2018). In late 2016 we heard that ivory from Thailand was being offloaded into the Golden Triangle for sale on the black market, in response to the imposition of tighter controls in Thailand. This raises the question: What is going to happen with all the ivory items previously on display in licensed shops in China, following the imposition of the domestic ivory trade ban at the end of 2017 (Amman 2018)? No doubt one option for traders would be to sell their stocks illegally in border markets such as Mong La, where there is an open market for sale of illegal worked ivory to the Chinese that is not being controlled in any way.

It is notable that illegal sales of rhino horn have also soared in the last decade, especially amongst increasingly affluent and numerous Chinese customers, including in Mong La. This sudden surge in demand for rhino horn occurred even though the trade in rhino horn has been banned in China since 1993. It has been suggested that some rich Chinese consumers are even more attracted by the idea of buying an illegal and hard-to-get commodity, from a rare and endangered species, to show that they

are above the law (Ammann 2018). Moreover, the Chinese see rare rhino horn, like ivory (Gao and Clark 2014), as an investment opportunity (Gao et al. 2016). This demonstrates that bans cannot work without effective law enforcement in the face of continued active local demand for the product.

As mentioned above, sales of ivory items on social media, as well as those of rhino horn and other endangered wildlife products, have shot up in the region. Social media sites both respond to and stimulate demand for illegal wildlife products. Code names are often used to disguise sales of illegal products. A recent online search in Hong Kong and Laos for example (Ammann 2018), found hundreds if not thousands of these ‘disguised’ products on view for sale. Ivory sometimes appears under the name of ‘jelly’ or ‘white plastic’ and emojis are also used as a secret language by WeChat users to buy and sell illegal wildlife products. Some traders describe items as ‘mammoth ivory’, which can be legally bought and sold in China, as a cover to launder small items made of elephant ivory. (Mammoth ivory is not for sale in Myanmar to Chinese visitors as it is openly and legally available in China.)

While Mong La provides the main known conduit in Myanmar for the trade in African ivory, it may be occurring out of sight in other places, such as in Dalou across the border from Mong La via so-called



This is the gateway for the town of Mong La whose endangered wildlife product market is now well known.

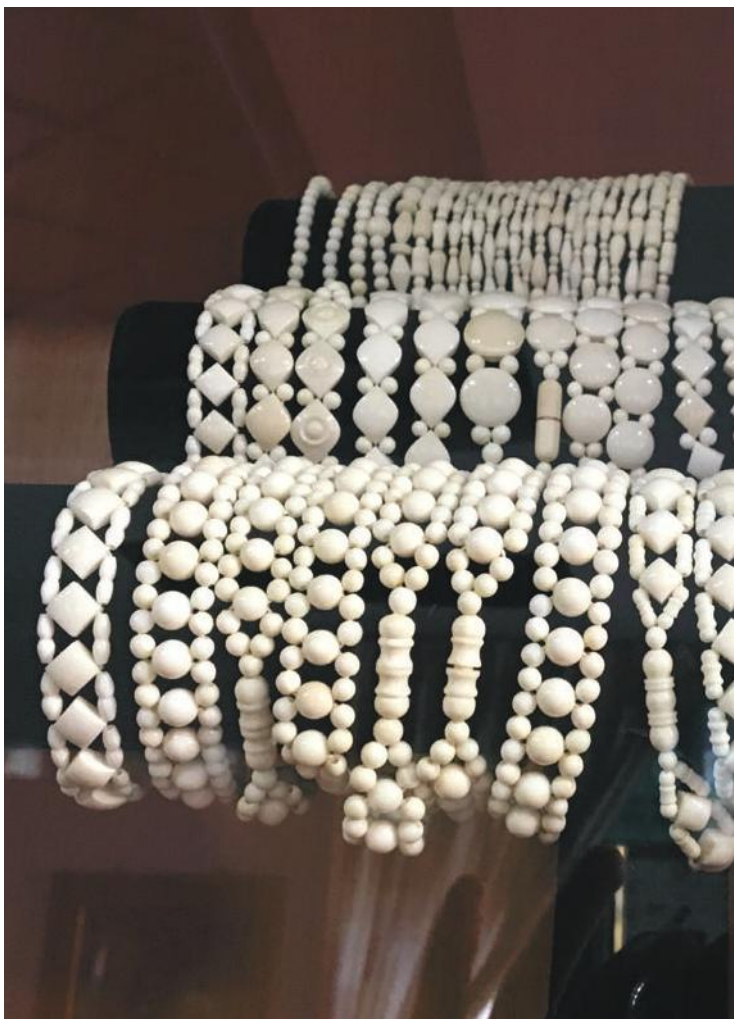


The Mong La area, like most of Shan State, consists of thickly forested mountains enabling illegal wildlife traders to cross the nearby Chinese border undetected.

Wa State, a de facto autonomous region of Myanmar, for example (Crosta et al. 2017). Pangkham town in the mountainous northern Wa State is also visited by Chinese for trade, according to informants in Shan State, and there have been elephant tusks seen openly for sale there (Fisher 2016). Wa State or Wa Special Region 2, officially recognized as part of Shan State, is divided into a northern region and southern region (with eastern Shan State in the middle). It is controlled by the United Wa State Army (UWSA). The region, home to the Wa ethnic group, is economically heavily linked to China and shares a 133-km frontier with China while also bordering Thailand to the south. Recent publicity regarding a Chinese casino developer called Zhao Wei who moved from Mong La to Laos to set up the ‘Golden Triangle Special Economic Zone’, has drawn attention to the potential involvement of the UWSA in the illegal wildlife trade. Zhao Wei has good connections, not only with Mong La, but also with UWSA. UWSA has been known for its collaboration with so-called drug warlords, and has been reputed to be one of the biggest and most well established drug-producers in Southeast Asia (Marshall and Davis 2002; Parry 2018). The US government has voiced its concerns about drugs and wildlife trafficking involving Zhao Wei and other kingpin traders (AP 2018; Parry 2018), but they deny it, claiming to bring economic prosperity to these areas. Without greater efforts to close down the continuing illegal wildlife markets the kingpins can freely operate in whatever they choose, regardless of any laws.

China tour guides bring to Mong La certain Chinese nationals to visit, and some actively promote seeing Mong La’s wildlife market with a lack of warning about illegal products (Ammann pers. comm., August 2018). We saw no signs against the illegal trade in endangered wildlife in Myanmar nor were there warnings to foreigners not to smuggle ivory. Above all, action to close down this trade in Mong La is needed. Nearby border areas require rigorous monitoring by well-trained nonpartisan Chinese investigators, who can reach these closed places more easily than Western researchers. The China and Myanmar CITES authorities need to work together to tackle illegal trade in ivory and other wildlife products along their mutual boundary, with support and commitment from other agencies.

There are encouraging signs that China is prepared to assume a leadership role in global efforts to close down trade in endangered wildlife, even to the extent of sacrificing its culturally important ivory industry to help save elephants (Zain 2018). At the 18th National Congress of the Communist Party held in November 2012, the policy of so-called ‘ecological civilization’ was developed to promote protection of the environment, including through the conservation of biodiversity (UNEP 2016). At the 19th National Congress held in October 2017, President Xi Jinping outlined plans for further reforms and improvements, including measures to cut down on corruption and for the protection of nature to achieve a ‘a clean and beautiful world’ (China Daily 2017).



These small ivory items, typical of Mandalay carving, do not sell well compared with bangles, beaded jewellery and large pendants that are preferred by the Chinese.



Conclusion

Myanmar has a long-standing legal domestic ivory trade that allows tusks from Myanmar's thousands of captive elephants licensed by the Forest Department to be sold for carving and sale at registered shops. However all those we spoke to told us that business has been very poor since about 2014. Stricter international law enforcement has put off many foreigners from buying worked ivory due to restrictions on taking items back to their home countries. The current trade in ivory is fuelled by burgeoning demand in China for ivory items, mainly simple jewellery, among middle class men and women. Chinese now buy 90% of the ivory items sold in Myanmar. However they rarely buy carved tusks, preferring small trinkets that are easier to smuggle home. The biggest and best of Myanmar's raw tusks are apparently smuggled by traders some from Mandalay into China, where they may be processed or sold as entire tusks as a symbol of status and power to wealthy Chinese.

Elephant poaching is an increasing concern in Myanmar, but the country also provides a largely unchecked conduit for illegal African ivory into China, in violation of the CITES ban. While there were still many older legal Asian ivory items on sale in the main cities of Yangon and Mandalay, there has been a prolific growth in new ivory items of African origin for sale in Mong La. A vast number of Chinese-style items are openly on sale to Chinese, who comprise nearly all the visitors to this de facto Chinese enclave in Myanmar. It can be assumed that most of this ivory is smuggled through the infamous

Golden Triangle area into this lawless eastern periphery of Myanmar. Well-connected illegal traders can operate in this region with impunity, smuggling ivory across borders, along with many other illicit wildlife products.

Thus as Myanmar increasingly opens up trading connections with China, the illegal trade in ivory and other elephant products appears to be growing along the Myanmar border largely unimpeded, putting pressure on Myanmar's elephants and contributing to the poaching crisis in Africa, where elephant populations in many areas have been decimated to meet Chinese demand.

It is now accepted that the global illegal wildlife trade is no longer only simply a conservation issue but also an international security issue, requiring greater cross-border coordination among law enforcement and conservation agencies, notably through improved intelligence and jurisdiction to tackle international criminal networks. NGOs have often felt they were battling the illegal wildlife trade alone in the past, and it is a relief that government agencies are getting more involved. However, until there is more effective law enforcement against international trade, notably in the border areas, leading to the successful prosecution and prevention of wildlife crime kingpins, the benefits for traffickers will continue to outweigh risks of involvement in this illegal trade, and the outlook for many wild elephants in Asia and Africa will remain bleak.



Pendants with the 12 animals of the Chinese zodiac are crafted by carvers in Mandalay for sale to the Chinese, but sales are slow.

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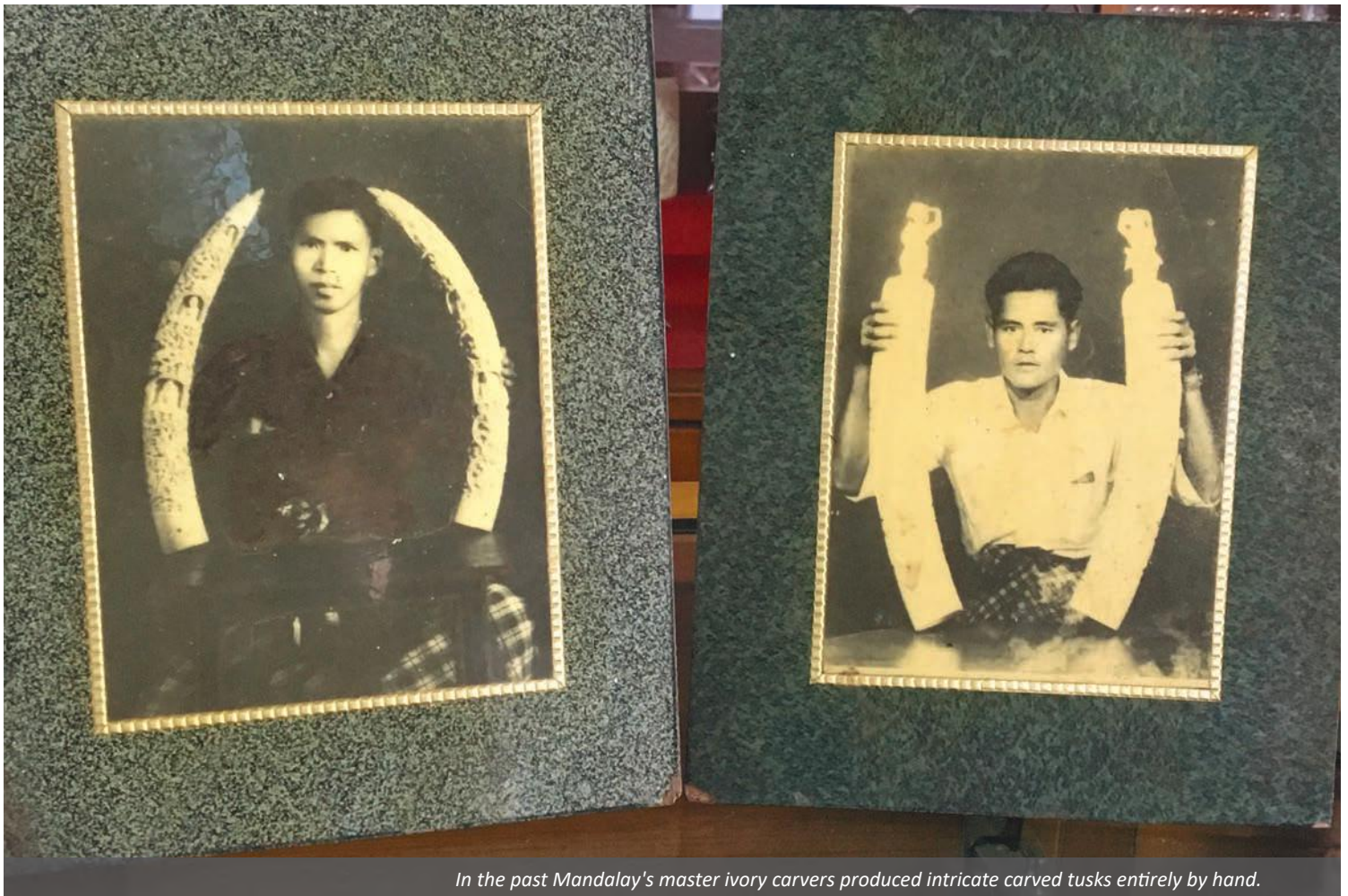
Old carvings for sale often depict elephants, which are highly valued in Myanmar culture.

Acknowledgements

Thanks and much appreciation are due to Save the Elephants and Wildlife Conservation Network's Elephant Crisis Fund for enabling us to carry out our fieldwork and to produce this report, published as a monograph. The dedicated staff at both the Elephant Crisis Fund and at the Save the Elephants office in Nairobi supported the work with efficient administrative help throughout. Special thanks with the research go to, amongst others, Karl Ammann, Faith Doherty, Vincent Nijman and Daniel Stiles for all their assistance with the fieldwork and/or the report. Also grateful thanks go to Andrew Halliday, Pilipili Creative and Digital Hub for their excellent editing, lay out and printing. Thanks also go to the many people from Myanmar who gave us their time and help.

Some earlier reports were also supported by Aspinall Foundation, Care for the Wild International, Columbus Zoo and Aquarium and Elephant Family for the following series of monographs:

- The Ivory markets of Africa (2000)
- The South and South East Asian Ivory Markets (2002)
- The Ivory Markets of East Asia (2003)
- The Ivory Markets of Europe (2005)
- Ivory Markets in the USA (2008)
- The Ivory Dynasty: a report on the soaring demand for elephant and mammoth ivory in southern China (2011)
- China faces a conservation challenge. The expanding elephant and mammoth ivory trade in Beijing and Shanghai (2014)
- Hong Kong's ivory. More items for sale than in any other city in the world (2015)
- Vietnam's illegal ivory trade threatens Africa's elephants (2016, also published in Vietnamese)
- Decline in the legal ivory trade in China in anticipation of a ban (2017)
- The ivory trade of Laos: now the fastest growing in the world (2017, also published in Lao)



In the past Mandalay's master ivory carvers produced intricate carved tusks entirely by hand.



In the past Myanmar artisans carved ivory from large tusks; most items today are made from much smaller tusks, as seen below.



Tables

Source: Our 2017 survey, unless otherwise stated.

Table 1. Wholesale prices of raw Myanmar ivory (1–10 kg tusks) in Mandalay, various years

Year	Source	Kyat/viss	Kyat/kg	USD/kg	Exchange rate
1981	Private	1,500	939	26	36.11
1989/90	Govt., large	5,280	3,300	76	43.42
	Govt., medium	4,480	2,800	64	43.42
	Govt., small	1,620	1,010	23	43.42
1991	Private	24,000	15,000	189	80.25
1992/3	Govt.	22,140	13,838	141	97.45
1993	Private	39,170	24,448	256	95.5
1994	Govt.	34,160	21,353	204	104.67
1995	Private	45,880	28,680	239	120
2001	Private	100,000	62,500	142	440
2002	Private	312,000	195,000	173	1,127
2013	Private	1,450,000	906,250	934	970
2016	Private	1,900,000	1,187,000	921	1,290
2017	Private	2,015,000	1,296,875	961	1,350

Sources: Martin 1997; Martin and Stiles 2002; Martin and Vigne 1997; Stiles 2002; Stiles 2004; this study

NB: The unit of weight for ivory traded in Myanmar is the viss, that equals 1.6 kg, and the currency is the kyat (pronounced 'chat'). The exchange rates are shown as number of kyat to one US dollar. These are unofficial (black market, but universally used) rates until 2 April 2012, when the Central Bank of Myanmar abolished the official exchange rate floated the currency against the US dollar.

Table 2. Wholesale prices of raw Myanmar ivory (<1 kg tusk pieces) in Mandalay, various years

Year	Source	Kyat/viss	Kyat/kg	USD/kg	Exchange rate
1981	Private	58–779	36–487	10–13.5	36.11
1993	Private	19,558	12,224	128	95.5
1995	Private	20,544–24,576	12,840–15,360	107–128	120
2001	Private	29,990–600,000	18,700–37,500	42.50–85	440
2017	Private, (2.5cm tusk tips)	500,000	312,500	231	1,350

Sources: Martin 1997; Martin and Stiles 2002; Martin and Vigne 1997; Stiles 2002; Stiles 2004; this study

NB: For notes, see Table 1.

Table 3. Number of master ivory carvers in Mandalay and Yangon, various years

Year	Mandalay	Yangon
1942	56	
1960		10
Late 1970s	45	
1981	30	
1995	50–60	a few
2001	45	10
2002	32	
2007	15	
2017	10	a few

Sources: Martin 1995; Stiles 2004; this study

Table 4. Yangon: Main ivory items seen for retail sale, 1995

Item	Percentage	Estimated number
Figurine/figure	30	1,031
Chopsticks, pair	12.5	430
Carved tusk	12.5	430
Name seal	12.5	430
Comb	10	344
Bangle	5	172
Necklace	5	172
Ring	5	172
Miscellaneous	7.5	257
Total	100	3,438

Sources: Unpublished survey carried out by Esmond Martin in 1995

NB: The numbers of specific items are approximate as detailed counts were not made, only estimates of percentages.



In 2001, there were perhaps 45 master ivory carvers in Mandalay (with two seen here) plus 10 in Yangon. In 2017 there were about 10 still carving ivory in Mandalay and very few in Yangon (Table 3).

Table 5. Yangon: Retail prices for ivory items seen for sale, 1995

Item	Size (cm)	Price range (USD)	Average price (USD)
Bangle, plain	0.5	50-150	100
Necklace, bead	0.5		5
	1		12
Ring, plain	0.25		5
Figurine	5	4-20	14
	6-10	17-83	45
	11-20	38-104	82
Tusk, carved	30		600
	40		625
	50		1,000
	60		1,250
Chopsticks, pair	Average	29-38	32
Cigarette holder	10		17
Comb	12	13-42	26
Name seal	6 × 2	21-40	30
Snuff box	7		80

Sources: Unpublished survey carried out by Esmond Martin in 1995

USD 1 = 120 kyat in late 1995.

NB: Where no price range is shown only the average price (or the price for a single item) was recorded.

Table 6. Number of shops surveyed displaying ivory items for sale in Myanmar, various years

Location	2001		2006		2009		2013/14		2017	
	Shops	Items	Shops	Items	Shops	Items	Shops	Items	Shops	Items
Yangon	34	3,438	40	1,904					27	1,995
Mandalay	19	2,363	17	1,821					6	4,630
Tachileik			23	4,166					7	2,913
Mong La			0	0	1	200	27	3,302	10	5,279
Bagan									1	29
Total			80	7,891					51	14,846

Sources: Martin and Stiles 2002; Shepherd and Nijman 2008; Nijman and Shepherd 2014a; this 2017 survey

NB: In 2017, in Yangon three additional shops brought out 667 hidden ivory items when we asked if they had any in stock; in Mandalay one of the shops surveyed brought out 8 more items. The shops (in Yangon) and items are not included in the totals shown. If they are included, we saw a total of 54 shops with 15,521 ivory items for sale in the 5 locations shown.

Table 7. Yangon: Types of retail outlets and number of ivory items on display, late 2017

Outlet	No. of outlets	% of total outlets	No. of items	Avg. no. of items/outlet
Jewellery	19	70	1,854	93
Antique: old items	6	22	93	5
Souvenir	1	4	42	2
Wood	1	4	6	<1
Total	27	100	1,995	100

NB: In addition to the outlets shown in the table, there were three Buddhist stalls with 667 ivory items not on display but brought out for sale on request. About half these items were older tiny amulets approximately 20 years old, of a type not being made today, and the rest was more modern jewellery. These outlets and items are not included in the table.

Table 8. Yangon: Main ivory items seen for retail sale, late 2017

Item	Percentage
Pendant	61
Necklace	12
Bracelet	7
Ring	5
Figurine	4
Bangle	3
Name seal	3
Chopsticks, pair	2
Cigarette holder	2
Cutlery	<1
Miscellaneous	1
Total	100

NB: The main miscellaneous items were earrings, combs, goblets and hairclips.



Pendants made up 61% of the ivory items seen in Yangon in late 2017 (Table 8).

Table 9. Yangon: Retail prices for ivory items, late 2017

Item	Size (cm)	Price range (USD)	Average price (USD)
JEWELLERY			
Bangle, plain	0.25–0.5	280	280
	1–3	550–600	575
Bracelet, bead	0.25–5	130–180	155
	1	350–450	400
	2	650–700	675
Necklace, bead	0.5	50–90	68
	0.5–1	200–275	235
String with pendant	1–3	20–100	60
Pendant/charm, small	1–2	7–10	9
Pendant, medium	2–4	35–60	50
Pendant, large	4–6	65–300	154
Ring, thin	0.25–0.5	10–15	12
FIGURINE/FIGURE			
Figurine/figure	2–5	30–64	47
	6–10	80–950	390
	11–20	300–7,900	2,179
	21–30, old	1,500–3,000	2,000
MISCELLANEOUS			
Cigarette holder	10	40–180	93
Chopsticks, pair	Average	120–220	160
Hairpin	10, old	60–70	70
Name seal	6 × 2	100–200	160
Paperknife	15	150	150

USD 1 = 1,350 kyat



Medium-sized ivory pendants in Yangon were priced at about USD 50 each on average in late 2017 (Table 9).

Table 10. Mandalay: Types of retail outlets and number of ivory items on display, late 2017

Outlet	No. of outlets	% of total outlets	No. of items	Avg. no. of items/outlet
Specialty	3	50	4,437	1,479
Souvenir	3	50	193	64
Total	6	100	4,630	772

NB: On request, one of the souvenir outlets brought out 8 more ivory items not on display for sale also. These 8 items are not shown in the table.

Table 11. Mandalay: Main ivory items seen for retail sale, late 2017

Item	Percentage
Pendant	57
Necklace	11
Figurine	7
Bracelet	5
Pick, ear/tooth	4
Pick, cocktail	4
Ring	4
Earrings, pair	1
Cigarette holder	1
Chopsticks, pair	1
Container/bowl	1
Paintbrush pot	<1
Hairclip	<1
Bangle	<1
Packet or jar of beads	<1
Name seal	<1
Miscellaneous	2
Total	100

NB: The main miscellaneous items were tusks, combs, shoe horns and cutlery.



Chopsticks made up only about 1% of the ivory items counted in Mandalay (Table 11). They were less commonly seen than in the past as they must be made from large expensive tusks.

Table 12. Mandalay: Retail prices for ivory items, late 2017

Item	Size (cm)	Price range (USD)	Average price (USD)
JEWELLERY			
Bangle, plain	0.25–0.5	185–260	222
	1–3	330–889	600
Bracelet, bead	0.25–5	15–300	120
	1–2	337–600	492
Earring, pair	1	19	19
Necklace, bead	0.5	22–63	44
	0.5–1	89–185	121
Pendant/charm	1–2	4–13	9
Pendant, medium	3	26–59	44
Pendant, large	4–6	74–148	111
Ring, thin	0.25–0.5	4–6	5
Ring, big	1	33	33
FIGURINE/FIGURE			
Figurine/figure	2–5	56–225	115
	6–10	600–960	780
	11–20	950–4,500	2,225
	21–30	5,550–9,500	7,500
TUSK			
Carved bridge	43	6,000	6,000
	51	7,500	7,500
MISCELLANEOUS			
Bowl	10	4,814	4,814
Cigarette holder, plain	5–10	19–111	67
Cigarette holder, carved	5–10	22–193	107
Chopsticks, pair	Average	95–148	130
Comb	10–12	111–259	185
Comb, thin	10–12	30–44	37
Hairclip	6–7	52	52
Name seal	2 × 6	19–89	64
Paint brush pot	15	741–800	771
Shoe horn	7–10	52–59	56

USD 1 = 1,350 kyat



Medium pendants were USD 44 each on average in Mandalay, slightly less expensive than in Yangon (Tables 9 and 12).

Table 13. Tachileik: Types of retail outlets and number of ivory items on display, late 2017

Outlet	No. of outlets	% of total outlets	No. of items	Avg. no. of items/outlet
Jade	2	29	1,991	596
Buddhist	2	29	174	87
Souvenir	1	14	740	740
Wood	1	14	6	6
Jewellery	1	14	2	2
Total	7	100	2,913	416

Table 14. Tachileik: Main ivory items seen for retail sale, late 2017

Item	Percentage
Pendant	65
Name seal	10
Earrings, pair	6
Necklace	4
Ring	4
Figurine	4
Bangle	4
Cigarette holder	1
Tusk, carved	1
Miscellaneous	1
Total	100

NB: The main miscellaneous items were bracelets, picks, penknives and chopsticks.



Name seals, used for stamping signatures on documents, were more common in Tachileik than anywhere else in the country. They made up 10% of the ivory items seen in Tachileik in late 2017 (Table 14).

Table 15. Tachileik: Retail prices for ivory items, late 2017

Item	Size (cm)	Price range (USD)	Average price (USD)
JEWELLERY			
Baby's bangle	0.25	77	77
Bangle, plain	1-3	245-301	274
Earrings, pair	1	15	15
Necklace, bead, medium	0.5-1	261	261
Pendant/charm, small	1-3	14-15	14
Ring, thin	0.25-05	15-18	17
FIGURINE/FIGURE			
	2-5	77-86	82
	6-10	199-1,688	944
TUSK			
Carved bridge	20	1,074-1,381	1,227
	30	2,603-3,682	3,143
MISCELLANEOUS			
Ear pick, tooth pick	6	9	9
Cigarette holder	10	77	77
Chopsticks, pair	Average	199	199
Name seal	2 × 6	128-261	187

USD 1 = 32.59 baht

NB: Most items appeared recently made with only about 50 that were older (20-30 years).



In Tachileik, ivory figurines including these Chinese folklore gods ranged in price considerably, from USD 199 to 1,688 (Table 15).

Table 16. Mong La: Types of retail outlets and number of ivory items on view, late 2017

Outlet	No. of outlets	% of total outlets	No. of items	Avg. no. of items/outlet
Specialty	7	70	4,436	638
Wildlife	2	20	696	348
Souvenir	1	10	147	147
Total	10	100	5,279	528

Table 17. Mong La: Main ivory items seen for retail sale, late 2017

Item	Percentage
Pendant	59
Necklace	11
Chopsticks, pair	8
Bangle	7
Bracelet	6
Cigarette holder	3
Name seal	<3
Ring	1
Netsuke	1
Figurine	1
Miscellaneous	1
Total	100

NB: The main miscellaneous items were tusks, combs, picks, pens and goblets.



Netsuke are miniature sculptures originally from 17th-century Japan that are appreciated for their delicate carving worldwide; they are also made by the Chinese. Ivory netsuke were only seen in Mong La during this survey (Table 17).

Table 18. Mong La: Retail prices for ivory items, late 2017

Item	Size (cm)	Price range (USD)	Average price (USD)
JEWELLERY			
Bangle, plain	1–2	681–909	832
Bracelet, bead	0.25–5	106	106
	1–2	333–909	601
Necklace, bead medium	1	260	260
Necklace, bead, long	1	424–606	520
Pendant, medium	2–4	61–342	225
Pendant, large	4–6	439–1,212	671
FIGURINE/FIGURE			
Netsuke	3–4	273–455	364
Chinese folklore figure	15	6,970	6,970
TUSK			
Carved	20–30	4,788–9,521	7,586
Plain	30	3,303	3,030
MISCELLANEOUS			
Cigarette holder	10	167–197	182
Chopsticks, pair	average	136–197	167
Name seal	2 × 6	455–758	607
Pagoda	20	5,455	5,455
Paint brush pot	15	3,509	3,509
Ruyi	15	455	455

USD 1 = 6.6 yuan



Chinese customers like intricately carved 4 x 6-cm ivory pendants. These are made by Chinese and Vietnamese carvers, many from the tusks of recently poached African elephants. On average they were USD 671 each in Mong La (Table 18).

Table 19. Myanmar: Types of retail outlets and number of ivory items on view, late 2017

Outlet	No. of outlets	% of total outlets	No. of items	Avg. no. of items/outlet
Jewellery	20	39	1,856	93
Specialty	10	20	8,873	887
Antique	7	14	122	16
Souvenir	6	12	1,122	187
Buddhist	2	4	174	87
Jade	2	4	1,991	996
Wildlife	2	4	696	348
Wood	2	4	12	6
Total	51	101	14,846	328

Table 20. Myanmar: Types of retail outlets displaying worked ivory in locations surveyed, late 2017

Outlet	Yangon	Mandalay	Tachileik	Mong La	Bagan
Antique	6				1
Buddhist			2		
Jade			2		
Jewellery	19		1		
Specialist		3		7	
Souvenir	1	3	1	1	
Wildlife products				2	
Wood	1		1		
Total	27	6	7	10	1

NB: There were three Buddhist/souvenir shops with worked ivory shown, but not on display.

Table 21. Myanmar: Percentage of main ivory items for retail sale seen in main locations, late 2017

Outlet	Yangon	Mandalay	Tachileik	Mong La
Pendant	61	57	65	59
Necklace	12	11	4	11
Bracelet	7	5	<1	6
Bangle	3	1	4	7
Ring	5	4	4	1
Figurine	4	7	4	1
Name seal	3	1	10	3
Cigarette holder	2	1	1	3
Chopsticks, pair	2	1	<1	8
Earrings, pair	<1	1	6	-

Table 22. Myanmar: Retail USD prices of ivory items for sale in principal locations, late 2017

Item	Size (cm)	Yangon	Mandalay	Tachileik	Mong La
Bangle, plain	0.25-0.5	280	222		274
	1-3	570	600		832
Bracelet, bead	0.5	155	120		106
	1-3	538	492		601
Earring, pair			19	15	
Necklace	1	121	83	261	260
Pendant/charm	1-2	10	9	14	
Pendant	2-4	50	44		225
	4-6	154	111		671
Ring, thin		12	5	17	
Ring big			33		
Figurine	2-5	47	115	82	
	6-10	390	780	944	
	11-20	2,179	2,225		6,970
	21-30	2,000	7,000		
Tusk, carved	20-30			2,185	7,586
	43		6,000		
	51		7,500		
Tusk, plain	30				3,030
Cigarette holder	10	93	88	77	182
Chopsticks, pair		160	130	199	167
Comb		12	37-185		
Hairpin		70			
Name seal, personal		160	64	187	607
Netsuke					364
Paintbrush pot			771		3,509
Paperknife, 15 cm		150			
Shoe horn, 7-10 cm			56		

NB: In Yangon and Mandalay, asking prices were in USD and kyat (USD 1 = 1,350 kyat); in Tachileik, asking price in baht (USD 1 = 32.59 baht); in Mong La, asking price in yuan (USD 1 = 6.6 yuan).

Table 23. Retail USD price comparisons for ivory items in Yangon and Mandalay in 1995, 2001 and 2017

Item	Size (cm)	1995	2001	2017
Pendant, medium	3-4		8	47
Bangle	0.5-1	67	51	440
Chopsticks, pair	Avg.	30	40	145
Cigarette holder	6-10	19	7	91
Earring	1-2	11	11	19
Name seal	6 × 2	27	48	112
Ring	Thin	5	6	9
Tusk carved	40-50	813	250	6,750

Sources: Martin 1997; Martin and Stiles 2002; this 2017 survey

1995: USD 1 = 120 kyat; 2002: USD 1 = 440 kyat; 2017: USD 1 = 1,350 kyat

NB: Asking prices were in USD and Kyat. These figures are not adjusted for inflation, but to understand the cost of living, average earnings of a craftsmen/carver were USD 21-54 (2,500-6,500 kyat) in 1995; in USD 34-80 (15,000-35,000 kyat) in 2001; and USD 74-154 (100,000-208,000 kyat) in 2017. These are starting prices, but sometimes vendors may discount certain items, especially if several are bought.



The price of bangles has risen the most compared with past surveys in Yangon and Mandalay due to the requirement for larger tusks to make them and greater Chinese demand (Table 23).

Table 24. Average retail price comparisons in US dollars for ivory items in Yangon, Mandalay, Tachileik and Mong La, late 2017

Item	Size (cm)	Yangon	Mandalay	Tachileik	Mong La
JEWELLERY					
Bangle, plain	0.25-0.5	280	222		
	1-3	575	600	274	832
Bracelet, bead	0.25-5	155	120		106
	1	400	492		601
	2	675	492		
Earring, pair	1		19	15	
Necklace	0.5	68	44		
	0.5-1	235	121	261	260
Pendant/charm, small	1-2	9	9	14	
Pendant, medium	2-4	50	44		225
Pendant, large	4-6	154	111		671
Ring, thin	0.25-0.5	12	5	17	
FIGURINE/FIGURE					
Figurine	2-5	47	115	82	364
	6-10	390	780	944	
	11-20	2,179	2,225		6,970
	21-30	2,000	7,500		
TUSK					
Carved bridge	20-30			2,185	7,586
	40-50	6,750			
MISCELLANEOUS					
Cigarette holder	10	93	87	77	182
Chopsticks, pair	average	160	130	199	167
Hairpin	10	70	52		
Name seal	6 × 2	160	64	187	607

USD 1 = 1,350 kyat (Yangon and Mandalay); USD 1 = 32.59 Baht (Tachileik); USD 1 = 6.6 yuan (Mong La)

Table 25. Vietnam, Laos and Myanmar: Numbers of shops and ivory items on view for sale, 2015-2017

Country	No. of shops	No. of ivory items	Avg. no. per outlet
Vietnam	242	16,099	67
Laos	81	13,248	164
Myanmar	51	14,846	291

Sources: Vigne and Martin 2016b; Vigne and Martin 2017; this study

Table 26. Average retail prices for common ivory items on open view in China, Vietnam, Laos and Myanmar in US dollars for comparison, 2015–2017

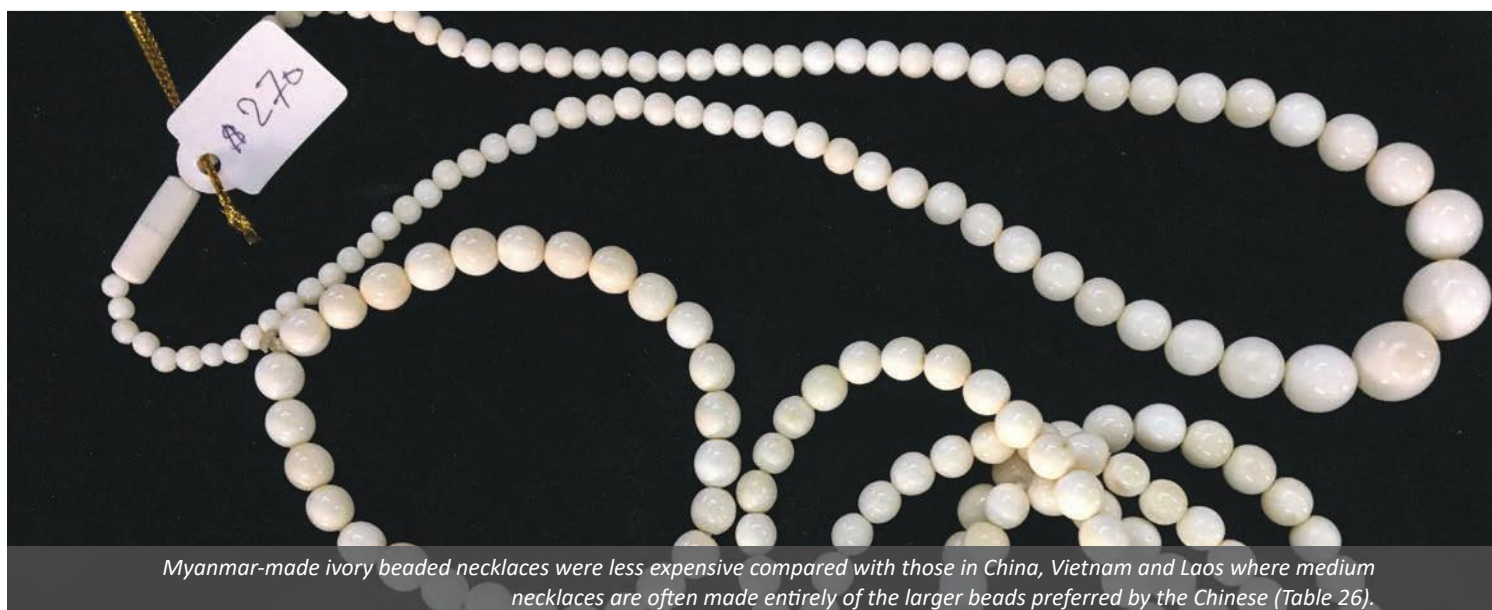
Item	Size (cm)	China	Vietnam	Laos	Myanmar
Date		2015	2015	2016	2017
No. of locations		6	5	5	5
JEWELLERY					
Bangle	1–3	1,382	383	520	652
Bracelet	1–2	1,297	269	381	477
Earrings, pair	1	192	25	50	17
Necklace, medium		3,858	311	327	263
Pendant/charm	1–2	174	56	44	11
Pendant	2–4	407	169	156	106
	4–6	821	276	273	312
Ring	0.25	51	39	27	11
FIGURINE/FIGURES					
Figurine/figure	3–5	1,414	38		81
	5–10	1,685	467		705
	10–20	8,814	1,277		2,202
	20–30	9,700			4,750
	40	46,321			
TUSKS					
Carved	30–50	30,074			5,826
	60–80	37,403			
	90–100	169,779			
MISCELLANEOUS					
Cigarette holder		498	95	463	110
Chopsticks, pair		636	174	196	164
Name seal cm	6 x 2	415	286	505	255
Paintbrush pot, 15 cm	15	5,581		8,350	2,140

Sources: Vigne and Martin 2016, 2017a and 2017b, and this study

Late 2015: in China USD 1 = 6.1 yuan and in Vietnam USD 1 = 2,500 dong

Late 2016: in Laos USD 1 = 8,200 kip, 35 Thai baht and 6.8 Chinese yuan

Late 2017: in Myanmar USD 1 = 1,350 kyat, 32.59 Thai baht and 6.6 Chinese yuan



Myanmar-made ivory beaded necklaces were less expensive compared with those in China, Vietnam and Laos where medium necklaces are often made entirely of the larger beads preferred by the Chinese (Table 26).

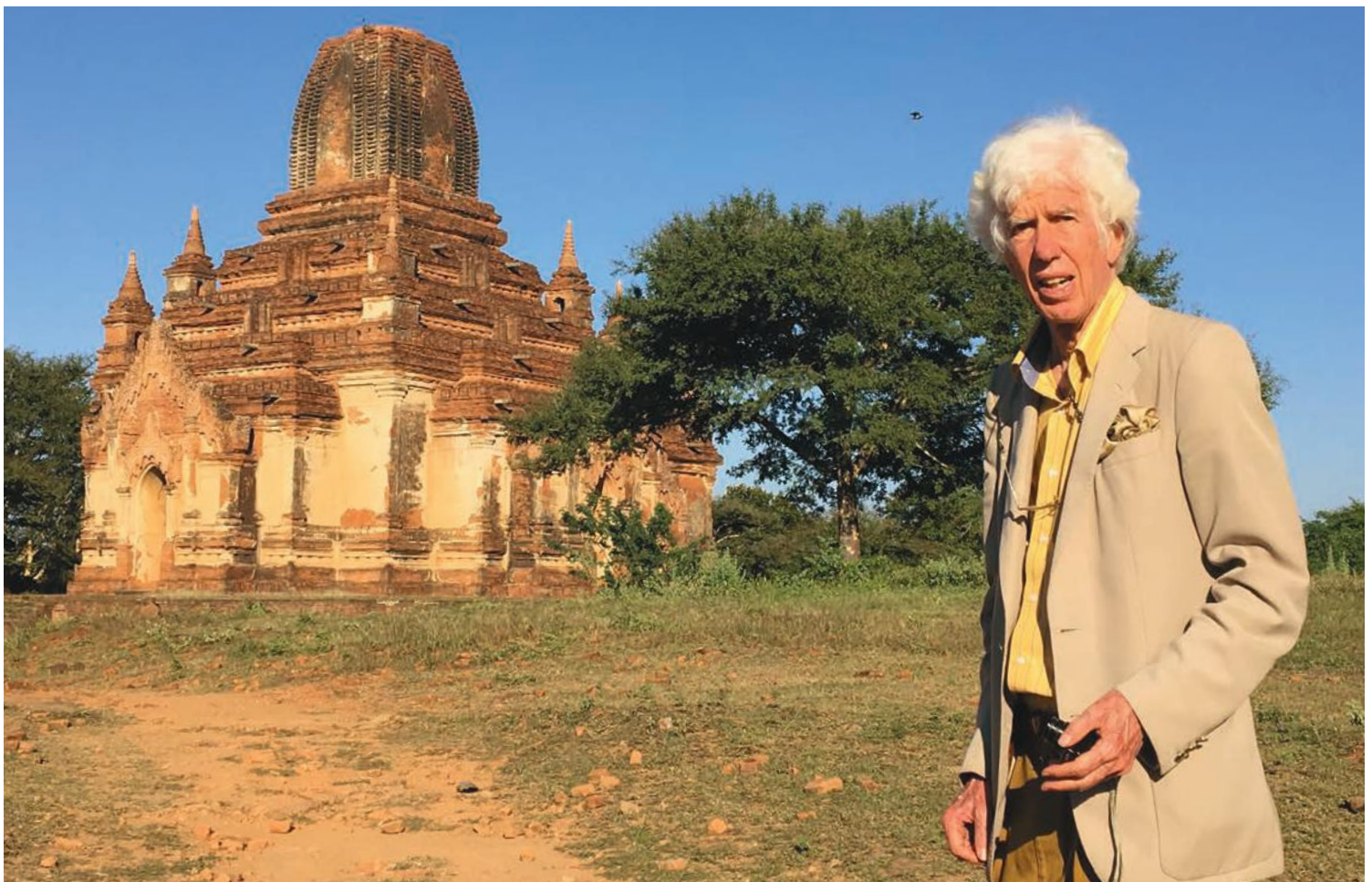
The authors

Esmond Martin and his wife Chryssee first visited Myanmar (then Burma) in 1981. The aim of the visit was to study the international trade in rhino products, but they also took an interest in the ivory trade there. In 1995 they visited Myanmar again to determine the availability of wildlife products, especially ivory, in Mandalay and Yangon, continuing to work together since then. In 1998, Esmond visited the small Myanmar border towns of Tachileik and Myawaddy in the company of wildlife conservationist Tim Redford to observe the cross-border trade in wildlife products headed for Thailand. Lucy Vigne had first witnessed this trade in 1979 while visiting hill tribe areas a few hours' drive from Chiang Mai in northern Thailand, where porters would carry goods unchecked across the river that marked the Thailand–Burma border.

From 1983 as concerns about the illegal ivory trade grew, Lucy Vigne worked as Executive Officer for the IUCN African Elephant and Rhino Specialist Group in Nairobi with David Western as Chair and Esmond as Vice Chair. Esmond and Lucy continued to work together on endangered wildlife trade studies from then on. From the late 1990s, Esmond carried out ivory trade fieldwork around the world co-authoring five monographs with Daniel Stiles and latterly, a further seven with Lucy, as illegal ivory markets boomed once more. This was to be their last, sadly written after his death. These monographs have been circulated around the world.

Tribute

In memory of Esmond Bradley Martin who was tragically killed in Nairobi on 4 February, 2018, by an unknown murderer. Esmond believed in persistence, and after 35 years working together, his enthusiasm for the work never dwindled. At the time of his death, he was still researching for answers to the issues facing the illegal wildlife trade. It is reassuring that many more are now involved in this study, looking for factual evidence to help understand and to develop workable policies and solutions. Esmond was the initiator and leading light in ivory trade field studies in many countries.





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ISBN 978-9966-814-09-8



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