

Ivory and elephants in India

by Esmond Bradley Martin

Despite a low per capita income, an expanding human population and the existence of an ivory industry, elephant numbers in India have remained stable. Does India's experience have any relevance to Africa?

India's ivory industry is one of the oldest in the world. Traders have been importing raw ivory from East Africa for over 2,000 years and have also been consuming ivory from Indian elephants for at least as long. Today, some 2,000 craftsmen are employed in the industry, but despite this, India's elephant population has probably been stable over the past few years, a phenomenal achievement for a poor country with a huge and expanding human population continually threatening the elephants and their habitat. This article will look at some of the anomalies of the ivory industry of India, concentrating on the present day, and will attempt to explain how Indian officials have been able to protect their elephants from poachers and at the same time tolerate an ivory industry. Perhaps wildlife officers in eastern Africa may adopt some of the successful management practices employed in India to improve the conservation of the African elephant.

The earliest reference to ivory exports from East Africa is contained in a document called 'The Periplus of the Erythraean Sea' written around 150 A.D. From a port called 'Rhapta', probably located in present-day Tanzania, the major exports were ivory, rhino horn, and tortoise shell. Some of this ivory was sent to India. Ivory was probably the most valuable export from East Africa from the era of the 'Periplus' until the late 19th century. From 1820 to 1857 an annual average of 234 tonnes of ivory was imported into Bombay and Surat, mostly from eastern Africa; not all of it was consumed in India, as some was re-exported to Britain, China and other places. Throughout the 19th and 20th centuries up until Independence in 1947, India remained one of the largest importers and manufacturers of ivory commodities. However, soon after Independence, the Indian government brought in restrictions including high import duties to increase revenue, which led to a great reduction in the amount of ivory imported. For example, compared with 246 tonnes of raw ivory legally imported on average each year just after World War II, the quantity declined to only 50 tonnes per annum in the 1960s and 13 tonnes per year from 1980 to early 1987. Of course, with the advent of higher taxes, there was more smuggling of raw ivory into India from East Africa and the Gulf countries (especially the United Arab

Emirates), but even so the total amount of ivory brought into the country was only a fraction of what it was in the mid-1940s.

In 1978 when I carried out the first economic survey of the ivory industry of India, I ascertained that there were approximately 7,200 craftsmen widely scattered throughout the country with the largest concentrations in Trivandrum in southern India (3,000), the Delhi area (2,000), Jaipur (800) and Mysore (600). When I returned to India in early 1989 with Lucy Vigne, my WWF project co-ordinator, we discovered that the number of ivory craftsmen had declined sharply by over 70 per cent. This was largely because the government of India tightened restrictions on ivory imports and ivory product sales.

Compared with India's major competitors in the ivory business – China, Hong Kong and Japan – the government became stricter. All imports from South Africa were banned for political reasons, although a lot of this ivory came from legal cropping operations in Kruger National Park. The Indian government also prohibited any imports of the huge Singapore stockpile of 297 tonnes, although this large quantity of ivory was legalised by the CITES Secretariat in late 1986 and thus accepted as legitimate raw ivory by other countries; the Indian government banned this ivory because most of it did not have proper country of origin certificates since much was accumulated from illegal exports from African countries.

Desperate to import ivory, two dealers from Jaipur brought in 5 tonnes of mammoth ivory from the Soviet Union in 1986 and 1987. This ivory is inferior to elephant ivory since it is hard and brittle and has dark brown lines, but is much cheaper. As a result of these imports, the Indian government in 1988 banned future imports and exports of mammoth ivory because, once carved, it could be confused with elephant ivory and provide a loophole. Now these two traders can only sell their mammoth ivory carvings to the very small domestic market.

Although the export of items made from local Indian ivory had been outlawed when India joined CITES in 1976, this ivory was still legally made into various items for local consumption, especially in the southern part of the country where many of the craftsmen and elephants were located. Much, however, was exported illegally in the suitcases of

tourists, causing an increase in the number of elephants poached in southern India in the early and mid-1980s. Therefore, in November 1986, the government amended its 1972 Wildlife Protection Act stopping all commercial use of Indian ivory whatsoever. This was probably the biggest blow for India's ivory industry. The government was, though, partly responsible for the increased poaching of Indian elephants because it had pushed up import duties for African ivory to 140 per cent in the 1980s, raising sharply the value of raw ivory within India, and giving greater incentives to the poachers and middlemen. Finally, in April 1988, the government, realising the problem it had created, eliminated all import duties on raw ivory, greatly reducing the poaching pressure on the Indian elephants.

The 1986 amendment to the Wildlife Protection Act also introduced a licensing system for African ivory. All ivory factories, dealers and even individual craftsmen had to be licensed annually and had to submit monthly returns on the amounts of raw ivory purchased, the number of pieces made, their weights, and a record of their sales. To enforce these new regulations, wildlife inspectors went around to the shops and craftsmen's houses. These Indian regulations are some of the most severe in the world and have certainly reduced the amount of illegally obtained raw ivory.

However, the added paperwork and harassment by government officials checking every stage of the business plus the increasing prices and shortage of raw ivory added to the devastation of India's ivory industry. Nearly three-quarters of the craftsmen have abandoned their traditional livelihood, and many have turned to using substitutes. Some have tried carving camel bones (which cost only \$1.50 a kilo) but the demand for them has not been brisk. This is because camel bone tends to turn an unattractive yellowish colour and is not shiny. Also, due to the composition of camel bone it is almost impossible to carve the same delicate details as one can on ivory. Furthermore, most Hindus and some Muslims do not like to purchase items made from any animal bones because they are dead animal products. Other bones, such as from water buffaloes, sheep and goats are also carved but they are considered to be even more inferior to camel bone and consequently sell cheaply, making it almost impossible for the carver to earn as much

money as an ivory craftsman.

Many craftsmen have switched to carving wood, especially in the south. The most popular is sandalwood, but the supply of this is limited. It costs about \$9 a kilo wholesale. Sandalwood is quite soft and thus the final finish is not as attractive as ivory. Because this softer material is easier to carve, more figurines can be produced in sandalwood in a week than in ivory. The carvers' take-home pay, however, is about 30–50 per cent less because sandalwood figurines sell retail on average for only 10–30 per cent of what similar ivory pieces would cost. Rosewood (55 cents a kilo wholesale), ebony (\$1.30 a kilo) and other woods are also carved by ivory craftsmen, if

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Clockwise from top:
A craftsman in Delhi carves a pattern on an ivory bangle.
A domesticated elephant of the Kerala Forest Department pulls a log while being guided by the mahout.
Ivory chess sets are popular items bought by tourists; this one in Delhi is particularly large and beautifully carved.
This intricately carved sofa is made entirely of ivory and is part of an ivory furniture set on view in a show room in Delhi.



Esmond Bradley Martin



Lucy Vigne



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"The Africa Cultural Gallery offers works by some of East Africa's finest artists. They are expensive ... but they are authentic."

New York Times
16 Dec. 1984

Collectors items in wood by Akamba and Makonde artists, and fine batiks.



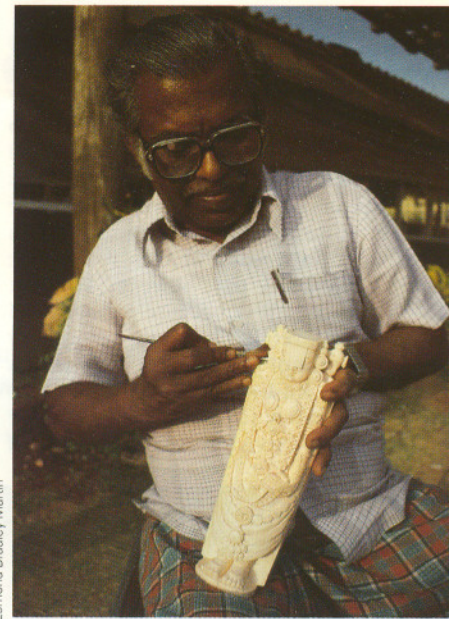
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they cannot get ivory. But most people prefer carvings in ivory, not only because ivory is precious and thus a good investment, but also because the most intricate and beautiful pieces can be made from it. One trader summarised these feelings in the following words: 'Ivory has prestige, while bones and wood are considered common without much value'.

Craftsmen in Mysore used to be famous for inlaying ivory in pieces of wood. Now they have turned to sambar and spotted deer horn for inlay work, bought from the Forest Department at \$3.30 a kilo. The dealers claim that in this case tourists cannot tell the difference between horn and ivory, thus sales have not been affected. In Delhi and Rajasthan, some of the artists who painted detailed miniature scenes of Mogul courts and Hindu gods and goddesses on thin rectangular plates of ivory have had to switch to paper and silk; a few have tried painting on animal bones but because they are porous the quality of the finished paintings is poor. Similar to the carvers, the painters' incomes have also declined.

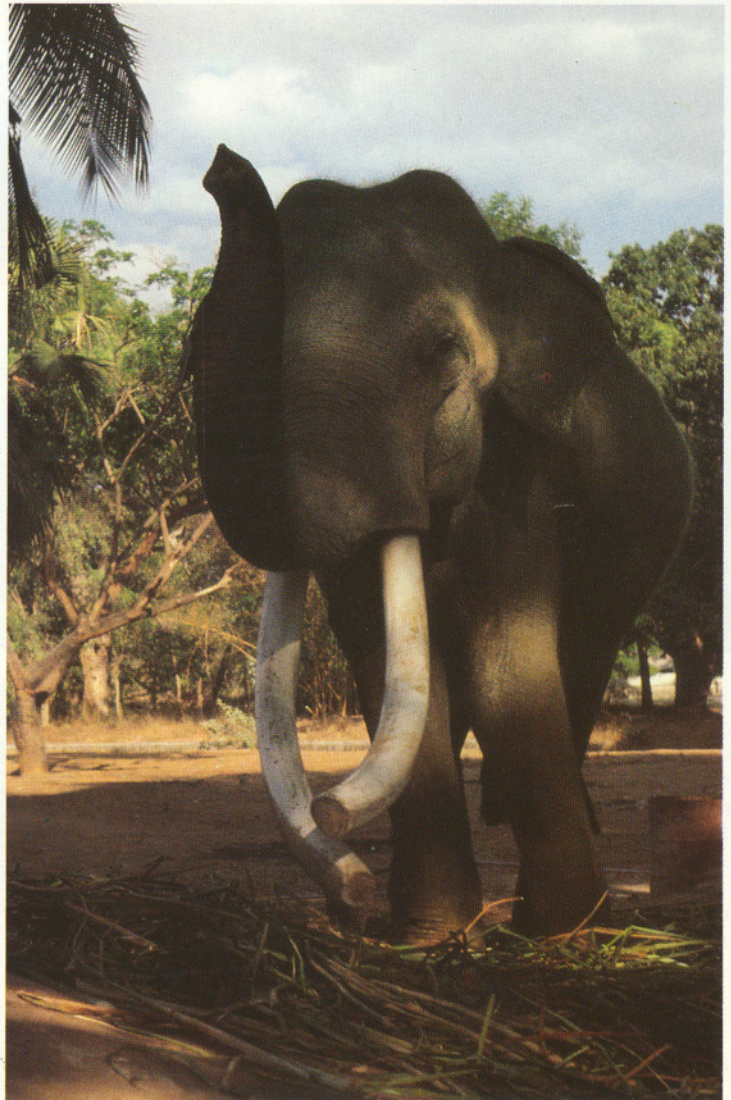
A few former ivory carvers in India have managed to increase their incomes by working gemstones, especially emeralds and rubies. The carvers can demand a higher fee for working on them as gemstones are more valuable. Only the



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In Bangalore, this master carver adds the final touches to his ivory figurine.

This Indian elephant in Mysore Zoo has had the tips of his tusks removed for safety.



Lucy Vigne

skilled master craftsman can easily switch to carving precious stones, and as it is physically more exacting and a greater strain on the eyesight than ivory work, only the younger carvers have the stamina for this. Furthermore, the chips which fly up can cause eye injuries, and the stone dust may damage the lungs.

The government is fully aware that its stringent regulations have forced thousands of craftsmen to lose their jobs in a country with a major unemployment problem, but it considers the protection of the Indian elephant paramount. R. Sukumar of the Indian Institute of Science in Bangalore has done more research on the number of elephants poached in the south than probably anybody else, and he estimates that from 1980 to 1986 a minimum of 100 elephants in southern India succumbed to poachers each year from a population of perhaps 6,500. Elephants in north-east India number roughly 10,000, but according to the authority there, D.K. Lahiri Choudhury, poaching for ivory was not a serious problem during this period in that region.

Poaching in the south of the Indian elephant became especially serious at the end of 1986 for a short period, when one gang succeeded in killing at least 15 bull elephants. In response the forest departments of the states of Tamil Nadu, Karnataka and Kerala pooled their resources and met periodically to coordinate their efforts. The departments soon acquired more wireless sets to improve communications with the men in the field; they increased the number of modern rifles, and most importantly they expanded their intelligence service to ascertain where the gang was located and exactly who was involved. At the same time the forest departments increased the number of men to patrol the reserves and track down the poachers. Finally, the gang was found in 1987 and a shoot-out occurred. Although the gang leader escaped, he is on the 'wanted list' with his name and photograph and has not dared to return. Since then, the population of Indian elephants has once again increased in the south but still the adult females, which are tuskless, significantly outnumber the mature males.

While the numbers of Indian elephants have begun to go up in certain parts of India such as the south, the numbers of ivory craftsmen continue to fall. In early 1989 only the craftsmen in Jaipur were doing reasonably well, while in the south, formerly the region with the most carvers in the country, the industry had collapsed with only 3 per cent of the number of craftsmen working in ivory compared with 1978. It is important to note that, for India as a whole during the late 1980s, the average craftsman probably consumed less ivory than in any other major ivory manufacturing country: about 7 kilos a year. The main reasons for this, besides the general shortage of raw ivory, are that in the north many of the remaining craftsmen paint ivory, which requires only small thin plates, and in the south only hand tools are used instead of electric drills, and so a craftsman may work for many months on one piece. For

Numbers of ivory craftsmen and regional ivory specialities in India in 1988

Location	Number	Specialities in ivory
Delhi	450	Paintings, jewellery, magic balls, tusks, table lamps, boxes, screens, seals, erotic figures, elephants, paper knives, chop sticks, cigarette holders, dice and toothpicks
Jaipur	760	Paintings, Indian gods and goddesses, charms, Chinese style human figurines, and animals
Jodhpur	190	'Chip work': ivory chips are used to cover wooden animals and boxes
Udaipur	300	Paintings
Amritsar	25	Chess sets and boxes
Lucknow	30	Fans, lamps and boxes
Ahmadabad	30	Bangles
Bombay	15	Bangles and pendants
Murshidabad	40	Bullock carts, peacock boats, and elephants with howdahs
Varanasi	20	Chess sets and lamps
Trivandrum	45	Human figurines, Ghanesh (elephant-headed Hindu god) and other figurines of Hindu gods and goddesses, and flower pots
Madras	10	Hindu gods and goddesses
Bangalore	40	Hindu gods and goddesses
Mysore	5	Inlay work on furniture and pictures
Others	100	

contrast, in Japan the average craftsman consumes 100 kilos of raw ivory a year, while in Hong Kong the carvers work at a much greater speed and for very long hours, using very modern and efficient machinery, with the result that the average Hong Kong craftsman consumes on average per year about 250 kilos of raw ivory.

The future of India's ivory industry appears bleak. It is now largely dependent upon the import of legal African ivory, which is becoming more expensive and harder to obtain. In May 1989 an average tusk imported into India cost about \$250 a kilo. Traditional exporting countries such as Kenya and Tanzania prohibited all legal exports by mid-1989, and Hong Kong, also a major supplier to traders in the 1980s, banned all exports of raw ivory in June 1989. For several years now, few young people have entered the industry because they see no long-term future in it. Old, experienced carvers have retired with the effect that in some places quality ivory carving can no longer be done, making the industry less competitive with those in Japan and Hong Kong. If the industry had to shut down for a few years due either to a lack of raw ivory or the closure of the main markets in the western world for finished products, the ivory carvers' skills could be lost to the extent that if the industry were ever to be re-opened, the carvers' work would of course be inferior.

The Indian government was correct in instituting harsh controls on the ivory business in the 1980s in order to conserve the Indian elephant. There have, however, been some government excesses, especially of a bureaucratic nature, aimed at the large ivory retail outlets and at some of the illiterate craftsmen. Nevertheless, India has now managed to sustain both an ivory carving industry employing more people than any other country, and probably a stable elephant population totalling approximately 20,000 animals.

What aspects of India's law enforcement can be relevant in east and central Africa? India, having one of the lowest per capita incomes in the world and possessing

the second largest human population, has been able to manage its wild populations of elephants, rhinos and tigers so successfully that their numbers have all been stable or increasing recently. The forest departments have accomplished this by allocating the necessary equipment, motivated manpower and commitment to deter most poaching efforts. In addition, concerning the elephants, the forest departments have improved their intelligence gathering capabilities, and increased and enforced their regulations on the local ivory industry. They have done this with very little money from abroad, and virtually no foreign experts have been brought in. Some of these successful management practices carried out by national and state forest departments in India should be studied with the aim of implementing those which may be relevant to conditions in Africa today.

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At the recent CITES meeting held in Switzerland in October 1989 (see page 8), the African elephant was transferred from Appendix II to Appendix I. This means that unless India takes out a reservation, which is unlikely, all commercial imports and exports of African elephant ivory will be illegal from the middle of January 1990. This will probably result in almost the complete collapse of India's ivory industry.

Esmond Bradley Martin is a geographer who first visited India in 1968. In 1978 and 1979 he travelled extensively through India to collect data for the first comprehensive survey of ivory craftsmen. In 1980 and 1986 he spent time in Assam, studying the illegal killings of the greater one-horned rhinoceroses and the trade syndicates which were involved in exporting the horns. In 1989 he returned to India for two months to up-date his information on the ivory industry.

Later in 1989, Dr Martin travelled to eastern Asia as the trade consultant for the BBC and Discovery Channel (USA) film *Ivory Wars*. He works for the World Wide Fund for Nature (WWF-International).