

Illegal Trade of Fresh Water Turtles and Tortoises in India

¹MKS Pasha, Rahul Dutta and Samir Sinha

TRAFFIC India, WWF India-Secretariat, 172-B Lodhi Estate, New Delhi – 110003

E-mail: ¹kpasha@wwfindia.net

Introduction

Asian freshwater turtles in particular, and turtles in general, are facing increasingly severe threats that need to be dealt with effectively. Nearly 100% of Asian freshwater turtle and tortoise population is impacted by trade (Rhodin and Behler, 2001). Over half of Asian freshwater turtle and tortoise species are endangered as per the IUCN criteria. This includes 18 critically endangered, and one extinct species: the Yunnan box turtle *Cuora yunnanensis*. Asian chelonians are threatened due to habitat destruction, scale deforestation (Altherr and Freyer, 2000), chemical pollution and fragmentation of large rivers by dams (Altherr and Freyer, 2000). The international illegal trade in chelonians has additionally enhanced the problem and has been implicated as the major conservation threat for most species of Asian turtles (van Dijk *et al.* 2000).

The turtle fauna in India is represented by 33 species, which includes twenty-four freshwater, five marine and four land-dwelling species. India has three endemic turtles. Two of these — the Travancore tortoise (*Indotestudo travancorica*) and the Cochin forest cane turtle *Vijayachelys silvatica*), are endemic to the Western Ghats; while the Leith's softshell turtle (*Nilssonina leithii*) is endemic to peninsular India.

Two main types of trade in turtles occur in Asia. One is a high-volume, commodity-type trade in whole live turtles or turtle parts for consumption; the other is the pet trade.

Hunting of turtles for sustenance might have a less impact, but the growing demand in turtle plastron in China for making gelatin has up scaled the hunting to an unsustainable level. The high income from turtle plastron has attracted other communities to this trade, other than those who were engaged traditionally in hunting turtles.

A medium sized freshwater adult turtle yields approximately 500 g of meat, 300 g of carapace and other body parts and 200 g of plastron. In a single week long hunting period in a good turtle habitat, approximately 90 turtles are hunted, which could yield 18 kg of plastron. Such hunting practices are carried out four to five times in a month for about seven to eight months starting at the monsoon season in the gangetic river system. An operative of Trade Monitoring Unit was informed that the Gangetic soft shell turtle (*Nilssonina gangetica*) and the Common soft shell turtle (*Lissemys punctata*) is the most preferred turtle species amongst the buyers (O'Brien 2004).

We investigated the volume of trade in Indian Star Tortoise, *Geochelone elegans*, which is commonly used in the pet trade. In addition, we also investigated the principal states from where other fresh water chelonians are illegally hunted in India.

Methods

Since there is no recent primary information in India on chelonian trade, we relied on two secondary sources to derive national level information. Information collected since January 2001 is presented in this paper.

1. Information received through Forest department state offices in states where chelonian trade is reported. Records of number of turtles confiscated by either the forest department directly, or by the police department and handed over to the forest department, were collected. This source could provide information only on the number of chelonians seized with no/little reference to species or other details. Seizures were largely made in the same state that the chelonians were captured in. Therefore this data is thought to represent the approximate location of actual captures at the state level.
2. Information on turtle and tortoise seizures as reported in national daily newspapers were collected. For the star tortoise, the location of capture of the animals was always unknown. Therefore only information on numbers seized is presented here to illustrate the volume of trade. This is an unknown fraction of the total trade and no effort was made to correct this for actual numbers traded since this is unknown.



The Gangetic softshell turtle *Nilssonina gangetica* and the Indian flapshell turtle *Lissemys punctata* were reliably identified by the forest department officials and from the photographs in the newspaper articles. This paper provides a general view on trade and attempts to show how large and widespread is the trade in chelonians in India. The information pertains to the data collected from January 2001 – January 2004.

Results

Volume of trade in star tortoise

Between January 2001 and January 2004, 13 cases of star tortoise seizures from three international airports and two additional locations accounting for 7404 tortoises were reported in national newspapers. The airports at which seizures occurred were Anna International Airport, Chennai (64.4% of the tortoises), Changi International Airport, Singapore (27%), and Kuala Lumpur International Airport, Malaysia (7%). Two catches in Bangalore accounting for 120 tortoises were seized at a railway station and at an undisclosed location. Most cases have been after July 1, 2003 (Plate 14.2 A).

Distribution of chelonian trade in India

Between January 2001 and February 2004, a total of 43 records were collected from Forest Department staff and newspapers reports accounting for seizure of 4665 turtles and tortoises. These seizures were spread over 13 states with most seizures being from Uttar Pradesh, Andhra Pradesh, Jharkhand and Bihar, in that order (Plate 14.2 B). Apart from live and dead turtles, turtle carapaces and meat were also traded and have been seized in huge quantities at several places. Table-1 shows the diversity of chelonian trade in different states.

Table-1: Variety of use of chelonians as evidenced by seizures during trade in various states in India. (? – possible use but not confirmed; blanks do not indicate total absence of that product in trade but lack of information.)

State	Products			
	Meat	Carapace and related products	Live (for meat)	Live (for pet trade)
Andhra Pradesh	+		+	
Assam			+	
Bihar			+	
Delhi				+
Jharkhand			+	
Madhya Pradesh		+		
Manipur			+	+
Nagaland			+	
Rajasthan	+		+	?
Tamil Nadu			+	?
Uttar Pradesh		+	+	?
Uttaranchal			+	
West Bengal	+	+	+	

Discussion

Tortoises and freshwater turtle species continue to be threatened by fragmentation, destruction and pollution of their habitats. They are being hunted and traded in overwhelming numbers. They are used for food, pets and traditional medicine with no room for sustainability.

Among all the threats that the turtles and tortoises face today, the most serious of them is the uncontrolled trade for food and traditional medicine in south Asia. A large part of this trade is meant for markets in south-east Asian.

Reports of hunting and trade in turtle species show that the illegal hunting takes place in almost all water bodies such as irrigation canals, rivers and ponds. There is a definitive pressure on the turtle populations is evident from the fact that the communities are traveling large distances as the number of turtles is diminishing.

The three preferred species were the Gangetic soft shell turtle *Nilssonina gangetica*, the Indian flapshell turtle *Lissemys punctata* and the Peacock soft shelled turtle *Nilssonina hurum*. All the three species are listed in Schedule – I of the Wildlife (Protection) Act, 1972.

Recent studies conducted by TRAFFIC India in one of the prominent markets in Indonesia and Thailand indicate that the Indian Star Tortoise rank in top three of the most commonly traded species of tortoises. South India appears to be the hub of trade of star tortoises to transport the animals, and it appears to cater almost entirely to the international pet trade market. Reports in newspapers based on interrogations of the traders caught with the animals seems to indicate that most tortoises are acquired from Andhra Pradesh and transported to Tamil Nadu to be exported to the foreign market. The star tortoise is reported to be traded at a price ranging from US\$40 in Singapore to up to US\$150 in USA and Europe (O'Brien, A. 2004). Exports are mainly to the south-east Asian countries, Jakarta, Singapore and Bangkok. The total numbers of Asian turtles traded specifically as pets are difficult to estimate (Altherr and Freyer, 2000) and this paper provides the first information of actual numbers, albeit geographically scattered and incomplete. Incomplete records maintained by authorities at the location of seizures make it difficult to obtain complete details of the species involved in trade. We suggest that a standard questionnaire be distributed to officials at airports and sea ports and other transit points of trade. This should be reviewed periodically and information be shared to strengthen the knowledge base on trade in species. Translation of this information into policy can ensure control of the illegal trade of the species.

There is no information on the volume of trade of chelonians in India. This is serious gap in information considering that most experts acknowledge that India is the source for many species, particularly those sought for their meat, in the markets of entire southeast Asia (Altherr and Freyer, 2000), turtle meat is sold at prices varying from ' 5 to ' 100 depending on the species. Live softshell turtles are reportedly sold for ' 100 to ' 200 (O'Brien, 2004).

Newspaper reports severely underestimate the actual volume of trade. Therefore, field studies that quantify the volume of trade and its impacts are required in India. The state of Uttar Pradesh is known to be a source for most of the softshell turtles (Das 1990, Bhupathy *et al.*, 1992) and is corroborated by this study as well. The state needs to curb poaching and illegal trade. Regular reporting of catches to media by police and forest department is important. It conveys the magnitude of illegal trade in freshwater turtles and tortoises to the people and increases awareness.

Acknowledgements

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References

- Altherr, Sandra and Freyer, Daniela 2000. Asian Turtles are Threatened by Extinction. *Turtle and Tortoise Newsletter* 1:7-11.
- Asian Turtle Trade Working Group 1999. *Conclusions from the Workshop on trade in tortoises and freshwater turtles in Asia* Dec 1-4, 1999. Phnom Penh, Cambodia.
- Bhupathy, S., Choudhury, B. C. and Moll, E. O. 1992. *Conservation and management of freshwater turtles and land tortoises of India*. Report of the Turtle and Tortoise Conservation Project, of the Wildlife Institute of India and U. S. Fish and Wildlife Services. Mimeo. 25 pp.
- Das, I. 1990. *Turtles and tortoises of India*. Oxford University Press, Bombay. 179 pp.
- O'Brien, A. 2004. *Smuggling leaves star turtles shell-shocked*. Delhi Times, Times of India (Thursday 29, 2004).
- Sundar, K.S.G. (unpublished manuscript). *From a poacher's bag! Patterns of exploitation of Lissemys punctata (Lacépède, 1788) in Etawah, Uttar Pradesh, India*.
- Van Dijk, P. P., B. L. Stuart, And A. G. J. Rhodin (eds.). 2000. *Asian Turtle Trade: Proc. Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia*. Phnom Penh, Cambodia, 1-4 Dec. 1999. Chelonian Research Monographs No. 2. Chelonian Research Foundation, Lunenburg. 164 pp.

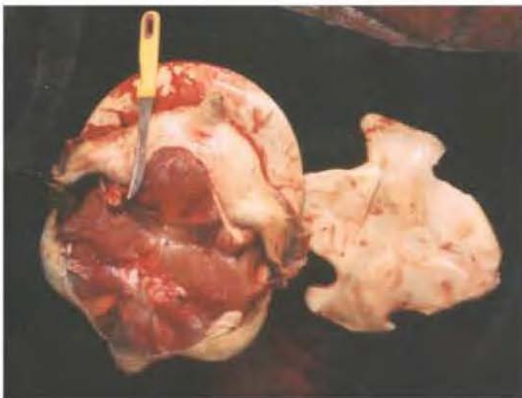
Plate 14.1



(A)



(B)



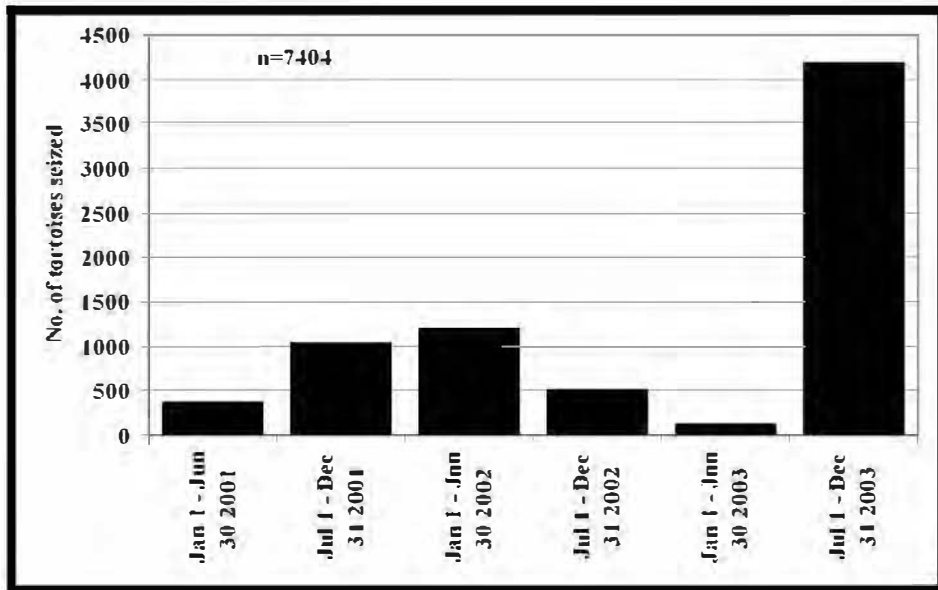
(D)



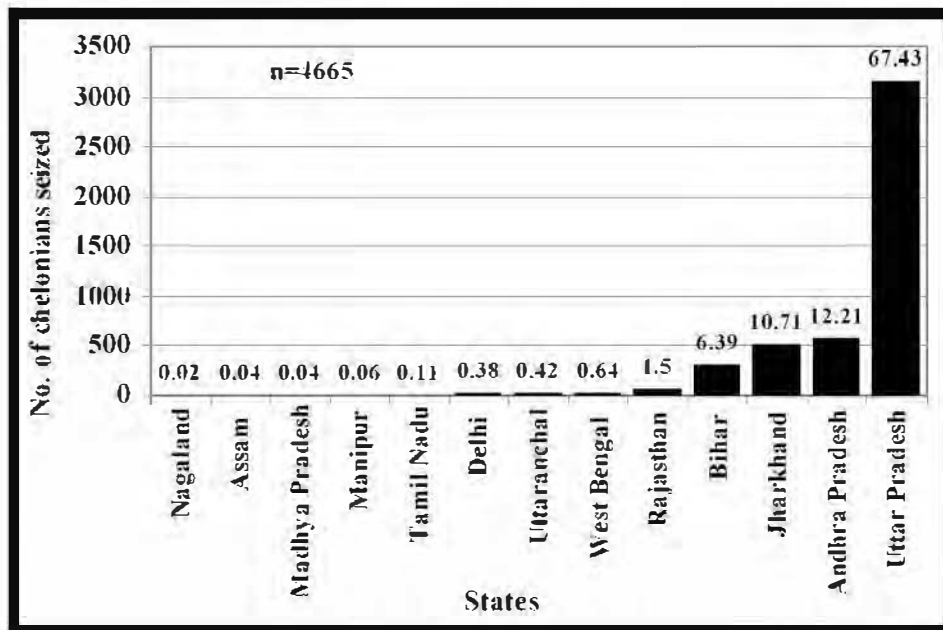
(E)

(A): Dismembered soft shell turtle with parts valuable in trade being removed; (B): Cartilaginous parts of the plastron of soft shell turtle used in trade; (C): Plastron of soft shell being excised and (D): *Nilssonia* sp. in trade.

Plate 14.2



(A)



(B)

(A): Number of Indian star tortoises in the pet trade as evidenced by seizures since Jan 1, 2001 and (B): Bias in number of chelonians seized in different states in India (Jan 1, 2001 – Feb 29, 2004).