

## Interim Report on the Freshwater Turtle Trade in Bangladesh

S. M. A. RASHID<sup>1</sup> AND IAN. R. SWINGLAND<sup>1</sup>

<sup>1</sup>*Durrell Institute of Conservation and Ecology, Rutherford College, University of Kent, Canterbury, Kent CT2 7NX, United Kingdom*

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### Introduction

Trade in the freshwater turtle species of Bangladesh has been occurring for a very long time. Exploitation of this natural resource was limited prior to 1980, but during the past decade there has been a rapid and drastic increase both in terms of commercial exploitation and volume of trade. At present freshwater turtles are captured everywhere in the country. Since there are potential buyers, who have emerged due to the increase in turtle trade, the hunters prefer to sell their catches to those buyers rather than selling it in the small country markets.

Turtle meat has served as a source of protein to most of the ethnic groups and non-moslems in Bangladesh. The turtle meat and eggs are mostly consumed by the Hindus and to some extent by the Christians, Buddhists and other minorities. Recent observations indicate that the rate of turtle meat consumption has accelerated due to the high price of other meat sources, making them unaffordable to most people, as well as the scarcity of fish and meat products. This trend has already proved to be a threat to the chelonian population. Many of the freshwater turtles are becoming rarer. Personal observations and interviews with the local people and hunters (turtle catchers) have confirmed it.

Lack of turtle trade regulation is also one of the reasons for the increase in the magnitude of turtle trade. Though on paper the Forest Department, "godfather" of all the wildlife in Bangladesh, looks after it practically there is no one to execute the regulation. There is no regulation to control the hunting and capturing of the

turtles. As a result, freshwater turtles are exported all round the year though the bulk fluctuates with the season. Some of the freshwater turtles are included in CITES I, but trade is still continuing. The Bangladesh Wildlife (Preservation Amendment) Act, 1973 does not include any turtle species in its schedules and as such gives free access to the exporters. Moreover the government also charges a nominal amount of duty (Taka 5.00 per maund) on the export.

### Study Period

This is a preliminary report on the freshwater turtle trade in Bangladesh, covering the period from May 1989 to mid-August, 1989. The work is still in progress and the final report will be submitted after the completion of the study.

### Objectives

The primary objectives of this study are to identify/determine:

1. Species involved in trade.
2. Volume of trade.
3. Proportion of each species exported.
4. Methods of collecting.
5. Major collecting sites, habitat preferences of the species concerned.
6. Sex ratio of the species exported.
7. Status of the species in the wild involved in trade.
8. Methods of transportation, packing, stocking.
9. Mortality rate during transportation.

### Previous Information

The chelonian fauna of Bangladesh are

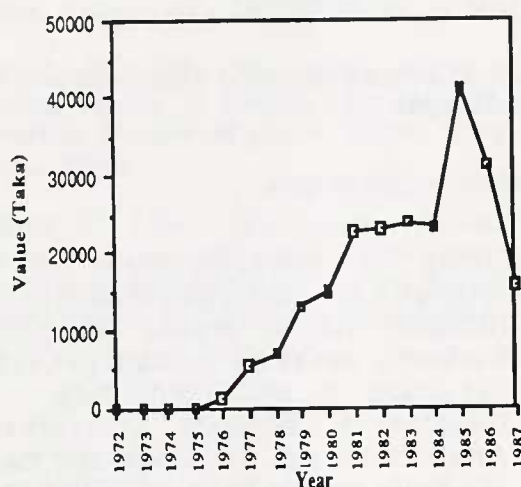


FIG. 1. Monetary value in Bangladesh Taka of turtle export from 1972 through 1987. The current exchange rate is approximately \$1 US = Taka 30. Figures are as reported by the Bangladesh Export Promotion Bureau.

not well documented. We have to rely mostly on Smith (1931), and it is necessary to revise and update the information for most of the chelonians. Later works include that of Ahmed (1958), Shafi and Quddus (1977), Husain (1979), Khan (1982, 1985) and Fugler (1984). All these publications throw some light on the chelonians with some indication of the species being exploited for trade either locally or for export. Fugler (1984) put forward further information on the extent of trade and the species involved. But since he worked for a very short time much information is lacking. A recent study by Hosain (1989 unpublished) gives some information on the food and feeding habits of some freshwater turtles in Bangladesh. Information on turtle export is also on file at the Export Promotion Bureau (EPB). They only give the value of the turtles exported (Fig. 1). Neither the quantity nor the species are known.

### Methods

Based on earlier information regarding the location of some of the turtle export

centers, those centers were visited and the owners were briefed about our intention to collect information on the turtle trade. These centers were located at Baidyar Bazar, Sonargaon; Narayanganj (BIWTA Ghat, Jam Tala, Panchaputi); and Dhaka (Mirpur Section 1 and 10) [Fig. 2].

After seeking information about the export schedule, members of the study group were present physically at the centers observing the packing methods, taking measurements of the turtles exported, identifying and sexing them and also estimating the proportion of each species exported in the consignment. The group members had to face a lot of non-cooperative attitudes from the traders. But patience and interest proved worthwhile and when the traders understood that we are not doing any harm to their trade, they gradually came forward.

At present the first author and two research assistants are working on this turtle trade project. The two export centers located within the metropolis Dhaka, Mirpur Sec. 1 and Sec. 10, are being visited weekly. Turtles are being exported every week and those are being monitored. The other centers are being visited once in a fortnight but it is not possible to check the turtle specimens there. The reason for this is that those centers are located far away and that in all the cases the turtles are packed for export after midnight so that they can be transported to the airport by dawn when most of the airlines are operating to the Far East. Most of these turtles are destined for Japan, Hong Kong, Singapore, Thailand and Malaysia where they are mostly used for food.

### Results

Zia International Airport, Dhaka is the only shipping port. The turtles are exported live, packed in bamboo-woven wicker baskets. Two to three individuals weighing about 10 - 12 kg are packed in a single basket but when the specimen is large, it is packed singly. Prior to packing the turtles are washed and cleaned of any foreign material. The sturdy cord which is

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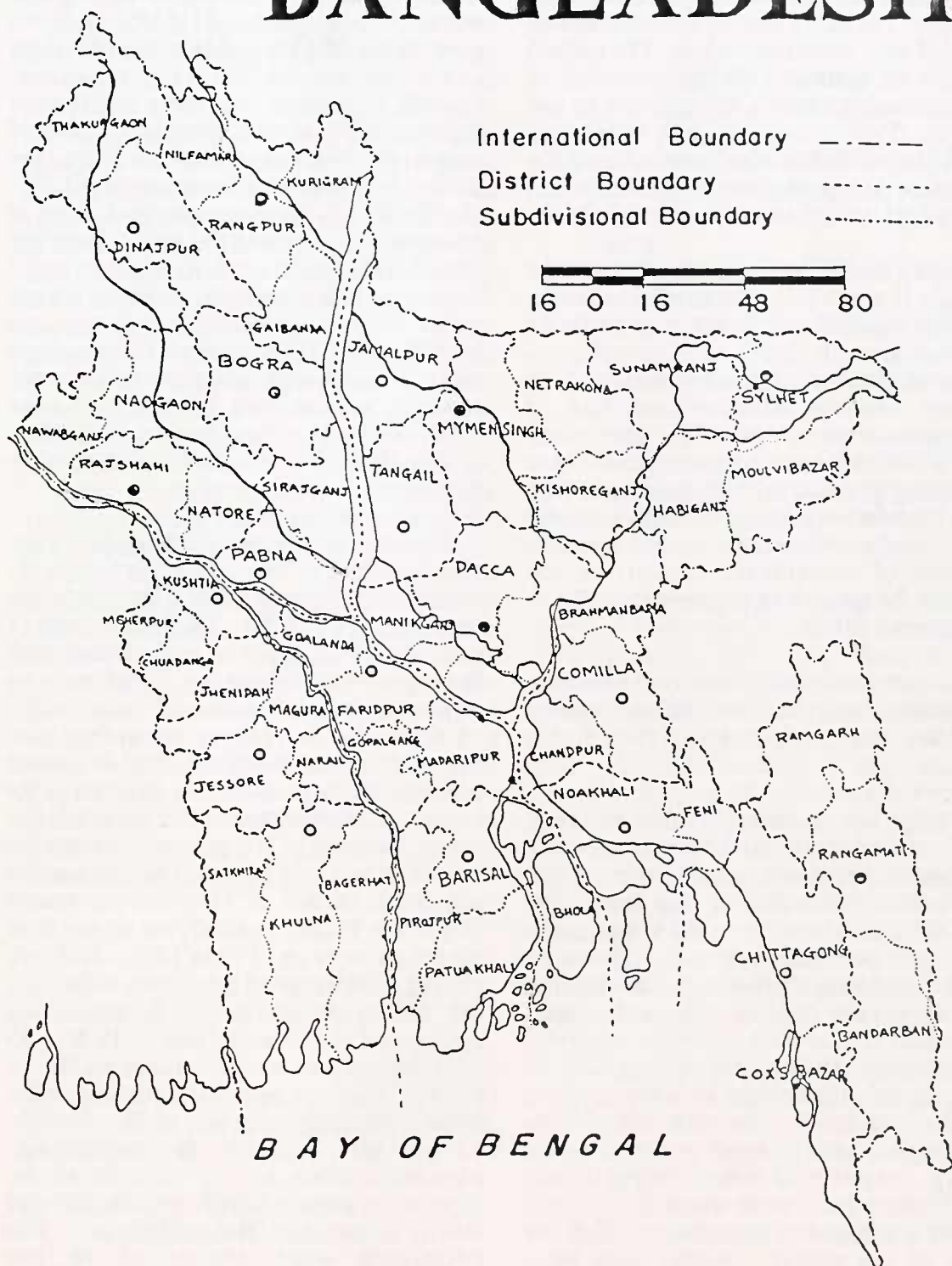


FIG. 2. Regional map of Bangladesh.



used to tie the fore and hind limbs of the turtle on each side together (to restrict its movement) is cut off and then the individuals are placed in the baskets to be packed. The lid is placed over the basket and tied with aluminium wires. The packed baskets are marked with the trademark of the exporter and then transported to the airport. Turtles under 1 kg in weight are not exported. While weighing, packing the exporters do not treat the different species separately.

During this period (summer), the volume of trade is much less. Because of monsoon rain the water level rises and it becomes difficult to catch turtles. But according to some of the turtle hunters the catch is greater because of increased rate of movement of the turtles and the hunters can also maneuver and place traps and other collecting gears in suitable localities. The peak time for exporting the turtles is winter (late October-February). At that time the number of individuals as well as the number of species is higher compared to the summer catches.

Information is being collected about the frequency of catches of the different species in different seasons and also in different habitats.

During this interim period it has been observed that 1 metric ton of live freshwater turtles are exported every week. The volume is much less than during the peak time, in winter, when the volume rises to 5 - 6 metric tons per week. Presently turtles are being shipped once a week but during winter they are shipped almost everyday. The species exported during this period were *Aspideretes hurum*, and *A. gangeticus*. *Aspideretes hurum* comprises the major portion of the bulk followed by *A. gangeticus*. *Lissemys punctata* is not being exported but smuggled to neighboring India with whom Bangladesh shares most of the boundaries. The sex ratio of the exported turtles have been found to be 45.71% males and 54.29% females irrespective of the species. The average weight of the exported turtles was 7.72 kg ranging from 1 kg to 33.20 kg.

From one of the export centers in Dhaka 4017 kg of live turtles were exported from June 10th to August 21st. The ratio of the turtles, in terms of number of individuals were *A. hurum* 71.43% and *A. gangeticus*- 28.57% and in terms of weight was *A. hurum* 83.62%; *A. gangeticus*-16.48%. Assuming that turtle demand for export is the same and that the number of people going for it is also the same, the decline in the export figures during 1987-88 (Fig. 1) can be related to the decline of the turtle population in the wild. There are occasional reports of *Kachuga tecta* hatchlings being exported to Japan for pet trade. About 200 hatchlings were exported in 1988, and 40 kilograms of live *Kachuga tecta* hatchlings and juveniles were exported to Singapore last year. In June 1989, there was a consignment of 40 kilos of live *Geochlemys hamiltoni* shipped to Singapore.

The prices of the turtles also vary considerably. The collectors sell *A. hurum*, *A. gangeticus* and *Chitra indica* at the rate of Taka 1200 - 1300 per maund (1 maund = 33 kg. approx.) to the middleman (locally known as *maha ian* or *bePari*) who in turn sells it at the rate of Taka 1400 - 1500 to the suppliers, who feed the exporters. The rate of the final exchange between the supplier and the exporter is not known. *Lissemys punctata* is bought at the rate of Taka 500 - 600 per maund from the collectors and sold by the middleman to the supplier at the rate of Taka 700 per maund (1 US \$ = Taka 30). Last year at one time the prices went up to Taka 1100 - 1200 per maund. The meat of the turtles which die off during transportation is consumed locally and is sold at the rate of Tk.50 - 55 per kilogram and that of *L. punctata* Tk. 15 per kg. *Kachuga tecta* is being sold in the country markets at the rate of Tk. 10 - Tk. 15 per kilo. Earlier the money was channeled down by the exporter to the supplier, who gave it to the middleman and finally it reached the collectors. The collectors were committed to the middleman to supply turtles at a rate determined by him. This trend has changed a lot now. The middleman invests his own money and the collectors negotiate to fix the

rate. This is because of the low rate of catches. The collectors complain of the non-availability of the turtles and the middleman has to comply with it.

Recently the working group has been able to contact the airport officials in Dhaka by whom the exact weight of the turtles shipped is recorded. In most of the cases the weight figures measured in front of the group members at the turtle export centers are not the same as the airport figures. The airlines carrying it and the final destination of the shipment will be known. Very often this information is concealed by the exporters. Also the business organizations exporting turtles will be known. So far some of the exporters have been contacted. The Forest Department personnel have also been contacted and liaison is being maintained with them.

Based on the information from the turtle suppliers about the collecting sites, the senior author and research assistants have travelled extensively to some areas in south Bangladesh to see the techniques used to collect chelonians and the habitat from where they are collected. Some of the major supply and collecting areas have been identified. Interviews have been taken of the traders and hunters and collectors. The areas visited thus far are Maijdi, Begumganj, Chandraganj, Lakhipur, Dalalbazar, Char, Alexandar, Ramgoti, Comilla, Laksham, Chandpur, Hajiganj, Sahatali, and Chittagong.

## Discussion

### *Species Involved in Local and International Trade*

The freshwater turtles found in Bangladesh belong to the families Trionychidae and Emydidae (Testudines, Reptilia).

#### Family Trionychidae Subfamily Cyclanorbinae

1. *Lissemys punctata andersoni* (Lacepede 1788), Flapshell Turtle.

#### Subfamily Trionychinae

2. *Aspideretes gangeticus* (Meylan 1987), Softshell turtle
3. *Aspideretes hurum* (Meylan 1987), Peacock Softshell Turtle.

#### Family Emydidae Subfamily Batagurinae

4. *Geoclemmys hamiltoni* (Gray 1831), Spotted Pond Turtle.
5. *Morenia petersi* (Anderson 1879), Eyed Turtle.
6. *Hardella thurji* (Gray 1831), Crowned River Turtle.
7. *Kachuga tecta* (Gray 1831), Roofed Turtle.
8. *Kachuga tentoria flaviventer* (Gray 1834), Tent Turtle.

Classification follows Obst (1988). The generic name of *Trionyx* has been replaced by *Aspideretes* and the common English names are used following Stubbs (1989).

There are reports of some of the other species being involved in the trade, like *Chitra indica*, *Kachuga dhongoka* and some others. But during the interim study period, no specimens of these species were observed. This gives rise to a great concern for particularly *C. indica*. In the past this species has been heavily exploited and the hunters and exporters believe that there is a serious decline in its population. *Pelochelys bibroni* was included in the chelonian list by Shafi and Quddus (1977), Husain (1979), and Khan (1982, 1985) but no precise localities were mentioned. Fugler (1984) was also not certain whether this species is included in trade or not.

All the species mentioned above are consumed locally, mostly by the non-moslems. The rate of consumption has increased to a considerable extent, which needs to be monitored.

### *Species Involved in International Trade*

1. *Lissemys punctata andersoni*.
2. *Aspideretes gangeticus*.
3. *Aspideretes hurum*.



4. *Kachuga tecta*.
5. *Hardella thurji*.
6. *Geoclemmys hamiltoni*.

Because of the wide distribution and availability of *Lissemys punctata*, it is consumed on most occasions. Apart from this, a good lot is also smuggled to India. The present investigator detected one smuggling route in eastern Bangladesh. There are reports of some more well established routes in the northwest and southwest Bangladesh. *Kachuga tecta* is also consumed quite often. It is estimated that most of the ethnic groups in the northeast, northwest and southeast consume at least either one *Kachuga tecta* or *Lissemys punctata* per week per household.

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