

CHELONIANS OF BANGLADESH AND THEIR CONSERVATION¹

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(With two plates)

Bangladesh supports 18 species of freshwater, two land tortoises and five marine turtles. Two of these are endemic when three other species are included in the Red Data Book of IUCN. Most species are threatened in the country mainly because of uncontrolled and round the year exploitation for commercial purposes.

INTRODUCTION

Bangladesh is potentially a rich chelonian country of the Indian sub-continent. Altogether 31 species or so of freshwater and marine turtles, and land tortoises are likely to be present in the sub-continent (Pritchard 1979 and Whitaker, pers. comm.). Of these, about 25 species are expected to be present in the present jurisdiction of Bangladesh, 20° 34' to 26° 37' N and 88° 45' to 92° 40' E., including 10 endangered species listed in Schedule I of Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington 1973 (CITES). Along with others all 10 endangered species are exported in large quantities and also consumed locally. There is no ban on the chelonian trade in Bangladesh. The statistics of the export promotion bureau (Anonymous 1981) revealed that there is a steady increase in the volume of export from Taka 1,000.00 (Tk. 15.00 is equivalent to 1 US Dollar) to Taka 12,948,000.00, between 1974-75 and 1979-80 fiscal years. The average export price is between 0.75 and 1.00 US dollar per kilo of

live turtle. Marine turtle has no export value. This means about 1,000,000 kg. of freshwater turtles have been exported out of Bangladesh in 1979-80. The figure is expected to be much higher in 1981. According to local dealers and exporters about an equal amount or more is consumed by the local residents. Potential live turtle buyers are Hong Kong, Singapore, Thailand and Japan. Olivier (1979) mentions, "...it is openly admitted by officials (of Bangladesh) that the legal, documented trade in turtles represents the "tip of an iceberg", with large quantities being smuggled out illegally, principally to India, where they are re-exported". Thus the export figure represent less than one third of the total turtle trade.

Kachuga tecta, *Kachuga tentoria*, *Lissemys punctata*, *Trionyx hurum* and *Trionyx gangeticus* are the main species that dominate the export trade although all freshwater turtles may actually be in the export list. These species and the land tortoises are consumed through local markets while the eggs of all the species of marine turtles are eaten by the tribals.

So far three scientific reports have appeared on the turtles and tortoises of Bangladesh and erstwhile East Pakistan after the publication of Fauna of British India by Smith (1931). These are Ahamed (1955), Shafi & Quddus

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(1977) and Husain (1979). The last two papers are in Bengali. Ahamed (1955) listed nine species of freshwater turtles whereas Shafi & Quddus (1977) reported 11 species including the nine of the preceding author and another five species of marine turtles. Husain (1979) added one unidentified species of *Geochelone* (*Testudo*) to Shafi & Quddus and provided some information on the status. Although Shafi & Quddus (1977) claimed that their report is based on the collection of specimens, this is difficult to substantiate as there appears to be a few specimens in the collection of the Dacca University Zoology Museum (DUZM). Inclusion of *Chrysemys picta* seems to be an erroneous one as it is purely a New World species, according to Pritchard (1979). *Emyda granosa* is possibly not a valid species and it is considered to be a subspecies of *Lissemys punctata*. Also addition of *Chelonia emys* and ³*Chelonia amboinensis* under marine turtles can not be justified as no current literature includes such names in this group (vide Pope 1964, Pritchard 1979 etc.) Hence the total number of turtles and tortoises listed from here by all previous workers of the country stands to only 13 that is, 10 freshwater, one land and two marine. But according to my own field and literature survey there are about 25 species of chelonians in Bangladesh including two endemic species — *Trionyx nigricans* and *Morenia petersi* as stated below.

Family EMYDIDAE

1. *Hardella thurji* Gray. Brahminy River Turtle/Kali Kaitta⁴

³ Once the authors have used 'Chelonia' and again 'Chelone', possibly synonymously.

⁴ Bengali name. All hard-shell freshwater species are called *kaitta*; soft-shell ones *kasim* and land tortoises as *kossop*.

Hardella thurji occurs in all major rivers of Bangladesh, from Padma in the west to Kushiara in the east, and in their tributaries. Along with all the other species of freshwater turtles this species is sold in the markets of Dacca, Savar, Narayanganj, Narsinghdi, Daudkandi, Chandpur, Chittagong, Mymensingh, Phulchari ghat, Bagerhat, Chalna port, Barisal Sri Mongal and Sunamganj. Actually these are the main turtle markets of the country. Kali kaitta is common nowhere in Bangladesh and there is only one specimen in DUZM. The maximum catch is between October and March and it is occasionally exported.

2. *Batagur baska* Gray. Common Batagur

Batagur baska is largely an estuarine species. It has never been reported from Bangladesh although IUCN Red Data Book on turtles (Groombridge, in press) included Bangladesh within its range while Olivier (1979) and Gittins (1980) doubted its presence in Bangladesh. Recently a large specimen has been brought to Dacca Zoological Garden from the estuarine river, bordering the Sunderbans Mangrove Forest. It was caught by the fishermen from the river Mongla — a tributary of the largest estuarine river Passur that cuts across the Sunderbans before discharging into the Bay of Bengal. This is the first authentic report of the occurrence of *B. baska* in Bangladesh based on actual specimen.

It breeds along the mouths of the rivers Katka and Konga within Sarankhola Range of the Sunderbans (Whitaker 1982, pers. comm.).

3. *Kachuga tecta tecta* Gray. Roofed Turtle/Kori Kaitta

K. t. tecta is the commonest and the smallest of the chelonians of Bangladesh. It is found all over the country, barring the hilly areas of the east, and the distribution is rather uniform over the entire range. I have seen

them both in running and stagnant waters including pools and puddles in the villages. They often cross the crop fields, when the pools get dried up during winter, with a view to reaching a new pool. It is caught in large numbers and is relished by the local hindus and christians. They buy them in hundreds and keep them in empty kerosine oil tins and use them whenever needed. DUZM specimens (other than that of Shafi & Quddus 1977) do not exceed 12 cm, carapace length. It is included in Schedule I of CITES.

4. ***Kachuga tentoria*** Gray. Roofed Turtle/
Majhari Kaitta

Kachuga tentoria has received its specific status in the recent past. Formerly it used to be considered as a subspecies of *Kachuga tecta* (Pritchard 1979). May be for the same reason it has never been included in the list of Bangladesh turtles. Both these species were found in the same pond at Faridpur (Fig. 1). It is as common as the preceding one and has a similar distribution in the country, that is, it occurs sympatrically with the former. DUZM has a dozen of them.

5. ***Kachuga smithi*** Gray. Roofed Turtle/
Vaittal Kaitta

Kachuga smithi is a poorly known species of Roof Turtle from Bangladesh. According to Smith (1931), Annandale collected several specimens of this species from Rajshahi. Shafi & Quddus (1977) has given no account of its distribution within the country or abundance. It is occasionally found along the river Padma and its tributaries, and marshy areas (Chalan beel) attached to these within Rajshahi, Pabna and Kushtia districts. I did not see any basking aggregations of it in the Padma. Pritchard's (1979) statement that 'this is a common species in Bangladesh south of Jhelum' appears to be erroneous as Jhelum

is a river of the Indus system in Pakistan. Moreover the species is not common in Bangladesh.

6. ***Kachuga dhongoka*** Gray

Smith (1931) has given its distribution as 'N. E. India; the Ganges as far west as Allahabad and north to Nepal. Anderson states that it has been found in the Brahmaputra in Assam'. Recently (1981) a shell has been collected from the suburbs of Dacca.

7. ***Kachuga kachuga*** Gray

It is occasionally found in the Padma, near Rajshahi and is also sold in the market, which needs confirmation as I failed to procure one when I visited the markets.

8. ***Kachuga sylhetensis*** Jerdon

Kachuga sylhetensis is likely to be present in Khasia and Jaintia of Sylhet and Garo hill areas of Jamalpur and Mymensingh districts bordering the Khasia and Garo Hill Ranges of India.

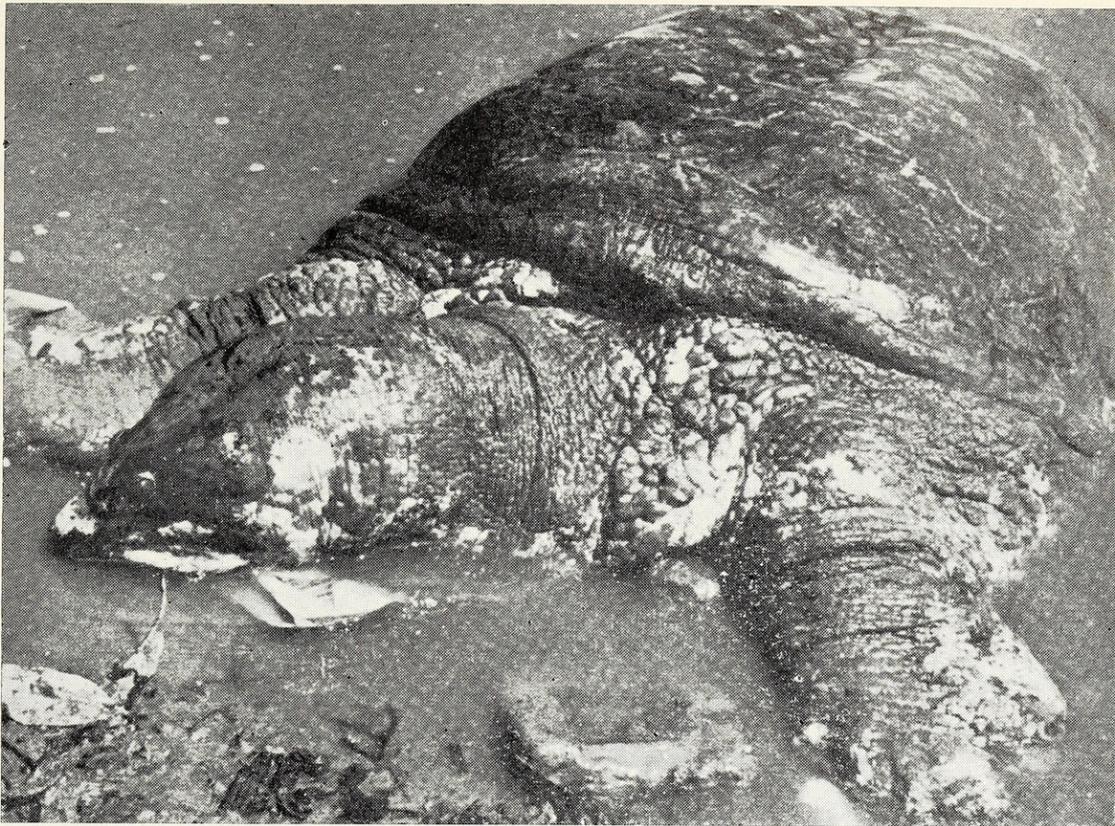
9. ***Melanochelys tricarinata*** Blyth. Threekeel-
ed Terrapin

M. tricarinata is possibly present in the extreme north-west corner of Bangladesh that is in Tentulia and Panchagarh areas of Dinajpur district as has been suggested by Pritchard (1979). One specimen has been collected from Mymensingh district. About the occurrence of *Melanochelys trijuga indopeninsularis* Annandale, Pritchard (1979) said, it is found in Chota Nagpur and Jalpaiguri District of northern Bangladesh. Although the 'Jalpaiguri District' is within the Indian state of West Bengal parts of Sylhet, Mymensingh, Jamalpur, Rangpur and Dinajpur may be prospective areas in Bangladesh for its occurrence.

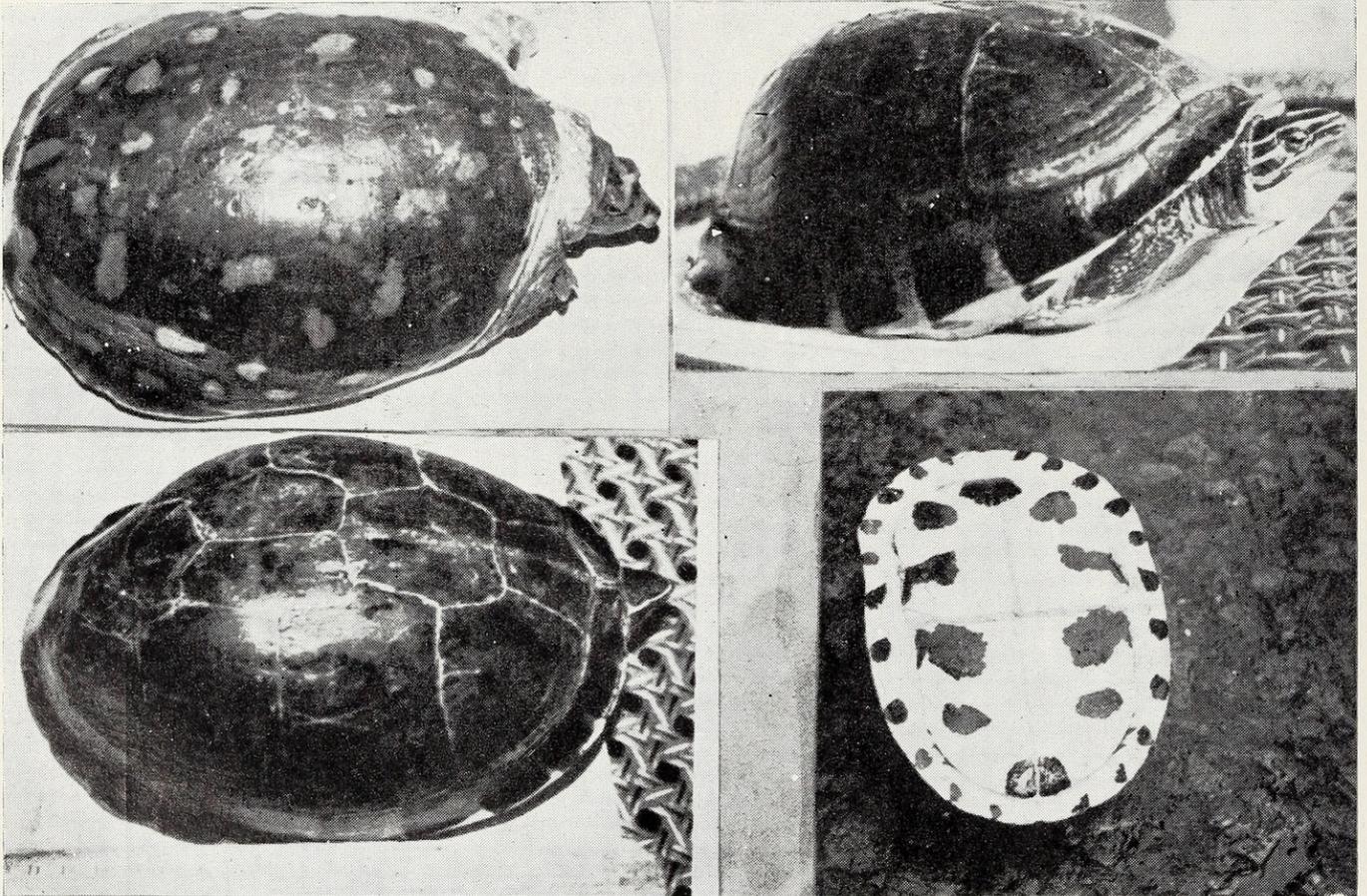
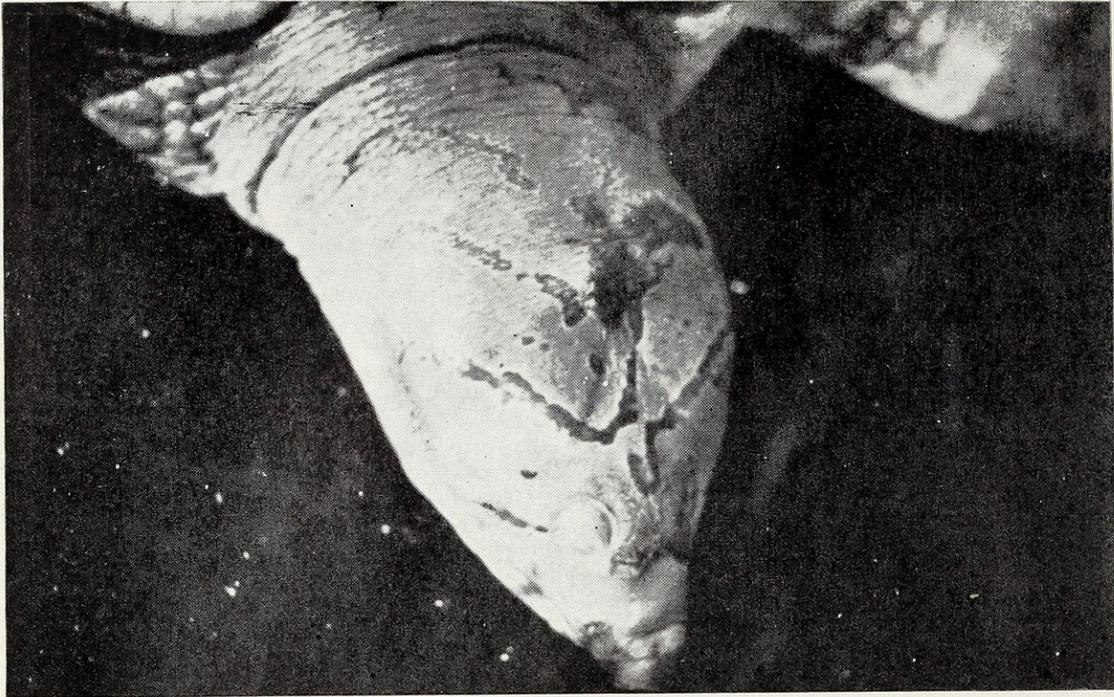
M. tricarinata is in Schedule I of CITES

10. ***Curora amboinensis*** Daudin. Malayan
Box Turtle/Diba Kasim

C. amboinensis has not yet been reported from any part of Indian sub-continent. Its



Above: Trionyx nigricans from Bostani tank at Chittagong.
Below: Trionyx hunum from foot of Garo hills.



Above: Head of a *Trionyx gangeticus*.
Middle: (Left)—*Lyssemys p. punctata* from Cox's Bazar;
(Right)—Side view of *Curora amboinensis*.
Below: (Left)—The 3rd central (Vertebral) is a divided one *C. amboinensis*.
(Right)—Ventral side of a *C. amboinensis*.

distribution has been given as "Tenasserim, Thailand, Cambodia, Vietnam, Malaysia, Indonesia...Philippines" by Pritchard (1979), who has actually adopted this distribution from Smith (1931). Recently I have collected a live specimen from Cox's Bazar area of south-eastern Bangladesh from the neighbourhood of a semi-evergreen forest. The turtle was crossing a highway that cuts across the denuded forest which is now planted with Malayan Oil Palm. Groombridge's (pers. comm.) conjecture that it might have been transported from Malayasia along the oil palm seems unlikely.

11. **Morenia petersi** Anderson. Yellow Turtle/
Haldey Kaitta

Although Smith (1931) and Pritchard (1979) restricted the distribution of *M. petersi* to Jessore, Dacca and Fategarh (?) within Bangladesh, to me it is a common turtle seen basking in Padma and Jamuna river systems of Bangladesh. It basks in rows on the newly accreted sandbars or on sand slabs along the eroded bank of these rivers. They drop down to water at the slightest disturbance or approach of a boat, fisherman or bather but stick their heads out of water again in no time, a few paces away from the intruder.

12. **Geoclemys hamiltoni** Gray. Black Pond
Turtle/Mogom or Kalo Kaitta

G. hamiltoni is usually found in old fairly large tanks, perennial marshes, etc. and although distributed over the entire country, minus the hilly areas, cannot be considered a common species. It is eaten by the local people. The species has been included in Schedule I of CITES.

Family TESTUDINIDAE

13. **Geochelone emys** Schlegel & Muller,

Brown Burmese Tortoise/Pahari Kossop
Husain (1979) was the first to report of its occurrence in Bangladesh although he did not mention the species name. I had the occasion to check the empty shell of this species with him which turned out to be *G. emys*. This species is found only in the forested belt of the Chittagong Hill Tracts district of Bangladesh. During my several visits to these forests I did not come across one. But the tribal *chakmas* told me that occasionally they collect it. It has a very high market value and specially so during the *biju* festival of the *chakmas*. Sometimes they use the empty shell of *G. emys* for washing clothes or for making door-step for their thatched houses.

14. **Geochelone elongata** Blyth. Hill-Tortoise/
Pahari Haldey Kossop

Unlike the preceding species *G. elongata* is not rare in the forested areas of Chittagong Hill Tracts. On three occasions I have recorded them from the *chakmas*, who were taking them home from the reserved forest area. Olivier's (1979) report of its export from Bangladesh is questionable as it is never gathered and sold in bulk in any market both inside and outside the hilly areas, and local exporters failed to confirm his report. Therefore this is the first confirmed report of its occurrence in Bangladesh.

Family TRIONYCHIDAE

15. **Lissemys punctata punctata** Bonnaterre.

Spotted Flap-Shell/Sundhi or Tila Kasim
One of the commonest of the soft-shells *L. p. punctata* is found all over Bangladesh, mostly in stagnant water specially in village ponds and marshy areas. It is sold in all turtle markets and is exported out too. The species has been listed under Schedule I of CITES.

16. **Trionyx gangeticus** Cuvier. Ganges Soft-

Shell/Khalua or Gongga Kasim

T. gangeticus is common in all major rivers of Bangladesh. Found in good number in ox-bow lakes and larger bodies of water. It is one of the species that is sold in the market round the year, has the highest market value and is exported.

17. **Trionyx hurum** Gray. Peacock Soft-Shell|
Dhum Kasim

Like the preceding species it is very common round the year, and found in all rivers excepting the hill ones and has good market value during monsoon when catches of other species is low. It has good export market too. Both *T. gangeticus* and *T. hurum* are sold at a flat rate of one US dollar, during monsoon, per kilo of freshly cut turtle. The butchers cut them live through the hinder part of the frontal pair of callosities, when the poor turtle bleed profusely right in front of the buyers.

18. **Trionyx nigricans** Anderson. Bostami
Turtle/Bostami Kasim

T. nigricans is an endemic species found only in small pond, attached to the shrine of Hazrat Byazid Bostami, at the outskirts of Chittagong town (Khan 1980). All three reports from Bangladesh (vide Ahamed 1955, Shafi & Quddus 1977, and Husain 1979) did not include this species in their list inspite of the fact that Smith (1931) quoting Annandale gave a quite comprehensive account of the species. I have already mentioned that all large specimens in the pond has some sort of fungal infection on their skins of neck and limbs. These turtles, numbering about 200, are almost entirely dependent on the food supplied to them by the shrine visitors. It mostly comprised of beef offal, prawns, plantain and puffed rice.

All the abovementioned three species of *Trionyx* are included under Schedule I of

CITES. Although the Bostami Turtle enjoys highest protection the remaining two are mercilessly exploited for commercial purposes.

19. **Chitra indica** Gray. Asiatic Soft-Shell
Turtle/Sim or Chitra Kasim

C. indica is the largest of all turtles of Bangladesh and found over entire Padma and Jamuna river systems and in their tributaries. A great number of them are sold in the market and exported during winter, between October-February, and sometimes up to May-June, before the break-out of heavy monsoon. Although Pritchard (1979) suggested that 'it prefers clear water' all rivers of Bangladesh become quite turbid during monsoon and all will have crystal clear water before winter which will last up to next monsoon.

20. **Pelochelys bibroni** Owen. Bibron's Soft-
Shell/Jata Kasim

Although Smith (1931) altogether doubted its presence in Bengal, Pope (1964) and Pritchard (1979) did not even include Indian sub-continent within its range, whereas Shafi & Quddus (1977) and Husain (1979) have categorically included *Pelochelys bibroni* in their lists. It is said to have wide distribution and is marketed too.

Family CHELONIIDAE

21. **Chelonia mydas** Linnaeus. Green Turtle

22. **Caretta caretta** Linnaeus. Loggerhead
Turtle

23. **Lepidochelys olivacea** Eschscholtz. Olive
Ridley Turtle

24. **Eretmochelys imbricata** Linnaeus. Hawks-
bill Turtle

Family DERMOCHELYIDAE

25. **Dermochelys coriacea** Linnaeus. Leather-
back Turtle



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