

# Endangered mammals of Bangladesh

Mohammad Ali Reza Khan

Many mammal species have been exterminated in Bangladesh; many more are threatened. The author visited all the forested areas, where 80 per cent of the surviving mammals are to be found, for this survey. His report supplements and enforces the primate survey report of S.P. Gittins and A.W. Akonda in the February 1982 *Oryx*.

Bangladesh has a rich mammal fauna, with some 100 of the Indian subcontinent's 500 species (Prater, 1971). But it is declining. The losses, which amount to about eight per cent in the past century (Husain, 1974), include all three rhinoceros species, buffalo, nilgai and blackbuck, and many more are threatened. Between 1969 and 1983 I visited all the forested areas and talked to tribal and knowledgeable forest people. This paper draws on my experiences as well as published information (Mountfort, 1969; Prater, 1971; Husain, 1974; Hendrichs, 1975; Green, 1978; Khan, 1979).

Bangladesh is a deltaic flood plain of recent origin, with undulating hills and hillocks towards the northern and eastern boundaries, crossed by numerous rivers flowing into the Bay of Bengal. Reserved forest comprises not more than eight per cent, roughly 11,700 sq km out of the country's 143,000 sq km. Three forest types dominate the vegetation; mangrove, evergreen and moist deciduous. The Sunderbans mangrove forest is the largest portion, occupying 6000 sq km in the south-west corner. Some 4000 sq km of the evergreen, semi-evergreen and mixed evergreen forests, with trees 30–45 m tall, are

reserved forests. These occur only in the east, mainly in the Chittagong Hill Tracts (North), Chittagong, Cox's Bazar and Sylhet Forest Divisions. The moist deciduous, or sal, forest covers about 260 sq km in the centre, in the Dacca, Mymensingh and Tangail Forest Divisions. The forests along the northern border and in the north-west are also of this type but they are patchy and the tree stands are not good. About 80 per cent of Bangladesh mammals live in forests managed by the Government Forest Department.

One of the most threatened mammals is possibly the gaur (*ban garu*) *Bos gaurus*, popularly known as the Indian bison. As late as 1950 it occurred in the northern and eastern forests. It has totally disappeared from the eastern forests now, but between 1974 and March 1980 at least three were shot in the northern forests in Mymensingh Division, close to the Indian Garo Hills. But gaur do not like the narrow—barely 1 km wide—moist deciduous forests of Bangladesh. Occasionally they may come down to the northern extremity of the eastern forests in Sylhet Division from the neighbouring Indian Khasia and Jaintia Hills. They also sometimes come down to graze at night to the forest or border villages and are taken by local people. Husain (1974) reported banteng *Bos javanicus* in the Hill Tracts but there is no other report. I have not seen any and nobody could say where they were.

The mainland serow (*ban chagal*) *Capricornis sumatraensis* once occurred in the eastern forests, although Husain (1974) doubted this. Between 1974 and 1978 the Forest Department caught or confiscated at least six, and I have seen three freshly caught individuals, one a calf. Serow are

*Oryx* Vol 18 No 3



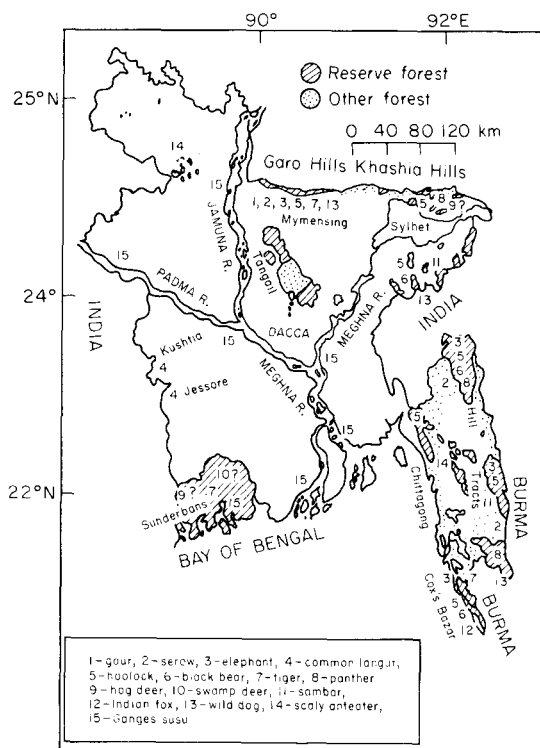
Gaur, one of the most threatened mammals in Bangladesh (N. Sundarraj).

easy victims of slash-and-burn (*jhoom*) cultivation, fleeing from the forest when it is fired to be trapped, killed and eaten. They are crepuscular, living in dense sun grass *Imperata arundinacea* and difficult to see. They still occur in the northern and eastern forests in the Mymensingh, Sylhet and Hill Tracts Divisions. I estimate a resident population of 50–100, but in scattered groups so that no genetic exchange is possible.

The Indian elephant (*hati*) *Elephas maximus*, once widely distributed, is now isolated in small pockets of Chittagong, Cox's Bazar and Hill Tracts Divisions. A survey I made, with assistance from the New York Zoological Society, showed that the resident population may not exceed 200. They live in isolated groups in substandard habitat. Another 50 or so wander around the border forests in the Mymensingh, Sylhet, Chittagong and Hill Tracts Divisions, from the Indian Garo, Khasia and Mizo Hills and Burmese Arakan Hill Ranges.

The 11 known primate species are: slow loris *Nycticebus coucang*; hoolock gibbon *Hylobates hoolock*; rhesus macaque *Macaca mulatta*; Assam macaque *M. assamensis*; crab-eating macaque *M. fascicularis*; pigtail macaque *M.*

*Endangered mammals of Bangladesh*



Bangladesh, showing the distribution of forests and endangered mammals.

*nemestrina*; stump-tailed macaque *M. arctoides*; capped langur *Presbytis pileata*; langur *P. entellus*; Phayre's leaf monkey *P. phayrei*; and dusky leaf monkey *P. obscura* (Khan, 1981). The langur (*hanuman*) *P. entellus* is dwindling fast. About 20 years ago it was well represented in the districts west of the Jamuna (Brahmaputra) and south of the Padma (Ganges) rivers. Now only about 100 survive in several villages in the Jessore and Kushtia districts, where I found people harassing and molesting these lovely animals because, being entirely dependent on human habitations for food and shelter, they sometimes damage orchards and gardens. These villages do not come under the nearest Forest Division—the Sunderbans—and so the langurs receive no official attention. They could become extinct at any moment.

The hoolock gibbon (*ulluk*) *H. hoolock*, also endangered, was once common all over the northern and eastern forests. Their position now is most precarious in the forests of Sylhet Division, where habitat destruction has forced them to live in isolated pockets of semi-evergreen forests. Each pocket is separated from the neighbouring ones by a tea garden or shrubbery, an impassable land barrier for an arboreal species, and there is no genetic exchange. The forests of Chittagong, Cox's Bazar and Hill Tracts Divisions are being systematically clear-felled.

The sun bear *Helarctos malayanus* and the sloth bear *Melursus ursinus* formerly occurred in the eastern forests bordering Burma and India but were nowhere common. There are no recent reports of sightings in Bangladesh. The Asiatic black bear (*bhallook*) *Selenarctos thibetanus*, which inhabited the northern as well as eastern forests, is now only found in Sylhet, part of Chittagong, Cox's Bazar and Hill Tracts Divisions, and is rarely seen. Females are shot or poisoned and their cubs taken and trained to perform tricks. Skins have a high market value; paws and muzzles are used for medicinal purposes.

Until the close of the last century eight cat species, large and small, were not uncommon over the greater part of Bangladesh, in forests and also cities and villages: tiger *Panthera tigris*; leopard *P. pardus*; jungle cat *Felis chaus*; fishing cat *F. viverrinus*; leopard cat *F. bengalensis*; marbled

cat *F. marmorata*; Asiatic golden cat *F. temmincki*; and clouded leopard *Neofelis nebulosa*. Today the last three may be extinct in Bangladesh. It is said that in 1940 tigers (*bagh*) were not uncommon in the Madhupur Tract of the sal forest 90 km north of Dacca. Formerly they occurred in the north, north-west, eastern and south-west forests in quite good numbers, but between 1975 and 1979 only two were seen (and shot), one in the northern sal forests and the other in the Cox's Bazar Division. Probably both had come in from India where good forest cover still exists. Now the only resident population is in the Sunderbans mangrove forest, where they are not immune from poaching. One-seventh of this forest consists of watercourses, ranging from a few metres to 2 km wide, and the northern and eastern boundaries are thickly populated. The Forest Department has no trained wildlife management staff and most of the area is unguarded. Bangladesh has no viable leopard (*cheeta bagh*) population but there are occasional sightings in the forests of Sylhet, Chittagong, Hill Tracts and Cox's Bazar. Apart from the muntjac and wild boar there are virtually no large herbivores on which leopard and tiger can prey. The leopard cat (*cheeta biral*) is restricted to the forested belt, whereas small populations of fishing cat (*mecho biral*) occur both inside and outside the forests. Both cats are poached for their coats and often killed for taking livestock.

The hog-deer *Cervus porcinus*, last seen in the Sylhet forests around 1971, may no longer survive there, and is extinct in the Sunderbans (Hendrichs, 1975) where swamp deer (*barasingha*) *C. duvauceli*, found nowhere else in Bangladesh, are also now extinct. Spotted deer, or chital, (*chitra harin*) *C. axis*, once common in all forested areas, now occur only in the Sunderbans. Sambar *C. unicorn* has been wiped out from the northern forests; a dwindling population survives in Sylhet, Chittagong and Hill Tracts forests. Indian muntjac (*maya harin*) *Muntiacus muntjak*, which was the most widely distributed of the deer, have disappeared from the Madhupur Tract of the sal forests where they occurred around 1950.

Of the six species of civet the large Indian civet (*baghdasha*) *Viverra zibetha* and binturong

*Oryx* Vol 18 No 3

*Arctictis binturong* are threatened. Destruction of the jungles and poaching for its striped coat are reducing the former, and bamboo cutting (for the pulp mills) in Hill Tracts North and South Divisions, seriously disturb the latter.

The golden jackal (*shial*) *Canis aureus* was very common in the villages, cities and jungles even 20 years ago, but with the indiscriminate use of DDT and other pesticides since the early 1960s many have died eating poisoned animals and fish. These areas have also lost the jungles. Today jackals are occasionally found in villages, but a good population survives along the forest edges. The Bengal fox (*khek shial*) *Vulpes bengalensis* may always have had a restricted distribution. I have seen two only in the coastal evergreen forests of Cox's Bazar and doubt if there is a viable population in Bangladesh. Dhole, or red dog, (*ram kutta*) *Cuon alpinus* have not been sighted recently and there may be no resident population. Once in a while packs of 7–10 animals may come down from the neighbouring Indian forests along Sylhet, Chittagong and Hill Tracts, and return after a few days hunting.

The Indian pangolin (*ban rui*) *Manis crassicaudata* and Malayan pangolin *M. javanica* once occurred, the latter in the eastern forests where it has not been sighted for 20 years. The Indian pangolin was in all the forests but is now only

occasionally sighted in those of the north-west, north and east. It is often killed by villagers simply because of its unusual appearance. Pangolin meat is relished by the tribal people, and medicine sellers use its scales with herbs to make drugs.

Hispid hare/Assam rabbit (*shashak*) *Caprolagus hispidus* once occurred in the neighbourhood of Dacca, Jamalpur and Mymensingh districts (Mitra, 1957). A live specimen, which was brought to Dacca University in 1974 or so, was believed to have been procured from the suburbs of Dacca. There has been no sight record of the animal in the recent past although I have searched in the suitable areas.

Lesser Malay chevrotain (or mouse deer) (*foita* or *khurela khorgosh*) *Tragulus javanicus* was present in most of the districts of Bangladesh. I have interviewed over 100 people and all have said that they used to eat the meat of a hare-like animal, but having hooves instead of claws. It may be mentioned here that Muslims eat only hoofed mammals and not clawed ones. The last record of the killing of a chevrotain was from the coppice sal forests of Mirzapur police station, in Tangail district, within 60 km of Dacca. I have so far failed to procure any part of a chevrotain—skin, skull, hooves, etc.—and it is believed to be extinct.



A baby serow captured by  
Garo Hills' tribesmen  
(Mohammad Ali Reza Khan).

*Endangered mammals of Bangladesh*



Hog-badger (*shukorakar bajar*) *Arctonyx collaris* was present in the hilly terrains of Chittagong and Chittagong Hill Tracts districts (Mitra, 1957). But sight records and specimens were wanting. Recently, I and two of my research students were able to collect two specimens from the Teknaf peninsula of Chittagong district. The tribal mogh and chakmas eat it, considering the animal to be a pig(!). It is very rare in the semi-evergreen and evergreen forests of those two districts.

The Ganges dolphin (*shisu*) *Platanista gangetica* of the Indo-Gangetic river system, once found throughout Bangladesh, now occurs year-round only in the larger rivers such as Padma, Jamuna, Meghna, Passur and Baleswar, but appears in the smaller rivers in the rainy season (Kasuya and Haque, 1972). Haque reported it as in danger of extermination 'from various developments', notably a dam at Kaptai, on the river Kamaphuli, and the Farakka Barrage on the Ganges on the Indian side (Haque, 1975, 1976, 1978).

### Necessary conservation measures

(1) Selective felling should replace clear-felling in the moist deciduous, semi-evergreen and evergreen forests. Areas already clear-felled should be planted with mixed species and undergrowth to provide wildlife cover. Forested corridors should be left in monocultures such as tea and rubber plantations.

(2) All slash-and-burn agriculture should be replaced by terrace gardening and villagers encouraged to grow bushes behind their houses as their forefathers did. Roadside shrubberies should be encouraged and trees and shrubs planted in cities and industrial areas.

(3) Pesticides with residual effects should be banned, aerial spraying of chemicals stopped and industrial effluents treated before release into rivers.

(4) The 1973 Wildlife Preservation Act should be widely publicised, especially the ban on shooting and taking skins, and extended to protect habitat.

(5) All trade in wildlife parts should be banned.

(6) All reserves, wildlife sanctuaries and national parks should be properly managed by adequate numbers of trained personnel.

(7) All cities should be supplied with natural gas for domestic use to reduce dependence on wood.

156

### Acknowledgments

I would like to thank the following: Messrs M. Ajmal Hussain, N.A. Katebi, M.A. Bari, Shah Ali Imam, Salamat Ali, Fazlul Hoque, M.A. Baset and Golam Habib, all Divisional Forest Officers at the time of my visit; Messrs S.A. Qureshi ACF, Syed Ali Ahmed ACF, Shamsuddin ACF and Range Officers, for their help in covering vast tracts of the forests; Messrs Wahab Akonda of Wildlife Circle, Neaz Ahamed Siddique and Md. Faizuddin of Forest Research Institute, Nazrul Haque of Dacca Museum and Babul of Dinajpur for information; Dr Lahiri Choudhury of Calcutta (India) for information on wildlife of the Madhupur Tract of the sal forest between 1935 and 1947. The University Grants Commission financed research fellow Farid Ahasdan and myself to carry out the project on the primates of Bangladesh and the Indian Institute of Science at Bangalore enabled me to attend the VIIth Congress of the International Primatological Society. I thankfully acknowledge their co-operation.

### References

- Green, K.M. 1978. Primates of Bangladesh: a preliminary survey of population and habitat. *Biol. Conserv.* **13**, 141–160.
- Haque, A.K.M.A. 1975. The Bay of Bengal and Bangladesh economy: the question of conservation. *Proceedings of the seminar organised by Bangladesh Marine Biological Association*, Chittagong, March.
- Haque, A.K.M.A. 1976. Comments on the abundance and distribution of the Ganges Susu *Platanista gangetica*, and the effects of the Farakka Barrage on its population. *FAO Scientific Consultation on Marine Mammals, ACMRR/MM/SC/132*.
- Haque, A.K.M.A. 1978. Status of aquatic mammals in Bangladesh. *3rd Annual Bangladesh Science Conference of the Bangladesh Association for the Advancement of Science*, Chittagong, pp. 1–14.
- Hendrichs, H. 1975. The status of the tiger *Panthera tigris* (Linne 1758) in the Sunderbans Mangrove Forest (Bay of Bengal). *Saugetierk. Mitt.* **23**(3), 161–200.
- Husain, K.Z. 1974. *An Introduction to the Wildlife of Bangladesh*. F. Ahamed, Dacca.
- Kasuya, T. and Haque, A.K.M.A. 1972. Some information on distribution and seasonal movement of the Ganges Dolphin. *Sci. Rep. Whales Res. Inst. Tokyo*, **24**, 109–115.
- Khan, M.A.R. 1979. Status, distribution and population estimates of the non-human primates of Bangladesh. *A paper presented at the Satellite Symposium which preceded the VIIth Congress of the International Primatological Society*, Bangalore, India.
- Khan, M.A.R. 1981. The non-human primates of Bangladesh. *Tigerpaper* **8**(1), 12–15.
- Mitra, S.N. 1957. *Banglar Shikar Prani*. West Bengal Government Press, India.
- Mountfort, G. 1969. *The Vanishing Jungle*. Collins, London.
- Prater, S.H. 1971. *The Book of Indian Animals*. 3rd edn. *Bombay Nat. Hist. Soc. India*.

Mohammad Ali Reza Khan, Assistant Professor, Department of Zoology, University of Dacca, Dacca-2, Bangladesh.  
At present: Curator, Al-Ain Zoo and Aquarium, PO Box 1204, Alain, Abu Dhabi, UAE.

Oryx Vol 18 No 3