

BANGLADESH'S DECLINING FOREST HABITAT

BY IAN LOCKWOOD

The rich biodiversity of Bangladesh is under assault. In the balance hangs the future of both wildlife and people. Unfortunately, nature and wildlife conservation has never enjoyed the same kind of attention that human development issues have in nearly thirty years of independence.

ä A female Hoolock gibbon, one of the endemic species, found in the rich hill forests of Bangladesh

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THE SMALL BOAT PUTTERED away leaving us on a muddy bank enveloped in the pitch darkness of the night. No moon lit the path, nor were there any stars visible, only the eerie glow of phosphorescent algae in the wake of our departing speed boat. But that too disappeared with the noisy motor, and we were left with the myriad sounds of the forest night. The air was cool and refreshingly clean, but I found it difficult to forget the fact that this extraordinary mangrove forest, the Sundarban, was one of the few places in the world where tigers occasionally eat people!

The darkness accentuated my imagination's wild trip and I cursed myself for not replacing the batteries in my torch. Its faint beam caught curious-looking mudskippers negotiating *pneumatophores* (upward growing roots that are a hallmark of mangrove forests), but did little to soothe my fear. Our destination, a rickety watchtower, lay less than a hundred metres away, yet all we could see were the dark shadows of the jungle. The sound of chital alarm calls pierced the blackness of the night as I noticed that our sandy path was crisscrossed with tiger pugmarks! The tower's dark silhouette loomed ahead and I breathed a sigh of relief. "I must be dreaming," I kept telling myself. "Undisturbed forests and tigers still left in this crowded country at the end of the 20th century?" But the goose bumps and excitement that I felt in the wobbly watchtower were all too real to be a dream.

BANGLADESH'S WILDLIFE AND ITS varied natural habitats hang in a precarious balance struggling to survive amongst an expanding sea of humanity. The conservation of wildlife and natural habitat has thus far not been a serious priority amongst citizens nor the of government. Bangladesh is the most densely populated country in the world (excluding city states), with 925 people crowded in the average square kilometre! It is a poor country, with a \$240 per capita GNP, if you are a believer in this sort of assessment. The land, formed by the sedimentation of the huge Padma (Ganga), Jamuna (Brahmaputra) and Meghna rivers, is fantastically fertile. Blessed with plenty of rainfall and sunlight, it is an ideal place for things to grow (even people, the sardonic population expert will tell you). For these same reasons, Bangladesh also supports a high level of biodiversity within its small, crowded borders.

Although a relatively small country, Bangladesh has a wealth of natural plant and animal diversity that is often overlooked by wildlife enthusiasts. One of the reasons for this wealth is the fact that it is a transition zone and

includes species of moist deciduous tropical monsoon forests that once covered great swathes of Bengal, still survive in the slightly elevated land between the cities of Tangail and Mymensingh. In the northeastern district of Sylhet large *baors* (bowl-shaped depressions that form near-permanent wetlands) provide a winter home for migratory birds. A few small but beautiful patches of tropical evergreen and semi-evergreen rain forests cloak the low hills of Sylhet. Further south, there are larger evergreen forests in the Chittagong Hill Tracts (CHT) and along the Cox's Bazar-Teknaf peninsula. Because of the long-running tribal-Bengali conflicts in the CHT, little is known about the status of these forests. A recently signed peace accord between tribal insurgents and the government will hopefully change this.

In the southwestern portion of the country lies the jewel of Bangladesh's forests: the Sundarban (literally meaning "beautiful forest" in Bengali). The largest single mangrove forest in the world, two thirds of it lie within Bangladesh, while the rest is in West Bengal.

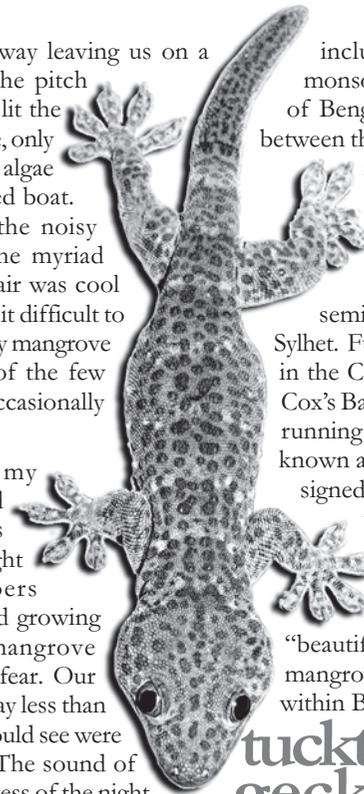
tucktoo gecko

In a move well received by conservationists, the government and UNESCO declared the Bangladesh Sundarban a World Heritage Site in December 1997. Aside from growing urban centres, the rest of the country is under intensive cultivation (rice and jute are the two most widely planted crops). But even in these agricultural areas, a variety of habitats survive, supporting small populations of different wild species.

Invariably, most people's idea of Bangladesh has to do with disasters, poverty and over-population. Floods inundate the country annually, and violent cyclones kill thousands of people every few years. Headlines, such as "10,000 feared killed in cyclone" numb the senses and Bangladesh just slips into one big disaster. But if you dig a little deeper, the nation is far from the basket case that Henry Kissinger once accused it of being. Since independence from Pakistan in 1971, Bangladesh has made great strides on the socio-economic front. Literacy levels are steadily climbing, fertility rates have dropped dramatically, women have more rights than in most Muslim countries and there are numerous successful homegrown economic development initiatives. Mohammed Yunus' Grameen Bank, with its renowned microcredit program, is one of the best known of these indigenous NGOs.

UNFORTUNATELY, NATURE AND WILDLIFE conservation has never enjoyed the same kind of attention that human development issues have in nearly thirty years of independence. Several ambitious nature and wildlife conservation initiatives were started in the early 1970s,

Sanctuary Asia Vol. XVIII. No. 3, June 1998 – 24





but were soon doomed to failure. In 1974 the Bangladesh Wildlife Preservation Order was passed and in 1976 a “wildlife circle” was created in the Forest Department (now the Department of Environment and Forests). Unfortunately, scant resources and low interest, as well as outright resistance, within the Forest Department has condemned most of these programmes to history’s rubbish bin.

Partly because of this there are few people in Bangladesh who recognize their country’s tremendous natural heritage. The vast majority of the population lives in rural areas, depending on subsistence crops. Despite the many benefits of protecting natural habitats, these people can hardly afford the luxury of caring about the fate of the country’s biodiversity. Much more worrisome is the indifference of the people who are educated and have the power to make positive decisions. These decisions and priorities are established by the government and the ruling business and political elite. Amongst these city dwelling and educated classes, wildlife and natural habitat protection enjoys scant attention. In fact, the few people who are knowledgeable about the country’s wildlife wealth are more likely to be hunting rather than conserving it!

Although scattered populations can be found in rural areas, the greatest diversity of wildlife is concentrated in the surviving forests and wetlands of Bangladesh. It was not that long when natural forests covered a great deal more than the 5.9 per cent forest cover that statistics from the World Resources Institute now report. East Pakistan and, before that, Bengal, was frequently described as being a land most noted for its tiger-infested jungles rather than its lack of tree cover! In the years following the 1971 Liberation War a surge in the human population coupled with mismanagement of forests, led to dramatic habitat loss in the new nation. WRI, estimates that Bangladesh has lost 50 per cent of its forest cover since 1970!

THE SAD DECLINE IS VIVIDLY illustrated by the case of Madhupur Forest, the most significant example of the moist deciduous monsoon forest found northwest of the capital city Dhaka. In 1971, at the time of Bangladesh’s liberation from Pakistan, Madhupur still retained much of its regal beauty. During the ‘71 war it had been large and thick enough to keep the Pakistani army outside of it, while providing an excellent hideout for the Muktibahini (freedom fighters). Having spent several happy childhood years on the edge of the forest between 1972 and 1975, I remember it being everything that a true jungle should be. Tall sal, *Shorea robusta* trees dominated the forest, but they were mixed in with a variety of 60 other deciduous species. Vines and thick undergrowth kept humans confined to a few well-worn paths. Although elephants, *Elephas maximus* and tigers, *Panthera tigris* had disappeared by the 1930s, chital, *Axis*

25 – Bangladesh

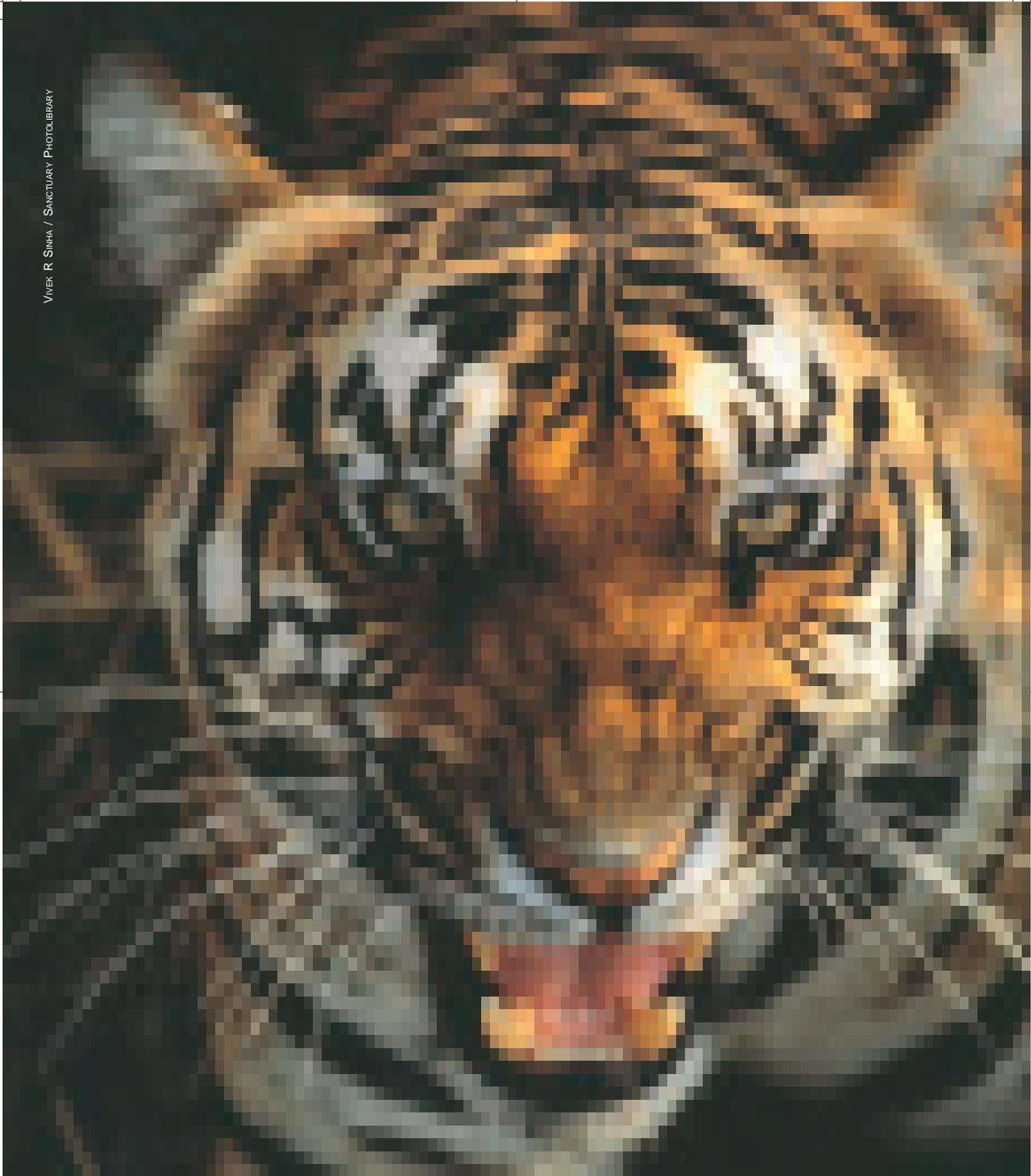
axis and shy sloth bears, *Melursus ursinus* found refuge in Madhupur in the early 1970s. Troops of brightly colored capped langurs, *Presbytis pileatus* kept to the high canopy, while far below a few leopards, *Panthera pardus* were still alive. The forest had a real *feeling* to it.

25 years later, Madhupur is only a shadow of itself. Its size has shrunk to about 10 per cent of what it was at the beginning of the century and 40 per cent of what it was in 1973. The last tall *sal* trees are clustered around a few forest rest houses, while the remaining forest is composed of immature trees surviving amongst totting stumps. Capped langurs still survive and the forest is an excellent birding site, but most of its original wildlife has been wiped out. Thanks to foreign donors like the Asian Development Bank, exotic eucalyptus and rubber trees have now replaced much of the natural forest. Each morning impoverished women and children walk into the forest to collect sticks and leaves, unchallenged as long as they pay their 10 TK “fee”. More heinous are the trucks from the cities that enter the forest under the cover of night, to take away the last large teak and *sal* trees.

THE OLDER INHABITANTS OF the forest, Mandis, or Garo tribals, have seen their land and traditions destroyed with the forest. Like other forest-based communities, they are seriously threatened by the great loss of forest in Bangladesh. A large part of the problem in Madhupur has been the huge influx of non-tribal Bengali migrants that have flooded the forest (the population of Bangladesh has mushroomed in the last 30 years). The influx has put tremendous pressure on the forest and the tribals who, in 1971, were the primary inhabitants. The Forest Department continues to behave like a colonial lord in Madhupur and has been in conflict with both tribal and Bengali migrants. The delicate situation is well documented in the 1992 Forest Master Plan (produced by none other than the Asian Development Bank, for the DOEF). The document makes concrete recommendations about the Forest Department needing to take into account the important role of tribals and other inhabitants in an effort to preserve Madhupur’s

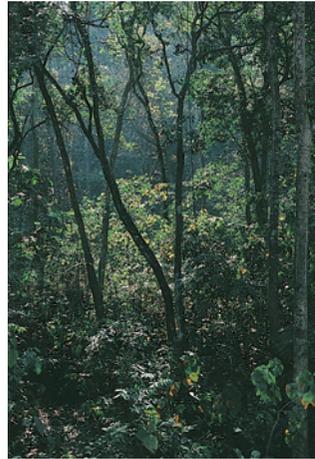


brown winged kingfisher



- Sundarbans – home to one of the largest tiger populations in the world
- The decimated semi-evergreen rain forest (facing page - top), Sylhet District
- A wood cutter and his axe, amidst the denudation (facing page – below), Sylhet District
- Sunrise in the tropical evergreen rainforests (facing page - middle right), Lawachara Forest, Srimangal
- Orchid, *Dendrobium aggregatum* (facing page – below right), Lawachara Forest, Srimangal

Sanctuary Asia Vol. XVIII. No. 3, June 1998 – 26



27 – Bangladesh



unique habitat! But even in 1998, there is little evidence that those who are supposed to be caretakers of the forests read the Master Plan. Nor is there any move to stop planting exotics on forest lands by the financiers.

Despite a handful of isolated individuals and initiatives, wildlife conservation in Bangladesh is in a dismal state of inaction. A few organizations are plugging away, but despite their good intentions they have not been able to achieve real success in the face of the great destruction of Bangladesh's natural habitats. A good deal of the problem, of course, is due to the Department of Environment and Forest's authoritarian control over forests and their resistance to making wildlife conservation a real priority. There are a handful of forest officers committed to wildlife protection within its walls, but since the disbanding

of the Wildlife Circle in 1983, they have not been able to exert their influence on major decisions.

Where the department has invested in "conservation" programmes, it has all too often been inappropriate. In Rema Kalenga Wildlife Sanctuary, there is a recently constructed concrete wildlife-viewing tower placed near a degraded forest with no large mammals. In the heart of Lawachara, under a high canopy of native evergreen species, exotic *acacia* trees have been planted along a forest road! Other plans for sensitive wildlife areas often involve "developing" picnic grounds, mini-parks, theme rides, zoos and a host of other activities geared to please urban and foreign tourists, all of which will be detrimental for wildlife.

THERE ARE TWO TYPES OF organizations working for the

red-breasted parakeets





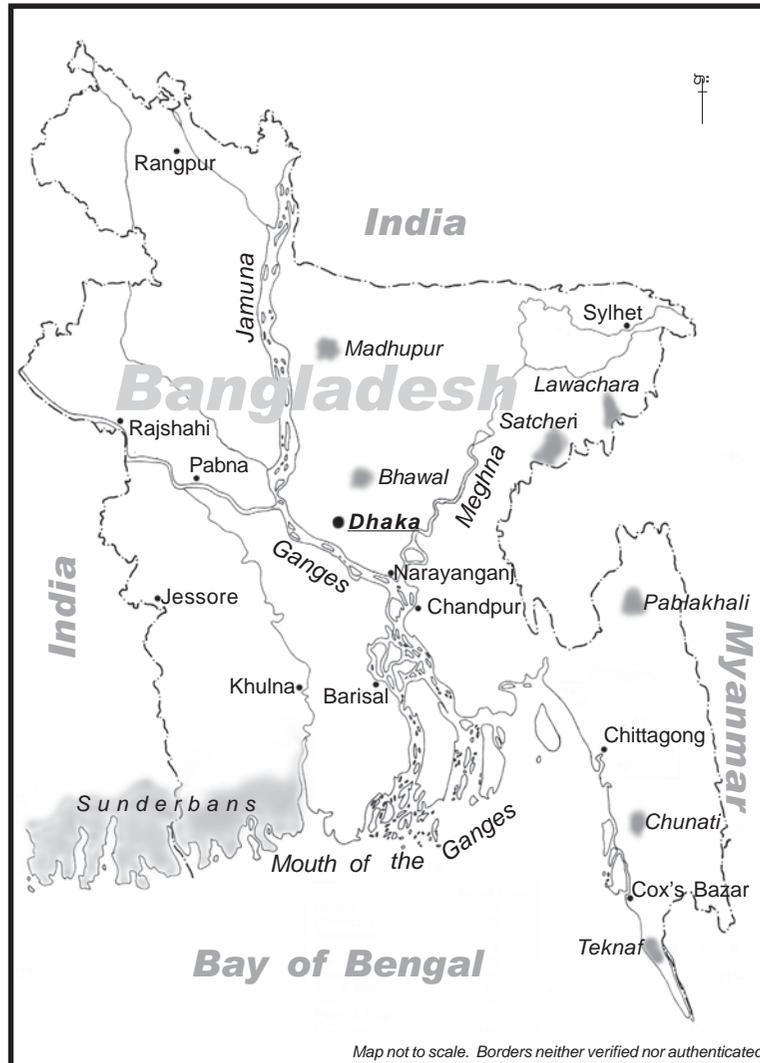
protection of wildlife and habitat conservation in Bangladesh: large NGOs working alongside the government and small independent NGOs. The most visible (and only significant) organization in this first category is the *World Conservation Union (WCU, previously IUCN)*. They have sponsored several studies, held seminars and produced a series of informative posters for use in schools. They, however, have their limitation since they work so closely with the government and can not act as freely as is desired of an NGO. About ten years ago the IUCN embarked on a programme with the Department of Environment and Forests to develop a *National Conservation Strategy (NCS)*. The idea is to devise a document that specifically designates conservation priorities (something that has not been done in nearly 30 years of independence). This is due to be completed in 1999, although much doubt surrounds how effective it is going to be.

The second type of conservation organisation operating in Bangladesh is comprised of small NGOs who undertake small studies and surveys for larger development projects, such as the massive and infamous *Flood Action Plan (FAP)*. Notable among them is the *Nature and Conservation Movement (NACOM)* which has carried out various studies, especially in wetland areas. In 1994 it produced an informative study *Wetlands of Bangladesh with the Bangladesh Center for Advanced Studies*.

There are also a number of smaller NGOs who have not yet played a significant role in wildlife and habitat conservation. These are, for the most part, groups that occasionally get together to bemoan the wildlife crisis, but have yet to make real change. Established originally as a hunting organization the oldest of these is the *Wildlife and Nature Conservation Society (WMCS)*. It has ambitious ideas, but has thus far not been able to affect policy or protect any habitats. Two other similar organizations are the *Wildlife Society of Bangladesh* and the *Bangladesh Bird Preservation Society*. The IUCN sponsors a *Biodiversity Contact Group* but, again, their meetings tend to be spent arguing about how much membership rates should be instead of the country's alarming decline of biodiversity!

THE LIFELINE OF BANGLADESH'S forest and wildlife

29 – Bangladesh



wealth is at the breaking point. Perhaps nothing is needed more urgently than recognition of the value of what wildlife exists and the importance of conserving it. In other words – education! Public awareness remains abysmal and there is a crying need for wildlife and environmental education in the country, amongst both rich and poor. Then, of course, there is a pressing need for the Department of Forest and Environment to cooperate and recognise the important role that it is required to play as the caretaker, not the destroyer of the forest. Considering that this has been written into law in the early 1970s, this should not be difficult. But vested interests continue to influence the Department, which is without doubt a source of destruction today. Having said this I hasten to add that without the Department's cooperation the chances of any substantial conservation initiatives working are virtually impossible. Hopefully, improved education will help to put pressure on them.





Bangladesh's wildlife wealth is on the edge of extinction

BY IAN LOCKWOOD



- ä Male Hoolock gibbon, *Hylobates hoolock telepara* (top left), Satcheri Forest
- ä Madhupur (top right), a shadow of its former self
- ä Adult capped langurs, *Presbytis pileatus*, with infant (above), in Madhupur National Park
- ä Forest guards on a beat (right), Madhupur National Park, near Mymensingh
- ä Sunderbans (facing page), or "beautiful forest"

31 – Bangladesh



Official figures suggest there are 300-400 Sundarbans tigers... 200 sounds more realistic!

FOR BANGLADESH'S WILDLIFE THE 20th century has been a harsh period of extinction. Human population growth, deforestation and poor habitat management has combined to overwhelm natural habitats and many significant species have gone extinct. Hunting, although outlawed in 1989 by executive order, remains a popular activity amongst the privileged and has added to this decline. Being a transition zone between the Indian and South East Asian zoogeographical regions, Bangladesh has a wealth of wildlife diversity. But it is a small area and thus endemism is rare. In fact Bangladesh is believed to have just one endemic species, the Bostami turtle *Trionyx nugricans*, found at a sufi shrine in Chittagong. According to recent estimates Bangladesh has 113 mammal species (out of 500 species in the Indian subcontinent), 690 species of birds (out of 1,200 in the Indian subcontinent), 123 reptiles, 19 amphibians, 107 freshwater fish and 120 estuarine fish species (IUCN p.93/Thompson p. 5).

Extinction has been the fate of many of Bangladesh's large mammals as well as significant reptile, fish and bird species (IUCN p.92). Three species of rhinoceros as well as wild buffalo *Bubalus buvalis*, were found in the area at the turn of the century but are now totally extinct here. The only place where you'll find large herbivores like nilgai *Boselaphus tragocamelus*, and banteng *Bos banteng*, is in the ill-maintained Dhaka Zoo.

AT THE APEX OF THE food chain is the much admired and greatly endangered tiger. While one of its most secure habitats in the world remains the Sundarban, the tiger has declined everywhere else in Bangladesh. Aside

from a few pug-mark claims from military people in the Chittagong Hill Tracts, the tiger is almost certainly extinct in every other habitat outside of the Sundarban. Forest officials estimate that there are 300-450 tigers in the Bangladesh Sundarban. However, according to knowledgeable sources, the numbers are exaggerated. A more realistic figure would be around 200 they suggest. But again the nature of the Sundarban makes this very difficult to determine. Since independence, only short-term studies and imperfect censuses of tigers and other wildlife have been conducted in the Sundarban.

Another big question is to what extent the huge tiger-poaching epidemic in neighboring India has affected the Bangladesh Sundarban. While little has been published, there are unsubstantiated accounts of tiger poaching specifically for the bone trade in the Bangladesh Sundarban. It is also thought that Bangladesh may be a conduit for the trafficking of wildlife products (including tiger bones). But thus far the issue has yet to be investigated. In sum, the status of Bangladesh's national symbol remains unstudied and obscured in the impenetrable, watery world of the Sundarban.

The evergreen and semi-evergreen rain forests of eastern Bangladesh still support the shy smaller cats including the fishing cat *Felis viverrins*, the leopard cat *Felis bengalensis* as well as jungle cats *Felis chaus*. Although they are rarely encountered, their small pug marks can often be seen in the sandy river beds of Lawachara, Satcheri and other forests. There are reports of leopards in the Chittagong Hill Tracts and, occasionally, in the Sylhet district. Many of these stray in from reserve forests and national parks

Sanctuary Asia Vol. XVIII. No. 3, June 1998 – 32



(such as Dampa in Mizoram and Balpakram in Meghalaya) across the border in India. In January 1998 a leopard strayed into the Sunamganj area from Meghalaya (near to Balpakram it is presumed). It was caught and tortured by farmers before forest officials rescued it. Within the same week a Dhaka newspaper, The Daily Star, reported the killing of two fishing cats in separate incidents.

While most of the large herbivores and predators have disappeared, Bangladesh's forests are still an excellent place to see primates. Madhupur has a large population of capped langurs that are easily observed, thanks to the fact that all the large, high canopy, trees have been cut down. Lawachara and some of the other smaller evergreen rainforests are excellent places for Hoolock gibbons *Hyllobates hoolock*, the only ape found in the Indian subcontinent. Their beautiful hoots and calls ring through the forest every morning, at a mystical quality that is difficult to describe. Lawachara also hosts Rhesus macaques *Macaca mylatta*, Assamese macaques *Macaca assamensis*, and pig-tailed macaques *Macaca nemestrina*. A small troop of the very rare Phayre's leaf monkey or Dusky langur *Presbytis phayrei* is also found in Lawachara. The slow loris *Nycticebus coucang* is thought to survive in Lawachara and the other evergreen rainforests, although there have been no recent sightings.

ANOTHER SYMBOL OFTEN ASSOCIATED with the Bengal of yesteryears is the Asian elephant. Although previously found in the moist deciduous forests, wild populations of elephants are now confined to the Chittagong Hill tracts and the forests between Cox's Bazaar and Teknaf. It is estimated that there are approximately 125 wild elephants left in Bangladesh. Although there is a resident herd in the very degraded Chunar Wildlife Sanctuary, most of the elephants migrate from India and Burma in and out of Bangladesh. This has become a serious hazard as the border is now heavily mined. In the early 1990s, Rohingya refugees fleeing persecution in Burma flooded into the Teknaf area. The result has been an alarming rise in deforestation and more mines along the border. Last year approximately 26 elephants died from mine injuries on the border.

The only significant crocodile left in Bangladesh's forest areas is the estuarine or salt water crocodile *Crocodylus porosus* found in the Sundarban. Although more common on the Indian side (where there is apparently a breeding farm), salties are often seen basking on the muddy banks of the Sundarban. The Gharial crocodile *Gavialis gangeticus* is struggling to survive along the Padma river, but without protection its future is bleak. A study in 1985 found only 28 gharials and this number has most probably declined. The status of the marsh, or mugger, crocodile *Crocodylus palustris* is equally precarious and it is only found in captivity at a mosque pond in Bagerhat (near Khulna). The Sundarban is also

33 – Bangladesh

home to the water monitor lizard *Varanus salvator*. There are several venomous snakes in Bangladesh, including the banded krait *Bungarus fasciatus* and Russell's viper *Vipera russelli*. Indian pythons *Python molurus* are still found in the Sunamganj Haors and Chittagong Hill Tracts.

BANGLADESH IS HOME TO several freshwater turtles, including the endemic Bostami turtle. Several turtle species are exported for their meat under licenses from the Department of Environment and Forests. The Cox's Bazaar beach used to be a nesting ground for the Olive Ridley turtle *Lepidochelys olivacea*, but increased human activity in this area has led to a decline of turtle activity. Leathery *Dermochelys coriacea*, Hawksbill *Eretmochelys imbricata* and Green turtles *Chelonia mydas* are also found in Bangladesh's coastal waters. On January 27, 1998 the *Daily Star* published an alarming article on the extent of turtle smuggling as well as turtle deaths along the coast. Based on a report by the *Bangladesh Wild Fauna and Flora Conservation Society*, it brought to light a new and alarming trend. According to the report, the demand for turtle meat has been increasing along with egg collecting. This has caused a serious decline in the five species of sea turtles found along Bangladesh's coast. Smuggling, on the other hand, is exacerbated by the fact that India and Nepal have banned the export of turtles.

BANGLADESH REMAINS AN UNAPPRECIATED and rewarding location for both amateur and serious bird watchers. Although there are no endemic species, 699 species have been recorded with in the small area of Bangladesh! There are 28 globally threatened bird species as well as 35 near-threatened species. Globally threatened species include the whitewinged wood duck *Cairina scutulata*, which is thought to survive in the Chittagong Hill Tracts. Pallas's fishing eagle *Haliaeetus leucorhynchus* is not uncommon in the Sunamganj Haors and the masked finfoot *Helipais personata* is to be found along the small creeks of the Sundarban. Other threatened species outside forest areas include the spoonbilled sandpiper *Calidris testacea* and Indian skimmer *Rynchops albicollis* found in coastal mud flats.

The Department of Environment and Forest's wildlife section has identified four indicator species on the basis of which habitat evaluations can be undertaken in different areas. They are the gharial crocodile in the West along the Padma (Ganges) river, the tiger in the Sundarban, the Hoolock gibbon in the Sylhet rain forests, and the elephant in the Cox's Bazar region. As highlighted in the overview printed at the start of page 22, these are purely symbolic acts. Whether any serious conservation measures are enacted in Bangladesh only time will tell.

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