

The dangerously venomous Spectacled Cobra (*Naja naja*) is the main attraction for snake charmers in Bangladesh.

TRAVELOGUE

Destination Bangladesh: From the Himalayas to the Bay of Bengal

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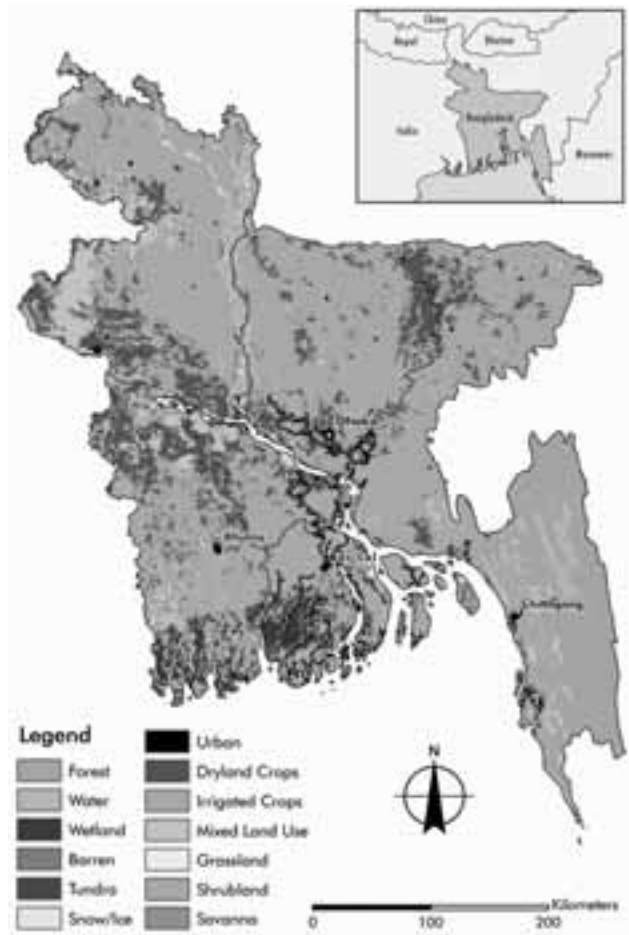
Photographs by the author.

I begin my story in Dhaka, the swirling and chaotic mega-city capital. The metropolitan area houses 11 million, making Dhaka the largest city in Bangladesh, and one of the most populous cities in the world. One does not enjoy a casual stroll through Dhaka. A trip to the city's center means bushwhacking through throngs of garishly decorated rickshaws, buses held together by Bondo putty, and taxis that belch and wheeze around the clock. Dhaka also is not a pleasant-smelling city; a hint of sewage and humanity always hangs in the hot and sticky air. City people are generally very friendly, but many speak only Bangla. Therefore, having a local guide is advisable if not familiar with the language, culture, and customs. However, just miles away from frenzied, industrialized Dhaka, the landscape changes dramatically and reveals a verdant flatland covered by hand-tended rice fields and palm trees waving lazily in the heat.

Bangladesh is situated between the Indo-Himalayan and Indo-Chinese subregions of the Orient. With 147 million people occupying roughly the same area as Iowa, Bangladesh is among the most densely populated nations on earth, but this mostly agricultural country rarely makes the news in the West. Within its nearly 144,000 km², the country contains a number



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of diverse ecosystems supporting roughly 113 species of mammals, 628 birds, 126 reptiles, 22 amphibians, 708 species of freshwater and marine fish, about 400 species of mollusks, and 140 bees and wasps, many of them on the nation's list of threatened animals. Few systematic studies have been conducted on the biodiversity of the country (formerly East Pakistan) since British scientists published their last book in 1943.

The current species list of Bangladesh, produced by IUCN Bangladesh in 2000, was prepared broadly based on collections made by British researchers a century ago. The country has neither a natural history museum nor a long-term biodiversity con-

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Brightly colored and noisy Tokay Geckos (*Gekko gecko*) are common in most old buildings.

servation strategic plan. Thus, this mainly Muslim, impoverished, overpopulated, and poorly explored country is now drawing attention from researchers and conservationists around the globe. As a native, I wanted to initiate a research and conservation program on the herpetofauna of Bangladesh, the least known and most neglected group of animals in the country. My research goals included the production of an updated species list, a set of GIS-based distribution maps, and estimates of species composition and richness in various habitat types.

Based on various geographic, biological, and logistical factors, I selected seven permanent sampling sites (PSSs) in five different forest types: evergreen, semi-evergreen, deciduous, mangrove, and swamp forest, and three study sites in urban and suburban areas. I planned to spend at least one week in each of my PSSs, which required a lot of paperwork. Worth mentioning here is that bureaucracy in a developing country is sometimes very frustrating, and is the main obstacle to conducting research. Nonetheless, the summer of 2006 found me exploring hot and humid tropical forests with some graduate students from the Department of Zoology, Jahangirnagar University and other assistants. Jahangirnagar, one of 28 public universities in Bangladesh, is in the district of the capital city, Dhaka.

We headed northeast into the Lawachara National Park, a 1,250-hectare, highly diverse evergreen forest. The park is the home to several primate species, including the only ape of the country, the Hoolock Gibbon (*Hylobates hoolock*). A bus ride of about six hours got me to the nearby township of Srimangal. This was not a peaceful journey, Bangladeshi drivers are not known for staying in their lanes. From there, we made our way to the national park headquarters in a “rickshaw,” a locally-made three-wheeled vehicle pulled by a human, only to be informed that my team would not be allowed to use the Hilltop Forest Rest House, the only place to stay overnight in the park. This meant we had to walk in each night, a journey of about 10 miles. On the way out from the forest around midnight, we found *Leptobrachium smithii*, a dark frog that had not been recorded from the park. Two lizards that had not previously been



Lawachara National Park is a 1,250-hectare, highly diverse evergreen forest.

reported from the country were also recorded: *Scincella reevesii*, a common ground-dwelling skink, and *Ptyctolaemus gularis*, a relatively uncommon *Calotes*-like agamid lizard that we found about 2 m high on a tree-trunk.

Undulating red soil and Sal (*Shorea robusta*) forest are the main ecological features of Madhupur National Park, my next PSS. Sal forests are relatively dry and have been dramatically reduced during the last few decades, but a few older stands remain and provide a home for serpents. Nocturnal and deadly venomous, the Banded Krait (*Bungarus fasciatus*) is considered “endangered” in Bangladesh. Normally, these snakes are very



The Green Fan-throated Lizard (*Ptyctolaemus gularis*) was recorded for the first time in Bangladesh.



Undulating red soil and Sal forest are the main ecological features of the deciduous forest.

secretive and very difficult to locate, but I found several fresh roadkills on the road that meanders through the 8,438-hectare deciduous forest in north-central Bangladesh. We recorded a brightly colored microhylid, *Kalophrynus orangensis*, which has recently been proposed to be synonymous with *K. interlineatus*, for the first time in Bangladesh. *Kaloula taprobanica*, another dark, painted microhylid also was collected from a head-high



Reeves's Ground Skink (*Scincella reevesii*), another first record for Bangladesh.



We found a Sri Lankan Painted Frog (*Kaloula taprobanica*) in a head-high tree-hole.



We recorded the Sticky Frog (*Kalophrynus interlineatus*) for the first time in Bangladesh from Madhupur National Park.



Like many other Asian ranids, *Sylvirana leptoglossa* has been subjected to prolonged taxonomic debates.

tree-hole. This is the first voucher specimen of this species from the country. Many Asian ranids have been subjected to a long taxonomic debate. We recorded an abundance of the noisy *Rana leptoglossa* (the recently revised name of which is now *Sylvirana leptoglossa*) from the park, and this also was a first record of the species from the region. We noticed the Berdmore's Narrow-Mouthed Frog (*Microhyla berdmorei*) in great abundance during late-June.

My next destination was Comilla Tipperah Hills, a degraded Sal forest habitat in east-central Bangladesh that experiences flash floods during the rainy season. Most of the hilly areas are already clear-cut, and considerable development occurred during the last couple of decades. We did not find any old trees or a good patch of forest, and decided to conduct surveys in the agricultural fields nearby, from which we recorded mostly common species. We did find two new skink species of the genus *Sphenomorphus* (*S. maculatus* and *S. indicus*) that had not been recorded from Bangladesh. Among several other skink species, *Lygosoma bowringii* was a new record for the country, considerably extending its range from the nearest known populations in Myanmar. We also observed breeding ranids, *Sylvirana leptoglossa*, which also represented a new record of the species outside Madhupur National Park in north-central Bangladesh.

Three mountainous districts occur in southeastern Bangladesh: Khagrachari, Bandarban, and Rangamati. These are covered in forests that extend from Myanmar and northeastern India, and are highly diverse, mostly intact, and poorly explored. Getting there required an eight-hour bus journey from Dhaka to Chittagong, then a three-hour bus ride to Bandarban, and finally a "chander gari," a locally produced four-wheel-drive jeep-like vehicle. My western friend had to get special permission, as foreigners are not normally allowed to visit these politically restless districts. While looking for amphibians and reptiles in the area, local people were constantly providing us information on sightings of frogs, snakes, and lizards. In response to such information, we were able to capture a Cat Snake (*Boiga*



Uncommon Berdmore's Narrow-Mouthed Frog (*Microhyla berdmorei*) is found frequently in Madhupur National Park.



We recorded Bowring's Supple Skink (*Lygosoma bowringii*) for the first time in Bangladesh.



Spotted Litter Skinks (*Sphenomorphus maculatus*) are common, but were recorded for the first time from Comilla Tipperah Hills.

ochracea) and a very fast-moving Trinket Snake (*Coelognathus radiatus*), inside our "well-protected" hillside resort campus. We also collected several species of skinks, the most important of which were *Lygosoma lineolatum*, which had not been described in earlier records, *Sphenomorphus maculatus*, which we had found already in the Camilla Tiperah Hills, and *Eutropis macularia*, which was quite common in the area. We spent more than an hour capturing a *Calotes versicolor* sleeping high in a tree at night inside the resort. Mountain streams are quite common in these three hill districts, and we recorded a megophryid frog, *Xenophrys parva*, by one such stream.

Haor is an internationally important seasonal wetland that includes numerous rivers, streams, irrigation canals, and large areas of seasonally flooded cultivated plains. Situated in northeastern Bangladesh, the Haor Basin is one of the most remote areas of the country. The Tanguar Haor is a 97.3 km²

UNESCO "World Heritage Site," and an important wintering and breeding ground for migratory birds. Water depths in the Haor vary from 5–10 m during the wet season and 1–4 m in some shallower wetland areas. We hired a boat especially designed to cruise in shallow water, but could not conduct a thorough survey this year because of logistical problems. We are planning to do so in the coming years. We did, however, record several species of common frogs and aquatic snakes (e.g., *Enhydryis enhydryis*, *Xenochrophis piscator*, etc.). We also found a few softshell turtles (*Aspideretes gangeticus* and *A. hurum*) that had been captured by local turtle hunters who we encountered on the way to local fish markets. We collected tissue samples for DNA analyses.



The Khagrachari, Bandarban, and Rangamati hill districts are covered in evergreen forests.



The mildly venomous nocturnal Tawny Cat Snake (*Boiga ochracea*) was only found in the Bandarban Hills.



This small Bronze Grass Skink (*Eutropis macularia*) is widely distributed in plains and hilly areas throughout the country.



Local people often were a good source of information for finding amphibians and reptiles in unfamiliar areas.



Common Smooth Water Snakes (*Enhydryis enhydryis*) are common in most wetlands in Bangladesh.



Indian Softshell Turtles (*Aspideretes gangeticus*) are still common in large rivers like the Brahmaputra and its tributaries.



Indian Roofed Turtles (*Pangshura tectum*) are popular in pet markets in Dhaka.



A good population of King Cobras (*Ophiophagus hannah*) remains only in the Sundarbans mangrove forest.

My final destination was the Sundarbans, the largest chunk of productive mangrove forest in the world, and another World Heritage Site that extends through both India and Bangladesh. At the mouth of the mighty Ganges, this wide area of impenetrable mangroves supports a varied and fascinating array of natural and anthropological treasures. The Bangladeshi Sundarbans covers an area of about 5,770 km², of which 4,016 km² is land and the rest is composed of rivers, canals, and creeks. Only a couple of centuries ago, the Sundarbans was twice its current size, but much of it has been altered. It is a crucial conservation area hosting Bengal Tigers (*Panthera tigris tigris*) and many other species, including the world's largest venomous snake, the King Cobra (*Ophiophagus hannah*), and the world's largest living reptile, the Estuarine Crocodile (*Crocodylus porosus*). This mangrove area also is one of the world's most effective cyclone barriers, and also serves as a food factory capable of feeding our children in perpetuity. Transport in the Sundarbans is difficult and dangerous, especially during the cyclone months. We rented a boat and launched from Khulna, the last human habitation in the northern part of the Sundarbans, and spent most of the time onboard. Our little "Titanic" carried several thousand gallons of freshwater and enough food for the whole team to eat, drink, and take showers for an entire week.

I end my story on Katka Beach, situated south of the Sundarbans mangrove forest, on a crisp and gorgeous day, with no one else to enjoy the wide swath of powdery white sand beach that stretched from horizon to horizon. The Earth's biodiversity is being lost at a frightening rate, and we must act now to conserve our life support system. We humans, who have been given the power and wisdom to achieve so much, should recognize that protecting ecosystems and wildlife will ultimately ensure our own survival. Bangladesh is an impoverished, overpopulated, beleaguered, and mostly forgotten country, but those of us from southern Asia have a headstart on the rest of the world because of our positive attitude towards nature. We



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respect other life forms and are grateful for the gifts nature bestows upon us.

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