

Post card from Belize, Central America

Coastal Caribbean Biology at the University of Arkansas—Fort Smith

Exploring Mayan ruins. Floating through dark limestone caves on a tyre tube. Snorkelling amongst sharks, rays, and sea turtles. Zip-lining at top speed through a rainforest canopy. Boating down a river flanked by tropical forests. These are snapshots of what my tropical biology students experienced in Belize. Although birding and other wildlife watching was our primary focus, these activities served to keep the participants engaged as they absorbed Belize's fabulous biodiversity. Clearly, for the novice, this was a great way to get exposed to the floral and faunal splendor of the tropics.

These were all part of *Coastal Caribbean Biology*, a new course I developed at the University of Arkansas—Fort Smith. In May 2011, I took 32 students on back-to-back trips to this little country in Central America. Formerly called British Honduras, this Manipur-sized (22,965 km²) nation, at the base of the Yucatan Peninsula, is one of the best destinations for English-speaking tourists, especially those seeking a taste of tropical biodiversity. Its year-round warm climate, political stability, thin population density, and a largely bilingual (English and Spanish) populace make it one of the best places to visit in this part of the world. With nearly 600 species of birds and over 40% of its land protected, it offers a bonanza for wildlife enthusiasts.

With habitats ranging from mangrove swamps, coastal lagoons and barrier reefs, to pine savannahs and evergreen forests, it is impossible to get an overview of the country's flora and fauna without staying in different places. We stayed in three spots. The first was the Crooked Tree Wildlife Sanctuary, an inland lagoon in northern Belize, where we were treated to hordes of water birds, including the spectacular Jabiru Stork, Belize's national bird. The scrubland adjoining the lagoons offered glimpses of interesting wildlife, like spiny-tailed iguanas (a local delicacy which the natives call *Bamboo chicken*), Common Tody-, and Vermilion flycatchers. An added treat was the close encounters with the rare black howler monkeys in the nearby village of Bermudian Landing, where the locals have developed a Community Baboon Sanctuary (CBS). The CBS has become a model for grass roots conservation. Over 200 villagers from seven villages have pledged to protect and grow monkey-favored trees and stop slashing-and-burning. They have built and maintained monkey-crossing aerial bridges across forest gaps and roads to protect the monkeys from being mauled by village dogs. Students from my Wildlife Conservation class were particularly pleased to be there since CBS is featured in our textbook.

We spent four days based at the Crystal Paradise Resort in the village of Cristo Rey near the Guatemalan border. A local Belizean family prepared delicious regional and American food. Food was served in a large thatch-roofed dining hall in full view of an array of bird feeders that attracted charismatic birds like toucans, chachalacas, orioles, and hummingbirds. Both humans and birds enjoyed the daily feast of fresh tropical fruit. The resort is tucked away in a remote spot by the scenic Macal River, flanked by tropical forests. We canoed four miles of the Macal and saw colourful tropical specialties like Black-cowled Orioles, Bare-throated Tiger Herons, and Black-headed Trogons. Paddling by the limestone bluffs along the river, we flushed

proboscis bats from their daytime hideouts. At siesta times in the hot afternoons, we swam in the rock pools by the river and enjoyed Green Kingfishers and Mangrove Swallows fly around at top speed low over the waters. We made a day trip to the 1,000 year-old Xunantunich Mayan ruins, an experience that offered a perfect blend of archaeology and natural history. These ruins were covered by rainforests until their discovery in 1892.

Cave tubing at the Caves Branch River was a truly phenomenal experience. Sitting on tyre tubes with our posteriors arching into the cool waters (and occasionally scraping stony bottoms), we floated through inky-black limestone caves. LED lights strapped to our foreheads afforded some illumination. Now and then we drifted through cracks or cave openings that revealed glimpses of the blue sky or the emerald green forest canopy above. Ridgeway's Rough-winged Swallows darted in and out of the entrances carrying nest material. In the blue stagnant rock pools near the cave entrances, we enjoyed cool dips among milling schools of Mexican tetras eating prey flushed from beneath our feet. These beautiful fish have become a nuisance because they follow cave divers' lights far deeper into caves than they would normally venture, and prey on rare invertebrates. Sighting the deadly fer-de-lance, one of the world's most venomous snakes, coiled up in a limestone crevice by the river was a memorable experience.

I had always hesitated to include zip-lining in any of these activities. What can be derived from an ecologists' standpoint by streaking down a canopy, hanging precariously from a wire? As it turned out, the experience was not only exhilarating, but we actually learned some canopy biology. Not while zipping, of course, but during the long climbs up wooden stairways that spiraled the massive, buttressed, tropical trees. We also had to wait our turns on platforms erected 45 m or so up on these cathedral-like giants. The trees were festooned with epiphytes (plants that grow on other plants) like bromeliads. It was nice to see them from above, for a change. Notable bird sightings included a Streak-headed Wood Creeper battering a long caterpillar and struggling to gobble it down; Montzeuma Oropendolas hanging off their long pendulous nests uttering bubbly calls; and the rare Olive-backed Euphonia collecting nest material at eye-level. Until then we could only get fleeting glimpses of these euphonias by arching our necks backwards and scanning the canopy. This was a unique and welcome perspective.

One of the best sites we visited was the world famous Belize Zoo, which harbours only native animals of Belize. Situated amidst the tropical savannah, and rendered lush by scores of planted trees, the campus yielded wildlife sightings even as we enjoyed the captive animals and the quaint hand-painted educational signs. Wild chachalacas, caciques, and tityras visited the enclosures, partaking in the largesse of food laid out for zoo animals. I showed my students the cottage I lived for four months in the late 1980s (as part of my graduate program) in the savanna forests adjacent to the zoo: now a part of their Tropical Education Centre.

Belize boasts the second largest barrier reef in the world. We spent the last three days on the delightful island

of Caye Caulker. From here we had quick access by boat to the Hol Chan Marine Reserve, where we snorkelled in waters teeming with nurse sharks, sting rays, and green sea turtles. The wildlife here has been unmolested for decades and is fearless of humans, swimming around apparently oblivious to our presence. We could reach out and touch the sharks. Our guides even scooped up the sting rays in their arms so we can touch and take photographs. We had to frequently side step to avoid the rays swimming by like flying saucers or the sea turtles languidly swimming around in apparent slow motion. We floated atop spectacular coral gardens, and stayed a respectful distance from venomous creatures like fire corals and lion fish. We identified over 25 species of reef fish, including exquisitely beautiful rock beauties and butterfly fish. An unexpected bonus was the marine mammal, the West Indian manatee, a pair of which grazed the bottom of a sandy expanse near the coral reefs. Later, on the island, we hiked to mangrove swamps and saw birds that were typical of this habitat, including Mangrove Warblers, Rufous-necked Wood Rails, Yucatan Vireos, and Black Catbirds. The skies were dotted with Magnificent Frigatebirds soaring like giant black crosses. A variety of shorebirds and terns

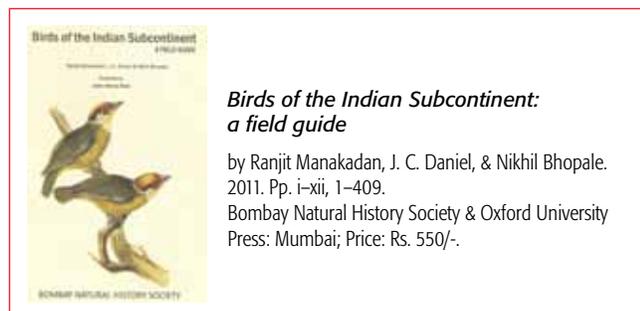
pushed our Belize bird list beyond 125!

The Belize experience was a great follow-up to my Ecology course that most of the participants had prior to the trip. Many ecology lectures were repeated briefly in the field, reinforcing concepts learned. We discussed dispersal of the guanacaste tree's massive seeds while squatting right under its gigantic crown, with the odd-looking circular seed pods in our hands; we delicately picked through the foliar nectaries and beltian bodies of ant-acacias and marveled about this classic case of mutualism between the acacia tree and ants; we reflected on the bizarre sex-changing life history of the blue-headed wrasse, a coral reef fish, even as it swam around our ankles. The entire course was an extension of our far-away classroom in land-locked Arkansas. It was just the right way to learn tropical biology.

Belize is one of the few places on earth largely unspoiled by human development. Given its strong conservation ethic and low population pressure, the outlook is refreshingly good for its wildlife. Being just a two-hour flight from the United States, it depends on ecotourism from America to sustain its people and its natural wonders. I am glad I was able to contribute my mite in this regard.

—Ragupathy Kannan

Reviews



The volume under review was originally published in 1983, to commemorate the centenary of the venerable Bombay Natural History Society, and created a sensation, for it answered the prayers of every Indian birder. At last, here was a single volume that illustrated all the species, with entire families on a plate, and closely resembling species so readily comparable to each other. Initially only its size was daunting. Later reviewers shot it full of holes (Rands 1985; Redman 1985; 'W. E. S.' 1985; Biswas 1986; Roberts *et al.* 1986). Even at that time there were ghost whispers in the corridors of India's oldest NGO, that it had been hurriedly cobbled together, to meet the centennial deadline. Subsequently, a '2nd impression' was issued in 1989, two years after the demise of Sálím Ali, with some monochrome plates converted to coloured ones, and purportedly rectifying past errors pointed out by the various reviewers (see above).

That was over twenty years ago. The field-guides' boat was rocked again after ten years, with the publication of the spectacular *Pocket guide* (Grimmett *et al.* 1999), followed a year later by the much-loved *Birds of India* (Kazmierczak 2000). By then the *Pictorial guide* was passé.

Ever since, Indian birders graduating from Ali's classic *Book of Indian birds*, or Martin Woodcock's delectable little *Collins handguide to the birds of the Indian Subcontinent* (1980)

invariably bought and followed one of the new extant field-guides—so much so that even the English names of birds used in manuscripts submitted for publication, long followed from Ali & Ripley's various works, began to change as birders knew only those from the newer guides. The BNHS itself began to allow these 'new' English names to seep into the pages of its journal, vis-à-vis those from the Ali & Ripley era. In the process, a part of India's cultural and linguistic heritage, from the British and post-independence era, was allowed to fade away. But for the decade that it held sway, nothing replaced the *Pictorial guide* in terms of convenience.

Like many fellow-birders of the *Pictorial guide's* heydays, I too crammed my copy with marginalia. Colour coding my jottings—red ink for additional ID information, and blue for highlighting errors. Many of its illustrations took on the strange silhouettes of avian cacti after I 'Petersoned' them. We enjoyed many idyllic times together. Then, of course, I bought the 'second edition,' and used it till more ergonomically designed field guides appeared at the turn of the millennium (actually 1999). (The larger Grimmett *et al.* work of 1998 does not count here.) But I rued my handwritten notes in that *Pictorial guide's* first edition.

The new wave of field-guides, Grimmett *et al.* (1999), Kazmierczak (2000), and much later, Rasmussen & Anderton (2005), took the format to a different level. They were a fresh wind that blew across a landmass dripping with the mundane monsoon humidity, crisping the birding fraternity upright with their myriad attractions. The first had delightful illustrations, layout, and notes. The second created a stir with its uncannily accurate distribution maps. The third broke new ground in revising taxonomy, introducing sonograms, and generally bringing the most advanced form of a field-guide to the Indian Subcontinent. It however tweaked the competition by splitting the work into two volumes: a field-guide, and, a sort of synoptic handbook.

To resurrect the *Pictorial guide* in the face of such stiff competition is either an act of bravado, grittiness—J. C. Daniel's,