

adaptive function. Three hypotheses proposed for the function of the old nest include: (1) reuse and thus saving in time and energy to breeding pairs, (2) protection from search-strategy predators (Watts 1987), and (3) their use as an indirect cue to the nest site selection (Erckmann et al. 1990).

We recorded eight nests in the Wattle plantations, a habitat apparently not scarce in Nilgiris. Apparently the nest material and nest site for White-bellied Shortwing is not at a premium. It would be interesting to test these hypotheses and understand the adaptive significance of such behavior.

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## In the footsteps of T. J. Roberts

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As a family visit to Karachi was planned for November 2004, I decided to use the opportunity to observe raptors around Karachi. I remembered T. J. Roberts' article in the *Newsletter for Birdwatchers* (2003) and requested him for more information via email. The area is semi-arid and I was interested in comparing the avifauna of Sindh with Saurashtra, Kutch and the desert areas of Rajasthan. Well in advance of leaving for Karachi I contacted Mr Babar Ali, Mr Ali Hasnain and Dr Ejaz Ahmed from WWF's Karachi office for details on good raptor watching areas. The first eight days were spent in Karachi as everything came to a standstill for the Eid holidays. Next week, at the WWF office, we shortlisted three days for raptor viewing. The first day would be spent at Kirthar National Park from the Karachi entrance. The second day we would follow in T. J. Roberts' footsteps, covering north-eastern areas of Sindh where he observed twenty-three species of raptors in one day during the 1970s. The third day we would explore the north-western area of Kirthar National Park. WWF kindly put their

Toyota 4-wheel drive at my disposal and deputed a knowledgeable Conservation Officer, Jahangeer Durrane, to accompany me.

Kirthar National Park lies in Sindh Province, north of Karachi and west of the Indus River. Its area comprises 1,192 square miles of dry, arid landscapes with sparse, hardy vegetation and imposing rocky outcrops. Most spectacular is the 3,000 feet high Kirthar range of rocky hills ranging into Baluchistan — home of the spectacular Urial *Ovis orientalis* and Sindh Ibex *Capra ibex*. In the plains of Kirthar, Chinkara *Gazella bennettii*, Striped Hyena *Hyaena hyaena*, Jackal *Canis aureus* and Desert Fox *Vulpes cana* can be observed. Kirthar National Park lies in the arid sub-tropical scrub forest zone with very hot, dry summers and frost-free winters.

On 19.xi.2004 we visited Kirthar National Park via the easily accessible Khar entrance, due north of Karachi. Raptors seen: Fifteen Tawny Eagles *Aquila rapax*, Short-toed Snake-Eagle *Circaetus gallicus*, many Black Kites *Milvus migrans* with a

few being the northern wintering subspecies *lineatus*, two Common Kestrel *Falco tinnunculus*, one juvenile Cinereous Vulture *Aegypius monachus* in fresh plumage, and two to three juvenile Steppe Eagles *Aquila nipalensis*. Some years ago Bill Clark (*pers. comm.*) had seen a juvenile Golden Eagle *Aquila chrysaetos* at Khar.

At Gadap village saw a Desert Fox chased by two dogs belonging to local herdsmen.

We were able to get very close to a rather confiding Barbary Falcon *Falco peregrinus babylonicus* in typical plumage: pale, buffy-pink underparts with sparse spotting on breast, barring restricted to lower belly and thighs and diagnostic reddish nape. Got as close as fifteen feet! In the morning papers we had read that over a hundred falcons had been confiscated and released in Kirthar National Park. The three Barbary Falcons we saw appeared to have been from among those.

20.xi.2004: Following Tom Roberts' route. The next day to Thatta and Hadiero via Haleji: Brahminy Kite *Haliastur indus*,

Marsh Harrier *Circus aeruginosus*, Tawny Eagle. After Gharo, all marshy areas mentioned by T. J. Roberts, have been built up, destroying excellent habitat for waders and marsh birds.

Turning left from the main road for Haleji we saw: Short-toed Snake-Eagle, two Marsh Harriers, Booted Eagle *Hieraaetus pennatus*, Black-shouldered Kite *Elanus caeruleus*, Long-legged Buzzard (pale morph) *Buteo rufinus*, Common Kestrel.

At Haleji: 12 Booted Eagles, one Tawny Eagle, two Marsh Harriers, two Greater Spotted Eagles *Aquila clanga*, Brahminy Kite, one Black-eared Kite *M. m. lineatus* (typical individual), Pelicans (Pelecanidae), Cormorants (Phalacrocoracidae).

Haleji appears to have degenerated since Tom Roberts' days. Haleji wetland is a Ramsar site and very well known for birds. However there appeared to be a total lack of management. The staff told us they had not been paid for six months. The Reception / Interpretation centre is not maintained and was in shambles. No designated authority is in charge. Instead four different departments are involved with the park, with different agendas and priorities, hindering proper management. These are: Sindh Wildlife Department, Irrigation Department, Karachi Water and Sewerage Board and, Pakistan Steel Mill (which draws water through a canal system to fill huge ponds).

Over and above this the surrounding fishponds are draining off water. We were told that fishing and poaching were rampant. We also witnessed illegal fishing. The bund surrounding the wetland and its environs up to 3km is disturbed and devoid of large trees which are cut or lopped, reducing perches for birds. Haleji wetland has great potential but needs a farsighted management policy, strict protection, motivated staff and habitat restoration.

To Hadiero Lake: a large brackish water

lake nestled between stony hills, not far from Haleji. Three Tawny Eagles on power lines.

En route to Thatta: Two White-eyed Buzzard *Butastur teesa*. Before Thatta Roberts saw a group of *Gyps* vultures. We didn't see any.

Thatta to Kalri (Kinjhar – local name): Two Black-shouldered Kite, several Marsh Harriers, and one White-eyed Buzzard.

21.xi.2004: To Kirthar via super highway entrance. Eight / nine Steppe Eagle juveniles near Dagai Hospital, three Tawny Eagles on pylon, three Black-shouldered Kites, and one Common Kestrel.

Nooriabad: Two Booted Eagles, two adult Cinereous Vultures, five Steppe Eagles — juvenile to third year plumage.

After Thanobulla Khan: Egyptian Vulture *Neophron percnopterus*, two Long-legged Buzzards, Black-shouldered Kite.

Park entrance: Black-shouldered Kite.

At Esar: Black-shouldered Kite, one Steppe Eagle on way to Dadabhai. Not a single *Gyps* sp. vulture was observed throughout the three days of extensive travelling.

Rapid development throughout Sindh will eventually restrict wildlife and also raptors to protected areas. A network of viably large protected areas needs to be created comprising different habitats typical of Sindh e.g., semi-arid areas, the large lakes, desert, mangroves, wetlands, etc. These areas should be scientifically managed and local people sensitized (not marginalized). Without the support of local people, no conservation exercise can be successful. More emphasis should be placed on public awareness in rural areas. I was very impressed with the work done at the Sea Turtle Centre at Sandspit (see below).

WWF (Mr Hasnain and Jahangeer Durrane) arranged a visit to their Sea Turtle Wetland Conservation Centre at Sandspit on 23.xi.2004. The knowledgeable

conservation officer, Babar Hussain, took us around the Centre, informing us the nature of their educational and conservation work. The laying beaches are protected night and day. Two Green Turtles *Chelonia mydas* (Olive Ridley *Lepidochelys olivacea* are very rare in these parts) were laying their last cluster of eggs. We watched, captivated, as the females meticulously covered the eggs with sand, moving forwards three to four times their body length before heading to the sea, with intermittent rest stops. We saw one emerging from the sea to lay her eggs. We released a few one to two day old hatchlings in the sea. Holding these young hatchlings and touching the adults as they headed back to sea was a life experience for me. Satellite tracking and tagging showed that the same females could lay as much as three times in adjacent areas on the same beach. The carapace of one female was 100cm and adults usually weigh 100-150kg. Main threats at Sandspit and Hawkes Bay are stray dogs, which dig out the eggs, and the mania for beach bungalows. The active laying beaches are protected right up to the Makran coast and beyond to the Sindh / Baluchistan coastal border. The Sindh Wildlife Department has its own sea turtle programme and co-ordination and communication with NGOs like WWF is vital for effective protection of the Green Turtle. The lifespan of the Green Turtle is approximately one hundred years, according to Babar Hussain, and young mature to adults in ten to fifteen years before coming to shore to lay their first clutch of eggs.

The wetland conservation centre is well planned out with displays, lecture hall (where school children of all ages and adults are introduced to wetlands and turtle conservation), and a visit to the beach to observe laying turtles. The local community has been sensitized and wanton killing of turtles and disturbance has been minimized. A schoolgirl who attended the sessions at the centre found a Green Turtle being sold in the Karachi market. When the vendor refused to give it up she bought it and took it to the Centre from where it was subsequently released.

I plan to go back one day and survey Kirthar and Baluchistan up to the Iran border.

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