

The fox, outfoxed

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The Indian Fox, also known as the Bengal Fox, is endemic to the Indian subcontinent

It was dry and hot, and the Acacia tree that I was sitting under didn't provide any respite from the searing heat. My water bottle was as dry as my throat and my work hadn't even begun. The bright colours worn by the tourists 'on evening safari' momentarily caught my attention as I saw the canter trudge along in the background. As I trained my binoculars back at the den site, I saw a pair of very long ears sticking out of one of the burrows. Roop Singh suddenly pointed out to another animal that was running away, its characteristic black tail tip leaving no doubt in my mind that I had had my first sighting of the Indian fox *Vulpes bengalensis* an animal I was to observe for the next 15 days.

Ranthambhore had always fascinated me. But I never thought I would go to Ranthambhore and study foxes. This ancient landscape of *Dangs* and *Khos*, local names for the mesa(s) and moist valleys respectively, is famous for its tigers that rule the forests. What had brought me to this place was not the great striped cat, but a cat-sized canid. I was in Ranthambhore's Jaisinghpura pastoral land. Only minutes away from the gate of the park but had a stark contrast to the lush 'Dhak'

Anogeissus pendula covered slopes of the Aravallis, this place was quite evidently heavily degraded. Nevertheless, it had a family of foxes that looked quite happy and seemed to be doing quite well for themselves, all seven of them. I had the unique opportunity to peek into the life of this shy creature with the help of Dr. Dharmendra Khandal and Tiger Watch, an NGO based in Ranthambhore. As a part of their Volunteer for Research programme in May 2007, I was to observe these fascinating animals in their natural habitat, recording behaviour near the den, the pressures that they faced and understanding the incredible tact that helped them survive in this human dominated landscape.

The Indian Fox is a widespread animal of arid and semi-arid areas especially partial to grasslands. It is mostly crepuscular and nocturnal in habit and rarely wanders around during the day. Its secretive nature leads to it hardly getting noticed, a life history strategy that might have helped it to survive in the 21st century. It is locally common and seen frequently in areas like the Great Indian Bustard Sanctuary, Maharashtra, Velavadar National Park Gujarat and Rollapadu Wildlife

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Sanctuary in Andhra Pradesh. An opportunistic omnivore by nature it forages for insects, fruits, rodents and the occasional unsuspecting little bird. Generally solitary they form pairs in the breeding season and both parents share the parenting responsibility. The average litter size is 3-4 and they are known to have more than one den site in their territory. It is not responsible for livestock losses, hence it is not persecuted in most of its range which spreads as north as Nepal, although they are hunted by some tribes in Tamil Nadu and

large burrows while the other burrows were much smaller. The female fox seemed to favour one of the burrows, while the pups just dove into anyone of them. There were 3-4 other similarly large burrows in a radius of about 30 m from the den.

The foxes consisted of a male, a female and four very playful pups. There was also another adult that seemed to linger around the den and occasionally guarded the den. This 'helper' adult has been noticed in other studies elsewhere on Indian foxes and may be one of the pups from the previous litter biding its time to inherit the parents' territory and its resources. Although the foxes are territorial they did seem to tolerate this individual. Unfortunately, it was so shy that I could never know whether it was a male or a female. I could distinguish the parent male from the female as she lacked the black tip on the tail. The pups although they had unique personalities were difficult to tell apart. Only one with a crescent moon mark at the base of its tail stood out and could be identified easily. This was also the most active and dominant of the pups. The pups although almost as big as the parents still suckled. It was quite hilarious to watch four pups lie on their backs to suckle while mom had to arch her back to accommodate her lively litter!

As foxes are crepuscular I would observe their behaviour in the late evenings and early mornings. Every evening I would sit under a tree at a distance of about 80 m from the den and observe the foxes. The female was generally the first to emerge from the den in the evenings and would go off for a drink. The male would come out of the den and lie under some bush while the pups played around. When the female came back the male would wander off, hardly ever did I see him coming back before I left the family after darkness.

Numerous feral dogs lived in the area and they regularly chased the foxes around. The dogs probably subsisted on the large amount of waste produced by the hotels and the villages. The female on seeing the approaching dogs would give a short 'bark', which would send the pups packing and they would dive into one of the burrows. The female often did a distraction display and ran in the opposite



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The Indian Fox is known to have more than one den site. The dens are large and complex with multiple chambers and escape routes

Rajasthan for food. They are quite tolerant of human presence and generally live in burrows or under bushes during the day quite close to human settlements.

The family of foxes I was studying lived in a den in an area of about 20 hectares of undulating scrub habitat that had highly over-browsed shrubs of *Capparis sepiaria*, *Capparis decidua*, *Zizyphus nummularia*, *Echinops carinatus* amongst others. There were many patches of *Calotropis procera* which were fed upon by the brightly yellow, blue and red nymphs of Painted grasshoppers and some trees of *Acacia tortilis* and *Prosopis juliflora* scattered over the area. It had a man-made water body in the south-western side. The area also had three large hotels and agricultural fields. The den that the foxes occupied had 14 burrows. It had three

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Termites form an integral part of a fox's diet



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The area is frequented by Longeared Hedgehogs at night

direction to distract the dogs. Once a single dog crept up very close to the female and suddenly attacked the female. The female surprisingly retaliated by charging the dog and chasing him away. It was quite amusing to see a large dog being chased by a lion-hearted vixen. The vixen chased the dog until both of them almost bumped into me. On seeing me the fox ran away, having displaced the dog away from the den. But on many occasions the dogs would try and dig up the den area, while some would chase the parents around.

I tried to locate the foxes at night to see how much they range from their denning area by using a powerful torch light and this made me aware of the other denizens of the night. The area was frequented by a pair of Golden Jackals *Canis aureus*, a Striped Hyena *Hyaena hyaena* and also Long-eared Hedgehogs *Hemiechinus collaris*. Indian Hares *Lepus negricollis* flushed from the grass, and so did Savanna Nightjars *Caprimulgus affinis*. The waterbody attracted a lot of birds and it was a common sight to find Woolly-necked Storks *Ciconia episcopus*, Little Grebes *Tachybaptus ruficollis* and Black-winged Stilts *Himantopus himantopus* feeding near the water as the foxes went for a drink. The scrub habitat near the Fox's den rewarded me in many other ways. I often saw Painted Sandgrouse *Pterocles indicus* land quite close to me as they prepared to roost. Southern Grey Shrikes *Lanius meridionalis* hunted from a perch catching insects and reptiles and one day

even a Fan-throated Lizard *Sitana ponticeriana* caught my eye. Once a Monitor Lizard *Varanus bengalensis* bolted from a bush quite close to me, this made Roop Singh also bolt in the opposite direction as there is a belief that the lizard is deadly poisonous, which is anyways not true.

During midday when the foxes were probably dozing off, I approached the den and collected the scat of the foxes. Indian foxes have the habit of defecating just outside their den, and hence fox dens are strewn with scats, it is also a great way to tell if the den is being used or not. A very preliminary scat analysis revealed something very interesting, more than 70% of the scat contained termite parts. Termites in my study area do not build large mounds above the ground, but have a vast network of tunnels just below the ground surface. Surprisingly, these termites form an integral part of the fox's diet. This has also been noted in some areas of Kutch, Gujarat. Most of the scats also contained bits of beetles, grasshoppers and



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A local collecting fuel-wood

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▲ Sand and boulder extraction by the locals often disturb the fox

Solifuge, some contained bird feathers while the others were full of hair and some even had some plant matter. Tragically, I also found pieces of plastic and silver foil in the scat, which meant that the foxes were also feeding on garbage.

Once as I was approaching the den, I smelt a horrible stench. Roop Singh promptly pointed to the tail marks of a monitor leading into one of the burrows. That evening I realized that the family had abandoned this den. Fortunately, I was aware of another den site that was present in the area and found them there. But one of the pups was missing! Over the next few days the rest of the pups too started showing signs of disease and started to lose body condition. They became at first less active and then skinny and very obviously weak. I was helpless as I saw them die one after the other, I think even the male succumbed to the disease. A description of the symptoms to a friend who is a veterinarian revealed that it could have been

▼ The area is heavily grazed by sheep and goats



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a disease that the foxes contracted from the dogs. Although I can't say this with any certainty as we didn't collect any tissue sample, the truth remains that the foxes of Jaisinghpura have disappeared. The female, resilient that she was, probably escaped the disease, but had left the area.

The dogs were not the only threat to these foxes. The success of the pair in bringing up four pups, so far, was a testimony to their amazing resourcefulness and cunningness. Ranthambhore is surrounded by about 1,400 acres of pastoral land. Only 50 acres of this land remains, while the rest has been converted to agriculture. Sand mining is rampant in the area and people were seen regularly excavating sand less than 100 m from the den literally carrying away the habitat in tractors. The plastic and other waste that was generated and improperly disposed off was finding a way into the diet of the foxes, which must have been detrimental to their health. The area is heavily grazed by sheep and goats. The herders often disturb fox dens by digging them up or sealing them with sand, this was told to me by a herder himself.

In a time when we talk about landscape ecology, areas like Jaisinghpura that lie outside protected areas, but harbour wildlife, also play a vital role in maintaining the diversity of the area. Granting them some level of protection can prove to be a blessing for lesser known animals like the Indian Fox, Hedgehog, Sandgrouse and Monitor Lizard. If we can't look beyond the 'tiger-centric' mode of conservation what we can do is at least ensure that such areas are included while planning our protected areas, and try to help these small, but beautiful animals survive without fear. The foxes of Jaisinghpura have gone into oblivion. But there are other populations of foxes in other areas like the Banaas ravines near Ranthambhore. Protection of these peripheral areas of the Park can alone save the fox from being outfoxed in Ranthambhore! ■



Sahas Barve has finished his M.Sc. in Wildlife Sciences from Wildlife Institute of India. His interests include biogeography, community ecology, birding, hiking, camping, photography.