



Conservation at the interface

It was six in the morning; we were between agricultural fields on one side and the forests of Kalakad on the other. In front of us were three Great Horned Owls perched on the ground and looking at us with a curious intense gaze. These large owls were returning to the forest after a night of hunting in the fields providing crucial 'pest free service' from the forest to the cultivated areas outside the reserve. In earlier times, these owls were found in large rock crevices and big trees in the fields itself but now all these have disappeared thanks to the constant demand for wood and granite. Such demands have led to sharper boundaries between the reserve and the human dominated landscape leading to greater interaction between people and wild animals with animals often being the losers. We need to



Great Horned Owl
Photo: Amogh R.

maintain and in some places even build a buffer around PAs that meets not only the basic demand of the local population but also prevent large scale urbanization in these areas. Pressure on the buffer around KMTR would be intense once the infrastructural ventures planned around Tirunelveli come up. The demand for water and land could then threaten the buffer and one would need strong regulations to prevent this from happening. The

recent decision of the government to have mandatory buffers around tiger reserves is a move in the right direction.

In this first anniversary issue of Agasthya, we have made some changes to the layout colour and added a sentence to what Agasthya means to an audience who are not familiar with the region. We have also added a slightly longer 'feature' article that in a sense summarizes the focus of our activity in the region.

Several of you over the year have either contributed or given us some useful tips to make the newsletter more useful and look better. We appreciate your help and look forward to more as we enter Vol. 2.

Happy reading.

T. Ganesh

Manage and Monitor livestock grazing

Srivilliputtur Wildlife Sanctuary is well known for its Grizzled Giant Squirrel but much less known for the consequences of illegal grazing inside the sanctuary. During our 'Mapping and Quantitative assessment of plant resources of Western Ghats', we had a chance to visit many areas inside the sanctuary. We noticed that most places, especially the forest areas which border the two districts and areas closer to human settlement have very high levels of cattle grazing. These patches never hold any seedlings on the forest floor except few invasive unpalatable weeds such as *Ageratum conyzoides*, and *Chromolaena odorata*. In order to know the back-

ground of the issue we interviewed some local inhabitants. They acknowledged the fact that there is illegal livestock grazing in these areas. They are of the opinion that the entry licenses granted by the forest department are sometimes misused and pave way for illegal grazing in



Cattle grazing within the Sanctuary
Photo: Kottaimuthu

the core area. Besides these the boundary between the two forest divisions serve as a corridor for the cattle to move in and the availability of fodder makes them stay for long periods of time inside the sanctuary. Within this period they damage the seedlings of pioneer tree species, and herbaceous species and as a result only a few seedlings established. Rampant grazing coupled with local encroachment hinders conservation efforts. This calls for political support to conserve forests and to develop adequate resources outside protected areas.

Kottaimuttu

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Feature

Extending the biodiversity frontier beyond the park boundary

If one hikes to the Agasthyamalai peak, one would soon realize that setting up of Kalakad-Mundanthurai-Tiger Reserve has indeed helped in conserving the forest. The extensive lush and dense forest of KMTR makes it the largest tract of well protected area in the region. Though the scars of past disturbance in the form of teak plantation raised during British period still remains, one also sees impacts of grazing, fuel wood collection and uncontrolled tourism coming from outside the park boundary. As one leaves the park boundary one can immediately witness the transformation as an emerald green ocean of paddy fields takes over leaving nothing for a buffer.

Quite a few problems arise with sharp edges of the park, one being man-animal conflict, which is rampant along the boundaries. We hear farmers' stories of constant crop loss due to wild life. Another woe is of the current land use of wet agriculture which has risen from a good irrigation system that has replaced dry crops of ragi and corn by paddy all through the year. Earlier, rotation of paddy with other crops resulted in residue which was used for household biomass requirements. This has led to increased dependence on forest for fuel wood by the community. Intense paddy cultivation has also robbed the landscape of the fauna which earlier ranged from forests to agro-landscapes. Earlier, people tolerated and even appreciated animals which shared their

landscape. During Pongal a harvest festival farmers hung a bunch of paddy (Naal Kathir) grains with the stalks in front of their houses which were eagerly raided by sparrows. Now we rarely hear the chirp of the sparrows and only occasionally see them in villages. Villagers also used to set owl perches in agricultural fields before rodenticide was brought into use.



The emerald green ocean of paddy.
Photo: T. Ganesh

The owls which roost in forest edges ranged into the paddy fields and used these perches readily to prey on rats. This practice is also dying because fewer owls make it to these perches. Weaver bird's nests which were common on trees earlier according to village elders are indeed a rare sight now. They not only gorged on paddy, nesting on these trees, but also fed on crop pest. Trees along bunds of paddy fields have disappeared due to narrowing of bunds to extend cultivation which has

made them unsuitable for trees and weavers.

ATREE-in the Agasthyamalai region for the past 5 years has distributed saplings and trees to the villages in the landscape, also identifying spaces wherever possible to plant the trees. We have identified farmers with broader bunds and planted trees on them. The leaf manure from these trees has reduced the usage of inorganic fertilizer.

Woman collectives formed by ATREE are into backyard multipurpose home gardening with trees, shrubs and herbs. Such garden supported bee colony and tailor bird nests apart from numerous other visitors. Our field station is also home to some interesting visitors such as Flycatcher, Pitta, Minivets, black napped hare, monitor lizard and many snakes, bees, wasps and sometimes a peacock. These demonstrates that such oases can serve as stepping stones that are required in the landscape to extend the biodiversity frontier beyond the reserve. All this would be ecologically friendly only if we move away from excessive use of inorganic pesticides and fertilizers. ATREE is working with Poyai Trust formed by a group of local youth to promote and demonstrate that organic agriculture can be viable in this landscape. All these efforts have to be clearly demonstrated with local stewardship to make a real difference on the ground.

M. Soubadra Devy

Community perspectives towards the forest

The Tiger, having found its way into the Union budget, illustrates the keen interest of the urbanites in saving the forests and the Tiger, in contrast to the perceptions of the forest fringe dwellers of KMTR. Though some of these dwellers appreciate flora and fauna and love the forest for its existential value, the only reason



Forest fringe dwellers identify KMTR more with the water that it brings than its existential value.

Photo: Allwin Jesudasan

most of them want the forest to be preserved is because 'it brings rain'. One wonders if this is a good sustainable reason to conserve the forest? For example, the same people who want the forest conserved because 'it brings rain', want roads built to nearby towns through it and would like the forest to be dug up if valuable minerals

back to the forest for their livelihood, either because they consider it demeaning or because it is unprofitable. With this changed scenario, a creative way has to be found to make people identify themselves with the forest if one expects to find a solution in these times of crisis.

Allwin Jesudasan

are found in KMTR. It is vital to have a national constituency for conservation but when facing a conservation crisis, local support is necessary. The Wildlife Act has changed the lifestyle of these villagers alienating them totally from the forest. Most of them do not want to go

Snippets from field

- The yellow throated sparrow that inspired Salim Ali to dedicate his life to birds appears to be a seasonal visitor to the Singampatti region. It is commonly seen in Feb and March and then disappears. There are several other birds showing similar patterns such as the Indian Pitta, the Blue-tailed Bee-Eater and even the ubiquitous Black Drongo.
- The Indian national bird the Peafowl is becoming increasingly common in the areas in and around the reserve. The "Meow" call of the male resonates through the jungles and fields at dawn and dusk. We rarely encountered peafowl inside the reserve a decade ago but today it is easily seen everywhere.
- The first rains of the north east monsoon bring a fascinating change in the life cycle of many creatures. Sitanas court, cuckoos sing and butterflies emerge. This time the scrub forest in Kolundumamalai was laden with glassy pupae of the crows and tiger butterflies. These were real jewels hanging from the bushes and in the evening sun it was simply scintillating.

Home gardens and healthy diets

Recently I got a call from the Headmaster of the local school seeking a solution to the health problems of students such as head ache, stomach pain, fainting, fatigue, drowsiness, inattention in classes and skipping physical education classes. In fact the call was redirected to me by the local Primary Health Centre which identified the cause of such problems to malnourishment especially lack of vitamins in the food intake of children from the villages. Through one of our pilot studies a couple of years back on health status of village women and children we found that most of the health problems were due to poor diet that lacked in greens and vegetables. This time I decided to reach the parents with messages on the importance of children's health, provisioning balanced diet from local sources and link-

ing them with home gardening practices. A slide presentation was made highlighting the issues on disease due to nutritional deficiency that could lead to irreparable damage by impairing brain development of children, responsibilities of parents to assure balanced diet and importance of dietary fiber content. As a solution, tips were given on balanced nutrition available in different local food preparations (few recipes), locally available seasonal vegetables, weedy plants and sourcing them in the backyard through home gardens. I also assured them that ATREE would guide them in terms of requirements for a balanced diet through the gardening program that would ensure a healthy generation next.

M. Mathivanan



A Multipurpose home garden in Singampatti village.
Photo: R. Ganesan

Abandoned plantations offer hope for forest restoration

The Agasthyamalai range includes four wildlife sanctuaries. Peppara, Shendurny and Neyyar lie on the western side of the range in Kerala and Kalakad Mundanthurai Tiger Reserve on the eastern side in Tamil Nadu. The entire range is known for its richness of plants and animals even though much remains to be explored. The range also had its share of intensive exploitation of forests for extracting timber and raising plantations. Many of the commercial plantations were established in the mid 1800's. With subsequent declaration as protected areas, some of these plantations that fell within the protected areas were abandoned. Such abandoned plantations now serve as potential habitat to bring back both native

plant and animal species. I visited some of these places on the Kerala side and spoke to several stake holders. Tea was revived in some



Abandoned tea plantations
Photo: Chetana H. C.

places thanks to the recent support from the government to help tea growers. While in others it was converted to rubber or was overgrown with grasses and lantana, though, I did notice regeneration of native species in some plantations. This gave me hope that abandoned tea can be restored but to do so, one would need some understanding of the process and some intervention. But as one would expect with any long history of usage and sudden abandonment, getting tea back to natural forests is fraught with several social and legal problems that may in some places overshadow ecological reasoning.

Chetana H.C

Experiencing Nature through Art

It is believed that sensitivity towards environment can be achieved through artistic activities. Art helps us to look at day to day things and events from a different perspective and have our own personal experience which may bring us pleasure and enjoyment. When we learn to immerse ourselves in the ordinary things that are close by, we start to understand what it means to exist in nature. It is very important to come up with innovative methods to sensitize children about environment through art. It can be achieved when we work closely with nature.

In an effort to get students to discover the beauty of nature within their own village, I conducted a weeklong workshop with high school students of St. Michael's school, Singampatti. As part of the workshop I made children observe trees and birds from close



Leaf sketches drawn by students
Photo: Abhisheka Gopal

and introduced them to few important mammals of KMTR. In the tree activity, students observed the characteristics of trees by sketch-

ing leaves, fruits and flowers while bark impressions were taken using crayons and paper. For the bird activity, children were taken to the local lakes for bird identification using field guides and also made sketches of a few birds. Finally in the field station I showed them slides of a few important mammals and asked them to draw and color the differences between animals that belonged to the same family. When all was done I noticed that students showed more interest when it came to sketching though they had no formal training, but were extremely hesitant when asked to write. This workshop also gave an opportunity for girl students who spend most of their time indoors to have an outdoor experience of nature that hopefully will go on to make them environmentally conscious leaders.

Abhisheka K

In search of *Corilla* and *Tortulosa*

It was a long dream to visit KMTR. I have heard a lot of field stories from the KMTR gang and finally got a chance to visit in Nov and again in Jan. I tagged along with others to the field and as everybody looked at the canopy for birds, butterflies or Lion Tail Macaques, I was busy searching the forest floor for land snails. My first hand knowledge on land snails of KMTR came from Fauna of British India. It mentions the presence of 30 species with about 26 Western Ghats endemic of which half a dozen are endemic to KMTR. I was looking for two groups of land snails viz., *Tortulosa* and *Corilla*. The former is represented by five and the latter by one species in the Western Ghats as against 25 and 10 species respectively in Sri Lanka. *Tortulosa* and *Corilla* have Gondwanan origin dating back to 100 million years. Fossil *Corilla*



New to science?
Photo: N. A. Aravind

dating back to 97 million years has been recorded from Ariyaloor, in Tamil Nadu. *Tortulosa* and *Corilla* are predominantly found in high altitude evergreen forests of the Western Ghats and Sri

Lanka. *Corillas* inhabit litter and soil layers and *Tortulosa* on the other hand are generally found in the canopies. In spite of bending my back over the forest floor for several days I was disappointed for not able to find a single shell of either of these species. But then nature always has a lot of surprises for us. As I was busy hunting in the forest for snails, Chetan spotted a beautiful big green snail, surprisingly right next to the main road. After going through the literature, I was convinced that it is in fact a new species belonging to the genus *Euplecta*. It is the only member of this group which is brightly coloured. There may be more such treasure to be unearthed in this beautiful region.

N. A. Aravind

Updates Anti Plastic Campaign

On the 16th of January 2008, ATREE – KMTR conservation education team conducted an anti-plastic campaign at the Manimuthar water fall. This has been the 6th year of endless effort to sensitize people about the use of plastic in protected areas. Thousands of tourists throng the Manimuthar falls each year on the day after pongal, causing considerable littering in the forests. Vehicles are checked for polythene bags at the check point by forest department officials and ATREE student volunteers (The Green Brigade) aged between 10 and 15 years from St. Michael's School in Singampatti. The volunteers made available cloth bags for a low price as an alternative and made frequent announcements about the harmful effects of plastic on wildlife and the environment. People were encouraged and urged to use garbage bins placed at these locations. Some volunteers carried placards and a few banners were hung to inspire people to appreciate the life in the forest and not litter carelessly

M. Mathivanan

'Maram Vishu' of Kallidaikurchi

When you drive past Kallidaikurchi to reach KMTR one cannot miss the saplings planted along the roads and in many public buildings. These are the efforts of one person, Mr. Vishwanathan, fondly called as 'Maram (Tree) Vishu'. Vishu a lecturer in the Paramakalayani College, collects samplings from a variety of sources and keeps them in a nursery at a local school, before he finds a safe place and a tree guard to plant them. Sourcing plants free of costs to green common places is a passion for Vishu since his student days. While taking computer courses in Tirunelveli he would wander into the Government nursery in the evenings before getting back home. He later established the TREE TRUST (Tamilraparani Research in Environment and Education Trust) with like minded people to make the villages green. The Trust has managed to plant 8500 saplings of which 7000 saplings have survived. He was recently awarded the best program officer of National Service Scheme for mobilizing youth in a greening program. ATREE has sanctioned a small grant for an Eco-club at the Tilak Vidyalaya Higher Secondary School, Kallidaikurchi of which Vishu is an alumini and

the main advisor for their green programme. He plans to conduct eco-awareness competitions at the district level through the school and identify the best performing school to confer 'ATREE Best Eco-Model School' award. We wish 'Vishu' the best and hope his dreams come true of making the land beyond KMTR also equally green.

T. Ganesh



'Maram' Vishu at work
Photo: Mathivanan

From the archive

A moment to savor

When I was in Upper Kodayar couple of years back I used to run the mammal transect in the forests around Upper Kodayar. I narrate one interesting incident that happened while I was on the transect. One evening dark clouds gathered above me, I hesitated to start as I was sure it would be interrupted by rain. But I decided to take the risk and the risk paid off. Midway through the transect it rained. So I took out the umbrella and stood by the side of the road waiting for the rain to cease. I saw a tiger, it was behind me and when it was crossing the road it

saw me. Man and Tiger locked eyes for a moment. Immediately it jumped across the road and vanished into the forest. I panicked and started to run in the opposite direction. I ran for about 100mtrs, and then stopped. After waiting for sometime and gathering some courage I came to the same spot where I had seen it. No pugmarks, nothing, all lost in the rain. I walked back to the room savoring the moment. The second sighting of Tiger came much later but that's for another time.

Patrick David



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