



Please... no rubbish here

The annual Sorimuthaian festival in KMTR happened in mid-July this year. Like in the previous years, the forest department along with volunteers from many organisations actively checked for polybags and liquor bottles at several places en route to the temple. In addition, the ATREE team continued to build awareness about safe disposal of solid waste among the lakhs of people assembled at the festival. While doing so the team sometimes was warmly welcomed by the people into their 'houses' and were showed how they are segregating plastic waste to be taken out of the reserve. But, in some others we were just another nuisance in a crowded place!

The 'Clean KMTR campaign' effort has now completed 4



Banatheertham falls, Kariyar
Photo: T.Ganesh

years and we are now seeing the difference in both the attitude of people towards plastic waste and its occurrence in the reserve, especially around the temple. However, not only do such efforts need to be sustained for years to have really tangible impact, it also has to be enforced across the several enclaves that are present inside the reserve to see a clean and

green KMTR. The forest department will have to be actively involved in this to make any ground level changes. This is possible because the department has some exemplary staff from the lowest to the highest cadre who have taken this call to clean KMTR beyond their usual call of duty. It's only hoped that this will inspire more staff to join the struggle to keep our rivers, air and forests clean from our own use and abuse.

This is the last issue of Vol. 3 of Agasthya and as before we welcome your comments, suggestions and critiques, if any, as we move to Vol. 4.in 2010.

Happy New year

T.Ganesh

Activism informed by sound science

For the last 8 years, there has been a concerted effort by the KMTR-team to make the science of environment more friendly and accessible to the locals around the park by practicing it in the human-biodiversity interface with active involvement of the local community. The flagship effort has been the Clean KMTR campaign, reflected well in the sheer scale of effort and manpower as well as active partnership with the Forest Department and local NGOs at all stages of the campaign.

Two significant approaches set this campaign apart. First, the exemplary voluntary effort put forth by not only science practitioners but also concerned citizens cutting across diverse professions,

ideologies and continents. Second was the multitude of impact monitoring efforts on different forest components, which informs the activism component with sound science.

One such effort has been to look at the impact of the festival on animal movements along the trails. Over two years, with a team of 9 field biologists, we carried out intensive monitoring of selected trails in the forests in and around the temple which represented the zone of maximum disturbance by the pilgrims. We replicated the effort over an area of 20 odd sq km which relatively had less pilgrimage disturbance. The results clearly show differences in the encounter rates of animals between the

pilgrim-disturbed areas and the less disturbed areas.

A finer analysis of the data reveals high encounters of animals such as wild pigs around the main temple premise during and after the festival indicating that they might be acting as opportunistic scavengers on the wastes generated by over 3 lakh spiritual tourists. There were more animals like bears, deer and wild dogs during post festival. We have no clue how feeding on refuse will impact these animals but wild animals being more sensitive than domestic ones to refuse food there may be some long-term implications which needs to be understood.

Rajkamal Goswami

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Old habits have to die fast

Elango, with a hand held mega-phone walked along the 'narrow streets' of temporary 'villages' around Sorimuthaian temple announcing the health hazards of unmindful disposal of polythene and other solid wastes in the camping site and possible penalizing action by the Forest Department. Volunteering school children either picked the litter or requested the campers to dump them in the gunny bags that they were carrying. In most of the shelters, women picked the trash from their tents and dumped in the gunny bag. However, when we appealed to them to pick the trash from their vicinity, they refused to do so by saying it was the trash of the neighbor. Interestingly, I also saw some campers disposing garbage through a hole in their tent while we gave a warning note about penalties. Even a small child sheepishly disposed the wrapper of the biscuit packet similarly. Overall during the clean KMTR campaign for the past few years I got to know their non-committal attitude towards waste disposal.

I returned to Bangalore with a kind of uncomfortable feeling about the campaign. Strangely, while riding my scooter in Bangalore I witnessed two interesting incidents. One, I saw the dark tinted glass of an expensive car, being



Volunteers collecting garbage from the tents during the 'Clean KMTR Campaign'
Photo: R. Ganesan

rolled down and followed by a rain of shredded paper. On the second occasion, an empty packet of chips was disposed off from yet another flashy car on Brigade Road, which almost brushed my helmet. For me, the attitude towards waste disposal by a villager who camped in the forest around Sorimuthaian temple and the one traveling in a flashy car in the city are the same. I wondered about the reason for the evolution of a common attitude among the two extreme living styles. I went back into the past to trace the roots for the attitude, especially among

Indians. Surprisingly, the tropical climate and its capacity in decomposing and recycling gave me a convincing explanation for the attitude towards waste disposal.

In the past, we used more biodegradable materials which got easily decomposed or consumed. In fact, open defecation was not at all a serious issue. Of course, the population was also low. In the past the materials we used were all decomposable or recyclable and the goods we kept with us also had high durability. So there were high chances in the past that the waste we generated got decomposed or recycled. It might probably have led to inheritance of the attitude among

us to dispose whatever we feel is not useful into our immediate surroundings. With the advancement of technology, we end up using more non-decomposable but easily disposable materials in every aspect of life. However, our inherited attitude of unmindful disposal has not changed in tune with the usage of more disposable, non-biodegradable wastes into the environment, be it by a 'polished city dweller' or a 'rustic villager'. We therefore first need a change in the attitude to solve the problem of solid waste disposal.

R. Ganesan

A road, a pilgrimage and a thousand kills

Roads, irrespective of where they are located cause problems to both people and animals as they can be run over by passing vehicles. While development is the most obvious reason for increased number of roads and the increase in number of vehicles, other seemingly small issues like a pilgrimage-where there is a large gathering of people in the name of religion, tradition, culture etc could also cause a significant amount of damage to the ecosystem by killing organisms on roads through their habitat. While larger mammals like tiger or the sambar grab the attention when road kills are spoken of, smaller but ecologically important organisms like the millipedes or the frogs for that matter are not given a second thought. The Sorimuthaian pilgrimage is one such annual religious activity which attracts about 2-3 lakh people using various modes of transport from two wheelers, public busses to hired vehicles including hi class sedans like BMW. All this leads to a huge influx of vehicles into the reserve for over 10 days and due to the high volume, the roads are kept open 24hours leading to a continuous train of vehicles flooding the otherwise peaceful



An unlucky chameleon that never made it to the other side of the road.
Photo: K. S. Seshadri

roads of Mundanthurai. During the last two festival seasons, a team from ATREE, for the first time documented the mortalities that occur due to the vehicular movement towards the temple. The roads were sampled for dead organisms and carcass for five days before and during the festival. It was obvious that the kills had increased during the festival and it became

even more evident when each team would take 4 hours to sample the roads for 'kills' compared to 20mins before the festival! As many as 50 species from ants to reptiles were recorded as road kills totaling up to about 1000 and 700 individual kills in two years. Though there were no "large mammals" killed on the roads, there is every chance of them getting killed sooner or later. However, large number of frogs, snakes, scorpions etc were killed across different habitat types and vehicle density gradients. In our nocturnal surveys along roads we found that Loris and Civets were more common along roads before and after the festival but were almost never sighted during the festival. With such impact on the fauna, it can be understood beyond doubt the temple pilgrimage is indeed having its impact on the forest, along with plastic waste, water contamination and such other disturbances. Pilgrims should co-operate with the forest department to regulate the vehicular movement in order to safe guard wildlife which will ultimately please Sorimuthaian the presiding deity.

K. S. Seshadri

Misunderstood friends

Pheasant-tailed Jacana, locally known as 'Thamara Koli or Allikurivi' is a bird commonly seen doing 'stilt walking' with their slender toes and legs over the floating water plants in the ponds of Singampatti and surrounding villages. During the first week of July, about 70 of them were seen in the paddy fields near the ATREE's Agasthyamalai CCC field station, where paddy seedlings were freshly transplanted.

They would forage in the fields the whole day and roost in the pond just behind the fields. However, farmers here complained that the birds damage the crops and they would burst crackers to chase them away.

We observed what the birds feed on and how they fed to check out if these allegations were true. The jacanas picked up minute creatures from the water and never touched the crop. They moved carefully between the crops and



Pheasant-tailed jacana foraging in a paddy field
Photo: Abhisheka Krishnagopal

did not do any damage to it. But they are still held responsible for destroying crops. There

may be instances of damage by other species of birds like ducks, swamp hens etc but there cannot be a general accusation against all aquatic birds.

This reveals the total disconnect between present-day farmers and their environment, as they fail to observe nature like their predecessors did. If they had bothered to spend some time to watch the birds', they would have realized that the jacanas are actually helping them control insects that could be harmful to the crops. The need of the hour is the ability to discern and have greater tolerance to all forms of life

Jacanas are sensitive to pesticides and by spraying our fields with pesticides these gorgeous birds with their long dainty legs and toes walking over the floating vegetation may well become a rarity.

Abhisheka Krishnagopal

A typical 'canopy' year

When I first climbed into the canopy back in 2005, all that my untrained eyes perceived was a blanket of green. Since then, I have had the time to look around in this sea of green. On a closer look, the canopy of a rain forest is an ever-changing world and the myriad hues of green, yellow, red and rust mask its secrets.

In the beginning of the year, the canopy is a mysterious place shrouded in mist. After the onslaught of the monsoons, all is green and verdant. Trees like the *Cullenia* are in flower and are a magnet to a host of mammals and birds. High winds characterize this season and all canopy life has to cope with cold and wet conditions. As the sun moves north of the equator, the months of March and April are the driest and conditions in the canopy are at their

most xeric. The mid-day sun beats down mercilessly drying up the moss and lichens but sheltering the cool understorey. The birds are in the midst of their breeding and display on open perches to attract mates. May and June herald the monsoons with frequent thunderstorms. The trees act as giant umbrellas and bear the brunt with a few succumbing to wind and lightning. Trees like the *Palaquium* are in fruit and attracts squirrels, langurs and bats.

After the initial fury, the monsoon relents for a period in September and early October. The canopy is soaked and the branches are slick. The withered mosses are now blanketing the branches that are festooned with epiphytes. This is a season of colour, as the different species of epiphytes bring forth flowers of red, yellow,

pink and more. But this is just a brief respite, the proverbial calm before the storm. The fury of the monsoon resumes and continues unabated for the remaining two months of the year. These are truly lean times in the canopy with scarce resources that are tided over by the gracious *Cullenia* and *Ficus* that are the keystones for the mammal and bird communities during last days of the year.

Such has been a typical canopy year for many millennia. Disturbing trends in recent years of drier and prolonged dry seasons, excessive and unseasonal rain threaten to upset this cycle. With the spectre of climate change looming over the horizon, these fragile mountain forests face an uncertain future.

Vivek Ramachandran

Death by the wires

Kalakad Mundanthurai Tiger Reserve is known to be the best protected reserve for plants and animals and a hotspot for endemic flora and fauna in the Agasthyamalai range. As in most protected areas it also houses many manmade enclaves such as tea plantations, dams, roads and electricity projects. Such developmental projects can pose several hazards like roads, electric power lines, poaching etc often resulting in tragic consequences for the wildlife.

An elephant death due to electrocution left a shock wave during Sep 09 when it appeared in a daily. However, more than ground dwelling animals, many tree dwelling animals such as Nilgiri langurs, Lion tailed macaque, squirrels,



A Nilgiri langur (*Trachypithecus johni*) found electrocuted in KMTR
Photo: Amogh R.

bats get electrocuted while they cross over the power-line passing through the evergreen forests. Though it's not possible to completely avoid such incidents it can be minimized. Power lines need to be isolated completely from adjacent trees and where possible, insulating them with pipes at critical points. These have to be regularly checked by the concerned authorities. We always differentially value life; a human being electrocuted brings immediate attention and action but few insignificant animals killed here and there hardly evokes a second thought. Let's be humane to be called human.

Chetana H C

Use plastics but say no to plastics: Lack of understanding or paradoxical thoughts?

The 'Clean KMTR' campaign aims at maintaining the forest areas as litter-free as possible. The ban on plastic within the reserve is being implemented with great difficulty. Best possible efforts are put in by the forest department staff, local volunteers and many others in making people aware of the hazards of plastics and asking them to dispose the waste responsibly. Though every thing is done to minimize plastic use there is still some work to do in terms of coordination.



Lunch served in plastic bags for the volunteers of the 'anti-plastic campaign' in KMTR
Photo: K. S. Seshadri

During the campaign, 11 of us camped at the Banatheertham falls – a major tourist site – to carry out the tasks of cleaning up the place and spreading awareness. At lunchtime, food was arranged for us at a makeshift tent. We expected some plates with food served on it instead what we saw was deflating; food was being packed in poly bags in a maddening frenzy to distribute to people. We saw many after relishing the meal, carelessly throw the plastic around! As if to rub things in, we

ourselves were handed packets of food, neatly packed in not less than 6 poly bags!

When we enquired about the eatery, it soon became clear that the tent was set up by the Police Department to cater to the hundreds of policemen who had been called in to manage the humungous crowd. Policemen, the law enforcers, were themselves clearly

defying the law! No proper collection point was made except for one bottom less pit nor was there periodic clearing of waste, all this leading to a stench-bearing heap of rotting food. On one hand, some people put their hearts into saving the forests and on the other the very enforcers do what they are supposed to prevent. This clearly calls for better coordination between agencies, institutions and departments to take the message of *Clean KMTR*. Otherwise fundamental flaws can overshadow the genuine cause behind taking up such initiatives!

K. S. Seshadri

Joining hands again

On August 11th, 2009 ATREE joined hands with Tamil Nadu Forest Department (TNFD), Theerthapathi Hr., Sec., School and Rotary club of Ambasamudram to conduct the post cleanup campaign at Sorimuthaian temple. This is the third time ATREE is conducting this campaign.



Volunteers at the post-festival clean-up
Photo: M. Mathivanan

Volunteers were divided into 6 groups headed by 2 forest personals. Each group was given gloves, a large sack and a stick. The volunteers removed the plastic wastes from the forest and surrounding areas. This year we collected less garbage compared to previous years which may be due to thorough checking at the entry points by TNFD, ATREE and other voluntary organizations. Volunteers participated actively in this event and received appreciation from the public for their valuable social service at this young age. Their effort

also created awareness among the public and pilgrims about the need to manage our waste. In the end Mr. Kitherothi, Papanasam forest Range Officer thanked the volunteers for involving in this kind of campaign and urged them to take such activities in the future. He also thanked ATREE for

conducting this activity for three years. A special bus was arranged for transporting volunteers from the school and Rotary club, Ambasamudram provided T-shirts for volunteers. However, such efforts can be sustainable only if other institutions apart from TNFD along with people cooperate and take ownership to make a Clean KMTR; Plastic free KMTR is in the hands of people.

M. Mathivanan

Snippets from field

- A sloth bear was sighted by Seshadri and Chetan on Servalar road on 21-7-09 at 0550 on their way to Servalar.
- *Clinotarsus curtipes*, the Bi-coloured frog was hardly recorded as road kills in the second sampling session. The previous season, up to 300 individuals were encountered as road kills. This could be because of the festival being advanced due to some planetary positions which are irrelevant to the frog's breeding biology.
- A Great-pied hornbill strayed into Vagaikulam tank in September. After few days in the agricultural landscape, it went back to the forest.
- ATREE calendar of 2010 featuring paintings and art work by children from KMTR and other regions is available at ATREE.

KMTR in News

- Elephant dies of Electric shock in KMTR (Indian Express, Madurai. 13 Sep 09)
- Fifth International Canopy conference was organised from Oct 25-31 at Bangalore. This was a special event for the KMTR team. Seven researchers presented their work on the forest canopies of KMTR. The conference website (www.canopy2009.org) has book of abstracts which can be downloaded.



Dual stroke: Cloth bag given by ATREE to replace polythene bags and caps!

Photo: K.S.Seshadri



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