



Our 20 years in KMTR

With the coming of 2009, our association with KMTR nears 20 years and Agasthya completes 2 years. In all these years there have been several changes in the landscape, people and researchers. As a team we have also grown from a partly 2-4 isolated researchers to now over 15 working on various aspects in and around the reserve. In January we had a mini symposium at Tilak school, Kalladaikurchi, where KMTR researchers from ATREE presented their research that clearly showed the diversity of work we do in the landscape. Where we go from here is open to further discussion but there is clearly a

body of work to build on. At the end of the day, we went to Vagaikulam, a heronry that had been discovered recently by ATREE researchers but is now under imminent threat as the trees are auctioned to be felled. How can we bring people, officials and others to protect this place is of immediate concern. We hope we can pull this off and get the place declared a community bird reserve. For this we need support from each one of you who read Agasthya.

Agasthya completes 2 years. We thank all of you who responded so freely with suggestions and valuable

comments. As you can see this issue has some changes in design, content and length of the articles. Vivek, our assistant editor who did a wonderful work to keep Agasthya coming every 4 months will now manage the web version and Samuel Jacob takes over from Vivek. Longer articles have been retained for the web version, but if you prefer the print copy, it will carry a shorter version to maintain the same, short and sweet in just 4 pages! I hope you like this new version and as before we welcome all your comments.

Happy reading

T. Ganesh

Building stewardship for bird habitat



Thousands of birds roosting and nesting on Acacia trees in Vagaikulam
Photo: Samuel Jacob

Though it was a winter sun, the heat was very much on during mid-day. We were sampling for water birds in the wetlands around Alwarkuruchi. Most tanks were full of water thanks to the rains, canals and the dams. We had finished a small tank and by balancing on the thin bund between green paddy fields, crossed over to another large pond. This was a beautiful one, full of plants like lily, lotus etc and many jacanas.

As we started recording the names of the birds and were debating over the identification of what looked like a watercock, we chanced upon a large congregation of birds on acacia trees far beyond the green stretch of paddies and

trees. When we enquired with the local farmer, he asked us to go by a road that would take us very close to where the birds were.

The watercock finally got confirmed and soon one more was noticed among the lilies and lotus. Gathering ourselves close together and balancing precariously on the thin bund, we moved to firma terra and the vehicle. From there, after a few vadas and tea, we were charged up to drive to the acacias and birds.

Under the bright afternoon light, we saw an awesome sight. Night herons, white ibis, cormorants all at nest on acacias inside a tank, large

number of terns on a power line crossing the tank, egrets, herons, grebes, spotbills, Pelicans etc all over the place. The place was simply teeming with birds and after all the tanks surveyed, which usually had few birds here and there and large expanse of water, this was a refreshing and delightful sight.

As we made enquiries, we were told that the small village next to the tank was Nanalkulam and the tank itself was called Vagaikulam. The villagers also suggested that we come in the evening to "see all the birds from the neighbourhood come and roost in this place."

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The villagers also gave us the bad news -- the acacias on which the birds were nesting and roosting has been auctioned and was to be cut once the water level comes down.

Suddenly we were running around to see that better sense prevailed and the trees would be spared. We held meetings with the Panchayat Presidents of Malik Nagar and Mandiyur, who have control over the tank. We contacted the Conservator of Forests, Tirunelveli, and gave him a report. The trees were actually part of a social forestry scheme launched a decade ago, under which it was scheduled to be harvested now and the revenue shared with the panchayats.

We found it strange that a forestry scheme can be so poorly designed, where a habitat is created and then destroyed in one go, keeping

in mind only the revenue that will accrue to the stakeholders. We later came to know that originally the trees were managed by the panchayats and scheduled to be harvested cyclically with certain percentage of trees always remaining, but because of shoddy implementation, it was taken over by the Forest department. The Conservator assured us his best to prevent the felling.

We also organised an all-panchayat meeting where we highlighted the value of water, birds, mountains and biodiversity and what we can do to protect Vagaikulam. The support from the participants was encouraging, but will that translate into action is what remains to be seen?

Meanwhile, during our visits to Vagaikulam, the children of Nanalkulam, seeing us with binoculars and cameras, were curious and one little chap called Mahesh soon organized a

small group of kids who tagged along with us for bird watching. We shared with them the excitement of watching the birds, their identification and what we could do to stop the trees from being felled.

We also informed the press at the local level and in Chennai and posted the information on some egroups, hoping to build a support base to fight the strong political and commercial forces that we were up against.

The fight will continue as we plan how best to negotiate with officials and local communities, to protect the trees and birds. Will we succeed? Only time will reveal, but by building stewardship among the younger generation and interested adults, we hope to create the will in local communities to guard our biodiversity.

Abhisheka K., Mathivanan M., Samuel Jacob, T. Ganesh

'Spiny gluttons' ravage *Ipomea*

One morning in the third week of November 2008, during my wetland survey, our driver Murugan brought me an *Ipomea carnea* leaf covered with strange looking larvae bearing armor with spines. While mulling over the mystery of the insect that these larvae would eventually metamorphose into, we noticed that all the *Ipomea* plants were covered by these gregarious creatures. I started closely observing *Ipomea* with a newfound zeal, in all the wetlands I surveyed and, lo, more larvae! After a week I found an answer to the mystery... When I got back to my wetland survey after a week of rains



Ipomea being ravaged by *Aspodomorpha miliaris* beetles. Photo: Abhisheka K.

I noticed that the spiny larvae had changed as if by magic, into surreally formed Tortoise-shell beetles. The design of these adult beetles, was toy-like – near perfect symmetry with a thin transparent fringe encompassing the semi-circular, domed wing-cases of these beautiful creatures. The mass of beetles boggled the mind; every wetland I visited appeared to be invaded by them.

The few surviving *Ipomea* leaves were ravaged and torn while most had disappeared into thin air, completely consumed by the larvae. In some of

the tanks, the *Ipomea* looked like reeds completely devoid of foliage, patiently waiting for the holocaust to pass... This mass outburst was seen all through the month of December.

Ipomea carnea, is a noxious aquatic weed with rapid vegetative growth. Most of the wetlands I surveyed were covered by this exotic plant. Looking at the *Ipomea* covered wetlands I had been wondering as to what would be the best method to control this weed. But it seems like nature has her own control agent and our interference may not be necessary.

This mystery beetle was identified as *Aspodomorpha miliaris* by my colleague from the entomology team.

Abhisheka Krishnagopal

Penance for the past

All those who have visited Atree's Singampatti field-station at Vairavikulam, would have come across this quiet and straight-faced woman. She is usually seen going about her chores in the kitchen silently or busy tending to some plant or the other in the nursery. Ruthamma, as she is known to everyone, came to Atree about 7 years ago. It has been a big shift for her from an erratic and risky venture of cutting and collecting fuel-wood from the forests, to this regular and routine endeavour.

The irony of her life is that she is now doing exactly the opposite of what she had done all her life. "It is a penance that I am paying, for all the trees I have cut," she says. Today she is directly or indirectly connected to at least 30,000 saplings she has tended to, that could one day become trees somewhere on the rolling landscape of this region.

Born in a family of 10, with six sisters and one brother, Ruthamma is fourth in the lot. As is the need in most marginal rural households, everyone is expected to help with daily chores and supplement the family income. At 14 she was doing farm labour for daily wages of Rs 2 a day. Later she graduated into a fuel-wood collector. For villages located near the forests, fuel-wood collection used to be the livelihood for families who had no access to land or other resources.

During droughts, hundreds of women would go



Ruthamma tending to plants in Singampatti nursery. Photo: Mathivanan M.

into the forests to collect fuel-wood which would then be bundled and carried to the Kalidaikurichi market to be sold for Rs 2 a bundle, says Ruthamma. At her age, she would carry three bundles weighing up to 60 kg to the market each day.

Those days the forests were lush with trees. "Some of the trees we chopped were so huge it would provide 15 women with enough fuel-wood for a week," she says. Among them were tamarind, teak and terminalias. The animals they came across during their sojourns into the

forests included elephants, tigers, leopards, jungle cats, wild boars, porcupines, ant eaters, Nilgiri thars, Indian gaur, bears, langurs (both black and white) and monkeys.

So wasn't she afraid of going into the forests? She was never scared, she says. Moreover, the women would go in groups. What about getting caught by the Forest guards? "I was extremely good at running," she says matter of fact, adding "they could never catch me." Those days they weren't so strict about entering the forests, she says about the guards. It is only in the last 10 years they have become more strict she thinks.

She remembers the ranger those days visiting her grandfather to collect "karupatty" (a sweetener made from palmyra sap), grains and toddy (fermented palmyra sap) as bribes. She stopped going to the forests after developing an illness which debilitated her. Though she has recovered after going through many treatments, today she makes it a point to dissuade all those who are still involved in collecting fuel-wood from the forests. 'You may get Rs. 120 or more by selling a bundle of fuel-wood, but you also end up spending more on clothes and health,' she tells them. "However, you have to cross 50 years of your life to understand some things," she concludes on an introspective note.

(As told to Samuel Jacob and Mathivanan)

Improvising with camera traps

One of the recent advancements in the field of wildlife monitoring is the improvement and increased usage of "camera traps". A camera trap is basically a camera with a remote trigger connected to infrared sensors, motion detectors and heat detectors replacing the conventional shutter release button. This contraption when set up on trails, ponds and other places where there is evidence of wildlife movement, will take a picture of the animal passing in front of the camera.

Camera traps have been used extensively to monitor wildlife populations since the time of its coming into existence. Lately, it is being used to estimate the number of tigers in a given area besides capturing rare behavior and the existence of other lesser seen fauna, monitoring the populations of critically endangered species like the Snow leopard in the Himalayas and so on.

These easily available camera trap units have



Dr. Ganesh and Seshadri setting the camera trap for owls in a paddy field at Singampatti.
Photo: Samuel Jacob

also been used in many other conventional and not so conventional situations like near the nest of an owl by TNA Perumal, who got scratched by the owl in the process, but was rewarded by fantastic flight images of owls and many interesting feeding habits which was never seen or documented before.

Some of us at ATREE have been successful in using these camera traps to capture the first ever tiger picture from KMTR, obtaining rare images of the Pigmy Hog and the leopard cat from Manas tiger reserve, to capturing the lives of arboreal mammals in forest canopies.

Quite recently, we implemented the camera trap in more unique situations. This was during the annual Sorimuthian festival, to document the movement of wildlife during the festival season and in another case during the pre harvest paddy season, in the plains of Singampatti, to capture the occurrence of rodent feeding owls.

Though both were by and large failures, they taught us great lessons which will enable better deployment next time. In the former case, the camera traps were discovered by the forest patrol staff and enthusiastic children, who then proceeded to pose in front of the camera triggering the entire film roll. All we got were a few laughing faces of homo sapiens.

The latter case was a trial run and un-loaded cameras were deployed to see if it would work. In order to make the owl trigger itself, we setup rodent feeding trays in a paddy field getting ready for harvest. The camera traps were fitted on to improvised posts made of discarded plastic water pipes and entrenched in the field. A perch was created for the owl in the field, overlooking the entire field.

Though nothing much happened in this experiment, for the owls nor the rats turned up, we were all delighted and relieved to find the camera traps in the place just as we had left it! We also learnt that the traps and the rodent feeding trays had to be left in the field for a few days for the rodents to acclimatize to it. Of course, the big lesson of all was that there weren't any rodents in that field for the owls to come and feed. The only way to get owls to come would have been to release a couple of rodents into the field!

Seshadri K.S.

International Canopy Conference coming to Bangalore

We have heard a lot in the late eighties of the forest canopy being the last biological frontier where discoveries of species and processes remain to be unravelled. I still remember our first and desperate attempt to access the canopy with a coconut fibre rope. At the same time, people elsewhere, particularly women like the renowned canopy ecologist Meg Lowman and Nalini Nadkarni, were making waves with interesting scientific findings.

Breakthrough happened when Albert from Nalmukku took up the challenge to set up the first ladder to reach the canopy with a double-decker platform, one to view the mid-storey, and one overlooking the canopy.

I still cannot forget the feeling when I first stepped on to the roof of the forest. This was



indeed a famous ladder; most of our VIPs were taken up to catch a glimpse of the denizens of this abode at eye-level. Our president Kamal Bawa, the world renowned pollination biologist, was one among them. Unfortunately, a decade after the ladder came up, the tree crashed due to old age. But the ladder had suddenly opened to

us a new world.

This gave us the confidence to make the forest canopy even more accessible, and I went about setting my aerial ladders network to study the pollination ecology of Western Ghats wet forest canopy. My colleagues too soon started their forays on to the canopy. Ganesh started camera trapping some of the most elusive animals in the canopy and their interaction with flowering and fruiting trees. Meanwhile, Ganesan recorded all the canopy epiphytic plants.

Yet another breakthrough came when Ganesh attended the Second International Canopy Conference and brought back the single-rope technique with him. He trained scores of students and field assistants who now zip up and through the canopy to do interesting studies. Today, we can safely say that, in India, KMTR is the place where the canopy is truly accessible. We also had Meg Lowman and Jan wolf visit these places.

In 2005, when Ganesh and I were attending the Fourth International Canopy Conference - which happens once in 4-5 years - the eminent gathering bestowed on us the responsibility of holding the Fifth International Canopy Conference in India. Sure enough, the Conference is coming to Bangalore from Oct 25-31st, 2009. (visit www.canopy2009.org for more details).

M. Soubadra Devy

In conversation with the wise one

The setting was perfect for the wise one to be there; the area was remote, there was only a temple and a small mosque on a hill with stretches of paddy fields on one side and rock and thorn hill country on the other. We decided to pay a visit to this place to see if we can see the wise one and record if any conversations happen.

It was late winter evening, the sun was setting behind the Agasthyamalai ranges painting the

sky bright orange that quickly turned red and then faded to dark grey as dusk engulfed us. Frogs from a nearby puddle had started their chorus and only occasionally a nightjar or lap-wing could be heard above the din made by them. As we waited in anticipation, a deep resonating call floated towards us from one of the tall boulders facing us. A few minutes later we had the first sight of the wise one as it quickly spread its cloak and glided across the face of the boulder and landed on a small rock

nearby.

The light was dim but it was time to set the stage for the evening. With the microphone attached to the recorder and a speaker to play our responses we were all set to begin our conversation with the wise one. The booming call of the great horned owl echoed once more across the landscape. There were 3-4 birds that were seen and heard around.

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We decided to start a conversation with one or some of them and played our recorded bubo bubo call and waited for the response. Our idea was to see if the owls respond to broadcast call and at what level and how soon and how frequently. The owl did respond and soon flew towards us. A while later made the 'hiss...' call that almost sounded like an amplified hiss of a snake.

Elsewhere we have heard continuous hissing from the owls when their territory is threatened but here instead of hissing further the owl started coming closer and calling bubo... We started to respond to the call depending on its volume and frequency. There were times when a teasingly friendly soft oooohh could be heard and we

would try to do the same by tweaking our apparatus. Sometimes there would be a similar response, sometimes a louder response but often it would be followed by long silence depending on how good we were at the craft of oooohing.

By varying the volume of the call we could still keep the wise one guessing and not scare it away. At one point it almost landed on the speaker. At times even prolonged silence elicited a strong response from the owl as if to check out where you are. It was almost 2 hours since the conversation started and we decided to let go this curious wise one and



A great-horned owl perched on a pole
Photo: R. Ganesan

help ourselves to some dinner away in the town but that was not to be. But beyond owl courtesy, we had to call it off as we did not want to spoil the day (night) of the wise one and wanted it to go back to hunt for those rats and toads in the fields and jungles beyond. We had enjoyed the evening and learnt a lot about the wise one and also some wonderful recordings, but not sure about the owl, if we may have treaded into its territory and left it confused or any wiser? Nevertheless, we decided not to go there for some time and let them be on their own.

T. Ganesh

A leaf out of Thatha's diary

Back from the field trip with my booty of plants, I sat down to make notes for identification. Mr. Kuruvapathu Murugesan, in his late seventies - fondly called by us as 'Thatha' - the caretaker of our regular camping site, was very curious after seeing the plants from the forest. I could see a botanist's enthusiasm and confidence brimming in his sunken eyes on one hand and the hint of a smile all over his wrinkled face, because he could recognize almost all the plants.



Thatha identifying plants
Photo: R. Ganesan

Soon we started chatting about his good old days in the forests, and I get to know more about how trees from the forests were so useful in every walk of

a villager's life. In his excitement, reminiscing about the past, Thatha rattled out rhythmically in 'Tirunelveli Tamil' slang, on how a bullock cart "katta vandi" or "maattu vanndi" was made out of timber from several species of the forest trees. He also attributed reasons why they chose only a particular species for every particular part of the cart.

Their reasoning was based more on knowledge than on wood science and it could match J. S. Gamble's 'Manual of Indian Timbers', a magnum opus of Indian forestry. "Sokkalai kaalu, Vaimaram kudam, Thekku alavu-vattai,

Koangu pole, Naangu sattam, Polavu noakk, Maruthu theppakattai, Koangu kuriathu! Radials from *Aglaia courtalensis*, core of the wheel from *Chloroxylon swietenia*, rim of the wheel from *Tectona grandis*, chasis from *Hopea spp.*, fillers from *Mesua ferrea*, yoke from *Pterospermum diversifolium*, *Terminalia arjuna* for the central support of the axil and chasis, front nose (on which the cart rests while not in use) from *Hopea spp.*

I was spell bound by the richness of knowledge that had no doubt got honed with constant interaction over many generations with the forest. Unfortunately, today the honing process is curtailed by forest management regulations in most part of Indian forests, prompted by our own un-mindful exploitation of forest resources.

R. Ganesan

Lesson from dead snake



Our watchman at the field station in Singampatti killed a Wolf snake, a non-venomous snake which lives and feeds amongst leaf litter in the wee hours of the morning. He had come out to answer the call of nature when he saw the snake. Trembling with fear he took a stick and hit it till it stopped moving, and left the corpse out there, scared to remove it from there.

The snake, a sub adult, measuring 63cm was so badly hit that its jaws were almost sealed together and the spinal cord flattened at 3

different places! Dr Ganesh suggested that I do a diet analysis of the snake. The diet content of snakes are very significant in terms of the feeding habits and would be of help to wildlife rehabilitators as they would know what the snake eats.

Back at the field station, a miniature lab was set up in the nursery, and with Murugan, the ever enthusiastic driver, I started to cut open the snake and I must confess, my hands were shivering! With some inputs from Giby, I managed to pull out the stomach and the intestine and cut it open. To my surprise, it had three long worms, alive and wriggling. I promptly thought it to be freshly eaten food, removed them and preserved them in alcohol and later was told by Abhisheka that they were actually internal parasites! The stomach was in fact empty. While nothing came out of this exercise, it was a worthwhile experience for me.

Seshadri K. S.

Food for thought

Food always adds a distinct flavour to any travel experience. Most places have specialized cuisine or at least special names for common food items which gives them a unique identity. Food names often range from the exotic to the absurd and tickle not only taste buds but also one's imagination. Be it in plush restaurants with lah-di-dah ambience and menu, or roadside stalls selling Chinese-sounding foodstuff, food names are many-a-times unpronounceable; unheard of and sometimes even unpalatable.

Our own trips to villages around KMTR are spiced up by having to comprehend food names. The local 'tiffan items' may not sound as harrowing as 'Chinese fray rice' and 'chopsey', but are equally amusing. A novice is usually perplexed to know that 'nice' and 'roast' are varieties of dosa and 'amlates' can be one side, two side, half boil or full boil. To add to the confusion, 'chicken spray' is served 'dry' or with 'grape'. It takes a while to come to terms with the fact that 'without' is omelette without onion, 'cutout' is tea without sugar and 'empty' is biryani minus meat. If you find it hard to swallow, you could try some 'sponge' or 'colour'. Or visit the nearest 'whine' shop if you please. Bon appétit!

Jahnvi Pai

Snippets from field

- On 13 Feb the first demo “rammed wall” was collectively built by the KMTR team at the new field station site in Singampatti
- On 16th Feb Dr Ganesh and few others made a late evening visit to Kundakulam. It was nesting time here and they counted nearly 1,500 pelicans; 1,500 painted storks and an equal number of glossy ibis. But in the nearby Adankulam tank, they saw nearly 400 lesser flamingoes in shallow waters.
- A trip to Muthukuli Vayal by Vivek was rewarded with a sighting of a herd of 26 Nilgiri thars. The herd consisted of females and calf only. Even though they have sighted thar before, this is the largest herd they have seen here.
- A flock of 12 Richard's pipits were sighted at Kudreyveti grasslands on the seventeenth of March by Seshadri and Giby. These birds were observed to be foraging and feeding on small grasshoppers and other insects which they flushed while doing the short runs across the vast grassland.
- Six unidentified snipes were sighted by Giby and Seshadri in the middle of the settlements in Oothu tea estate on the 17th of March. They were seen actively foraging in the small swampy areas at 1500 hrs. The birds must have stopped over for a break while returning at the end of winter season.
- A large-scaled pit viper and a snail were observed by field assistant Johnson and Seshadri at 30 and 20 meters in the canopy on 28th and 30th of March on *Cullenia exarillata* and a *Holigarna* sp trees respectively.
- An unidentified foot long Shield tail, was found on the road in Kodayar by Seshadri on 31st March. The snake had probably come out to bask in the sun due to the dampness caused by a heavy downpour the previous evening. The snake was observed to have two ticks attached to the rear end of the rough body.
- A pair of Southern hill myna, one of the very few frugivores was observed on a *Cullenia exarillata* by Seshadri on the 30th of March while sampling for epiphytes. These birds were seen very sporadically in the forests of Kakachi but are very abundant in the forests of Manjolai at a lower elevation.
- Murthy, our field assistant was hit by a bat while entering a cave on 19th of March. The small insectivorous bat was later identified as a False vampire by Dr Ganesh.
- Six unidentified snipes were sighted by Giby and Seshadri in the middle of the settlements in Oothu tea estate on the 17th of March. They were seen actively foraging in the small swampy areas at 1500 hrs. The birds must have stopped over for a break while returning at the end of winter season.
- Four Nilgiri thars, two Broad-tailed grassbirds, a Black eagle and a Olive Tree pipit were sighted by Seshadri and field assistant Johnson on the 30th of March at Muthukizi grasslands near Kodayar.
- The current weather pattern at Kodayar was quite different from that observed in January-February 2008. The usual heavy gale completely stops by 1500 hrs, clouds start to build up and by 1630 hrs dew sets in. Along with it comes the fog and mist which clears up in a few minutes. In the night, the clouds can be seen by 2030 hrs and surprisingly, by 2100 hrs there is no sign of a cloud in the sky! The sky is so clear that sometimes, the Milky Way is visible! This strange weather pattern is accompanied by a scorching hot sun during the day and mildly cold windless nights.



ATREE is building a new field station at Singampatti, in Tirunelveli district of Tamil Nadu. This eco-friendly structure is being built using rammed earth like the one seen in the picture.

Photo: Jahnvi Pai

The joy of learning

When I first received an email from Dr Ganesh for interning with the KMTR team, I jumped at the opportunity, only because it would be a welcome break from the boring days at Bangalore. Little did I know this opportunity would give me the experience of a lifetime. I was to assist the wetland birds survey team.

The first couple of weeks were quite simple. All I had to do was take down the names of birds we spotted and learn to identify them. There were tough times though, especially when trying to recall and identify some of the birds and when an entirely new list of birds was showered on me. A lot of the birds looked so similar, at times it made me want to quit. Instead I spent every evening trying to recall each bird and studying its features.

However, the time I learnt the most was the time I spent in South KMTR. It was the ultimate test. I had to learn; I did not have a choice as I had to take part of the responsibility of surveying and identifying the birds. It was a transformation for me from not having the courage to say a word even if I spotted a bird, to giving daily reports on all the sightings to an audience of experts.

Most importantly, the best part of fieldwork is that one gets to marvel at nature's work. So rewarding is the beauty of the wetlands that just a few minutes spent admiring the bees, the birds, the plants, the trees and the waters is enough to make one forget the exhaustion of fieldwork and keep going just to get to see more of these simple but beautiful works of art.

Deepa Ruth Varkey



The KMTR team in Kallidaikurichi for the in-house symposium.

(L to R Standing): Mathivanan, Chian, Soubadra, Chetan, Saravanan, Vivek, Giby, Abhisheka, Prashanth, Ganesh, Deepa, Samuel, Jahnvi, Allwin, Merlin, Ruthamma. Sitting: Ganesan and Seshadri.

Photo: Samuel Jacob



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