

# Centres for studying conservation - Masinagudi and Holematti

Masinagudi was a trip that we looked forward to after a great time of learning in Coorg.

We left at 4.30 AM on Saturday to beat the holiday traffic to Ooty. 1.5 hours later, we mounted the ghat section and witnessed the sunrise from our cars. We made a pitstop at Hotel Adyar Anand Bhavan and another stop at a popular tea shop called Iyer Bakery. The drive after that was a bit challenging due to the mist and rain, with visibility at around one metre. There was so much to absorb on our way to Mudumalai Tiger Reserve and to Masinagudi Village thereafter. We spotted the Malabar Giant Squirrel, Bonnet Macaques, and some native plant species. With all the beauty around, it was also disheartening to see the invasive Lantana camara and Eupatorium take over most of the landscapes along with monocultures of Eucalyptus trees.

After we checked into our accommodation at Masinagudi, we had a quick lunch and proceeded to Priya Davidar's residence in Sigur Plateau. Priya Davidar is a retired professor and a field ornithologist who completed her Ph.D. under the guidance of Dr. Salim Ali. Ms Davidar spoke about her work in brief and sought our introduction and plans for the future. Priya's husband, Jean-Philippe Puyravaud, a landscape ecologist was also present and gave us an overview of their experiences with wildlife, and their interactions with elephants like Rivaldo.

"Watch out for leopards and tigers. Even if you don't spot them, it is very likely that they have spotted you." These were cautionary words thrown at us before and during our trip. Quite thrilling to hear it off-field but once on the field, you actually start to think if it might be true.

The Davidar residence had seen a lot of elephant movements, and Jean-Philippe informed us that a man had a near-death experience with a tiger. With tales like these, we were on high alert while jaywalking around the main building structure. A sharp alarm call of what we assumed was a Chital's made us stop in our tracks and listen keenly on where the action was happening. It was presumed that a tiger or a leopard had found its dinner that evening. We left the Davidar residence before sunset and returned for our next session, a day later.

H. Byju, an avid vulture conservationist, was with the RHATC team during the entirety of the trip. Like Sanjay, traveling in Byju's car was like listening to a fun, educational podcast. With slick driving and a familiarity with the town owing to his extensive work on vultures, we took an unplanned diversion and spotted a nightjar, Grey Mongoose, Wild Boars, and Spotted Deer. We drove past the Bokkapuram Village, up till the point where cars were allowed and then retreated to our accommodation for the night.



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Day two at Mudumalai was quite a treat. We visited the Moyar Gorge and got a lesson on the geography of the valley, the wildlife that visited the gorge and the evolutionary history of the Western and Eastern Ghats. The fact that we were overlooking a gorge that was 2.5 billion years old was overwhelming!

We decided to head back to the Davidar residence after a quick cup of tea and a talk on vulture conservation by S. Manigandan, a Ph.D. student and one of Byju's mentees. A few sips later, Byju spotted a vulture flying towards the gorge followed by many others.

They seemed to be landing about 700 m from where we were sitting and a quick check on the binoculars confirmed that they were indeed circling around a reservoir lake near the gorge. We finished our teas and darted towards the spot and got an astounding view of about 50 White-rumped and Long-billed Vultures basking in the sun. Vultures need thermal heat to fly and can sense when the sun comes out. All of us were ecstatic about the spotting, and we left with big smiles on our faces.

Back at Priya Davidar's, we were given a task to understand the foraging ecology of birds. Thanks to near-pristine habitats around them, there were numerous bird species found around the main residence. Our group was divided into a team of two members each, and we had about six teams in total. We were told to identify a species – birds or ungulates – and study their behaviour for 30 minutes in total. The results had to be compiled in four categories – movement, foraging, resting, and vocalisation. We found that different species

invested different times for their activities. After completing this activity, we headed back to our accommodation.

### **Conservation action**

Day three was something of an experience reserved for the lucky conservationist. We had the morning to ourselves so Byju decided to take us to the Bokkapuram Village and the temple on one of its hillocks. The temple hosts a yearly festival for the deity where people from other towns nearby congregate to celebrate. We parked our cars at the base of the hillock and trekked for about 30 minutes to reach the temple.

Once we reached the summit, we overheard a local forest officer radio his colleague about a wounded vulture resting below a shrub. Byju rushed to the scene and found that the vulture was alive but was restricting its movements.

The vulture that we found was a migratory one. It turned out that we were keeping an eye on the Himalayan Griffon Vulture *Gyps himalayensis*, an Old-World vulture native to the Himalaya and the Tibetan plateau. We left the bird alone for a bit and waited for the forest officials to arrive with first-aid and necessary gear. A rectal temperature check was done to check for hypothermia. The ideal body temperature for a vulture is around 104–111 °F whereas the wounded vulture's temperature was 91 °F. The diagnosis was that the individual was probably hypothermic and hadn't accumulated enough heat to take off. Vultures exhibit an interesting ecology in the way they fly and regulate their body temperature. They use thermals, which are rising columns of warm air, to facilitate low-

energy flight. Most vultures are equipped with enormous wingspans of up to 2.8 m which suit this style of flight. Using thermals prevents the necessity to flap large wings, helping the birds save on energy that would be required for flapping during flight<sup>1</sup>. Unfortunately, on further examination, the vet discovered that the bird had a broken wing and wouldn't be able to fly soon.

This rescue mission was completed in about three hours. Byju, at the forefront of the mission, assumed a protective position over the injured bird up till the moment where the cardboard box and a thermal source, a light bulb of about 100 Watts was brought in to take the vulture for treatment. Ticks from the bird made their way up to Byju and he coolly flicked them off. The sight, although amusing, was a lesson on maintaining composure when a larger mission is at hand. He never once let the bird go out of his sight and grasp until proper apparatus was brought and further care was ensured by the veterinarian.

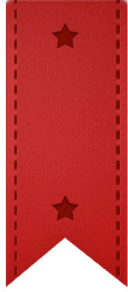
Of the people that came atop the hill to rescue the vulture were the range officer, forest guards, and four to five anti-poaching watchers. The deputy director of Mudumalai Tiger Reserve (MTR) was on the call with Byju, calling to check on the status of the bird's health. The further course of action, we were told, was to let the bird recuperate on its own, after which it would be translocated to Vandalur Zoo. After this amazing experience, we set on our way to Hanur, as there were different sessions scheduled over there starting from 13th December.

<sup>1</sup> <https://southafrica.co.za/why-do-vultures-use-thermals.html#:~:text=Vultures%20use%20thermals%20to%20facilitate,suit%20this%20style%20of%20flight.>

## At Holematthi

Conservation does not just mean at species or landscape level, but also often needs to be done at the community level through outreach. But how does one go about doing community-based initiatives for conservation? To learn this, we the RHATC fellows traveled to Hanur to visit the Holematthi Nature Information Centre and interact with the Holematthi Nature Foundation team (HNF) and learn about their outreach work. The HNF is an NGO that's been actively involved in conserving the wild landscapes of Karnataka. The team is led under the guidance of Dr. Sanjay Gubbi, a senior scientist at Nature Conservation Foundation (NCF), who's also the program head of HNF. The HNF carries out its conservation work mainly in the landscapes of Male Mahadeshwara Wildlife Sanctuary (MMH), Biligiri Ranganatha Temple Tiger Reserve (BRT), and Cauvery Wildlife Sanctuary (CWS). Their conservation work includes long-term population monitoring of large carnivores such as Tigers and Leopards through camera trapping and their prey base through the line transect method. Along with these, they do outreach and capacity building through nature information centres and community-based initiatives.

When we reached Hanur, we were accommodated by Ashritha Anoop, one of the RHATC Fellows from the 2021–22 batch, who works as the field coordinator, for community initiatives at HNF, Hanur. On 12th December, we visited the Nature Information Centre (NIC) at Ellemala. The NIC is built with the aim of nature education and outreach to children of local rural schools. Through NIC, they aim to make children aware of



Studying

# CONSERVATION

*Holematthi*



Hands on - Camera trapping.

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Ashritha Briefing about the NIC.

Identifying individual leopards from Camera trap images.

the wildlife around them so that negative perception about wildlife in them is reduced. The NIC also helps in the capacity building where the frontline staff of the Karnataka Forest Department (KFD) are trained in wildlife monitoring techniques such as camera trapping. The NIC is located in an area where it is surrounded by three protected areas—MMH, CWS, and BRT. Upon reaching NIC, we got introduced to Mr. Abhishek and Mr. Eshwara Prasad who work at the NIC. We spent time exploring the vicinity of the NIC and found foamy material on the leaf blades of some plants. Abhishek told us that those were by spittlebugs. We also saw caterpillars with tumor-like structures on their body and wondered what they were. We got to know that these were caterpillars of the moth *Carea angulata*. These were some of the things we were seeing for the first time in our lives.

After a while, Abhishek and Ashritha, alongside Mr. Eshwara Prasad, took us on a tour in around the NIC. The NIC is informative from both outside and inside. On the outside, there are paintings of local butterflies with names in both Kannada and English. We were told that the butterflies were painted there since they are visible easily, they make up the best materials for the children to take interest in nature. On the floor were prints of leaves of different plants, and one would be definitely left guessing the plant. There was also a cast footprint of an elephant, where one can compare their foot size with that of an Elephant's. Nine of us fellows' feet were equal to that of one Elephant's. Abhishek told us that the height of an elephant is nearly twice the circumference of its foot. There was also a sloth bear photobooth where one can put

their head and hands in and pose like a sloth bear. The wall opposite contained silhouette paintings of microhabitats. Before entering the NIC, there's a signboard saying 'I'm a forest and this is my story'. The inside of NIC contains various art depictions of wildlife, such as the story of a tiger who survived to see her cubs reproduce successfully, and a narrative about elephants. There is also the story of Malai Mahadeshwara, a short mention of Veerappan. There were also paintings of different birds and mammals with respect to their activity day and night. The birds were painted at the levels of their occupied niche. On one of the walls was the painting of different wild fauna, which when viewed from a bit far appears as if the animals are looking at us. When most such wildlife paintings use tigers as the main attention catch animals, it was not the case here. Rather there were animals like Dholes who would catch someone's attention first. Hats off to the concept and the group of artists that made the concept come true.

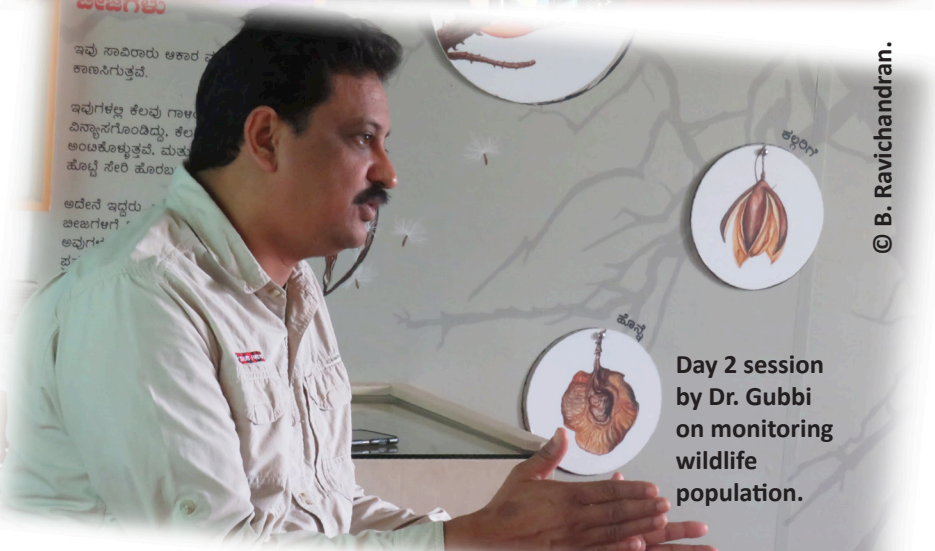
We were then joined by Dr. Sanjay Gubbi and his colleagues Malaika Chawla & Shravan Suthar. After a brief introduction, Dr. Gubbi started out the session by briefing us on Outreach for conservation, the need for rural outreach, the Holematthi NIC, and how it stands apart from other NICs. Here we got important insights into things that need to be considered while designing a NIC. One of the key points here was that if the NIC contains information in the local language, then it fulfils a great purpose of outreach to local rural children. Our perception of 'who is a stakeholder?' was debunked by Dr. Gubbi. We also got to know about the importance



Spittlebug in its foamy nest.

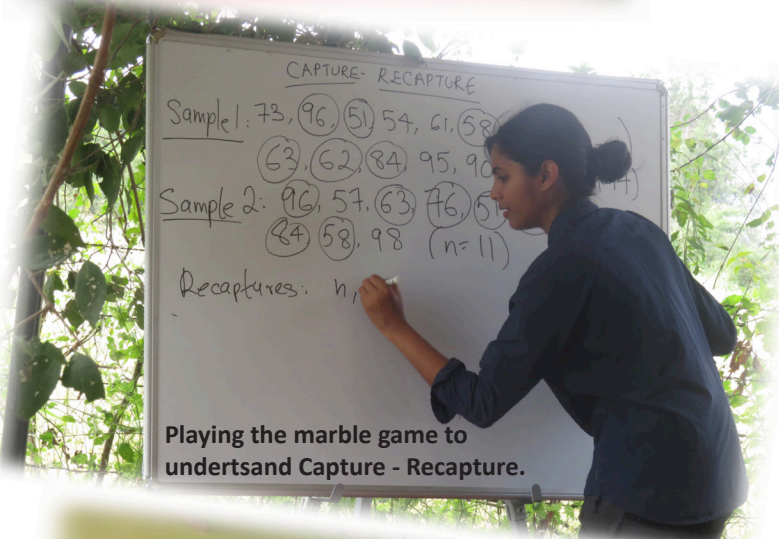


Day 1 morning session by Dr. Gubbi



Day 2 session by Dr. Gubbi on monitoring wildlife population.

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Playing the marble game to understand Capture - Recapture.



Carea angulata Caterpillar.



Group photo with HNF before departure.



RHATC fellows looking at Holeyatthi merchandise.

of evaluation after conducting any outreach task. After the session, we were divided into groups and were tasked with acting out how we would convince a government authority for a conservation cause. After each group presented its case, Dr. Gubbi gave important tips that need to be considered when presenting such cases. Here we learnt that politicians are actually not stupid. But it's we who need to be extra smart and planned when presenting our cause for conservation. After this wonderful morning session, we headed out for lunch.

At noon, we reached a dam-built area named 'Uduthore Halla'. The landscape was scenic. We saw a large number of swallows rapidly taking a dip in the water and flying away. Most probably they were building a nest nearby, which we couldn't locate. We also got to see the hovering flight of a Black - Shouldered kite, where it would stay fixed at a spot in the sky, flap its wings repeatedly, and swoosh down on its prey. It was a beautiful moment to watch. After spending some time here, we headed to the HNF office, Hanur for another session with Dr. Gubbi. In this session we got to know about how HNF works to protect the different landscapes of Karnataka, and about 'Fuelling Change', one of their community outreach programs whereby they provide LPG to poor people in the areas in the vicinity of the protected areas. They also provide them with fuel-efficient water boilers. This community initiative came into existence when it was found that these local communities would venture into forests to collect firewood. In the process, not only do they cut down the trees, but also come into face-off with wildlife like Elephants,

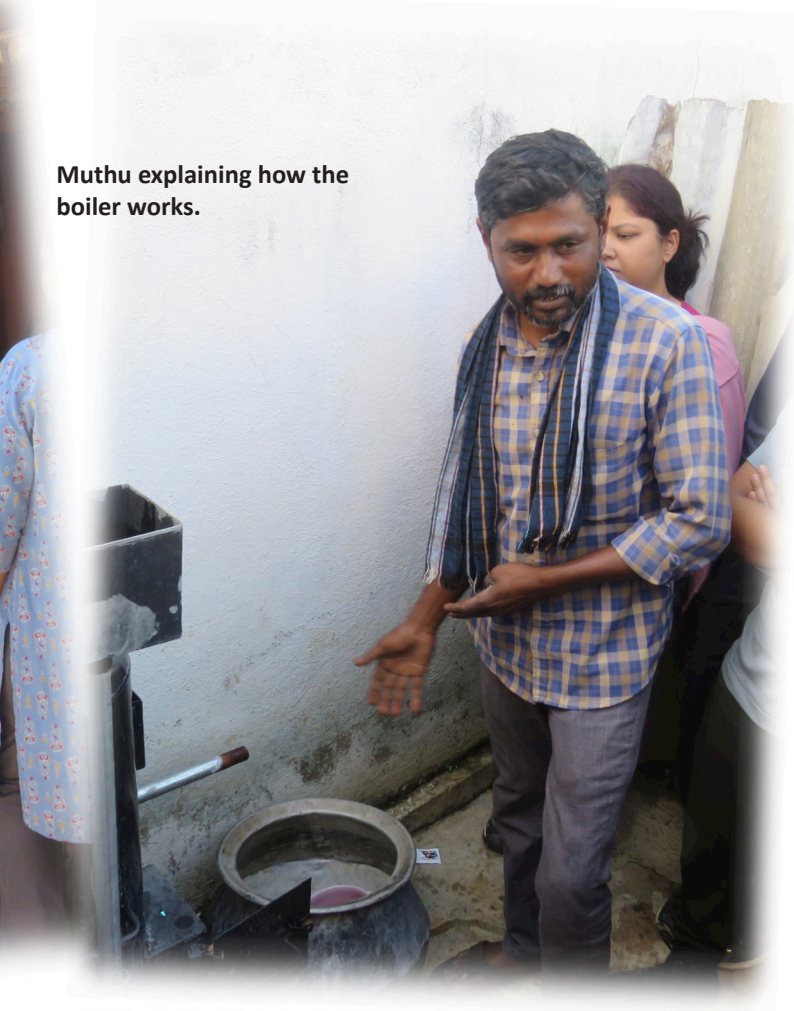
which would put both lives at risk. With this community initiative, the dependency of these people on firewood has been reduced by a lot. Dr. Gubbi also mentioned that despite this, people sometimes still go to forests to collect firewood. A big takeaway here was that often shortcomings happen in conservation work. So we need to speak about that as well, and learn from them. We also got to hear from the outreach members which included Ganesh, Prabhu, and Narmada. It was really engaging to speak with them and listen to their experiences of people's initial hostility and their friendliness towards the outreach members now. Another important learning here was that people like Ganesh, Prabhu, and Narmada become key in community outreach programs. Since they are locals with incredible skill and ability to talk to these communities, they are able to convey the intention and gain people's trust. After this beautiful session, we departed back.

On the second - day, with a handful of minutes to spare before the session by Dr. Gubbi began, we got an opportunity to look at and purchase some of the merchandise by HNF. These included books authored by Dr. Gubbi such as the 'Leopard Diaries and 'Second Nature', notebooks with beautiful paintings, wildlife lapel pins, and greeting cards. After a while, Dr. Gubbi began his session on monitoring wildlife populations. We got a brief overview of why, how, and when to monitor the populations and different methods such as the capture-recapture technique for monitoring. During the afternoon session, we had some fun activities such as picking marbles to understand the capture-recapture, and matching the leopard images to identify



At Nagamma, a LPG beneficiary's house.

Muthu explaining how the boiler works.



RHATC fellows looking at a shola grassland on BRT Hills.



RHATC fellows at a Tibetan monument.



RHATC fellows at Lokkanahalli Village with Muthu.

the number of leopards from camera trap images. During the activity of identifying leopards, Shravan gave us some tips on how we can identify certain patterns to identify individual leopards. Following this activity, we got hands-on experience in deploying camera traps thanks to Shravan. Here we learnt of the important things to be kept in mind such as clearing vegetation so as to avoid false triggers, the different heights at which the camera trap needs to be deployed for the target species, and recording the data in the camera trap deployment data sheet. After this activity, we bid farewell to Dr. Gubbi and his team. We then went to Ponnachi, another beautiful landscape in MM hills where we spent time looking at the beautiful valleys. As the sun set, the sky took different gradients of colours. It appeared as if an invisible painter is creating his evening art. After having spent some quality time here, we departed back.

On the third day, we along with Ashritha and Ganesh visited some of the beneficiaries of the community initiatives by HNF. We visited two villages, Lokkanahalli and Boredoddi. At Lokkanahalli, one of the beneficiaries named 'Muthu' joined us in visiting two houses of the beneficiaries. It was an exhilarating experience interacting with the villagers, discussing with them their livelihoods. Muthu told us that since there are agricultural fields at the base of the wildlife sanctuary, they often face Elephants raiding their crops. At the beneficiaries' house, we saw how the fuel-efficient water boilers work. Discussing with them made it evident that this initiative has made a major impact in their lives by reducing the usage of firewood and venturing into the forests to collect the same. We then bid our

goodbyes to the people of Lokkanahalli and began our journey to Boredoddi. En route, we stopped by to see the shola grasslands on the BRT hills. Upon reaching Boredoddi, Ganesh briefed us on how the condition of the villages as before. There used to be stacks of firewood through lengths and breadths of the village for usage by the villagers and for selling to others. But after the community initiative by HNF, this has significantly reduced. We visited one of the beneficiaries of LPG named Nagamma, who prepared a really delightful tea for us. Sipping our tea, we engaged ourselves in conversation with Nagamma and her family. We got to know that getting LPG has reduced their burden by a lot. Now they are able to cook food faster which in turn helps them to get to fields for their agricultural labor quicker.

Even though we were traveling in cars, the distance between each village felt huge. This made me think of the dedication and the effort the HNF outreach team possesses to cover these distances, and often through difficult roads and terrains to outreach people living at the edges of these protected areas. Kudos to them. Upon departure from Boredoddi, we saw a 1.7 km corridor stretch. We learnt that an NGO has purchased the agricultural lands and has handed it over to the forest department so as to maintain it as a corridor. Byju explained to us that since some parts are in process of being converted to corridor, there are electric fences around the agricultural lands.

On our way to Basavanagudi, a Tibetan settlement, we stopped to see an anti-poaching camp (APC) from a distance. Byju explained

to us how the situations are at APCs and how the frontline staff operates even in tough conditions to prevent poaching. Continuing our journey, we reached Basavanagudi and stopped at a Tibetan memorial. Here we filled out our feedback forms about our experience with HNF. At this moment, a neighboring lady voluntarily offered each of us a bottle of water. She also explained to us what the religious structures in that place signified. It was really interesting to learn about the culture of Tibetans. After spending some time here, we continued our journey to a Tibetan hotel to have lunch. After enjoying Tibetan delicacies and bidding adieu to Ashritha and Ganesh, we headed back to Coimbatore.

These three days with HNF taught us many things. The conservation vision of Dr. Gubbi, the work spirit and perseverance of Ashritha, Ganesh, Abhishek, and many others of the outreach team of HNF, have inspired us. One of the things that Dr. Gubbi said to work where our strength lies is one of the key approaches that one needs to follow in conservation. The experiences of interacting with different members of HNF and having an exchange of information are simply unforgettable. We feel lucky because would anyone else have an opportunity to get insights from two of the well-known Sanjays of Conservation at once? We think not.

## **Acknowledgements**

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