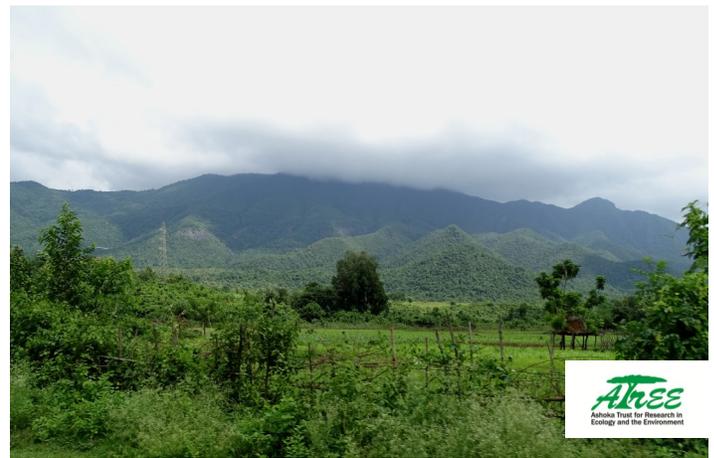


# MANYAM

A NEWSLETTER ON THE EASTERN GHATS

VOLUME 1, ISSUE 1

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## FIRST IMPRESSIONS!

The Eastern Ghats is a highly diverse landscape of India, dominated by extensive moist and dry deciduous forests, and inhabited since eons by indigenous communities who've continued their livelihood practices such as *podu* or shifting cultivation and ritual hunting to this day. Stretching some 1,500 km north to south, roughly parallel to India's east coast, these Ghats support vast stretches of near contiguous forests that are home to several endemic species of flora and fauna. The landscape is also extremely dynamic, with rapid land use and land cover changes occurring almost on a daily basis due to a range of development activities. Yet, the region has attracted hardly any scientific studies on the impacts of these changes on the landscape that it deserves.

ATREE has initiated some work in the Eastern Ghats since 2013, beginning with intensive bird surveys in the northern Ghats in collaboration with local institutions and mammal distribution surveys. This was followed with a certificate course in Conservation Science in July 2015 in Maredumilli, on the fringes of the Papikonda National Park in the northern Eastern Ghats of Andhra Pradesh. A total of 15 young researchers from around the country attended the one week course. For most of them, this was their first time visiting the Eastern Ghats landscape, while a

few had already been working in the region. They took away not just a number of essential skills to develop their careers in conservation, but also a range of diverse views on the Eastern Ghats.

With the intention of showcasing the enormous landscape diversity of the Eastern Ghats, as well as the work that ATREE, local individuals and organizations are undertaking in the region, we are pleased to initiate ATREE's quarterly newsletter on the Eastern Ghats, *MANYAM*. *MANYAM* is a unified Telugu word that describes the hills and forests of the Eastern Ghats, and also signifies the landscape as a whole, a composite of nature and humans.

In this first edition of *MANYAM*, themed *First Impressions*, we showcase the initial thoughts of ATREE researchers and participants belonging to different parts of India who attended the conservation science course. We hope you like reading their experiences.

-Vikram Aditya



Participants of the conservation science course that was conducted at Maredumilli and Andhra University

## THE HILLS ARE ABUZZ | OVEE THORAT

When I first visited the northern Eastern Ghats last summer, it took me two days just to adjust to the unbearably hot weather and to understand the local environmental issues. On a motorcycle trip with Vikram Aditya, I saw gloomy picture of the landscape. Hills ablaze in the nights with fires, and dams small and big, each clinging on to half-submerged forests. We also traveled through villages that were going to be submerged under the mighty Godavari. The forests too, seemed empty; we hardly saw any wildlife.

Winter arrived with a chance for another visit with an enthusiastic team of experts and volunteers from ATREE and Andhra University for an avifaunal survey. Weather

was wonderfully pleasant unlike the harsh summer; the forests and even the people seemed more amiable. Exciting observations of birds and endemics such as the Golden Gecko happened. We also had meetings with the local people and had a chance to understand their life in the Eastern Ghats.

Another visit followed a few months later, this time around in the peak of monsoon, for ATREE's Conservation Science course. A larger group of scientists, activists and students brought my attention to aspects of the landscape which I had missed so far. For the

first time, I noticed the changing patterns of shifting cultivation, for the first time, I was amazed by the diversity of butterflies and other smaller fauna in the region, and for the first time the landscape really started to speak to me after the initial dark silence!

A complex and beautiful landscape that had gone unnoticed by researchers is starting to get the attention it deserves now. It's true that the Eastern Ghats are undergoing rapid changes, but what they hold is precious enough to start working on answering some tough questions.



OVEE THORAT

## THE LITTLE BROTHER | ROHIT SUBHEDAR

Whenever someone says Ghats, we instantly think of the lush evergreen forests of the Western Ghats, but we forget about someone who could be called Western Ghats' little brother, The Eastern Ghats! These discontinuous hills run from West Bengal to Tamil Nadu and are ecologically just as important as the former, but have been ignored for long.

My first visit to the Eastern Ghats was in the year 2013 during a nature camp at the picturesque village of Maredumilli. The area around there is a mix of natural forests and plantations. I enjoyed exploring the nearby forests and came back with a pleasant experience.

I visited the area again in 2015 for studying birds. I got a chance to explore nearby forests more this time. As a part of our project, we were studying hunting of birds. To our surprise not only did we find traps but also found a group of people sitting in their makeshift hut in the middle of the forest. The men were relaxed and sipping toddy. Seeing that they had bows and arrows, we asked them what they hunted. One man replied, "*The arrows are for the birds, and traps are for wild boars*". As the con-

versation went on, I could see that they were not comfortable sharing more information on hunting.

Hunting pressures in the region seemed quite high and more studies need to be undertaken in order to understand effects of this practice on the biodiversity of the area. The Eastern Ghats are already facing several threats, from dam building to mining. This fragile ecosystem could lose its biodiversity soon if steps are not taken to conserve it.

**"we forget about someone who could be called Western Ghats' little brother, The Eastern Ghats!"**

## BIODIVERSITY AMIDST PODUS | KRISHNA PAVAN

Eastern Ghats is one place where a nature lover should surely visit. It is an enchanting landscape. Many areas in Eastern Ghats have not been explored yet, making it a place offering great opportunities for young researchers. The region is home to many endemic species. While mammal sightings may be rare due to the terrain and other factors; reptiles, amphibians, birds and insects are easier to spot. This is one reason why visiting Eastern Ghats makes me happy. The Ghats has many plants which are of use in

ethnobotany.

But all this is slowly declining. There are many conservation issues threatening the forests. My first experience in the Eastern Ghats was during a workshop by ATREE in Maredumilli. Generally as in other forests in India, the forests of Eastern Ghats are deteriorating with major problems like mining.

My project was on the effects

of *podu* cultivation on the forests around Maredumilli. We selected *podu* lands abandoned at different time periods. We observed that even after abandonment, there was little re-growth of forest as the land was soon put through intense use. Our results indicated that current *podu* cultivation practices which have changed over time, might pose threats to the forests.



KRISHNA PAVAN

Clockwise from the top left: *Raorchestes terebrans*, a frog endemic to EG; an *Ariophanta* species of snail; *Cyrtolipsis* and *Caleta* butterflies mud-puddling; and *Micronia aculeata* moth

**PACK YOUR BAGS WISELY!** | NIHAL GUJRE AND POOJA S.

Visiting the forests of Maredumilli in the Eastern Ghats was the best field experience. With a number of checklists of items and many instructions, I packed my bag and reached Vishakhapatnam for the field course. The actual field work started at Maredumilli, located about 300 km away. My project team (Abhishek, Parul and me), had an exciting experience while conducting a survey of wildlife road kills around Maredumilli.

We had selected four roads heading in different directions from Maredumilli for sampling road kill density. One of the sampling points located in a shade coffee plantation was 6 km from the highway. It was late in the evening when we were done with the three

other sampling locations and only the coffee plantation was left, so we decided to quickly finish the survey in the plantation. The driver dropped us at the beginning of the coffee plantation and we began our sampling. Initially it was quite good but later the situation changed as sunlight started fading and darkness set in.

We were still enjoying the experience, but suddenly a sound of disturbance came from the forest and filled us with fear. We were new to the area and none of us knew Telugu. We walked fast toward the highway without looking sideways. Thank god we had a torch and GPS that helped us find the path in the forest.

Suddenly the lights of a vehicle flashed in front of our eyes, and for a moment we thought that it might be an unknown vehicle. But luckily it was the same driver who had dropped us. I will forever remember Maredumilli and the Eastern Ghats landscape for this memorable and exciting experience.



OVIEE THORAT

Nihal and his teammates conducting fieldwork during the Conservation Science course in Maredumilli

**JHUM PODU JHUM** | RAJKAMAL GOSWAMI

Shifting cultivation (=jhum) is the dominant form of agriculture in the hills of north-east India, where my research has been focussed. I was therefore excited about visiting a few podus (shifting cultivation plots) of the Eastern Ghats during the Conservation Science course to understand how podus were similar and dissimilar from jhum.

The first podu we visited was freshly cleared and presented a dreary sight. One of my colleagues was visibly exasperated, claiming how podus were the 'ultimate' cause of forest loss in the Western Ghats and how they seemed to be pushing

Eastern Ghats also towards a similar fate. However, in my eyes, podus were a lesser evil when compared to permanent forms cultivation such as wet agriculture (terrace and flat) and I had asked the question to several jhum cultivators from Meghalaya: Why most jhum were surrounded by forests? Two main reasons emerged. 1. Surrounding forests help to control the spread of a wild fire during the burning stage. 2. They enable faster forest regeneration. Which, indirectly meant that forests were critical for the health of jhum and therefore

wealth of the people. Therefore, there was a strong local rationale to preserve the forests. No such immediate rationale exist for the permanent cultivators, where size of the patch is the most important determinant of yield.

Therefore I was surprised that when we visited teak and citrus plantations later, they didn't elicit a similar 'disgust' for driving forest loss from the passionate conservationist.

**"forests were critical for the health of jhum and therefore the wealth of the people"**

**THE ALLURE OF MAREDUMILLI** | VIKRAM ADITYA

The northern Eastern Ghats hill region, spread over Odisha and Andhra Pradesh, has over 11,000 sq km of moist deciduous and semi evergreen forests that are an important habitat for a diverse range of flora and fauna. Papikonda National Park, where I am doing the field work for my PhD, is located in the southern end of the northern Eastern Ghats. It has the finest forests in the Eastern Ghats. Spread over 1,012 sq km, an elevation gradient ranging from 20 m at the Godavari to 800 m at the summit of Bison hill,

combined with relatively high precipitation levels, allows Papikonda to support a variety of forests dominated by moist deciduous vegetation.

I spent the first half of 2014 in Maredumilli, a picturesque village located next to Papikonda. I had first visited Maredumilli more than 12 years back, and was instantly captivated by the beauty of the rolling hills covered with dense forests surrounding

the village. However, the forests here are largely a mosaic of natural forest and teak and coffee plantations. Very few ecological studies have taken place so far in the northern Eastern Ghats, and Papikonda NP, with its location straddling the Godavari River that acts as a biogeographic divide, is a promising landscape for biodiversity studies in the future.



VIKRAM ADITYA

## OPPORTUNITIES FOR LEARNING | DEVEN MEHTA

I would like to share my experience in the Eastern Ghats during the Conservation Science course organized by ATREE in Maredumilli near Papikonda National Park. It was my first visit to the Eastern Ghats region and the moment I observed the beauty of the habitat around Maredumilli, the village in the Ghats where the course was held, I was left speechless! The hills and forests around the village were beautiful. The mentors were very supportive and due to a conducive environment created by the whole team of ATREE, each technique became easier and interesting to learn. The design of the course involved several site visits to nearby forests, which helped me

understand the landscape better. The interactions with experts were very helpful to better understand the conservation issues in the Eastern Ghats. We also got an opportunity to apply field methods that we learnt in the course in sites around Maredumilli, which was very interesting. I also liked the opportunity to visit a local school at the end of the course.

According to me, there are great opportunities to carry out research on the biodiversity related to the Eastern Ghats, and urge everyone to think seriously about its conservation. I thank



Participants of the Conservation Science course during a debate session organized at the Andhra University, Visakhapatnam

ATREE researchers and all the participants for gifting me such precious memories.

OVEE THORAT

## EVENT REPORT

### BIRDS IN THE EASTERN GHATS | PRASHANTH M B

#### Forest Bird Survey, Dec 2014

Of the many well explored regions pertaining to avifauna in India, the Eastern Ghats along with the forested regions of central India seem to be one of the least explored parts. Portals, field guides, books that present information on the distribution of birds seem to present a void from this region which may have been due to various reasons to do with accessibility and relatively sparsely populated areas. A few surveys have taken place in the past to document the avifauna of the region. Surveys by Humayun Abdul Ali, Bruce Bheeler, Trevor Price, S. Dillon Ripley, Krishna Raju and others have thrown light on the birdlife here (prior to 1989), but surveys have remained far and few thence upon. It was this apparent void that made few of us plan a survey for the region. With helpful support from ATREE and BNHS, a survey was conducted in Dec 2014 over three days that broadly focused on documenting the bird diversity in areas around the hill tracts of Lambasinghi and Chintapalle, the thickly wooded areas of Donkarayi, Mothugudem, Chintur, the banks of the Godavari at Rekhlapalle and the forest-coffee-plantation matrix around Maredumilli.

Over 145 species of birds belonging to 58 families were recorded during the survey which also included opportunistic sightings. The Red-vented Bulbul, Red-whiskered Bulbul, Plum-headed Parakeet, Common Iora, Spotted Dove, Brown-headed Barbet occurred commonly in both the dry and moist deciduous habitats. In the dry deciduous habitats, species such as the Indian Treepie, Tickell's Flowerpecker, Black-hooded Oriole have been frequently encountered. In moister habitats, the *Phylloscopus* Warblers (including Greenish Warbler), Velvet-fronted Nuthatch and Black-lored Tit were frequented.

Malabar Pied Hornbill near Sileru and the north bank of Godavari, and Alexandrine Parakeet near Chintur were the two near threatened (IUCN) species encountered. The patchily occurring and uncommon Pale-chinned Flycatcher was seen in two locations near Donkarayi<sup>1</sup> and Maredumilli<sup>2</sup>. Jerdon's Baza<sup>3</sup> which is part of an isolated population in the Eastern Ghats was sighted at Chintapalle. Species recorded from earlier surveys such as the Orange-breasted Green Pigeon (*Treron bicincta*) were missing from the surveyed area. However, on preceding and succeeding visits solitary sightings of the Purple Wood Pigeon and few Orange-breasted Green Pigeon were observed. Such seasonality has been noticed by earlier surveyors such as Trevor Price who noted that *T. bicincta* is subject to seasonal presence coinciding with the fruiting periods of trees and may be occurring during the summer. Abbott's Babbler, another species belonging to an isolated population was not detected in this survey.

#### Conservation Science Course, July 2015

Tickell's Blue Flycatchers (genus *Cyornis*) were sighted during brief frugivory observations on *Dillenia pentagyna*. Few of the morphs (in dull plumage) could possibly belong to the speculated intermediate hybrid morphs of the Tickell's Blue Flycatcher and the Pale-chinned Flycatcher. Price in 1979 has pointed out to the extremely similar calls of these species which had complicated the detection by calls during Dec 2014 survey.

Ruby-cheeked Sunbird has been documented as early as 1980s from the southern Eastern Ghats, however their distribution might be very patchy within the region. Single sightings of the Ruby-cheeked Sunbird near Jalatharangini<sup>4</sup> and of the Jerdon's Baza<sup>5</sup> near coffee plantations of Maredumilli were recorded.



Fulvous-breasted Woodpecker



Ruby-cheeked Sunbird



Malabar Trogon

PRASHANTH M B

PRASHANTH M B

OVEE THORAT

<sup>1</sup>Prashanth & Aparna Surampudi

<sup>2</sup>Prashanth & Ovee Thorat

<sup>3</sup>Prashanth & Nukaraju

<sup>4</sup>Prashanth, Ovee Thorat, Rajkamal Goswami & Vikram Aditya

<sup>5</sup>Prashanth & T.Ganesh

**FORESTS IN LIGHT AND SHADOW | T GANESH**

I had worked for more than two decades and still continue to do so in one of the finest wet evergreen forests in the Western Ghats, and any forest I see outside that was just plain degraded until I came across this stretch of mixed deciduous forests of the Eastern Ghats in northern Andhra Pradesh. When Vikram showed me the imagery and his analysis of the forest cover of Papikonda hills in the Eastern Ghats, it showed up as a huge stretch of greenery, not necessarily pristine but the contiguity was just mindboggling in this era of fragmentation. I decided to visit and explore the forests; we made a brief reconnaissance visit in 2012. This was just an appetizer to the one week long bird survey where we had the opportunity to spend some time visiting different forests in the region. Unlike the evergreens it was not dark and deep, but was all light and shadow playing in the subtle light that came through the canopy. The forest stretched for miles and I could walk them endlessly. There is something about forests that no written word can capture fully which was true for the deciduous forests of Eastern Ghats.

As I walked and travelled through the landscape it also took me back in time. Seeing people with bow and arrow, simple and effective traps and completely nonchalant about it, happily discussing the animals they hunted and even demonstrate a hunt, seemed completely out of context in the modern world when most hunters flee or are reluctant to talk about what they see or do to a complete stranger. The fact that animals have disappeared or are in the verge of it did bring in a nod from them as they retreated to nostalgic memory of great hunts in the past. In a sense

while the forests are beautiful, seemingly endless and remarkably intact structurally the faunal element is just a whisper in the woods unlike in parts of the Western Ghats.

Whenever I drive away from the hills of Papikonda, a great sense of sadness also travels with me, it's just not animals, it's the forest itself which is being lost. When Vikram showed more of his analysis it was apparent that the forests will not remain as contiguous as before, they are being bitten off at about 226 ha each year (Global Forest Watch data) over the past two decades mainly from the edges of the Papikonda hills for many known and unknown reasons. Can we stem this loss somehow using various approaches is what I think should remain in the minds of people who are committed to conserve this stretch of beautiful forests, for its own cultural and biological identity.



VIKRAM ADITYA

**“Unlike the evergreens it was not dark and deep, but was all light and shadow playing in the subtle light that came through the canopy.”**



OVEE THORAT

A friendly local man displaying his bow and arrows before starting an evening hunt

**FIELD NOTES**

**ROLLED DOWN DILLENIA | PRASHANTH M B**

Forays into the field during the conservation science course presented brief opportunities to observe frugivory on the abundantly fruiting *Dillenia pentagyna* tree. This is a medium sized tree in the moist deciduous forests of the Eastern Ghats, and bears small brightly colored orange fruits that might potentially attract birds. We were hoping to see the Purple Wood Pigeon, Orange breasted Green Pigeon and others as they

occur sporadically in the area. Over roughly 6 hours of observations we did not see any bird except parakeets.

The presence at the fruiting trees also allowed us to watch a crawling crab in the litter of *D. pentagyna* fruits. The crab was observed rolling a fallen *Dillenia* fruit into a burrow while it disappeared into it. The crabs seem to stock the burrow with fruits. Terrestrial crabs procure a

wide variety of food that come in the form of algae, fungi, small crustaceans etc. Fruit - crustacean interactions is poorly known and mostly reported from riverine ecosystems. Their role as seed dispersers could also be limited since direct intake of plant or fruit matter may occur very rarely. Nevertheless, this observation points to how little we know of the biodiversity of the Eastern Ghats.



*Dillenia pentagyna* fruits near the crab's burrow

PRASHANTH M B

## OF BEAUTY, RICHNESS, HOPE AND FEAR!

| KARISMA PRADHAN

Love at first sight! Well, that was my exact feeling as we went up the hills towards our destination one early morning in the Eastern Ghats. The heavy fog forced us to slow down as we cozily tucked into whatever warm clothing we had carried with us. The trip was one of WWF's Nature Camps for students, being conducted on the outskirts of the Papikonda National Park. My second visit, as a part of the Conservation Science course organized by ATREE, was more recent.

As we explored the region, the drastic change in the land patterns was eye catching. Apart from patches of undisturbed moist deciduous forest, there were coffee and teak plantations, and *Podu* cultivated land. The other salient feature was the variation in topography, where one could either walk to the bottom of a valley or climb up a hill top, which evidently supported a rich species diversity. Casual strolls inside the coffee plantations offered us incredible views of

the Indian Giant Squirrel gracefully leaping from branch to branch. I was and always will be mesmerized by its characteristic long tail. Hikes through the forests were constantly accompanied by numerous bird calls, endless singing of Cicadas and occasional excited alarm calls of Langurs. Small streams that cut through these hills were an added boon as we dipped ourselves in the chilled water.

During our treks we also crossed a few tribal hamlets, with their distinctive huts built of bricks, stones, mud, bamboo and hay. One evening, we were treated to a delightful tribal dance. Their attire and dance clearly represented the intricate connection shared between their culture and nature. A local delicacy '*bamboo-chicken*',

only enhanced my experience of their culture.

Eastern Ghats, rich in biodiversity, relaxing getaway for city dwellers, home to tribal communities, stands out as one of the most beautiful yet neglected part of the region. With the current threats that this fragile landscape is facing and lack of attention from researchers, I wonder if I am being a little too optimistic to hope that these forests will continue giving a similar 'first impressions', if not a better one, to visitors even 10 years down the line!



A dance performance by the people of Koya tribe in Maredumilli

## NEWS SNIPPETS

- The Government of Andhra Pradesh decides to cancel a major bauxite deal with ANRAK aluminum for mining in the Galikonda area of Visakhapatnam district in the Eastern Ghats (Times of India, 9th April 2016)
- Plans for denotification of 118 and relocation of 11 villages from the Satkosia Tiger Reserve in the Eastern Ghats of Odisha (The New Indian Express, 12th January 2016)
- A study claims that as per the Forest Soil Quality Index, 42% of forests in the Eastern Ghats of Tamil Nadu are degraded, contrary to 1.8% according to the Forest Survey of India (Deccan Chronicle, 10th April 2016)

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