



M A N Y A M

A NEWSLETTER ON THE EASTERN GHATS

VOLUME 2, ISSUE 3

DECEMBER 2017

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WILDMEAT TO KITCHENWARE : THE USE OF LOCAL FLORA AND FAUNA IN THE EASTERN GHATS



The traditional forest dwelling tribes of the Eastern Ghats live alongside nature's bounty not just in the form of faunal and floral diversity, but also in the wild varieties of crops. In this issue, we once again bring to you articles from organizations and individuals working across the Eastern Ghats on conservation issues and opportunities for local communities.

Aristo Mendis, a researcher working on ecology and conservation, talks about the status of the Indian pangolin in the northern Eastern Ghats of Andhra Pradesh, where this endangered insectivorous mammal is fighting for survival, battling intense hunting pressure driven by the demand for its scales and meat.

Ranjit K. Sahu and Bidyut Mohanty talk about the importance of the various species of bamboo for ensuring food security and nutrition of tribal communities across the Eastern Ghats. They emphasize how utiliz-

ing bamboo seeds could be beneficial for both the livelihood requirements of local communities and the environment.

Continuing on this theme, Syed Subhani talks about the potential of harvesting the rich untapped natural resources for income generation for supplementing livelihoods among forest dwelling communities in the Eastern Ghats, in particular, the widely available Palmyra fiber and bamboo sheaths.

Chitragada Choudhury describes how some tribal communities in Odisha's Koraput district are rediscovering traditional wild varieties of rice, in this hotspot of millet diversity in the Eastern Ghats.

We hope that these articles reveal some interesting insights into the relationships between people and the landscape.

- Vikram Aditya



IN LOOKOUT FOR THE ADAVI CHAAPA | ARISTO MENDIS

Tribal communities, while describing the pangolin, would sometimes refer to it as Adivi Chaapa, which means 'Fish of the Forest', as a reference to its scaly skin. They would also mention that it has become increasingly difficult to spot a pangolin in the wild.

The Eastern Ghats, an understudied landscape is continuously being subjected to multiple anthropogenic threats, while also being home to a good population of tribal communities, residing in remote (and at times inaccessible) villages. Many of these tribals actively carry out shifting cultivation, creating 'podus' of cultivable land in hilltops and elevated grounds (Podu – Local term in Northern Andhra Pradesh referring to a patch of shifting cultivated land). Barren patches of podus now remain spread out in the Eastern Ghats landscape, slowly recovering and regrowing to their natural state.

The tribal communities here are mostly devoid of basic amenities like electricity, clean water, and access to motorable roads. But it feels as though they are willingly living in isolated and relatively 'wilder' landscapes, by choice. It is a common sight to spot tribals carrying a set of home-made bow and arrows with them. As a form of recreation, cultural habit or just seeking for some bushmeat, tribals are often spotted in 'hunting parties', comprising of five or more members, roaming the forests of the Eastern Ghats, looking for an adventure, and connecting with their instincts. Not surprisingly, hunting for bushmeat is, and has been, an integral part of their lives. The cost that certain wild species face due to this activity is something I am unable to side towards or comment about.

Currently, all eight species of pangolins are being poached for their scale and body parts. India is home to the Endangered Indian Pangolin (*Manis crassicaudata*); and the Critically Endangered Chinese Pangolin *Manis pentadactyla* (IUCN Redlist of Threatened Taxa). The pangolin's cryptic nature, coupled with its heavy demand in wildlife trade, has made

studying and conserving the animal in the wild a daunting task. Like for most cryptic, rare and nocturnal animals, researchers have relied on secondary data to study the species and their ecology. I worked on a project headed by Vikram Aditya (PhD Student, Ashoka Trust for Research in Ecology and the Environment), to assess the status and distribution of the Indian Pangolin in the northern Eastern Ghats, during which we interacted with tribal community members, to gather local ecological knowledge on the pangolin, while also documenting the hunting practices carried out in the landscape and their impacts on the pangolin. The immediate future plans of the project involve making use of sign surveys of pangolin scrape marks, and camera trap based studies to assess the pangolin's presence, status and distribution.

The interesting aspect of the interactions with tribal communities was getting a glimpse at their lives, and how they influence the surroundings. Inquiring elders of the tribal communities, about the pangolin, helped reveal that there is a demand and local market for Pangolins in parts of the Eastern Ghats of northern Andhra Pradesh. Tribals would describe their few encounters with the pangolins, and some admitted to having hunted pangolins for its meat in the past. Tribals claimed that the meat of the Pangolin is a delicacy of sorts. Nothing conclusive although has been identified as to the source of demand for the scales of the Pangolin in the market. Some tribals were aware of the demand for the pangolin and the price it fetched but appeared too hesitant to reveal too much about the



- An image of the scale of a hunted Pangolin in the northern Eastern Ghats

"Inquiring elder generations of the tribal communities about the pangolin helped reveal that there is a demand and local market for Pangolins in parts of northern Andhra Pradesh"

reasons for its disappearance and how they contribute to such impacts. They also mentioned that this demand is probably only a decade old, increasing suspicion whether this demand is from Asian countries like China, who have been documented to use pangolin scales for Traditional Chinese Medicine (TCM).

During our pursuit to know more about the Adavi Chaapa, our discussions with the locals made us realize that understanding of the lifestyles of tribal communities residing here was equally as important as understanding the landscape and its ecological entities. The

immediate future for the Adavi Chaapa, seems to be grim at the moment, but hope still lives on for the scaly anteater if we reach out to such tribal communities and collaborate to save them.

-Aristo Mendis has completed his Masters in Ecology from Pondicherry University, Pondicherry. He is an independent researcher with interest in avian and mammal ecology especially the conservation of the Pangolins

Images by author.

SEEDING IN BAMBOO: A BOON FOR THE POOR

| RANJIT K. SAHU AND BIDYUT MOHANTY

Bamboo is a perennial grass found across India, where it is not only grows in the wild but is also planted in large scale in many states. Among the many bamboo species found in India, *Bambusa arundinacea*, *B. tulda*, *B. vulgaris*, *Melocanna baccifera*, *Dendrocalamus strictus*, *Ochlandra travancorica*, *Oxytenanthera stocksii*, and *Thyrsostachys oliveri* are commercially important. Bamboo plays an important role in food and nutritional security of tribal communities across India, who use it for food, shelter, furniture, handicrafts, medicines, and various ethno-religious purposes. Therefore, bamboo is among the most important resources to be leveraged towards the alleviation of rural poverty, employment generation, empowerment of women and environmental rejuvenation. Bamboo is endemic to the Eastern Ghats of Odisha, which is also home to several tribes who have been living here for centuries. There is extensive bamboo flowering across Odisha's Eastern Ghats. This article emphasizes the importance of bamboo seeds as a natural resource to the common people and forest dwellers of the Eastern Ghats as well other handicrafts of India including the north eastern states.

The large amount of seeds produced due to synchronized flowering in bamboos leads to rapid increase in rodent population, which also feed on domestic grains leading to famine. Thus, flowering and seed set in bamboo have long been considered as an indicator of a natural calamity like drought or famine. However, the utilization of bamboo seeds for livelihood purposes could be beneficial for both the local communities and the environment. Seeing bamboo as a potential source of food rather than as a calamity

would also promote the conservation of bamboos and thereby the dependent native fauna and flora in these forests. It may be emphasized that forest bamboo seeds are naturally grown and organic as per commercial technologies. Thus, the problem of pesticides and other contaminants entering food are practically absent. Additionally, since the operation is mainly limited to maintaining a clean area around the clumps for seed collection, it could employ women in tribal areas. The absence of other operating costs makes this a relatively low-cost venture for surrounding tribal communities, employing women as seed gatherers and contributing to their empowerment.



Bamboo seeds are similar in nutritional composition to those of many of the staple cereal crops. Only about 100 tons of about 25000 tons of seeds produced during 1985-1986 were collected. Thus, these seeds were lost to seed predators. A proactive role by the government in disseminating information to local communities through

radio broadcast, newspapers and television would help to take advantage of this natural phenomenon that occurs at long intervals and ensure that the seeds are used for both commercial and scientific purposes.

Bamboo seeds have been used as a cereal in the Wayanad district of Kerala and further ahead in the Coorg district of Karnataka. It is a rare and healthy commodity and thus can be an invaluable resource of nutrition for people living in the forest tracts. Local self help groups should train communities to harvest this bounty of

nature so that they can be benefited. Unlike the consumption of shoots which would result in reduced number of bamboo culms, utilization of the seeds, does not affect the commercial production adversely.

-Dr. Ranjit K. Sahu (Ph.D biotechnology, B.Sc (Ag)) is a Research Associate (Nephrology) at the University of Virginia, Virginia, USA and is a freelance writer with interest in health, environment, education and sustainability. Bidyut Mohanty is the Secretary of SPREAD, Koraput, Odisha.

Images by author.

PALMYRA AND BAMBOO AS MFP | SYED SUBHANI

The major developmental issues confronted by villagers in the northern Eastern Ghats are stemming out of a situation where farming activities are not economically viable for all the families in villages. The ground reality is that there are plenty of MFP [Minor Forest Produce] which local communities collect and dispose without any value addition because of lack of awareness which undermines their livelihood option. This region also has rich untapped natural resources for generating income such as Palmyra fiber, Bamboo sheaths, leaves etc. It is noticed that separation of Palmyra Fiber is not in practice in villages of the surrounding area. Each and every village has nearly 3000 to 4000 Palmyra trees, but these resources are remaining untapped as most of the tribal communities are unaware of the application of technologies developed for sustainable utilization of forest resources.

To address these issues, we have conducted participatory research with local communities to identify the existing problems with regard to utilizing Palmyra fiber and Bamboo sheaths. If these problems are addressed through providing appropriate technology for management of untapped natural resources, the poor and landless tribal communities in the Eastern Ghats would be able to tap these natural resources as a source of livelihood for betterment of their living. One such innovation is making biodegradable cups with bamboo sheaths. Bamboo leaves are abundantly available in the area, but nothing was done to make use of them.



These leaves are useful to make leaf plate and cups etc. There is good scope for self employment for rural and tribal people in the northern Eastern Ghats with a reasonable investment to manufacture improved bamboo leaf cup and plate using machines.

Moreover, under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Scheduled Tribes (STs) have the right to use forest land for livelihood generating activities, in addition to cultivation and habitation. However, the Forest Dwelling STs of the area were not aware of the technology for making of non-polluting and biodegradable cups and plates from bamboo

“There is good scope for self employment for rural and tribal people in the northern Eastern Ghats with a reasonable investment to manufacture improved bamboo leaf cup and plate using machines.”



Left - Women making Palmyra crafts during a workshop

Right - Edible and craft products made from palmyra fruit and fibre



sheaths. Under this project, with the support of KEYSTONE FOUNDATION - PEOPLE AND NATURE FUND we have created awareness and provided training for selected beneficiaries amongst local tribal communities to use machines for making biodegradable cups. They come with a bamboo sheath coating, thus providing the scope for livelihood generation amongst forest dwelling communities in the region. The ample availability of bamboo in the forest areas of the region pro-

vides good resources for tribal communities to utilize them, while still allowing for sufficient regeneration after harvesting.

-Syed Subhani
 Founder and Director
 ASHA,
 Chintur, East Godavari district, Andhra Pradesh

Images by author.

REDISCOVERING LOST VARIETIES OF RICE IN ODISHA

| CHITRANGADA CHOUDHURY

Southern Odisha's Koraput district is a well-known center of rice diversity. It's vast, undulating landscape has historically been among the world's leading areas for rice diversification. Hundreds of varieties of rice adapted to various agro-climatic conditions are found here. Koraput's loyalty to local varieties of rice endures even as hybrid varieties have colonised much of India's paddy fields, as a consequence of decades of agricultural practises during the Green Revolution, where 'high-yield' hybrids and varieties were aggressively promoted. In the 1950s, an official survey found that farmers in Koraput grew over 1,700 kinds of rice.

A grassroots movement in Koraput, with over 1,400 farmer-conservators at its heart, is one of other such

groups now trying to safeguard what remains of this genetic-cultural wealth. Farmers from Koraput have kept close to 200 varieties of native seeds alive through decades, a proof that they have still not abandoned these varieties. Dr. Debal Deb, aided by staff from a local organisation, Living Farms, is working with farmers to preserve these and over a thousand more heirloom rice varieties raised by farmers across India.

Dr. Deb encouraged locals to grow native varieties and circulate the seeds to other farmers to save them from extinction. He trained farmers in simple techniques to ensure genetic purity. By reviving seeds, they are also reviving taste, ritual, nutrition and sus-

tainability, attributes waylaid by the obsession with yield. Several farmers also say traditional heirloom crops are better suited to unpredictable weather, having adapted over centuries to local ecologies. This also makes them hardier in the face of biotic and abiotic stresses such as pests and drought. Today, the number of farmer-conservator households has grown to 1,469 from only 13 in 2014.

- *Chitrangada Choudhury is a freelance journalist working on conservation issues and rural and indigenous communities. She has worked extensively across the Eastern Ghats and is currently based in Bhubaneswar, Odisha.*

This article is adapted and has been first published in The Hindu on 23rd September, 2017

Image by author.



MAMMALS OF PAPIKONDA NP

| VIKRAM ADITYA

Researchers from the Ashoka Trust for Research in Ecology and the Environment (ATREE) have conducted a comprehensive assessment of the mammal diversity in Papikonda National Park, northern Eastern Ghats, using camera traps, sign surveys and community interviews between October 2014 and March 2015. This data was combined with a comprehensive literature review of research articles, field guides and IUCN species range reports from which a total of 55 species of mammals from 46 genera belonging to 24 families were enumerated.

The study found a high diversity of carnivores (15 species), followed by Chiropterans or bats (13 species) and rodents (11 species) in Papikonda NP. The study emphasized the importance of the low elevation dry-deciduous habitats in supporting several species of primates and small carnivores. Rapid forest conversion has been particularly affecting these dry deciduous forests spread across lower elevations below 200m, especially along the Godavari River. These forests are also facing the threat of submergence from the construction of the Polavaram dam on the Godavari river adjacent to the Papikonda NP.

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